ANNEX A

PROPOSED CSA RISK CLASSIFICATION METHODOLOGY

Introduction

This annex sets out the framework and details of the Proposed Methodology. As a starting point, the Proposed Methodology was constructed with the following criteria and objectives in mind:

- be a uniform methodology applicable to all investment funds;
- be easy to understand by all market participants;
- be meaningful and allow for easy comparison across investment funds;
- be difficult to manipulate for someone's benefit, i.e. should minimize subjectivity or any form of discretionary risk assessment;
- be relatively simple and cost-effective for fund managers to implement;
- enable easy and effective regulatory supervision; and
- as much as possible, be a stable indicator of risk while fairly reflecting market cycles and broad market fluctuations.

Methodology for the calculation of a fund's Volatility Risk

The CSA propose the following risk classification methodology for the purpose of disclosing a fund's Volatility Risk on the Fund Facts' risk scale as required under Form 81-101F3 *Contents of Fund Facts Document*.

1. ***Risk indicator*** **-** The risk indicator adopted for the Proposed Methodology is standard deviation, which measures the volatility of past returns of the fund.

Explanatory Note

The volatility of past returns essentially captures the effects of a large number of risk exposures, as many risk exposures would be reflected in the prices of the underlying assets and, ultimately, in the volatility of these prices. While, we recognize that risks that have not materialized historically (certain types of liquidity risks and/or counterparty risks for example) would not be captured by standard deviation, or any other backward-looking risk indicator, we emphasize that standard deviation does not attribute more weight to a particular risk factor.

Questions

1. Keeping the criteria outlined in the introduction above in mind, would you recommend other risk indicators? If yes, please explain and supplement your recommendations with data/analysis wherever possible.
2. We believe that standard deviation can be applied to a range of fund types (asset class exposures, fund structures, manager strategies, etc.). Keeping the criteria outlined in the introduction above in mind, would you recommend a different Volatility Risk

measure for any specific fund products? Please supplement your recommendations with data/analysis wherever possible.

2. ***Monthly total returns*** **-** Standard deviation must be calculated using the monthly total returns (i.e. reinvesting all income and capital gains distributions) of the fund.

Question

We understand that it is industry practice (for investment fund managers and third party data providers) to use monthly returns to calculate standard deviation. Keeping the criteria outlined in the introduction above in mind, would you suggest that an alternative frequency be used? Please specifically state how a different frequency would improve fund risk disclosure and be of benefit to investors. Please supplement your recommendations with data/analysis wherever possible.

3. ***10 year history*** **-** Fund managers must use monthly total returns over the past 10 years to calculate the standard deviation for the fund.

Explanatory Note

After reviewing fund data for the Canadian fund marketplace, we are of the view that the use of 10-year performance returns is preferable to both shorter (3, 5, 7 years) and longer time periods (15, 20, 25 years) as it strikes a reasonable balance between indicator stability and data availability. Over shorter periods, we found that risk indicators (including standard deviation) tended to fluctuate too much. Over shorter time periods, risk indicators also have a tendency to be misleading – showing relatively low levels of Volatility Risk just before a market downturn and relatively high levels of volatility just after a market downturn.

Question

Keeping the criteria outlined in the introduction above in mind, should we consider a different time period than the proposed 10 year period as the basis for risk rating disclosure? Please explain your reasoning and supplement your recommendations with data/analysis wherever possible.

4. ***Fund series/class used*** - For each fund, fund managers must use the total returns of the oldest fund series/class of the securities of the fund as the basis for their Volatility Risk calculation across all fund series/ classes, unless an attribute of a particular fund series/class would result in a materially different level of Volatility Risk (e.g. currency hedging) in which case, the total returns of that particular fund series/class must be used.

Explanatory Note

After reviewing fund data for the Canadian fund marketplace, we are of the view that, in most cases, the variance of the standard deviation calculation is small across each fund's series/classes. In addition, data availability across fund series/classes is highly variable – many fund series/classes do not have the requisite performance history. In light of these two considerations, and keeping in mind our objectives of simplicity and cost-effectiveness, we are not requiring that calculations be made for each fund series/class of securities of a fund.

Question

Keeping the criteria outlined in the introduction above in mind, should we consider an alternative approach to the calculation by series/class? Please supplement your recommendations with data/analysis wherever possible.

5. ***Standard deviation*** **-** Volatility Risk (standard deviation) shall be calculated, and then annualized, using the following formula:

Formula	$\sigma_A = \sqrt{12} \times \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(R_i - \overline{R})^2}$
Where	σ_A = annual standard deviation n = number of months R_i = return of investment in month *i* $\overline{R}$ = average monthly return of investment

Explanatory Note

Standard deviation, calculated and annualized using monthly returns, is one of the most common indicators of volatility and risk used in the industry. We are aware that return distributions may not always be symmetrical, thus standard deviation may either understate or overstate Volatility Risk in some cases. However, we are of the view that given the available alternatives and the known data obstacles, standard deviation is still the best general risk indicator and one that is useful as a first test to measure overall risk. Our analysis of data from the Canadian fund marketplace also revealed that there were relatively few cases where alternative risk indicators signaled a higher risk rating than that indicated by standard deviation. We also note that most risk indicators will tend to underestimate risk where the probability of event risk (i.e. unforeseen event) is high.

6. ***Use of reference index data –*** For new funds or funds that do not have the requisite 10 years of history, the fund manager must use the monthly returns of a reference index to impute missing data. Thus, for a fund without sufficient performance history, the investment fund manager will select a reference index and will add the monthly returns of

this reference index to the available monthly returns of the fund, if any, in order to calculate its 10 year standard deviation.

It may be appropriate for a fund that invests in more than one type of security or asset class to build its own blended index as a reference index from a weighted combination of acceptable indices to fill out its return history. For instance, a balanced fund may wish to build its reference index by including data from acceptable bond and equity indices.

We are of the view that certain widely accepted principles and guidelines should be followed by investment fund managers in selecting a reference index for imputed data.

For an index to be acceptable as a reference index, it should:

- exist, be widely recognized and be available during the period the data will be used as proxy;
- for an index that did not exist for all or part of the contemplated period, be a widely recognized reconstruction or calculation of what the index would have been during that period, calculated on a basis consistent with its current basis of calculation;
- be administrated by an organization that is not affiliated with any of the fund, its fund manager, its portfolio manager and its principal distributor;
- have data and a published methodology that are accessible to the fund; and
- be publicly available.

Ideally, the reference index selected or constructed by a fund manager should comply with the following principles:

- whenever possible, have returns highly correlated to the returns of the fund;
- contain a high proportion of the securities represented in the fund's portfolio with similar portfolio allocations;
- have a historical systematic risk profile similar to the fund;
- share the same style characteristics and reflect the market sectors in which the fund is investing;
- have security allocations that represent investable position sizes on a pro rata basis to the fund's total assets;
- be denominated or converted to the same currency as the fund's reported net asset value (or the currency of the fund's oldest share class); and
- have its returns computed on the same basis (e.g., total return, net of withholding taxes, etc.) as the fund's returns.

When using a reference index, we expect a fund manager to:

- monitor on an annual basis, or more frequently should circumstances indicate, the appropriateness of the reference index;
- disclose in the fund's prospectus:
    a) a brief description of the reference index, and

b) if the reference index is changed, provide details of when and why the change was made;

- maintain adequate books and records, including
  a) internal policies and procedures around monitoring appropriateness of the reference index;
  b) details of the composition, risk and return profile of the reference index relative to the fund; and
  c) any calculations or internal discussions supporting selection of the appropriate reference index.

Questions

Keeping the criteria outlined in the introduction above in mind, do you agree with the principles we have proposed for the use of a reference index for funds that do not have sufficient historical performance data? Are there any other factors we should take into account when selecting a reference index? Please supplement your recommendations with data/analysis wherever possible.

7. ***Six category scale and risk bands –***We propose to change the Volatility Risk scale from a five band to a six band scale. The six bands will correspond to the following standard deviation ranges:

Risk Category	**SD Bands**
Low	0 – 2.0
Low to medium	2.0 –- 6.0
Medium	6.0 – 12.0
Medium to High	12.0 – 18.0
High	18.0 – 28.0
Very High	> 28.0

Explanatory Note

The risk band boundaries were studied in combination with a number of different options for the monitoring procedures. Our objectives were to:
- find the risk band boundaries and monitoring procedure combination that minimized unnecessary band switching (such as when a fund's risk tended to straddle the boundary between bands);
- provide meaningful risk categorization distinctions between fund types;

- provide timely investor notification after consequential fund risk changes;
- minimize the implementation burden for managers, to the extent possible.

To study the placement of the risk band boundaries and the various monitoring procedures, and their impact on the objectives detailed above, we used a survivorship bias-free dataset of 10 year standard deviations rolled monthly from 1965 to 2012 for the Canadian fund universe (about 2,200 fund series were included) from Morningstar Direct.

We found that the proposed risk bands coupled with the requirement to calculate the 12 month average risk band classification best fit the objectives identified above. In particular, the CSA think the inclusion of the sixth band could lead to more meaningful volatility clustering across the fund universe.

Based on our analysis, we expect the "Low" category to capture money market funds and short term fixed income funds, and the "Very High" category to capture precious metal equity funds and commodity focused funds.

The CSA recognize that moving to a 6 band risk scale, along with a change in band boundaries, will likely mean that a number of funds will end up being classified in a risk band that differs from what is currently disclosed in the Fund Facts. In our view, a clear distinction should be drawn between a change in classification that results from the initial application of the Proposed Methodology and a change in classification that results from a material change in the underlying Volatility Risk of a fund. An initial risk band adjustment that results in a fund shifting to a higher risk band should not generally be interpreted as meaning that the fund has a greater degree of risk than was previously the case. The CSA will continue to work with Self-Regulatory Organizations on issues arising from the transition to 6 bands.

Questions

Keeping the criteria outlined in the introduction above in mind:

1. Do you agree with the proposed number of risk bands, the risk band break-points, and nomenclature used for risk band categories?

2. Do the proposed break points allow for sufficient distinction between funds with varying asset class exposures/risk factors?

   If not, please propose an alternative, and indicate why your proposal would be more meaningful to investors. Please supplement your recommendations with data/analysis wherever possible.

3. Please comment on any transition issues that you think might arise as a result of risk classification changes that are likely to occur upon the initial application of the Proposed Methodology. How would fund managers and dealers propose to minimize

the impact of these issues?

8. ***Monitoring and changing of risk categorizations*** - The following sets out the calculation and process that must be followed by fund managers when monitoring the risk categorizations :

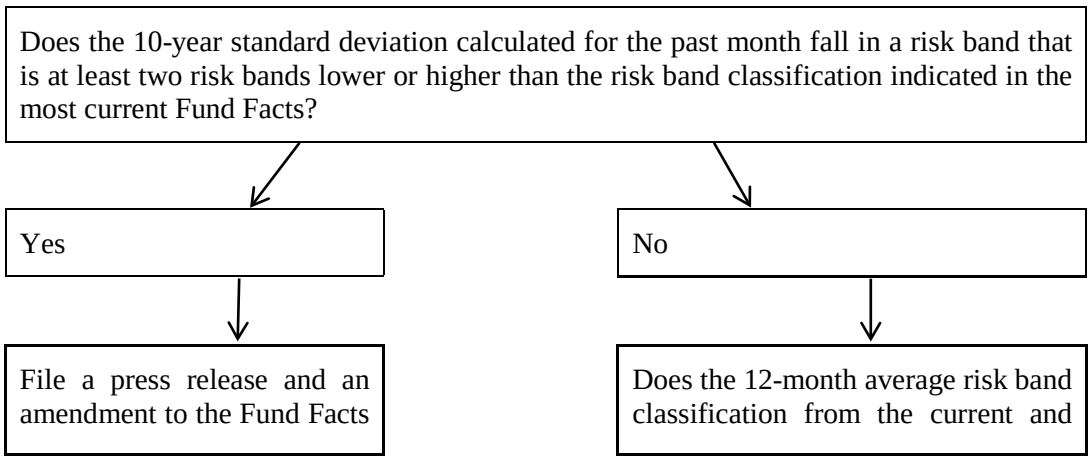
- Monitor the fund's 10-year standard deviation on a monthly basis and categorize the fund in a risk band, using a value of 1 for the lowest risk band, and 6 for the highest risk band;

- If the last monthly calculation of the fund's 10-year standard deviation results in a change of two risk bands (up or down) from the risk band classification indicated in the most current Fund Facts, the fund manager must issue a press release to indicate the change. The fund manager must also file with the securities regulatory authority an amended Fund Facts that reflects the change. Both the press release and the amended Fund Facts must be filed within ten (10) days of their last monthly calculation of the fund's standard deviation;

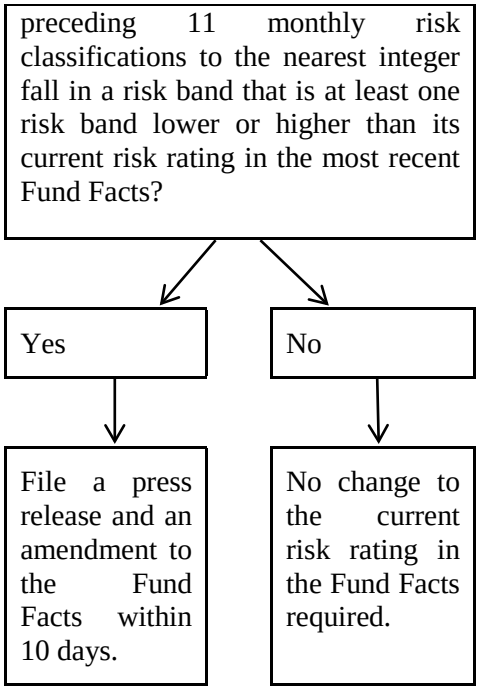
- If the last monthly calculation of the fund's 10-year standard deviation does not indicate the need to change two risk bands from the most recent risk classification, the fund manager must nevertheless calculate the 12-month average risk classification from the current and preceding 11 monthly risk classifications to the nearest integer. For example, if the last 12 monthly risk band classifications were 3, 2, 3, 2, 2, 2, 2, 3, 3, 3, 3, 3, the average to the nearest integer would be 3;

  From the results of this calculation, if a change of at least one (1) risk band up or down from its current risk rating in the most recent Fund Facts is indicated, the fund manager must issue a press release to indicate the change. The fund manager must also file with the securities regulatory authority an amended Fund Facts. Both the press release and the amended Fund Facts must be filed within ten (10) days of their last monthly calculation of the fund's average standard deviation for the last 12 months.

The following chart illustrates the process for the monthly monitoring, and changing of risk categorizations:



within 10 days.



Question

Do you agree with the proposed process of risk rating monitoring? Keeping the criteria outlined in the introduction above in mind, would you propose a different set of parameters or different frequency of monitoring risk rating changes? If yes, please explain your reasoning. Please supplement your recommendations with data/analysis wherever possible.

9. ***Records of standard deviation calculation*** **-** The calculation of standard deviation of a fund must be adequately documented. Fund managers must keep appropriate records of these calculations for at least 10 years.

Question

Is a 10 year record retention period too long? If yes, what period would you suggest instead and why?