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Foreign Withholding Taxes

How to estimate the hidden tax drag on US and international equity index funds and ETFs

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Canadian investors get an enormous benefit from diversifying their portfolios with US and international stocks. But this benefit carries a cost in the form of **foreign withholding taxes**.

Many countries impose a tax on dividends paid to foreign investors: for example, the US government levies a 15% tax on dividends paid to Canadians. Because these taxes are withheld before the dividends are paid in cash, they often go unnoticed by investors. But their impact can be far greater than that of management fees, which get much more attention.

> The withholding tax on US dividends paid to Canadians is technically 30%, but this can be reduced to 15% if you fill out the Internal Revenue Service's W-8BEN form. Your brokerage should have provided you with this form when you opened your account: if you are unsure, check with your brokerage before you purchase any US-listed securities.

The amount of foreign withholding tax payable depends on two important factors. The first is the **structure of the ETF or mutual fund** that holds the stocks. Canadian index investors can get exposure to US and international stocks in three ways:

- through a US-listed ETF
- through a Canadian-listed ETF that holds a US-listed ETF
- through a Canadian-listed ETF or mutual fund that holds the stocks directly

In all of these cases, investors are potentially subject to withholding taxes levied by the countries where the stocks are domiciled, whether that is the US, developed markets outside North America (western Europe, Japan, Australia), or emerging markets (China, Brazil, Taiwan). We refer to this as **Level I** withholding tax.

When international stocks are held indirectly via a Canadian-listed ETF that holds a US-listed ETF, investors may also be subject to what we've called **Level II** withholding tax. This is an additional 15% withheld by the US government before the US-listed ETF pays the dividends to Canadian investors.

> You can think of **Level I** foreign withholding tax like a departure tax you pay when taking a direct flight to Canada from a foreign country (including the US). **Level II** tax is like a second departure tax you pay when an overseas flight to Canada has a layover in the US.

The second key factor is the **type of account** used to hold the ETF or mutual fund. Different account types—RRSPs, personal taxable accounts, corporate accounts, Tax-Free Savings Accounts (TFSAs) and Registered Education Savings Plans (RESPs) — are vulnerable to foreign withholding taxes in different ways. For example:

- When US-listed ETFs are held directly in an RRSP (or other registered retirement account, such as a RRIF or a locked-in RRSP) investors are exempt from withholding tax from the US (but not from overseas countries).
- This exemption does not apply to TFSAs or RESPs.
- If you hold foreign equities in a personal taxable account, you will receive an annual T3 or T5 slip indicating the amount of foreign tax paid. This amount can generally be recovered by claiming the foreign tax credit on Line 405 of your return. (Since no tax slips are issued for dividends received in a registered account, any foreign withholding taxes incurred are not recoverable.)
- Holding foreign equities in taxable corporate accounts is generally less tax-efficient than holding them in taxable personal accounts. A full explanation is beyond the scope of this paper. However, to make our cost comparisons more relevant, we have assumed the taxation of foreign income in a corporation has a similar effect to recovering approximately **50%** of the final level of foreign withholding tax. Throughout the paper, we refer to this tax as "partially recoverable".

However, to our knowledge no one has **quantified the costs** of foreign withholding tax in a comprehensive way until now. As a result, investors may not have had enough information to make good decisions.

In this white paper, we discuss eight different fund structures, which we have labeled Type A though Type H. For each structure and each account type, we estimate the total cost of a representative fund by adding the fund's fee to the foreign withholding taxes that apply. The results are first explained in detail and then summarized in a table on page 12.

Always consider the big picture when making investment decisions. Foreign withholding taxes are just one of many costs of investing. Before choosing the right funds and account locations, consider the following factors as well:

The cost of currency conversion. In a large RRSP, it may be significantly more cost-effective to hold US-listed ETFs for your foreign equity exposure. However, this is only true if you can avoid paying large spreads to convert currency before purchasing the ETFs.

In taxable accounts, US-listed equity ETFs are not more tax-efficient than Canadian-listed ETFs that use US-listed equity ETFs. It may therefore make sense for DIY investors to use Canadian-listed ETFs in their taxable accounts—even though their MERs are slightly higher—to avoid the cost of currency conversion. (For a cheaper way to convert Canadian dollars to US dollars, refer to our series of white papers on Norbert's gambit.)

Your income tax situation. While holding foreign equities in a taxable account allows you to recover at least some of the foreign withholding tax, the dividends are taxed at your full marginal rate, and you'll face additional taxes on capital gains. For an investor in a high tax bracket, it is likely better to pay a 15% withholding tax on dividends in an TFSA (if you have the available contribution room) if the alternative is paying 46% income tax on dividends and 23% on capital gains.

US estate taxes. Wealthy Canadians may be subject to US estate taxes if they have significant holdings in US-listed ETFs. These investors may be better off holding Canadian-domiciled funds to avoid this risk, even if it means incurring foreign withholding taxes.

Most foreign equity mutual funds and ETFs available to Canadians can be classified in one of the following eight categories:

A. US-listed ETF of US stocks.

When Canadians hold a US-listed ETF of US stocks, they face only Level I foreign withholding taxes. This is exempted in RRSPs and recoverable in taxable personal accounts, making Type A ETFs extremely tax-efficient:

- In an **RRSP**, Level I withholding taxes do not apply.
- In a **taxable account**, Level I withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply, but are partially recoverable.
- In a **TFSA or RESP**, Level I withholding taxes apply and are not recoverable.

Level I withholding tax on Type A funds is 15% of dividends. We have used the Vanguard S&P 500 ETF (VOO) as an example.

Example: Total estimated cost of the Vanguard S&P 500 ETF (VOO)

RRSP $= ER$
$= 0.05\%$

Taxable $= ER$
$= 0.05\%$

Corporate $= ER + FWT_{Level\ I} \times 50\%$
$= 0.05\% + [15\% \times (2.0\% - 0.05\%)] \times 50\%$
$= 0.05\% + 0.29 \times 50\%$
$= 0.20\%$

TFSA or RESP $= ER + FWT_{Level\ I}$
$= 0.05\% + 0.29\%$
$= 0.34\%$

Where:
ER = Most recently reported expense ratio of the US-listed ETF
D/P = Dividend yield of the underlying index as of December 31, 2013
$FWT_{Level\ I}$ = $15\% \times (D/P - ER)$

B. Canadian-listed ETF that holds a US-listed ETF of US stocks.

Canadian ETF providers such as Vanguard and iShares often take advantage of economies of scale by getting their exposure to US markets by simply holding a US-listed ETF.

On the iShares website you can identify Type B funds by clicking the "Holdings" tab on the ETF's web page. The US-listed ETF will be named near the top of the page, followed by a list of the "Aggregate Underlying Holdings" (i.e. the individual stocks in that ETF).

These funds can also be identified by looking at the Statement of Investments section in the fund's annual report. For example, the annual report for the Vanguard S&P 500 Index ETF (VFV) reveals its primary holding is the US-listed Vanguard S&P 500 ETF (VOO):

Statement of Investment Portfolio

As at 31 December 2012

Number of Shares	Description	Average Cost ($)	Fair Value ($)	% of Net Assets
	Exchange-Traded Fund			
406,827	*Vanguard S&P 500 ETF	26,051,156	26,388,584	99.9
Total investments		26,051,156	26,388,584	99.9
Other assets less liabilities			14,526	0.1
Total net assets			26,403,110	100.0

* This fund (a U.S.-based Vanguard ETF) is managed by The Vanguard Group, Inc. Refer to Note 5(b).

Source: Vanguard Investments Canada Annual Report, 2012

Because the underlying stocks are domiciled in the US, only Level I withholding tax applies. Unlike with Type A funds, there is no exemption from this withholding tax when Type B funds are held in an RRSP:

- In an **RRSP, TFSA or RESP**, Level I withholding taxes apply and are not recoverable.
- In a **taxable account**, US withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply, but are partially recoverable.

In our example below, we calculate the estimated cost of holding the Vanguard S&P 500 Index ETF (VFV), assuming a 15% Level I withholding tax.

Example: Total estimated cost of the Vanguard S&P 500 Index ETF (VFV)

RRSP $= \mathbf{MER + FWT_{Level\ I}}$
$= 0.17\% + [15\% \times (2.0\% - 0.05\%)]$
$= 0.17\% + 0.29\%$
$\mathbf{= 0.46\%}$

Taxable $= \mathbf{MER}$
$\mathbf{= 0.17\%}$

Corporate $= \mathbf{MER + FWT_{Level\ I} \times 50\%}$
$= 0.17\% + 0.29\% \times 50\%$
$\mathbf{= 0.32\%}$

TFSA or RESP $= \mathbf{MER + FWT_{Level\ I}}$
$= 0.17\% + 0.29\%$
$\mathbf{= 0.46\%}$

Where:
MER = Most recently reported management expense ratio of the Canadian-listed ETF
ER = Most recently reported expense ratio of the US-listed ETF
D/P = Dividend yield of the underlying index as of December 31, 2013
$\mathbf{FWT_{Level\ I}} =$ 15% × (D/P – ER)

C. Canadian-domiciled mutual fund or Canadian-listed ETF that holds US stocks directly.

The foreign withholding tax implications for Type C funds are almost identical to those of Type B securities. Holding the US stocks directly has little impact on the Level I foreign withholding taxes relative to Type B funds

- In an **RRSP, TFSA or RESP**, Level I withholding taxes apply and are not recoverable.
- In a **taxable account**, US withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply, but are partially recoverable.

Most index mutual funds tracking the S&P 500 fall into this category, including the TD US Index Fund e-Series (TDB902). However, among Canadian-listed ETFs, only the BMO S&P 500 Index ETF (ZSP) holds the stocks directly.

Example: Total estimated cost of the BMO S&P 500 Index ETF (ZSP)

RRSP	$= \mathbf{MER + FWT_{Level\ I}}$
	$= 0.17\% + (15\% \times 2.0\%)$
	$= 0.17\% + 0.30\%$
	$= \mathbf{0.47\%}$
Taxable	$= \mathbf{MER}$
	$= \mathbf{0.17\%}$
Corporate	$= \mathbf{MER + FWT_{Level\ I} \times 50\%}$
	$= 0.17\% + 0.30\% \times 50\%$
	$= \mathbf{0.32\%}$
TFSA or RESP	$= \mathbf{MER + FWT_{Level\ I}}$
	$= 0.17\% + 0.30\%$
	$= \mathbf{0.47\%}$

Where:
MER = Most recently reported management expense ratio of the Canadian-listed ETF or mutual fund
D/P = Dividend yield of the underlying index as of December 31, 2013
$\mathbf{FWT_{Level\ I}}$ **=** 15% × D/P

D. US-listed ETF that holds developed markets stocks directly.

Dividends from ETFs of this type are subject to unrecoverable Level I withholding taxes levied by the countries where the stocks are domiciled (which include countries in western Europe, Japan and Australia).

Except when held in an RRSP, Type D funds are also subject to Level II withholding tax imposed by the US government before the ETFs pay the dividends to Canadian unitholders:

- In an **RRSP,** Level I withholding taxes apply and are not recoverable. Level II withholding taxes do not apply.
- In a **taxable account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes recoverable.
- In a **corporate account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are partially recoverable.
- In a **TFSA or RESP**, Level I and Level II withholding taxes apply and are not recoverable.

Since the stocks are held in a US-listed ETF, Level I withholding taxes are payable at rates determined by tax treaties between these overseas countries and the US. In order to estimate these tax rates, we've used the most recent 5-year average paid by the iShares MSCI EAFE ETF (EFA). For Level II withholding tax, we've assumed 15% on the remaining dividends.

Estimated Level I Foreign Withholding Tax of a Type D Fund

iShares MSCI EAFE ETF (EFA)	July 31, 2009	July 31, 2010	July 31, 2011	July 31, 2012	July 31, 2013	5-Year Average
Dividend Income $	1,102,118,246	1,047,803,335	1,287,385,914	1,408,135,736	1,388,903,159	–
Foreign Withholding Tax $	82,551,033	85,167,442	97,729,230	101,032,071	95,827,259	–
Foreign Withholding Tax %	**7.5%**	**8.1%**	**7.6%**	**7.2%**	**6.9%**	**7.5%**

Sources: BlackRock Annual Reports, 2009-2013

Example: Total estimated cost of the iShares MSCI EAFE ETF (EFA)

RRSP $= ER + FWT_{Level\ I}$
$= 0.35\% + (7.5\% \times 3.0\%)$
$= 0.35\% + 0.23\%$
$= \mathbf{0.58\%}$

Taxable $= ER + FWT_{Level\ I}$
$= 0.35\% + 0.23\%$
$= \mathbf{0.58\%}$

Corporate $= ER + FWT_{Level\ I} + FWT_{Level\ II} \times 50\%$
$= 0.35\% + 0.23\% + [15\% \times (3.0\% - 0.23\% - 0.35\%)] \times 50\%$
$= 0.35\% + 0.23\% + 0.36\% \times 50\%$
$= \mathbf{0.76\%}$

TFSA or RESP $= ER + FWT_{Level\ I} + FWT_{Level\ II}$
$= 0.35\% + 0.23\% + 0.36\%$
$= \mathbf{0.94\%}$

Where:

ER = Most recently reported expense ratio of the US-listed ETF

D/P = Dividend yield of the underlying index as of December 31, 2013

$FWT_{Level\ I}$ = 5-year average Level I foreign withholding tax of EFA × D/P

$FWT_{Level\ II}$ = 15% × (D/P – $FWT_{Level\ I}$ – ER)

E. Canadian-listed ETF that holds a US-listed ETF of developed markets stocks.

International equity indexes can contain a large number of stocks denominated in several foreign currencies, making them costly to replicate. Rather than buying all of these stocks individually, all of the international equity ETFs from Vanguard Canada and most of those from iShares get their exposure to by simply holding a US-listed ETF tracking the same index.

As with Type B funds, you can identify Type E funds by checking the ETF's website or its annual report. For example, the annual report for the iShares MSCI EAFE Index Fund (CAD-Hedged) (XIN) reveals its primary holding is the US-listed iShares MSCI EAFE ETF (EFA):

Statement of Investments
As at December 31, 2012

Security	Shares	Average cost ($)	Fair value ($)
Exchange-Traded Funds — 99.82%			
International Equities — 99.82%			
iShares MSCI EAFE Index Fund	14,051,543	837,413,524	794,975,516
Total Exchange-Traded Funds — 99.82%		837,413,524	794,975,516
Transaction Costs (Note 2)		(128,416)	—
Total Investments — 99.82%		837,285,108	794,975,516
Net Unrealized Depreciation on Forward Currency Contracts (Note 4) — (0.28)%			(2,225,007)
Cash and Cash Equivalents — 2.01%			15,992,447
Other Assets, Less			

Source: BlackRock Canada Annual Report, 2012

With Type E funds, investors face both Level I and Level II withholding tax on dividends. Unlike with Type D funds, there is no exemption on the Level II tax if the fund is held in an RRSP:

- In an **RRSP, TFSA or RESP**, Level I and Level II withholding taxes apply and are not recoverable.
- In a **taxable account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are partially recoverable.

For this example, we'll use the iShares MSCI EAFE Index Fund (CAD-Hedged) (XIN), a typical Type E fund. Since its underlying holding is the US-listed iShares MSCI EAFE ETF (EFA), discussed above, we can use the same estimate of 7.5% for the Level I withholding tax.

Example: Total estimated cost of the iShares MSCI EAFE Index Fund (CAD-Hedged) (XIN)

RRSP $= \textbf{MER} + \textbf{FWT}_{\textbf{Level I}} + \textbf{FWT}_{\textbf{Level II}}$
$= 0.50\% + (7.5\% \times 3.0\%) + [15\% \times (3.0\% - \text{FWT}_{\text{Level I}} - 0.35\%)]$
$= 0.50\% + 0.23\% + [15\% \times (3.0\% - 0.23\% - 0.35\%)]$
$= 0.50\% + 0.23\% + 0.36\%$
$\boldsymbol{= 1.09\%}$

Taxable $= \textbf{MER} + \textbf{FWT}_{\textbf{Level I}}$
$= 0.50\% + 0.23\%$
$\boldsymbol{= 0.73\%}$

Corporate $= \textbf{MER} + \textbf{FWT}_{\textbf{Level I}} + \textbf{FWT}_{\textbf{Level II}} \times \textbf{50\%}$
$= 0.50\% + 0.23\% + 0.36\% \times 50\%$
$\boldsymbol{= 0.91\%}$

TFSA or RESP $= \textbf{MER} + \textbf{FWT}_{\textbf{Level I}} + \textbf{FWT}_{\textbf{Level II}}$
$= 0.50\% + 0.23\% + 0.36\%$
$\boldsymbol{= 1.09\%}$

Where:
MER = Most recently reported management expense ratio of the Canadian-listed ETF
ER = Most recently reported expense ratio of the US-listed ETF
D/P = Dividend yield of the underlying index as of December 31, 2013
$\textbf{FWT}_{\textbf{Level I}}$ **=** 5-year average Level I foreign withholding tax of EFA × D/P
$\textbf{FWT}_{\textbf{Level II}}$ **=** $15\% \times (D/P - \text{FWT}_{\text{Level I}} - ER)$

F. Canadian-domiciled mutual fund or Canadian-listed ETF that holds developed markets stocks directly.

Type F funds get their exposure to international markets by holding the underlying stocks directly, rather than via a US-listed ETF. Many international index mutual funds fall into this category—including the TD e-Series funds—as do most of the foreign equity ETFs from BMO and a few from iShares.

With this type of fund, Level I withholding taxes are levied by the countries where the stocks are domiciled, and payable at Canadian rates. Since Canada has different tax treaties with the various countries, the foreign withholding tax rates differ from the rates paid by investors holding Type D funds.

Level II withholding taxes do not apply to Type F funds. Therefore this structure can be extremely tax-efficient:

- In an **RRSP, TFSA or RESP**, Level I withholding taxes apply and are not recoverable.
- In a **taxable account**, Level I withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply, but are partially recoverable.

To estimate the Level I foreign withholding taxes in Type F funds, we've used the most recent 5-year average foreign withholding taxes paid by the TD International Index Fund e-Series (TDB911).

Estimated Level I Foreign Withholding Tax of a Type F Fund

TD International Index Fund - e-Series (TDB911)	December 31, 2008	December 31, 2009	December 31, 2010	December 31, 2011	December 31, 2012	5-Year Average
Dividend Income $	12,397,000	6,746,000	6,485,000	7,951,000	7,272,000	–
Foreign Withholding Tax $	1,404,000	640,000	717,000	898,000	911,000	–
Foreign Withholding Tax %	**11.3%**	**9.5%**	**11.1%**	**11.3%**	**12.5%**	**11.1%**

Sources: TD Mutual Funds Annual Financial Statements, 2008-2012

Example: Total estimated cost of the TD International Index Fund – e-Series (TDB911)

RRSP $= MER + FWT_{Level\ I}$
$= 0.51\% + (11.1\% \times 3.0\%)$
$= 0.51\% + 0.33\%$
$\mathbf{= 0.84\%}$

Taxable $= MER$
$\mathbf{= 0.51\%}$

Corporate $= MER + FWT_{Level\ I} \times 50\%$
$= 0.51\% + 0.33\% \times 50\%$
$\mathbf{= 0.68\%}$

TFSA or RESP $= ER + FWT_{Level\ I}$
$= 0.51\% + 0.33\%$
$\mathbf{= 0.84\%}$

Where:

MER = Most recently reported management expense ratio of the Canadian-listed ETF or mutual fund

D/P = Dividend yield of the underlying index as of December 31, 2013

$FWT_{Level\ I}$ = 5-year average Level I foreign withholding tax of TDB911 × D/P

G. US-listed ETF of emerging markets stocks.

This structure is very similar to Type D: the only difference is that the underlying stocks are domiciled in emerging markets rather than developed countries.

Except when held in an RRSP, Type G funds are also subject to Level II withholding tax, imposed by the US government before the ETFs pay the dividends to Canadian unitholders:

- In an **RRSP,** Level I withholding taxes apply and are not recoverable. Level II withholding taxes do not apply.
- In a **taxable account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes recoverable.
- In a **corporate account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are partially recoverable.
- In a **TFSA or RESP**, Level I and Level II withholding taxes apply and are not recoverable.

As a group, emerging countries tend to have higher withholding tax rates on dividends paid within US funds. We've estimated the Level I foreign withholding tax at 10.8%, which is the 5-year average on the iShares MSCI Emerging Markets ETF (EEM).

Estimated Level I Foreign Withholding Tax of a Type G Fund

iShares MSCI Emerging Markets ETF (EEM)	August 31, 2009	August 31, 2010	August 31, 2011	August 31, 2012	August 31, 2013	5-Year Average
Dividend Income $	734,078,455	859,833,004	1,106,565,670	1,053,595,736	1,126,261,998	–
Foreign Withholding Tax $	75,670,624	104,658,434	115,216,424	106,651,366	124,596,362	–
Foreign Withholding Tax %	**10.3%**	**12.2%**	**10.4%**	**10.1%**	**11.1%**	**10.8%**

Sources: BlackRock Annual Reports, 2009-2013

Example: Total estimated cost of the [iShares MSCI Emerging Markets ETF (EEM)]

RRSP $= ER + FWT_{Level\ I}$
$= 0.67\% + (10.8\% \times 2.6\%)$
$= 0.67\% + 0.28\%$
$\mathbf{= 0.95\%}$

Taxable $= ER + FWT_{Level\ I}$
$= 0.67\% + 0.28\%$
$\mathbf{= 0.95\%}$

Corporate $= ER + FWT_{Level\ I} + FWT_{Level\ II} \times 50\%$
$= 0.67\% + 0.28\% + [15\% \times (2.6\% - 0.28\% - 0.67\%)] \times 50\%$
$= 0.67\% + 0.28\% + 0.25\% \times 50\%$
$\mathbf{= 1.07\%}$

TFSA or RESP $= ER + FWT_{Level\ I} + FWT_{Level\ II}$
$= 0.67\% + 0.28\% + 0.25\%$
$\mathbf{= 1.20\%}$

Where:
ER = Most recently reported expense ratio of the US-listed ETF
D/P = Dividend yield of the underlying index as of December 31, 2013
$\mathbf{FWT_{Level\ I}} =$ 5-year average Level I foreign withholding tax of EEM × D/P
$\mathbf{FWT_{Level\ II}} =$ 15% × (D/P – $FWT_{Level\ I}$ – ER)

H. Canadian-listed ETF that holds a US-listed ETF of emerging markets stocks.

This structure is very similar to Type E: the only difference is that the underlying stocks are domiciled in emerging markets rather than developed countries. They can be identified in the same way as Type E funds: either by examining the holdings on the ETF's website, or by looking at the Statement of Investments section in the annual report.

For example, the annual report for the [iShares MSCI Emerging Markets Index Fund (XEM)] reveals its primary holding is the US-listed [iShares MSCI Emerging Markets ETF (EEM)]:

Statement of Investments
As at December 31, 2012

Security	Shares	Average cost ($)	Fair value ($)
Exchange-Traded Funds — 99.91%			
Emerging Markets Equities — 99.91%			
iShares MSCI Emerging Markets Index Fund	6,310,191	267,996,602	278,716,416
Total Exchange-Traded Funds — 99.91%		267,996,602	278,716,416
Transaction Costs (Note 2)		(4,973)	—
Total Investments — 99.91%		267,991,629	278,716,416
Cash and Cash Equivalents — 0.79%			2,194,631
Other Assets, Less Liabilities — (0.70)%			(1,934,329)
Net Assets — 100.00%			278,976,718

Source: BlackRock Canada Annual Report, 2012

With Type H funds, investors face both Level I and Level II withholding tax on dividends:

- In an **RRSP, TFSA or RESP**, Level I and Level II withholding taxes apply and are not recoverable.
- In a **taxable account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are recoverable.
- In a **corporate account**, Level I withholding taxes apply and are not recoverable. Level II withholding taxes apply, but are partially recoverable.

For this example, we'll use the iShares MSCI Emerging Markets Index Fund (XEM), a typical Type H fund. Since its underlying holding is the iShares MSCI Emerging Markets ETF (EEM), discussed above, we can use the same estimate of 10.8% for the Level I withholding tax.

Example: Total estimated cost of the iShares MSCI Emerging Markets Index Fund (XEM)

RRSP $= \mathbf{MER + FWT_{Level\ I} + FWT_{Level\ II}}$
$= 0.79\% + (10.8\% \times 2.6\%) + [15\% \times (2.6\% - FWT_{Level\ I} - 0.67\%)]$
$= 0.79\% + 0.28\% + [15\% \times (2.6\% - 0.28\% - 0.67\%)]$
$= 0.79\% + 0.28\% + 0.25\%$
$\mathbf{= 1.32\%}$

Taxable $= \mathbf{MER + FWT_{Level\ I}}$
$= 0.79\% + 0.28\%$
$\mathbf{= 1.07\%}$

Corporate $= \mathbf{MER + FWT_{Level\ I} + FWT_{Level\ II} \times 50\%}$
$= 0.79\% + 0.28\% + 0.25\% \times 50\%$
$\mathbf{= 1.19\%}$

TFSA or RESP $= \mathbf{MER + FWT_{Level\ I} + FWT_{Level\ II}}$
$= 0.79\% + 0.28\% + 0.25\%$
$\mathbf{= 1.32\%}$

Where:
MER = Most recently reported management expense ratio of the Canadian-listed ETF or mutual fund
ER = Most recently reported expense ratio of the US-listed ETF
D/P = Dividend yield of the underlying index as of December 31, 2013
$\mathbf{FWT_{Level\ I}}$ **=** 5-year average Level I foreign withholding tax of EEM × D/P
$\mathbf{FWT_{Level\ II}}$ **=** $15\% \times (D/P - FWT_{Level\ I} - ER)$

We have not included a category for Canadian-listed ETFs or index mutual funds that hold emerging markets stocks directly, because there are none we would recommend. The CIBC Emerging Markets Index Fund (CIB519) fits this description, but has an excessively high MER of 1.39%. The BMO MSCI Emerging Markets Index ETF (ZEM) holds a combination of ETFs and individual stocks and may be somewhat more tax-efficient than Type H funds.

APPENDIX: Total Estimated Cost of Equity ETFs and Mutual Funds

In the table below, we've estimated the overall cost of various equity ETFs and mutual funds when held in an RRSP, taxable personal account, taxable corporate account, TFSA or an RESP.

US Equity Fund	Ticker	Type	Stock Market	RRSP	Taxable	Corporate	TFSA or RESP
Vanguard Total Stock Market ETF	**VTI**	**A**	US	0.05%	0.05%	0.19%	0.32%
Vanguard US Total Market Index ETF	**VUN**	**B**	CDN	0.44%	0.17%	0.31%	0.44%
Vanguard US Total Market Index ETF *(CAD-hedged)*	**VUS**	**B**	CDN	0.44%	0.16%	0.30%	0.44%
Vanguard S&P 500 ETF	**VOO**	**A**	US	0.05%	0.05%	0.20%	0.34%
Vanguard S&P 500 Index ETF	**VFV**	**B**	CDN	0.46%	0.17%	0.32%	0.46%
Vanguard S&P 500 Index ETF *(CAD-hedged)*	**VSP**	**B**	CDN	0.46%	0.17%	0.32%	0.46%
iShares Core S&P 500 ETF	**IVV**	**A**	US	0.07%	0.07%	0.21%	0.36%
iShares S&P 500 Index ETF	**XUS**	**B**	CDN	0.45%	0.16%	0.30%	0.45%
iShares S&P 500 Index Fund *(CAD-hedged)*	**XSP**	**B**	CDN	0.54%	0.25%	0.39%	0.54%
BMO S&P 500 Index ETF	**ZSP**	**C**	CDN	0.47%	0.17%	0.32%	0.47%
BMO S&P 500 Hedged to CAD Index ETF	**ZUE**	**C**	CDN	0.53%	0.23%	0.38%	0.53%
BMO S&P 500 Index ETF *(US Dollar Units)*	**ZSP.U**	**C**	CDN	0.47%	0.17%	0.32%	0.47%
TD US Index – e-Series	**TDB902**	**C**	–	0.65%	0.35%	0.50%	0.65%
TD US Index Currency Neutral – e-Series	**TDB904**	**C**	–	0.81%	0.51%	0.66%	0.81%
TD US Index ($US) Fund – e-Series	**TDB952**	**C**	–	0.65%	0.35%	0.50%	0.65%

Sources: BlackRock, BlackRock Canada, BMO Financial Group, TD Mutual Funds, Vanguard Group Inc.

Developed Markets Equity Fund	Ticker	Type	Stock Market	RRSP	Taxable	Corporate	TFSA or RESP
Vanguard FTSE Developed Markets ETF	**VEA**	**D**	US	0.31%	0.31%	0.50%	0.68%
Vanguard FTSE Developed ex North America Index ETF	**VDU**	**E**	CDN	0.90%	0.53%	0.71%	0.90%
Vanguard FTSE Developed ex North America Index ETF *(CAD-hedged)*	**VEF**	**E**	CDN	0.90%	0.53%	0.71%	0.90%
iShares MSCI EAFE ETF	**EFA**	**D**	US	0.58%	0.58%	0.76%	0.94%
iShares MSCI EAFE Index Fund *(CAD-Hedged)*	**XIN**	**E**	CDN	1.09%	0.73%	0.91%	1.09%
BMO MSCI EAFE Hedged to CAD Index ETF	**ZDM**	**F**	CDN	0.74%	0.41%	0.58%	0.74%
BMO MSCI EAFE Index ETF	**ZEA**	**F**	CDN	0.67%	0.34%	0.51%	0.67%
TD International Index Fund – e-Series	**TDB911**	**F**	–	0.84%	0.51%	0.68%	0.84%
TD International Index Currency Neutral Fund – e-Series	**TDB905**	**F**	–	0.87%	0.54%	0.71%	0.87%
iShares Core MSCI EAFE ETF	**IEFA**	**D**	US	0.36%	0.36%	0.55%	0.74%
iShares MSCI EAFE IMI Index ETF	**XEF**	**E**	CDN	0.94%	0.56%	0.75%	0.94%

Sources: BlackRock, BlackRock Canada, BMO Financial Group, TD Mutual Funds, Vanguard Group Inc.

Emerging Markets Equity Fund	Ticker	Type	Stock Market	RRSP	Taxable	Corporate	TFSA or RESP
Vanguard FTSE Emerging Markets ETF	**VWO**	**G**	US	0.49%	0.49%	0.67%	0.85%
Vanguard FTSE Emerging Index ETF	**VEE**	**H**	CDN	1.05%	0.69%	0.87%	1.05%
iShares MSCI Emerging Markets ETF	**EEM**	**G**	US	0.95%	0.95%	1.07%	1.20%
iShares MSCI Emerging Markets Index Fund	**XEM**	**H**	CDN	1.32%	1.07%	1.19%	1.32%
iShares Core MSCI Emerging Markets ETF	**IEMG**	**G**	US	0.46%	0.46%	0.62%	0.78%
iShares MSCI Emerging Markets IMI ETF	**XEC**	**H**	CDN	1.00%	0.68%	0.84%	1.00%

Sources: BlackRock, BlackRock Canada, BMO Financial Group, TD Mutual Funds, Vanguard Group Inc.

Note: We have not included the trading expense ratio (TER) of the above products, as this is generally negligible. However, we encourage you to verify this by reviewing the most recent Management Report of Fund Performance for a fund before purchasing it. Data updated April 11, 2014.