Canadian Responsible Investment Mutual Funds

Risk / Return Characteristics Study Findings

Carleton Centre for Community Innovation

May 1st, 2015

Executive summary

- We find that the RI equity mutual funds in Canada examined in this study, financially outperform their respective benchmarks 63% of the time.

- We find that the SRI equity mutual funds outperformed risk measurement standard industry benchmarks 55% of the time, demonstrating the ability for RI funds to reduce risk in investment portfolios.

- These findings are particularly strong for Sharpe ratios and Sortino ratios that measure the excess return per each unit of risk taken. RI equity funds outperformed the benchmark Sharpe ratios 63% of the time, and Sortino ratios (which measure excess return against downside loss) 72% of the time.

- We find that the RI fixed income and balanced mutual funds in Canada examined in this study, financially outperform their respective benchmarks 67% of the time.

- We find Canadian fixed income RI funds and Canadian balanced RI funds to be in line with other Canadian mutual funds in these asset classes with regard to risk reduction in these portfolios.
- Again they show the ability of RI funds to reduce downside risk, outperforming benchmark on their Sortino ratio 61% of the time.

About the author

Dr. Tessa Hebb is the Director of the Carleton Centre for Community Innovation at Carleton University. Her research focuses on Responsible Investment and Impact Investing. She is a frequent speaker on responsible investment policies and issues and has published many books and articles on those topics.

Dr. Hebb is a member of the steering committees of the UN-backed PRI Academic Network, the Heartland Network, Canadian Business Ethics Research Network, the Responsible Investment Association and the Impact Investing Policy Collaborative. She received her Doctorate from Oxford University.

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Introduction

Responsible investing (RI) is one of fastest growing investment trends in the last decade. According to the Responsible Investment Association of Canada over $1 trillion (as of December 31, 2013) is managed in Canada using one or more responsible investment (RI) strategies. These assets grew from $600 billion to more than $1 trillion in just two years, representing a 68% growth rate. Retail RI mutual funds and venture capital funds in Canada, have grown from $13.48 billion to $17.5 billion in this period, with the RI mutual fund industry increasing by 52.3%, from $4.36 billion to $6.64 billion. This compares to 29.8% growth in traditional mutual funds during the same period.

RI investors use environmental, social, and governance (ESG) factors in their investment decision-making. It is evident that the demand for these products by Canadians is on the upswing. A recent study found that 92% of Canadians think it is important to choose investments that align with their values (Standard Life, 2011; NEI, 2014). Investment managers apply a variety of approaches in RI: best-of-class screening, ESG integration, shareholder engagement, negative screening, and impact investing are the most popular methods employed. RI uses the term 'doing well by doing good'. It is suggested that taking environmental, social and governance factors into consideration can reduce risk in a portfolio and may lead to outperformance.

The traditional investment approach argues that RI limits the investment universe and results in a decrease in value. But this view is not backed up by empirical evidence. In fact most studies show that RI funds deliver comparable and in some cases superior returns to those of traditional funds.[1]

The reasoning behind the link between ESG and financial returns lies in the fact that companies with high ESG standards have been found to outperform companies with low ESG ratings. A recent academic meta-study done at Oxford University looked at over 190 studies and found that 80% of the studies showed that stock price performance is positively influenced by good sustainability practices (Clark et al, 2014). Margolis et al, 2003 looked at 109 studies on the link between corporate financial and social performance and CSR and found most studies indicated a positive relationship (54) while only 7 of the 109 studies found a negative relationship, the remainder were either neutral or mixed.

While many studies have focused on the link between financial performance and ESG, to date few have focused on whether taking ESG factors into account can lower risk in a portfolio, which is one of the central claims made by RI and RI proponents. Increasingly investors are seeking long-term stable returns. Particularly in this period following the financial crisis of 2008, investors are avoiding undue volatility (particularly downward volatility) in their investment portfolios.

[1] A recent Morgan Stanley Report (2015) found that SRI equity mutual funds in the US performed favourably compared to traditional counterparts. Osthoff and Kempf (2007) found that investors can earn remarkably high abnormal returns if they employ a long high SRI rating, short low SRI rating investing strategy. A similar study by Russell Investments also found a link between ESG and value creation (2014) Eccles, Lannou, and Serafein (2012) reinforce these results, finding a group of high sustainability funds had annual abnormal performance of 4.8% higher than a group of low sustainability funds.

All Canadian RI funds examined in this study have an average or below average risk rating from Morningstar.

This study examines the relationship between risk and return in Canadian RI mutual funds. We ask whether Canadian RI mutual funds are able to provide solid financial returns for investors while simultaneously reducing risk in their portfolios. We measure these funds risk and return characteristics against the average risk and returns for the Canadian mutual funds across eight common asset classes in Canada. These include equity, fixed income and balanced mutual funds. We use one, three, five, and 10 year observations. We find that the RI equity mutual funds examined here financially outperform the benchmark 63 per cent of the time, while simultaneously reducing risk in the portfolio. The RI equity mutual funds outperformed their benchmark on risk factors 55 per cent of the time. They are particularly strong in generating excess return for each unit of risk taken with Sharpe Ratios outperforming 63 per cent of the time and Sortino Ratios, which measure excess return per unit of downside risk, 72 per cent of the time.

We find the RI fixed income and balanced funds examined in this study financially outperform the benchmark 67per cent of the time, with risk characteristics in line with other Canadian mutual funds in these asset classes. Fixed Income and Balanced Funds examined outperformed benchmark 61per cent of the time in their Sortino ratios (measuring excess return per unit of downside risk).

Methodology

We examined Canadian RI mutual funds and measured their financial returns and risk characteristics against applicable Morningstar benchmarks[2]. We used the Responsible Investment Association of Canada's RI mutual fund listing to identify the Canadian RI funds to be used in the study. We examined eight asset classes: four in equity: Canadian equity, U.S. equity, international equity, and global equity, and four in fixed income and balanced: Canadian fixed income, Canadian fixed income balanced, Canadian neutral balanced, and global equity balanced. We used Morningstar data across four time periods one year, three year, five year and 10 year data. We used annualized total returns and risk data for month end March 31st 2015.

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RI equity mutual funds

Canadian equity

Morningstar benchmark: Canadian equity benchmark: Includes 897 funds which meet the following criteria. Funds in the Canadian equity category must invest at least 90% of their equity holdings in securities domiciled in Canada, and their average market capitalization must be greater than the Canadian small/mid cap threshold.

Using RIA listings of Canadian RI mutual funds by asset class we examined 22 RI Canadian equity mutual funds found in the Morningstar database in this asset class:

Desjardins Environment

Desjardins Environment C

Desjardins Environment F

GWL Ethics (G) DSC

GWL Ethics (G) NL

IA Clarington Inhance Canadian Equity SRI Cl A

IA Clarington Inhance Canadian Equity SRI Cl F

Meritas Jantzi Social Index

Meritas Jantzi Social Index Series F

Meritas Monthly Div and Income Series F

Meritas Monthly Dividend and Income

NEI Ethical Canadian Equity A

NEI Ethical Canadian Equity F

PH&N Community Values Canadian Equity Advisor Series

PH&N Community Values Canadian Equity Series C

PH&N Community Values Canadian Equity Series D

PH&N Community Values Canadian Equity Series F

RBC Jantzi Canadian Equity Advisor Series

RBC Jantzi Canadian Equity Series A

RBC Jantzi Canadian Equity Series D

RBC Jantzi Canadian Equity Series F

RBC Jantzi Canadian Equity Series I

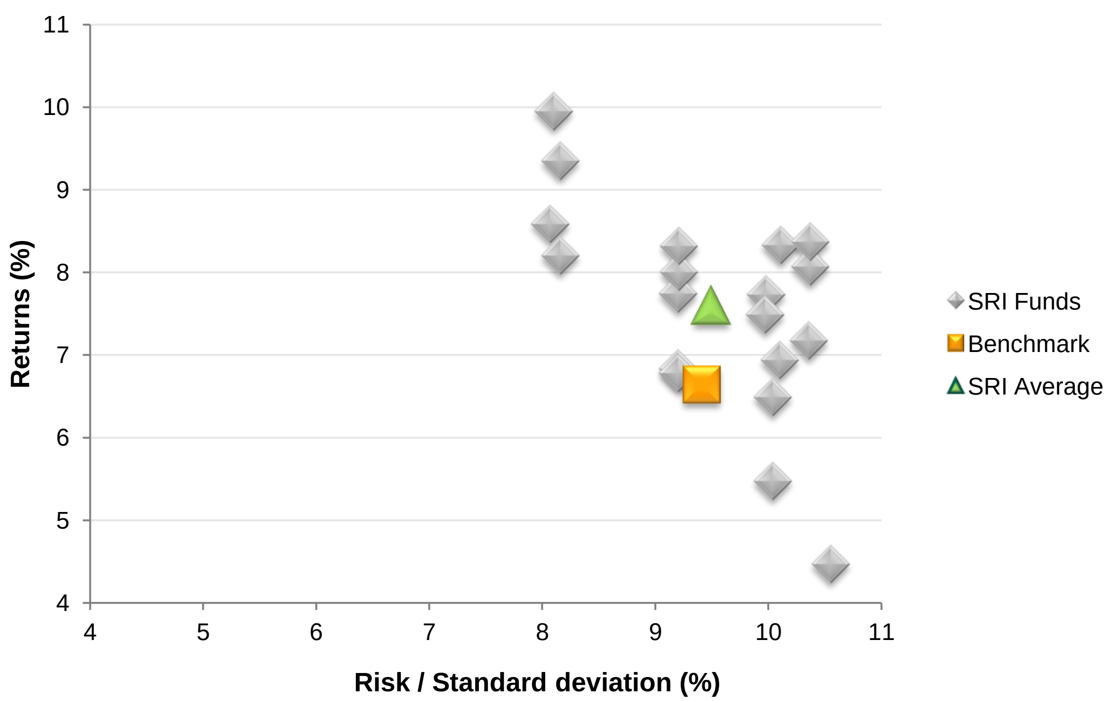
Findings

Returns

- 9/22 RI funds in this asset class outperformed the benchmark in 1 year performance
- Over the 3 year period, 13/20 RI funds outperformed the benchmark
- Over the 5 year period, 16/19 RI funds outperformed the benchmark
- Over the 10 year period, 3/6 RI funds outperformed the benchmark

RI funds outperformed the benchmark in 41/67 observations over 4 time periods — 61% of the time.

Figure 1: Canadian equity RI funds' risk/returns (5 year)



Standard deviation

Standard deviation measures risk in a portfolio by calculating the volatility of the returns, in other words how large are the swings between returns over the period. It measures the variance from the mean - or the range of returns in a given period from the average return in that period. This includes both upswings and downturns in performance. The lower the standard deviation the less risk the investor takes on.

- Over the 3 year period, 4/20 RI funds had less volatile returns in comparison to benchmark
- Over the 5 year period, 9/19 were less volatile than the benchmark
- Over the 10 year period, 2/6 were less volatile than the benchmark

15/45 observations had lower standard deviation than the benchmark over 3 time periods — 33% of the time

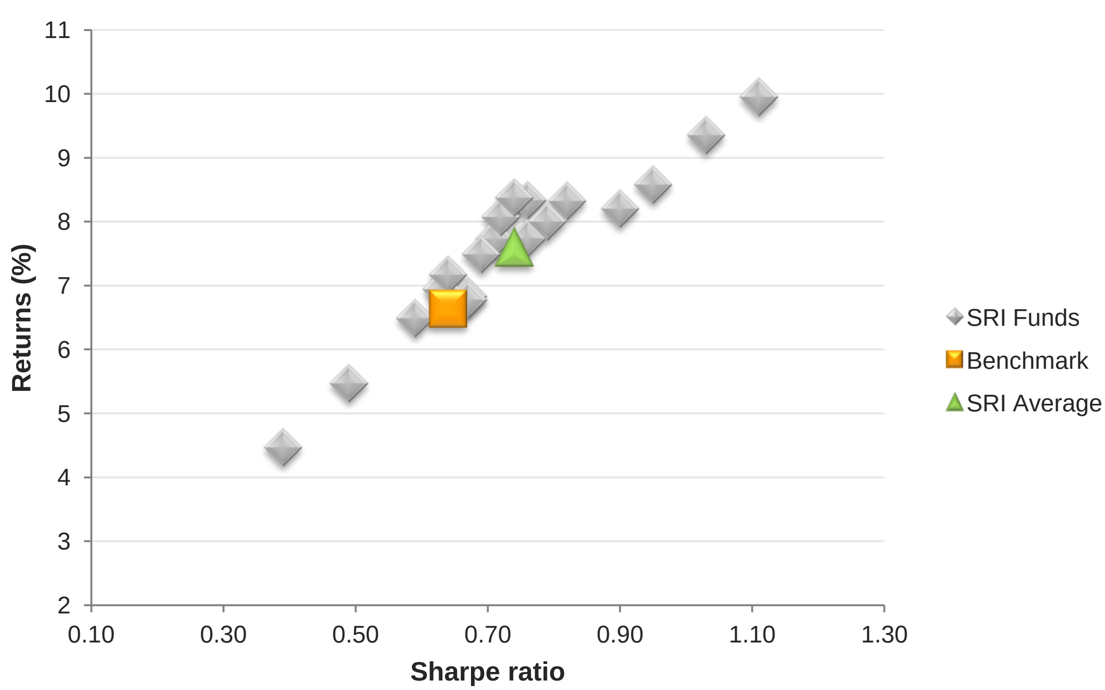
Sharpe ratio

This ratio measures the excess return a fund makes for each unit of risk it takes on, many feel it is a better measurement of risk in an investment portfolio than standard deviation. With Sharpe ratios, the higher the number the more positive the outcome for investors.

- 13/20 outperformed the benchmark over the 3 year period
- 15/19 outperformed the benchmark over the 5 year period
- 3/6 outperformed the benchmark over the 10 year period

31/45 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 69 % of the time.

Figure 2: Canadian equity RI funds' Sharpe ratio (5 years)



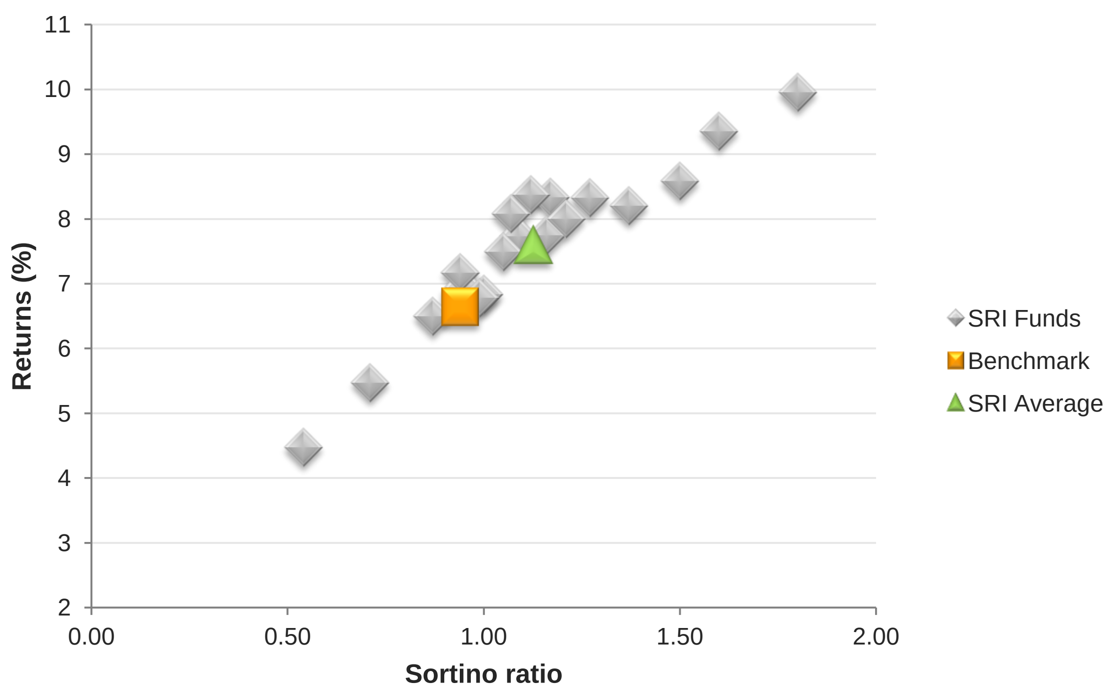
Sortino ratio

A final measurement of risk in the portfolio is the Sortino ratio. The Sortino ratio measures excess return for each unit of downside risk. Both Standard Deviation and Sharpe Ratios punish funds that have volatility when generating higher returns as well as lower returns, but higher return volatility is not the kind of volatility that bothers most investors. Investors are concerned with the risk of losing money or downside risk. Like the Sharpe ratio the higher the number the more positive the outcome for investors.

- Over the 3 year period, 13/20 RI funds outperformed the benchmark, while the remainder were in line with the benchmark
- Over the 5 year period, 16/19 RI funds outperformed the benchmark
- Over the10 year period, 3/6 RI funds outperformed the benchmark

32/45 observations had stronger Sortino ratios than the benchmark over 3 time periods — 71% of the time.

Figure 3: Canadian equity RI funds' Sortino ratio (5 years)



U.S. equity

Morningstar benchmark: The benchmark used for this asset class is the Morningstar U.S. Equity. Funds in the U.S. equity category must invest at least 90% of their equity holdings in securities domiciled in the United States, and their average market capitalization must be greater than the U.S. small/mid cap threshold.

There are substantially fewer US RI funds in Canada. Using the RIA list of such funds we find four in the Morningstar database:

Meritas U.S. Equity Series F

Meritas U.S. Equity

NEI Ethical American Multi-Strategy A

NEI Ethical American Multi-Strategy F

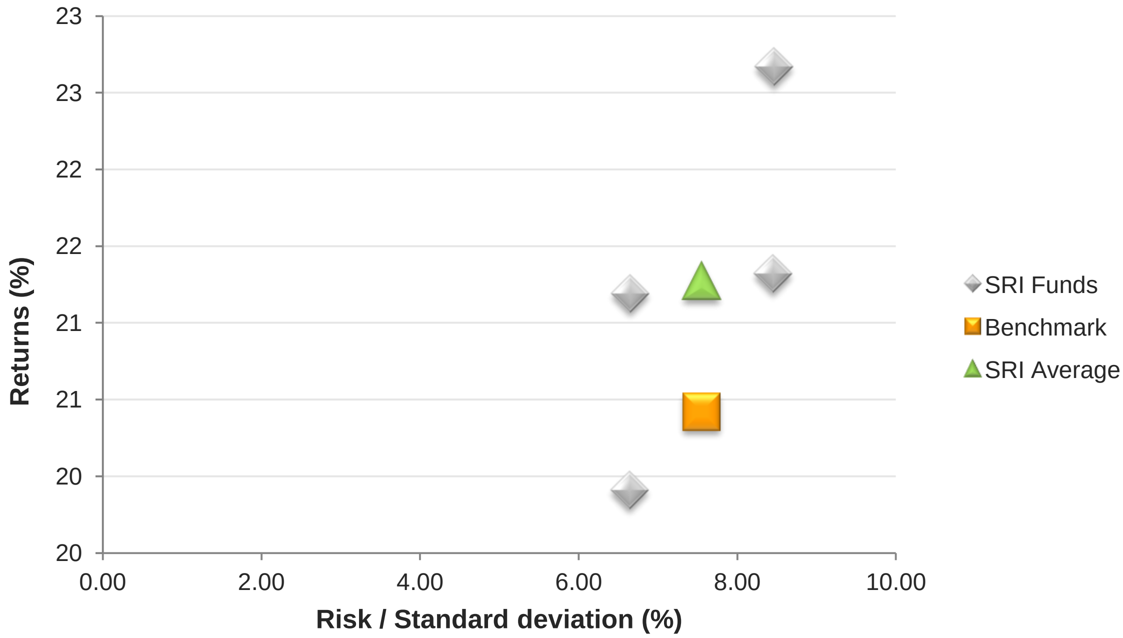
Findings

Returns

- Over the 1 year period, 4/4 RI funds in this asset class outperformed the benchmark
- Over the 3 year period, 3/4 RI funds outperformed the benchmark
- Over the 5 year period, 1/4 RI funds outperformed benchmark, the remainder were in line with the benchmark
- Over the 10 year period 1/2 RI funds outperformed the benchmark

RI funds outperformed the benchmark in 9/14 observations over 4 time periods — 64% of the time.

Figure 4: U.S. equity RI funds' risk / return (3 years)



Standard deviation

- Over the 3 year period, 2/4 RI funds had less volatile returns than the benchmark
- Over the 5 year period, 2/4 RI funds had less volatile returns than the benchmark
- Over the 10 year period, 1/2 RI funds had less volatile returns than the benchmark

5/10 observations had lower standard deviation than benchmark over 3 time periods. — 50% of the time.

Sharpe ratio

- 2/4 outperformed the benchmark over the 3 year period
- 3/4 outperformed the benchmark over the 5 year period
- 1/2 outperformed the benchmark over the 10 year period

6/10 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 60% of the time.

Sortino Ratio

- 4/4 outperformed the benchmark over the 3 year period
- 4/4 outperformed the benchmark over the 5 year period
- 1/2 outperformed the benchmark over the 10 year period

9/10 observations had stronger Sortino ratios than the benchmark over 3 time periods — 90% of the time.

International equity

Morningstar benchmark: We use the Morningstar international equity benchmark. Funds in the international equity category must invest at least 95% of their equity assets in countries other than Canada and the United States and at least 70% of their equity assets in developed countries. Funds that do not meet any of the requirements of the more focused geographic equity categories and that invest less than 90% of their assets in any single country or region will be assigned to the international equity category.

Using RIA listings of Canadian RI mutual funds by asset class we found 4 RI Canadian international equity mutual funds in the Morningstar database in this asset class:

Meritas International Equity

Meritas International Equity Series F

NEI Ethical International Equity A

NEI Ethical International Equity F

Findings

Returns

- 3/4 funds outperformed the benchmark over the 1 year period
- 0/4 funds outperformed the benchmark over the 3 year period
- 3/4 funds outperformed the benchmark over the 5 year period
- 1/2 funds outperformed the benchmark over the 10 year period

RI funds outperformed the benchmark in 7/14 observations over 4 time periods — 50% of the time.

Standard deviation

- Over the 3 year period, 0/4 RI funds had less volatile returns than the benchmark
- Over the 5 year period, 2/4 RI funds had less volatile returns than the benchmark
- Over the 10 year period, 1/2 RI funds had less volatile returns than the benchmark

3/10 observations had lower standard deviation than benchmark over 3 time periods —30% of the time.

Sharpe ratio

- 0/4 outperformed the benchmark over the 3 year period
- 2/4 outperformed the benchmark over the 5 year period
- 1/2 outperformed the benchmark over the 10 year period

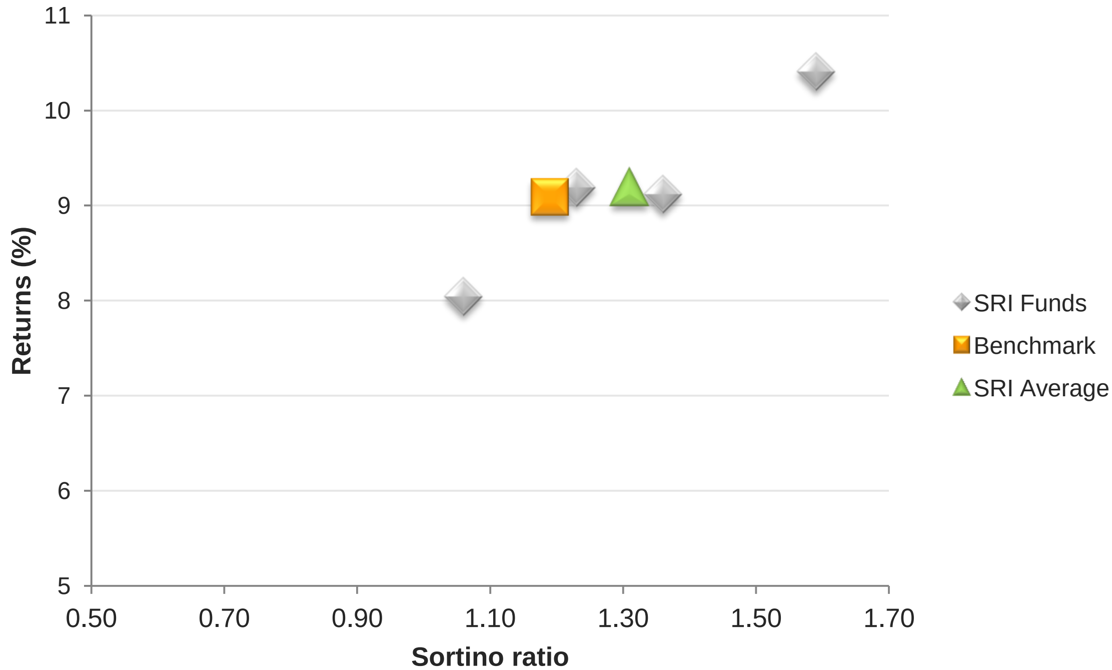
3/10 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 30% of the time.

Sortino ratio

- 1/4 outperformed the benchmark over the 3 year period
- 3/4 outperformed the benchmark over the 5 year period
- 1/2 outperformed the benchmark over the 10 year period

5/10 observations had stronger Sortino ratios than the benchmark over 3 time periods — 50% of the time.

Figure 5: International equity RI funds' Sortino ratio (5 years)



Global equity

Morningstar benchmark: Global equity benchmark: 2259 funds. Funds in the global equity category must invest in securities domiciled anywhere across the globe such that their average market capitalization is greater than the small/mid cap threshold, and invest more than 5% and less than 90% of their equity holdings in Canada or the U.S. Funds that do not meet any of the requirements of other geographic equity categories and have no formal restrictions that limit where they can invest will be assigned to this category.

Using RIA listings of Canadian RI mutual funds by asset class we found 17 RI global equity mutual funds in the Morningstar database in this asset class:

IA Clarington Inhance Global Equity SRI Class A

IA Clarington Inhance Global Equity SRI Class F

Meritas Max Growth Portfolio Series A

Meritas Max Growth Portfolio Series F

NEI Ethical Global Dividend A

NEI Ethical Global Dividend F

NEI Ethical Global Equity A

NEI Ethical Global Equity F

PH&N Community Values Global Equity Advisor Series

PH&N Community Values Global Equity Series C

PH&N Community Values Global Equity Series D

PH&N Community Values Global Equity Series F

RBC Jantzi Global Equity Advisor Series

RBC Jantzi Global Equity Series A

RBC Jantzi Global Equity Series D

RBC Jantzi Global Equity Series F

RBC Jantzi Global Equity Series I

Findings

Returns

- 12/17 RI funds outperformed the benchmark over the 1 year period
- 11/17 RI funds outperformed the benchmark over the 3 year time period - 1 was in line with benchmark
- 12/14 RI funds outperformed the benchmark over the 5 year period
- 0/2 RI funds outperformed the benchmark over the 10 year period

RI funds outperformed the benchmark in 35/50 observations over 4 time periods — 70% of the time. The average outperformance in the 1 and 3 year time periods was large.

Standard deviation

- 2/17 RI funds had lower volatility than the benchmark over the 3 year period
- 5/14 RI funds had lower volatility than the benchmark over the 5 year period
- 0/2 RI funds had lower volatility than the benchmark over the 10 year period

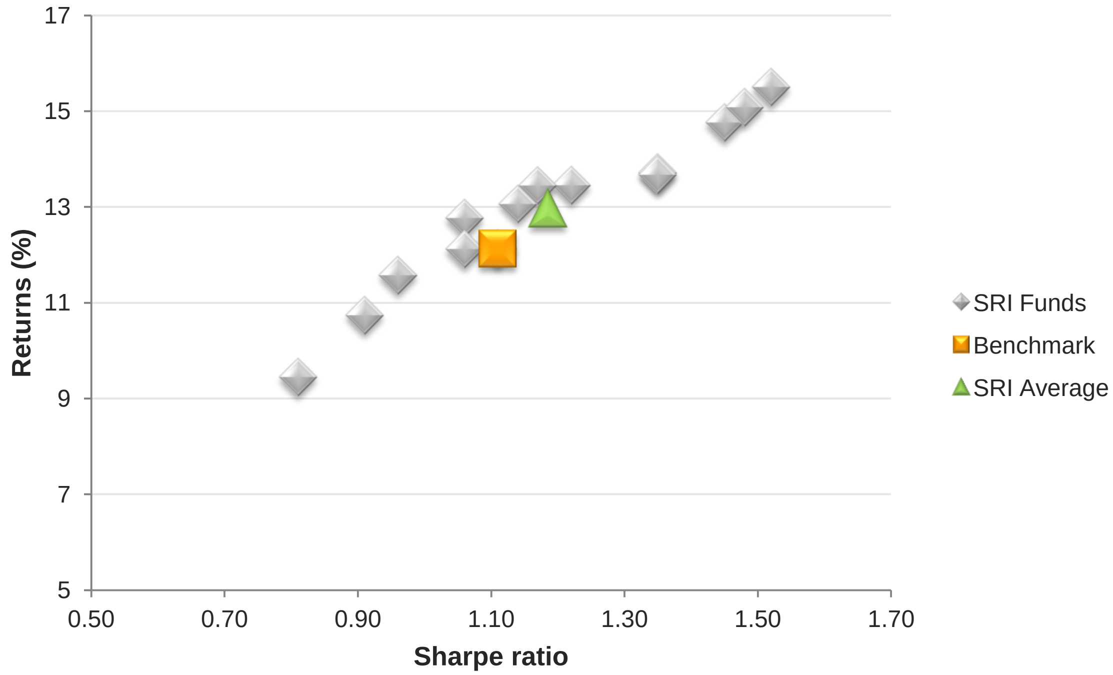
7/33 observations had lower standard deviation than benchmark over 3 time periods — roughly 21% of the time.

Sharpe ratio

- 13/17 RI funds outperformed the benchmark over the 3 year period
- 9/14 RI funds outperformed the benchmark over the 5 year period
- 0/2 RI funds outperformed the benchmark over the 10 year period

22/33 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 67% of the time.

Figure 6: Global equity RI funds' Sharpe ratio (5 years)



Sortino Ratio

- 13/17 RI funds outperformed the benchmark over the 3 year period
- 12/14 RI funds outperformed the benchmark over the 5 year period
- 0/2 RI funds outperformed the benchmark over the 10 year period

25/33 observations had stronger Sortino ratios than the benchmark over 3 time periods — 76% of the time.

RI equity mutual funds conclusions

Returns

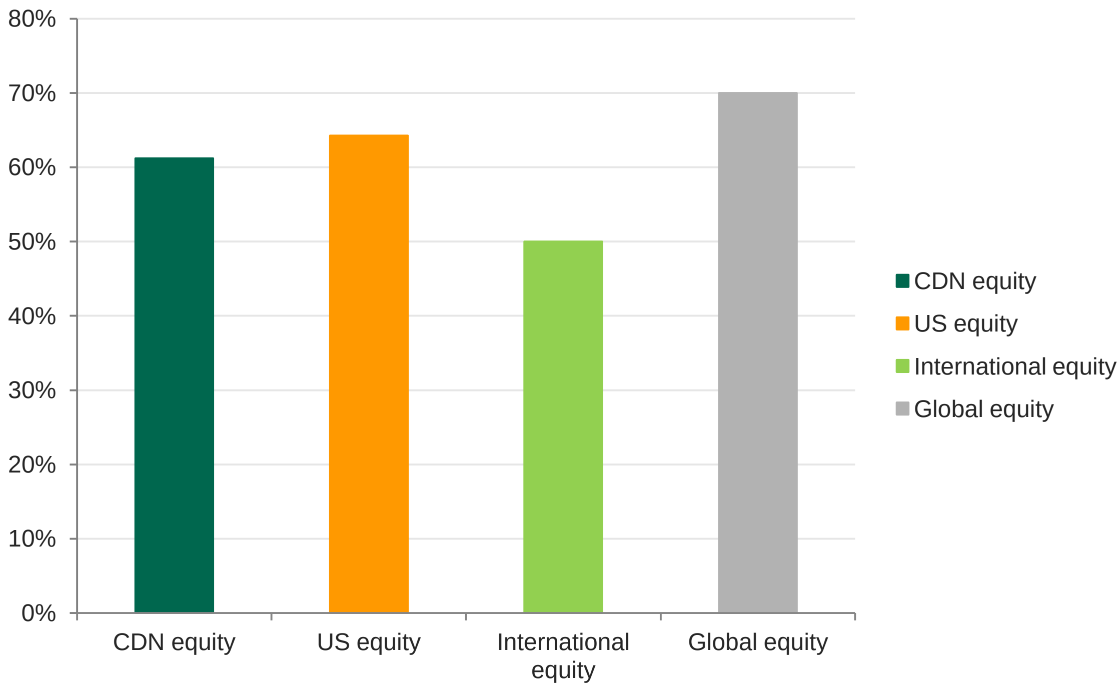
We used 145 observations of the financial performance of 47 RI equity mutual funds (Canadian equity, U.S. equity, International equity and Global equity) in the Canadian market across one, three, five and 10 year time periods (as of March 31st 2015) and compared them to their respective Morningstar benchmarks.

We found that the RI equity mutual funds financially outperformed their respective benchmarks 63% of the time while also reducing risk in the investment portfolio.

Table 1: Canadian RI equity mutual funds' returns measured against benchmark

Return	RI outperformance	Total observations
Canadian equity	41	67
U.S. equity	9	14
International equity	7	14
Global equity	35	50
Total	**92**	**145**
RI % of total	**63%**	

Figure 7: Canadian equity RI funds' return outperformance over benchmark



Risk

We used three measurements of risk in these portfolios, standard deviation, Sharpe ratios, and Sortino ratios to evaluate whether RI equity mutual funds reduce risk. We made 294 observations of RI Equity Mutual funds in Canada using these three measures over 3, 5 and 10 year time periods and comparing them to their respective benchmarks.

We find that the RI Funds outperformed risk measurement benchmarks 55% of the time. These findings are particularly strong for Sharpe ratios and Sortino ratios that measure the excess return per each unit of risk taken, using these two ratios the RI funds are able to generate excess return at lower risk than the benchmark 63% of the time for their Sharpe ratio and 72% of the time for their Sortino ratio. Reducing downside risk is particularly strong for RI funds when compared to the benchmark.

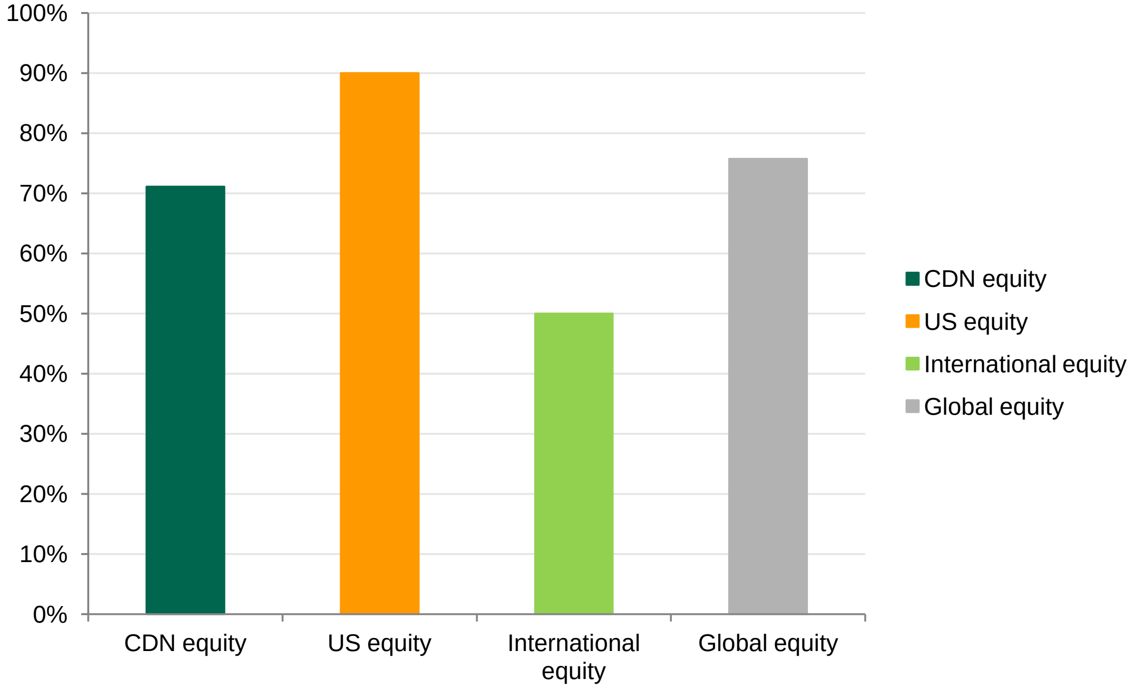
Table 2: Canadian RI equity mutual funds risk characteristics measured against benchmark

Standard deviation	RI outperformance	Total observations
Canadian equity	15	45
U.S. equity	5	10
International equity	3	10
Global equity	7	33
Subtotal	**30**	**98**
RI %	**31%**	

Sharpe ratio		
Canadian equity	31	45
U.S. equity	6	10
International equity	3	10
Global equity	22	33
Subtotal	**62**	**98**
RI %	**63%**	

Sortino ratio		
Canadian equity	32	45
U.S. equity	9	10
International equity	5	10
Global equity	25	33
Subtotal	**71**	**98**
RI %	**72%**	
Total risk observations	**163**	**294**
RI % of total	**55%**	

Figure 8: Canadian equity RI funds' Sortino ratio outperformance over benchmark



Fixed income and balanced mutual funds

Canadian fixed income

Morningstar benchmark: Canadian fixed income: includes 1041 funds which meet the following criteria. Funds in the Canadian fixed income category must invest at least 90% of their fixed income holdings in Canadian dollars with an average duration greater than 3.5 years and less than 9.0 years. In addition, these funds must invest primarily in investment-grade fixed-income securities, such that the average credit quality of the portfolio as a whole is investment grade (BBB or equivalent rating or higher) and not more than 25% of the portfolio's holdings are invested in high yield fixed income securities. For purposes of the category definition, up to 30% of a Fund's assets may be held in foreign fixed income products which will be treated as Canadian content provided that the currency exposure on those holdings is hedged into Canadian Dollars.

Using RIA listings of Canadian RI mutual funds by asset class we found 10 RI fixed income mutual funds in the Morningstar database in this asset class:

Meritas Canadian Bond

Meritas Canadian Bond Series F

NEI Canadian Bond

NEI Canadian Bond Series F

NEI Income Series A

NEI Income Series F

PH&N Community Values Bond Advisor Series

PH&N Community Values Bond Series C

PH&N Community Values Bond Series D

PH&N Community Values Bond Series F

Findings:

Returns

- 7/10 RI funds outperformed the benchmark over the 1 year period
- 5/10 RI funds outperformed the benchmark over the 3 year period
- 4/8 RI funds outperformed the benchmark over the 5 year period
- 1/3 RI funds outperformed the benchmark over the 10 year period

RI funds outperformed the benchmark in 17/31 observations over 4 time periods — 55% of the time.

Standard deviation

- 2/10 RI funds was less volatile than the benchmark over the 3 year period
- 1/8 RI funds was less volatile then the benchmark over the 5 year period
- 1/3 RI funds was less volatile than the benchmark over the 10 year period

4/21 observations were less volatile than benchmark over 3 time periods — 19% of the time

Sharpe ratio

- 4/10 RI funds outperformed the benchmark over the 3 year period
- 3/8 RI funds outperformed the benchmark over the 5 year period
- 1/3 RI Funds outperformed the benchmark over the 10 year period

8/21 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 38% of the time

Sortino ratio

- 4/10 RI funds outperformed the benchmark over the 3 year period
- 3/8 RI funds outperformed the benchmark over the 5 year period
- 1/3 RI funds outperformed the benchmark over the 10 year period

8/21 observations had stronger Sortino ratios than the benchmark over 3 time periods — 38% of the time

Canadian RI balanced funds

Canadian fixed income balanced

Morningstar benchmark: Funds in the Canadian fixed income balanced category must invest at least 70% of total assets in a combination of equity securities domiciled in Canada and Canadian dollar-denominated fixed income securities and between 5% and 39% of their total assets in equity securities.

Using RIA listings of Canadian RI mutual funds by asset class we found 12 RI fixed income balanced mutual funds in the Morningstar database in this asset class:

Desjardins SocieTerra Secure Market Port C
Desjardins SocieTerra Secure Market Port F
Desjardins SocieTerra Secure Market Port
IA Clarington Inhance Conservative SRI Portfolio T6
Meritas Income & Growth Portfolio A
Meritas Income & Growth Portfolio F
Meritas Income & Growth Portfolio T
Meritas Income Portfolio Series A
Meritas Income Portfolio Series F
Meritas Income Portfolio Series T
NEI Ethical Select Conservative Portfolio A
NEI Ethical Select Conservative Portfolio F

Findings:

Returns

- 10/12 RI funds outperform the benchmark over the 1 year period
- 5/8 RI funds outperform the benchmark over the 3 year period
- 3/4 RI funds outperform the benchmark over the 5 year period
- There is no 10 year data for RI mutual funds in this asset class

18/24 RI fund observations outperformed the benchmark in over 3 time periods — 75% of the time.

Standard deviation

- 2/8 RI funds were less volatile than the benchmark over the 3 year period
- 0/4 RI funds was less volatile than the benchmark over the 5 year period
- There were no observations over the 10 year time period

2/12 observations were less volatile than benchmark over 3 time periods — 17% of the time.

Sharpe ratio

- 3/8 RI funds outperformed the benchmark over the 3 year period
- 1/4 RI funds outperformed the benchmark over the 5 year period
- There were no observations over the 10 year time period

4/12 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 33% of the time.

Sortino ratio

- 4/8 of the RI funds outperformed the benchmark over the 3 year period
- 1/4 RI funds outperformed the benchmark over the 5 year period
- There were no observations in the 10 year time period

5/12 observations had stronger Sortino ratios than the benchmark over 3 time periods — 42% of the time.

Canadian neutral balanced

Peer benchmark: Canadian neutral balanced benchmark includes funds which meet the following criteria: Funds in the Canadian neutral balanced category must invest at least 70% of total assets in a combination of equity securities domiciled in Canada and Canadian dollar-denominated fixed income securities and between 40% and 60% of their total assets in equity securities.

Using RIA listings of Canadian RI mutual funds by asset class we found 19 RI Canadian neutral balanced mutual funds in the Morningstar database in this asset class:

Desjardins SocieTerra Balanced Portfolio C
Desjardins SocieTerra Balanced Portfolio F
Desjardins SocieTerra Balanced Portfolio
IA Clarington Inhance Balanced SRI Portfolio A
IA Clarington Inhance Balanced SRI Portfolio T6
Meritas Balanced Portfolio
Meritas Balanced Portfolio Series F
Meritas Balanced Portfolio T

Meritas Growth and Income Portfolio A

Meritas Growth and Income Portfolio F

Meritas Growth Portfolio A

Meritas Growth Portfolio F

Meritas Growth and Income Portfolio T

NEI Ethical Balanced A

NEI Ethical Balanced F

PH&N Community Values Balanced Advisor Series

PH&N Community Values Balanced Series C

PH&N Community Values Balanced Series D

PH&N Community Values Balanced Series F

Findings:

Returns

- 15/19 funds experienced higher returns than the benchmark over the 1 year period
- 11/15 outperformed the benchmark over the 3 year period
- 6/10 RI funds outperformed the benchmark over the 5 year period
- 1/3 RI funds outperformed the benchmark over the 10 year period

RI funds outperformed the benchmark in 33/47 observations over 4 time periods — 70% of the time.

Standard deviation

- 2/15 RI funds exhibited lower volatility over the 3 year period
- 3/10 RI funds exhibited lower volatility over the 5 year period
- 1/3 funds exhibited lower volatility over the 10 year period

6/28 observations were less volatile than benchmark over 3 time periods — 21% of the time.

Sharpe ratio

- 6/15 funds outperformed the benchmark over the 3 year period - 2 were in line with benchmark
- 1/10 outperformed over the 5 year period however all were very close to the benchmark
- 0/3 outperformed over the 10 year period - one was close to the benchmark

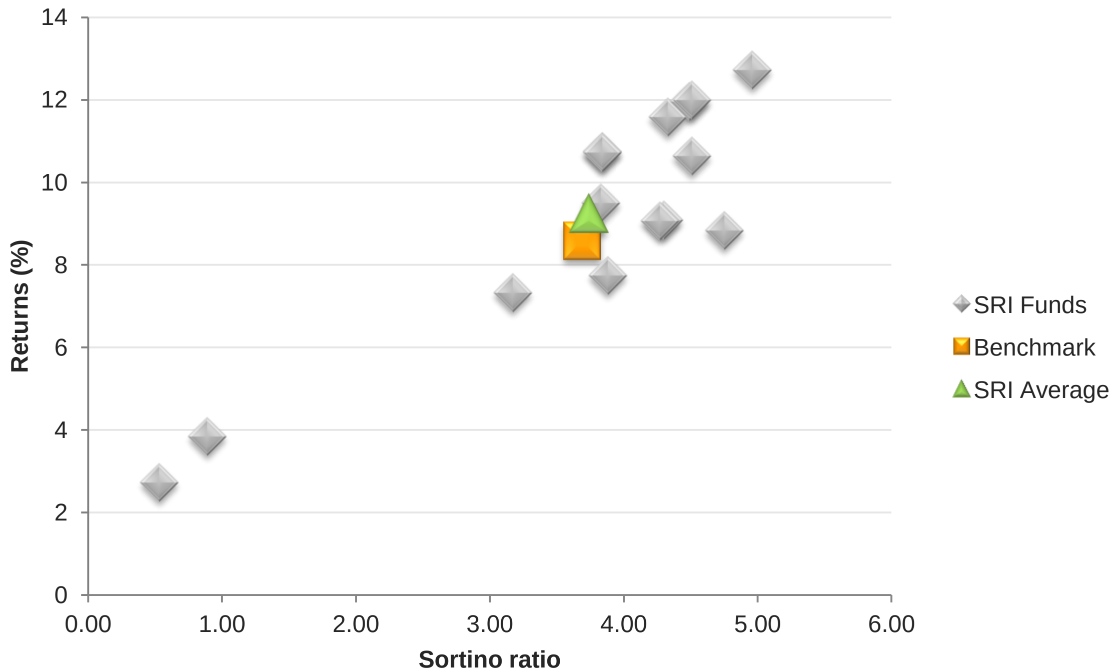
7/28 observations had stronger Sharpe ratios than the benchmark over 3 time periods — 25% of the time.

Sortino ratio

- 12/15 RI funds outperformed the benchmark over the 3 year period
- 6/10 RI funds outperformed the benchmark over the 5 year period
- 1/3 RI funds outperformed the benchmark over the 10 year period

19/28 observations had stronger Sortino ratios than the benchmark over 3 time periods — 68% of the time.

Figure 9: Canadian neutral balanced RI funds' Sortino ratio (3 years)



Global equity balanced

Morningstar benchmark: Global equity balanced: includes 1760 funds. Funds in the global equity balanced category must invest less than 70% of total assets in a combination of equity securities domiciled in Canada and Canadian dollar-denominated fixed income securities. In addition, they must invest between 61% and 90% of their total assets in equity securities.

Using RIA listings of Canadian RI mutual funds by asset class we found 10 RI global equity mutual funds in the Morningstar database in this asset class:

Desjardins SocieTerra Growth Portfolio Plus

Desjardins SocieTerra Growth Portfolio Plus C

Desjardins SocieTerra Growth Portfolio Plus F

NEI Ethical Select Growth Portfolio A

NEI Ethical Select Growth Portfolio F

RBC Jantzi Balanced Advisor Series

RBC Jantzi Balanced Series A

RBC Jantzi Balanced Series D

RBC Jantzi Balanced Series F

RBC Jantzi Balanced Series I

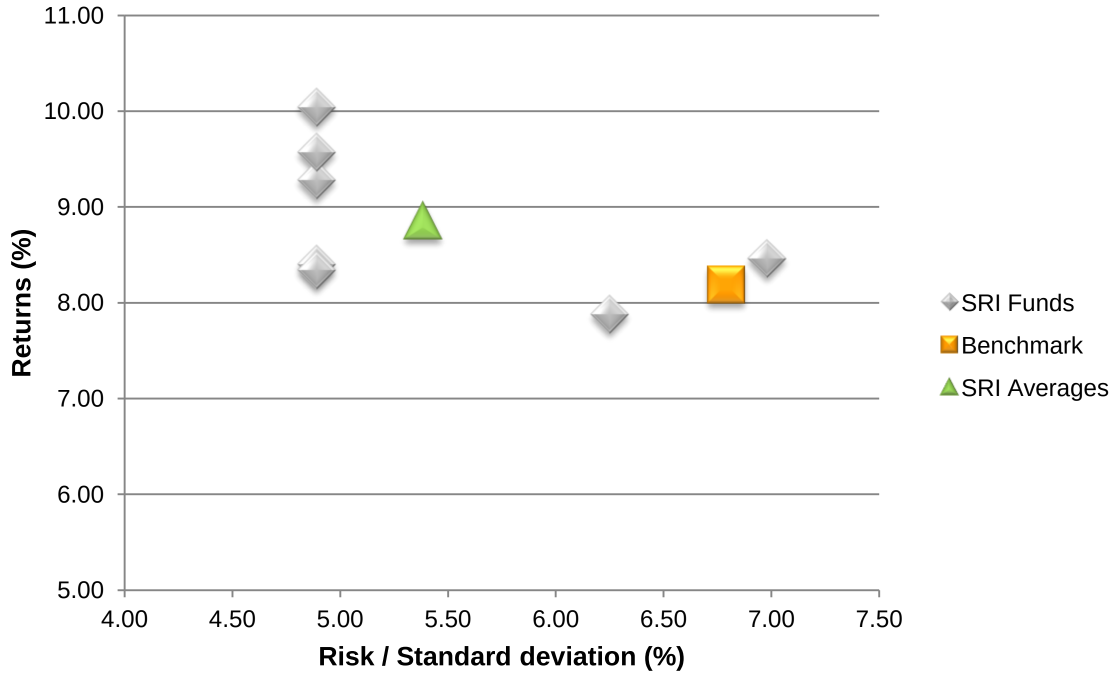
Findings:

Returns

- 6/10 RI funds outperformed the benchmark over the 1 year period
- 5/8 RI funds outperformed the benchmark over the 3 year period
- 6/7 RI funds outperformed the benchmark over the 5 year period
- No 10 year data available for RI funds in this asset class

RI funds outperformed the benchmark in 17/25 observations over 3 time periods — 68% of the time.

Figure 10: Global equity balanced RI funds' risk / return (5 years)



Standard deviation

- 7/8 RI funds were less risky than the benchmark over the 3 year period
- 6/7 RI funds were less risky than the benchmark over the 5 year period
- No 10 year data available

13/15 RI fund observations were less volatile than the benchmark over 2 time periods — 87% of the time.

Sharpe ratio

- 6/8 RI funds outperformed the benchmark over the 3 year period
- 7/7 RI funds outperformed the benchmark over the 5 year period
- No 10 year data available

13/15 observations had stronger Sharpe ratios than the benchmark over 2 time periods — 87% of the time.

Sortino ratio

- 7/8 RI funds outperformed the benchmark over the 3 year period
- 7/7 RI funds outperformed the benchmark over the 5 year period
- No 10 year data available

14/15 RI fund observations had stronger Sortino ratios than benchmark over 2 time periods — 93% of the time.

RI fixed income and balanced mutual funds conclusions

Returns

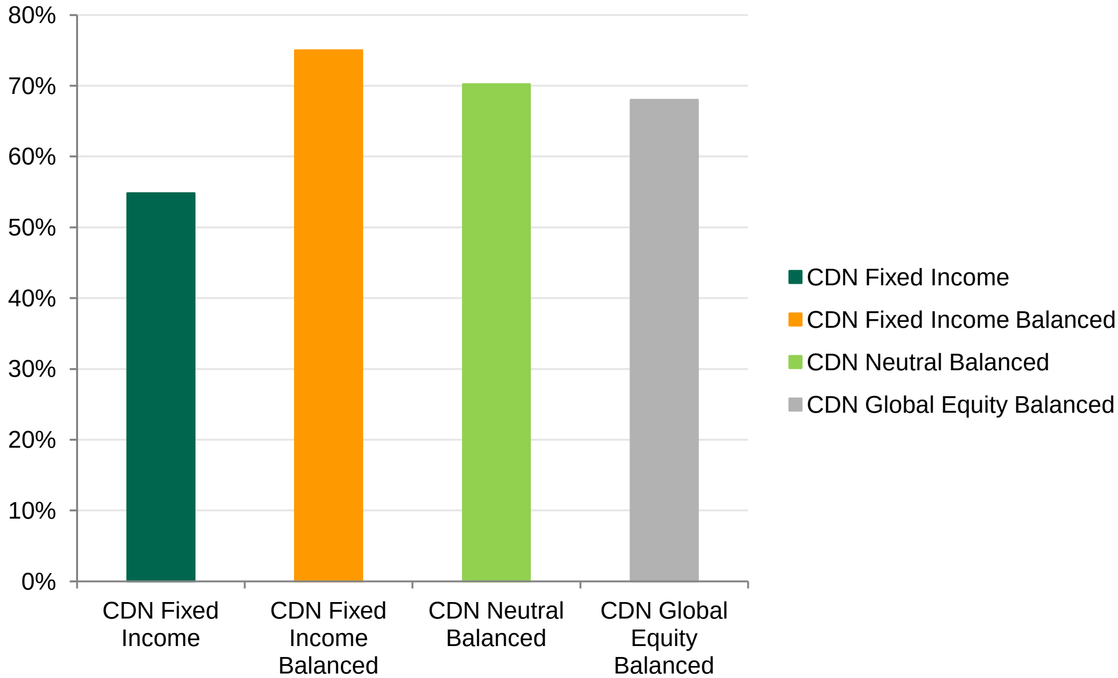
We used 127 observations of the financial performance of 51 RI Fixed Income and Balanced mutual funds (Canadian fixed income, Canadian fixed income balanced, Canadian neutral balanced, and global equity balanced) in the Canadian market across a one, three, five and 10 year time periods (as of March 31st 2015) and compared them to their respective Morningstar benchmarks.

We found that these RI fixed income and balanced mutual funds financially outperformed their respective benchmarks 67% of the time with risk characteristics in line with benchmark funds in each asset class.

Table 3: Canadian RI fixed income and balanced mutual funds' returns measured against benchmark

	RI outperformance	Total observations
Canadian fixed income	17	31
Canadian fixed income balanced	18	24
Canadian neutral balanced	33	47
Global equity balanced	17	25
Subtotal	**85**	**127**
RI %	**67%**	

Figure 11: Canadian fixed income and balanced RI funds' return outperformance over benchmark



Risk

We used three measurements of risk in these portfolios, Standard deviation, Sharpe ratios, and Sortino ratios to evaluate whether RI Fixed Income and Balanced mutual funds reduce risk. We made 228 observations of RI fixed income and balanced mutual funds in Canada using these three measures over three, five and 10 year time periods and comparing them to their respective benchmarks.

We find that the RI Funds are in line with the benchmark in terms of risk to the portfolio. However the RI funds are able to generate excess return at lower risk than the benchmark 61% of the time, measured by their Sortino ratio. Reducing downside risk is particularly strong for RI funds when compared to the benchmark.

Table 4: Canadian RI fixed income and balanced mutual funds' risk characteristics measured against benchmark

Standard deviation	RI outperformance	Total observations
Canadian fixed income	4	21
Canadian fixed income balanced	2	12
Canadian neutral balanced	6	28
Global equity balanced	13	15
Subtotal	**25**	**76**
RI %	**33%**	

Sharpe ratio		
Canadian fixed income	8	21
Canadian fixed income balanced	4	12
Canadian neutral balanced	7	28
Global equity balanced	13	15
Subtotal	**32**	**76**
RI %	**42%**	

Sortino ratio		
Canadian fixed income	8	21
Canadian fixed income balanced	5	12
Canadian neutral balanced	19	28
Global equity balanced	14	15
Subtotal	**46**	**76**
RI %	**61%**	
Total observations	**103**	**228**
RI %	**45%**	

Final thoughts

Many RI skeptics believe that RI funds underperform the market and add risk to an investment portfolio by reducing the universe available to the investor. Our research finds the opposite to be true. This study examines the relationship between risk and return in Canadian RI mutual funds. We found that Canadian RI equity mutual funds are able to provide solid financial outperformance for investors while simultaneously reducing risk in their portfolios.

RI mutual funds in this study show that taking ESG into account in investment selection lowers downside risks.

We measure these funds' risk and return characteristics against the average risk and returns for the Canadian mutual funds across eight common fund classes in Canada. These include equity, fixed income and balanced mutual funds. We use one, three, five, and 10 year observations. We find that the RI equity mutual funds examined here financially outperform the benchmark 63 per cent of the time, while simultaneously reducing risk in the portfolio. The RI equity mutual funds outperformed their benchmark on risk factors 55 per cent of the time. They are particularly strong in generating excess return for each unit of risk taken with Sharpe ratios outperforming 63 per cent of the time, and Sortino ratios, which measure excess return per unit of downside risk, 72 per cent of the time. These findings suggest that RI funds are able to protect investors from downside risk in their equity portfolios.

We find the RI fixed income and balanced funds examined in this study financially outperform the benchmark 67 per cent of the time, without adding undue risk to their portfolios. In fact, the fixed income and balanced funds examined outperformed their benchmarks 61 per cent of the time in their Sortino ratios (measuring excess return per unit of downside risk). These findings echo those of similar studies conducted on U.S. RI mutual funds (Morgan Stanley, 2014; Russell Investments 2014). These findings demonstrate the fact that taking environmental, social and governance factors into consideration can lead to outperformance and reduce risk in a portfolio. Both of these considerations are of significant importance to investors.

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The Carleton Centre for Community Innovation (3ci) is a university research centre based at the School of Public Policy and Administration at Carleton University, Ottawa, Canada. Through research, education and program management, 3ci investigates, strengthens and disseminates innovation in community-based economic development, and local governance, responsible investment, philanthropic and non profit leadership, social finance, and community/university engagement.

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