

The Impact of Personal Income Taxes on Returns and Rankings of Canadian Equity Mutual Funds



*Amin Mawani, Moshe Milevsky,
Kamphol Panyagometh*

Executive Summary

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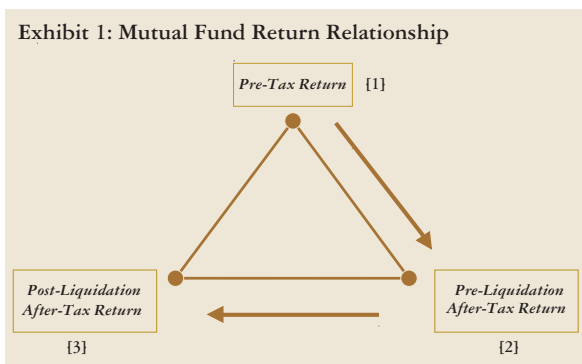
TAXES SCRAMBLE RANKINGS

By Moshe A. Milevsky

A brief summary of the research paper: "The Impact of Personal Income Taxes on Returns and Rankings of Canadian Equity Mutual Funds," by Amin Mawani, Moshe Milevsky and Kampbol Panyagometh, and forthcoming in the Canadian Tax Journal, which is available at www.aic.com/en/tax_smart/milevskyapr8.asp.

We examined 10 years of historical rates of return from 343 equity and balanced mutual funds managed by Canadian companies to assess the impact of personal income taxes on their relative performance and rankings. The study combined data from two sources: Morningstar Canada and Fundata Canada. They provided us with Net Asset Values (NAV) numbers and distributions for all retail mutual funds managed by Canadian companies that had a complete 10-year record of performance on December 31st, 2001.

It is important to note that there are three rate-of-return measures of interest to individual investors. The first is the pre-tax return, already widely reported and advertised by fund companies and the financial media. Investors holding their mutual funds within a tax-sheltered registered plan may find this number to be sufficient for all their investment planning. Investors holding mutual funds outside of a registered plan may find two other numbers to be more important. The first one is the pre-liquidation after-tax return. This measure captures the return an investor would obtain from simply buying and holding the fund, and it reflects the tax burden on realized capital gains and dividend and interest income earned inside the fund. The second measure is the investment return resulting from selling the mutual fund unit at the end of the reporting period. It captures the additional tax burden of unrealized capital gains that is triggered when the fund unit is redeemed. Exhibit 1 displays a graphical relationship between these three measures of return.



We started the process by proposing a mathematical algorithm for computing after-tax returns from mutual funds. This algorithm was then used to generate after-tax returns for each and every mutual fund in the database. Then, the mutual funds were ranked relative to each other, and the after-tax ranking was compared to their pre-tax ranking.

The main robust result from the study was that the ranking of funds on a pre-tax return basis was significantly different from the ranking of funds on an after-tax return basis. Thus, for example, even though Fund A might have performed better than Fund B on a pre-tax basis, once taxes were taken into account, their relative ranking was reversed.

In fact, we found that equity funds ranked in close proximity on a pre-tax basis have a 46 per cent probability of having their ranking reversed when the ranking is done on an after-tax basis. Furthermore, an investor with the highest personal marginal tax rate during the 10-year period of the study, lost approximately 135 basis points to income taxes on fund distributions from the average annual pre-tax return of 9.01 per cent.

To understand how and why income taxes might actually change the relative ranking of mutual funds, one has to focus on the turnover rate within the fund itself; namely the amount of buying and selling that is done by the fund managers. The following chart clearly illustrates the impact of turnover on the after-tax accumulated amount that is actually consumable by the investor. The investor starts with an initial investment of \$10,000 in a mutual fund that earns 15 per cent annually for each of the next 15 years, and where realized or distributed capital gains are taxed at the rate of 25 per cent each and every year for the 15-year period. Clearly, this is an abstraction since capital gains tax and income and growth rates have fluctuated over time—and the analysis in the report was of course based on proper numbers—but the table is meant to illustrate the raw impact of turnover.

Relationship Between Fund Turnover and Accumulated Portfolio After 15 Years

| Fraction of Capital Gains Realized Each Year | Amount Accumulated After 15 Years |
|--|-----------------------------------|
| 0% | \$63,527 |
| 10% | \$61,907 |
| 20% | \$60,340 |
| 30% | \$58,822 |
| 40% | \$57,354 |
| 50% | \$55,933 |
| 60% | \$54,558 |
| 70% | \$53,227 |
| 80% | \$51,940 |
| 90% | \$50,694 |
| 100% | \$49,488 |

Assuming a 15% annual rate of return and a 25% annual marginal tax rate on realized capital gains for the entire period.

The first column consists of the fraction of unrealized capital gains (or pre-tax portfolio growth) that is realized each year. This fraction sold or liquidated generates distributions (of realized capital gains) and triggers taxes payable along the way.

For example, if the fund sold 100 per cent of the stocks within the portfolio each year, then an initial investment for \$10,000 would grow to \$49,488 after taxes. However, if the fund did not sell any of its stock holdings—the ultimate buy and hold strategy—the same \$10,000 would grow to \$63,527. The difference between the two extreme cases represents 30 per cent more consumable dollars for the mutual fund investor.

Thus, for example if one fund (Company B) earned 13% per annum, but with very little turnover, and the other fund (Company A) earned 15% with a very high level of turnover, it is quite likely that their after-tax returns would be reversed. Of course, in practice, the situation is a bit more complicated because some companies might be better than others at utilizing the Capital Gains Refund Mechanism or avoiding redemptions at inopportune times, but the main idea is the same.

In fact, the report's results for these Canadian-managed funds confirm similar studies done with

U.S.-managed funds by a variety of tax scholars during the last few years. (The report contains a full literature review.) In the U.S. as well, the ranking of funds on a pre-tax return basis is significantly different from ranking of funds on an after-tax return basis. And, in the U.S. the Securities and Exchange Commission has recently required fund companies to disclose both pre-tax and after-tax returns in their prospectus and information distributed to the public.

In sum, the results and implications from this research report should be of interest to the large number of Canadians and their financial advisors—especially those with a high net worth—who hold some mutual funds outside their tax sheltered accounts. Indeed, if mutual funds are selected based on past performance—even though the general direction of stock markets are difficult if not impossible to predict—then investors may want to focus on historical after-tax performance measures, since fund managers do have substantial control over tax efficiency.

Indeed, if we are in an environment of permanently lower investment returns—as many experts are now predicting—then tax awareness and efficiency becomes more important as one of the ways in which advisors can add value relative to their competition.

THE IMPORTANCE OF AFTER-TAX RETURNS

By Tim Cestnick, Managing Director and Leigh Vyn, Associate Vice President, National Tax Services, AIC

Canadian investors have not focused enough on the impact that taxes can have on the accumulation of wealth over the long run. The reason is because mutual fund companies report their fund returns on a pre-tax basis, so investors have not been fed the proper information on the subject. As of April 1, 2001, mutual funds in the U.S. were required to report their returns on both a pre-tax and an after-tax basis. With this change in U.S. regulations comes the debate as to whether or not the same after-tax reporting should be required in Canada.

AIC has sponsored research by the IFID Centre at the Fields Institute in Toronto, entitled "The Impact of Personal Income Taxes on Returns and Rankings of Canadian Equity Mutual Funds." The paper examined 10 years of returns from 343 equity and balanced mutual funds managed by Canadian companies to assess the impact of personal income taxes in the investor's hands on the fund's relative performance and ranking. The results of the paper found that the ranking of funds on an after-tax basis was significantly different from rankings on a pre-tax basis. What does this report mean to the average investor? Consider the following six implications.

1. Non-registered investors are losing returns.

The after-tax research found that an investor at the highest marginal tax rate lost, on average, 1.35% annually to taxes on a Canadian equity or balanced fund as a result of distributions over the period 1991 to 2001. The actual amount of the loss could be higher depending on the specific mutual fund chosen.

2. After-tax investing will increase in importance.

Nearly two-thirds of all investable wealth in Canada today is outside of RRSPs and RRIFs where taxes can easily impact the growth of those assets. Further, billions of dollars are expected to pass from one generation to the next over the next decade. When this happens, money that was once held in registered accounts will generally end up in the non-registered accounts of the deceased's children and grandchildren. What this means is that, over time, more people will have non-registered money. A focus on after-tax investing is becoming more and more critical.

3. **Take pre-tax mutual fund rankings with a grain of salt.** The main finding from the research is that the ranking of mutual fund performance on a pre-tax basis is significantly different from the ranking on an after-tax basis. In fact, funds that ranked in proximity on a pre-tax basis had a 46% probability of having that ranking reversed on an after-tax basis. What does this mean? Simply that mutual fund rankings on a pre-tax basis are not relevant when investing outside of a registered plan.

4. **Understand your mutual fund manager's attitude to tax.** Most money managers in Canada today grew up in the pension industry, where taxes are not a concern since money in a pension fund is not subject to taxes annually. Therefore, before you invest in a fund, you need to know the fund manager's attitude to tax, and whether it is part of his or her mandate to minimize taxes annually for investors.

5. **Ask your mutual fund company for after-tax information.** As an investor, you should be focused on after-tax rates of return. However, since this type of reporting is not yet required in Canada, the first step you can take is to ask your fund company to disclose after-tax returns. The more investors in Canada who demand this type of reporting, the more likely it will be that the securities regulators will make this mandatory for all fund companies.

6. **After-tax reporting could become law.** There is currently no requirement in Canada to report after-tax returns. The purpose of AIC sponsoring the after-tax research in Canada was to illustrate the significant impact that taxes play in calculating the true investment return to the investor.

Based on the findings of the after-tax research, it is clear that investors need to have after-tax information when selecting funds to make intelligent decisions and to maximize long-term wealth accumulation. Not all funds are created equal, and simply looking at rates of return on a pre-tax basis does not tell investors the whole story. We hope and anticipate that, one day, securities regulators in Canada will follow the lead of U.S. regulators and recognize the importance of after-tax information, and require the disclosure of after-tax returns in Canada.