Following the release of report by Douglas Cumming, Sofia Johan and Yelin Zhang - "A Dissection of Mutual Fund Fees, Flows and Performance" on October 22, 2015, the authors received several requests to present their research and several questions and comments on the research.

In the interest of facilitating an open policy discussion on mutual fund fees in Canada, the Canadian Securities Administrators (CSA)have asked Professor Cumming to publish a list of the questions he has received thus far along with his responses so that all stakeholders may benefit from the information. This list of frequently asked questions is included below.

As with the release of the original report from Cumming et al. we remind readers that the views and opinions expressed in the enclosed FAQ are those of the authors. The responses provided are their own.

The CSA also note that in response to some of the questions received, the authors have provided additional analysis and updates to the report. Along with the enclosed FAQ, we have also released a new version of the report.

Frequently Asked Questions about the
***Dissection of Mutual Fund Fees, Flows and Performance* Report**

Subsequent to the release of our paper and in response to several presentations we made to industry groups, we received many questions and comments. Rather than repeat our responses and in an effort to be transparent about the questions received, we have posted all our responses to the questions received thus far below. We have included all questions received and the original author's wording so that commenters can see that their questions have not been overlooked. We have grouped similar questions together and provided one answer where appropriate. Finally, we have grouped questions into subject areas to make it easier for readers to see all the questions asked on a particular theme.

We thank all those who have taken the time to provide questions and comments.

Subject Area: Dataset

Q1: 70 of the 113 fund families chose not to participate in the study. Are these fund families systematically different from those that participated in fees, performance, and/or other characteristics?

A1: For the fund companies that did not submit data to us, there are many things we do not know about their fund fees and flows. However, based on public information, we find their characteristics similar to characteristics of the funds in our dataset in that they:

- are located in the same provinces;
- focus on similar markets and have similar business models;
- have comparable portfolio compositions.

It is worth noting that, in terms of market size, the majority of the funds have submitted data to us. In short, we don't see systematic differences between the fund companies that did and did not submit data.

Q2: In the list of purchase options, you include paying a front end sales charge. However, according to a study conducted by Investor Economics, of the fund sales involving a front end load, in 98% of cases, the load was waived. (https://www.ific.ca/wp-content/uploads/2013/08/Canadian-Study-Mutual-Fund-MERs-and-Cost-to-Customer-in-Canada-September-2012.pdf/1655/). In calculating fund fees, did you include front end loads?

A2: Our study is based on actual fees and money flow, not the estimated, proclaimed, or advertised amounts. If there was no actual front end sales charge, then the amount was zero for the fund in the according month. As for the types of sales charges, we used the information the fund companies reported directly in response to the data request questionnaire (see data request questionnaire at Appendix III of the report). If they reported themselves as type front-end load or initial sales charge, we used dummy variables to reflect the reported type and used their money flow information as provided.

Q3: I'd like to know where the data set under the "no load" fund sales came from and how it differed from "front end load" given that the vast majority of front end sales go in with zero commission charged. My suspicion is the "no load" data set came from the bank branch distribution system and/or the DIY channel but I'd like to clarify.

A3: The no load funds are those that the fund manager has identified in their data submission as being "no load" (refer to the question #8 in data request questionnaire) and that we have confirmed pay no front end commission and do not have DSCs but do pay trailing commissions. Without acknowledging or confirming

who participated in the survey we can state that yes, these purchase options are typically offered by bank owned fund manufacturers but they are also offered by other non-bank fund manufacturers as well.

Q4: I believe I heard Professor Cummings say that the average trailer fee in the entire data set was 0.30%. Is that correct? That strikes me as odd as the average bond fund pays a trailer of about 0.50% and the average equity fund and balanced fund (in fact the vast majority of them) pays a standard trailer of 1.00%. What is skewing the data so drastically downward? Any money market funds should probably have been eliminated because these are simply a parking spot for cash in volatile markets. How was the data scrubbed so it is relevant to the debate?

A4: Yes, the average trailing commission for the entire dataset - for all purchase options, front end, no load, DSC and including those that pay no trailing commissions, and all fund asset classes was 0.3%. If you look at the summary stats by purchase option (which are still reported as aggregates across all asset classes) on pages 74 -75, you will see that the trailing commissions reported are representative of industry norms. As for removing any particular asset class, this would not be appropriate and we would not want to be accused of introducing bias in the dataset. Instead, there were controls for fund type by broad asset class, including for money market funds.

Q5: The report only seems to contain analysis on equity mutual funds? Is that correct?

A5: No, that is not correct. The dataset included information on all types of mutual funds including money market funds, fixed income funds, balanced funds and equity funds, and all fund structures including stand-alone funds, fund-of-funds, corporate class funds and trust funds. The dataset was representative of the various kinds of mutual funds offered in the industry today.

Q6: The Cumming report doesn't seem to take into account the fees paid by consumers directly to advisors in a fee-based arrangement, as the data comes directly from the managers; unlike embedded commissions, direct-paid fees are not deducted "at source" and therefore do not show up in the dataset.

A6: Yes, that is correct. We did not receive this information. However it is important to note that all risk-adjusted outperformance calculations were done using fund series returns gross of fees. So the analysis focuses on whether investors and their advisers seek out skilled fund managers or not. The evidence suggests that this is much less likely when advisers and their dealers are paid trailing commissions, when advisers work for dealers that are affiliates of the fund manager and it is less likelier still when advisers use the deferred sales charge purchase option. Put differently, for an equivalent magnitude of fees and level of risk, the structure of the deferred sales charges and trailing commissions makes the investor substantially worse off relative to a fee-based arrangement.

Subject Area: Alpha Calculations

Q7: You measure alpha using the 4 Fama-French North American factors. These factors are derived from the returns of both US and Canadian stocks, but predominately U.S. Why would these factors be appropriate for Canadian stock funds?

A7: While the mutual funds included in our analysis were only those established and offered in Canada, they didn't necessarily only invest in the Canadian market. In fact, many fund companies who submitted data to us indicated that their funds have a US focus or global/international focus etc. We have done robustness checks on different sub-samples based on the regional focus of the funds (for example, exclude/include all funds labeled US/global focus). The results are consistent. Trailing commissions still drive flows and have a negative effect on future alpha and these results are both economically and statistically meaningful.

To address any remaining doubts about the validity, veracity and applicability of our results, we have also completed the analysis using alpha calculations generated by both Sharpe ratios and simple market returns (see appendix IV and V of the latest draft of the paper). **The results are the same, trailing commissions still drive flows and have a negative effect on future alpha and these results are both economically and statistically meaningful**.

We also note that the results of our research are consistent with other research that has been completed in this area[1] with the one exception being the unpublished (at the time of this writing) Investor Economics report commissioned by the Investment Funds Institute of Canada (IFIC)[2].

Q8: Since the factors are in U.S. dollars and the fund's returns are in Canadian dollars, you must have done a currency conversion. Did you convert the factors to Canadian dollars or the fund returns to U.S. dollars?

A8: We considered currency conversions, and found that the results are not affected either way. Also, the results are quite stable over different points in time, as discussed in the paper. In the latest draft of the paper (which can be found at http://ssrn.com/abstract=2678260) we show the results in Appendix III with 3-year exchange rate adjusted alphas. The results are very similar to those in the main body of the paper.

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[1] The list of papers with results that are consistent with our findings is extensive, but see for example, Bergstresser, Daniel, John MR Chalmers, and Peter Tufano. "Assessing the costs and benefits of brokers in the mutual fund industry." Review of Financial Studies 22, no. 10 (2009): 4129-4156, Christoffersen, Susan EK, Richard Evans, and David K. Musto. "What do consumers' fund flows maximize? Evidence from their brokers' incentives." The Journal of Finance 68, no. 1 (2013): 201-235. Zhao, Xinge. Conflict of interests between load fund investors and brokers and financial advisors. Working paper, China Europe International Business School, 2008. Anagol, Santosh, Cole, Shawn & Sarkar, Shayak. "Understanding the Advice of Commissions-Motivated Agents: Evidence from the Indian Life Insurance Market". Harvard Business School, Working Paper 12-055, 2013. Chen, Hsuan-Chi, Christine W. Lai, and Sheng-Ching Wu. "Newly-added Mutual Funds and Revenue Sharing in 401 (k) Plans.", 2010. Chalmers, John, and Jonathan Reuter, "Is Conflicted Investment Advice Better than No Advice?" Boston College Working Paper, March 2015. Del Guercio, Diane, and Jonathan Reuter. "Mutual fund performance and the incentive to generate alpha." The Journal of Finance (2013).

[2] Investor Economics, 2015. Analysis of Factors Influencing Sales, Retention and Redemptions of Mutual Fund Units, September 2015 Unpublished Study by Investor Economics for The Investment Funds Institute of Canada.

Q9 Version 1: Did you calculate alpha for other types of funds such as global equity funds, fixed income funds, and multi-asset class funds? If so, what factors did you use? If the 4 Fama-French North American factors, why would they be appropriate for these type of funds?

Q9 Version 2: Could the researchers indicate if specific factors were used to calculate alpha for fixed income and balanced funds to distinguish them from equity funds, as their risk/return characteristics can be quite different?

Q9 Version 3: Information was collected on CIFSC Fund Category and Fund Risk Classification for each fund from fund managers. Would this data not have provided sufficient information to warrant picking different factors?

A9: To our knowledge, there do not exist reliable factors that specifically target global equity, fixed income and multi-asset funds. We conducted multiple robustness checks in subsamples by including or excluding a particular type of fund in our dataset. Our findings are stable across different subsamples. We did not use different models to generate alpha for different fund types in the paper in the interest of not being accused of data mining, i.e. arbitrarily picking different models to generate different alphas for different funds to get results that support a particular point of view. We used the same model for all funds, and checked subsamples, and found the results to be robust.

We believe that it would take more than a change in the absolute level of alphas – say through the use of an alternative set of Fama-French factors - to materially change the results of the study. The relative alphas – across trailing commission paying versus fee-based paying series - would need to change to materially alter the results. Relative – across series/purchase option - alphas will not change under an alternative set of Fama-French factors.

Q10: Did you look at alphas net of fees?

A10: No, we only use monthly gross alpha—fund performance before the fees. If gross performance is poor, an extra charge of trailer fee, either directly or indirectly, only makes the net performance worse. Hence, the negative effect of fees on performance is understated in our paper.

Subject Area: Results and Interpretation of Results

Q11: Funds in different asset classes (stocks vs. bonds) tend to have different fees. Do any of the results vary across CIFSC fund categories?

A11: We have over 100 CIFSC categories (including closed CIFSC categories for funds that merged or closed over the sample period) in our data-set. We didn't analyze these categories one by one. However, apart from the investment region robustness checks, we also conducted robustness checks on subsamples based on asset class. There exist variations for different subsamples, but the general characteristics of the data-set remain stable. Trailing commissions still drive flows and have a negative effect on future alpha and these results are both economically and statistically meaningful.

Q12: The report shows that "no load" fund sales had a lower flow-performance slope.

a) Does this not clearly show that the advice channel (non-restricted advice) is successfully pushing investors into funds that add alpha more successfully than those other channels?

A12a: We assume that you are referring to the graph on page 40 and that by "advice channel (non-restricted advice)," you are referring to front end purchase option fund flows from non-affiliated dealers. Keep in mind that for all the purchase options shown in that graph, the flow-performance slope for each purchase option is calculated based on flows that are ***net*** of affiliated dealer flows.

Therefore, what the graph shows is that non-affiliated fee-based fund flows are more performance sensitive than non-affiliated front end commission option fund flows which, in turn, are more performance sensitive than non-affiliated no load fund flows etc.

Also, please note that this question 12a does not reflect what lower flow-performance slope means. To repeat what is in the executive summary, for example, we state: "Higher flow-performance slope means disproportionately more investor money flows into the fund when past performance is strong and disproportionately more investor money flows out of the fund when past performance is weak. Conversely, lower flow-performance slope means that disproportionately less investor money flows into the fund when past performance is strong and disproportionately less investor money flows out of the fund when past performance is weak (see "possible effect 1" on chart – page 6). Higher flow-performance slope incentivizes fund managers to achieve higher alpha because the fund manager will receive disproportionately more flows into the fund for each increase in performance."

b) Does this not show that for the advice channel, there is indeed value in the advice being given?

A12b: This graph shows that the quality of fund selection within flows coming from non-affiliated fund dealers is materially impacted by the way the adviser and fund dealer are compensated, with fee-based compensation resulting in flows that are the most performance sensitive and deferred sales charge compensation resulting in flows that are the least performance sensitive.[3]

c) Doesn't this also show that the bigger policy concern for regulators should be affiliated broker dealer arrangements and not trailer fees?

[3] We note here that for deferred sales charge options, it is likely not just the adviser/dealer compensation but also the fact that investors are locked in that is driving this result.

A12c: We are not privy to the policy concerns of the regulators or to the relative importance of any concern.

We can confirm however that affiliated dealer flows showed no flow-performance sensitivity at all which was found to be relatively more detrimental to investors relative to all trailing commission paying purchase options for non-affiliated dealer flows.

In terms of which is the bigger concern, our research has shown that **both** affiliated dealer flows and the payment of trailing commissions result in material conflicts of interest that are detrimental to mutual fund investors over the long term.

Q13: Are the strong conclusions of the report listed on pages 7 – 9 justified given the low estimated effects and explanatory powers of the underlying equations?

A13: Yes. As was discussed in the paper at footnote 20, with panel data methods, R^2 is not directly comparable to time series regressions. It is quite normal for R^2 to be low in a panel setting because the same variables are used to explain differences in outcomes for different FundSERV codes, and not only the same FundSERV code at different points in time. For a detailed explanation of the interpretation of R^2 in a panel data setting see http://www.stata.com/statalist/archive/2003-05/msg00336.html. The R^2s are well within acceptable ranges for analyses based on panel datasets.

Q14 Version 1: In the report summary, you mention the impact of a 1.5% trailing commission. Trailing commissions this high are not standard in the industry. Typically, trailing commissions for equity funds sold on a front end basis are 1%. Since pretty much everyone is paying the same trailing commission, this must mean that there is no impact on fund sales at 1% and that we could cap trailing commissions at that rate and address the issues cited in the report right?

Q14 Version 2: The paper concludes that a 1.5% trailer fee increases the average monthly flows by 0.3% of AUM each month regardless of past performance.

a) Can the researchers provide the computations used to derive this estimate?

A14a: Thank you for making this request. The estimate comes from Table 4 Panel A. The most conservative estimate is 0.00296 in model 6. The calculation is 1.5* 0.00296, which is 0.45%. The estimate in the paper should have said 0.45%, not 0.3%, so the effect was underreported (i.e., the magnitude of the concern is heightened). We have updated the paper to reflect this change.

We regret the inadvertent and embarrassing mistake in this simple calculation. By way of a quick explanation/apology, it was added to the paper after we received some feedback from folks who wanted an example that did not involve standard deviations. The typical thing we do in academic studies is provide such calculations with the use of standard deviations. It appears we multiplied this coefficient by 1 and not 1.5. We checked the other figures and did not find any other such issues that needed correcting.

b) Is the incidence of funds having trailers of 1.5% a material event? Of the 22,077 funds studied, how many have trailers of 1.5%? How many have trailers of 1.0%?

A14b: Of the funds with trailers, 27.7% have a 1% trailer and 1.3% have a 1.5% trailer.

c) What would the corresponding result be for a 1.0% trailer?

A14c: The corresponding result would be 0.3% (see also A14a immediately above)

Q15 Version 1: Did the report establish a direct correlation between high-MER funds and reduced performance?

Q15 Version 2: Did the results show that higher MERs don't necessarily translate to lower performance?

A15: The purpose of the research was to determine the factors that influence fund flows and in particular, the extent to which tied forms of compensation, including trailing commissions, influence mutual fund flows. We therefore did not directly test this hypothesis. Previous analysis by Morningstar and others has looked at this question and found that expenses can be a good predictor of future fund performance[4].

Q16 Version 1: The Cumming Report seems to imply that anything that reduces flow-performance sensitivity is unambiguously an indication of conflict. But hasn't experience demonstrated that advisors who adopt strategies of chasing past performance for their clients by recommending the redemption of underperforming funds and their replacement with last month's outperformers risk overtrading and the production of inferior long-term outcomes for their clients? Wouldn't advisors that employ 'buy-and- hold' strategies act to moderate the 'flow-performance slopes' measured in this study, while at the same time producing better long-term results for clients than a more active approach?

Q16 Version 2: I note that you use past performance in your analysis, I thought that investors shouldn't chase past performance?

A16: We are not saying that anything that reduces flow-performance is unambiguously an indication of conflict. We are saying that anything that reduces the flow - ***risk adjusted out*** performance after controlling for the factors that drive fund demand including market risk/return, fund type, fund risk disclosure, fund branding, tax efficiency preferences, target payout preferences etc. - is an indication of conflict. After controlling for all these factors, investors and their advisors should, if the market is efficient, be choosing those funds that are managed by relatively skilled portfolio managers.

Once again, while we found that this was likely to be the case to some degree for all fund flows (with the exception of affiliated dealer flows) the degree of the sensitivity to fund manager skill was materially reduced for those purchase options that included trailing commission payments and for deferred sales charge options where the investor is locked in to a fund family over a multi-year redemption schedule.

In terms of chasing past performance, while we are routinely warned that past performance may not be a good indicator of future performance, this is not tantamount to saying that past performance has no value, particularly in markets where capital is being allocated inefficiently. To the extent that you have an inefficient allocation of capital – such as when mutual fund flows are determined by something other than risk-adjusted outperformance – then there could be valuable information in past performance and a lot of performance persistence, as we have found here. Essentially, the results of this research suggest that investment decisions are being made to a significant degree based on something other than portfolio manager skill – e.g. trailing commissions.

Q17: Did the researchers test the effect of trailers on future alpha directly by including a trailer variable in regressions similar to those reported in Table 5?

A17: We did include a number of different fee variables in the model, but found the results to be sensitive to the other different possible sets of variables that could be included, particularly due to the fact that these fee variables are correlated with the flow-performance level and the flow-performance slope. Since fees directly

[4] See for example, http://news.morningstar.com/articlenet/article.aspx?id=347327

affect flow-performance level and slope, we felt it was inappropriate to include them twice in the model and hence did not report these results.

Q18: Table 4 Panel A in the paper indicates that a 1 standard deviation increase in trailer fees reduces flow-performance sensitivity by 15.4%. Can the researchers provide the computations used to derive these results?

A18: From Table 4 Panel A Model 6, 1.283 (1 std dev increase)* 0.00208 (coefficient estimate for trailer) * alpha) * 0.243 (average alpha in this subsample) / 0.0042 (estimated effect of alpha in Model 6 without interaction term) = 15.4%.

Q19: This paper's description of the creation of "Flow Intercept" and "Flow Slope" are not very clear. Can the researchers elaborate on the construction of the flow intercept and slope intercept variables, and how the conclusions provided on page 59 are reached based on these constructions?

A19: We invite you to read the methodology section starting on page 4 which provides a good explanation of the flow-performance intercept and flow-performance slope. The conclusions follow directly from the empirical methods. Note that flow-performance intercept and flow-performance slope are well accepted terms in the literature and widely used in dozens of prior empirical studies on mutual fund flow and performance.

Q20: On page 38 the authors state that: "a 1-standard deviation increase in prior alpha causes a 10.0% increase in future flow…" Can the authors provide the computations used to derive the results of page 38?

A20: Based on Model 5 in Table 3, the coefficient estimate is 0.0025. Based on the summary statistics in Table 1, 0.0025*0.7433 / 0.0187= 9.994% (for ease of presentation we rounded to 10%, also because the models produce slightly different coefficient estimates depending on which other variables are controlled for)

Q21 Version 1: Do the models contained in this paper assume that there are no other factors besides performance and fees that should determine mutual fund flows?

Q21 Version 2: Is it possible that inclusion of other variables, such as for example some of the variables referred to in Footnote 19, would meaningfully improve the fit of these equations and meaningfully change the conclusions of the report?

A21: By footnote 19, you are referring to factors that were mentioned but were never properly tested in the unpublished (at the time of this writing) Investor Economics report commissioned by the Investment Funds Institute of Canada.[5] As we commented in our report, because Investor Economics does not use panel data regressions and/or information at the FundSERV code level, among other things, they cannot make statistical claims about the relationship between fund fees and fund flows including their assertion that trailing commissions do not drive fund flows.

[5] Investor Economics, 2015. Analysis of Factors Influencing Sales, Retention and Redemptions of Mutual Fund Units, September 2015 Unpublished Study by Investor Economics for The Investment Funds Institute of Canada.

The richness and breadth of our dataset is such that we were able to control for many of these factors either directly or indirectly including the three factors cited by Investor Economics as most impactful for fund demand – macroeconomics, demographics and preferred access to distribution.

Macroeconomic factors or market cycle is taken into account through the Fama French factors used to calculate risk-adjusted outperformance through time.

So the fact that investors switched from higher risk equity funds to money market funds (as they did in 2007/08), then out to short-term fixed income funds in 2009, then to balanced income and target income funds would not impact our results because we are measuring risk-adjusted outperformance. In other words, when investors purchased or redeemed a money market, equity or balanced fund, to what extent were they taking risk-adjusted performance into account? If the fund market is efficient, and the conflicts stemming from the payment of trailing and other commissions are managed, investors should be equally performance sensitive when making these investment decisions both across different fund categories and across fund series/purchase options in each category. We found that this was not the case.

Demography is a factor that impacts both aggregate inflows and outflows into the industry as well as the popularity of certain fund types. Since we control for fund type in our regressions, an aggregate shift from growth oriented funds to income oriented funds would be accounted for both by the fund type and the time series controls.

Once again, as with macroeconomic factors, while we can see how changing demographics might affect aggregate flows over the long run, this would not explain why certain series/purchase options exhibit different levels of performance sensitivity. Given that we are measuring risk adjusted out-performance (alpha), those focusing on demographics as an alternative explanation of our results would have to explain why certain investor cohorts are less sensitive than others or why certain cohorts become less performance sensitive over time – particularly given that all cohorts are advised. And since we are already controlling for target distribution series, fund type, currency, and tax efficiency among other fund attributes, changing preferences in product attributes over time cannot be an alternative explanation.

In terms of preferred access to distribution, we were able to control for and analyze separately both affiliated dealer flows and fund flows coming from affiliated investment funds in our research and we show that performance sensitivity is very different for these two groups relative to both the commission-based and fee-based groups.

Q22: The average asset mix of commission-based and fee-based accounts is quite different, as dictated by differences in clients who typically use these accounts. For example, an embedded fee mutual fund account at an MFDA dealer would choose from a total universe of mutual funds which is 34% in Equity Funds and 49% in Balanced Funds. A fee-based account, which would typically be at a full service IIROC dealer, would choose mutual funds from a universe which is 41% in Equity Funds and 33% in Balanced Funds.

- **a) Is it possible that the differences in flow-performance sensitivity of embedded fee mutual funds and fee-based funds could reflect nothing more than the different investment needs, goals and risk tolerance of the clients in these two market segments?**
- **b) Have the researchers tested whether or not some of the differences in flow return sensitivity for affiliated vs unaffiliated and for trailered vs non-trailered funds could be explained by differences in asset mixes which are most prevalent in the respective segments?**

A22a and b: No this would not be the case. In terms of KYC and suitability concerns being a driver of the research results, once again this should not impact an investor's ability to buy/sell or an adviser's ability to seek out those investments that outperform on a risk-adjusted basis.

Our approach to the analysis essentially says ok, the suitability piece has been done and you know the types of funds that will make up the investor's portfolio, how well do you select those funds (controlling for those other product attributes that may be important to the investor) and how do trailing and other commissions seem to impact that decision? Our answer once again is that trailing commissions are very impactful to the quality of that selection process.

You mentioned the aggregate supply of funds in the commission-based versus fee-based universe as being a potential factor driving the results. We note that while we think that this is highly unlikely to be an important consideration, this supply is driven by the fund companies themselves. We wonder why they are not offering the same universe of funds in both registration channels? We note that a likely explanation for this difference in aggregate product supply is likely the differential in the degree of 'openness' in the product shelves in the IIROC versus MFDA channels.

In response to this issue, we note that we already controlled for the affiliated dealer flows by stripping them out and analyzing them separately. We acknowledge though that even at a dealer with an open product shelf, it can often be the case that the adviser's dealer sets the menu by creating the firm's recommended funds list. It could be the case that it is the adviser's dealer that is determining the universe of products available based on trailing and other embedded commissions rather than the adviser or that the dealer is providing other internal incentives to choose relatively poorly performing funds. We would invite the industry to research this issue further or provide data to test this hypothesis.

Q23: An alternative explanation of why funds with trailers may appear to reduce the flow performance slope relative to funds without trailers may be connected to the availability of discretionary accounts under the fee-based category that allow advisors to purchase and redeem mutual funds in a client's account without explicit transactional consent from the client. Have the researchers tested whether or not some of the differences in flow return sensitivity for affiliated vs unaffiliated and for trailered vs non-trailered funds could be explained by the existence of discretionary trading in fee-based accounts?

A23: First it is not the case that all fee-based accounts are discretionary and second, it would seem that you are implying that the conclusions of the research are correct but that the source of the market failure is not the payment of trailing commissions at all but rather has something to do with the fact that advisers in non-discretionary accounts need to obtain consent from the client before trading?

This would suggest that you believe that the reason that trailing commissions influence fund flows is not because of the trailing commissions themselves but rather because investors in non-discretionary accounts are 'forcing' their advisors to purchase relatively poor performing funds and that they are more likely to do so when the fund's trailing commission is higher than when it is lower so that this behavior perfectly correlates with the payment of trailing commissions.

We do not have any evidence that this is a plausible alternative explanation of our results and we note that this explanation would contradict most if not all previous research on Canadian investor behavior and investor knowledge. We would invite the industry to research this issue further or provide the requisite data to test this hypothesis.

Q24: Instances of funds changing their trailer fees are relatively infrequent. The researchers note on pages 32-34 that 2.5% of funds permanently increased their trailers and this was associated with a decrease in alpha over the 24-month post-change period. Also, 0.6% of funds permanently decreased their trailer fees and that this was associated with an increase in post change alpha. Some of these infrequent changes may be consequences of specific market and business related developments where the relationship can be fully explained and is not detrimental to clients. We note, for example, that in 2008/2009 trailers on several money market funds were lowered in order to avoid their returns net of fees from going below zero. In the years following 2006 there were instances where one high performing fund company raised its trailer fees on a number of funds. Coincident with these fee increases were fund mergers that saw assets rise dramatically in the successor funds. Performance declined to reflect the higher trailers but the funds continued to perform well ahead of their peers. Have the researchers explored the data for similar market events which would give an explanation, other than the hypothesis of conflicts provided in the paper, of the observed negative relationship between trailer fee changes and future performance?

A24: Note that our research is based not on absolute performance net of fees, but rather on risk-adjusted outperformance gross of fees after controlling for other pertinent factors (see the answers to questions 16 and 20 above for more on this). As a result, the events and alternative explanations you describe have already been controlled for in our regressions and do not affect the results.

Q25: The paper concludes on page 9 that funds that sell more through affiliated dealers tend to have lower future performance. However, in figure 7 it appears that this result is not evident for indirectly purchased standalone funds and is only pronounced in 3 of the 8 years of the analysis for indirectly purchased fund-of-funds and directly purchased funds. In some years the authors note that affiliated dealer flows appear to help future performance. Is the broad conclusion on page 9, that funds that sell more through affiliated dealers tend to have lower future performance, accurately reflecting the mixed results of Figure 7?

A25: The estimates in Table 6 Panels A and B unambiguously show that the coefficient on affiliate flows is negative and statistically significant in at least the 1% level of significance in all (100%) of the models for all of the 4 different categories (direct, indirect, stand alone, fund-of-funds) for the full sample of each of the years. Hence, we felt that the conclusion was appropriately based on the full sample of data. We do explain on page 69, as you point out that,

> "As in Figures 5 and 6, we consider the stability of these estimates over time, and find they are most pronounced in 2007 for all of the fund categories, and in 2011 for stand-alone funds purchased directly; see Figure 7. Overall, these effects are the least pronounced for stand-alone funds that are not purchased directly. Also, it is notable that in some years, affiliated dealer flows appear to help future performance (or at least not hurt performance) such as in 2009 and 2012, and generally the negative effects of affiliated dealer flows are least pronounced for all fund categories in the financial crisis years from 2008-2010."

Indeed, there are many subtle details in the findings that are explained in full in the paper. The conclusion that you refer to on page 9 is merely a very condensed executive summary (which was already too long), and where it was stated,

> "…but there were some differences in these effects at different points in time.
> Specific details are described in the body of this report."

Subject Area: Econometrics

Q26: In the regressions you introduce in section 4.1 and report results for in Tables 3 and 4, you include Alpha and Alpha squared as independent variables. Since Alpha is an estimated variable, possibly subject to a significant amount of noise (see question 29 below), would not the use of these variables in the regression possibly cause statistical problems?

A26: There are endless ways of model setups by using different sets of independent variables. We cannot report all of them. What we report are the models of economic meaning and statistical importance. In case we drop alpha and alpha squared, then we are analyzing the money flows irrespective of fund performance—which assumes that investors do not care about fund performance upfront in the model setup. The resulting model setup is economically unreasonable and statistically flawed, as it generates the omitted variables problem---the resulting coefficients could catch up the effects of omitted variables due to statistical correlations. In other words, to make sure our models are reasonable, we have to put in the alpha in the regressions. As for the alpha squared, the reason we put it in is that previous literature has documented a convex relationship between fund performance and money flows. We want to capture this relationship if it exists in our dataset. We have shown some regressions without the use of this variable, and the findings are robust regardless.

Q27: In the regressions that you introduce in section 4.2 and report results for in Tables 5, all of the variables, both independent and dependent, are estimated from other regressions. Furthermore, the independent variables are from regressions that include estimated variables, possibly compounding the effects of using estimated variables in a regression. Do you see any issues from running regressions from estimated data?

A27: The purpose of generating new variables based on existing variables is to reflect information that is not easily observable from existing variables. The concern you have raised is about the correlations among existing and newly created variables (multicollinearity problem). According to our tests, this is not an issue in our models. Each variable we are interested in is independently statistically significant.

Q28: You present panel regression results over what we assume is monthly data over the entire period 2003-2014. Did you try any sub-periods to see if the results might differ over time?

A28: Yes, we have tried subsample analysis: Before 2010 VS after 2010 (to check the possible change of the fund characteristics over time); Before 2007, 2007 to 2009, and after 2010 (to check the effect of the financial crisis on the fund characteristics), the results are stable. Also, we explicitly show some of these subsample results in the latter part of the paper (Figures 5-7 and accompanying text).

Q29: On p. 24, you discuss 12-month Fama-French 4-factor alpha. Does this mean that you estimated each historical alpha using 12 months of returns, leaving only 7 degrees of freedom? If so, does not that mean that your alpha estimates are subject to a great deal of noise? Did you try longer periods?

A29: For rolling window regressions, we did try to use 24 month rolling windows and 36 month rolling windows. However, there is a cost associated with using longer windows: we have fewer alphas. For example, suppose the window length is 24 months, and a fund only exists for 30 months in the dataset, then we can only get the alpha information for the last 7 months; the first 23 months do not have matched alpha. In other words, we miss the performance of the funds for 23 months. In order to track the performance of the funds over a longer sample horizon, we decide to use 12 month rolling windows, instead of 24 months or 36

months. As for the noise generated from the current rolling window regressions, we checked the variation of the coefficients of the 4 Fama-French factors over different sample horizons. In general, they are stable and consistently fall into reasonable ranges. We therefore consider our model setup acceptable and the resulting alpha reliable. Note that we have added a new appendix (III) to the online version of the paper http://ssrn.com/abstract=2678260. In that Appendix III, we present all of the regressions and recreate all of the regression tables using a 36 month (3 year) alpha. The results are extremely consistent, but note that we lose roughly half (50%) of the observations due to requiring that there are 36 months of returns data from each fund to be included.

Subject Area: The 'Value of Advice'

Q30 Version 1: The Cumming research is limited to a fund-level analysis therefore is it correct to say that it is not able to provide any insight into the long-term individual client experience including any benefit from asset allocation and/or savings discipline provided by the advisor?

Q30 Version 2: Isn't it true that a singular focus on fund performance using only the fund and series level data studied is not able to provide meaningful insight into individual investor outcomes of these strategies or provide conclusive insight into the overall investor experience?

Q30 Version 3: Does the report account for the value of advice?

Q30 Version 4: The report seems to be missing any analysis of what consumers get in return for the fees that they pay?

A30: The research was based on fund series/purchase option level analysis, not fund-level analysis as was the case for the IFIC sponsored Investor Economics research. Therefore, unlike that research, we could control for, among other things, the impact of trailing commissions, affiliated dealer purchases and redemptions, deferred sales charge commissions on mutual fund flows – those incentives that are most likely to lead to conflicts between the adviser's and the client's interest. We found that these incentives do in fact result in material conflicts of interest that are detrimental to mutual fund investors over the long term.

It is true that we did not have access to account level data so it may be possible that investors are receiving other benefits from this relationship. In our view however, these 'other benefits' would need to be quite substantial (in terms of improving risk adjusted returns) to offset the foregone returns stemming from the use of trailing commissions, deferred sales charge arrangements and dealer affiliation. Furthermore, since fee-based adviser/client relationships would no doubt share in these other potential benefits, then it must still be the case that investor outcomes are materially improved when the adviser is not paid via trailing commissions, when the investor does not enter into a deferred sales charge arrangement and when the fund manufacturer and fund dealer are unrelated.

We also note that the existing research on the investor's account level experience is conflicting at best.[6]

It is worth noting – as we mentioned above at question 21 - that as we were completing our research we were sent a report by Investor Economics (commissioned by the Investment Funds Institute of Canada) on their interpretation on the value of advice in the context of mutual fund fees, flows and performance.[7] We have reviewed that report and we provide comments below explaining why that report is flawed.

[6] See for example, Stephen Foerster, Juhani T. Linnainmaa, Brian T. Melzer, and Alessandro Previtero , *Retail Financial Advice: Does One Size Fit All?* NBER Working Paper No. 20712, November 2014, Claude Montmarquette, Nathalie Viennot-Briot, *Econometric Models on the Value of Advice of a Financial Advisor*, Center for Interuniversity Research and Analysis of Organizations (CIRANO) July 2012 or, John Chalmers and Jonathan Reuter *Is Conflicted Investment Advice Better than No Advice?* NBER Working Paper No. 18158 September 2015.

[7] Investor Economics, 2015. Analysis of Factors Influencing Sales, Retention and Redemptions of Mutual Fund Units, September 2015 Study by Investor Economics for The Investment Funds Institute of Canada.

Why the Investor Economics Report *"Analysis of Factors Influencing Sales, Retention and Redemptions of Mutual Fund Units"* is flawed

- The Investor Economics report presents simple correlations and a simple ordinary least squares (OLS) or "pooled" regressions on a panel dataset.
- Simple correlations do not establish causality on anything conclusive about the relationship between variables because they do not control for other things being equal.
- Regressions refer to statistical methods to control for other things being equal. It is important to use the right regression for the dataset.
- Panel data refer to the fact that there are differences across funds, and differences over time. The dataset in both the Investor Economics report and the Cumming et al. report use panel data.
- Econometricians and statisticians have well established in thousands of papers dating back to the 1950s that simple OLS on panel data is statistically wrong.[8] Why? Simple OLS assumes on panel data all funds have the exact same characteristics, and that the statistical properties of the error term (what is not explained by the model) are independent and identically distributed for each fund.
- The Investor Economics report finds that fund characteristics that can affect flow may be related to market sentiment, risk preferences, demographics, investor preferences and needs, investor financial literacy, fund product awareness and recognition of benefits. Ironically, the qualitative arguments about the importance of fund characteristics in the Investor Economics report highlight the mistake of not using panel data methods. Because Investor Economics does not use panel data regressions, they cannot make statistical claims about the relationship between fund fees and fund flows.
- An important additional issue in the Investor Economics report includes the lack of information at the FundSERV code level. The level of detail in the data is not sufficiently detailed to control for FundSERV level information.
- A further major limitation of the Investor Economics report involves return analysis. The report looks at absolute raw returns and relative raw returns. In practice, fund managers care about risk adjusted performance (alpha). Without measuring fund alphas, one says nothing about risk adjusted performance. Raw returns do not account for risk taking, and/or performance relative to market conditions.
- In summary, the Investor Economics report studies the wrong measure of returns with insufficiently detailed data, and completely incorrect econometric methods that ignores over half a century of econometrics and statistics, and has qualitative arguments that only serve to highlight the mistakes with the econometric methods used. Without the necessary econometric underpinnings and data, Investor Economics can say absolutely nothing about the relationship between mutual fund performance and mutual fund flows or about other pertinent factors that may affect those flows.

[8] For example, see the well cited book that provides a comprehensive explanation of the topic, see Jeffrey M. Wooldridge (2002). Econometric Analysis of Cross Section and Panel Data, MIT Press. There are literally thousands of papers in that use panel data methods; there is no question that it is the correct method.