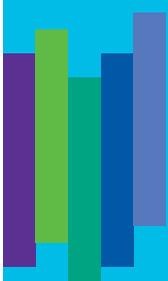


INVESTMENT PRINCIPLES
INFORMATION SHEET FOR CFA PROFESSIONALS

**ISSUES AFFECTING
BENEFITS**

**THE IMPACT
OF TAXES**



4B

IMPORTANT NOTICE

The term "financial advisor" is used here in a general and generic way to refer to any duly authorized person who works in the field of financial services, including the following:

- Investment brokers
- Mutual fund brokers
- Scholarship plan dealers
- Exempt market dealers
- Portfolio managers
- Investment fund managers
- Life insurance agents
- Financial planners (F.Pl.)



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THE IMPACT OF TAXES

Much like fees, taxes reduce investors' net returns and accumulated wealth. Different sources of returns, such as interest, domestic (and foreign) dividends, and capital gains, may be taxed differently, which affects the relative attractiveness of financial products. Furthermore, in some countries, income from specific investment vehicles is tax-exempt, such as municipal securities in the United States. The inclusion of financial assets in specific government-sponsored programs can also affect the overall tax burden. For example, several governments have put in place tax-exempt and tax-deferred programs to promote savings for such purposes as children's education and retirement. Taxation affects net returns and risk. Therefore, it affects product selection and asset allocation.

GENERAL IMPACT OF TAXES

AND FEES ON RETURNS

Let's consider a fixed-income investment yielding 3.0% before management fees and taxes. We initially ignore the possibility of capital gains or losses. Let's also consider two scenarios of asset management fees (0.30% and 1%) and two tax scenarios (non-taxable and taxable at 40%). The following table shows the average yearly returns after taxes and fees and the cumulative value of a \$1,000 yearly investment over 10, 20, and 30 years.

	TOTAL CAPITAL			
	FEES = 0.30%		FEES = 1.00%	
	Non-Taxable	Taxable	Non-Taxable	Taxable
Net Return	2.70%	1.62%	2.00%	1.20%
10 Years	\$11,612	\$10,936	\$11,169	\$10,684
20 Years	\$26,769	\$23,778	\$24,783	\$22,722
30 Years	\$46,553	\$38,859	\$41,379	\$36,285

Taxes further decrease the accumulation of capital. But taxes also reduce the net impact of fees, assuming all fees are tax-deductible. For example, although the difference between the 0.30% and 1.00% fee scenarios is 0.70% on a before-tax basis, it is only 0.42% on an after-tax basis ($0.70\% \times (1-40\%)$).

Furthermore, this example shows the importance of managing both taxes and fees. The earned income of a lower-fee, tax-exempt scenario is much greater than that of a higher-fee, taxable scenario. For example, in the 30-year case, the earned income is \$16,553 ($\$46,553 - (30 \times \$1,000)$) for the most favourable scenario, whereas it is only \$6,285 under the least favourable scenario.

SOURCES OF INCOME AND IMPACT OF TAXES

Most countries tax sources of investment returns differently. We will use examples from the U.S. and Canadian tax codes to illustrate. Canadian and U.S. tax policies have some common elements but there are also differences. Obviously, the reality can be quite complex.

SOURCE OF INCOME	UNITED STATES	CANADA
Interest	Taxed at ordinary tax rate except municipal securities which are untaxed.	Taxed at ordinary tax rate.
Eligible Domestic Dividends	Lower tax rate than interest income.	Lower tax rate through a tax credit designed to manage the impact of double taxation (corporate and individuals).
Foreign Dividends	Taxed at ordinary tax rate.	Taxed at ordinary tax rate.
Capital Gains	Taxed at ordinary tax rate if realized within one year but at a lower tax rate beyond one year.	Taxed at 50% of ordinary tax rate. No restriction on timing unless trading is unusually high.
Capital Losses	Can be used against current and forward gains and limited current income.	Can be used against current gains, forward gains and gains realized three years back.

Withholding taxes are another important consideration. Many countries levy a tax on dividends paid to foreign investors. Under the Canada-U.S. Tax Treaty, the withholding tax rate applicable to dividends is 15% in both countries. In principle if the dividend yield is 2%, a 15% levy would account for a loss of about 0.30% of returns. But investors can often recover withholding taxes by claiming a tax credit to offset foreign taxes in a taxable account or such taxes may not apply in some circumstances if countries have a tax treaty covering these situations. But it can get very complicated, even confusing. The net amount of withholding taxes on foreign securities may differ according to the type of instrument (such as direct investment in securities, locally listed ETFs or mutual funds that own the securities directly, foreign-listed ETFs, locally listed ETFs that may invest in foreign-listed ETFs, foreign-listed ETFs that may invest in foreign securities, etc.), and the location of the assets (in taxable, tax-deferred, or tax-exempt accounts). As a rule, it is preferable to avoid buying local ETFs that invest in foreign-listed ETFs that hold international securities. In such cases, some withholding taxes may not be recoverable or avoided. But, surprisingly, it is very difficult to find comprehensive literature on this issue.

Finally, there is the issue of the deduction of fees for tax purposes (in taxable accounts). Again, it can get somewhat complicated. For our purpose, we will assume that fees reduce the taxable cash distribution of interest and dividend income in mutual funds and ETFs, and that there is sufficient income distribution to cover these expenses.¹

Now let's consider the following scenario: the ordinary tax rate is 40% and the tax rates on eligible domestic dividends and capital gains are both 20%. Let's also assume that the yearly expected return on fixed income and on equities (domestic and international) are, respectively, 3.0% and 7.0% (2.0% from dividends and 5.0% from capital gains). What would the net return be in all possible contexts? For now, we assume that capital gains are realized and taxed on a yearly basis. This assumption will be relaxed later on. Fees on financial products vary widely but with the advent of ETFs, equity products do not necessarily have higher fees than fixed-income products. In fact, they are often lower. We also assume total fees of 1.00% in all cases.

	FIXED INCOME	DOMESTIC EQUITIES	FOREIGN EQUITIES
Interest/Dividend	3.00%	2.00%	2.00%
Capital Gain Assumption	-	5.00%	5.00%
Gross Return	3.00%	7.00%	7.00%
Fees	1.00%	1.00%	1.00%
Net Return	2.00%	6.00%	6.00%
Taxes Paid	0.80%	1.20%	1.40%
Net Return After Tax	1.20%	4.80%	4.60%
Taxes as % of Net Return	40%	20%	23%

Despite lower tax rates on domestic dividends and capital gains, the taxes expected to be paid on domestic equities are higher than those paid on interest income because of the higher expected return. Of course, different return assumptions and tax rates could lead to a different conclusion.

¹ In the United States, investment management fees paid outside a fund are deductible but only beyond a 2% threshold of adjusted gross income of the miscellaneous itemized deductions in schedule A. In Canada, there is no such threshold but the level of fees must be reasonable.

TAXES AND ASSET LOCATION

Financial assets can be held in taxable accounts, tax-exempt accounts (Roth IRAs in the United States and TFSAs in Canada), or tax-deferred accounts (401-K in the United States and RRSPs in Canada). A tax-exempt account allows for the accumulation and eventual withdrawal of accumulated capital without any tax implications. A tax-deferred account implies that any tax contribution is deductible at the ordinary current tax rate and any withdrawal is taxed at the ordinary tax rate prevailing at that time. The return on investment accumulates free of taxes. Thus, in both tax-exempt and tax-deferred accounts, the return on investment accumulates tax-free. What differs is what happens when a capital

contribution is made and when capital is withdrawn. Let's again assume a stable 40% tax rate and a \$1,000 annual contribution for 30 years to a tax-exempt account allocated to a domestic equity portfolio as above.

In this case, the \$1,000 contribution every year will cost the investor only \$600 after tax because he will receive a tax refund of \$400. Let's assume the investor has a choice between allocating \$1,000 to the tax-deferred account or \$600 to the tax-exempt account, because the net cost to the individual is essentially the same. After 30 years, assuming a 6.0% net return and unchanged tax rates, the accumulated capital in both accounts will be as follows:

	TAX-DEFERRED	TAX-EXEMPT
Yearly Investment	\$1,000 before tax refund	\$600
Value in 30 Years at 6.0%	\$83,803	\$50,281
Value After Tax in 30 years	\$50,281	\$50,281

The capital accumulated before tax is substantially higher in a tax-deferred account than in a tax-exempt account. But assuming the tax rate in 30 years is the same as it is now, both accounts will have the same purchasing power because if you withdraw capital from your tax-deferred account, it will be taxed at 40%. Thus we can conclude that both are usually equivalent if you assume your tax rate at retirement will be similar.

Furthermore, both options are preferable to a taxable account. For example, assuming the net return after tax is 4.8%, we could show that it would require an annual investment of \$747.30 to achieve the same after-tax value after 30 years. That amount is \$147.30 more than what would be required from a tax-deferred or tax-exempt account. In other words, you achieve the same standard of living while investing 19.7% less each year! It is very worthwhile for an investor to maximize the use of tax-exempt or tax-deferred accounts before investing through a taxable account.²

THE IMPLICATIONS

Investors should first maximize the use of tax-exempt or tax-deferred accounts. An investor who avoids taxes can reach the same final wealth with much less risk, or much greater wealth with the same level of risk.

Assuming investors hold a diversified portfolio of fixed income, domestic equities, and foreign equities, we should not be indifferent to the location of our financial assets. The traditional advice has often been to place fixed income in non-taxable accounts first (tax-deferred or tax-exempt) because of the higher tax rate on interest income. But the exact answer is related to:

- the relative level of income and capital gains expected on different asset classes and products;
- the specific tax rates that apply to each investor on different sources of income;

² The actual amount would be slightly less because capital gains would not fully be taxed on a yearly basis.

- the investment instruments used, the location of the instruments (taxable versus untaxed versus tax-deferred accounts), and how these factors affect the withholding taxes on foreign assets; and
- the expected annual turnover of the different portfolios (namely how fast capital gains will be taxed).

For example, contrary to conventional wisdom, in an environment of very low interest rates, an investor could be better-off putting local equities in a non-taxable account for two reasons:

- First, the amount of total taxes paid per dollar of assets may still be greater on equities because of higher expected returns even though the tax rates are lower on domestic dividends and capital gains than on interest income;
- Second, we should remember that the compounding effect of periodic returns is proportionally more powerful when the expected return (tax-adjusted) is higher. For example, on a portfolio allocated 50% to equities and 50% to fixed income, it is preferable to compound returns at 6% on equities and at 2% in fixed income than to compound returns at 5% on equities and 3% on fixed income. The argument to hold equities first in the non-taxable account may also apply to foreign equities even though we may be unable to obtain a tax credit for withholding taxes or benefit from an exemption. The main reason is that the tax rate on foreign dividends is higher than on domestic dividends if the securities are held in a taxable account. Thus, in a non-taxable account, investors may be subject to withholding taxes but will avoid the more significant tax rate on dividends.

To illustrate further the importance of asset location, let's assume our target asset allocation is 30% fixed income, 40% domestic equities, and 30% foreign equities. Asset returns,

fees and tax rates are as specified earlier in this document. Let's also assume that 30% of our yearly savings may be placed in a non-taxable account. The portfolio is rebalanced on a yearly basis to maintain the target allocation. Four options are considered:

- All assets are placed in a taxable account and all capital gains are realized on a yearly basis (implying a 100% portfolio turnover).³ This is a worst-case scenario.
- Assets are invested evenly in the non-taxable and taxable accounts, and all capital gains in the taxable account are realized on a yearly basis.
- Fixed-income assets are invested first in the non-taxable account. Because fixed income compounds at a lower rate than equities, the weighting of the non-taxable account will tend to fall below 30%. Thus it will be necessary to invest in fixed income in the taxable account as well. Two scenarios of portfolio turnover within the equity portfolios are considered, 100% and 30% (in parentheses). A lower turnover allows the portfolio to postpone taxation related to capital gains and consequently to compound asset returns on a larger investment base. The tax implications of the turnover required to rebalance the portfolio are fully recognized annually. But new contributions facilitate the rebalancing and mitigate the tax implications.
- Domestic equities are invested first in the non-taxable account. Initially, it will be necessary to invest in domestic equities in the taxable account as well to complete the 40% target allocation. But because untaxed equities will compound at a faster rate than taxed fixed-income securities and taxed foreign equities, it is eventually possible that all domestic equities could be in the non-taxable account. The same scenarios of portfolio turnover are considered as above.

Assuming, as before, \$1,000 saved each year for 30 years, we obtain the following results:

	Taxable	Allocated Evenly	Fixed Income in Tax-Exempt Account First	Equity in Tax-Exempt Account First
Final Value After Tax	\$54,943	\$58,645	\$56,904 (\$57,350)	\$59,384 (\$59,601)
Gains in Excess of Yearly Contributions	\$24,943	\$28,645	\$26,904 (\$27,350)	\$29,384 (\$29,601)
Average Nominal Return	3.66%	4.03%	3.86% (3.90%)	4.10% (4.12%)

³ We assume that capital gains, if in the United States, will retain the tax status of long-term capital gains (securities held for more than one year).

Using these particular parameters, fixed income should not be placed in the tax-exempt account first. Although the increase in final value may not appear impressive, we have to remember that \$30,000 of the final wealth is accounted for by the yearly savings. Thus, in the taxable scenario, the net investment gains are \$24,943 whereas they are \$29,601 under the most favourable option, a difference of nearly 20%.

Relaxing the turnover assumption does increase the final wealth but the impact is obviously more mitigated if domestic equities are placed in the non-taxable account. Furthermore, the impact of a low turnover is not necessarily as significant as often advertised. For example, the tax benefits on total wealth of portfolio turnovers ranging from 0% (capital gains fully taxable at the end of the 30 years – a theoretical scenario) to 100% (capital gains fully taxable annually) were evaluated. The analysis shows that the tax benefits of a turnover lowered from 100% to 40% are less than those resulting from reducing turnover from 40% to 20%, a level of turnover that few active or passive products are able to deliver.⁴ Thus the benefits of a lower portfolio turnover are mitigated when the turnover is already above 30% or 40%.

In specific circumstances, locating some equities in the tax-exempt account may also simplify the process of rebalancing. Investors often hesitate to rebalance because of the cash-flow implications of generating taxable capital gains. If the amount of capital invested in tax-exempt and/or tax-deferred accounts is relatively significant in relation to the size of the taxable account, it may be possible to structure the portfolio in order to realize most of the rebalancing outside the taxable account. Furthermore, we have to consider that if we hesitate to rebalance for tax reasons, we may lose part of the rebalancing premium discussed in document 3f.

Taxes significantly complicate the investment process, and there are many issues we have not covered, such as the impact of taxes on risk. For example, although taxes reduce investors' returns they also affect risk by lowering the volatility of net returns. While a capital gain will be reduced by taxes, a capital loss will also be reduced net of taxes if the capital loss can be used against a capital gain. Finally, it is always financially preferable to make maximum use of non-taxable accounts. But determining which financial assets should be placed in taxable versus non-taxable accounts requires customized planning efforts. In a low-rate environment, we cannot assume that the traditional advice of allocating fixed income to tax-exempt or tax-deferred accounts is necessarily the right one. But because there is very little consensus on this issue, we simply recommend that advisors remain wary of conclusions that are based on traditional beliefs and analyze this aspect in the context of each investor.

⁴ These calculations ignore the possibility of tax-loss harvesting.