A Post-Implementation Review of The Impacts of The CRM2 Annual Costs and Performance Reports on Investment Fund Fees[15]

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1. Introduction and a Summary of Research Findings

Purpose and Background of Research

Policy evaluation is crucial in the policy development cycle because it allows regulators to understand whether a newly introduced policy has been implemented as intended and is having the desired impacts and outcomes.

The purpose of this research is to examine the post implementation impacts of the final phase of the Client Relationship Model (CRM2) amendments to *Regulation 31-103 respecting Registration Requirements, Exemptions and Ongoing Registrant Obligations* (herein after the CRM2 annual costs and performance reports) on industry behaviour.

The final amendments, which came into effect on July 15, 2016, were designed to ensure investors receive clear and complete disclosure of the performance of their investments and all fees associated with their accounts, including registrant compensation, on an annual basis.

With increased transparency of fees and performance in the CRM2 annual costs and performance reports, we expect that investors have paid closer attention to the total cost of investing and the services received over time. We hypothesize that this increase in cost and performance awareness has led to more competitive product pricing (e.g., investment fund managers may lower fees on existing mutual fund series/classes) with knock on effects for risk-adjusted performance.

To test our hypothesis, we undertook a study to examine whether greater transparency about investment cost and performance has led to changes in mutual fund and exchange-traded fund (ETF) fees[16], product creation, and product distribution. In particular, we asked:

4. Have investment fund managers (IFMs) lowered fees, specifically the management expense ratio (MER) and management fee, and what is the extent of these changes?
5. Have product manufacturers and product distributors been shifting to products that are not captured by the new account costs and performance disclosures, and
6. What have been the changes in product creation and distribution trends?

An accompanying research report entitled *A Post-Implementation Review of the Impacts of the CRM2 Annual Costs and Performance Reports on Investment Fund Performance* provides insights into whether IFMs have improved the risk-adjusted performance of their products as a result of the CRM2 annual costs and performance reports. The performance research tests our hypothesis that greater transparency of fees and performance has led to an increased demand from both investors and their advisers for funds with better risk-adjusted performance. Research suggests that we should anticipate this outcome as a corollary of any reduction in fund fees.[17]

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[16] Our study is focused on MER and management fees because the MER is an ongoing cost levied annually, and the components of the MER are relatively consistent across asset classes for the same (mutual fund) series type.

[17] Russel Kinnel, "How expense ratios and star ratings predict success", Morningstar FundInvestor, August 2010, online: https://www.morningstar.com/articles/347327/how-expense-ratios-and-star-ratings-predict-success

This fees report is focused on mutual funds and ETFs, but where appropriate other types of investment products, such as segregated funds, are also examined.[18]

Our fees analysis examines changes in MERs and management fees for the following mutual fund/ETF fund characteristics:

- asset class
- fund product type (mutual funds only)
- fund investing strategy
- IFM firm type
- series/class type (mutual funds only).[19]

We focused our analysis on these fund characteristics as there is a large body of research conducted by academics, industry, and regulators showing that these characteristics are significant in influencing fund expenses.

The study period covers January 2013 to December 2020. This time period begins about 18 months before the first set of CRM2 amendments came into effect on July 15, 2014 (cost disclosures related to pre-trade disclosure of charges, and trade confirmation for debt securities). The 2013 start date gives us a baseline of the investment fund industry before the first set of CRM2 amendments were implemented. We hypothesize that the changes we are seeking to measure took place several years after the CRM2 annual costs and performance reports are fully implemented. In light of this, the study timeline extends to 2020 to account for this time lag, enabling us to more fully observe the extent of any changes. Our analysis groups the findings into three time periods: 2013 to 2020, which is the overall duration of our study period, the pre-implementation period of 2013 to 2016 and the post-implementation period of 2017 to 2020.

Summary of Research Findings

Main Findings

The findings presented in this report are the views of CSA staff and are for informational purposes only. As such, statements made in the report do not represent the CSA's views of any official policy position.

Our findings provide important directional trends, i.e., correlation rather than cause and effect outcomes. As such, we caution readers from drawing conclusions that the changes presented in this report were caused by the CRM2 annual costs and performance reports.

It is possible that other factors, which we could not practically account for in our analysis, also contributed to the changes we are highlighting.

These factors include: advertising by firms competing on fees; local and national news stories focused on fees, cost effective investments, and the best interest

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[18] We analyze trends in segregated funds as part of our examination of whether product manufacturers and product distributors are shifting to products not subject to the CRM2 annual costs and performance reports requirements.

[19] Details of these fund characteristics, and the study's overall research design and fees methodology, can be found in Appendix A of the report.

discussion in Canada; increasing investor interest in passive investment funds and online advisers; and improvements in market conditions.

Keeping these limitations in mind, our research found that after the introduction of the CRM2 requirements:

- MERs and management fees decreased, for both mutual funds and ETFs in our study sample[20]
- there is no evidence that IFMs and product distributors have been shifting to products not subject to the CRM2 requirements
- there were market shifting changes in product creation and distribution. Most notable were the growth of the ETF market and actively managed and strategic beta ETFs, growth in fee-based mutual fund series, and the emergence of online advisers.

These findings suggest that industry behaviour, overall, has been shifting in directions that are congruent with our hypothesis on the impact of the CRM2 regulations, and help provide evidence that disclosure-based regulations may be an effective tool in changing industry and investor behaviour.

We further discuss the three generalized findings for each of our research questions by the study's three time periods, in the latter half of this section of the report. Sections 4, 5, and 6 of the report break down our research findings in greater detail, specifically by investment fund type, fund characteristics, and time periods.

Summary of Research Findings by Research Questions

This section of the report further discusses the three generalized findings for each of our research questions by the study's three time periods.

Research question 1: Have investment fund managers (IFMs) lowered fees, specifically MERs and management fees, and what are the extent of these changes?

There were declines in the asset-weighted average MERs and management fees, for both mutual funds and ETFs, during our study period, and the extent of these changes varied by investment fund type and fund characteristics.

Mutual Funds

i) 2013-2020 Findings

Overall, the asset-weighted average MER declined by 38 basis points (or 19%) over 2013-2020 for our study sample, and between 13 and 49 basis points, or between 6% and 30%, across the main fund characteristics examined.[21] The size of the

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[20] Since our mutual fund and ETF study samples do not include the entire universe of funds, this finding is only relevant for our study samples and should not be extrapolated to the larger mutual fund and ETF universe.

[21] Analysis in the body of the report focuses on fund characteristics that account for the majority of mutual fund and ETF assets.

asset-weighted average management fee declines was smaller, at 29 basis points for the overall study sample and ranged from 6 to 39 basis points across the main fund characteristics, or between 4% and 32%.

ii) Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Changes in the asset-weighted average MERs and management fees were generally greater during the post-implementation period than the pre-implementation period. Declines in the asset-weighted average MERs and management fees across the fund characteristics examined ranged from 3 to 19 basis points, or 2% to 15%, for both time periods.

Both shifts in the distribution of assets towards mutual fund series with lower fees, and reductions in series' MERs and management fee rates, contributed to lowering the asset-weighted average MERs and management fees.[22]

However, shifts in the distribution of assets had a larger effect than reductions in MER/management fee rates in lowering the aggregate asset-weighted average MERs/management fees for both time periods.

ETFs

iii)2013-2020 Findings

ETFs, compared to mutual funds, had smaller declines in their asset-weighted average MERs and management fees during our study period. This finding was anticipated since the MERs and management fees for most ETFs started from a lower baseline level. This is primarily because the majority of ETF assets are invested in funds that employ a passively managed investing strategy.

By the end of our study period in 2020, the asset-weighted average MER for our study sample had declined by 8 basis points (or 21%) from 2013 levels, and between 6 and 11 basis points or between 12% and 34%, depending on the fund characteristic examined. The decrease in the overall asset-weighted average management fee was 7 basis points (22%) between 2013 and 2020. Across the main fund characteristics, the declines in asset-weighted averages ranged from 3 to 10 basis points, or 5% to 34%.

ii) Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Changes in the asset-weighted average MERs and management fees during both the pre- and post-implementation periods ranged from +1 to -8 basis points or +1% to -19% across the fund characteristics examined. There were no strong directional trends in the asset-weighted average MER/management fee declines by fund characteristics. Both changes in the distribution of assets and reductions in

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[22] Not all series saw a decline in their asset shares during our study period. In general, the decline in asset share was seen in series with a wide range of MER/management fee rates. On average, asset shares of series with lower MER/management fee rates, however, grew more than asset shares of series with higher MER/management fee rates, and this contributed to lowering the asset-weighted average fees.

MERs and management fee rates had a broadly similar contribution to lowering the asset-weighted average fees, in both the pre- and post- implementation periods.[23]

Research question 2: Have product manufacturers and product distributors been shifting to products that are not captured by the new account costs and performance disclosures?

Our analysis of Canadian household discretionary financial assets did not show a trend of discretionary financial assets moving towards products not captured by the CRM2 annual costs and performance report requirements.

Between 2013 and 2020, the share of discretionary financial assets held in deposits remained stable at 27%. Meanwhile, the share of assets in non-investment fund securities increased slightly, from 25% to 26%, and the share of assets in investment funds increased from 28% to 32%. For investment funds, the 4 percentage point share increase was the result of growing market shares for mutual funds and ETFs.

Research question 3: What have been the changes in product creation and distribution trends, generally?

Five notable changes in product creation and distribution occurred during our study period. Unless otherwise noted, the findings and figures discussed below are for the overall industry and are not only for our study sample.

    i.   *Increasing Popularity of Fund-of-Funds Products*

The continued popularity of fund wrap programs contributed to a rise in the number of fund-of-funds products, for both mutual funds and ETFs; and, this was evident in the shift of assets away from stand-alone funds to fund-of-funds products. In 2013, 26% of mutual fund assets were in fund-of-funds products and by 2020 this figure had increased to 37%. One of the largest ETF manufacturers introduced ETF-of-ETFs products in early 2018. By December 2020, ETF-of-ETFs products accounted for $6 billion or 2% of the total industry ETF assets.

    ii.   *Growth of the ETF Market, and Actively Managed and Strategic/Smart Beta ETFs*

Growth of the ETF market was evident during our study period, and the growth rate for ETFs substantially surpassed the growth rate for mutual funds. Between 2013 and 2020, the annual growth in the number of ETFs was 17% while it was 2% for mutual funds.

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[23] Ibid.

Within ETF creation, one of the most significant changes that occurred during our study period was the rise of actively managed and strategic beta ETFs.[24] Near the start of our study period, actively managed and strategic beta ETFs accounted for 23% and 17% of the number of ETFs according to data from Investor Economics. By December 2020, their respective share rose to 43% and 21%. The rise in the number of strategic beta ETFs did not lead to a corresponding rise in ETF assets in that category of fund. In contrast, the share of ETF assets in actively managed ETFs increased from 9% at the start of our study period, to 24% by the end of our study period.

iii. Continued Growth in Fee-Based Mutual Fund Series

Within the mutual fund market, the shift from commission-based to fee-based series was pronounced during our study period. Between 2013 and 2020, the number of fee-based series increased by 186%, from 2,592 to 7,404. In comparison, the number of commission-based "A-series", which is the "core" mutual fund series, increased by 103% from 2,887, in 2013, to 5,880, in 2020.

Looking at our study sample, we found that 6% of mutual fund assets were in fee-based series at the start of our study period in 2013. This figure increased to 27% by the end of our study period in 2020. The growth and shift of assets into fee-based series corresponded with declining assets in commission-based A-series. In 2013, 75% of our study sample assets were in A-series and by 2020 this figure had declined to 58%.

iv. Rise of Funds with an ESG Mandate

A product creation trend that occurred towards the end of our study period was the rise of and demand for funds with an environmental, social, and governance (ESG) mandate. There were 49 mutual funds with an ESG mandate in 2013 and these funds had assets of $5.1 billion. By 2020, the number of mutual funds with an ESG mandate almost doubled to 97 funds. The number of ETFs with an ESG mandate grew from 10 in 2018, to 50 by 2020. Despite the significant increase in the number of funds with an ESG mandate, their share of total industry assets is small. In 2020, funds with an ESG mandate accounted for around 1% of total industry assets within the mutual fund and ETF markets, respectively.

v. Rise of Online Advisers

A new direct to investor/consumer distribution channel emerged in 2014 with the launch of four online advice platforms - Wealthsimple, Wealth Bar, NestWealth, and Questwealth Portfolios. These platforms provide retail investors with access to

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[24] Strategic beta ETFs are funds that apply rules to a basket of securities (often represented by an index) to target companies that demonstrate specific "factors" such as value, momentum, or growth. Strategic beta ETFs are also known by other names such as smart beta or alternative beta. There is no universally accepted view as to whether strategic beta ETFs are passively managed investment funds or actively managed investment funds. For the purpose of our research, we have classified strategic beta ETFs as passively managed funds because they focus on a specific basket of securities often represented by indices.

discretionary asset management services with a substantially lower, if any, account size minimum requirement. These platforms invest client assets primarily in ETFs, and to a lesser extent in mutual funds, other redeemable investment funds, cash and cash equivalents.[25] By the end of 2020, 22 online advisers operated in Canada. These firms had an estimated $10 billion in assets under management, which is equivalent to about 4% of the industry total assets for ETFs.

Organization of Research Findings

Our research findings are organized along the following structure.

Part 3 of the report provides a high-level overview of Canadian household discretionary financial wealth and how this wealth is allocated by investment products. This section of the report discusses whether product manufacturers and distributors are shifting to products not subject to the CRM2 requirements.

Part 4 provides a high-level overview of the investment fund industry in Canada. This section of the report discusses in detail changes in product creation and distribution. Parts 3 and 4 of the report provide useful information to readers that puts the research findings into context and aids readers in their interpretation of the research results.

Part 5 discusses the MER and management fee findings for mutual funds. The results are organized by the fund characteristics discussed in Appendix A of the report. A general overview is presented for each fund characteristic before we examine changes in MERs and management fees, before and after the full implementation of the CRM2 annual cost and performance reports.

Part 6 discusses the ETF fee findings. The format of the ETF research results mirrors the format for the mutual fund fees findings.

Part 7 summarizes our research findings by research question and CSA staff's view on whether disclosure-based regulations can shift industry behaviour in the desired policy direction.

Appendix A provides details of the study's research design and the formulas for calculating changes in MERs and management fees.

Appendix B explains and provides guidance on how to interpret the fees results for each of the effects we examined.

Appendix C provides supplemental data tables by report sections.

Overview of Canadian Household Discretionary Financial Assets

The purpose of this section of the report is to provide a high-level overview of Canadian household discretionary financial wealth and answer the question of whether product manufacturers and distributors are shifting to investment products

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[25] Redeemable investment funds generally allow investors to purchase or redeem securities of mutual funds on demand for a price representing a proportionate interest of the fund's net assets. Mutual funds are the main type of redeemable investment fund.

not captured by the CRM2 annual costs and performance reports. Another intent of this overview is to provide useful information to readers that will assist them in contextualizing the research findings, interpreting, and understanding the research results.

a. Canadian Household Discretionary Financial Assets

Canadian households held an estimated $4.1 trillion in discretionary financial assets, in 2013.[26] Of this amount, approximately $1.1 trillion were held in investment funds.[27] Another $2.1 trillion were held in securities and deposits ($1.0 billion in securities; $1.1 trillion in deposits).

By the end of 2020, household discretionary financial assets increased to $6.5 trillion and, of this amount, $2.1 trillion were held in investment funds. Equities and deposits each amounted to $1.7 trillion in discretionary financial assets.

Table 3.1 below compares the asset size and share of discretionary financial assets for each investment product type, at the start and end of our study period. The share of assets held in investment funds increased during our study period while the share of assets in securities and deposits remained broadly stable.

At a high-level, an investment fund is an investment product that pools money from various investors and invests that money collectively through a portfolio of financial instruments, such as stocks and/or bonds, and the portfolio of investments is professionally managed by a fund manager.

For the purposes of our research, we collectively refer to mutual funds and ETFs, which are focus of our analysis, and segregated funds as investment funds.[28] Segregated funds are an insurance product and were not covered by the CRM2 annual costs and performance report requirements. We have looked at trends in the segregated fund market because they are often sold by dually registered/licensed advisers who are permitted to sell mutual funds and insurance products such as segregated funds.[29] Their inclusion enables us to assess whether product manufacturers and distributors were engaging in regulatory arbitrage by shifting to products not captured by the CRM2 annual costs and performance requirements.

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[26] Investor Economics *Household Balanced Sheet Report*, 2021.

[27] Ibid. Discretionary financial assets exclude assets held in defined benefit pension plans.

[28] The (Ontario) *Securities Act*, R.S.O. 1990, c. S.5 defines an investment fund to mean "a mutual fund or a non-redeemable investment fund" and Regulation 41-101 defines an ETF to be a mutual fund.

[29] These dually registered/licensed advisers are most prevalent in financial advisory firms overseen by the Mutual Fund Dealer Association (MFDA) until December 31, 2022, and the Canadian Investment Regulatory Organization (CIRO) afterwards. As at 2018, 43% of advisers overseen by the MFDA were dually registered/licensed to sell insurance products, such as segregated funds, and mutual funds, and these advisers administered 21% of all mutual fund assets. See MFDA 2020 Client Research Report.

Table 3.1 Estimated Canadian Discretionary Financial Assets, 2013 and 2020

	Asset Size ($B)		Share of discretionary financial assets	
	2013	2020	2013	2020
All discretionary financial assets	4,091	6,517	-	-
Investment funds	1,145	2,074	28%	32%
Securities	1,031	1,686	25%	26%
Deposits	1,102	1,742	27%	27%

Source: Investor Economics Household Balance Sheet 2021. Excludes group segregated funds, closed end funds and alternatives

b. <u>Household Discretionary Financial Assets in Investment Funds</u>
Table 3.2 below compares the amount of financial assets that were in investment funds, and each investment fund type's share of the total investment fund assets and all discretionary financial assets, for 2013 and 2020.[30] Just below one-third (1/3) of all discretionary financial assets were held in investment funds, in both 2013 and 2020.

The most common type of investment fund held was mutual funds, which accounted for 26% of all discretionary financial assets, in 2020. Less widely held investment funds were ETFs and segregated funds. At the end of 2020, 4% of discretionary financial assets were held in ETFs and another 2% were held in segregated funds.

During our study period, the share of assets in ETFs increased by 2 percentage points and the share of assets in mutual funds increased by 4 percentage points. Segregated funds share of total financial assets remained stable (see Table 3.2).

Focusing solely on investment funds, ETFs gained market share during our study period. In 2013, their share of investment funds was 6%. By 2020, ETF market share increased to 12%, thus making it the second most widely held type of investment fund. The market share of mutual funds and segregated funds declined by 4 and 3 percentage points between 2013 and 2020. By the end of our study period, mutual funds accounted for 81% of investment fund assets and segregated funds accounted for another 6%.

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[30] Analysis excludes U.S. domiciled ETFs. In December 2019, Canadian investors held $38.8 billion in U.S. listed ETFs. Data source: Investor Economics *ETF and Index Report, Q4 2019*.

Table 3.2 Estimated Canadian Discretionary Financial Assets Held in Investment Funds

	Assets ($B)		Share of Investment Funds (%)		Share of discretionary financial assets (%)	
	2013	2020	2013	2020	2013	2020
All discretionary financial assets	$4,091	$6,517	-	-	-	-
Investment funds	$1,145	$2,074	-	-	28%	32%
Canadian listed ETFs	$63	$257	6%	12%	2%	4%
Seg funds	$101	$127	9%	6%	2%	2%
Mutual funds excl. ETFs	$981	$1,690	86%	81%	24%	26%

Source: Investor Economics Household Balance Sheet 2021. Excludes group segregated funds, closed end funds and alternatives

The findings presented in this section of the report suggest that product manufacturers and distributors were not shifting to products not subject to the CRM2 requirements.

Overview of Investment Fund Industry in Canada

This section of the report provides a high-level overview of the investment fund industry. The focus is on the number funds and assets by investment fund product types, specifically mutual funds, ETFs and (individual) segregated funds. The intent of this section of the report is to provide key background information that readers may need to understand and interpret the research findings. **This section is not intended to provide a detailed overview of the investment fund industry in Canada.** Readers interested in this topic can refer to the CSA's Mutual Fund Fees Discussion Paper published in December 2012.[31]

a. Assets and Number of Investment Funds by Fund Type
The graphs below show the number of funds and annual assets for each investment fund type.

During our study period, there was a steady rise in the number of ETFs and ETF assets (refer to Graphs 4.1 and 4.2). The average year-over-year increase in the number of ETFs was 17% during our study period. The average year-over-year increase was much lower for mutual funds and segregated funds, and the increases were 1% and 0.05%, respectively.

The number of segregated funds was not proportionate to its share of investment fund assets. Segregated funds accounted for 38% to 43% of investment funds throughout our study period, but only 6% to 9% of investment fund assets. The average annual growth in the number of funds and assets was 0.05% and 3%, respectively.

The number of mutual funds steadily increased during our study period, but they accounted for a declining share of the number of funds and investment fund assets,

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[31] The CSA's Mutual Fund Fees paper is available at: https://www.securities-administrators.ca/news/canadian-securities-regulators-publish-discussion-paper-on-mutual-fund-fees/

due to the rising share of ETFs. The average annual growth in the number of mutual funds and their assets were 1% and 8%, respectively.

The orange bars in Graphs 4.1 and 4.2 visualize the growing number of ETFs and their increasing share of investment fund assets, during our study period.

Graph 4.1: Number of Investment Funds by Fund Type, 2013-2020
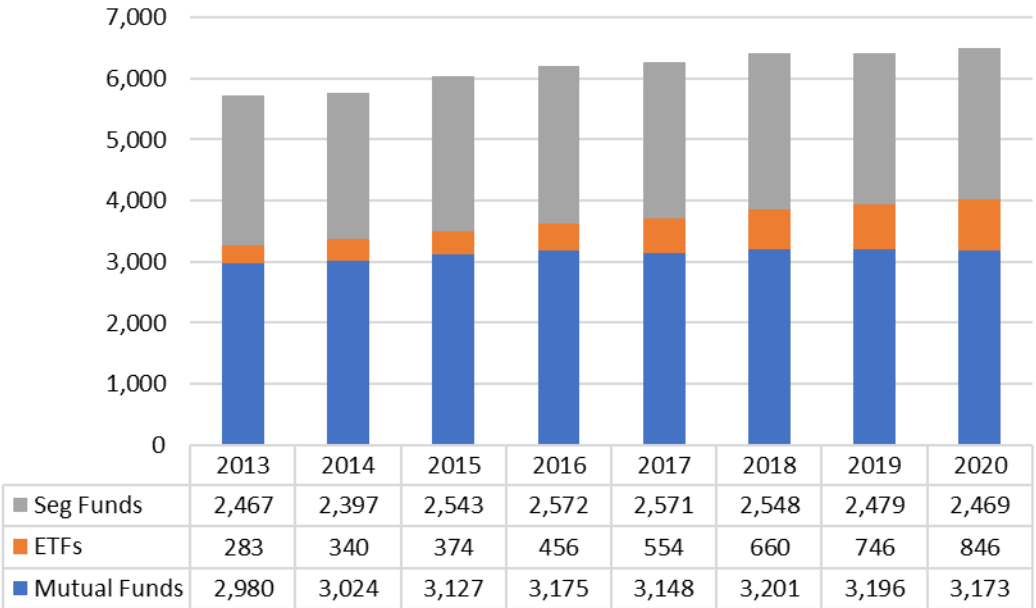
	2013	2014	2015	2016	2017	2018	2019	2020
Seg Funds	2,467	2,397	2,543	2,572	2,571	2,548	2,479	2,469
ETFs	283	340	374	456	554	660	746	846
Mutual Funds	2,980	3,024	3,127	3,175	3,148	3,201	3,196	3,173

Source: Investor Economics Insights Report, January 2021 and January 2019; ETF and Index Funds Report Q4 2020, Q4 2016, Q1 2016
*only includes individual seg funds; Investor Economics Household Balance Sheet Report 2016, 2018, and 2021.

Graph 4.2: Investment Fund Assets ($billion) by Fund Type, 2013-2020
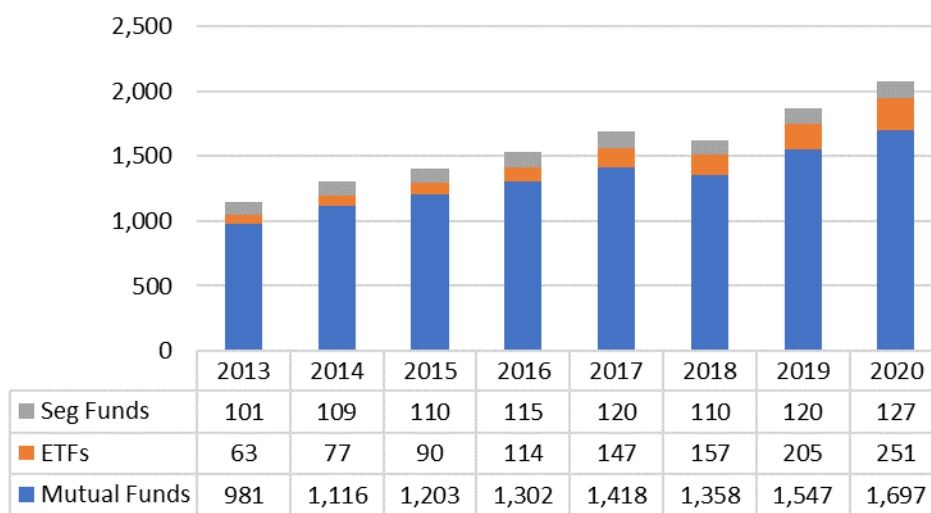
	2013	2014	2015	2016	2017	2018	2019	2020
■ Seg Funds	101	109	110	115	120	110	120	127
■ ETFs	63	77	90	114	147	157	205	251
■ Mutual Funds	981	1,116	1,203	1,302	1,418	1,358	1,547	1,697

Source: Investor Economics Insights Report, January 2021 and January 2019; ETF and Index Funds Report Q4 2020, Q4 2016, Q1 2016
*Only includes individual seg funds; Investor Economics Household Balance Sheet Report 2016, 2018, and 2021.

b. Trends in Product Creation and Distribution

Trends in production creation and distribution were (and continues to be) driven by the need to differentiate product offerings and channels of access to investment funds.

The continued popularity of fund wrap programs has contributed to a rise in the number of fund-of-funds products, for both mutual funds and ETFs, and a corresponding rise in their fund assets (refer to Tables 4.1.1 and 4.1.2). The ratio of the number of stand-alone funds to fund-of-funds products remained constant throughout our study period. The share of assets, however, started to shift away from stand-alone funds to fund-of-fund products, as our study period progressed.[32]

The introduction of ETF-of-ETFs products, i.e., ETFs where the underlying portfolio of securities consists of other ETFs, by one of the larger ETF manufacturers occurred early in 2018.[33] By December 2020, ETF-of-ETF products, accounted for $6 billion or 2% of the total industry ETF assets.[34]

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[32] Our analysis of fund-of-funds products found that 75% of them invest in proprietary stand-alone funds, i.e., funds that are sponsored by the same IFM.
[33] This product type is equivalent to a mutual fund fund-of-funds products. Common marketing names for these products are 'ETF portfolios' and 'asset-allocation ETFs'.
[34] Investor Economics Insights Report February 2021.

Table 4.1.1 Number of Mutual Funds by Product Type (Industry Total and for Long-Term Funds Only)

Product Type	2013	2014	2015	2016	2017	2018	2019	2020
Stand-alone funds	1,814	1,829	1,843	1,930	1,599	2,468	2,469	2,459
Fund-of-funds	485	495	481	564	501	687	689	678
Total	**2,299**	**2,324**	**2,324**	**2,494**	**2,100**	**3,155**	**3,158**	**3,137**
Share of Industry Total								
Stand-alone funds	79%	79%	79%	77%	76%	78%	78%	78%
Fund-of-funds	21%	21%	21%	23%	24%	22%	22%	22%

Source: IFIC; fund count is for December of each year

Table 4.1.2 Mutual Fund Assets ($B) and Share of Mutual Fund Assets by Product Type (Industry Total and for Long-Term Funds Only)*

Product Type	2013	2014	2015	2016	2017	2018	2019	2020
Stand-alone funds	735	811	839	894	966	908	1,040	1,130
Fund-of-funds	264	330	392	445	511	515	591	654
Industry Total	**999**	**1,141**	**1,231**	**1,339**	**1,477**	**1,423**	**1,630**	**1,784**
Share of Industry Assets								
Stand-alone funds	74%	71%	68%	67%	65%	64%	64%	63%
Fund-of-funds	26%	29%	32%	33%	35%	36%	36%	37%

Source: IFIC

Another significant trend in the ETF market during our study period was the rise of actively managed and strategic beta ETFs.[35] In March 2014, actively managed and strategic beta ETFs accounted for 23% and 17% of the number of ETFs based on analysis of data from Investor Economics.[36] By December 2020, their respective shares rose to 43% and 21%.[37] The rise in the number of strategic beta ETFs did not lead to a corresponding rise in ETF assets. In contrast, the share of ETF assets in actively managed ETFs increased from 9% at the start of our study period, to 24% by the end of our study period.[38]

A third emerging trend that occurred towards the end of our study period was the rise of and demand for funds with an environmental, social, and governance (ESG) mandate. The number of ESG funds and the assets in these funds steadily increased during our study period, with the greatest year-over-year growth occurring between 2019 and 2020 (refer to Tables 4.1.3 and 4.1.4). By the end of our study period, there were an estimated 97 mutual funds and 50 ETFs with an

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[35] See footnote 24 for a definition of strategic beta ETFs.
[36] The earliest available data are as of March 2014. CSA analysis of data obtained from Investor Economics ETF and Index Reports, Q1 2016, Q4 2019, Q4 2020.
[37] Ibid.
[38] Ibid.

ESG mandate, and their net assets accounted for 1% of total industry assets within the mutual fund and ETF markets, respectively.[39]

Table 4.1.3 Estimated Number of Funds, and Net Assets of Funds with an ESG Mandate

Fund Type	2013	2014	2015	2016	2017	2018	2019	2020
Number of Funds								
Mutual Fund	49	46	46	52	61	67	73	97
ETFs	-	-	-	-	-	10	20	50
Net Assets ($B)								
Mutual Fund	5.1	6.0	6.8	8.0	9.8	10.1	12.3	17.6
ETFs	-	-	-	-	-	0.1	0.3	2.8

Source: OSC analysis of IFIC data (sourced from fund prospectuses) . Analysis is limited to long-term mutual funds and ETFs. Fund count and fund assets are as at December of each year.

Table 4.1.4 Estimated Year-over-Year Change in the Number of Funds, and Net Assets of Funds with an ESG Mandate

Fund Type	13-'14	14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20*
Number of Funds							
Mutual Fund	-6%	0%	13%	17%	10%	9%	33%
ETFs	-	-	-	-	-	100%	150%
Net Assets ($B)							
Mutual Fund	17%	13%	18%	23%	3%	22%	43%
ETFs						162%	954%

Source: OSC analysis of IFIC data (sourced from fund prospectuses) . Analysis is limited to long-term mutual funds and ETFs.

A new direct to investor/consumer distribution channel emerged in 2014 with the launch of four online advice platforms - Wealthsimple, Wealth Bar[40], NestWealth, and Questwealth Portfolios. As noted in CSA Staff Notice 31-342.[41]

> Unlike "robo-advisors" in the USA, these online advice platforms *"offer hybrid services that utilize an online platform for efficiency, while registered advising representatives (ARs) remain actively involved. These platforms use online questionnaires as the basis for the know-your-client (KYC) information gathering process, but ARs are responsible for determining that sufficient KYC information has been gathered to support investment suitability determinations. Clients' managed accounts are invested in relatively simple products, including unleveraged exchange traded funds*

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[39] Net assets of long-term funds only, as at December 2020. Net assets for mutual funds include some ETF assets held in fund-of-fund products.

[40] Wealth Bar was acquired by CI Investments in 2019 and was re-branded as CI Direct Investing in 2020.

[41] CSA Staff Notice 31-342 *Guidance for Portfolio Managers Regarding Online Advice*. Available at https://lautorite.qc.ca/fileadmin/lautorite/reglementation/valeurs-mobilieres/0-avis-acvm-staff/2015/2015sept24-31-342-avis-acvm-en.pdf

(ETFs), low cost mutual funds or other redeemable investment funds, cash and cash equivalents. Often, model portfolios are created using algorithmic software although, again, an AR has responsibility for the suitability of each client's investment."

By the end of 2020, 22 online advisers[42] operated in Canada. These firms had an estimated $10 billion in AUM.[43]

Another notable trend that emerged during our study period was the shift away from commission-based to fee-based products and/or accounts. This was most pronounced in mutual funds, and the growth of fee-based "F-series".[44] In 2013, the number of funds with a F-series accounted for 23% of all mutual funds, and by 2020, this figure rose to 29% (refer to Graph 4.3). The number of F-series surpassed the number of A-series starting in 2017.[45] We hypothesize and have heard anecdotally that the proposed regulations related to embedded commissions in mutual funds and the Client Focused Reforms were important drivers behind this change, as IFMs started creating F-series, in response to a shift in adviser practice models.

The shift in assets can be seen in our study sample. In 2013, 5% of assets were in F-series and, by 2020, this figure had increased to 27%. For the same time periods, the share of total fund assets in A-series decreased from 82% to 58% (refer to Graph 4.4).

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[42] This figure includes investment dealers or mutual fund dealers overseen by the Canadian Investment Regulatory Organization (formerly the MFDA and IIROC) in addition to portfolios managers directly overseen by provincial regulators.

[43] Internal OSC staff analysis.

[44] F-series were developed for fee-based accounts, and they do not include an embedded trailing commission.

[45] A series are the original/core series that have traditionally populated the mutual fund market, and they include an embedded trailing commission.

Graph 4.3: Number of A-Series and F-Series in Total Mutual Fund Industry

	2013	2014	2015	2016	2017	2018	2019	2020
A-series	2,887	3,113	4,341	4,749	4,979	4,879	5,020	5,880
F-series	2,592	2,791	4,195	4,488	6,704	6,952	7,197	7,404
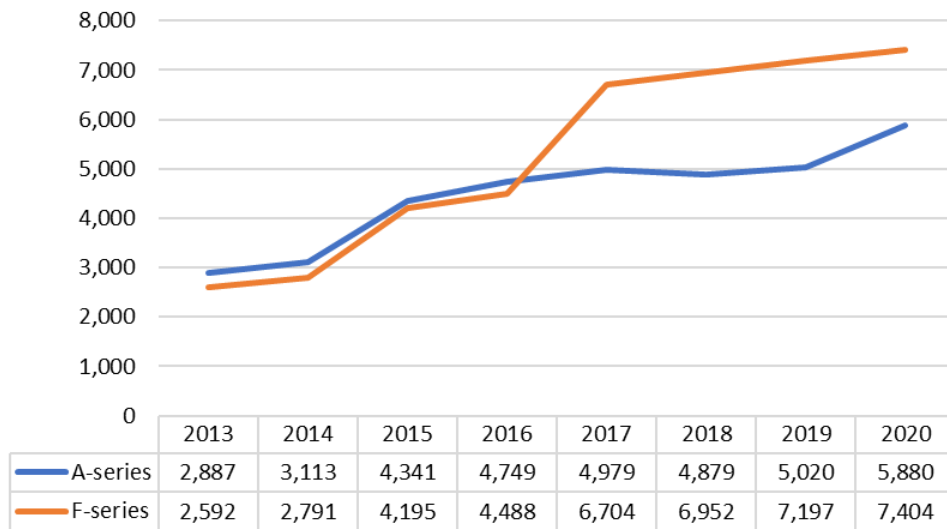
Source: Investor Economics Insights Report, January 2014 to 2022

Graph 4.4: A-Series and F-Series Share of Total Fund Assets in Study Sample, 2013 to 2020

A-series: 2013: 82%, 2014: 78%, 2015: 74%, 2016: 71%, 2017: 66%, 2018: 62%, 2019: 60%, 2020: 58%

F-series: 2013: 5%, 2014: 6%, 2015: 9%, 2016: 12%, 2017: 16%, 2018: 20%, 2019: 24%, 2020: 27%
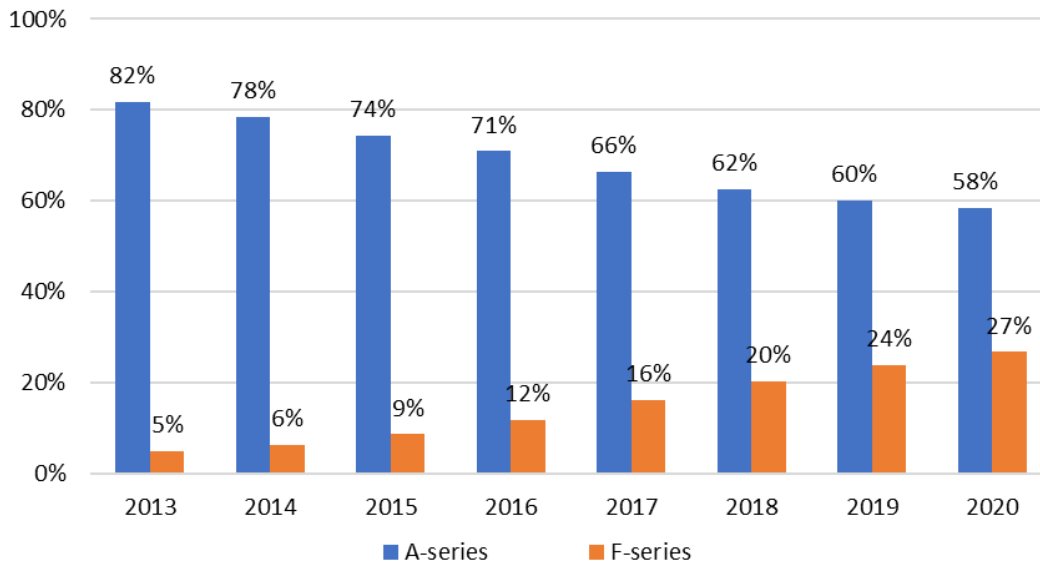
Source: CSA analysis of data obtained from IFMs and Investor Economics

Mutual Fund Fees Research Findings

Overview of Mutual Fund Study Sample – Assets, Returns and Fees

Our analysis of mutual fund MERs and management fees consisted of 2,990 unique mutual funds, at the fund level, and 13,617 series.   The total AUM of these funds was $781 billion in 2020, and these funds accounted for 44% of the total industry AUM of $1.78 trillion.[46] Table 5.1.1 breaks down the number of funds and their assets, returns, and fees for each year of our study period.

Fund assets steadily increased during our study period, from $545 billion in 2013 to $781 billion in 2020. Our study sample accounted for about 50% of total industry assets, on average.[47]

There were no clear overall directional trends in mutual fund returns during our study period. The asset-weighted annualized gross returns were positive for all but one year – 2018 – and returns ranged from -3.84% to 13.28%. While not a focus of our study, the fees and returns findings indicate that investors holding mutual funds, on average, realized positive net returns in 7 of the 8 years of our study period.

The simple average and asset-weighted average MERs and management fees steadily decreased for each year of our study period.

From 2013 to 2019 the simple average MER was lower than the asset-weighted average MER, and this relationship only reversed in 2020. This finding indicates that for seven years of our study, assets were concentrated in series with higher MERs and the asset shift to series with comparatively lower MERs only became evident in the final year of our study period.

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[46] Data from the Investment Fund Institute of Canada (IFIC).

[47] One of the research design objectives of this study was to have a study sample that was as similar as possible to the study sample used in the accompanying research report on investment fund performance (see Appendix A for details). To achieve this outcome, one of the fund selection criteria included in our research design was the requirement that mutual funds and ETFs must have at least 36 months of performance data. This fund selection criteria meant that mutual fund series introduced after 2017 were excluded from our analysis, and this exclusion helps explain why our study sample's share of industry assets and number of ETFs declined as our study period progressed (refer to Table 5.1.1).

Table 5.1.1 Mutual Fund Assets, Returns, and Fees, 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020
Net assets ($B) of series in study	545	622	632	671	708	699	747	781
Industry assets ($B)	999	1,141	1,231	1,339	1,477	1,423	1,630	1,784
Share of industry assets (series in study)	55%	54%	51%	50%	48%	49%	46%	44%
Number of funds in study (at the fund level)	2,235	2,344	2,379	2,480	2,442	2,421	2,348	2,254
Number of series in study	7,497	8,382	9,120	10,175	10,549	11,067	10,539	10,011
Number of series - industry total	8,652	9,356	15,175	18,813	20,644	21,232	21,784	22,066
Share of industry total - number of series in study	87%	90%	60%	54%	51%	52%	48%	45%
Asset-weighted annualized gross returns (%)	13.05	8.21	3.08	7.26	7.22	-3.84	13.28	9.45
Simple average MER	1.96	1.93	1.88	1.82	1.77	1.71	1.69	1.69
Asset-weighted average MER	2.06	2.03	1.98	1.93	1.83	1.77	1.70	1.67
Simple management fee	1.49	1.47	1.44	1.40	1.36	1.33	1.32	1.31
Asset-weighted average management fee	1.65	1.64	1.61	1.56	1.48	1.43	1.38	1.36

CSA analysis of data obtained from investment fund managers and third-party data providers. Assets and expense data were obtained from Investor Economics. Gross monthly total returns data were obtained from Morningstar Direct. Assets are as at December. Funds in our study sample exclude institutional fund series.

Changes in the Overall Asset-Weighted Average MERs and Management Fees by Study Period

This section of the report presents the research findings for all mutual funds, i.e., without grouping the mutual funds into different fund characteristics, for the pre- and post-implementation periods.

The asset-weighted average MER and management fee declined during both the pre- and post-implementation periods (refer to Tables 5.1.1 and 5.2.1). In 2013, the asset-weighted average MER was 206 basis points and by 2016 it had declined by 13 basis points (or 6%), to 193 basis points. In 2017, the asset-weighted

average MER was 183 basis points, and by 2020 it had declined to 167 basis points, which was a 16 basis point (or 9%) decline. This trend was seen in the aggregate and, on average, at the individual fund level.

The asset-weighted average management fee declines were smaller than the MER declines. The pre-implementation decline was 9 basis points (5%), and the post-implementation decline was 13 basis points (8%). This finding was expected since, in general, the management fee accounts for most of an MER.

The negative fund asset-weight effects, for both the asset-weighted average MER and management fee, were larger than the negative price effects during the pre-implementation period (refer to the *Fund Weight (FW) Effect* and *Price Effect* rows in Table 5.2.1). This finding tells us two things. First, both the fund asset-weight and price effects contributed to lowering the asset-weighted fees.[48] Second, the fund asset-weight effect, i.e., changes in the distribution of assets across the different the series in our sample, however had a greater impact than the price effect in driving down the asset-weighted fees during the pre-implementation period. The relative impact between the fund asset weight and price effects in decreasing the asset-weighted average fees was broadly similar during the post-implementation period.

Table 5.2.1 Changes in AW Avg MERs/Mgmt Fees, All Mutual Funds, Pre- and Post-Implementation Periods

	AW Avg MERs		AW Avg Mgmt Fees	
	Chg '13-'16	**Chg '17-'20**	**Chg '13-'16**	**Chg '17-'20**
AW Avg MER Chg/Mgmt Fee Chg	**-0.13**	**-0.16**	**-0.09**	**-0.13**
Fund Weight (FW) Effect	**-0.09**	**-0.12**	**-0.07**	**-0.10**
of which…				
Sales Effect	-0.11	-0.12	-0.08	-0.10
Returns Effect	0.02	0.00	0.01	0.00
Price Effect	**-0.02**	**-0.01**	**-0.01**	**-0.01**
FW + Price Effects	**-0.02**	**-0.02**	**-0.01**	**-0.01**
Share of series with fund weight declines	42%	61%	42%	61%
Share of series with price declines	58%	54%	17%	11%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Assets and expense data were directly obtained from Investor Economics. Returns data were obtained from Morningstar Direct.

The interaction effect (refer to the *FW+Price Effects* row in Table 5.2.1 also contributed to decreasing the asset-weighted fees. The size of the interaction effect ranged from 1 to 2 basis points.

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[48] Unless otherwise noted, all references to asset-weighted fees from this point forward refer to both the asset-weighted average MER and asset-weighted average management fee.

An explanation and interpretation of these effects are provided below, using a subset of the research findings.

We caution readers that the size of the asset-weighted average MER/management fee changes discussed in this section of the report are not equal to the sum of the different fee changes by fund characteristic discussed in the proceeding sections of the report. This is because the asset-weighted averages reported above are calculated using all series in our sample, whereas the averages by fund characteristic discussed below are based on only the subset of series captured by each fund characteristic.

Explanation and Interpretation of the Fund Asset Weight Effect

As noted above, the asset-weighted average MER decreased by 13 and 16 basis points respectively during the pre- and post-implementation periods, and part of the decrease was driven by series with declines in their share of total assets covered by our sample. Specifically, 42% of series during the pre-implementation period and 61% of series during the post-implementation period experienced a decline in their assets and in turn their asset weights.[49] These declines would have lowered the aggregate asset-weighted average MERs by 9 and 12 basis points for the respective time periods if funds kept their fees constant over each period (refer to Table 5.2.1).

The findings pertaining to the share of series with declines in their assets and the size of the fund asset weight effect indicate that the relationship between these two variables is not linear; that is, a large numerical value for one variable does not correlate to a large numerical value for the other. Rather, the primary factor that dictates the size of the fund asset weight effect is the aggregate assets of the series with declines in their share of total assets covered by the sample, while the number of series is a secondary factor. A conclusion that can then be drawn from the MER findings is that larger funds contributed to the negative fund asset weight effect, particularly during the pre-implementation period.

Within the fund asset weight effect, we see that changes in assets arising from sales, in the aggregate, contributed to lowering the asset-weighted average MER and management fee, in both the pre- and post-implementation periods. A negative value for the sales effect does not indicate that in the aggregate there was negative sales for the series in our study sample. Rather, a negative value indicates that a sufficient number of series saw large enough declines in their asset shares due to sales, such that the asset share changes contributed to lowering the overall asset-weighted average MER/management fee.

Conversely, a positive return effect tells us that a sufficient number of series saw their asset shares increase because of asset growth arising from investment

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[49] The fund asset weight effect would be positive for funds that saw an increase in their fund assets, for these two time periods.

returns, such that the asset share changes contributed to increasing the aggregated asset-weighted average MER/management fee.

The purpose of the fund asset weight effect is to understand how changes in distribution of assets across series are contributing to changes in the asset-weighted average fee, while holding MERs/management fees constant. This metric is therefore not suitable for making inferences about whether assets were flowing into funds with lower or higher fees, overall. More appropriate metrics to use are the asset-weighted average MER and management fee findings, in Table 5.1.1, because these metrics consider changes in both a series' assets and MER/management fee rate. The conclusion that can be drawn from the findings in Table 5.1.1 is that assets generally flowed into funds with lower MER/management fee rates, and that MERs and management fees, on average, decreased.

Explanation and Interpretation of the Price Effect

The negative price effects indicate the following necessary and sufficient changes took place for series that operated over the entire given time periods:

    i)   a sufficient number of series lowered their MER or management fee rates
    ii)   the size of the fee reductions for these series was sufficiently large, and
    iii)   these series had sufficiently large assets

such that these three conditions contributed to lowering the aggregated asset-weighted average MER/management fee, for both the pre- and post-implementation periods by the amounts shown in Table 5.2.1.

The relationship between the share of series with declines in their fees and the price effect is not linear. A higher (lower) share of series with declines in their fees does not necessarily equate to a larger (smaller) price effect. The size of the price effect is determined by the interplay between the size of the fee reductions and whether these reductions occurred in series with relatively higher or lower fund asset weights.

Additionally, comparing the share of series with price declines and the corresponding price effect between fee types (and fund characteristics in proceeding sections of the report) or time periods is not meaningful due to differences in the sample size and population of series.[50] The only meaningful comparison that can be made for the price effect, across fee type, fund characteristics, and time periods is the size of the price effect and its contribution to the directional change in the aggregated asset-weighted average MER/management fees for the particular fee type, characteristic or time period. The price effect can also be compared to the fund asset weight effect for the same comparative analysis.

Explanation and Interpretation of the Interaction of the Fund Asset Weight and Price Effects (i.e., Interaction Effect)

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[50] The sample size and population of series varied by fee type, fund characteristics, and time periods; therefore, any comparisons made would not be meaningfully equivalent.

The interaction effect is more difficult to interpret than the individual price or fund asset weight effects because it is measuring the impacts of two variable changes at once rather than a single variable change, which is the procedure used to measure the fund asset weight and price effects.

The interaction effect can increase, decrease, or have no impact on the aggregated asset-weighted average MER/management fee. *The size and direction of the interaction effect varied depending on the fund characteristics looked at in our study.*

Two scenarios were responsible for the interaction effects observed in our study, as illustrated in Figure 1 in Appendix B of the report. The first scenario was due to the addition of new series or the deletion of existing series.[51] In general, the addition of new series occurred more often in our sample during the pre-implementation period than the post-implementation period. The second scenario was instances where series had simultaneous changes in their asset weights and MER or management fee rates.[52]

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[51] The interaction effect resulting from the addition or removal of a series will always be positive, all else equal, whereas changes in fees or asset shares for existing series can lead to either positive or negative interaction effects. See Appendix B for more details.

[52] Refer to Figure 1 in Appendix B for different ways changes in a series' asset share and fee affect the interaction effect and the aggregate asset-weighted fee.

Mutual Fund Fees by Broad Asset Class[53]

a. Overview of Fund Assets and Fees by Broad Asset Class

The distribution and number of mutual fund assets by broad asset class are shown below in Table 5.3.1. The dominant broad asset classes of funds throughout our study period were balanced funds, with 55% of mutual fund assets in our sample in 2020.[54] The other two dominant broad asset classes of funds were equity and fixed income funds. These funds accounted for 32% and 11% of total fund assets in our sample in 2020. Funds in the money market and other broad asset class categories accounted for the remaining 1% of assets in the final year of our study period. Balanced, equity, and fixed income funds' share of the total assets in our sample remained relatively constant throughout our study period.

Table 5.3.1 Mutual Fund Assets ($B) by Broad Asset Class

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	No. of Series in Sample
Balanced	278	335	350	375	392	386	420	431	4,655
Equity	200	220	214	224	237	234	238	252	6,890
Fixed Income	59	59	61	65	71	70	81	89	1,692
Money Market	6	5	5	4	4	4	5	5	110
Other	2	3	3	3	4	4	4	3	270
Total	**545**	**622**	**632**	**671**	**708**	**699**	**747**	**781**	**13,617**

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset data were directly obtained from Investor Economics. Broad asset class data developed by the CSA using CIFSC data provided by investment fund managers. The "Other" broad asset class category represents funds that investment in so called alternative/non-traditional assets such as real estate or derivatives products.

The asset-weighted fees for funds of all three dominant broad asset classes steadily declined during our study period (refer to Tables 5.3.2 and 5.3.3).[55] The size of the decline was greater for the asset-weighted average MER than the asset-weighted average management fee. The size of the fee declines varied by asset classes, and it ranged from 32 to 48 basis points (15% to 30%) over 2013-2020 for the asset-weighted average MERs, and 24 to 38 basis points (14% to 32%) for the asset-weighted average management fees.

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[53] Our broad asset class categorization was developed and based on the Canadian Investment Funds Standards Committee (CIFSC) retail investment fund category definitions. The "other" category captures funds that do not fall into the other four categories, specifically balanced, equity, fixed income, or money market. Funds in the "other" asset class category invest in so called alternative/non-traditional assets such as real estate or derivatives products. The CIFSC methodology document used to inform our development of the broad asset class categories can be found at https://www.cifsc.org/wp-content/uploads/2019/05/CIFSC-2019-Category-Definitions.pdf.

[54] Funds categorized by CIFSC as "balanced funds" must invest between 5% and 90% of their non-cash assets in equity securities and between 10% and 95% of their non-cash assets in fixed-income securities. We did not have detailed portfolio holdings for balanced funds to re-categorize them as predominantly equity or fixed income funds.

[55] The asset-weighted average MERs and management fees for money market and other funds can be found in Appendix C.

The asset-weighted average MERs and management fees for equity funds were, on average, slightly greater than the fees for balanced funds throughout our study period. Balanced and equity funds had asset-weighted average MERs that were above 200 basis points at the start of our study period, in 2013. The asset-weighted average MERs dropped below 180 basis points by the end of our study period, in 2020. Fixed income funds had the lowest asset-weighted average MERs and management fees of the three dominant asset classes. The cost difference between fixed income funds and equity/balanced funds was 64-78 basis points, for the asset-weighted average MER, and 49-63 basis points, for the asset-weighted average management fee, depending on the year of our study period.

Table 5.3.2 Asset-Weighted Average MERs by Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Balanced	2.10	2.07	2.03	1.98	1.90	1.85	1.79	1.78	-0.12	-0.12
Equity	2.22	2.17	2.12	2.05	1.94	1.87	1.77	1.74	-0.17	-0.19
Fixed Income	1.46	1.40	1.35	1.28	1.19	1.13	1.06	1.02	-0.18	-0.17

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics.

Table 5.3.3 Asset-Weighted Average Management Fees by Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Balanced	1.69	1.69	1.65	1.62	1.55	1.50	1.47	1.45	-0.08	-0.10
Equity	1.75	1.73	1.70	1.63	1.55	1.49	1.44	1.41	-0.12	-0.14
Fixed Income	1.20	1.16	1.11	1.04	0.97	0.91	0.85	0.82	-0.16	-0.15

CSA analysis of data obtained from investment fund managers and third party data providers. Asset and expense data were directly obtained from Investor Economics.

b. Pre and Post-Implementation Changes in Fees - Balanced, Equity, and Fixed Income Funds

Declines in the asset-weighted average MERs and management fees were seen for funds of all three dominant broad asset classes, in both the pre- and post-implementation periods (refer to Tables 5.3.4 and 5.3.5). The asset-weighted average MER/management fee declines ranged from 8 to 18 basis points (or 5% to 13%) during the pre-implementation period, and 10 to 19 basis points during the post-implementation period (or 6% to 15%).

During both periods, changes in the distribution of assets across series played a larger role than reductions in MER/management fee rates in driving down the asset-weighted average MERs/management fees. Changes in the distribution of assets across series arising from sales contributed to lowering the asset-weighted average MERs/management fees. Conversely, changes in the distribution of assets

attributable to investment returns had little impact on the asset-weighted average MERs/management fees.

The interaction effect for balanced series was close to zero in both the pre-and post-implementation periods. For equity and fixed income series, the interaction effect was negative. This was mainly attributable to the addition and termination of series over the period.

Table 5.3.4 Changes in the Asset-Weighted (AW) Average MERs by Select Broad Asset Classes

	Balanced		Equity		Fixed Income	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.12**	**-0.12**	**-0.17**	**-0.19**	**-0.18**	**-0.17**
Fund Weight (FW) Effect	**-0.09**	**-0.11**	**-0.11**	**-0.14**	**-0.11**	**-0.08**
of which…						
Sales Effect	-0.09	-0.11	-0.11	-0.13	-0.11	-0.07
Returns Effect	0.00	-0.01	0.00	-0.01	0.00	-0.01
Price Effect	**-0.02**	**-0.01**	**-0.03**	**-0.02**	**-0.02**	**-0.04**
FW + Price Effects	**-0.01**	**0.00**	**-0.03**	**-0.02**	**-0.04**	**-0.06**
Share of series with fund weight declines	41%	59%	39%	61%	49%	64%
Share of series with price declines	53%	50%	63%	56%	55%	58%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third party data providers. Asset and expense data were obtained from Investor Economics. Returns data were obtained from Morningstar Direct.

Table 5.3.5 Changes in the Asset-Weighted (AW) Average Management Fees by Select Broad Asset Classes

	Balanced		Equity		Fixed Income	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.08**	**-0.10**	**-0.12**	**-0.14**	**-0.16**	**-0.15**
Fund Weight (FW) Effect	**-0.07**	**-0.10**	**-0.09**	**-0.12**	**-0.10**	**-0.06**
of which…						
Sales Effect	-0.07	-0.09	-0.08	-0.11	-0.10	-0.06
Returns Effect	0.01	0.00	0.00	-0.01	0.00	-0.01
Price Effect	**-0.01**	**0.00**	**-0.01**	**-0.01**	**-0.03**	**-0.03**
FW + Price Effects	**0.00**	**0.00**	**-0.02**	**-0.01**	**-0.03**	**-0.05**
Share of series with fund weight declines	41%	59%	39%	61%	49%	64%
Share of series with price declines	18%	10%	17%	9%	21%	20%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics. Investor Economics. Returns data obtained from Morningstar Direct.

Mutual Fund Fees by Series Type[56]

a. Overview of Fund Assets and Fees by Series Type

The distribution of mutual fund assets by series type is shown below in Table 5.4.1. Each fund has multiple series/classes and the dominant series/class types in our study sample were "Series A" and "Series F" (herein after A-series and F-series). A-series are the original/core series that have traditionally populated the mutual fund market, and they include an embedded trailing commission. F-series were developed for fee-based accounts, and they do not include an embedded trailing commission.[57] A-series and F-series accounted for 82% and 5%, respectively, of our study sample assets at the start of our study period. As our study period progressed, assets in F-series grew while assets in A-series declined. By the end of our study period, F-series accounted for 27% of assets and A-series accounted for 58% of assets in our study sample.

Table 5.4.1 Mutual Funds Assets ($B) by Series Type

Series Type	2013	2014	2015	2016	2017	2018	2019	2020	No. of Series
A	446	488	470	476	470	437	449	455	3,477
ADV	28	30	30	29	28	26	26	22	603
D	10	11	11	12	13	13	15	16	536
F	26	40	54	78	114	142	179	208	4,695
O	24	41	55	64	71	71	68	69	2,638
T	11	12	12	12	11	11	10	9	1,668
Total	**545**	**622**	**632**	**671**	**708**	**699**	**747**	**781**	**13,617**

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

A-series had a higher asset-weighted average MER/management fee than F-series throughout our study period, and the average difference was 110 basis points for the MER and 93 basis points for the management fee (refer to Table 5.4.2).[58] This finding was expected as A-series include an embedded trailing commission while F-series do not.

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[56] Mutual funds can sell series other than Series A and F. Advisor-series include series originally launched as no load products that have been modified to include trailer fee, and series manufactured by bank-affiliated IFMs and primarily sold through third-party advisers and full service brokerage rather than the bank's branch and discount networks. The A and Advisor series typically charge a full trailing commission. Series F are designed for fee-based accounts and they do not include an embedded trailing commission. Series D are designed for the discount brokerage channel and as at June 1, 2022, they can no longer include an embedded trailing commission. Series O are designed for high net worth accounts. In Series O, management fees are reduced compared to the original series of the fund and trailing commissions are negotiable between an investor and their adviser. Series T are designed for investors interested in a tax-efficient cash flow and charge an embedded trailing commission.

[57] In our analysis, series are classified by their main type and will include all sub-types. For example, F-series will includes F-HNW and F-T series.

[58] The asset-weighted average fees for the other series types - advisor series, D-series, O-series and T-series can be found in Appendix C.

The asset-weighted average MER and management fee incrementally declined for both series types during our study period. By the end of our study period the asset-weighted average MER for A-series remained above 200 basis points while it fell below 100 basis points for F-series.

Table 5.4.2 Asset-Weighted Average MERs by Series Type, 2013-2020

Series Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
A	2.15	2.14	2.12	2.10	2.06	2.06	2.01	2.02	-0.05	-0.04
F	1.09	1.07	1.03	1.00	0.95	0.92	0.91	0.91	-0.10	-0.04

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics.

Table 5.4.3 Asset-Weighted Average Management Fees by Series Type, 2013-2020

Series Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
A	1.72	1.73	1.72	1.71	1.68	1.67	1.65	1.66	-0.01	-0.03
F	0.82	0.82	0.79	0.77	0.73	0.72	0.72	0.72	-0.05	-0.01

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset data were obtained from Investor Economics.

b. Pre and Post-Implementation Changes in Fees – Series A and Series F Funds

The asset-weighted average MER and management fee declined for both A-series and F-series during our study period. The declines ranged from 1 to 10 basis points (or 1% to 9%) for the pre-implementation period, and 1 to 4 basis points (or 2% to 4%) for the post-implementation period. The pre-implementation decline was somewhat greater for F-series than A-series, and this relationship was reversed for the post-implementation period (refer to Tables 5.4.4 and 5.4.5).

For A-series, both the price effect and the fund asset weight effect contributed to lowering the asset-weighted average MER/management fee for both the pre- and post-implementation periods. For F-series, declines in MER/management fee rates rather than shifts in assets towards series with lower fees had a slightly larger effect in lowering the asset-weighted average MER/management fee, particularly during post-implementation period.

The interaction effect was generally small for both series during both periods. The negative effect for F-series in the post-implementation period was primarily attributable to the addition and termination of series.

Table 5.4.4 Changes in the Asset-Weighted (AW) Average MERs by Select Series Type

	Series A		Series F	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.05**	**-0.04**	**-0.10**	**-0.04**
Fund Weight (FW) Effect	**-0.02**	**-0.02**	**-0.04**	**0.01**
of which…				
Sales Effect	-0.04	-0.03	-0.06	0.01
Returns Effect	0.02	0.00	0.02	0.01
Price Effect	**-0.02**	**-0.01**	**-0.05**	**-0.02**
FW + Price Effects	**-0.01**	**-0.01**	**0.00**	**-0.03**
Share of series with fund weight declines	54%	62%	54%	66%
Share of series with price declines	54%	52%	62%	59%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third party data providers. Asset and expense data were obtained from Investor Economics. Returns data obtained from Morningstar Direct.

Table 5.4.5 Changes in the Asset-Weighted (AW) Average Management Fees by Select Series Type

	Series A		Series F	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.01**	**-0.03**	**-0.05**	**-0.01**
Fund Weight (FW) Effect	**0.00**	**-0.02**	**-0.03**	**0.02**
of which…				
Sales Effect	-0.02	-0.02	-0.04	0.01
Returns Effect	0.01	0.00	0.01	0.01
Price Effect	**-0.01**	**-0.01**	**-0.03**	**-0.01**
FW + Price Effects	**0.00**	**0.00**	**0.01**	**-0.02**
Share of series with fund weight declines	54%	62%	54%	66%
Share of series with price declines	13%	13%	16%	14%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics. Returns data obtained from Morningstar Direct.

Mutual Fund Fees by Product Type

a. Overview of Fund Assets and Fees by Product Type

There are four mutual fund product types in our analysis – stand-alone funds and three types of fund-of-funds (FoF). The three types of FoF are: 3rd party FoF, proprietary & 3rd party FoF, and proprietary FoF.[59] Of the four product types, stand-alone funds and proprietary FoF accounted for 61% and 29% of total mutual fund assets, in 2020 ($477B in stand-alone funds, $229B in proprietary FoF – refer to Table 5.5.1 below).

During our study period, the share of assets in stand-alone funds declined while the share of assets in proprietary FoF increased. In 2013, stand-alone funds accounted for 73% of total fund assets in our study sample. By 2020, this figure fell to 61%. Conversely, proprietary FoF accounted for 19% and 29% of total fund assets in 2013 and 2020, respectively.

The share of assets in the other two product types remained relatively unchanged during our study period.

Table 5.5.1 Mutual Fund Assets ($B) by Product Type

Product Type	2013	2014	2015	2016	2017	2018	2019	2020	No. of Series
3rd Party Fund-of-Funds	8	10	11	12	12	12	12	13	196
Proprietary & 3rd Party Fund-of-Funds	31	38	44	47	52	56	60	60	720
Proprietary Fund-of-Funds	106	131	147	165	177	182	207	229	2,538
Stand-Alone Mutual Funds	400	441	430	447	466	448	467	477	10,163
Total	**545**	**622**	**632**	**671**	**708**	**699**	**747**	**781**	**13,617**

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset data were obtained from Investor Economics and data on a fund's product type from investment fund managers.

The next two tables present the asset-weighted average MERs and management fees for the two dominant product types for each year of our study, and for the pre- and post-implementation periods. The asset-weighted average MERs/management fees for the other product types can be found in Appendix C.

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[59] A stand-alone mutual fund invests directly in securities such as stocks and bonds. Proprietary fund-of-funds are a type of mutual fund that invests in funds sponsored by the same IFM. Third party fund-of-funds are a type of mutual fund whereby the holdings are mutual funds managed by a third-party investment fund manager.

Table 5.5.2 Asset-Weighted Average MERs by Product Type

Product Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Proprietary Fund-of-Funds	2.11	2.08	2.04	2.00	1.91	1.84	1.77	1.74	-0.12	-0.17
Stand-Alone Mutual Funds	2.03	2.00	1.94	1.88	1.78	1.71	1.62	1.60	-0.15	-0.18

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Table 5.5.3 Asset-Weighted Average Management Fees by Product Type

Product Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Proprietary Fund-of-Funds	1.73	1.71	1.68	1.63	1.57	1.51	1.46	1.42	-0.10	-0.15
Stand-Alone Mutual Funds	1.61	1.60	1.56	1.50	1.43	1.37	1.32	1.30	-0.10	-0.13

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

The asset-weighted average MERs/management fees incrementally declined for both product types during our study period (refer to Tables 5.5.2 and 5.5.3). Proprietary FoF had higher asset-weighted average fees than stand-alone funds, and the difference was an average of 12 basis points for the MER and 13 basis points for the management fee. The asset-weighted average MERs for both product types were above 200 basis points at the start of our study and fell below 200 basis points by the end of our study period.

b. Pre and Post-Implementation Changes in Fees, Stand-alone Funds and Proprietary Fund-of-Funds

Similar sized declines were seen in the asset-weighted average MERs and management fees, for both product types, during the pre- and post-implementation periods (refer to Tables 5.5.4 and 5.5.5). The declines ranged from 10 to 15 basis points (or 6% to 7%) for the pre-implementation period, and 13 to 18 basis points (or 9% to 10%) for the post-implementation period.

The fund asset weight effect had a larger impact than the price effect in lowering the asset-weighted average MERs and management fees, for both time periods.

The negative interaction effects were primarily driven by the introduction and termination of series over implementation periods.

Table 5.5.4 Changes in the Asset-Weighted (AW) Average MERs by Select Product Type

	Proprietary Fund-of-Funds		Stand-Alone Mutual Funds	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.12**	**-0.17**	**-0.15**	**-0.18**
Fund Weight (FW) Effect	**-0.09**	**-0.12**	**-0.10**	**-0.14**
of which…				
Sales Effect	-0.10	-0.12	-0.12	-0.14
Returns Effect	0.01	0.00	0.02	0.00
Price Effect	**-0.01**	**0.00**	**-0.03**	**-0.02**
FW + Price Effects	**-0.02**	**-0.04**	**-0.02**	**-0.02**
Share of series with fund weight declines	47%	59%	40%	61%
Share of series with price declines	51%	50%	61%	56%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics. Returns data obtained from Morningstar Direct.

Table 5.5.5 Changes in the Asset-Weighted (AW) Average Management Fees by Select Product Type

	Proprietary Fund-of-Funds		Stand-Alone Mutual Funds	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.10**	**-0.15**	**-0.10**	**-0.13**
Fund Weight (FW) Effect	**-0.08**	**-0.11**	**-0.08**	**-0.11**
of which…				
Sales Effect	-0.09	-0.11	-0.10	-0.11
Returns Effect	0.01	0.00	0.02	0.00
Price Effect	**-0.02**	**-0.01**	**-0.01**	**-0.01**
FW + Price Effects	**0.00**	**-0.03**	**-0.01**	**-0.01**
Share of series with fund weight declines	47%	59%	40%	61%
Share of series with price declines	21%	9%	17%	11%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were directly obtained from Investor Economics. Returns data obtained from Morningstar Direct.

Mutual Fund Fees by Investing Strategy

a. Overview of Fund Assets and Fees by Investing Strategy

Actively managed funds dominated the mutual fund landscape and accounted for 99% of the assets in our study sample (refer to Table 5.6.1). The remaining 1% of assets were in passively managed funds. The lack of traction of passively managed mutual funds in Canada is in stark contrast to the trend seen in the ETF market, where passive funds account for most funds, and in peer jurisdictions, where passively managed funds have a greater share of the mutual fund market. For example, in the United States, 24% of mutual fund assets were in passively managed funds in 2020. [60,61]

Table 5.6.1 Mutual Fund Assets ($B) by Investing Strategy

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	No. of Series
Actively Managed Funds	538	613	624	661	696	687	733	769	13,391
Passively Managed Funds	7	8	9	10	12	12	14	11	226
Total	**545**	**622**	**632**	**671**	**708**	**699**	**747**	**781**	**13,617**

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset data and data on a fund's investing strategy were obtained from Investor Economics.

The asset-weighted average MERs and management fees steadily and incrementally declined for both actively and passively managed funds throughout our study period (refer to Tables 5.6.2 and 5.6.3). The asset-weighted average MER was above 200 basis points for actively managed funds at the start of our study period, and by the end of our study period the MER had dropped to 169 basis points. In comparison, the asset-weighted average MER for passively managed funds was already below 100 basis points at the start of our study period.

In spite of the decline in the MERs for actively managed funds, their MERs continued to be around 100 basis points higher than the MERs for passively managed funds for most years of our study period.

The difference in the asset-weighted average management fees for actively and passively managed funds averaged 88 basis points over our study period. The difference was largest in 2014 at 97 basis points and smallest at the end of our study period at 84 basis points.

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[60] Peer jurisdictions are those with a mature and sizeable investment fund market.

[61] PWL The Passive vs Active Fund Monitor Spring 2022. Available at https://www.pwlcapital.com/wp-content/uploads/2022/04/PWL-WP-May-Kerzerho-Passive-Active-Fund-Monitor-2022-1.pdf

Table 5.6.2 Asset-Weighted Average MERs by Investing Strategy

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Actively Managed Funds	2.07	2.05	2.00	1.95	1.85	1.79	1.71	1.69	-0.13	-0.16
Passively Managed Funds	0.91	0.89	0.87	0.86	0.85	0.84	0.82	0.67	-0.04	-0.18

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics. Active and passive categorization made at the fund level and applies to all series within a particular fund.

Table 5.6.3 Asset-Weighted Average Management Fees by Investing Strategy

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Actively Managed Funds	1.66	1.65	1.62	1.57	1.50	1.45	1.40	1.37	-0.09	-0.13
Passively Managed Funds	0.70	0.68	0.67	0.67	0.67	0.66	0.62	0.53	-0.04	-0.14

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics. Active and passive categorizations are made at the fund level and applies to all series within a particular fund.

b. Pre and Post-Implementation Changes in Fees, Actively Managed Funds

In this section of the report, we only analyze changes to the MERs and management fees for actively managed funds. We have excluded passively managed funds from our analysis due to their small sample size.

Declines were seen in the asset-weighted average MER and management fee for actively managed funds in both the pre- and post-implementation periods (refer to Table 5.6.4). The fee declines ranged from 9 to 13 basis points (or 5% to 6%) for the pre-implementation period and 13 to 16 basis points (or 8% to 9%) for the post-implementation period.

The fund asset weight effect had a larger impact than the price effect in reducing the asset-weighted average MERs/management fees during the pre- and post-implementation periods.

Changes in series' assets arising from sales contributed to lowering the asset-weighted fees while investment returns moved fees slightly in the opposite direction.

The key drivers of the negative interaction effects were the addition and termination of series during the implementation periods.

Table 5.6.4 Changes in the Asset-Weighted (AW) Average MERs and Management Fees for Actively Managed Funds

	MER		Management Fee	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg/Mgmt Fee Chg	**-0.13**	**-0.16**	**-0.09**	**-0.13**
Fund Weight (FW) Effect	**-0.09**	**-0.12**	**-0.07**	**-0.10**
of which…				
Sales Effect	-0.11	-0.14	-0.08	-0.12
Returns Effect	0.02	0.00	0.01	0.00
Price Effect	**-0.02**	**-0.01**	**-0.01**	**-0.01**
FW + Price Effects	**-0.02**	**-0.02**	**-0.01**	**-0.01**
Share of series with fund weight declines	42%	61%	42%	61%
Share of series with price declines	59%	54%	17%	11%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third party data providers. Asset and expense data were obtained from Investor Economics. Returns data obtained from Morningstar Direct. Active categorization made at the fund level and applies to all series within a particular fund.

Mutual Fund Fees by IFM Firm Type

a. Overview of Fund Assets and Fees by IFM Firm Type

Mutual funds sponsored by bank-affiliated IFMs[62] and independent IFMs dominated our study sample. Funds sponsored by these two groups of IFMs accounted for 93% to 96% of fund assets during our study period (see Table 5.7.1). Funds sponsored by insurer-affiliated IFMs and professional association IFMs accounted for the balance of fund assets.

Table 5.7.1 Mutual Fund Assets ($B) by IFM Firm Type

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	No. of Series
Association	6	7	7	7	8	7	7	4	53
Bank	236	278	286	304	332	334	366	386	3,556
Independent	285	316	316	331	332	321	329	339	8,717
Insurer	18	21	24	30	35	37	45	51	1,291
Total	**545**	**622**	**632**	**671**	**708**	**699**	**747**	**781**	**13,617**

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset data were obtained from Investor Economics. IFM firm type classification developed by CSA.

The asset-weighted average MER and management fee steadily declined for all IFM firm types throughout our study period (refer to Tables 5.7.2 and 5.7.3). As our

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[62] Bank-affiliated IFMs encompasses banks and credit unions.

study period progressed, the differences in the asset-weighted average fees between funds sponsored by different IFM firm types narrowed. At the start of our study period, the difference in the asset-weighted average MER across IFM types was 41 basis points. By the end of our study period the difference had narrowed to 14 basis points. For the asset-weighted average management fee the difference was 20 basis points, at the start of our study period, and 4 basis points by the end of our study period.

Some differences in MERs and management fees between the IFM firm types can reflect differences in underlying characteristics of the funds that make up our sample, such as differences in fee structures, investment objectives, and risk preferences.[63] In addition, MER and management expenses can vary across the different fund companies within a particular IFM type. As a result, we caution readers from drawing conclusions about the relative level of fees between different types of IFM firms.

Table 5.7.2 Asset-Weighted Average MERs by IFM Firm Type

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg. '13-'16	Chg '17-'20
Bank	1.84	1.86	1.85	1.81	1.75	1.69	1.65	1.61	-0.03	-0.13
Independent	2.25	2.19	2.12	2.06	1.93	1.87	1.76	1.76	-0.19	-0.18
Insurer	2.19	2.10	2.00	1.87	1.80	1.76	1.68	1.64	-0.32	-0.17

Average for Association funds not shown because to a small number of series in sample for some years. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Table 5.7.3 Asset-Weighted Average Management Fees by IFM Type

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Bank	1.54	1.57	1.56	1.51	1.46	1.41	1.38	1.35	-0.03	-0.12
Independent	1.74	1.70	1.66	1.60	1.52	1.46	1.41	1.39	-0.13	-0.13
Insurer	1.76	1.73	1.66	1.55	1.41	1.37	1.30	1.27	-0.21	-0.14

Average for Association funds not shown because to a small number of series in sample for some years. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

b. Pre and Post-Implementation Changes in Fees, Bank-Affiliated and Independently Owned IFMs

Our analysis of changes in fees during the pre- and post-implementation periods is confined to bank and independent mutual funds, given that more than 90% of fund assets are concentrated in funds sponsored by these two groups of IFMs.

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[63] For example, F-series funds can have lower MERs than A-series funds because they do not include an embedded commission. However, this does not mean that investors pay less overall for F-series funds compared to an A-series as F-series funds are used by fee-based advisors who will charge an asset management fee on top of the fund cost.

The asset-weighted average MER/management fee declined for funds sponsored by bank-affiliated IFMs and those sponsored by independent IFMs, in both the pre- and post-implementation periods. The fee declines ranged from 3 to 19 basis points (or 2% to 8%) for the pre-implementation period and 13 to 18 basis points (or 8% to 9%) for the post-implementation period.

Both shifts in the distribution of assets towards lower cost series and reductions in MER/management fee rates contributed to lowering the asset-weighted average fees. Shifts in the distribution of assets, however, had a larger effect than reductions in MER/management fee rates in lowering the asset-weighted average MER/management fee, particularly for funds sponsored by independent IFMs (refer to Tables 5.7.4 and 5.7.5).
Similar to the findings for the other fund characteristics, the interaction effects were relatively small and largely attributable to the addition and termination of series.

Table 5.7.4 Changes in the Asset-Weighted (AW) Average MERs by Select IFM Firm Type

	Bank		Independent	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.03**	**-0.13**	**-0.19**	**-0.18**
Fund Weight (FW) Effect	**-0.01**	**-0.11**	**-0.14**	**-0.14**
of which…				
Sales Effect	-0.03	-0.11	-0.15	-0.13
Returns Effect	0.02	0.00	0.01	-0.01
Price Effect	**-0.02**	**-0.01**	**-0.02**	**-0.01**
FW + Price Effects	**0.00**	**-0.01**	**-0.03**	**-0.03**
Share of series with fund weight declines	43%	54%	41%	62%
Share of series with price declines	59%	55%	58%	52%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics. Returns data obtained from Morningstar Direct.

Table 5.7.5 Changes in the Asset-Weighted (AW) Average Management Fees by Select IFM Firm Type

	Bank		Independent	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.03**	**-0.12**	**-0.13**	**-0.13**
Fund Weight (FW) Effect	**-0.01**	**-0.10**	**-0.11**	**-0.11**
of which…				
Sales Effect	-0.03	-0.10	-0.11	-0.11
Returns Effect	0.02	0.00	0.01	0.00
Price Effect	**-0.02**	**0.00**	**-0.01**	**-0.01**
FW + Price Effects	**0.01**	**-0.01**	**-0.02**	**-0.01**
Share of series with fund weight declines	43%	54%	41%	62%
Share of series with price declines	28%	10%	15%	9%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data from Investor Economics. Returns data obtained from Morningstar Direct.

ETF Fees Research Findings

Introduction

This section of the report examines how ETF fees changed during our study period. We examine ETF fees for the following three fund characteristics: broad asset class, investing strategy, and IFM firm type. A more detailed explanation of our methodology can be found in Appendix A.

The business model and competitive landscape governing the creation, distribution, and management of ETFs in Canada is materially different from the business model and competitive landscape for mutual funds. These differences are reflected in the ongoing costs of owning these two types of investment funds.

The first key material difference is that Canadian-domiciled ETFs are open to competition from abroad, mainly from US-domiciled ETFs. This competitive pressure and the entry of low-cost ETF providers into Canada, starting around 2011, have contributed to keeping ETF costs down.

A second key difference is that the dominant ETF providers have adopted a business model where they do not pay for distribution, in the form of trailing commission to advisers.[64] The adoption of this pricing model can reduce management fees by upwards of 100 basis points, in comparison to the management fees for mutual funds.

The third key difference is the share of ETFs that employ a passively managed investing strategy. In 2020, 84% of ETF assets and 1% of mutual fund assets in our study were passively managed. Passively managed funds have lower costs than actively managed funds. Passively managed funds, by replicating a basket of holdings that underpin the specific benchmarks they are tracking, avoid the additional research and trading costs that arises for actively managed funds. Actively managed funds can have greater research and trading costs than passively managed funds because of the greater need to adjust portfolio holdings as part of efforts to outperform the funds' specific benchmarks.[65]

These three key differences help explain why ongoing costs for ETFs are lower than those for mutual funds. They also explain why the size of the MER and management fee rate declines for ETFs is smaller than those for mutual funds.

These structural differences should be kept in mind when interpreting the findings in this section of the report. We also caution readers from comparing the mutual fund findings to the ETF findings by fund characteristics. While ETFs and mutual

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[64] The three largest ETF providers in Canada do not pay for distribution. These three firms collectively manage 72% of ETF assets as at December 2020. Asset data from Investor Economics' *ETF and Index Funds Report, Fourth Quarter 2020*.

[65] In contrast, the investing objective of passively managed funds is to match the performance of the broad indices/benchmarks the funds are tracking.

funds are both investment funds, there are enough structural differences between them that an equivalent comparison may not be meaningful.

Overview of ETF Study Sample – Assets, Returns, and Fees

Table 6.2.1, below, summarizes the annual assets of the 389 ETFs in our study sample, and their returns and fees, from 2013 to 2020.

At the start of our study period the 389 ETFs in our study had assets of $54 billion. By the end of our study period, assets had increased by 150% to $136 billion.[66] In contrast, for the same time period mutual fund assets in our sample increased by 43%. In spite of the increase in ETF assets, the investment fund industry in Canada is still dominated by mutual funds. In December 2020, mutual fund assets accounted for 82% of all investment fund assets (mutual funds, ETFs, segregated funds).[67]

There were no clear overall directional trends in ETF returns during our study period. The asset-weighted annualized gross returns were positive for all but two years – 2015 and 2018 – and returns ranged from -3.25% to 14.92%. While not a focus of our study, the fees and returns findings indicate that investors owning ETFs realized positive net returns, on average, in 6 of the 8 years of our study period.

The simple average and asset-weighted average MERs and management fees steadily decreased for each year of our study period. The simple average MERs and management fees were higher than the asset-weighted average MERs and management fees. This finding indicates that fund assets were concentrated in funds with lower MERs and management fees. In contrast, the simple average MERs and management fees for mutual funds were lower than the asset-weighted average MERs and management fees, indicating that mutual fund assets were concentrated in funds with higher fees.

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[66] As noted, one of the research design objectives of this study was to have a study sample that was as similar as possible to the study sample for the performance study (see Appendix A for details). To achieve this outcome, one of the fund selection criteria included in our research design was the requirement that mutual funds and ETFs must have at least 36 months of performance data. This fund selection criteria meant that ETFs introduced after 2017 were excluded from our analysis, and this exclusion helps explain why our study sample's share of industry assets and number of ETFs declined as our study period progressed (refer to Table 6.2.1).

[67] Individual segregated funds

Table 6.2.1 ETF Assets, Returns, and Fees, 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020
Net assets ($B) of funds in study	54	64	72	92	112	118	141	136
Industry assets ($B)	63	77	90	114	147	157	205	257
Share of industry assets (funds in study)	86%	83%	80%	80%	76%	75%	69%	53%
Number of funds in study	175	189	212	247	318	382	389	323
Number of funds - industry total	283	340	374	456	554	659	746	853
Share of industry total - number of fund series in study	62%	56%	57%	54%	57%	58%	52%	38%
Asset-weighted annualized gross returns (%)	8.65	8.94	-0.90	11.48	9.23	-3.25	14.92	9.80
Simple average MER	0.50	0.50	0.50	0.52	0.51	0.52	0.50	0.50
Asset-weighted average MER	0.37	0.36	0.35	0.34	0.33	0.33	0.31	0.29
Simple management fee	0.46	0.45	0.44	0.43	0.43	0.43	0.43	0.43
Asset-weighted average management fee	0.33	0.32	0.31	0.30	0.30	0.29	0.28	0.26

CSA analysis of data obtained from third party data providers. Assets, MER, and management fee obtained from Investor Economics. Gross monthly total returns data were obtained from Morningstar Direct. Industry total assets and number of funds obtained from IFIC.

Changes in The Overall Asset-Weighted Average MERs and Management Fees by Study Periods

This section of the report presents the research findings for all ETFs, i.e., without grouping the ETFs into different fund characteristics, for the pre- and post-implementation periods.

The asset-weighted average MERs and management fees declined during both the pre- and post-implementation periods (refer to Table 6.3.1). In 2013, the asset-weighted average MER was 37 basis points, and by 2016 it had declined by 3 basis points (or 8%) to 34 basis points. In 2017, the asset-weighted average MER was 33 basis points, and by 2020 it had declined to 29 basis points, which was a 4 basis point (or 12%) decline.

The size of the asset-weighted average management fees declines was similar to the size of the MER declines. In 2013, the asset-weighted average management fee was 33 basis points. By 2016 the asset-weighted average management fee dropped to 30 basis points[68] and stayed at this level in 2017. A further 4 basis points decline (or 13%) was seen by 2020, and the asset-weighted average management fee was 26 basis points in that year.

Shifts in fund assets towards cheaper funds and reductions in the MER/management fee rates, in general, had similar impacts on decreasing the asset-weighted average MER and management fee, for both time periods, while the

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[68] This was a decline of 6%.

interaction effect had a muted effect on the size of the overall MER/management fee decline (refer to Table 6.3.1). The interaction effect was close to zero in both study periods.

Table 6.3.1 Changes in Asset Weighted Average MERs and Management Fees, All ETFs, Pre- and Post-Implementation Periods

	MERs		Mgmt Fees	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER/Mgmt Fee Chg	**-0.03**	**-0.04**	**-0.03**	**-0.04**
Fund Weight (FW) Effect	**-0.01**	**-0.03**	**-0.01**	**-0.03**
of which…				
Sales Effect	0.00	-0.03	0.00	-0.02
Returns Effect	-0.01	0.00	-0.01	0.00
Price Effect	**-0.02**	**-0.01**	**-0.02**	**-0.01**
FW + Price Effects	**-0.01**	**0.00**	**-0.01**	**0.00**
Share of series with fund weight declines	40%	58%	40%	58%
Share of series with price declines	36%	41%	18%	11%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Assets, MER, and management fee data were obtained from Investor Economics. Gross monthly total returns data were obtained from Morningstar Direct. The individual fund weight, price, and interaction effects (i.e., fund weight and price effects) may not sum to the figure shown in the AW Avg MER/Mgmt Fee Change line due to rounding.

ETF Fees by Broad Asset Class

a. Overview of Fund Assets and Fees by Broad Asset Class
The distribution of ETFs assets by broad asset class is shown below in Table 6.4.1. The dominant asset classes throughout our study period were equity ETFs, which accounted for 63% of ETF assets in 2020, and fixed income ETFs, which accounted for another 34% of ETF assets. The concentration of assets in equity and fixed income funds, and their share of the total assets, remained constant throughout our study period.

Table 6.4.1 ETF Assets ($B) by Broad Asset Class

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	No. of Funds
Balanced	1	1	1	1	1	1	2	1	9
Equity	33	39	43	56	68	70	83	86	250
Fixed Income	20	23	27	34	42	45	53	47	127
Money Market	0	0	0	0	1	2	3	2	2
Other	0	0	0	0	0	0	0	0	1
Total	54	64	72	92	112	118	141	136	389

CSA analysis of asset and fund classification data obtained from Investor Economics.

The asset-weighted average fees for equity and fixed income ETFs were similar and they steadily declined during our study period (refer to Tables 6.4.2 and 6.4.3). The size of the declines was similar for both the asset-weighted average MERs and management fees, and they ranged from 6 to 9 basis points over 2013-2020.

Table 6.4.2 Asset Weighted Average MERs for Select Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Equity	0.36	0.35	0.34	0.33	0.33	0.33	0.32	0.30	-0.03	-0.03
Fixed Income	0.36	0.37	0.34	0.33	0.32	0.31	0.29	0.28	-0.03	-0.04

CSA analysis of asset and fund classification data obtained from Investor Economics.

Table 6.4.3 Asset Weighted Average Management Fees for Select Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Equity	0.32	0.31	0.31	0.30	0.30	0.30	0.29	0.27	-0.03	-0.03
Fixed Income	0.33	0.31	0.30	0.29	0.30	0.28	0.26	0.25	-0.04	-0.05

CSA analysis of asset and fund classification data obtained from Investor Economics.

b. Pre and Post-Implementation Changes in Fees - Equity and Fixed Income ETFs

The size of the declines in the asset-weighted average MERs and management fee was similar for equity and fixed income ETFs in both the pre- and post-implementation periods, and they ranged from 3 to 5 basis points, or 7% to 17% (refer to Tables 6.4.4 and 6.4.5).

In general, the price effect had a similar impact to the fund asset-weight effect in reducing the asset-weighted average fees.

The interaction effect had a limited impact on changes in the asset-weighted average fees during both the pre- and post-implementation periods.

Table 6.4.4 Changes in the Asset Weighted (AW) Average MERs for Select Broad Asset Classes

	Equity		Fixed Income	
	Chg '13-'16	**Chg '17-'20**	**Chg '13-'16**	**Chg '17-'20**
AW Avg MER Chg	**-0.03**	**-0.03**	**-0.03**	**-0.04**
Fund Weight (FW) Effect	**0.00**	**-0.03**	**-0.02**	**-0.03**
of which…				
Sales Effect	0.01	-0.02	-0.01	-0.03
Returns Effect	-0.01	0.00	0.00	0.00
Price Effect	**-0.02**	**0.00**	**-0.01**	**-0.02**
FW + Price Effects	**-0.01**	**0.00**	**-0.01**	**0.01**
Share of series with fund weight declines	35%	56%	42%	60%
Share of series with price declines	38%	40%	36%	45%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Asset, MER, and fund classification data obtained from Investor Economics. Returns data obtained from Morningstar. The individual effects may not add up to the figures shown in the AW Avg MER Chg line due to rounding.

Table 6.4.5 Changes in the Asset Weighted (AW) Average Management Fees for Select Broad Asset Classes

	Equity		Fixed Income	
	Chg '13-'16	**Chg '17-'20**	**Chg '13-'16**	**Chg '17-'20**
AW Avg Mgmt Fee Chg	**-0.03**	**-0.03**	**-0.04**	**-0.05**
Fund Weight (FW) Effect	**0.00**	**-0.03**	**-0.02**	**-0.01**
of which…				
Sales Effect	0.01	-0.02	-0.02	-0.01
Returns Effect	-0.01	0.00	0.00	0.00
Price Effect	**-0.02**	**0.00**	**-0.02**	**-0.03**
FW + Price Effects	**0.00**	**0.00**	**-0.01**	**0.00**
Share of series with fund weight declines	35%	56%	42%	60%
Share of series with price declines	16%	7%	23%	19%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Asset, management fee, and fund classification data obtained from Investor Economics. Returns data obtained from Morningstar. The individual effects may not add up to the figures shown in the AW Avg Mgmt Fee Chg line due to rounding.

ETFs Fees by Investing Strategy

a. Overview of Fund Assets and Fees by Investing Strategy

Passively managed ETFs accounted for the largest share of assets (refer to Table 6.5.1). In 2020, 76% of ETF assets were in traditional passively managed funds[69] and another 9% were in passively managed ETFs that follow a strategic beta[70] strategy. Actively managed funds accounted for the remaining 16% of assets, and assets in these ETFs steadily increased during our study period.

Table 6.5.1 ETF Assets ($B) by Investing Strategy

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	No. of Funds
Active	3	4	6	11	15	19	25	21	115
Passive	46	52	58	71	84	86	101	103	165
Passive - Strategic Beta	6	7	8	10	13	13	15	12	109
Total	54	64	72	92	112	118	141	136	389

CSA analysis of asset and fund classification data obtained from Investor Economics.

The asset-weighted average fees steadily decreased for passively managed and strategic beta ETFs during our study period (refer to Tables 6.5.2 and 6.5.3). Actively managed ETFs and strategic beta ETFs had similar asset-weighted average MERs throughout our study period, and they were 25-32 basis points higher than passively managed ETFs. The asset-weighted average management fee for strategic beta ETFs was higher than the fee for actively managed ETFs for most of our study period, and the difference averaged 2 basis points. The asset-weighted average management fees for passively managed funds were on average 24 basis points lower than the fees for actively managed or strategic beta funds. *The largest differences in the asset-weighted average fees for ETFs were seen for this fund characteristic.*

Table 6.5.2 Asset Weighted Average MERs by Investing Strategy, 2013 to 2020

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Active	0.61	0.59	0.56	0.53	0.56	0.55	0.51	0.54	-0.08	-0.02
Passive	0.32	0.31	0.30	0.28	0.26	0.25	0.23	0.21	-0.05	-0.04
Passive - Strategic Beta	0.60	0.58	0.56	0.54	0.53	0.52	0.51	0.49	-0.06	-0.04

CSA analysis of asset and fund classification data obtained from Investor Economics.

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[69] Traditional passively managed ETFs are generally funds that track financial indices where the indices construction uses a market capitalization weighted methodology.

[70] See footnote 24 for a definition of strategic beta ETFs.

Table 6.5.3 Asset Weighted Average Management Fees by Investing Strategy, 2013 to 2020

Investing Strategy	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Active	0.50	0.49	0.47	0.44	0.47	0.47	0.44	0.48	-0.06	0.01
Passive	0.30	0.27	0.26	0.25	0.24	0.23	0.21	0.19	-0.05	-0.05
Passive - Strategic Beta	0.55	0.54	0.53	0.49	0.48	0.46	0.46	0.44	-0.06	-0.04

CSA analysis of asset and fund classification data obtained from Investor Economics.

b. Pre and Post-Implementation Changes in Fees, Passively Managed Funds, Actively Managed Funds, and Strategic Beta Funds

The pre-implementation decreases in the asset-weighted average MERs and management fees, in general, were greater than the post-implementation decreases for all three investing strategies (refer to Tables 6.5.4 and 6.5.5). The size of the decreases ranged from 5 to 8 basis points (or 9% to 16%) for the pre-implementation period, and 1 to 5 basis points (or 2% to 19%) for the post-implementation period. In general, the fund asset weight effect had a larger impact than the price effect in decreasing the asset-weighted average MERs and management fees, especially for the pre-implementation period.

Even though there was a subset of funds with declines in their MERs, these declines were not sufficiently large enough to shift the aggregated asset-weighted average MERs lower. As a result, the price effects for ETFs by investing strategy were around zero.

In general, the addition and termination of series over the implementation periods, and simultaneous changes in the distribution of assets across funds and to funds' MER/management fee rates, drove the interaction effects across the different investing strategies.

Table 6.5.4 Changes in the Asset Weighted (AW) Average MERs by Investing Strategy

	Active		Passive		Passive - Strategic Beta	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.08**	**-0.02**	**-0.05**	**-0.04**	**-0.06**	**-0.04**
Fund Weight (FW) Effect	**-0.09**	**-0.01**	**-0.01**	**-0.03**	**-0.05**	**-0.01**
of which…						
Sales Effect	-0.09	-0.01	0.00	-0.03	-0.05	0.00
Returns Effect	0.00	0.00	-0.01	0.00	0.00	0.00
Price Effect	**0.00**	**-0.01**	**-0.02**	**-0.01**	**0.00**	**-0.01**
FW + Price Effects	**0.01**	**0.00**	**-0.02**	**-0.01**	**-0.01**	**-0.02**
Share of series with fund weight declines	66%	62%	37%	56%	36%	52%
Share of series with price declines	38%	54%	42%	30%	20%	45%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Asset, MER, and fund classification data obtained from Investor Economics. Returns data obtained from Morningstar. The individual effects may not add up to the figures shown in the AW Avg MER Chg line due to rounding.

Table 6.5.5 Changes in the Asset Weighted (AW) Average Management Fees by Investing Strategy

	Active		Passive		Passive - Strategic Beta	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.06**	**0.01**	**-0.05**	**-0.05**	**-0.06**	**-0.04**
Fund Weight (FW) Effect	**-0.08**	**0.01**	**-0.01**	**-0.02**	**-0.03**	**-0.01**
of which…						
Sales Effect	-0.07	0.01	0.00	-0.02	-0.03	-0.01
Returns Effect	0.00	0.00	-0.01	0.00	0.00	0.00
Price Effect	**0.00**	**0.00**	**-0.02**	**-0.01**	**-0.01**	**-0.01**
FW + Price Effects	**0.01**	**0.00**	**-0.01**	**-0.01**	**-0.02**	**-0.02**
Share of series with fund weight declines	66%	62%	37%	56%	36%	52%
Share of series with price declines	4%	13%	26%	9%	8%	13%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Asset, management fee, and fund classification data obtained from Investor Economics. Returns data obtained from Morningstar. The individual effects may not add up to the figures shown in the AW Avg Mgmt Fee Chg line due to rounding.

ETF Fees by IFM Firm Type

a. Overview of Fund Assets and Fees by Firm Type

This section of the report examines ETF fees by IFM firm type. The three types of IFM firms were bank-affiliated IFMs, independent IFMs, and insurer-affiliated IFMs. Of the 389 funds in our study sample, 284 were sponsored by independent IFMs, 92 were sponsored by bank-affiliated IFMs, and 13 were sponsored by insurer-affiliated IFMs (refer to Table 6.6.1). The sample size of ETFs sponsored by insurer-affiliated IFMs was too small for the findings to be representative of the universe of funds sponsored by this group of IFMs. We therefore excluded these 13 funds from our detailed fees analysis.

ETFs sponsored by independent IFMs accounted for 74% of fund assets, in 2020, while those sponsored by bank-affiliated accounted for the remaining 26% of fund assets (refer to Table 6.6.1). In contrast, mutual fund assets were more evenly distributed between funds sponsored by bank-affiliated IFMs (49% of assets in 2020) and independent IFMs (43% of assets).

Table 6.6.1 ETF Assets ($B) by Select IFM Firm Type

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	No. of Funds Series
Bank	10	13	16	24	29	31	38	35	92
Independent	45	51	56	68	82	86	103	101	284
Total	**54**	**64**	**72**	**92**	**111**	**118**	**141**	**136**	**376**

CSA analysis of asset data obtained from Investor Economics. IFM firm type categories developed by CSA.

The asset-weighted average fees steadily decreased for funds sponsored by bank-affiliated IFMs and independent IFMs (hereinafter independent ETFs) during our study period (refer to Tables 6.6.2 and 6.6.3). As was the case for our mutual funds results, we caution readers from drawing conclusions about the relative level of fees between different types of IFM types, as these can reflect differences in underlying characteristics of the funds that make up our sample.[71]

Table 6.6.2 Asset Weighted Average MERs by Select IFM Firm Type, 2013 to 2020

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Bank	0.43	0.41	0.38	0.36	0.35	0.35	0.33	0.33	-0.07	-0.02
Independent	0.35	0.35	0.34	0.33	0.32	0.31	0.30	0.27	-0.02	-0.05

CSA analysis of asset data obtained from Investor Economics. IFM firm type categories developed by CSA.

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[71] Differences in underlying fund characteristics can include, for example, differences in fee structures, investment objectives, and risk preferences.

Table 6.6.3 Asset Weighted Average Management Fees by Select Firm Type, 2013 to 2020

IFM Firm Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Bank	0.38	0.35	0.33	0.32	0.31	0.33	0.30	0.30	-0.06	-0.01
Independent	0.32	0.31	0.30	0.29	0.29	0.28	0.27	0.25	-0.03	-0.05

CSA analysis of asset data obtained from Investor Economics. IFM firm type categories developed by CSA.

c. Pre and Post-Implementation Changes in Fees, Independent and Bank-Affiliated IFMs

The decreases in the asset-weighted average MERs and management fees for ETFs sponsored by bank affiliates were greater for the pre-implementation period than the post-implementation period (refer to Tables 6.6.4 and 6.6.5). This trend was generally reversed for independent ETFs. Declines in the asset-weighted average MERs ranged from 2 to 7 basis points (or 7% to 17%) and 1 to 5 basis points (or 3% to 17%) for the asset weighted average management fees.

Within each IFM grouping, the size of the fund asset weight and price effects were relatively similar for both time periods. As a result, these effects had a similar sized impact in lowering the asset-weighted average MERs or management fees.

The positive interaction effects for ETFs sponsored by bank affiliated IFMs were caused by the creation and termination of series. The interaction effects for independent ETFs were small in both periods.

Table 6.6.4 Changes in the Asset Weighted (AW) Average MERs for Select IFM Firm Type

	Bank		Independent	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg MER Chg	**-0.07**	**-0.02**	**-0.02**	**-0.05**
Fund Weight (FW) Effect	**-0.04**	**-0.04**	**0.00**	**-0.03**
of which…				
Sales Effect	-0.03	-0.04	0.00	-0.02
Returns Effect	-0.01	0.00	-0.01	0.00
Price Effect	**-0.05**	**-0.01**	**-0.01**	**-0.01**
FW + Price Effects	**0.01**	**0.04**	**-0.01**	**-0.01**
Share of series with fund weight declines	50%	69%	40%	56%
Share of series with price declines	75%	46%	23%	40%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third party data providers. Asset and MER data obtained from Investor Economics. Returns data obtained from Morningstar. IFM firm type categories developed by CSA. The individual effects may not add up to the figures shown in the AW Avg MER Chg line due to rounding.

Table 6.6.5 Changes in the Asset Weighted (AW) Average Management Fees for Select IFM Firm Type

	Bank		Independent	
	Chg '13-'16	Chg '17-'20	Chg '13-'16	Chg '17-'20
AW Avg Mgmt Fee Chg	**-0.06**	**-0.01**	**-0.03**	**-0.05**
Fund Weight (FW) Effect	**-0.03**	**-0.02**	**-0.01**	**-0.03**
of which…				
Sales Effect	-0.03	-0.02	0.00	-0.02
Returns Effect	-0.01	0.00	-0.01	0.00
Price Effect	**-0.04**	**0.00**	**-0.02**	**-0.02**
FW + Price Effects	**0.01**	**0.02**	**-0.01**	**-0.01**
Share of series with fund weight declines	50%	69%	40%	56%
Share of series with price declines	16%	6%	18%	13%

Fund Weight and Price Effects, and shares of series with fund weight and price declines, are calculated using series where both expense and asset data are available over the specific implementation period. CSA analysis of data obtained from third-party data providers. Asset and management fee data obtained from Investor Economics. Returns data obtained from Morningstar. IFM firm type categories developed by CSA. The individual effects may not add up to the figures shown in the AW Avg MER Chg line due to rounding.

Conclusion

This section of the report answers the three research questions that guided our research and analysis, and our concluding observations of the research findings.

> **Research question 1: Have investment fund managers (IFMs) lowered fees, specifically the management expense ratio (MER) and management fee, and what are the extent of these changes?**

Investment fund managers have been lowering the MERs and management fees for both mutual funds and ETFs, and the extent of these changes varied by investment fund type and fund characteristics.

For mutual funds, the aggregate asset-weighted average MER declined by 38 basis points (or 19%) over our study period, and between 13 and 49 basis points or between 6% and 30%, across the fund characteristics examined. The size of the asset weighted average management fee declines was smaller, at 29 basis points for the overall study sample and ranging from 6 to 39 basis points across the main fund characteristics, or between 4% to 32%.

ETFs, compared to mutual funds, had smaller declines in their asset-weighted average MERs and management fees during our study period. This finding was anticipated since the MERs and management fees for ETFs were starting from a lower baseline level, primarily because the MERs/management fees of ETFs do not include embedded trailing commissions, and they generally employ a passively managed investing strategy. By the end of our study period in 2020, the asset-weighted average MER for our total sample decreased by 8 basis points (or 21%) from 2013 levels, and between 6 to 11 basis points, or 12% to 34%, depending on fund characteristic. The decrease in the asset-weighted average management fee for our total sample was 7 basis points (22%) between 2013 and 2020. Across the main fund characteristics, the declines in asset weighted average management fee ranged from 3 to 10 basis points, or 5% to 34%.

> **Research question 2: Have product manufacturers and product distributors been shifting to products that are not captured by the new account cost and performance disclosures?**

Our analysis of Canadian household discretionary financial assets did not show a trend of discretionary financial assets moving towards products not captured by the CRM2 annual costs and performance report requirements.

Research question 3: What have been the changes in product creation and distribution trends, generally?

Five notable market shifting changes in product creation and distribution occurred during our study period. These were:

i)   the increasing popularity of fund-of-fund products, reflected in the growth of fund wrap programs
ii)   growth of the ETF market, and in the number of actively managed and strategic/smart beta ETFs
iii)   continued growth in fee-based mutual fund series, and a corresponding shift in assets from commission-based to fee-based fund series
iv)   the rise of funds with an ESG mandate, and
v)   the rise of online advisers

Concluding Observations

While our findings provide important directional trends, i.e., correlation rather than cause and effect outcomes, we caution readers from drawing conclusions that the changes presented in this report were caused by the CRM2 annual costs and performance reports. It is possible that other factors, which we could not practically account for in our analysis, also contributed to the changes we have highlighted. These factors could include: advertising by firms competing on fees; local and national news stories focused on fees, cost effective investments, and the best interest discussion in Canada; increasing investor interest in passive investment funds and online advisers; and improvements in market conditions.

Keeping these limitations in mind, our findings for these three research questions appear to indicate that industry behaviour, overall, has been shifting in directions that are congruent with our hypothesis about the effect of the CRM2 regulations, and help provide evidence that disclosure-based regulations may be an effective tool in changing industry behaviour.

Appendix A – Research Design and Fees Methodology

This section of the report provides an overview of the study's research design and fees methodology.

1. Research Design

a. Fund Characteristics

We analyze the following main fund characteristics (and their sub-fund characteristics) on mutual fund and ETF fees:

1) Broad asset class: The broad asset classes are balanced, equity, fixed income, money market and other.[72]

2) Product type (for mutual funds only): The product types for mutual funds are stand-alone funds and three categories of fund-of-funds (FoF), specifically, proprietary FoF, 3rd party FoF, and proprietary and 3rd party FoF. ETFs do not have the same product type categories that exist for mutual funds. As such, there is no product type analysis for ETFs.

3) Fund investing strategy: The investing strategy for mutual funds are actively managed funds and passively managed funds. The investing strategy for ETFs includes an additional category – strategic beta funds. Strategic beta ETFs are in their own category as they are neither purely actively nor passively managed funds.[73]

4) IFM firm type: IFM firm type describes the mutual fund or ETF manufacturers who create and promote mutual funds and ETFs. Our analysis categorizes these manufacturers, i.e., investment fund managers, into four groupings: bank-affiliated IFMs[74], insurer-affiliated IFMs, independent IFMs, and professional association IFMs.

5) Series/class type (for mutual funds only): The mutual fund industry does not use a standardized approaching in naming mutual fund series/classes. Mutual fund series included in our analysis are so called A, adviser, D, F, O, and T series of funds.[75] These series types are designed for retail investors.

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[72] Other is a category that encompasses funds that invest in alternative/non-traditional assets, such as real estate or derivatives instruments.

[73] See footnote 24 for a definition of strategic beta ETFs.

[74] Bank-affiliated IFMs include banks and credit unions.

[75] The mutual fund industry does not use a standardized approach in naming their fund series/class. We relied upon data provided by Investor Economics to standardize the fund series/class in our study sample. A-series are the original/core series that have traditionally populated the mutual fund market. Advisor series include series originally launched as no load products that have been modified to include trailer fee, and series manufactured by bank-affiliated IFMs and are primarily sold through third party advisers and full service brokerage rather than the bank's branch, discount. F-series are designed for fee-based accounts and they do not include an embedded trailing commission. D-series are designed for the discount brokerage channel and as at June 1, 2022, they can no longer include an embedded trailing commission that was typically between 25 and 50 basis points. O-series are

b. Time Periods

For each fund characteristic we analyze changes in MERs and management fees before and after the CRM2 annual costs and performance report requirements were fully implemented. The pre-implementation period is from 2013 to 2016 and the post-implementation period is from 2017 to 2020. For each fund characteristic we do not present the findings for every sub-fund characteristic through the pre- and post-implementation lens. The decision of what sub-fund characteristic findings to include or exclude was determined by that sub-fund characteristic's share of the total mutual fund/ETF assets. For example, in our mutual fund analysis of fees by broad asset class we excluded money market funds from our detailed analysis as they only accounted for 1% of mutual fund assets.

c. Subset of Funds Included

Our MER and management fee analysis includes a subset of the entire universe of mutual funds and ETFs. Data availability limitations meant that only a subset of funds could be included in our analysis. Our analysis is underpinned by data obtained from multiple sources, including directly from investment fund managers and third-party data vendors. Third-party data vendors we relied on were Investor Economics, an ISS Market Intelligence company, and Morningstar.

Our analysis of mutual funds includes 2,991 funds and they accounted for 44% to 65% of mutual fund assets throughout our study period.[76] Three hundred eighty-nine (389) ETFs are included in our analysis and these funds accounted for 53% to 86% of all ETF assets throughout our study period.

The mutual fund analysis excludes fund series created for institutional investors. The ETF analysis includes institutional assets as we did not have information that would enable us to easily separate institutional assets from retail investor assets. Additionally, the ETFs only include Canadian listed ETFs.

d. Data Sources and Fund Coverage

The data sets that underpin our analysis were obtained directly from investment fund managers and third-party data providers, specifically Investor Economics and Morningstar. Our data sets contained a total of 3,703 unique mutual funds for our study period. After filtering the funds by our selection criteria and eliminating funds with obvious reporting errors[77] and missing data points our final sample size was 2,991 mutual funds and 389 ETFs. The 2,991 mutual funds were comprised of 14,159 unique fund series.

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designed for high net worth accounts. Management fees are reduced compared to the original series of the fund and trailing commissions are negotiable between an investor and their adviser. T-series are designed for investors interested in a tax-efficient cash flow. These funds charge an embedded trailing commission.

[76] Our sample population includes funds that were terminated or merged during our study period.

[77] We cross checked the value of outlier observations against information contained in regulatory documents and filings to confirm that the outliers were not reporting errors.

The following mutual fund data points, covering a time period of 2013 to 2019, were sourced directly from investment fund managers:

- Assets, sales, redemptions, switches
- Product type
- CIFSC classification

The following data points were sourced from Investor Economics:

- Asset data[78]
- MER
- Management fee
- Series type classification
- Investing strategy
- CIFSC classification (for ETFs only)

Monthly returns data were sourced from Morningstar Direct.

e. Selection of Funds

The following criteria were used to select ETFs and mutual funds for inclusion in our analysis.

- The funds are domiciled in Canada and sold to Canadian investors

- Mutual funds must be open-ended funds

- ETFs are Canadian listed ETFs

- Each fund must have gross monthly total return data for at least 36 consecutive months, between 2009 and 2020.[79] Terminated and merged funds are included in our sample population if they can satisfy the monthly performance data criteria. These criteria were included to minimize survivorship bias in our sample population.
- The funds must have MER[80] and management fee data from 2013 to 2020.

2. Fees Methodology

Fees were analyzed using the asset weighted average of funds in our sample population, on an annual basis.

Mutual funds

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[78] Asset data for ETFs and mutual funds. The ETF asset data covered a time period of 2013-2020, and the mutual fund asset data was for 2020 only.

[79] We imposed this condition as we wanted the sample of funds in the fees analysis to be as similar as possible to the sample of funds in the performance analysis.

[80] MER after waiving or absorption of some of the MER costs by investment fund managers.

Our MER and management fee data were at the series/class level, for mutual funds. Mutual fund series included in our analysis were series A, D, F, O, T, and advisor series funds.

We calculated the asset-weighted series level MER and management fee for each fund in our study sample and then summed the results for all funds to obtain the aggregated asset weighted average MER/management fee for the entire study sample. The asset data used to calculate each fund's series level asset weight was obtained from Investor Economics and are at December.[81]

For each fund we calculated an overall asset weight and an asset weight for each fund characteristic examined in our research. Each mutual fund series had a total of 6 weights:

1. an overall asset weight
2. a series type weight
3. a broad asset class weight
4. a product type weight
5. an investing strategy weight and
6. an IFM firm type weight.

ETFs

ETFs in general do not have different series types. As such, our MER and management fee data, and asset weighting calculations were at the fund level. Each ETF in our analysis had 4 unique fund weights, an overall asset weight and three fund characteristics weights, one for broad asset class, one for investing strategy and one for IFM firm type.

The next section provides a detailed description of the formulas used in our analysis to calculate changes in MERs and management fees, including the formulas for calculating the fund weight, sales, returns, price, and interaction effects.

a. **Formulas for Calculating Changes in MERs and Management Fees**

The formulas for calculating changes in the simple average and asset-weighted MER and management fee are the following:

- Change in the simple average between time periods

$$\frac{1}{n}\sum_{i=1}^{n} m_t^i - \frac{1}{n}\sum_{i=1}^{n} m_{t-1}^i$$

  where m is the given MER or management fee for fund i at time t, and n is the number of funds in the study

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[81] Data on assets and fees from Investor Economics are based on the funds' final, audited Management Report of Fund Performance (MRFP) documents.

- Change in the asset-weighted average between time periods

$$\sum_{i=1}^{n} m_t^i \cdot w_t^i - \sum_{i=1}^{n} m_{t-1}^i \cdot w_{t-1}^i$$

where w is the weight of fund i at time t is given as the assets a at time t as a percentage of total assets

$$w_t^i = \frac{a_t^i}{\sum_{i=1}^{n} a_t^i}$$

The asset-weighted average changes are further deconstructed into three sub-components: changes in fund asset weighting, changes in fund pricing, i.e., MER or management fee rates, and changes arising from the interaction of fund weighting and fund pricing. The formulas for each component are below.

- Changes in the fund asset weighting

$$\sum_{i=1}^{n} m_{t-1}^i \cdot (w_t^i - w_{t-1}^i)$$

- Change in fund pricing, i.e., MER or management fee rate changes:

$$\sum_{i=1}^{n} (m_t^i - m_{t-1}^i) \cdot w_{t-1}^i$$

- Changes arising from the interaction of fund weighting and fund pricing:

$$\sum_{i=1}^{n} (m_t^i - m_{t-1}^i) \cdot (w_t^i - w_{t-1}^i)$$

We further deconstruct changes in the fund asset weighting component to calculate the effect of fund sales and fund returns[82] on the change in asset-weighted MERs and management fees using the following formulas:

- Fund sales effect:

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[82] Return data use the annualized average monthly gross total returns for a given calendar year.

$$\sum_{i=1}^{n} m_{t-1}^{i} \cdot \left(\frac{a_{t-1}^{i}\left(1 + r_{t}^{i} + s_{t}^{i}\right)}{\sum_{i=1}^{n} a_{t-1}^{i}\left(1 + r_{t}^{i} + s_{t}^{i}\right)} - \frac{a_{t-1}^{i}\left(1 + r_{t}^{i}\right)}{\sum_{i=1}^{n} a_{t-1}^{i}\left(1 + r_{t}^{i}\right)} \right)$$

where r denotes the rate of return of fund i at period t and s denotes the net sales rate of fund i at period t

- Fund returns effect:

$$\sum_{i=1}^{n} m_{t-1}^{i} \cdot \left(\frac{a_{t-1}^{i}\left(1 + r_{t}^{i}\right)}{\sum_{i=1}^{n} a_{t-1}^{i}\left(1 + r_{t}^{i}\right)} - \frac{a_{t-1}^{i}}{\sum_{i=1}^{n} a_{t-1}^{i}} \right)$$

Appendix B – Explanation and Interpretation of the Fund Asset Weight Effect, the Price Effect, and the Interaction Effect

This appendix explains the three effects examined in our study and how to interpret them.

The following equation captures the relationship of the fund asset weight, price, and interaction effects in relation to changes in the aggregated asset weighted average MER/management fee, for all fund series.

> Change in the aggregated asset weighted average MER/management fee[83] (for a given time period) = sum of *fund asset weight effect + sum of price effect + sum of interaction effect*

i. Fund Asset Weight Effect

The fund asset weight effect measures how increases or decreases in each series' assets, *between two time periods*, contributed to changes in the aggregated asset-weighted average MER or management fee, while holding the series' MER or management fee constant.[84] An increase (decrease) in the fund asset weight effect reflects a shift in the distribution of assets in our sample towards series which had higher (lower) MERs or management fees at the start of the period looked at.[85]

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[83] References to the aggregated asset-weighted average MER/management fee are always in reference to the metric for all fund series, unless otherwise noted.

[84] The fund asset weight effect calculation holds a series' MER or management fee constant to the start date of a given time period. For example, the fund asset weight analysis for the pre-implementation period, which is from 2013 to 2016, would hold the MER/management fee rates to the 2013 level.

[85] The fund asset weight effect includes the result of shifts in the distribution of assets across series from different fund categories and which may have different fees. For example, over a period of rising equity valuations, the share of total assets represented by equity series increases relative to other series, all else equal. In this example,

Increases (decreases) in a fund asset weight effect will lead to a corresponding increase (decrease) in its asset-weighted average MER/management fee.

Series with more assets will have a higher fund asset weight than series with fewer assets. As such, the aggregated asset-weighted average MERs or management fees will always be weighted towards the MERs or management fees of fund series with larger asset sizes. Each mutual fund series has 6 unique fund asset weights – an overall weight, and a weight for each fund characteristic that we analyzed.[86]

Within the fund asset weight effect, we break down how asset changes arising from sales and investment returns contribute to this effect. Increases (decreases) in a fund series' assets attributable to sales or returns, *between two time periods*, will lead to a corresponding increase (decrease) in the fund's asset weighted average MER/management fee.

ii.   The Price Effect

The price effect measures how changes in a fund series' MER or management fee contributed to changes in the aggregated asset-weighted average MER or management fee, for all fund series. The price effect calculation holds a fund series' asset weight constant, while accounting for changes in its MER or management fee, *between two time periods.*[87]

The terms prices and fees are used interchangeably throughout our report. These terms should be interpreted to mean MERs/management fees and not the price for a unit of a mutual fund or ETF, unless otherwise noted.

iii.   Interaction effect

The interaction effect measures how simultaneous changes in a fund series' MER/management fee and fund asset weight, *between two time periods*, contributed to changes in the aggregated asset weighted average MER or management fee, for all fund series. In other words, the interaction effect is measuring the impacts of two variable changes at once rather than a single variable change, which is the procedure used to measure the fund asset weight and price effects.

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the fund asset weight effect, and the aggregate asset-weighted average fee, would typically rise as fees in equity funds tend to be higher than those of other types of funds.

[86] The denominator used to calculate a fund series' overall fund asset weight was the assets of all series in our study sample where asset and expense data are available for both the start and end of the period (i.e. the series was not terminated or created within the period). The denominator for each fund characteristic changes according to the number of series with a given fund characteristic. For example, in 2020, the denominator used to calculate each series overall fund asset weight in the MER table was the sum of assets of 8,603 series, because this was the number of fund series in our study sample with asset and MER data available for 2017 and 2020. For equity mutual funds, in 2020, the denominator was the sum of assets of 4,353 series, as this was the number of equity mutual fund series in our study sample with asset and MER data available for 2017 and 2020.

[87] The price effect calculation holds a fund series' asset weight to its 2013 level, when we are examining the price effect for the pre-implementation period, and to its 2017 level when we are examining the price effect for the post-implementation period.

Figure 1, below, illustrates how the directional change of each effect for a series contributes to the directional changes in the aggregated asset weighted average MERs or management fees, ***before the impacts of the other effects are netted out and assuming no changes to other series in the sample***. A total of thirtheen possible scenarios are illustrated for the fund asset weight, price, and interaction effects[88], and the three corresponding directional changes in the aggregated asset-weighted average MERs or management fees of these effects. The directional changes are an increase, decrease, or no change in the asset-weighted average MERs or management fees.

The four most common scenarios encountered in our study were:

- decreases in the asset-weighted average MERs/management fees, all else equal, that were attributable to i) declines in the share of total assets for a subset of series with higher fees than other series in our sample (scenario 1 in Figure 1) or ii) declines in the MER/management fee rates for a subset of series (scenario 6 in Figure 1).

- increases in the asset-weighted average MERs/management fees, all else equal, that were attributable to i) the addition of new series[89] (scenario 9 in Figure 1) or ii) simultaneous decreases in a series' assets and MER/management fee rates (scenario 10 in Figure 1).

The directional changes in the fund asset weight, price, and interaction effects, and their contribution to the directional changes in the aggregated asset weighted average MERs/management fees, illustrated in Figure 1, is for the specified effect.

The direction of the overall asset-weighted average MERs/management fees, i.e., whether it increases or decreases, depends on how the size and direction of each effect collectively net out.

For example, in Table 5.4.5, in section 5 of the report, the overall aggregated asset weighted average management fee for the "Series A" of mutual funds increased by 2 basis points during the pre-implementation period. The fund asset weight and price effects contributed to decreasing the overall aggregated asset weighted average management fee by 2 and 4 basis points, respectively, for a combined decrease of 6 basis points. The interaction effect, however, increased the overall aggregated asset weighted management fee by 8 basis points. These 8 basis points offset the 6 basis points decline attributable to the combined fund asset weight and price effects.

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[88] These scenarios are exhaustive.

[89] The addition of new funds increases the asset weighted average MER/management fee because changes in the fund assets or MER/management fee calculations have a starting value of zero and end value greater than zero. As such, the change calculation will always yield a result that is greater than zero, i.e., positive.

It is this netted aggregated asset weighted average MER and management fee that is presented in the top row of the tables in sections 5 and 6 of the report[90].

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[90] The top row of the tables in sections 5 and 6 of the report is labelled as "AW Avg MER Chg/Mgmt Fee Chg".

Figure 1: Impact of Directional Changes in a Series' Fund Asset Weight and/or MERs/Management Fees on the Aggregated Asset Weighted Average MERs/Management Fees*

Effect	Direction of Fund Weight or Fee Change Between 2013-2016 or 2017-2020		Impact on the Aggregated Asset Weighted Average MERs/Management Fees for the Specified Effect**
Main effect 1 - Fund Weight Effect (measuring 1 effect on the asset weighted average MERs/management fees – *changes in fund weights*)***	Fund weight **decreases** & MER/management fee is <u>above</u> asset weighted average *(scenario 1)* (↓)	Leads to …	**Decreases** in asset-weighted average MERs/management fees (↓)
	Fund weight **decreases** & MER/management fee is <u>below</u> asset weighted average *(scenario 2)* (↓)	Leads to …	**Increases** in asset weighted average MERs/management fees (↑)
	Fund weight **increases** & MER/management fee is <u>below</u> asset weighted average *(scenario 3)* (↑)	Leads to …	**Decreases** in asset weighted average MERs/management fees (↓)
	Fund weight **increases** & MER/management fee is <u>above</u> asset weighted average *(scenario 4)* (↑)	Leads to …	**Increases** in asset weighted average MERs/management fees (↑)
	No changes in fund weight *(scenario 5)* (→)	Leads to …	**No impact** on asset weighted average MERs/management fees (→)
Main effect 2 – Price Effect (measuring 1 effect on the asset weighted average MERs/management fees – *changes in MER/management fee rates*)	MER/management fee **decreases** *(scenario 6)* (↓)	Leads to …	**Decreases** in asset weighted average MERs/management fees (↓)
	MER/management fee **increases** *(scenario 7)* (↑)	Leads to …	**Increases** in asset weighted average MERs/management fees (↑)
	No changes in MER/management fee *(scenario 8)* (→)	Leads to …	**No impact** on asset weighted average MERs/management fees (→)
Interaction Effect – Fund Weight Effect & Price Effect (measuring 2 effects on the asset weighted average MERs/management fees – *changes in fund weights & changes in MER/management fee weights*)***	Fund weight **increases** & MER/management fee **increases** *(scenario 9)* (↑↑)	Leads to …	**Increases** in asset weighted average MERs/management fees (↑)
	Fund weight **decreases** & MER/management fee **decreases** *(scenario 10)* (↓↓)	Leads to …	**Increases** in asset weighted average MERs/management fees (↑)
	Fund weight **increases** & MER/management fee **decreases** *(scenario 11)* (↑↓)	Leads to …	**Decreases** in asset weighted average MERs/management fees (↓)
	Fund weight **decreases** & MER/management fee **increases** *(scenario 12)* (↓↑)	Leads to …	**Decreases** in asset weighted average MERs/management fees (↓)
	No changes in fund weight & MER/management fee *(scenario 13)* (→→)	Leads to …	**No impact** on asset weighted average MERs/management fees (→)

Notes to table:

* Discussion of the impact assumes that the identified directional is the only change to any series in the sample (i.e. impact assumes 'all else equal').

** The impact of each effect on the overall aggregated asset-weighted average MERs/management fees depends on how the size and direction of each effect collectively net out.

*** A change in the fund weight of a series has an offsetting impact on the fund weight of other series. E.g. If a series' fund weight falls then the fund weight of all other series must increase, all else equal. This is why a change in a series' fund weight can either increase or decrease the aggregate asset-weighted average MER /management fee depending on the size of the MER or management fee relative to other series in the sample. This is also why five scenarios are considered in Figure 1 for the fund weight effect.

In contrast, the direction of the interaction effect on the aggregate asset-weighted average does not depend on the size of fees relative to other series in the sample, even if a series' fund weight changes. This is because the change in fees, which is the first term in the interaction effect, is zero for all other series in the sample under the assumption 'all else equal'.

Appendix C – Supplemental Data Tables by Report Sections

This section of the appendices provides supplemental data tables that show the asset weighted average fees and number of funds for all sub-categories of a fund characteristic.

5.3   Research Findings – Mutual Fund Fees by Broad Asset Class

Appendix - Table 5.3.2 Asset Weighted Average MERs by Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Balanced	2.10	2.07	2.03	1.98	1.90	1.85	1.79	1.78	-0.12	-0.12
Equity	2.22	2.17	2.12	2.05	1.94	1.87	1.77	1.74	-0.17	-0.19
Fixed Income	1.46	1.40	1.35	1.28	1.19	1.13	1.06	1.02	-0.18	-0.17
Money Market	0.42	0.42	0.44	0.44	0.44	0.42	0.42	0.37	0.02	-0.07
Other	2.64	2.36	2.18	2.10	1.92	1.66	1.58	1.69	-0.54	-0.22

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data from Investor Economics.

Appendix - Table 5.3.3 Asset Weighted Average Management Fees by Broad Asset Class, 2013 to 2020

Broad Asset Class	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
Balanced	1.69	1.69	1.65	1.62	1.55	1.50	1.47	1.45	-0.08	-0.10
Equity	1.75	1.73	1.70	1.63	1.55	1.49	1.44	1.41	-0.12	-0.14
Fixed Income	1.20	1.16	1.11	1.04	0.97	0.91	0.85	0.82	-0.16	-0.15
Money Market	0.36	0.36	0.37	0.37	0.36	0.35	0.37	0.36	0.01	0.00
Other	1.83	1.75	1.64	1.52	1.39	1.24	1.17	1.15	-0.31	-0.23

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Number of Fund Series by IFM Firm Type and Broad Asset Class

IFM Firm Type	Balanced	Equity	Fixed Income	Money Market	Other	Total
Association	17	27	8	1	0	53
Bank	1,255	1,682	543	21	55	3,556
Independent	2,839	4,681	921	77	199	8,717
Insurer	544	500	220	11	16	1,291
Total	4,655	6,890	1,692	110	270	13,617

5.4   Research Findings – Mutual Fund Fees by Series Type

Appendix - Table 5.4.2 Asset Weighted Average MERs by Series Type, 2013-2020

Series Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
A	2.15	2.14	2.12	2.10	2.06	2.06	2.01	2.02	-0.05	-0.04
ADV	2.03	2.06	2.07	2.06	2.01	2.01	2.01	2.05	0.02	0.04
D	0.98	0.98	0.95	0.94	0.92	0.92	0.92	0.91	-0.04	-0.01
F	1.09	1.07	1.03	1.00	0.95	0.92	0.91	0.91	-0.10	-0.04
O	1.88	1.92	1.92	1.87	1.78	1.74	1.69	1.69	0.00	-0.09
T	2.25	2.23	2.22	2.20	2.18	2.18	2.16	2.17	-0.04	-0.01

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Appendix - Table 5.4.3 Asset Weighted Average Management Fees by Series Type, 2013-2020

Series Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
A	1.72	1.73	1.72	1.71	1.68	1.67	1.65	1.66	-0.01	-0.03
ADV	1.66	1.73	1.74	1.71	1.67	1.68	1.67	1.71	0.05	0.03
D	0.83	0.83	0.81	0.77	0.78	0.77	0.76	0.75	-0.06	-0.03
F	0.82	0.82	0.79	0.77	0.73	0.72	0.72	0.72	-0.05	-0.01
O	1.45	1.49	1.49	1.44	1.39	1.35	1.33	1.33	-0.01	-0.06
T	1.82	1.82	1.81	1.80	1.78	1.77	1.77	1.76	-0.03	-0.02

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Number of Fund Series by IFM Firm Type and Investing Strategy

IFM Firm Type	A	ADV	D	F	O	T	Total
Association	42	0	1	1	0	9	53
Bank	869	602	343	1,102	314	326	3,556
Independent	2,250	1	191	3,045	2,100	1,130	8,717
Insurer	316	0	1	547	224	203	1,291
Total	3,477	603	536	4,695	2,638	1,668	13,617

5.5 Research Findings – Mutual Fund Fees by Product Type

Appendix - Table 5.5.2 Asset Weighted Average MERs by Product Type

Product Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
3rd Party Fund-of-Funds	1.89	1.87	1.81	1.76	1.65	1.62	1.58	1.56	-0.13	-0.10
Proprietary & 3rd Party Fund-of-Funds	2.32	2.28	2.25	2.21	2.15	2.10	2.05	2.04	-0.11	-0.11
Proprietary Fund-of-Funds	2.11	2.08	2.04	2.00	1.91	1.84	1.77	1.74	-0.12	-0.17
Stand-Alone Mutual Funds	2.03	2.00	1.94	1.88	1.78	1.71	1.62	1.60	-0.15	-0.18

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Appendix - Table 5.5.3 Asset Weighted Average Management Fees by Product Type

Product Type	2013	2014	2015	2016	2017	2018	2019	2020	Chg '13-'16	Chg '17-'20
3rd Party Fund-of-Funds	1.63	1.91	1.68	1.81	1.45	1.42	1.38	1.37	0.17	-0.08
Proprietary & 3rd Party Fund-of-Funds	1.89	1.86	1.84	1.79	1.73	1.67	1.64	1.63	-0.10	-0.10
Proprietary Fund-of-Funds	1.73	1.71	1.68	1.63	1.57	1.51	1.46	1.42	-0.10	-0.15
Stand-Alone Mutual Funds	1.61	1.60	1.56	1.50	1.43	1.37	1.32	1.30	-0.10	-0.13

CSA analysis of data obtained from investment fund managers and third-party data providers. Asset and expense data were obtained from Investor Economics.

Number of Fund Series by IFM Firm Type and Product Type

IFM Firm Type	3rd Party Fund-of-Funds	Proprietary & 3rd Party Fund-of-Funds	Proprietary Fund-of-Funds	Stand-Alone Mutual Funds	Total
Association	0	6	0	47	53
Bank	124	281	773	2,378	3,556
Independent	39	288	1,628	6,762	8,717
Insurer	33	145	137	976	1,291
Total	196	720	2,538	10,163	13,617

5.6   Research Findings - Mutual Fund Fees by Investing Strategy

Number of Fund Series by IFM Firm Type and Investing Strategy

IFM Firm Type	Actively Managed Funds	Passively Managed Funds	Total
Association	52	1	53
Bank	3,496	60	3,556
Independent	8,552	165	8,717
Insurer	1,291	0	1,291
Total	13,391	226	13,617

6.3   Research findings – ETF fees by broad asset class

Number of ETFs by IFM Firm Type and Broad Asset Class

IFM Firm Type	Balanced	Equity	Fixed Income	Money Market	Other	Total
Bank	1	48	43	0	0	92
Independent	8	192	81	2	1	284
Insurer	0	10	3	0	0	13
Total	9	250	127	2	1	389

6.4   Research Findings – ETFs fees by investing strategy

Number of Fund Series by IFM Firm Type and Investing Strategy

IFM Firm Type	Actively Managed Funds	Passively Managed Funds	Passive - Strategic Beta	Total
Bank	27	47	18	92
Independent	85	118	81	284
Insurer	3	0	10	13
Total	115	165	109	389

A Post-Implementation Review of The Impacts of The CRM2 Annual Costs and Performance Reports on Investment Fund Performance[91]

Table of Contents

Executive Summary

I. Purpose and Background of Research

The purpose of this research is to examine the post-implementation impacts on industry behaviour of the final phase of the Client Relationship Model (CRM2) amendments to *Regulation 31-103 respecting Registration Requirements, Exemptions and Ongoing Registrant Obligations* (herein after the CRM2 client statements, annual costs and performance reports).

The final amendments, which came into effect on July 15, 2016, were designed to ensure investors receive clear and complete disclosure of the performance of their investments and all fees associated with their accounts, including registrant compensation, on an annual basis.

This study examines whether greater transparency about transaction information and investment returns led to investment fund managers improving the risk-adjusted performance of their mutual funds and ETFs.[92]

The study period covers January 2013 to December 2020. This time period begins about 18 months before the first set of CRM2 amendments came into effect on July 15, 2014 (cost disclosures related to pre-trade disclosure of charges, and trade confirmation for debt securities). The 2013 start date gives us a baseline of what the investment fund industry looked like before the first set of CRM2 amendments were implemented. We hypothesize that the changes we are seeking to measure would take place several years after the CRM2 client statements, including transaction information, and performance reports are fully implemented. Considering this, the study timeline was extended to 2020 to account for this time lag, enabling us to more fully observe the extent of any changes.

Our analysis groups the research findings into three time periods, 2013 to 2020, which is the overall duration of our study period, the pre-implementation period of 2013 to 2016, and the post-implementation period of 2017 to 2020.

Finally, we note that the findings presented in this report are the views of CSA staff and are for informational purposes only. As such, statements made in the report do not represent the CSA's views of any official policy position.

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[92] Risk-adjusted performance or risk-adjusted return is a rate of return that is relative to a/some benchmark(s). Specifically, we use a version of the Fama and French (2015) model as the common benchmark to measure risk-adjusted return in this report. See section Research Methodology in Appendix A for details.

II. Research Findings

Our research findings are based on a fund sample representing approximately 62% of mutual funds and ETFs in the Canadian market, as measured by assets under management (AUM) in December 2020.

We use total return and risk-adjusted return, also known as alpha, as measures of fund performance, and report results based on gross returns, i.e., returns before fees and expenses.[93] On balance, we find that the risk-adjusted performance relative to our model's benchmark for both mutual funds and ETFs, while remaining negative for the whole study period, improved in the years after the client statements, annual costs and performance reports were implemented.[94]

i. 2013 to 2020 Findings

The annualized average gross total returns between 2013 and 2020, for our study sample, were 7.1% for mutual funds and 7.9% for ETFs. Accounting for fund risk, we found that the mean gross alphas relative to our model benchmarks were -3.5% for mutual funds and -2% for ETFs. These negative alphas imply that, on average, the total returns are lower than what would be implied by our benchmark model.

ii. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Comparing the performance findings for the pre- and post-implementation periods, we found that the risk-adjusted returns relative to our model benchmarks improved during the post-implementation period, even though they continued to remain negative. For mutual funds, the annualized average gross alpha was -5%, between 2013 and 2016, and -2.2% between 2017 to 2020. The ETF findings were -4.8% for the pre-implementation period and -0.6% for the post-implementation period.

Our research also analyzed whether there were differences in fund performance by the following fund characteristics: asset class, investing strategy, product type, and IFM type. The findings by fund characteristics

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[93] Gross performance allows the analysis of funds' performance to be independent of their fees and expenses, which are analyzed separately in a companion report entitled *A Post-Implementation Review of the Impacts of the CRM2 Annual Costs and Performance Reports on Investment Fund Fees.* We have also assessed net performance and obtained qualitatively similar conclusions (results available upon request).

[94] Note that the risk-adjusted performance is measured relative to our chosen benchmarks based on the Fama and French (2015) model. Negative risk-adjusted performance of a fund indicates that the fund underperforms the benchmarks used to account for the fund risk. It is important to highlight that our benchmarks are not necessarily the benchmark used by the funds in our sample, and thus negative risk-adjusted return does not imply that investors incurred losses from investing during our sample period. See section Research Methodology in Appendix A for details.

directionally mirrored the overall findings but the annualized average gross total return and risk-adjusted return varied by fund characteristics.

There were no uniform directional trends for the gross total returns when we compared the pre- and post-implementation results. The returns increased for some fund characteristics and decreased for others, between these two time periods. The gross total returns ranged from 1% to 10.8% for mutuals funds, and 1.4% to 11.2% for ETFs.

1. Introduction

Post-implementation evaluation is crucial in the policy development cycle because it allows regulators to understand whether newly introduced policy has been implemented as intended and is having the desired impacts and outcomes.

The purpose of this research is to examine the post-implementation impacts of the final phase of the Client Relationship Model (CRM2) amendments to *Regulation 31-103 respecting Registration Requirements, Exemptions and Ongoing Registrant Obligations* on industry behaviour (herein after the CRM2 client statements, annual costs and performance reports).

The final amendments, which came into effect on July 15, 2016, were designed to ensure investors receive clear and complete disclosure of the performance of their investments, client statements (covering account and security positions and transactions information) and all fees associated with their accounts, including registrant compensation, on an annual basis.[95]

The literature on disclosure regulation has identified numerous potential benefits of reporting standards including improved market liquidity, lower cost of capital, and more efficient portfolio choice among others.[96] Specifically, Zingales (2009) suggests that standardization in performance reporting makes comparison between funds easier and hence facilitates capital allocation toward more talented managers. Hence, it can be argued that providing standardized performance reports would motivate investors to compare investment funds and avoid those with poor performance. Moreover, CRM2 compliant reporting would allow fund managers to signal their product quality more effectively, reducing the cost of information asymmetry.[97] The resulting shift in investor demand toward outperforming funds should prompt fund managers to raise the performance of their offerings (e.g., perhaps by hiring more skilled portfolio managers and

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[95] The CRM2 amendments require dealers to disclose to their clients transaction information and total returns at the account level, expressed as a percentage, and on an annualized basis. The total return is net of fees and other charges.
[96] Leuz and Wysocki (2016) provide a comprehensive survey of the literature.
[97] See Dranove and Jin (2010) for more details.

phasing out underperforming funds). This would ultimately improve the performance of the investment fund market as a whole. Therefore, we hypothesize that the enhanced transparency and standards of performance reporting brought about by the CRM2 amendments will lead to improvements in investment fund performance.

This study focuses on the impacts of the CRM2 implementation on investment fund performance. A separate research report entitled *A Post-Implementation Review of the Impacts of the CRM2 Annual Costs and Performance Reports on Investment Fund Fees* examines the impacts of the new regulations on mutual fund and ETF MERs and management fees.

Our research findings are organized as follows in the report:

- section 2 provides an overview of the investment fund market in Canada, our study samples, and study periods,
- section 3 presents the performance results for mutual funds and ETFs,
- section 4 discusses the limitations of our research findings, and
- section 5 presents our conclusion.

2. Overview of investment fund market in Canada, study samples, and study periods

Canadian households, in 2013, held $4.1 trillion in discretionary financial assets[98] (refer to Table 1). Of this amount, approximately $1.0 trillion (26%) were held in investment funds.[99] By the end of 2020, household discretionary financial assets increased to $6.5 trillion, and of this amount, about $2.0 trillion (30%) dollars were held in investment funds.

Table 1, below, further breaks down these figures by investment fund type. Within investment funds, assets are concentrated in mutual funds, but ETFs assets are growing and gaining market share at the expense of mutual funds.

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[98] Investor Economics Household Balanced Sheet Report, 2014 and 2016. Discretionary financial assets are assets not held in employer sponsored pension plans.
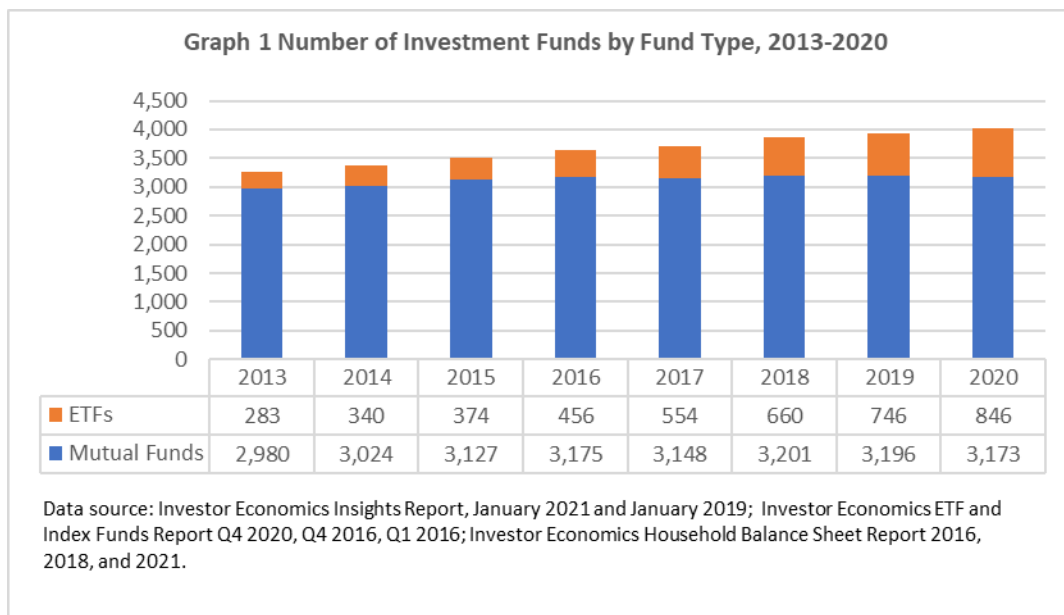[99] For the purpose of our research, we define an investment fund as an investment product, specifically a fund, that pools money from various investors and invest that money collectively through a portfolio of financial instruments, such as stocks and bonds, and the portfolio of investments is professionally managed by a fund manager. Based on this definition we have classified mutual funds and exchange traded funds (ETFs) as investment funds. While hedge funds satisfy our definition of an investment fund, we have excluded hedge funds from our analysis as these funds are only available to "accredited investors", who are institutional investors and a subset of high net worth retail investors.
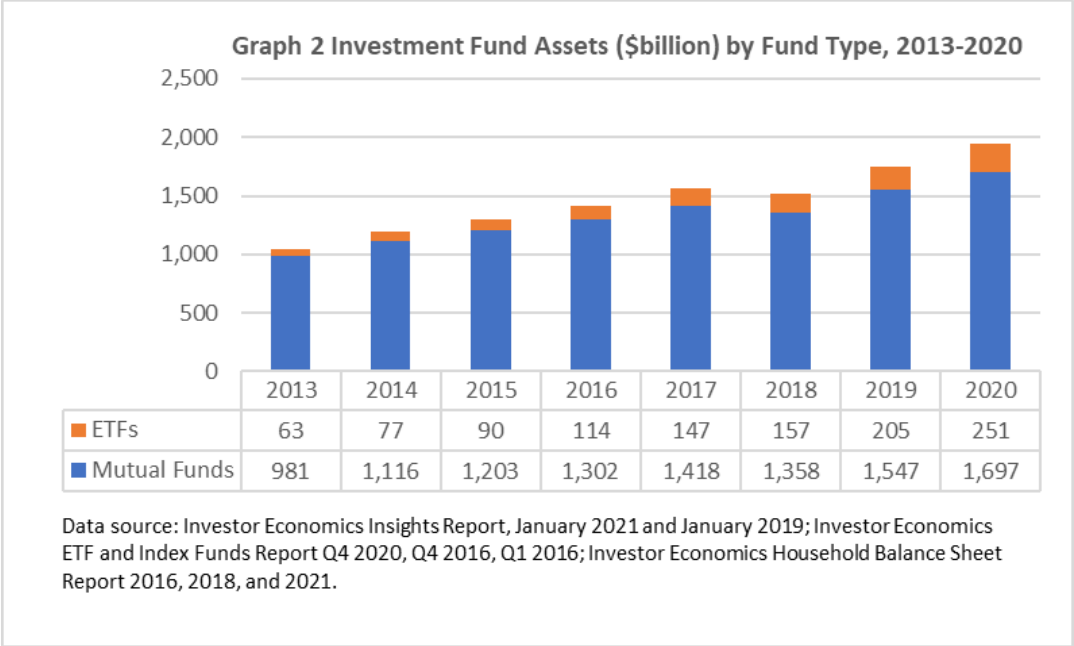
Table 1 Estimated Canadian Discretionary Financial Assets Held in Investment Funds

	Asset Size ($B)		Share of Investment Funds (%)		Share of discretionary financial assets (%)	
	2013	2020	2013	2020	2013	2020
All discretionary financial assets	4091	6517				
Investment Funds	1044	1947			26	30
Canadian listed ETFs	63	257	6	13	2	4
Mutual Funds excl ETFs	981	1690	94	87	24	26

Source: CSA estimates based on data in Investor Economics Household Balance Sheet Report, 2014, 2016 and 2021; excludes seg funds; closed-end funds and alternatives

Graphs 1 and 2, below, show the number of mutual funds and ETFs, and their assets as measured by assets under management (AUM), for each year of our study period.

Graph 1 Number of Investment Funds by Fund Type, 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020
ETFs	283	340	374	456	554	660	746	846
Mutual Funds	2,980	3,024	3,127	3,175	3,148	3,201	3,196	3,173

Data source: Investor Economics Insights Report, January 2021 and January 2019; Investor Economics ETF and Index Funds Report Q4 2020, Q4 2016, Q1 2016; Investor Economics Household Balance Sheet Report 2016, 2018, and 2021.

Graph 2 Investment Fund Assets ($billion) by Fund Type, 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020
ETFs	63	77	90	114	147	157	205	251
Mutual Funds	981	1,116	1,203	1,302	1,418	1,358	1,547	1,697

Data source: Investor Economics Insights Report, January 2021 and January 2019; Investor Economics ETF and Index Funds Report Q4 2020, Q4 2016, Q1 2016; Investor Economics Household Balance Sheet Report 2016, 2018, and 2021.

Our study sample includes 3,086 unique mutual funds and 299 ETFs. The number of mutual funds increased from 1,974 in 2013 to 2,106 in 2020. The total AUM of mutual funds rose from $594 billion, in 2013, to $995 billion by the end of 2020. Both the number of ETFs in our study sample and their total AUM more than tripled during our study period. The number of ETFs increased from 83, in 2013, to 284 in 2020, while the total AUM increased from $46.6 billion to $162 billion for the same time period.

Taken together, the aggregate AUM of our ETF and mutual fund study samples was almost $1.2 trillion by the end of 2020, and these funds represented approximately 62% of the total AUM of the Canadian mutual fund and ETF markets.[100]

3. Research Findings

We present our performance results for mutual funds and ETFs in the subsections below, for all three time periods, and by fund characteristics.[101]

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[100] Investor Economics, Insight Report January 2021

[101] We have performed statistical tests for our hypothesis that the risk-adjusted performance (i.e., alpha) improves following the CRM2 implementations. Using both t-tests to compare the average alpha before and after the CRM2 implementations and regressions to estimate the impact of the CRM2 compliance on fund alpha controlling for fund characteristics, we find that the results are statistically significant at 0.1% level for both mutual funds and ETFs. The details of these tests are available upon request.

3.1 Mutual Fund Performance

3.1.1 Overall Findings

a. Overview - Number of Funds and Fund Assets

For the entire study period, i.e., 2013-2020, our mutual fund sample contained 3,086 unique mutual funds, with an average age of 12 years, and an average AUM of $361.2 million.[102] The total AUM of our mutual fund study sample, in December 2020, was $995.5 billion, and this represents 59% of the Canadian mutual fund market total net assets.[103]

b. 2013-2020 Findings

Both the equal-weighted and asset-weighted average total returns before fees were 0.59% per month[104], between 2013 and 2020. This finding suggests that there was no difference in total returns by fund size.

Our estimates of the monthly equal weighted and asset weighted average gross alphas[105], from 2013 to 2020, were -0.37% and -0.29%, respectively. These negative alpha values indicate that, on average, mutual fund total returns are lower than the returns implied by the funds' exposures to the risk factors of our model. Negative risk-adjusted performance relative to the Fama and French model is not uncommon and has been documented in several studies of the U.S. mutual fund market. Researchers including Gil-Bazo and Verdue (2009), Fama and French (2010) among others have found that it is formidable for asset managers to generate returns higher than those implied by the Fama and French model. The asset weighted average gross alpha is slightly higher than the equal weighted alpha. This finding suggests that fund size appears to have a positive impact on risk-adjusted performance, despite having no effect on total returns.

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[102] We include fund age in our descriptive statistics because many studies have shown it as one of the variables that determine fund performance. It is well-documented that in the U.S mutual fund market, fund age has a negative relationship with mutual fund performance. See Brown and Wu (2016), Evan (2010) and others for detail.

[103] The total industry assets in December 2020 was $1.697 trillion. Source: Investor Economic Insight Report January 2021.

[104] We have reported the monthly returns as this is the convention in performance research. An annualized figure can be calculated from a monthly return by multiplying the monthly return by 12.

[105] Unless otherwise noted, alpha, risk-adjusted return, and risk-adjusted performance have the same meaning in our report.

b. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

The pre- and post-implementation period results show that, between these two time periods, total returns decreased by 0.13 percentage points for the equal weighted average and by 0.04 percentage points for the asset weighted average (refer to rows 2 and 3 in Panel A, Table 2). For the same two time periods, the risk-adjusted performance increased by 0.27 percentage points for the equal weighted average gross alpha, and 0.24 percentage points for the asset weighted average gross alpha.

Panel B of Table 2 presents the total returns and gross alphas for each year of our study period. The number of mutual funds, in our study sample, slowly increased from 1,974 in 2013 to 2,106 in 2020.[106] There was growth in both the average fund AUM and total AUM throughout our study period. The sole exception was in 2018, when the total AUM dropped but the average fund AUM continued to grow.[107] The total return figure fluctuated year-over-year and was negative in 2018. In contrast, the risk-adjusted performance steadily improved, starting in 2014.

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[106] There are 3,086 unique mutual funds in our study sample. The number of mutual funds for each year of our study period, as laid out in Table 2, is less than 3,086 because within a given year new funds are introduced and existing funds are merged or terminated. If a fund has 36 consecutive months of performance data between 2009 and 2020 then the fund is counted in the total fund count. The inclusion of a fund in the annual fund count depends on when a fund is introduced, merged, or terminated. For example, a fund merged or terminated in 2018 is counted in the 2013 to 2018 statistics but is excluded from the 2019 and 2020 statistics.

[107] This drop is consistent with the broader trend in the mutual fund market. According to Investor Economics Insight Annual Review January 2023, during our sample period from 2013 – 2020, the AUM of long-term investment funds in the market only fell in 2018 when net outflows of mutual funds amounted to $7.94 billion in December alone. See Investor Economics Insight Annual Review January 2019 for more details.

Table 2. Summary of MF Monthly Gross Performance

			Panel A. Performance over the Sample Period						
	No. of Obs.	No. of	Total Return (%/month)		Gross Alpha (%/month)		Average	Average AUM	Total AUM
Period	(Fund x Month)	Funds	EW Mean	AW Mean	EW Mean	AW Mean	Age	($ million)	($ billion)
2013-2020	201,416	3,086	0.59	0.59	-0.37	-0.29	11.95	361.15	995.46
2013-2016	95,571	2,567	0.66	0.62	-0.51	-0.42	11.49	331.17	780.01
2017-2020	105,845	2,704	0.53	0.58	-0.24	-0.18	12.37	388.22	995.46

			Panel B. Performance by Year						
	No. of Obs.	No. of	Total Return (%/month)		Gross Alpha (%/month)		Average	Average AUM	Total AUM
Year	(Fund x Month)	Funds	EW Mean	AW Mean	EW Mean	AW Mean	Age	($ million)	($ billion)
2013	22,029	1,974	1.23	1.02	-0.51	-0.41	11.29	309.38	594.13
2014	23,132	2,081	0.61	0.68	-0.61	-0.53	11.53	330.48	664.47
2015	24,864	2,198	0.31	0.25	-0.47	-0.39	11.52	336.67	707.64
2016	25,546	2,316	0.57	0.6	-0.45	-0.37	11.6	345.23	780.01
2017	26,582	2,334	0.66	0.59	-0.37	-0.31	11.8	368.88	841.31
2018	27,009	2,362	-0.4	-0.29	-0.24	-0.2	12.16	372.76	789.95
2019	27,418	2,432	1.1	1.08	-0.2	-0.14	12.42	379.34	920.63
2020	24,836	2,106	0.78	0.89	-0.12	-0.08	13.13	435.54	995.46

3.1.2 Mutual Fund Performance by Broad Asset Class

a. Overview - Number of Funds and Fund Assets by Broad Asset Class

Table 3 presents the mutual fund performance results by the funds' broad asset class: balanced, equity, fixed income and money market. Our sample consists of 980 balanced funds, 1,610 equity funds, 436 fixed income funds, and 100 money market funds. Balanced funds, with an average age of 10.1 years are the youngest of the four asset classes, yet they have the largest total and average fund AUM for the entire study period. The average fund AUM in December 2020 was $666.1 million and the total AUM was $558.1 billion. Equity mutual funds have the second largest total AUM, followed by fixed income funds. Funds belonging to both these asset classes have an average age that is between 12 to 13 years. Money market funds, with an average age of 17.9 years, are the oldest funds in our study sample, and yet they have the smallest total and average fund AUMs, of the four asset classes.

b. 2013-2020 Findings

Balanced and equity funds have the highest monthly asset weighted average total returns of 0.51% and 0.86%, respectively. These funds, however, have

the lowest monthly asset weighted average risk-adjusted performance, of -0.3% for balanced funds and -0.32% for equity funds. Fixed income and money market funds have the highest monthly asset weighted risk-adjusted performance, with gross alphas of -0.11% and -0.24%, respectively.

c. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Comparing the asset weighted risk-adjusted performance for each asset class, for the pre- and post-implementation periods, we find that there is a consistent improvement in performance – between 0.2 and 0.3 percentage points per month. Except for fixed income funds, total returns decreased for most asset classes, between these two time periods.

Table 3. Summary of MF Monthly Gross Performance by Asset Class

Asset Class	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ million)	Total AUM ($ billion)
Balanced	2013-2020	61,549	980	0.49	0.51	-0.34	-0.3	10.09	666.11	558.1
Balanced	2013-2016	28,620	791	0.54	0.53	-0.46	-0.42	9.45	607.65	453.19
Balanced	2017-2020	32,929	863	0.45	0.49	-0.23	-0.21	10.66	716.92	558.1
Equity	2013-2020	106,021	1,610	0.77	0.86	-0.43	-0.32	12.61	220.49	312.62
Equity	2013-2016	51,352	1,360	0.88	0.9	-0.59	-0.49	12.08	206.05	244.32
Equity	2017-2020	54,669	1,382	0.68	0.83	-0.28	-0.19	13.11	234.06	312.62
Fixed Income	2013-2020	26,373	436	0.25	0.3	-0.19	-0.11	11.93	266.88	109.06
Fixed Income	2013-2016	11,566	344	0.2	0.23	-0.3	-0.24	12.1	258.34	70.75
Fixed Income	2017-2020	14,807	384	0.29	0.36	-0.11	-0.02	11.79	273.55	109.06
Money Market	2013-2020	7,473	100	0.09	0.11	-0.26	-0.24	17.91	177.71	15.68
Money Market	2013-2016	4,033	98	0.13	0.13	-0.37	-0.38	16.73	171.2	11.75
Money Market	2017-2020	3,440	86	0.04	0.08	-0.12	-0.09	19.3	185.35	15.68

3.1.3 Mutual Fund Performance by Product Type

a. *Overview - Number of Funds and Fund Assets by Product Type*

The mutual funds in our sample comprise of four product types: stand-alone funds, proprietary fund-of-funds (proprietary FoF), proprietary & 3rd party fund-of-funds (proprietary and 3rd party FoF), and 3rd party fund-of-funds (3rd party FoF).

Stand-alone funds account for most mutual funds in our study sample, both in terms of the number of funds (77.6%) and the total AUM (59.9%), at the end of 2020. Stand-alone funds were also the oldest product type, with an average age of 12.7 years.

The three types of FoFs account for 25.1% of funds and 40.1% of total AUM. The age of these funds is about 3 years less than stand-alone funds, on average.[108]

b. 2013-2020 Findings

Table 4, below, summarizes mutual fund performance by product type. Stand-alone funds have the highest average total returns and are among the funds with the highest risk-adjusted returns, second only to 3rd party FoF. All three FoFs have very similar total returns, which are between 0.51% and 0.55% per month. Risk-adjusted performance is, however, more varied, with third-party FoF having the best gross alpha, -0.23% per month.

c. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Comparing the pre- and post-implementation period findings, we observe that all product types gained between 0.2 and 0.3 percentage points per month in risk-adjusted performance. Changes in total returns, by product type, varied after the CRM2 requirements were fully implemented.

Table 4. Summary of MF Monthly Gross Performance by Product Type

Product Type	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month)		Gross Alpha (%/month)		Average Age	Average AUM ($ million)	Total AUM ($ billion)
				EW Mean	AW Mean	EW Mean	AW Mean			
Stand-alone Fund	2013-2020	156,840	2,396	0.61	0.64	-0.37	-0.28	12.66	294.58	596.06
Stand-alone Fund	2013-2016	74,866	2,005	0.68	0.67	-0.52	-0.42	12.25	284.09	485.43
Stand-alone Fund	2017-2020	81,974	2,085	0.55	0.62	-0.23	-0.15	13.04	304.16	596.06
Proprietary FoF	2013-2020	33,374	563	0.53	0.51	-0.37	-0.3	9.55	644.51	341.92
Proprietary FoF	2013-2016	15,859	425	0.59	0.5	-0.48	-0.43	8.69	521.39	238.59
Proprietary FoF	2017-2020	17,515	508	0.48	0.51	-0.26	-0.22	10.32	755.99	341.92
Proprietary & 3rd Party FoF	2013-2020	8,053	149	0.53	0.52	-0.36	-0.33	9.21	499.93	48.53
Proprietary & 3rd Party FoF	2013-2016	3,590	102	0.61	0.56	-0.49	-0.46	8.99	459.76	44.49
Proprietary & 3rd Party FoF	2017-2020	4,463	137	0.47	0.5	-0.25	-0.24	9.39	532.25	48.53
3rd Party FoF	2013-2020	3,033	62	0.63	0.55	-0.29	-0.23	8.93	326.8	8.7
3rd Party FoF	2013-2016	1,188	31	0.66	0.57	-0.45	-0.34	8.61	383.63	11.39
3rd Party FoF	2017-2020	1,845	61	0.61	0.54	-0.19	-0.14	9.14	290.2	8.7

3.1.4 Mutual Fund Performance by Investing Strategy

a. Overview - Number of Funds and Fund Assets by Investing Strategy

Table 5, below, summarizes mutual fund performance by a fund's investing strategy. Ninety-seven percent of mutual funds (3,001 out of 3,086 funds)

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[108] There are four funds in our sample that do not have observations of product type.

in our study sample use an actively managed strategy. Actively managed funds account for 98% of the total AUM at the end of 2020. Passively managed funds compared to actively managed funds account for less than 3% of the number of funds, and less than 2% of total AUM, despite having the same average age of approximately 12 years.

b. *2013-2020 Findings*

Actively managed funds, in comparison to passively managed funds, have lower monthly asset weighted average total returns (0.59% vs. 0.85%), yet their risk-adjusted performance is only marginally lower (-0.29% vs. -0.24%).

c. *Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings*

Both actively managed and passively managed funds improved their risk-adjusted performance during the post-implementation period (0.2 and 0.3 percentage points, respectively). Total returns, however, fell for actively managed funds and rose for passively managed funds.

Table 5. Summary of MF Monthly Gross Performance by Investing Strategy

Strategy	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ million)	Total AUM ($ billion)
Active	2013-2020	195,879	3,001	0.59	0.59	-0.37	-0.29	11.95	365.1	973.31
Active	2013-2016	92,892	2,493	0.66	0.61	-0.51	-0.42	11.51	335.88	768.1
Active	2017-2020	102,987	2,639	0.53	0.57	-0.24	-0.18	12.35	391.46	973.31
Passive	2013-2020	5,421	88	0.73	0.85	-0.35	-0.24	11.98	223.74	21.9
Passive	2013-2016	2,611	76	0.73	0.79	-0.52	-0.41	10.78	169.61	11.8
Passive	2017-2020	2,810	65	0.73	0.89	-0.19	-0.14	13.09	274.04	21.9

3.1.5 Mutual Fund Performance by IFM Firm Type

a. *Overview - Number of Funds and Fund Assets by IFM Firm Type*

Mutual funds sponsored by bank-affiliated IFMs and independent IFMs account for 70.5% of funds (2,175 funds) and 86.3% of total AUM ($859.4 billion) at the end of 2020. These funds had an average age of about 12 years. There are 281 funds sponsored by insurer-affiliated IFMs. These funds are the youngest funds, with an average age of 9 years, and a total AUM of $59 billion, at the end of 2020. The oldest funds are those sponsored by IFMs that are professional associations. These 24 funds have a total AUM of $2.4 billion at the end of 2020.

b. 2013-2020 Findings

The asset weighted average total returns and gross alphas for the entire study period, and by IFM firm type, range from 0.5% to 0.62% and from -0.39% to -0.19% per month, respectively.

We observe that there appeared to be differences in the average risk-adjusted performance among IFM types. However, caution should be taken to interpret this result. First, it is worth noting that the differences were not statistically significant.[109] Second, these are differences in the sample mean only and do not account for the difference in the distribution of mutual funds (for example, across asset class or product type) sponsored by each IFM type, which is important when making meaningful comparisons of each group's performance. Finally, as emphasized in Section 4 below, this result may depend on the measure of performance and our specific sample of mutual funds. There is no guarantee that it will hold for a different measure of performance and/or for a different sample of mutual funds.

c. *Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings*

Comparing the results for the pre- and post-implementation periods, we find that the risk-adjusted performance improved between 0.2 to 0.3 percentage points per month during the post-implementation period. Total returns, meanwhile, showed little improvement and in some instances declined after the CRM2 requirements were fully implemented.

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[109] In one of our statistical tests, mentioned in footnote 10 above, we controlled for the type of IFM firms and found that effects of IFM firm type on alphas are statistically insignificant. This result is available upon request.

Table 6. Summary of MF Monthly Gross Performance by IFM Firm Type

Firm Type	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ million)	Total AUM ($ billion)
Association	2013-2020	1,866	24	0.56	0.5	-0.38	-0.39	19.77	145.48	2.42
Association	2013-2016	1,039	24	0.6	0.49	-0.51	-0.53	16.72	134.13	3.45
Association	2017-2020	827	24	0.51	0.51	-0.21	-0.24	23.6	159.73	2.42
Bank	2013-2020	68,766	992	0.64	0.57	-0.32	-0.27	12.57	526.9	536.46
Bank	2013-2016	30,907	780	0.69	0.56	-0.48	-0.41	12.24	484.08	381.13
Bank	2017-2020	37,859	940	0.6	0.58	-0.2	-0.17	12.84	561.87	536.46
Independent	2013-2020	81,263	1,183	0.6	0.62	-0.39	-0.33	12.21	338.99	322.89
Independent	2013-2016	39,542	997	0.7	0.67	-0.52	-0.45	11.78	336.01	307.65
Independent	2017-2020	41,721	1,077	0.51	0.57	-0.26	-0.21	12.63	341.81	322.89
Insurer	2013-2020	16,463	281	0.59	0.61	-0.33	-0.19	9.02	185.18	59
Insurer	2013-2016	7,253	228	0.6	0.55	-0.45	-0.34	8.82	132.38	31.24
Insurer	2017-2020	9,210	248	0.58	0.64	-0.22	-0.12	9.17	226.76	59

3.2 ETF Performance

This section of the report examines changes in ETF performance during our study period. We will examine ETF performance for the following three fund characteristics: broad asset class, investing strategy, and IFM firm type.

3.2.1 Overall Findings

Overall, the performance of ETFs was similar to that of mutual funds. Total returns fluctuated while gross alphas consistently improved starting in 2014, and became positive starting in 2019, although the size of the improvement is negligible. The gross alphas for ETFs are also higher than the gross alphas for mutual funds during our study period.

Table 7 summarises ETF performance for our study period. Panel A presents the performance results for three time periods – the overall study period, and the pre-and post-implementation periods.

Panel B of Table 7 provides the ETF performance for each year of our study period. The number of ETFs and total AUM have both more than tripled during our study period. In comparison to our mutual fund sample, the average fund size for ETFs has fluctuated and declined during our study period[110], perhaps due to a more dynamic market structure.

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[110] This may be due to a more dynamic market structure in the ETF market, compared to the mutual fund market, which is characterized by more active trading, more liquidity, and arbitrage by authorized participants.

a. Overview - Number of Funds and Fund Assets

Our ETF sample, for the entire study period, consists of 293 funds, with an average age of 7.2 years, and an average fund AUM of $509.4 million. The total AUM of our ETF sample is $162 billion at the end of 2020, and our study sample accounts for 65% of the Canadian ETF market total net assets.[111]

b. 2013-2020 Findings

The equal weighted and asset weighted average gross total returns are 0.61% and 0.66% per month, respectively. Our estimates of the monthly equal weighted and asset weighted average gross alpha are -0.19% and -0.17%, respectively. The asset weighted averages are slightly higher than the equal weighted averages. This finding suggests that ETF fund size has a positive impact on both total returns and risk-adjusted returns.

c. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

Comparing the pre and post-implementation periods shows that ETF total returns and risk-adjusted performance both increased significantly. Total returns and risk-adjusted performance increased by 0.05 and 0.35 percentage points, respectively in equal weighted average, and by 0.14 and 0.35 percentage points, respectively in asset weighted average.

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[111] Total industry assets as of December 2020 was $251 billion. Source: Investor Economic Insight Report, January 2021.

Table 7. Summary of ETF Monthly Gross Performance

Panel A. Performance over the Sample Period									
	No. of Obs.		Total Return (%/month)		Gross Alpha (%/month)			Average AUM	Total AUM
Period	(Fund x Month)	No. of Funds	EW Mean	AW Mean	EW Mean	AW Mean	Average Age	($ millions)	($ billions)
2013-2020	16783	293	0.61	0.66	-0.19	-0.17	7.18	509.44	161.99
2013-2016	5777	176	0.58	0.57	-0.42	-0.4	6.18	489.14	89.1
2017-2020	11006	293	0.63	0.71	-0.07	-0.05	7.7	520.12	161.99

Panel B. Performance by Year									
	No. of Obs.		Total Return (%/month)		Gross Alpha (%/month)			Average AUM	Total AUM
Year	(Fund x Month)	No. of Funds	EW Mean	AW Mean	EW Mean	AW Mean	Average Age	($ millions)	($ billions)
2013	899	83	0.63	0.62	-0.47	-0.33	5.93	584.13	46.55
2014	1228	122	0.73	0.71	-0.56	-0.56	5.99	498.81	56.6
2015	1654	150	-0.11	-0.17	-0.42	-0.42	6.1	443.33	65.46
2016	1996	176	1.04	1.02	-0.31	-0.32	6.48	478.06	89.1
2017	2268	189	0.82	0.7	-0.21	-0.24	7.01	520.52	103.76
2018	2531	211	-0.4	-0.27	-0.07	-0.08	7.54	515.5	106.82
2019	2852	243	1.27	1.24	-0.02	0.01	7.97	527.31	136.39
2020	3355	284	0.74	0.98	-0.01	0.03	8.07	517.23	161.99

3.2.2 ETF Performance by Broad Asset Class

a. *Overview - Number of Funds and Fund Assets by Broad Asset Class*

The ETF performance findings by asset class are presented in Table 8, below. Our ETF sample is comprised of 10 balanced funds, 190 equity funds, 94 fixed income funds, and 2 money market funds. Balanced ETFs are the oldest, with an average age of 8.2 years, yet they have the smallest total AUM ($2.7 billion at the end of 2020). Equity and fixed income ETFs are the largest asset classes in terms of number of funds (190 and 94, respectively) and total AUM at the end of 2020 ($100.9 billion and $55.7 billion, respectively). Money market ETFs is the smallest asset class, within our study sample, with only 2 funds and a total AUM of $2.8 billion at the end of 2020.[112]

b. *2013-2020 findings*

Equity and balanced ETFs have the highest asset weighted average total returns during our study period (0.88% and 0.55%, respectively), yet their risk-adjusted performance, of -0.18%, is the lowest of the four asset

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[112] Note that the total number of funds and total AUM, by asset class, may not add up to the corresponding totals for the sample because some ETFs have changed their asset class during our study period.

classes. In contrast, fixed income and money market ETFs have the highest risk-adjusted performance, in spite of their lower total returns.

Comparing the equal weighted and asset weighted averages of the two largest asset classes of funds, i.e., equity and fixed income ETFs, we find that the impact of fund size on performance is not clear. Fund size has a positive effect on performance for equity ETFs, but a negative effect for fixed income ETFs.

c. Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings

We find that there is consistent improvement in both the total returns and risk-adjusted performance across all asset classes, in the post-implementation period, and the improvements in general were larger for the risk-adjusted performance. The lower overall risk-adjusted performance for balanced and equity ETF is mainly due to their poorer pre-implementation performance.

Table 8. Summary of ETF Monthly Gross Performance by Asset Class

Asset Class	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ millions)	Total AUM ($ billions)
Balanced	2013-2020	535	10	0.52	0.55	-0.27	-0.18	8.15	249.77	2.66
Balanced	2013-2016	261	6	0.48	0.44	-0.45	-0.41	6.52	213.93	1.23
Balanced	2017-2020	274	9	0.57	0.64	-0.09	-0.01	9.69	283.91	2.66
Equity	2013-2020	10759	190	0.78	0.88	-0.22	-0.18	7.28	480.37	100.87
Equity	2013-2016	3598	116	0.78	0.8	-0.5	-0.47	6.4	477.15	54
Equity	2017-2020	7161	188	0.78	0.93	-0.07	-0.03	7.72	481.98	100.87
Fixed Income	2013-2020	5342	94	0.31	0.32	-0.13	-0.16	6.88	592.91	55.71
Fixed Income	2013-2016	1867	54	0.23	0.2	-0.25	-0.28	5.7	561.2	33.4
Fixed Income	2017-2020	3475	94	0.35	0.37	-0.06	-0.09	7.51	610.3	55.71
Money Market	2013-2020	147	2	0.09	0.11	-0.21	-0.07	7.59	577.54	2.75
Money Market	2013-2016	51	2	0.05	0.06	-0.41	-0.39	6.68	97.75	0.48
Money Market	2017-2020	96	2	0.1	0.12	-0.1	-0.05	8.08	832.42	2.75

3.2.3 ETF Performance by Investing Strategy

a. Overview – *Number of Funds and Fund Assets by Investing Strategy*

The ETFs in our study sample employ an actively managed, passively managed, or strategic beta[113] investing strategy.

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[113] Strategic beta ETFs are products that apply rules to a basket of securities (often represented by an index) to target companies that demonstrate specific "factors" such as value, momentum, or growth. Strategic beta ETFs are also known by other names such as smart beta or alternative beta. There is no universally accepted view as to whether strategic

The distribution of ETFs by investing strategy is dominated by passively managed and strategic beta funds, whereas for mutual funds active fund management is the dominant investing strategy. Funds employing these two investing strategies account for 72% of funds and 85% of total AUM, of our ETF sample at the end of 2020.

Passively managed and strategic beta ETFs are, on average, older than actively managed ETFs (8.1 year, 6.5 years, and 5.6 years respectively).

b. 2013-2020 Findings

Strategic beta ETFs have the highest asset weighted average total returns (0.75%), followed by passively managed ETFs (0.67%), and then actively managed ETFs (0.53%). Despite having the lowest asset weighted average total returns, actively managed ETFs have the highest risk-adjusted performance, with a monthly asset weighted average gross alpha of -0.05%. The differences between the equal weighted and asset weighted averages suggest that fund size has more impact on the risk-adjusted returns than total returns, and among the investing strategies it impacts actively managed ETFs the most.

c. *Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings*

Comparing the results for the pre- and post-implementation periods, we find that all three investing strategies show improved risk-adjusted performance[114] in the post-implementation period. However, there were no consistent directional changes in total returns. Both passively managed and strategic beta ETFs have improvements in their asset weighted average risk-adjusted returns, and these improvements are greater than the asset weighted average risk-adjusted returns for actively managed ETFs. It is worth noting that the asset weighted average gross alpha for strategic beta ETFs turned positive in the post-implementation period, and this is the only instance, at the fund characteristic level, where we observe a positive gross alpha.

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beta ETFs are passively managed investment funds or actively managed investment funds. For the purpose of our research, we have classified strategic beta ETFs as passively managed funds because they focus on a specific basket of securities, often represented by an index.

[114] Improvements were seen in both the equal weighted and asset weighted gross risk adjusted performance, i.e., gross alpha.

Strategy	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ millions)	Total AUM ($ billions)
Active	2013-2020	3416	82	0.55	0.53	-0.14	-0.05	5.55	265.75	22.63
Active	2013-2016	820	32	0.56	0.64	-0.44	-0.25	4.35	201.45	9.03
Active	2017-2020	2596	82	0.55	0.5	-0.05	-0.01	5.93	285.7	22.63
Passive	2013-2020	9226	130	0.61	0.67	-0.2	-0.19	8.05	729.02	122.63
Passive	2013-2016	3688	102	0.54	0.54	-0.39	-0.41	6.77	637.76	69.91
Passive	2017-2020	5538	130	0.65	0.74	-0.07	-0.07	8.9	790.15	122.63
Strategic Beta	2013-2020	3949	79	0.68	0.75	-0.2	-0.12	6.45	223.27	15.69
Strategic Beta	2013-2016	1173	40	0.72	0.79	-0.49	-0.42	5.51	250.69	10.08
Strategic Beta	2017-2020	2776	79	0.66	0.73	-0.08	0.03	6.85	211.68	15.69

3.2.4 ETF Performance by IFM Firm Type

a. Overview – *Number of Funds and Fund Assets by Investing Strategy*

Table 10 presents the ETF performance findings by IFM firm type. The IFM firm types in our study sample are independent and bank-affiliated IFMs.

Our study sample is dominated by ETFs sponsored by independent IFMs (hereinafter independent ETFs). These ETFs account for 75% of funds and 73% of total AUM, at the end of 2020. In general, independent ETFs have larger average fund sizes than ETFs sponsored by bank-affiliated IFMs (hereinafter bank-sponsored ETFs). The average fund size was $522.3 million for independent ETFs and $477.4 million for bank-sponsored ETFs.

b. *2013-2020 Findings*

We observed that in our sample the asset weighted average total returns and risk-adjusted returns for independent ETFs were 0.68% and -0.19%, respectively. The corresponding numbers for bank-sponsored ETFs were 0.62% and -0.11%. Again, while there appeared to be differences in performance between the two IFM types, caution should be exercised in interpreting them. First, the difference between bank- and independent-sponsored ETFs' performance in our sample is only marginally statistically significant.[115] Second, as noted earlier, this is the difference in the sample mean only and does not account for the difference in the distribution of ETFs sponsored by each IFM firm type. Finally, as emphasized in Section 4 below, this result may depend on the measure of performance and our specific sample of ETFs.

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[115] In our statistical tests, mentioned in footnote 10 above, for the ETF sample, we controlled for IFM firm type and found that the difference in performance between bank-sponsored ETFs and independent ETFs was only statistically significant at 5% level. This result is available upon request.

c. *Pre-implementation (2013-2016) and Post-implementation (2017-2020) Findings*

Comparing the pre- and post-implementation period results, we find that both bank and independent ETFs saw increased total returns and risk-adjusted performance, in the post-implementation period. The effect of fund size on performance varied by IFM firm type and time period.

Table 10. Summary of ETF Monthly Gross Performance by IFM Firm Type

Firm Type	Period	No. of Obs. (Fund x Month)	No. of Funds	Total Return (%/month) EW Mean	AW Mean	Gross Alpha (%/month) EW Mean	AW Mean	Average Age	Average AUM ($ millions)	Total AUM ($ billions)
Independent	2013-2020	12439	221	0.61	0.68	-0.2	-0.19	7.47	522.27	118.91
Independent	2013-2016	4181	131	0.58	0.57	-0.42	-0.42	6.68	544.94	65.91
Independent	2017-2020	8258	221	0.63	0.73	-0.08	-0.06	7.87	510.75	118.91
Bank	2013-2020	4279	71	0.63	0.62	-0.16	-0.11	6.35	477.44	42.84
Bank	2013-2016	1579	44	0.59	0.54	-0.41	-0.29	4.88	344.86	22.99
Bank	2017-2020	2700	71	0.65	0.64	-0.01	-0.04	7.21	554.97	42.84

4. Limitations of Research Findings

We discuss several limitations of our research findings in this section of the report.

Our study is an observational study, and as such the documented increase in the risk-adjusted returns for mutual funds and ETFs should be interpreted as correlation rather than causation. We cannot exclude the possibility that some of the improvements in the risk-adjusted returns are driven by other structural changes in the investment fund industry, broader macroeconomic conditions, and/or proposed regulatory changes.

Second, there is no consensus or industry-wide accepted standard of fund performance measures that allow for comparable analysis of funds with diverse risk exposures.[116] A large body of literature on methodologies to evaluate fund performance has emerged since Jensen (1968). Each of these methodologies have their own advantages and disadvantages. Though our chosen performance measure based on the prominent Fama and French (2015) model is the most widely used in academics, there are some criticisms of using the model for this purpose. Most notably, as pointed out by Berk and van Binsbergen (2017), benchmarking performance against the Fama and French (2015) model builds on the premise that investors' next best investment opportunities are spanned by the portfolios mimicking the model factors. However, these portfolios are not truly investible because they do not include transaction costs.

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[116] See Elton (2020), Wermers (2011), and Ferson (2010) for comprehensive reviews of performance measures.

Finally, our research findings are based on a subset of mutual funds and ETFs, and as such our performance results may not be representative of the larger universe of mutual funds and ETFs. We caution readers from using our research results to make inferences about the performance of the broader universe of mutual funds and ETFs, from 2013 to 2020.

5. Conclusion

Post-implementation evaluation is crucial in the policy development cycle because it allows regulators to understand whether a newly introduced policy has been implemented as intended and is having the desired impacts and outcomes.

The purpose of this research is to examine the post-implementation impacts of the final phase of the Client Relationship Model (CRM2) amendments to *Regulation 31-103 respecting Registration Requirements, Exemptions and Ongoing Registrant Obligations* on industry behaviour. We specifically wanted to examine whether greater transparency about investment returns, in the annual costs and performance reports, is leading to improved risk-adjusted performance.

We find that the risk-adjusted performance for both mutual funds and ETFs is negative for the entirety of our study period, but performance improves in the years after the annual costs and performance reports were implemented.

Although our study cannot practically control for every factor that may influence our research findings, the results help provide evidence that disclosure-based regulations may be an effective tool in shifting industry behaviour.

Appendix A – Research Design

a. Data Sources and Fund Coverage

The data sets that underpin our analysis were obtained directly from investment fund managers and third-party data providers, specifically ISS MI Investor Economics and Morningstar. Our data sets contained a total of 3,703 unique mutual funds for our study period. After filtering the funds by our selection criteria and eliminating funds with obvious reporting errors and missing data points our final sample size was 3,086 mutual funds and 299 ETFs. The 3,086 mutual funds were comprised of 13,356 unique fund series.

The following data points were sourced from ISS MI Investor Economics:

- Series type classification
- Investing strategy
- CIFSC classification (for ETFs only)

We use monthly returns and assets data from Morningstar Direct, and Product Type from investment fund managers.

b. Selection of Funds

The following criteria were used to select ETFs and mutual funds for inclusion in our analysis:

- The funds are domiciled in Canada and sold to Canadian retail investors[117]
- Mutual funds must be open-ended funds
- ETFs are Canadian listed ETFs
- Each fund must have gross monthly total return data for at least 36 consecutive months, between 2009 to 2020. Terminated and merged funds are included in our sample population if they can satisfy the monthly performance data criteria. These criteria were included to minimize survivorship bias in our sample population.

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[117] ETF assets include assets held by both retail and institutional investors. Mutual fund assets exclude mutual fund series sold to institutional investors.

c. Research Methodology

Investment performance evaluation has been studied extensively in the academic fund management literature.[118] Ever since the seminal paper by Jensen (1968), it has been established that in order to measure and compare fund performance, it is necessary to account for fund risk. Failure to do so would lead to a substantial overestimate of fund performance and an incorrect inference of average performance.[119] Moreover, subjecting fund returns to a common risk model renders an added bonus of making possible comparisons of fund performance among funds with diverse asset classes and risk exposures.

One of the most prominent models used to account for risk in the stock market is the Fama and French (2015) model, which has been found to explain patterns in stock returns consistently.[120]

Our approach to estimate risk-adjusted returns uses the Fama and French (2015) model, with five risk factors. We, however, include an additional bond factor, because our study sample includes both stock and bond funds.[121] The equation below is a mathematical representation of our performance model.[122]

$$R_{it} - R_{ft} - R_t^{USDCAD}$$
$$= \alpha_i + \beta_{iM}MKT_t + \beta_{iSMB}SMB_t + \beta_{iHML}HML_t + \beta_{iRMW}RMW_t$$
$$+ \qquad\qquad \beta_{iCMA}CMA_t + \beta_{iMOM}MOM_t + \beta_{iWB}WB_t + \varepsilon_{it}$$

Where:

- R_{it} is fund i's total returns (before expenses) in month t,
- R_{ft} is the risk-free rate, and
- R_t^{USDCAD} is the monthly change in the USD/CAD exchange rate.[123]

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[118] See Ferson (2010), Wermers (2011), and Elton (2020) for comprehensive reviews.
[119] See Elton et al. (1993 and 1996).
[120] See Cochrane (2005) and, more recently, Ferson (2019) for comprehensive reviews of empirical methods and models in finance.
[121] See Elton et al. (1996)
[122] In addition to estimating this model, we also estimated various permutations of the explanatory risk factors. We settled on this model because it produced the highest adjusted R squared on average. The adjusted R squared, one of the most common measures used for model selection, is a corrected "goodness-of-fit" measure for linear regression models. The adjusted R squared measures how well the predictor variables, in our case the risk factors, explain the estimated gross alpha. The higher the adjusted R squared, the better the model's explanatory power.
[123] We adjust a fund's returns for the USD/CAD exchange rate because while a funds' returns are measured in Canadian dollar, the explanatory risk factors on the right hand-side of our equation are measured in U.S. dollars.

The explanatory factors MKT_t, SMB_t, HML_t, RMW_t, and CMA_t represent the common risk factors of the Fama and French (2015) model for equities; and MOM_t is the Carhart (1997)'s momentum factor.[124] Finally, the factor WB_t is the excess returns on a value-weight portfolio of global and Canadian bond indices, which represents the risks for bonds.[125]

The regression equation above shows that a fund's total returns in excess of the risk-free rate and the Canadian exchange rate can be explained by the Fama and French factors and a bond factor. The slopes ($\beta_i s$) on the explanatory returns describe a fund's risk exposure to each of the common risk factors.

The intercept α_i, which is the fund's alpha, measures a fund's average returns in excess of the returns explained by exposures to the risk factors and captures the fund's before-fee risk-adjusted performance.[126] A positive alpha is interpreted as "outperformance" and a negative alpha as "underperformance", relative to the expected returns implied by the risk exposures.[127] This model, therefore, attempts to measure the degree to which variations in a fund's past performance are explained by variations in the six factors.

It is worth noting that the Fama and French factors and the momentum factor are not available for Canada, thus we follow Cumming et al. (2019) and use the North American factors, which comprise constituents from both the Canadian and U.S. markets. This choice can be justified by extensive evidence of stock market integration between Canada and the United States

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[124] Specifically, MKT, the market factor, is the return on the market portfolio in excess of the risk-free rate; and SMB, HML, RMW, CMA, and MOM are the returns on the value-weighted, zero-investment factor-mimicking portfolios for size, book-to-market ratio, profitability, investment, and one-year momentum in stock returns. For details of how to construct the Fama and French (2015) factors, please refer to Prof. Kenneth French's webpage at https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#Benchmarks.

[125] The bond indices are total returns index, including the Bloomberg Barclays Global Aggregate Bond Index, Bloomberg Barclays Global High Yield Index, Bloomberg Barclays Global Inflation Linked Index, and Bloomberg Barclays Canadian Aggregate Bond Index.

[126] Note that the risk factors include the returns for both the equity and bond markets that are subtracted from total returns when calculating alpha. Hence, unlike total returns, the risk-adjusted return or alpha is independent of the equity and bond market performance.

[127] We caution that risk-adjusted return is defined, and therefore, must be interpreted within the context of a specific risk model that has been selected to benchmark a fund's performance. Our chosen version of the Fama and French (2015) model may not be the performance benchmark that an IFM has chosen for its funds. Consequently, a fund's negative risk-adjusted returns based on our estimation simply means that the fund' expected returns is lower than the expected returns of our model and does not necessarily imply a loss of wealth for the fund's investors.

due to their comprehensive economic ties.[128] More importantly, the use of these factors is supported by the high values of adjusted R^2 when estimating the above equation. The average adjusted R^2 is 88.4% and 84.3% for mutual funds and ETFs, respectively, indicating that about 84% to 88% of the variations in sample funds' returns are accounted for by the factors in our model.

We use a rolling-regression procedure to estimate the monthly risk-adjusted performance for each fund in our sample. For every month in our study period, we regress the gross total returns of each mutual fund series or ETF on the risk factors for the previous three years. The rolling regression provides time-varying estimates that can account for changes in market dynamics. Given that all mutual fund series of the same fund share a common underlying portfolio, the returns at the mutual fund series level should be similar.[129] Following conventions in mutual fund performance research we aggregate the series level estimates (using asset-weighted average) of the same fund to obtain the fund's overall risk-adjusted performance.[130]

We then derived equal weighted and asset weighted averages of fund performance, to compare performance by time periods and fund characteristics. The equal weighted performance metric represents a fund's performance on average, while the asset weighted average performance metric takes into account the effects of a fund's assets size on performance.

We perform statistical tests for our hypothesis using t-tests and regressions. The results are available for interested readers upon request.

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[128] See, for example, Harvey (1991), Mittoo (1992), Mussa and Goldstein (1993), Faff and Mittoo (2003), Glimore and McManus (2004), Bekaert et al. (2007), and Pukthuanthong and Roll (2009)).

[129] See Morningstar (2006) for details.

[130] See, for example, Ferson and Lin (2014) and Fama and French (2015) among others.

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