

# Scotia International Index Fund

## Annual Management Report of Fund Performance

For the period ended December 31, 2018

This annual management report of fund performance contains financial highlights but does not contain the complete annual financial statements of the investment fund. You can get a copy of the annual financial statements at your request, and at no cost, by calling toll-free 1-800-268-9269, by writing to us at 1832 Asset Management L.P., 1 Adelaide Street East, 28th Floor, Toronto, ON, M5C 2V9 or by visiting our website at [www.scotiafunds.com](http://www.scotiafunds.com) or SEDAR at [www.sedar.com](http://www.sedar.com).

Securityholders may also contact us using one of these methods to request a copy of the investment fund's interim financial statements, proxy voting policies and procedures, proxy voting disclosure record or quarterly portfolio disclosure.

1832 Asset Management L.P. is the manager (the "Manager") of the fund. In this document, "we", "us", "our" and the "Manager" refer to 1832 Asset Management L.P. and the "Fund" refers to Scotia International Index Fund.

The term "net asset value" or "net asset value per unit" in this document refers to the net asset value determined in accordance with Part 14 of National Instrument 81-106 – Investment Fund Continuous Disclosure ("National Instrument 81-106"); while the term "net assets" or "net assets per unit" refers to total equity or net assets attributable to unitholders of the Fund as determined in accordance with International Financial Reporting Standards ("IFRS").

### Caution Regarding Forward-Looking Statements

*Certain portions of this report, including, but not limited to, "Recent Developments", may contain forward-looking statements about the Fund and the underlying funds, as applicable, including statements with respect to strategies, risks, expected performance events and conditions. Forward-looking statements include statements that are predictive in nature, that depend upon or refer to future events or conditions, or that include words such as "expects", "anticipates", "intends", "plans", "believes", "estimates", "projects" and similar forward-looking expressions or negative versions thereof.*

*In addition, any statement that may be made concerning future performance, strategies or prospects and possible future action by the Fund is also a forward-looking statement. Forward-looking statements are based on current expectations and projections about future general economic, political and relevant market factors, such as interest rates, foreign exchange rates, equity and capital markets, and the general business environment, in each case assuming no changes to applicable tax or other laws or government regulation. Expectations and projections about future events are inherently subject to, among other things, risks and uncertainties, some of which may be unforeseeable. Accordingly, current assumptions concerning future economic and other factors may prove to be incorrect at a future date.*

*Forward-looking statements are not guarantees of future performance and actual results or events could differ materially from those expressed or implied in any forward-looking statements made by the Fund. Any number of important factors could contribute to these digressions, including, but not limited to, general economic, political and market factors in North America and internationally, such as interest and foreign exchange rates, global equity and capital markets, business competition, technological change, changes in government relations, unexpected judicial or regulatory proceedings and catastrophic events. We stress that the above mentioned list of important factors is not exhaustive. Some of these risks, uncertainties and other factors are described in the Fund's simplified prospectus, under the heading "Specific risks of mutual funds".*

*We encourage you to consider these and other factors carefully before making any investment decisions. Forward-looking statements should not be unduly relied upon. Further, you should be aware of the fact that the Fund has no specific intention of updating any forward-looking statements whether as a result of new information, future events or otherwise, prior to the release of the next management report of fund performance, and that the forward-looking statements speak only to the date of this management report of fund performance.*

### Investment Objective and Strategies

The Fund's objective is long-term capital growth by tracking the performance of generally recognized indexes of established international stock markets. It currently tracks the performance of indexes of established markets in Europe, Australasia and the Far East. The portfolio advisor's strategy is to track the performance of the indexes as closely as possible by using futures contracts that are linked to the performance of these indexes. It invests the balance of its assets in cash and money market instruments. This allows the Fund to cover its positions in the futures contracts. The Fund will only use derivatives as permitted by securities regulations.

The Fund can invest up to 100% of its assets in foreign securities.

### Risk

The risks associated with investing in the Fund are as described in the simplified prospectus. There were no material changes to the Fund over its last completed financial year that affected the overall level of risk of the Fund.

### Results of Operations

For the year ended December 31, 2018 (the "period"), the Series A units of the Fund returned -7.6%. Fund returns are reported net of all management fees and expenses for all series, unlike the

returns of the Fund's benchmark, which is based on the performance of an index that does not pay fees or incur expenses. Returns for other series of the Fund will be similar to Series A units with any difference in performance being primarily due to different management fees, operating expenses and other expenses that are applicable to that particular series. Please see the "Past Performance" section for the performance of the Fund's other series.

The Fund's broad-based benchmark, the MSCI EAFE Index (C\$), returned -6.4% during the same period. In accordance with National Instrument 81-106, we have included a comparison to this broad-based index to help you understand the Fund's performance relative to the general performance of the market.

The Fund aims to track the performance for its benchmark as closely as possible before the deductions of fees and expenses. For the period, the Fund underperformed the broad-based benchmark before fees and expenses.

A record number of asset classes posted negative returns for the year, an abrupt change from the solid returns generated in 2017. During the final quarter of 2018, volatility increased substantially, and most asset classes exposed to credit risk or sensitive to economic growth declined sharply. Among the most affected asset classes, U.S. small-capitalization equities declined by roughly 20% as investors reduced their exposure to higher-risk assets, while the price of oil fell by more than 30% on signs of strong supply and forecasts of weaker demand. Government bonds afforded some protection, but their performance was somewhat muted as concerns about higher interest rates fuelled some of the overall volatility that affected financial markets.

Heightened volatility in the fourth quarter was largely the result of uncertainty associated with policy decisions and statements. Early in the fourth quarter, the U.S. Federal Reserve Board ("Fed") indicated that short-term interest rates might be a long way from neutral. However, the suggestion in November that short-term interest rates could be "just below" a neutral rate led to higher equity prices, before another sharp decline in December.

In oil markets, concerns about sanctions on Iranian oil exports supported oil prices leading up to the fourth quarter, but prices subsequently declined substantially. A number of factors contributed to the sharp drop in oil prices, including the U.S. granting temporary waivers to eight Iranian-oil importing countries, continually increasing supply and inventories, and key industry sources forecasting for lower demand.

Brexit negotiations created substantial volatility in the U.K., including cabinet resignations, a postponed vote in Parliament and a leadership contest. In October, German Chancellor Angela Merkel announced her intention to step down. France faced political challenges associated with ongoing protests. By the end of the period, Italy's budget conflict with the European Commission appeared to have reached a tentative compromise. Meanwhile, trade relations between the U.S. and China appeared to be on the mend following the G20 summit in Argentina, but the durability of potential trade progress subsequently came into question again.

Overall, global equity markets delivered their worst quarterly performance since the fall of 2011. European equities fell sharply, although they marginally outperformed U.S. equities, particularly in local currency terms.

In continental Europe, signs of somewhat slow economic growth weighed on stocks and contributed to a change in tone from the European Central Bank ("ECB"). Germany posted notably weak economic data, including a gross domestic product ("GDP") contraction of 0.2% in the third quarter. Although other measures of German industry were more promising, and French GDP was confirmed to have risen by about 0.4% in the third quarter, data points across Europe were sufficiently mixed for the ECB to acknowledge the "loss in growth momentum" in mid-November.

In November, the Bank of England ("BoE") decided to make leave interest rates unchanged, as had been anticipated. However, the BoE's inflation projections were more hawkish than expected, with inflation above target at the two-year policy horizon. At its December meeting, the ECB effectively ended its quantitative easing program even though incoming economic data had been weaker than expected, citing geopolitical factors, protectionist policies and financial market volatility as key risks.

The only European markets to avoid double-digit declines for the period were Spain, Switzerland and Denmark (although each posted single-digit declines). Spain benefited from its relatively high exposure to the Utilities sector. Of the larger markets, the U.K. and Italy modestly outperformed Europe overall, although both posted double-digit declines. Meanwhile, both Germany and France posted declines in excess of 15%. Germany's Health Care sector faced challenges, while France's greater exposure to more cyclical sectors (those more affected by economic change) weighed on returns.

The Fund's net asset value decreased by 5.3% to \$33.7 million at December 31, 2018, from \$35.6 million at December 31, 2017. This change was composed of net sales of \$0.9 million and investment performance of negative \$2.8 million. The investment performance of the Fund includes income and expenses which vary year over year. The Fund's income and expenses changed compared to the previous year mainly as a result of fluctuations in average net assets, portfolio activity and changes in the Fund's income earning investments.

Certain series of the Fund, as applicable, may make distributions at a rate determined by the Manager from time to time. If the aggregate amount of distributions in such series exceeds the portion of net income and net realized capital gains allocated to such series, the excess will constitute a return of capital. The Manager does not believe that the return of capital distributions made by such series of the Fund have a meaningful impact on the Fund's ability to implement its investment strategy or to fulfill its investment objective.

## Recent Developments

### *IFRS 9, Financial Instruments*

The Fund has adopted IFRS 9, Financial Instruments in the current reporting period commencing January 1, 2018. The adoption

of IFRS 9 has been applied retrospectively and does not result in a change to the classification or measurement of financial instruments, in either the current or prior period.

The impact to the Fund will include additional disclosures related to changes to the classification of certain financial instruments to align with the classifications under IFRS 9. Adoption of the standard does not impact net assets attributable to holders of redeemable units.

## Related Party Transactions

The Manager is a wholly-owned subsidiary of The Bank of Nova Scotia ("Scotiabank"). Scotiabank also owns, directly or indirectly, 100% of Scotia Securities Inc. and Tangerine Investment Funds Limited, each a mutual fund dealer, and Scotia Capital Inc. (which includes ScotiaMcLeod and Scotia iTRADE), an investment dealer.

The Manager, on behalf of the Fund, may enter into transactions or arrangements with other members of Scotiabank or certain other companies that are related or connected to the Manager (each a "related party"). All transactions between the Fund and the related parties are in the normal course of business and are carried out at arm's length terms.

The purpose of this section is to provide a brief description of any transaction involving the Fund and a related party.

### *Management Fees*

The Manager is responsible for the day-to-day management and operations of the Fund. Certain series of the Fund pay the Manager a management fee for its services as described in the "Management Fee" section later in this document. The management fee is an annualized rate based on the net asset value of each series of the Fund, accrued daily and paid monthly.

### *Fixed Administration Fees and Fund Costs*

The Manager pays the operating expenses of the Fund, other than Fund Costs, in exchange for the payment by the Fund of a fixed rate administration fee (the "Fixed Administration Fee") to the Manager with respect to each series of the Fund. The expenses charged to the Fund in respect of the Fixed Administration Fee are disclosed in the Fund's financial statements. The Fixed Administration Fee is equal to a specified percentage of the net asset value of a series, calculated and paid in the same manner as the management fees for the Fund. Further details about the Fixed Administration Fee can be found in the Fund's most recent simplified prospectus.

In addition, each series of the Fund is responsible for its proportionate share of certain operating expenses ("Fund Costs"). Further details about Fund Costs can be found in the Fund's most recent simplified prospectus.

The Manager, at its sole discretion, may waive or absorb a portion of a series' expenses. These waivers or absorptions may be terminated at any time without notice.

### *Distribution Services*

Certain registered dealers through which units of the Fund are distributed are related parties to the Fund and the Manager. The Manager may pay a trailing commission, which is negotiated with dealers, to dealers for their financial advisors in respect of the assets of their clients invested in securities of the Fund. The Manager may also pay trailing commissions to dealers for securities purchased or held through discount brokerage accounts.

### *Other Fees*

The Manager, or its affiliates, may earn fees and spreads in connection with various services provided to, or transactions with, the Fund, such as banking, custody, brokerage, foreign exchange or derivatives transactions. The Manager, or its affiliates, may earn a foreign exchange spread when unitholders switch between series of funds denominated in different currencies.

### *Independent Review Committee*

The Manager has established an independent review committee (the "IRC") in accordance with National Instrument 81-107 – Independent Review Committee for Investment Funds ("NI 81-107") with a mandate to review and provide recommendations or approval, as required, on conflict of interest matters referred to it by the Manager on behalf of the Fund. The IRC is responsible for overseeing the Manager's decisions in situations where the Manager is faced with any present or perceived conflicts of interest, all in accordance with NI 81-107.

The IRC may also approve certain mergers between the Fund and other funds, and any change of the auditor of the Fund. Subject to any corporate and securities law requirements, no securityholder approval will be obtained in such circumstances, but you will be sent a written notice at least 60 days before the effective date of any such transaction or change of auditor. In certain circumstances, securityholder approval may be required to approve certain mergers.

The IRC has five members, Carol S. Perry (Chair), Stephen J. Griggs, Simon Hitzig, Heather A. T. Hunter and Jennifer L. Witterick, each of whom is independent of the Manager.

The IRC prepares and files a report to the securityholders each fiscal year that describes the IRC and its activities for securityholders as well as contains a complete list of the standing instructions. These standing instructions enable the Manager to act in a particular conflict of interest matter on a continuing basis provided the Manager complies with its policies and procedures established to address that conflict of interest matter and reports periodically to the IRC on the matter. This report to the securityholders is available on the Manager's website or, at no cost, by contacting the Manager.

The compensation and other reasonable expenses of the IRC will be paid out of the assets of the Fund as well as out of the assets of the other investment funds for which the IRC may act as the independent review committee. The main components of compensation are an annual retainer and a fee for each committee meeting attended. The chair of the IRC is entitled to an additional fee.

Expenses of the IRC may include premiums for insurance coverage, travel expenses and reasonable out-of-pocket expenses.

The Fund received the following standing instructions from the IRC with respect to related party transactions:

- Paying brokerage commissions and spreads to a related party for effecting security transactions on an agency and principal basis on behalf of the Fund;
- Purchases or sales of securities of an issuer from or to another investment fund managed by the Manager;
- Investments in the securities of issuers for which a related underwriter acted as an underwriter during the distribution of such securities and the 60-day period following the completion of such distribution;
- Executing foreign exchange transactions with a related party on behalf of the Fund;
- Purchases of securities of a related party;
- Entering into over-the-counter derivatives on behalf of the Fund with a related party;

- Outsourcing products and services to related parties which can be charged to the Fund;
- Acquisition of prohibited securities as defined by securities regulations;
- Trading in mortgages with a related party.

The Manager is required to advise the IRC of any breach of a condition of the standing instructions. The standing instructions require, among other things, that the investment decision in respect to a related party transaction: (a) is made by the Manager free from any influence by an entity related to the Manager and without taking into account any consideration to any associate or affiliate of the Manager; (b) represents the business judgment of the Manager uninfluenced by considerations other than the best interests of the Fund; and (c) is made in compliance with the Manager's written policies and procedures. Transactions made by the Manager under the standing instructions are subsequently reviewed by the IRC to monitor compliance.

The Fund did not rely on IRC standing instructions regarding related party transactions during the period.

## Financial Highlights

The following tables show selected key financial information about each series of the Fund and are intended to help you understand the Fund's financial performance for the periods indicated. The information on the following tables is based on prescribed regulations and as a result, is not expected to add down due to the increase (decrease) in net assets from operations being based on average units outstanding during the period and all other numbers being based on actual units outstanding at the relevant point in time. Footnotes for the tables are found at the end of the Financial Highlights section.

### The Fund's Net Assets per Unit (\$) <sup>(1)</sup>

For the period ended	Net Assets, beginning of period	Increase (decrease) from operations:					Distributions:					Net Assets, end of period <sup>(1)</sup>
		Total revenue	Total expenses	Realized gains (losses) for the period	Unrealized gains (losses) for the period	Total increase (decrease) from operations <sup>(2)</sup>	From net investment income (excluding dividends)	From dividends	From capital gains	Return of capital	Total distributions <sup>(3)</sup>	
Series A												
Dec. 31, 2018	10.71	0.15	(0.14)	(0.74)	(0.10)	(0.83)	—	—	—	—	—	9.89
Dec. 31, 2017	10.14	0.09	(0.14)	1.68	(0.13)	1.50	(0.94)	—	—	—	(0.94)	10.71
Dec. 31, 2016	10.55	0.06	(0.12)	(0.21)	(0.14)	(0.41)	—	—	—	—	—	10.14
Dec. 31, 2015	9.12	0.07	(0.14)	1.25	0.26	1.44	—	—	—	—	—	10.55
Dec. 31, 2014	8.91	0.52	(0.12)	(0.19)	0.00	0.21	—	—	—	—	—	9.12
Series D												
Dec. 31, 2018	10.27	0.16	(0.11)	(0.98)	(0.04)	(0.97)	—	—	—	—	—	9.51
Dec. 31, 2017	9.77	0.09	(0.12)	1.46	(0.30)	1.13	(0.98)	—	—	—	(0.98)	10.27
Dec. 31, 2016	10.14	0.06	(0.11)	(0.21)	0.72	0.46	—	—	—	—	—	9.77
Dec. 31, 2015*	10.00	0.06	(0.09)	1.07	(0.64)	0.40	—	—	—	—	—	10.14
* Start date for Series D was March 27.												
Series F												
Dec. 31, 2018	10.68	0.15	(0.10)	(0.79)	(0.09)	(0.83)	—	—	—	—	—	9.90
Dec. 31, 2017	10.18	0.11	(0.11)	4.13	(2.99)	1.14	(1.06)	—	—	—	(1.06)	10.68
Dec. 31, 2016*	9.44	0.00	(0.03)	0.00	0.77	0.74	—	—	—	—	—	10.18

\* Start date for Series D was March 27.

\* Start date for Series F was June 20.

<sup>(1)</sup> This information is derived from the Fund's audited annual financial statements. The net assets per unit presented in the financial statements may differ from the net asset value per unit. An explanation of these differences can be found in note 2 of the Fund's financial statements. The net asset value per unit at the end of the period is disclosed in Ratios and Supplemental Data.

<sup>(2)</sup> Net assets per unit and distributions per unit are based on the actual number of units outstanding for the relevant series at the relevant time. The increase (decrease) in net assets from operations per unit is based on the weighted average number of units outstanding over the period.

<sup>(3)</sup> Distributions were paid in cash or reinvested in additional units of the Fund.



## Ratios and Supplemental Data

As at	Total net asset value (000's) (\$) <sup>(1)</sup>	Number of units outstanding <sup>(1)</sup>	Management expense ratio ("MER") (%) <sup>(2)</sup>	MER before waivers or absorptions (%) <sup>(2)</sup>	Trading expense ratio (%) <sup>(3)</sup>	Portfolio turnover rate (%) <sup>(4)</sup>	Net asset value per unit (\$)
<b>Series A</b>							
<b>Dec. 31, 2018</b>	<b>33,378</b>	<b>3,374,226</b>	<b>1.29</b>	<b>1.29</b>	<b>0.11</b>	–	<b>9.89</b>
Dec. 31, 2017	35,405	3,306,424	1.25	1.25	0.05	–	10.71
Dec. 31, 2016	28,201	2,780,170	1.26	1.26	0.07	–	10.14
Dec. 31, 2015	29,504	2,795,897	1.26	1.26	0.10	–	10.55
Dec. 31, 2014	25,721	2,819,952	1.18	1.18	0.09	–	9.12
<b>Series D</b>							
<b>Dec. 31, 2018</b>	<b>267</b>	<b>28,092</b>	<b>1.06</b>	<b>1.06</b>	<b>0.11</b>	–	<b>9.51</b>
Dec. 31, 2017	150	14,603	1.01	1.01	0.05	–	10.27
Dec. 31, 2016	16	1,688	1.06	1.06	0.07	–	9.77
Dec. 31, 2015	5	–	1.09	1.09	0.10	–	10.14
<b>Series F</b>							
<b>Dec. 31, 2018</b>	<b>25</b>	<b>2,530</b>	<b>0.87</b>	<b>0.87</b>	<b>0.11</b>	–	<b>9.90</b>
Dec. 31, 2017	23	2,147	0.85	0.85	0.05	–	10.68
Dec. 31, 2016	1	53	0.71	0.71	0.07	–	10.18

<sup>(1)</sup> This information is provided as at the period end of the years shown.

<sup>(2)</sup> The management expense ratio is based on the total expenses (including sales tax, and excluding commissions and other portfolio transaction costs) of each series of the Fund and a proportional share of underlying funds' expenses (mutual funds, ETFs and closed-end funds), where applicable, for the stated period and is expressed as an annualized percentage of daily average net asset value during the period.

<sup>(3)</sup> The trading expense ratio represents total commissions and other portfolio transaction costs of the Fund and the underlying funds, where applicable, expressed as an annualized percentage of daily average net asset value of the Fund during the period.

<sup>(4)</sup> The Fund's portfolio turnover rate indicates how actively the Fund's portfolio advisor manages its portfolio investments. A portfolio turnover rate of 100% is equivalent to the Fund buying and selling all of the securities in its portfolio once in the course of the period. The higher a fund's portfolio turnover rate in a period, the greater the trading costs payable by the fund in the period, and the greater the chance of an investor receiving taxable capital gains in the year. There is not necessarily a relationship between a high turnover rate and the performance of a fund.

## Management Fees

The management fee is an annualized rate based on the net asset value of each series of the Fund, accrued daily and paid monthly. The management fees cover the costs of managing the Fund, arranging for investment analysis, recommendations and investment decision making for the Fund, arranging for distribution of the Fund, marketing and promotion of the Fund and providing or arranging for other services.

The breakdown of services received in consideration of management fees for each series, as a percentage of the management fees, are as follows:

	Management fees (%)	Dealer compensation (%)	Other† (%)
Series A	0.80	54.0	46.0
Series D	0.60	15.2	84.8
Series F	0.40	n/a	100.0
Series I*	n/a	n/a	n/a

\* The management fee for this series is negotiated and paid directly by these unitholders and not by the Fund.

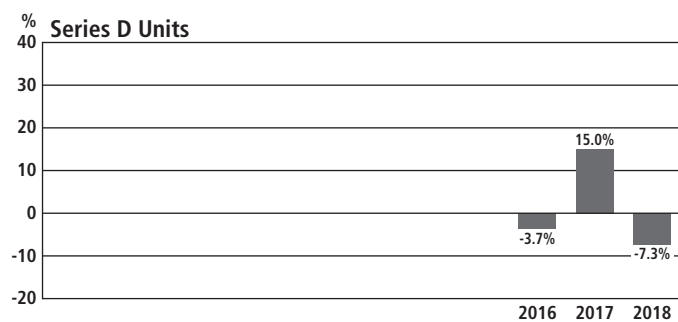
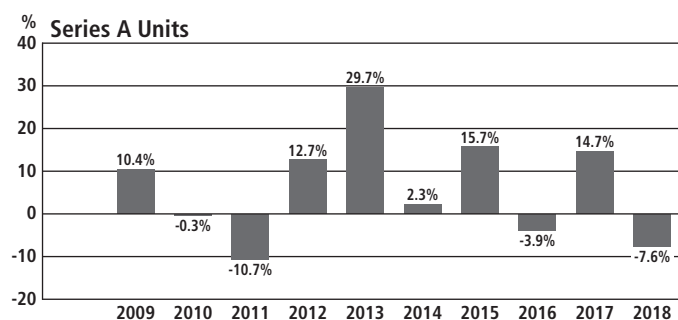
† Relates to all services provided by the Manager described above except dealer compensation.

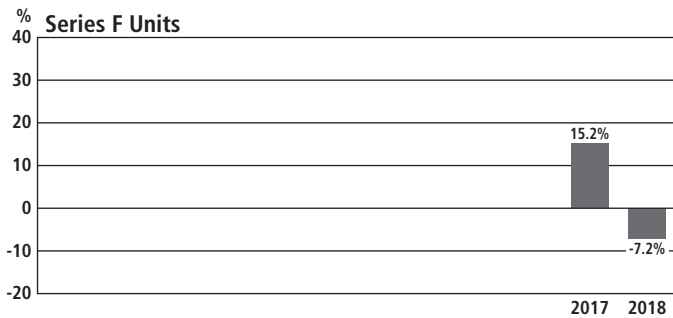
## Past Performance

The following shows the past performance for each series and will not necessarily indicate how the Fund will perform in the future. The information shown assumes that all distributions made by each series of the Fund in the periods shown were reinvested in additional units of the relevant series. In addition, the information does not take into account sales, redemption, distribution or other optional charges that would have reduced returns or performance.

## Year-by-Year Returns

The following charts show the performance for each series of the Fund and illustrate how performance has varied from year to year. The charts show, in percentage terms, how much an investment held on the first day of each calendar year would have increased or decreased by the last day of each calendar year for that series.





## Annual Compound Returns

The annual compound returns table below compares each series of the Fund's performance to one or more benchmarks. A benchmark is usually an index or a composite of more than one index. Fund returns are reported net of all management fees and expenses for all series, unlike the return of benchmarks which are based on the performance of an index that does not pay fees or incur expenses.

		One Year	Three Years	Five Years	Ten Years	Since Inception
Series A	%	-7.6	0.6	3.8	5.6	–
MSCI EAFE Index (C\$)	%	-6.4	2.3	5.7	7.4	–
Series D	%	-7.3	0.9	–	–	1.1
MSCI EAFE Index (C\$)	%	-6.4	2.3	–	–	2.8
Series F	%	-7.2	–	–	–	5.7
MSCI EAFE Index (C\$)	%	-6.4	–	–	–	7.3

### Index Descriptions

MSCI EAFE Index (C\$) – This index captures large and mid-cap representation across developed markets around the world, excluding the U.S. and Canada.

A discussion of the performance of the Fund as compared to its benchmark(s) is found in the Results of Operations section of this report.

## Summary of Investment Portfolio

The Summary of Investment Portfolio may change due to ongoing portfolio transactions. A quarterly portfolio update is available to the investor at no cost by calling 1-800-268-9269, or by visiting [www.scotiafunds.com](http://www.scotiafunds.com), 60 days after quarter end, except for December 31, which is the calendar year end, when they are available after 90 days.

By Asset Type <sup>(1)</sup>	% of net asset value <sup>(2)</sup>
Bankers' Acceptances	39.6
Treasury Bills	25.2
Commercial Paper	15.6
Cash	12.9
Bearers' Deposit Notes	6.7
Other Net Assets (Liabilities)	0.0

By Country <sup>(1)</sup>	% of net asset value <sup>(2)</sup>
Japan	24.8
United Kingdom	17.3
France	10.8
Germany	8.8
Switzerland	8.7
Australia	7.0
Netherlands	3.4
Hong Kong	3.7
Spain	3.1
Sweden	2.7
Italy	2.2
Denmark	1.8
Singapore	1.6
Belgium	1.0
Finland	1.0
Norway	0.7
Israel	0.4
Austria	0.2
Ireland	0.3
New Zealand	0.2
Portugal	0.2
Luxembourg	0.1

### Top Holdings<sup>(1)</sup>

Issuer	% of net asset value <sup>(2)</sup>
Cash and Cash Equivalents	100.0

<sup>(1)</sup> The Fund obtains its exposure to the international equity markets through investments in derivatives and money market instruments. The listed country mix represents the Fund's exposure as a result.

<sup>(2)</sup> Based on the net asset value, therefore, weightings presented in the Schedule of Investments will differ from the ones disclosed above.

