Cost Effective Rebalancing

# Objective

To examine the impact of simple cost and tax effective strategies on various standard rebalancing strategies for retail investment accounts. Rebalancing will occur at the portfolio level, which will be comprised of two or more accounts. The strategy will be layered over any ‘normal’ retail investing strategy.

# Description

Most of the research regarding portfolio rebalancing excludes the impact of taxes and costs. However, in the real world, and in particular at a retail investor level, taxes and trading costs can have a serious impact on the performance of a portfolio.

The purpose of this exercise will be to create a program that will provide some insight into this impact. The program will provide the ability to run a standard rebalancing strategy across multiple taxable and not taxable accounts, for perhaps two or more tax payers in different tax brackets, and then analyze the impact of deploying simple cost and tax strategies on the overall returns.

The strategies that will be used include:

1. Using cash flow for example from interest and dividends to rebalance on an ongoing basis across the portfolio.
2. Use cash deposits to invest towards the target allocation.
3. Using index mutual funds for rebalancing of smaller amounts until such time as sufficient funds are in the index mutual funds to warrant transfer to etfs. This will avoid costs of purchase etfs too often.
4. Avoid selling any investments with tax gains in taxable accounts.
5. Minimum Trade sizes
6. Seek out year end tax loss opportunities for assets trading at a loss.
7. Emphasize different asset classes in taxable versus non-taxable accounts. Have the ability to favour say equities in a taxable account. Try different allocations for different tax environment to see which does better.
8. Testing using cash inflows and withdrawals to rebalance.
9. If a trade is triggered, try to determine if near term cash flow might negate the need for the trade.

The benchmark strategy will be applied uniformly across all accounts, with all dividends and interest payments reinvested into the investment that generated them (DRIP).

Benchmark strategies will include threshold adjustments, and calendar adjustments, or combinations thereof.

Cost per transaction will be typical discount costs for a discount broker.

This system does not recommend:

1. Which account to put money into.
2. Transfers between accounts.
3. Tax advice.

Will need the following objects

1. Portfolio Object:
2. Account Object:
3. Investment Object:
4. Tax Account:

Steps:

1. Find data for etfs and munge. Get data into usable format, probably SQLite, as other information will likely need interacting in tables.
   1. Use ishares for etfs due to longevity and readily available information
   2. Use the [TD DIY Mutual fund series](https://www.savvynewcanadians.com/td-eseries-funds-review/), which has low MERs and longevity the same as the iShares ETFs.
2. Structure program to pass one account trading system with ability to adjust threshold, periodicity, or both.
3. Create metrics to show performance of the standard portfolio.
4. Add cash savings and tax enhancements one at a time, all must be modules that can be turned on or off in a set of main variables.
5. Add reporting to compare standard portfolio to enhanced portfolio.

The system will be able to accumulate tax in a portfolio tax account.

Historical investment data: The oldest index funds in Canada are the iShares managed by blackrock. Investment history and detailed information is readily available on the Blackrock site.

Asset classes will be as follows:

1. Cash: this is the cash in the account, can be positive or negative
2. Money Market: No money market to start
3. Fixed Income: XBB, inception date:
4. Equity: Canada US Int

Munging data;

Here is a list of the TD eSeries funds I would like data for.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TD Canadian Bond Index Fund  FTSE TMX Canadian Universe Bond Index |  | Fixed Income | Inception | Canadian |
| TD Canadian Index Fund -e | Nov 1, 1999 | Equity | October 10, 2000 | Canadian |
| TD US Index Fund |  | Equity |  | US |
| TD International Index Fund |  | Equity |  | Int |
|  |  |  |  |  |