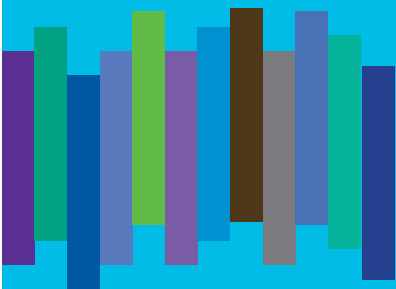




CFA Societies
Canada

INVESTMENT PRINCIPLES
INFORMATION SHEET FOR INVESTORS

THE IMPACT OF INFLATION



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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 INFLATION

Inflation depreciates the value of wealth and acts as a form of tax on income and wealth. Although there are many discussions among experts concerning the inflation protection provided by specific asset classes, most studies show that it is hard to protect ourselves against the impact of increased inflation. For example, it is far from certain that real estate and gold are effective long-term inflation hedges, despite the rhetoric. At the very least, we can estimate the potential impact of inflation on our standard of living.

INFLATION AND THE REAL VALUE OF WEALTH

Assuming a 2% annual inflation rate, a basket of goods and services currently selling for \$1,000 would sell for \$1,020 one year later. In 30 years, this basket would cost \$1,811. Consequently, \$1,000 30 years from now would only have a fraction of its current purchasing power. In fact, it would total about \$552.

However, in the presence of inflation we could assume that average investors may be able to increase their annual savings contribution at the rate of inflation (assuming their net income/salary is tracking inflation). For example, if we consider a 30-year scenario starting with an initial saved amount of \$1,000, the amount of savings could be increased to \$1,020 in year one, \$1,040.40 in year two and so on. Hence, over 30 years, the total amount of savings would not be \$30,000 but rather \$40,568.

We will now introduce the concept of nominal return and real return. The nominal return is simply the gross return paid to you before any consideration for fees or taxes, such as a certificate of deposit that pays you 4% in interest. The real return is simply the nominal return net of the inflation rate. What matters to you is the real return and not the nominal return. For example, if we ignore the effect of taxes, generating a nominal annual return of 4% in the absence of any inflation will maintain the same purchasing power for your savings as generating a nominal return of 6% in the presence of a 2% inflation rate. In both examples, the real return is 4%. In order to increase the purchasing power of our savings, the real return net of fees and taxes must be positive. In other words, the nominal returns net of fees and taxes must be greater than the inflation rate.

Assuming again a 6% nominal yearly return on investment, the following table describes the final wealth using four scenarios:

- **SCENARIO 1 (BASE CASE):** No inflation, fixed annual contribution of \$1,000, no fees and no taxes. This is an unrealistic scenario, but it serves to illustrate the impact of inflation on final wealth;
- **SCENARIO 2:** Annual inflation of 2%, inflation adjusted contributions starting with \$1,000, no fees and no taxes;
- **SCENARIO 3:** Annual inflation of 2%, inflation adjusted contributions starting with \$1,000, fees of 1% and no taxes;
- **SCENARIO 4:** Annual inflation of 2%, inflation adjusted contributions starting with \$1,000, fees of 1% and 40% tax on investment income.

	Base Case	Scenario 2	Scenario 3	Scenario 4
Nominal Return (after fees and taxes)	6.0%	6.0%	5.0%	3.0%
Real Return (after inflation)	6.0%	4.0%	3.0%	1.0%
Total Savings	\$30,000	\$40,568	\$40,568	\$40,568
Total Investment Income	\$53,802	\$63,633	\$47,302	\$22,870
Total Nominal Wealth	\$83,802	\$104,201	\$87,870	\$63,438
Total Real Wealth	\$83,802	\$57,527	\$48,511	\$35,022

The final wealth is specified in nominal dollars but also in terms of the purchasing power that these nominal dollars will have 30 years from now (in terms of today's purchasing power). For example, let's consider the last scenario, where the nominal return net of fees and taxes is 3.0%. The total savings over 30 years is \$40,568, and the investment income on those savings is \$22,870 for a total cumulated nominal wealth of \$63,438. However, this final wealth has the same purchasing power as \$35,022 now.

Furthermore, what if the nominal return after fees and taxes of the investment portfolio was exactly 2% (a real return of 0% in the presence of 2% inflation)? What would the total real wealth be then? When the nominal return net of fees and taxes is equal to the inflation rate, the total real wealth is equal to the total amount of real savings. In this case, it would be \$30,000 (or 30 times \$1,000). The nominal return on investment would have been just enough to maintain the purchasing power of the savings.

SUMMARY AND CONCLUSION

Inflation acts as a tax on wealth and income. At the very minimum, we need to increase our annual savings by the rate of inflation to mitigate its effects. We also need to generate a return after fees and taxes at least equal to the inflation rate simply to keep inflation from reducing the purchasing power of our wealth. This further reinforces the necessity to make maximum use of tax-exempt and tax-deferred accounts to increase the likelihood of generating a portfolio return that will exceed inflation after fees and taxes.