PWL

Tax-loss Selling

Using Canadian-listed ETFs to defer taxes on capital gains

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No one likes losing money on an investment. But sometimes realizing capital losses can enhance your bottom line by reducing your tax bill while you patiently wait for markets to recover.

Tax-loss selling—also known as tax-loss harvesting—is a technique for realizing, or crystallizing, capital losses in your non-registered accounts so they can be used to offset capital gains.

To be clear, ***there is no benefit to tax-loss selling in your TFSA or RRSP***. This entire discussion only applies to your non-registered accounts, where deferring capital gains taxes can give your money more time to grow.

Tax-Loss Selling Made Crystal Clear

As an example, suppose you invest $100,000 in a Canadian equity ETF, and then the value declines to $90,000. By selling your shares, you can crystallize a capital loss of $10,000, and potentially use that loss to offset a $10,000 capital gain elsewhere in your portfolio. By deferring thousands of dollars in taxes, there's more left in your portfolio to compound over time.

Tax-loss selling may sound like the cardinal sin of "selling low," but we'll explain in a moment why, when properly executed, that's not the case.

Before engaging in tax-loss selling, it is important to ensure your tax strategy is based on accurate information. It is your responsibility (not your brokerage's) to ensure your adjusted cost base (ACB) is accurate and up-to-date. This includes making adjustments for buys, sells, DRIPs, return of capital, reinvested distributions and unit splits. For more details on how to track your adjusted cost base, please download our white paper, As Easy as ACB.

When you file your tax return, any capital losses must first be used to offset capital gains you've incurred in the current tax year. Any remaining losses can be carried back for up to three years, or carried forward indefinitely to offset future capital gains. (To carry back current capital losses to prior years, you need to file form T1A - Request For Loss Carryback with your return.)

Here's an example. Let's say you got a big promotion in 2017 and your marginal tax rate jumped from 30% to 54%. Let's also assume your investments had taxable capital gains of $25,000 annually from 2016 to 2018, and then a net capital loss of $25,000 in 2019. You could carry back the loss to offset gains realized during any of the previous three years. One option would be to use the losses to offset the capital gain from 2017, since your marginal tax rate was much lower in 2016. That way you'd get more bang for your capital-loss buck:

Tax Year	2016	2017	2018	2019
Taxable capital gain (+) or net capital loss (-)	+$25,000	+$25,000	+$25,000	-$25,000
Marginal tax rate	30%	54%	54%	54%
Tax deferral from claiming 2019 loss	$7,500	$13,500	$13,500	-

When Is It OK To "Sell Low"?

Back to that "selling low" conundrum. You may be wondering if it's wise to realize a capital loss by selling a security that plays an important role in your portfolio.

If you're holding individual stocks, it probably isn't wise. Say, for example, your Royal Bank shares are down in value, and you sell them to capture the capital loss. You could then end up missing a big upward move in that stock.

Now, you might decide to just turn around and buy back more Royal Bank shares at the new, low price. Nice try. If you do that, the Canada Revenue Agency (CRA) would declare your sale a superficial loss, and you wouldn't be able to use it to offset gains.

This is why investors who buy individual stocks have limited opportunity for tax-loss selling. And it's another way ETF investors have an advantage. By following the techniques in this paper, you can systematically harvest capital losses, maintain constant exposure to all the asset classes in your portfolio, ***and*** comply with CRA rules.

The Superficial Loss Rule

So, again, the CRA does not allow you to sell a security to crystallize a loss, immediately buy it back, and continue to hold it. If you do that, your claim will be denied as a superficial loss.

Bottom line, the CRA doesn't think much of you playing shell games with your taxable holdings, so they require you to abide by a two-part superficial loss rule. And by the way, "you" includes people affiliated with you, which includes your spouse or a corporation controlled by either of you.

Whoever you are, you …

A. *cannot buy, or have the right to buy, the same or identical property, during the period starting 30 calendar days before the sale, and ending 30 calendar days after the sale; and*

B. *cannot still own or have the right to buy, the same or identical property 30 calendar days after the sale.*

In part A of this rule, the period spans 61 days: the settlement date of the sale, plus the 30 calendar days before and the 30 calendar days after the settlement date. Part B sounds redundant, but there's an important subtlety. You can *buy* the identical security any time during the 61-day period, but you must ensure you don't still *own* it by the end of the period. If you do, the loss will be denied and added back to the adjusted cost base of the identical security.

Determining the 61-Day Period

As mentioned above, the 61-day period includes the settlement date of the sale as well as the 30 calendar days before and after the settlement date. For an ETF, the settlement date is T+2, or two business days after the initial trade. When determining settlement dates, skip over any weekends or holidays when the Canadian stock markets are closed.

Next, count backward and forward 30 days starting at the settlement date. Ensure all purchases of the identical security settle outside of this 61-day period (unless you plan on selling the shares before the end of the 61-day period).

Example. In 2018, you purchase 3,000 shares of the Vanguard FTSE Canada All Cap Index ETF (VCN) for $100,000 in your non-registered account. On December 24, 2018 your holding has fallen in value to $84,000, so you sell all 3,000 shares, realizing a capital loss of $16,000.

The transactions would settle on December 28 (T+2). The 61-day period would run from November 28, 2018, to January 27, 2019 (30 calendar days before and after the settlement date). You would therefore have been able to buy VCN anytime on or before November 23, 2018, as the trade would have settled on November 27, 2018, the trade day before the 61-day period began.

You would also be free to repurchase VCN anytime on or after January 24, 2019, as the trade would settle on January 28, 2019, the trade day after the 61-day period ends. But any purchases during this window could trigger a superficial loss if the shares are still held at the end of the period.

NOVEMBER 2018

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER 2018

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	**24**T+0	25	26	**27**T+1	**28**T+2	29
30	31					

JANUARY 2019

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Similar vs. Identical Property

The good news for ETF investors is that you can avoid the superficial loss rule while still maintaining exposure to the same asset class by using similar, but slightly different holdings.

Remember, the superficial loss rule only applies if you sell and then repurchase the same security or an identical property. If you're buying and selling individual stocks, this distinction is obvious. With ETFs, however, there's an important rule to understand: two ETFs may still be considered "identical property," even if they're from different fund companies.

In 2001, the CRA issued a bulletin stating that two index funds tracking the same benchmark are considered identical property. So, according to this interpretation, you cannot sell the iShares Core S&P/TSX Capped Composite Index ETF (XIC) and replace it with the BMO S&P/TSX Capped Composite Index ETF (ZCN), as they both track the S&P/TSX Capped Composite Index.

Other less obvious examples of identical property would include the Mackenzie Canadian Equity Index ETF (QCN) and the TD Canadian Equity Index ETF (TTP), which both track the Solactive Canada Broad Market Index. Vanguard, BMO and iShares all have funds tracking the S&P 500 Index, and these would also be considered identical property according to the CRA.

However, it is possible to find pairs of ETFs in the same asset class that are similar, but track different indexes. By selling your existing ETF and repurchasing one of these non-identical counterparts you can realize a capital loss and still maintain similar exposure in your portfolio.

Example. In 2018, you purchase 3,000 shares of the Vanguard FTSE Canada All Cap Index ETF (VCN) for $100,000. On December 24, 2018, you sell all 3,000 shares for proceeds of $84,000, resulting in a capital loss of $16,000.

You immediately buy 3,818 shares of the iShares Core S&P/TSX Capped Composite Index ETF (XIC) for $84,000. Both trades settle on December 28, 2018 (T+2). Because you are replacing one Canadian equity ETF with another, you maintain a constant exposure to this asset class. And because these two ETFs track different indexes, they do not meet the CRA's definition of identical property, so the superficial loss rule will not apply.

Identifying acceptable ETF pairs can be time-consuming. At the end of this paper, we'll provide our suggestions.

Partial Disposition of Shares

It's also possible to trigger a *partial* superficial loss, whereby only a portion of the capital loss is denied. This would occur if you or your affiliates (as previously defined) buy back fewer shares of the identical property during the 61-day holding period, and you are still holding these shares at the end of the period. The partial loss is calculated based on the following equation:

$$\textbf{Denied Loss} = \frac{(\text{Least of S, P and B})}{\text{S}} \times \text{L}$$

Where:

S = the number of shares sold

P = the number of shares bought during the 61-day period

B = the number of shares remaining at the end of the 61-day period

L = the initial loss

Example: You purchase 3,000 shares of the Vanguard FTSE Canada All Cap Index ETF (VCN) in 2018 for $100,000. On December 24 you sell all 3,000 shares for $84,000, resulting in a capital loss of $16,000. You immediately purchase the iShares Core S&P/TSX Capped Composite Index ETF (XIC) with the proceeds.

On January 9 of the following year (which is within the 61-day period), your spouse makes a TFSA contribution and buys 300 shares of VCN (which is the same security you just sold at a loss in December). Your spouse continues to hold these shares until after the 61-day period ends on January 27, 2019.

Since your spouse repurchased 300 of the 3,000 shares you initially sold, 10% of your $16,000 loss will be denied. This will result in a partial superficial loss of $1,600, reducing your actual $16,000 loss to $14,400.

$$\textbf{Denied Loss} = \frac{(\text{Least of 3,000, 300 and 300})}{3{,}000} \times \$16{,}000$$

$$= \frac{300}{3{,}000} \times \$16{,}000$$

$$= \mathbf{\$1{,}600}$$

Some spouses prefer to keep their finances separate, but this example illustrates the need for spouses to coordinate their investment strategies, especially when tax-loss selling.

Dividend Reinvestment Plans (DRIPs)

Enrolling in a dividend reinvestment plan (or DRIP) through your brokerage account is also a surefire way to realize partial superficial losses. If you (or your spouse) have a DRIP set up on the same ETF you sell for tax purposes in your non-registered account, a portion of the loss may not be allowed. This is why we advise against using DRIPs when implementing a tax-loss selling strategy.

Continuing with our example, suppose your spouse also owns 3,000 shares of VCN in a TFSA he or she purchased outside the 61-day window. In January 2019, your spouse receives a dividend from the fund, most of which is used to automatically purchase 20 additional shares of VCN. If these 20 shares are not sold by the end of the 61-day period, you've just triggered another partial superficial loss.

Multiple Portfolio Managers

Multiple portfolio managers can also cause unintended superficial losses. Some investors feel that using more than one advisor (or managing part of their portfolio on their own) offers some diversification benefit. The problem is, it can cause major headaches when it comes to avoiding superficial losses. If one of the managers sells a security to realize a loss, there is no way for he or she to know whether another manager is buying shares of the same security during the 61-day period.

Corporate Considerations

For corporate accounts, we generally won't engage in tax-loss selling, preferring to harvest gains instead. Corporate tax-gain harvesting involves selling an ETF at a gain, thereby increasing the notional capital dividend account by half of the gain. Tax-free dividends can then be distributed to shareholders, up to the available balance in the capital dividend account.

Depending on the shareholder's personal tax rate, this can be a more tax-efficient strategy than distributing additional taxable dividends or salary. As this tax-gain harvesting strategy is complex, we recommend working with your accountant to determine whether it is appropriate for you.

Underperformance of Your Replacement ETF

Since your replacement ETF is similar, but not identical, to your original ETF, it's unlikely the performance of the two funds will be the same over the 30-day period.

For example, say you took a much-needed break from your in-laws on Christmas Eve 2018 to check on your portfolio. You discovered your $100,000 holding of the Vanguard FTSE Canada All Cap Index ETF (VCN) had dropped to $84,000. You sold your holding and used the proceeds to buy the iShares Core S&P/TSX Capped Composite Index ETF (XIC), realizing a $16,000 loss in the process. After 30 days had passed, you sold your XIC holding and repurchased VCN.

During this 30-day period, the replacement ETF happened to outperform the original ETF by about 0.15%, including dividends. This doesn't seem like much, but on an $84,000 holding, it means you scored an extra $122 from your tax-loss selling round trip.

This is an ideal result, but things don't always work out so well. There's also a risk the replacement ETF will underperform the original ETF during the 30 calendar days after the switch.

If your tax-loss selling pairs are properly selected, there should be minimal performance difference, or "tracking error." In fact, if the two ETFs track very similar indexes at the same cost, there's good reason to continue holding the replacement ETF indefinitely, instead of switching back to your original ETF after 30 days. If both ETFs are expected to perform similarly going forward, and there's no way to determine which will slightly outperform the other over your investment horizon, you're really just flipping a coin.

When Should You Sell Your Losers?

Many investors—and advisors—pay little attention to tax-loss selling until year-end. By doing so, they miss opportunities that arise from market downturns throughout the year.

Consider an investor who purchased $100,000 of the iShares Core MSCI Emerging Markets IMI Index ETF (XEC) in April 2013. XEC was significantly down in the third quarter of the year, but during the fourth quarter it made an impressive recovery. Our investor could have crystallized a loss of more than $6,000 in July or August, but by the end of the year the opportunity had vanished.

This is why we recommend keeping an eye on your non-registered accounts year-round, not just in December. Pay particular attention when you know your holdings are probably taking a hit. Market downturns aren't usually a big secret.

Date	Market Value $
April 30, 2013	$101,049
May 31, 2013	$99,266
June 28, 2013	$95,094
July 31, 2013	$93,605
August 30, 2013	$93,693
September 28, 2013	$97,776
October 31, 2013	$103,227
November 29, 2013	$104,178
December 31, 2013	$103,342

Source: BlackRock, Inc.

Next, how big of a capital loss do you need to realize to make it worthwhile? As there are additional trading costs with this strategy, such as bid-ask spreads and commissions, the loss should be large enough that the tax benefit easily outweighs the one-time expenses from implementing the strategy.

In his book The Only Guide You'll Ever Need for the Right Financial Plan, Larry Swedroe suggests two requirements that should be met before engaging in tax-loss selling. The security should have:

1. A minimum dollar loss of **$5,000, *and***
2. A minimum percentage loss of **5%**

Example: Suppose you purchased $100,000 of the Vanguard FTSE Canada All Cap Index ETF (VCN) in your non-registered account and your holding is currently showing a dollar loss of $5,000 (calculated as *market value minus book value*). This loss meets the minimum dollar threshold of $5,000.

The holding also has a percentage loss of 5% (which is the $5,000 loss divided by the $100,000 book value). This also meets the minimum percentage threshold of 5%, so both rules have been satisfied. To realize the loss, you could sell all your shares of VCN and immediately purchase an equivalent amount of a similar, but not identical security.

Symbol	Quantity	Market Value	Book Value	$ Gain/Loss	% Gain/Loss
VCN	3,000	$95,000	$100,000	–$5,000	–5.00%

We prefer Swedroe's double-barrel rule to specifying only a dollar amount. Requiring a percentage threshold as well ensures the bid-ask spread cost of trading ETFs won't offset the potential tax advantage.

Without a rule specifying a minimum percentage loss on a security, a $5,000 loss on a $100,000 holding would be treated the same as a $5,000 loss on a $1 million holding. In both cases, the tax deferral benefit is the same, but the bid-ask spread costs on the larger holding will be 10 times higher. So, if the bid-ask spread cost of a $100,000 tax-loss selling trade is $160, its cost would increase to $1,600 for a $1 million tax-loss selling trade. A trading cost of this magnitude would certainly offset the tax benefit for many years.

Market Recovery During 30-Day Period: Are You Feeling Lucky?

We currently use Swedroe's $5,000 and 5% tax-loss selling thresholds with clients of PWL Capital's Toronto team, but with one minor tweak. If we're planning to switch back to the original ETF after 30 days, we increase the minimum dollar and percentage loss thresholds to **$10,000** and **10%** respectively. This adjustment considers the impact a strong market recovery during the 30-day holding period could have on the results of our strategy.

PWL Toronto's adjusted tax-loss selling rule of thumb	If switching back to the original ETF	If continuing to hold the replacement ETF
Minimum dollar loss on the security, ***and***	$10,000	$5,000
Minimum percentage loss on the security	10%	5%

Market recoveries during the 30-day period can be bittersweet. It's sweet that your portfolio value is up. But you'll face a bitter capital gain when you switch back to your original ETF after 30 days. This can offset some—or potentially all—of the benefit from your initial tax-loss selling trade.

Example: Imagine you sold $84,000 of Vanguard FTSE Canada All Cap Index ETF (VCN) on Christmas Eve 2018 at a loss of $6,000 and replaced it with XIC. In January 2019, the Canadian stock markets experienced an impressive recovery. If you had sold your replacement shares of XIC after 30 days, they would have been worth around $93,000, resulting in a capital gain of $9,000 (which more than offset your initial $6,000 capital loss). Had you instead increased your tax-loss selling thresholds to $10,000 and 10%, this situation could have been avoided.

A significant recovery in the markets is hardly the worst thing that could happen, but it would still defeat the purpose of tax-loss selling. This is another reason to consider not switching back to your original ETF after the 30-day period has passed. If this is not possible, consider increasing your tax-loss selling dollar and percentage thresholds to $10,000 and 10%, respectively.

When we introduce you to our tax-loss selling pairs at the end of this paper, we'll let you know which of the original ETFs you should probably switch back to after thirty days, and which replacement ETFs you could consider holding for the long-term.

Banking Capital Losses: Losses Saved Are Losses Earned

We've also heard advisors say it only makes sense to realize capital losses if their clients have already realized capital gains in the current year, or in the three prior years. They see no benefit to banking capital losses for later use.

We disagree with this logic, for a number of reasons.

First, many Canadian-listed ETFs distribute capital gains at year-end, and these gains can be significant. By anticipating the need for capital losses to offset gains from these transactions, you can leave more money in the portfolio to grow.

Second, most investors will need to periodically rebalance their portfolios by selling equities, which will usually trigger capital gains. Having an arsenal of capital losses to offset these gains will also come in handy when filing your future tax returns.

Finally, having carried-forward capital losses provides you with more portfolio management options. As new and improved ETFs are released, you may want to switch from a more expensive, less tax-efficient ETF to a cheaper or more tax-friendly alternative. We experienced this with our PWL clients when some Canadian-listed international equity ETFs began holding individual stocks directly back in 2014, making them more tax-efficient. For those clients with capital losses "in the bank," it was easier to switch to the better products with fewer tax implications.

Which ETF Pairs Should I Use When Tax Loss Selling?

To review, tax-loss harvesting means selling an existing ETF at a capital loss, and then repurchasing a similar ***but not identical*** holding to maintain asset class exposure in your portfolio.

Again, the new ETF must not be deemed identical to the one you just sold, or you'll violate the CRA's superficial loss rules. If you do, you'll lose the tax savings you were hoping to capture.

To that end, it helps to have a list of ETF pairs that offer you similar exposure to the same asset class without being deemed "identical property." Fortunately, due to the seemingly endless supply of new ETFs being launched, tax-loss selling for Canadians has never been easier. Here, we'll suggest ETF pairs we believe would be good candidates.

We'll start with the most broadly diversified asset class ETFs for global (ex Canada), Canadian, U.S., international and emerging markets stocks. We then suggest a replacement ETF that will provide similar market exposure while tracking a different index. Oh, and as always, you should speak with your accountant or other tax specialist before engaging in any tax strategy.

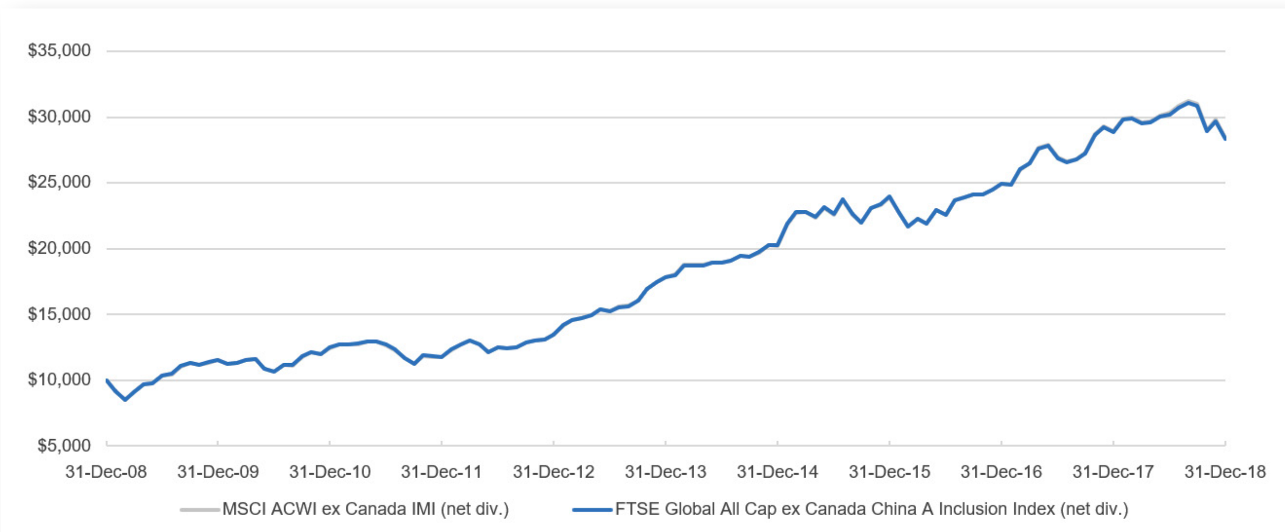
Global (ex Canada) Equities Pairing: XAW Pairs with VXC

The [iShares Core MSCI All Country World ex Canada Index ETF (XAW)] is a familiar fund among DIY investors, featured in the [Canadian Couch Potato] and [Canadian Portfolio Manager] model portfolios. XAW follows the MSCI All Country World ex Canada Investable Market Index. This index tracks the performance of large-, mid- and small-cap companies in the U.S., emerging markets, and developed markets outside of North America.

The [Vanguard FTSE Global All Cap ex Canada Index ETF (VXC)] is the best XAW replacement for tax-loss selling purposes, as it also tracks large-, mid- and small-cap companies across the world, excluding Canada. From 2009–2018, the ETFs' underlying indexes had a low monthly tracking error of **0.065%**, indicating similar expected performance going forward. Over the same period, performance for both indexes was nearly identical — so similar, in fact, you can barely make out the grey line of the MSCI ACWI ex Canada IMI in a graph charting both of them.

By the way, the term *tracking error* is commonly used to describe the size of an index fund's outperformance or shortfall relative to its benchmark. We're using the more technical application of the term here, based on the standard deviation of the differences in monthly returns. As used in this post, ***the lower the tracking error, the more closely two indexes track one another.***

Growth of $10,000: MSCI ACWI ex Canada IMI (net div.) (in CAD) vs. FTSE Global All Cap ex Canada China A Inclusion Index (net div.) (in CAD)



Sources: FTSE Russell Indices, MSCI, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

Until late 2019, VXC had a higher management expense ratio than XAW (0.27% vs. 0.22%) and higher expected foreign withholding taxes in a taxable account (0.13% vs. 0.04%). This meant most investors would have preferred to switch back to XAW once the 30-day holding period had been satisfied. Plus, we would have encouraged investors to only realize a loss on XAW if it was at least

$10,000 and 10% of the book value. However, Vanguard recently fixed VXC's tax inefficiencies and lowered its fee. With this update, we can now change the loss threshold to $5,000 and 5% of book value, with no need to switch back to XAW.

Canadian Equities: VCN Pairs with FLCD (which also pairs with XIC and ZCN)

If you're currently holding the Vanguard FTSE Canada All Cap Index ETF (VCN), a suitable tax-loss selling alternative would be the Franklin FTSE Canada All Cap Index ETF (FLCD). Although the fund names suggest they track the same index, a closer inspection reveals they have slightly different benchmarks.

VCN follows the FTSE Canada All Cap Index, which tracks the performance of 200 large-, mid- and small-cap Canadian companies. FLCD tracks the FTSE Canada All Cap ***Domestic*** Index, which also tracks the same 200 large-, mid- and small-cap companies as VCN, but in slightly different proportions.

The term "Domestic" in the name indicates that this index does not adjust any company weights based on foreign ownership restrictions. In contrast, the FTSE Canada All Cap Index tweaks its allocation to certain companies in the index based on these restrictions.

Governments impose limits to foreign ownership of companies in certain industries (such as aviation or telecommunications) when they feel domestic ownership would in the public interest. For example, Bell Canada (BCE) is subject to the Telecommunications Act, which governs the ownership and control of Canadian telecommunications carriers. The Act restricts foreign investment in voting shares of BCE to a maximum of 33 1/3%. If we view FLCD's holdings, Bell Canada has a weight of around 2.4% as of September 30, 2019. VCN has a weight of only 0.8%. That's a third of FLCD's weight, which is the maximum foreign ownership of the company allowed.

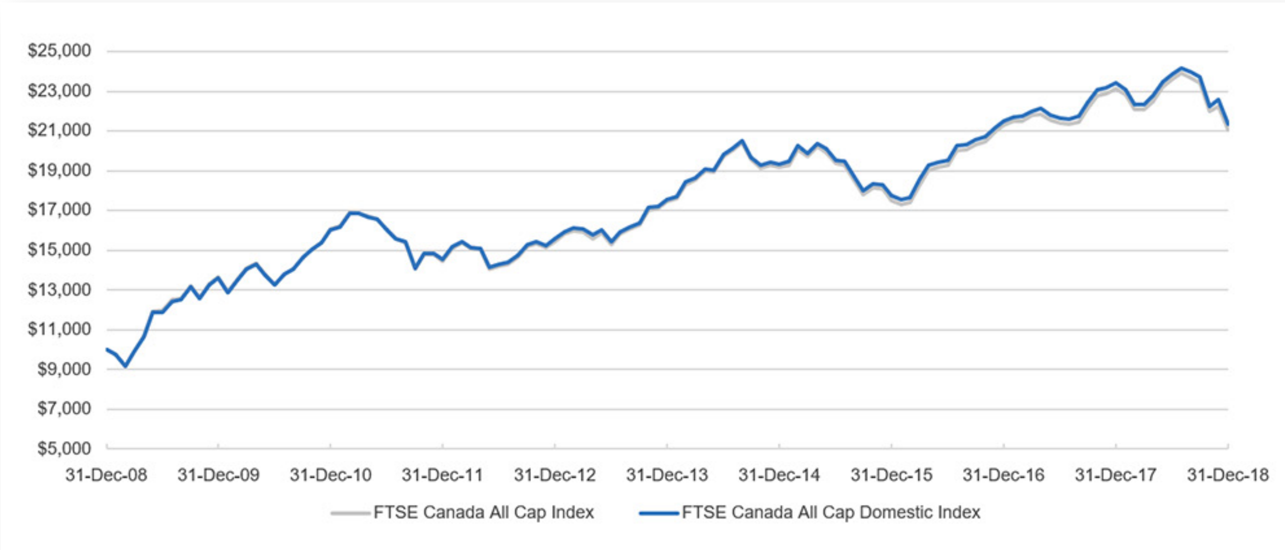
Another way to think about the difference between these two ETFs is that FLCD's index is a better gauge of what Canadian investors would consider to be the "available Canadian stock market," while VCN's index is what foreign investors would consider as their "available Canadian stock market." Knowing this, it's surprising that Vanguard Canada hasn't shifted VCN to the domestic version of this index yet.

From 2009–2018, these two indices had a monthly tracking error of **0.106%**. This is relatively small, which suggests the two ETFs are interchangeable. By comparison, the monthly tracking error over the same period between the FTSE Canada All Cap Index and the S&P/TSX Capped Composite Index was slightly higher, at **0.177%**.

If you're considering a switch from VCN to FLCD to realize a capital loss, there's little reason to switch FLCD back to VCN after 30 days, unless another tax-loss selling opportunity presents itself at the end of the required holding period. Both ETFs are expected to have similar returns going forward (they also have the same management expense ratio at 0.06%). Without knowing which ETF will *slightly* outperform over your future investment horizon, we recommend saving yourself the extra cost and hassle by hanging onto the replacement ETF.

The graph below shows the growth of $10,000 in the FTSE Canada All Cap Index (grey line) and the FTSE Canada All Cap *Domestic* Index (blue line) between 2009 and 2018. This time, the very similar tracking produces a modest "shadow effect."

Growth of $10,000: FTSE Canada All Cap Index vs. FTSE Canada All Cap Domestic Index



Sources: FTSE Russell Indices, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

FLCD is also the best available tax-loss selling replacement for either the iShares Core S&P/TSX Capped Composite Index ETF (XIC) or the BMO S&P/TSX Capped Composite Index ETF (ZCN).

Both XIC and ZCN follow the S&P/TSX Capped Composite Index, which tracks 233 large-, mid- and small-cap companies in the Canadian stock market. As the name suggests, this index caps any company's weighting at 10% (avoiding a future Nortel-like meltdown due to a single company dominating the index). If a single company were to one day become larger than 10% of the FTSE Canada All Cap *Domestic* Index, we might see significantly higher tracking error between the two indices. The S&P/TSX Capped Composite would cap the security at 10%, but the FTSE Canada All Cap *Domestic* Index would continue to allow the stock's weight within its index to increase above 10%.

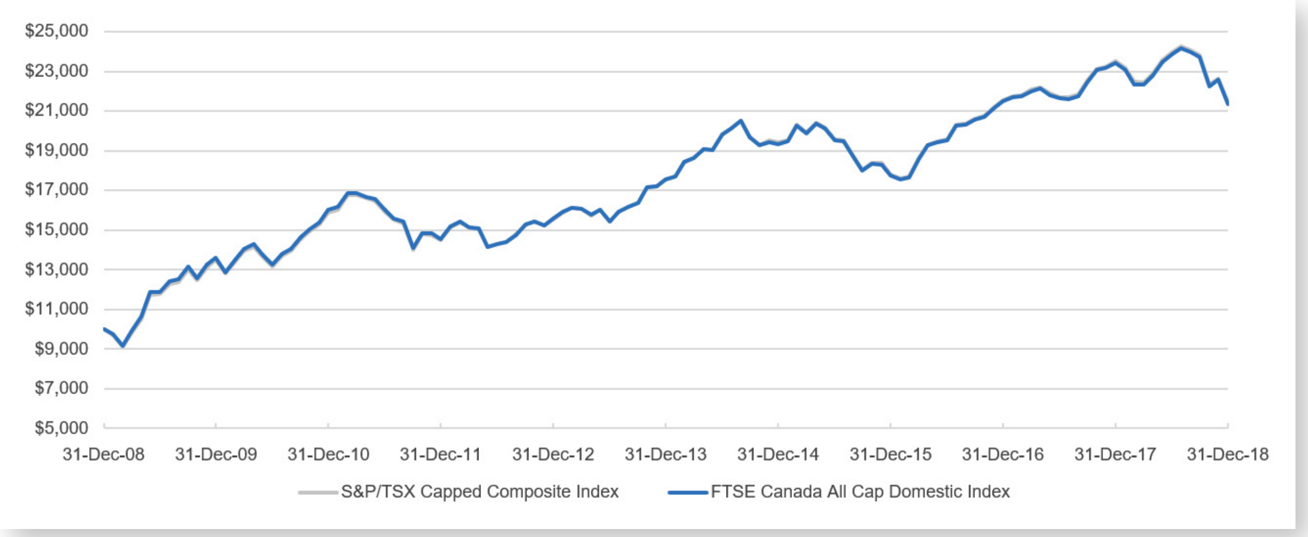
Another notable difference is FLCD excludes a number of Brookfield Limited Partnerships, while XIC and ZCN include them. This is because FTSE indexes exclude limited partnerships, while S&P Dow Jones indexes do not.

In terms of similarities, the S&P/TSX Capped Composite Index does not adjust company weights with regards to foreign ownership restrictions. This makes it more similar to the FTSE Canada All Cap *Domestic* Index than to the FTSE Canada All Cap Index. We can see in the graph below how this single difference has led to nearly identical performance from 2009 through 2018. The grey S&P/TSX Capped Composite Index line is mostly indistinguishable from the blue FTSE Canada All Cap Domestic Index line.

Over the same period, these two indices had a monthly tracking error of **0.118%**. As mentioned above, the monthly tracking error between the S&P/TSX Capped Composite Index and the FTSE Canada All Cap Index was slightly higher at **0.177%**.

What happens if Vanguard ever changes the underlying index for VCN to the *Domestic* version at some point in the future? All else equal, we'd then prefer pairing XIC or ZCN with VCN for tax-loss selling, so FLCD would no longer be needed.

Growth of $10,000: S&P/TSX Capped Composite Index vs. FTSE Canada All Cap Domestic Index



Sources: FTSE Russell Indices, S&P Dow Jones Indices, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

U.S. Equities: XUU Pairs with VUN

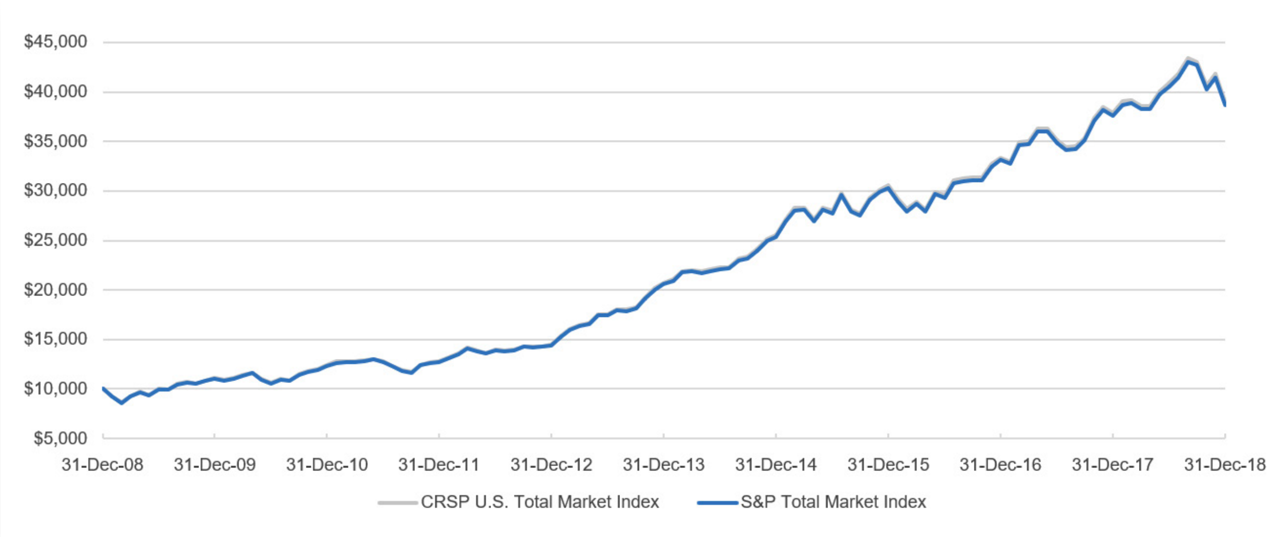
If you've decided on the iShares Core S&P U.S. Total Market Index ETF (XUU) for your U.S. equity exposure, we recommend the Vanguard U.S. Total Market Index ETF (VUN) as the most suitable tax-loss selling replacement.

XUU follows the S&P Total Market Index, which tracks the performance of around 3,800 large-, mid-, small- and micro-cap companies, making it one of the most diversified U.S. equity indexes. VUN follows an equally impressive index, the CRSP U.S. Total Market Index, which includes over 3,500 large-, mid-, small- and micro-cap companies.

After switching from XUU to VUN, cost-conscious investors may prefer to switch back, as XUU has an annual management expense ratio (MER) of 0.07%, while VUN has an MER of 0.16%. We don't feel this is entirely necessary, but if you're planning to switch back after the 30-day period has ended, consider only selling XUU if it has a loss of $10,000 and 10% of the book value. This will increase the odds you'll still have an overall capital loss when you switch VUN back to XUU.

From 2009 through 2018, the underlying indices had a monthly tracking error of **0.065%**. As with our last example, the blue and grey lines in the graph below mostly overlap.

Growth of $10,000: CRSP U.S. Total Market Index (in CAD) vs. S&P Total Market Index (in CAD)



Sources: CRSP, S&P Dow Jones Indices, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

International Equities: XEF Pairs with ZEA (not VIU)

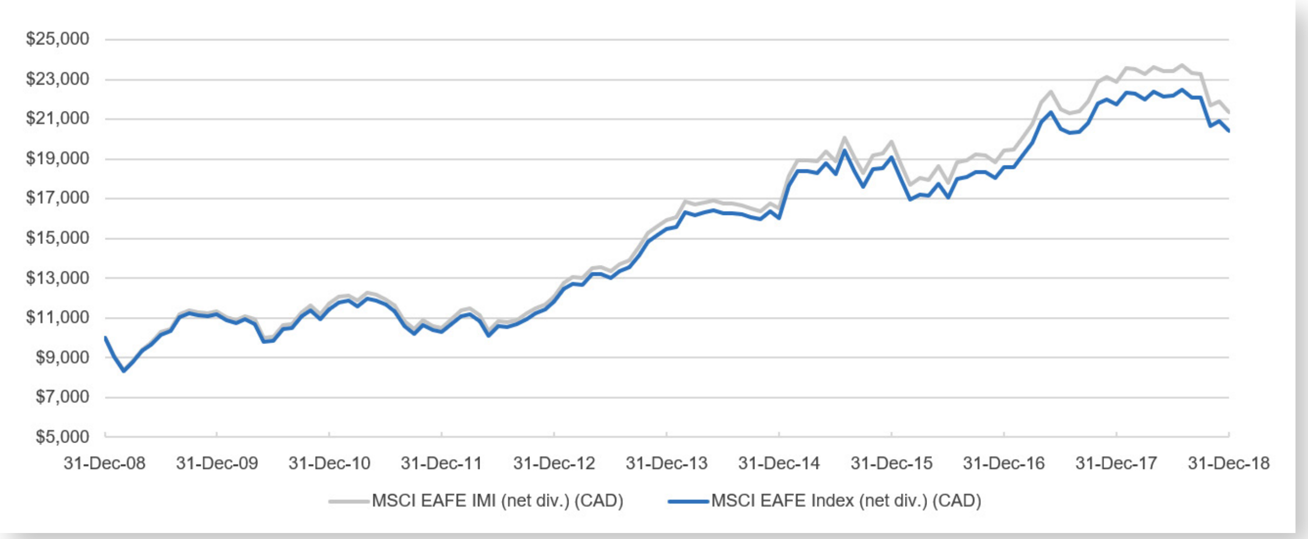
Suitable tax-loss selling pairs for international equity ETFs are harder to come by than for Canadian or U.S. equity ETFs.

Investors may consider the iShares Core MSCI EAFE IMI Index ETF (XEF) and the Vanguard FTSE Developed All Cap ex North America Index ETF (VIU) to pair well with one another, as they both track over 3,000 large-, mid- and small-cap companies in developed countries outside of North America. However, index providers FTSE and MSCI differ in which countries they consider to be "developed." The most obvious example is South Korea, which is classified as a developed market by FTSE, but as an emerging market by MSCI. As VIU follows a FTSE index, it allocates more than 4% of its portfolio to over 400 Korean companies, while XEF (which follows an MSCI index) has no Korean companies in its fund. This difference has led to a higher monthly tracking error than our previous tax-loss selling pairs, at **0.226%**.

Alternatively, investors could consider switching from XEF to the BMO MSCI EAFE Index ETF (ZEA). Both ETFs track an MSCI index, which avoids the South Korea country classification issue just discussed. But ZEA does not invest in small-cap stocks, which will result in return differences, relative to XEF.

From 2009 through 2018, the underlying indices had a monthly tracking error of **0.171%**, which is lower than our last example (indicating a more optimal tax-loss selling pair). However, the index performance during this 10-year period was noticeably different. So, if you go this route, you may want to consider switching back to XEF after the 30-day period has passed if you intend to maintain broad-market exposure. In this case, though, we again recommend a $10,000 and 10% tax-loss selling threshold.

Growth of $10,000: MSCI EAFE IMI (net div.) (CAD) vs. MSCI EAFE Index (net div.) (CAD)



Sources: MSCI, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

Emerging Markets Equities: XEC Pairs with ZEM (VEE, not so much)

The same country classification issue arises with emerging markets indexes as well. At first glance, you might think you could replace the iShares Core MSCI Emerging Markets IMI ETF (XEC) with the Vanguard FTSE Emerging Markets All Cap Index ETF (VEE).

Both underlying indexes follow thousands of large-, mid- and small-cap companies in developing markets across the globe. However, as XEC follows an MSCI index (which considers South Korea to be an emerging market), it allocates more than 12% of its fund to over 400 Korean companies. On the other hand, VEE (which follows a FTSE index) considers South Korea to be a developed country, and allocates these stocks to VIU, Vanguard's developed markets ETF. This difference has led to a relatively high monthly tracking error from 2009 through 2018 of **0.544%**.

Long story short? We believe a better tax-loss selling pairing for XEC is the BMO MSCI Emerging Markets Index ETF (ZEM). ZEM follows the MSCI Emerging Markets Index, and includes large- and mid-sized companies from developing markets around the world. As both ETFs follow MSCI indexes, they both include South Korean companies in their funds. The monthly tracking error from 2009 through 2018 for their underlying indexes was **0.213%**, which indicates they make a better couple than XEC and VEE.

Growth of $10,000: MSCI Emerging Markets IMI (net div.) (in CAD) vs. MSCI Emerging Markets Index (net div.) (in CAD)

Sources: MSCI, Morningstar Direct, Dimensional Returns 2.0 (2009 to 2018)

Best of Both Worlds, with a PWL Twist

We're the first to admit our tax-loss selling pairs for international and emerging markets equity ETFs are not ideal. The replacement BMO ETFs exclude the smaller companies that are part of the original iShares ETFs. As such, we expect more tracking error than we'd like to see.

If MSCI upgraded South Korea to developed markets status, we wouldn't have this problem. We could switch XEF to VIU, or XEC to VEE, knowing the future performance of our replacement fund would likely closely track our original ETF. Until that happens, though, it would appear we're stuck with these "next best" tax-loss selling pairs for international and emerging markets ETFs.

As we're not fans of "good enough" at PWL, we've come up with a better (albeit, more complicated) solution. For tax-loss selling purposes, we have adjusted our rules slightly to treat XEF and XEC as if they were a single holding. If the net unrealized dollar losses on the combined holdings of XEF ***and*** XEC are greater than $5,000, and the total percentage loss of both holdings is greater than 5%, we consider the threshold met. We would consider selling all units of both XEF and XEC and repurchasing VIU and VEE with the proceeds—even if the loss on one of the two ETFs is not above our tax-loss selling threshold, and even if one of the ETFs has an unrealized capital gain.

This relaxed rule allows us to realize the overall capital loss for our clients, maintain similar broad equity market exposure, and keep the CRA from crying foul. The tradeoff: It involves more number crunching—and another example!

Switching XEF and XEC to VIU and VEE

Suppose you bought **$80,088** of XEF and **$28,315** of XEC in September 2018, for a total book value of **$108,403**. At year-end, the value of XEF and XEC fell to **$72,924** and **$27,076**, respectively. You'd have a total market value of **$100,000**, and a total unrealized capital loss of **$8,403**.

XEF's unrealized dollar loss is $7,164, and its percentage loss is 8.9%. It is now a potential tax-loss selling candidate; it could be switched to ZEA to realize the loss.

On the other hand, XEC's dollar loss is only $1,239, and its percentage loss is only 4.4%, both of which are under our $5,000 and 5% tax-loss selling thresholds.

However, if we consider XEF and XEC to be a single position, their total dollar losses of $8,403 and percentage losses of 7.8% would meet our tax-loss selling requirements.

Security	Book Value ($)	Market Value ($)	Unrealized Capital Loss ($)	Unrealized Capital Loss (%)
iShares Core MSCI EAFE IMI Index ETF (XEF)	$80,088	$72,924	($7,164)	(8.9%)
iShares Core MSCI Emerging Markets IMI Index ETF (XEC)	$28,315	$27,076	($1,239)	(4.4%)
Total	**$108,403**	**$100,000**	**($8,403)**	**(7.8%)**

Sources: BlackRock Canada Inc., MSCI Index Fact Sheets as of December 31, 2018

After selling XEF and XEC, VIU and VEE will immediately need to be purchased, but in slightly different proportions. To determine the appropriate market-cap weights, you'll need to use the most recent month-end index fact sheets from MSCI and FTSE Russell Indices. Currently, the approximate splits are 73/27 for XEF/XEC, and 75/25 for VIU/VEE. For more information on this process, please refer to the blog post and video, Combining International and Emerging Markets Equity ETFs.

In this example, **$75,909** of VIU and **$24,091** of VEE would need to be purchased with the sale proceeds of $100,000 from XEF and XEC. These investment amounts provide market-cap-weighted exposure to international and emerging markets, as of December 31, 2018. The relative index weights fluctuate daily, but using the latest month-end index fact sheets should be close enough for our purposes.

Tracking ETF	Underlying Index	Market Cap (in USD)	Allocation (%)	Sale Amount ($)
iShares Core MSCI EAFE IMI Index ETF (XEF)	MSCI EAFE IMI	14,590,688	72.92%	$72,924
iShares Core MSCI Emerging Markets IMI Index ETF (XEC)	MSCI Emerging Markets IMI	5,417,489	27.08%	$27,076
Total	**MSCI EAFE + EM IMI**	**20,008,177**	**100.00%**	**$100,000**

Sources: BlackRock Canada Inc., MSCI Index Fact Sheets as of December 31, 2018

Tracking ETF	Underlying Index	Market Cap (in USD)	Allocation (%)	Purchase Amount ($)
Vanguard FTSE Developed All Cap ex North America Index ETF (VIU)	FTSE Developed All Cap ex North America Index	15,219,418	75.91%	$75,909
Vanguard FTSE Emerging Markets All Cap Index ETF (VEE)	FTSE Emerging Markets All Cap China A Inclusion Index	4,830,248	24.09%	$24,091
Total	**FTSE Global All Cap ex North America China A Inclusion Index**	**20,049,666**	**100.00%**	**$100,000**

Sources: Vanguard Investments Canada Inc., FTSE Russell Index Fact Sheets as of December 31, 2018

What About Asset Allocation ETFs?

Vanguard's Asset Allocation ETFs were launched in January 2018 and have become a popular choice for DIY investors. One of the downsides of these products (and there aren't many) is they're not ideal for tax-loss selling.

Take the Vanguard Balanced ETF Portfolio (VBAL) for example. Let's say you had purchased $1 million of the fund at the end of January 2018, shortly after its launch. There would have only been three days in 2018 when the fund showed a loss of at least $5,000 and 5% of its book value. (These were December 20, 21 and 24.) There were no days where the loss was at least $10,000 and 10% of the book value.

On those December days, you could have switched to a similar fund, like the iShares Core Balanced ETF Portfolio (XBAL), keeping in mind the wet paint was still drying on this fund too, at around the same time.

Unfortunately, had you switched XBAL back to VBAL after thirty days, you would have realized substantial capital gains due to the stock market recovery in January 2019. This would have offset the majority of the capital losses from your initial tax-loss selling trades. Also, the trading costs due to the ETF's bid-ask spreads would generally be larger when trading an asset allocation ETF, relative to trading the individual underlying ETFs. You're technically forced to sell and buy all of VBAL and XBAL's underlying ETF holdings behind the scenes, including the bond ETFs, which would not have been trading at large losses.

Had you instead purchased VBAL's underlying ETFs in similar proportions, there would have been many more tax-loss selling opportunities to take advantage of throughout the year (and no need to switch back to the original ETFs). There were 33 days during 2018 where VCN would have been trading at a loss that breached our tax-loss selling thresholds. VUN also had a few days when it qualified for tax-loss selling. Combined, VIU and VEE spent an impressive 84 days in the proverbial danger zone.

2018 Tax-Loss Selling Opportunities (Number of Days)

Month	VBAL	VCN	VUN	VIU+VEE	VAB	VBU	VBG
February 2018	0	2	1	1	0	0	0
March 2018	0	1	0	0	0	0	0
April 2018	0	1	0	0	0	0	0
May 2018	0	0	0	0	0	0	0
June 2018	0	0	0	0	0	0	0
July 2018	0	0	0	0	0	0	0
August 2018	0	0	0	8	0	0	0
September 2018	0	0	0	12	0	0	0
October 2018	0	6	0	22	0	0	0
November 2018	0	6	0	22	0	0	0
December 2018	3	17	2	19	0	0	0

Source: Vanguard Investments Canada Inc. (2018), FTSE Russell Indices as of December 31, 2018

On any of these days, you could have taken action to realize some capital losses. This would have been especially useful if you had already realized substantial capital gains when transitioning your $1 million portfolio to low-cost ETFs.

So, if you happen to be in a similar situation, and you don't mind the added complexity, it could make sense to consider purchasing a handful of ETFs instead of an asset allocation ETF in your taxable account. It would increase your chances of stumbling across tax-loss selling opportunities to offset the capital gains realized in your portfolio transition.

That said, the hassle factor is worth calculating into your costs. For many, a simple asset allocation ETF may still be your preferred route.

2019 Tax-Loss Selling ETF Pairs

Primary ETF	Symbol	Replacement ETF	Symbol	10-Year Monthly Index Tracking Error
iShares Core MSCI All Country World ex Canada Index ETF	XAW	Vanguard FTSE Global All Cap ex Canada Index ETF	VXC	
• *MSCI ACWI ex Canada IMI*		• *FTSE Global All Cap ex Canada China A Inclusion Index*		0.065%
Vanguard FTSE Canada All Cap Index ETF	VCN	Franklin FTSE Canada All Cap Index ETF	FLCD	
• *FTSE Canada All Cap Index*		• *FTSE Canada All Cap Domestic Index*		0.106%
iShares S&P/TSX Capped Composite Index ETF	XIC	Franklin FTSE Canada All Cap Index ETF	FLCD	
• *S&P/TSX Capped Composite Index*		• *FTSE Canada All Cap Domestic Index*		0.118%
BMO S&P/TSX Capped Composite Index ETF	ZCN	Franklin FTSE Canada All Cap Index ETF	FLCD	
• *S&P/TSX Capped Composite Index*		• *FTSE Canada All Cap Domestic Index*		0.118%
iShares Core S&P U.S. Total Market Index ETF	XUU	Vanguard U.S. Total Market Index ETF	VUN	
• *S&P Total Market Index*		• *CRSP US Total Market Index*		0.065%
iShares Core MSCI EAFE IMI Index ETF	XEF	BMO MSCI EAFE Index ETF	ZEA	
• *MSCI EAFE IMI*		• *MSCI EAFE Index*		0.171%
iShares Core MSCI Emerging Markets IMI Index ETF	XEC	BMO MSCI Emerging Markets Index ETF	ZEM	
• *MSCI Emerging Markets IMI*		• *MSCI Emerging Markets Index*		0.213%
iShares Core MSCI EAFE IMI Index ETF + iShares Core MSCI Emerging Markets IMI Index ETF	XEF + XEC	Vanguard FTSE Developed All Cap ex North America Index ETF + Vanguard FTSE Emerging Markets All Cap Index ETF	VIU + VEE	
• *MSCI EAFE + Emerging Markets IMI*		• *FTSE Global All Cap ex North America China A Inclusion Index*		N/A

Sources: CRSP, MSCI Inc., FTSE Russell Indices, S&P Dow Jones Indices, Dimensional Returns 2.0

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