

Research report

CIA Member Ethical Concerns Survey – Summary Report

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Table of Contents

Preface	3
Executive Summary.....	4
1. Introduction	5
2. Survey Design.....	6
1. Description of Ethical Issues	6
2. Retrospective/Prospective Duality	8
3. Answer Keys	8
4. Open-Ended Questions	8
3. Member Responses	9
4. Part A Results	12
5. Part B Results	13
6. Inter-Relating Parts A and B.....	14
7. Conclusion.....	16
1. Feedback Themes	16
2. What Can Be Done?	16
3. Future Research	17
Addendum – Abbreviations Used in the Summary Report.....	18
Appendix A1 – Member Communications.....	19
Appendix A2 – November 22 Notice.....	20
Appendix A3 – Survey Invitation.....	21
Appendix A4 – November 29 Reminder	22
Appendix A5 – December 13 Final Reminder	23
Appendix B – Survey Text	24
Appendix C – Sundry Data Observations	29
Appendix D – Part A Responses	30
Appendix E – Part B Responses.....	31
Appendix F – Dual-Response Tables	32
Appendix G – Dual-Response Bubble Graphs.....	36

Preface

The motto of the Canadian Institute of Actuaries (CIA) is *Nobis Cura Futuri*, meaning “We care about the future.” Actuaries appreciate that there are many possible futures, each one affected by the decisions we make today. Hence, taking a professional interest in our current ethical state and ethical outlook seems very much a part of the future that Canadian actuaries care about. That several hundred CIA members took time to complete an online ethical concerns survey in late 2017—including many who shared their views and opinions via the survey’s open-ended questions—bears witness to this fact. This report obviously would not have been possible without this significant member response.

Thank you to the project oversight group—Kathy Thompson, Bill Osenton and Alon Halbrich—for their many insights, thoughtful feedback and helpful comments regarding the survey’s design and wording, and the analysis and communication of findings. An improved research report is the consequence of their interest and participation. Thanks as well to Leona Campbell, Chris Fievoli, Josée Gonthier, and Shlomit Jacobson of the CIA staff for their assistance with this work, and to Andrew Melvin for his editorial support.

Questions or comments about the report may be directed to me at my CIA member directory address.

This research project was underwritten by a grant from the CIA’s Research Council, chaired by Keith Walter, and its support and encouragement is appreciated.

Executive Summary

- The purpose of this research project is to foster a better understanding of the ethical concerns of Canadian actuaries, and thereby enhance the effectiveness of the CIA's continuing education (§1).
- The survey targeted 14 generic ethical issues gauged to be generally recognizable to CIA members across their various areas of practice. The ethical issues employed by the survey were not meant to be definitive or all-encompassing (§2).
- The survey was distributed to 5,077 members of the CIA in late 2017, and 394 replies were received, constituting a 7.8% response rate (§3).
- Part A of the survey asked members to what extent they had personally experienced the various ethical issues. The top-ranked issues were: responding to pressure from principals when setting assumptions, witnessing actuaries making disparaging comments about competitors, and failing to respond to requests from principals in a timely manner (§4).
- Part B of the survey asked members to what extent they thought the issues might pose an ethical problem for the actuarial profession over the next five years. Once again, the top-ranked issue was responding to pressure from principals when setting assumptions (§5).
- Past experiences with ethical issues may influence a member's outlook. Actuaries who encountered assumption pressure from principals during their careers were more likely to rate this ethical issue a major problem going forward (§6 c)). Alternatively, data ethics was a significant concern for members who had little or no prior exposure to this ethical issue (§6 d)).
- The open-ended questions, posed in Part C of the survey, gave members an opportunity to: comment on the 14 generic ethical issues, raise other ethical issues of concern, suggest reasons why the ethical issues exist and propose remedial actions (Appendix B). Responses to the Part C questions were received from 41% of survey respondents.
- There are several overarching themes in the Part C feedback. Many members mentioned being under pressure from different sources as a factor contributing to ethical issues. A second theme was the reputation risk borne by actuaries. Members were also concerned about maintaining a proper degree of professional courtesy and respect, as well as the role of the actuarial profession in the public realm (§7.1).
- The Part C feedback also included significant member support for continuing education generally, and professionalism training using real-world examples in particular. Members prized clear professional standards and guidance. Other suggestions included providing more insight into the CIA's discipline process, as well as having a confidential hotline to obtain advice or lodge a complaint (§7.2).

1. Introduction

This survey has been authorized by the CIA Research Council, and its purpose is to enhance the effectiveness of the CIA's continuing education by having a better understanding of the ethical landscape for Canadian actuaries. In particular, the survey's findings will support professionalism education by identifying the ethical issues (EI) that CIA members have experienced in the past, as well as their concerns for the actuarial profession in the future.

"Ethical concerns" can be a somewhat ambiguous term inasmuch as the concerns reflect personal opinions and not proven "facts". One actuary's concern may simply be the nature of things for another actuary. Certainly, objective truth's role as the wellspring of subjective opinion may be debated. But what is clear is that a CIA member's perceptions about EI constitute *their* individual reality—and, by extension, the CIA's reality too.

This is the first survey to examine CIA members' ethical concerns, utilizing both closed and open-ended questions. The inspiration for this research project derives from an interesting 2012 survey of the members of the American Academy of Actuaries (AAA).¹ A description of the CIA survey's design—which is similar to, but different from, that employed by the AAA—may be found in the second section of the summary report, including descriptions of the various EI under examination.

The third section of the summary report outlines the survey response rate, its incidence over the survey period and the demographic composition of the member responses. The survey's quantitative results are presented and discussed in sections 4 through 6.

The final section of the summary report offers some concluding comments about the survey, including certain themes reflected in the member responses to the open-ended questions, as well as thoughts about future research.

The summary report makes extensive use of abbreviations throughout, intending to make a long document just a little shorter. Most of these abbreviations will be familiar to actuaries; however, three in particular are special to this summary report: "EI" for ethical issue(s), "N" for the "Do not know" survey response option and "P" for the "Prefer not to say" survey response option. A complete list of abbreviations may be found in an addendum located immediately after the main body of the summary report.

Several appendices are included for documentary completeness. Appendices A1 through A5 relate to communications with CIA members about the survey. Appendix B presents the complete text of the survey, including its introductory comments, questions and answer keys. Appendix C has some incidental comments about the survey data, while Appendices D through G set out the summary data, in tables and graphs, which support the main body of the summary report.

¹ *Key Ethical Concerns Facing the Actuarial Profession: Perceptions of Members of the American Academy of Actuaries* presents the 2012 survey's findings, and was published by the AAA's Council on Professionalism in April 2015 (29 pages).

2. Survey Design

The CIA Member Ethical Concerns Survey is broadly similar to the earlier AAA member survey. In both surveys, members of the respective actuarial organizations were asked to respond to a list of generic EI using a five-point Likert scale. But there are significant differences in the CIA survey's design, as well as the presentation of its results.

1. Description of Ethical Issues – The 14 EI examined in the CIA survey, as described in Table 1, are generic examples intended to be recognizable to members generally across their areas of practice. It was anticipated that the EI would variously have more or less resonance with individual members. The EI were not at all intended to be definitive or all-encompassing.²

The EI adopted different degrees of specificity. For example, EI-10 refers broadly to honesty and objectivity in business dealings, while EI-5, regarding pressure from principals, is more specific. There was also some interrelation or possible overlap between various EI; for example, EI-4, concerning false representations, and EI-9, regarding failure to meet the needs of principals; or actuaries lacking sufficient knowledge in EI-8, and EI-11, regarding failure to disclose limitations.

The CIA survey's terminology was included in the introduction to the online **Survey Text** (Appendix B), and this prompted a few member comments (via responses to the Part C questions), which are included in this section.

For the purposes of the member ethical concerns survey, "An 'actuary' is either an Associate (ACIA) or a Fellow (FCIA) or an affiliated member of the Canadian Institute of Actuaries. Hence, 'actuaries' includes ACIAs, FCIAAs, and affiliates." The descriptions of all 14 EI used the term "actuaries".

The term "principal" was employed by several of the EI—viz. EI-1, 5, 9 and 14—and was defined as "a client or employer of an actuary". The nature of the principal/actuary relationship can be influenced by its particular context, as was noted by a couple of members. One member wrote: "The seriousness of concerns relating to a principal depends on whether that principal is a client, a 'non-actuarial' employer (e.g. an insurance company) or an 'actuarial' employer (e.g. a consulting firm)." The second actuary elaborated further:

While the wording may be generic, many of the issues described appear to {be}³ more applicable to actuaries who provide services to an external client, versus actuaries whose 'client' is another actuary. In the former case, reliance on the actuary to be an expert may be much higher. In the latter case, the actuary may not have the authority to challenge or have influence over methods and assumptions.

As the term "actuary" was clearly defined for purposes of the survey, one might take the definition of "actuarial" for granted. Yet a member wrote asking for "Clarification of what is of an actuarial nature." This is of interest inasmuch as the term "actuarial considerations" figured directly in the description of EI-14, and also implicitly in the definition of "professional services" (per EI-4, 7, 8, 9 and 11), namely: "[T]he rendering of advice, recommendations or opinions based upon actuarial considerations, including other services provided from time to time by an actuary to a principal."

² The CIA survey's EI are generally consistent with the 18 potential ethical problems employed by the AAA survey. CIA members were given an opportunity to comment on the survey's 14 EI, and also describe other EI of concern, via survey questions C-1 and C-2.

³ Clarifying interpolations regarding CIA member feedback are set out in curly brackets (i.e. {...}).

Table 1
Description of Ethical Issues

EI-1	Timely Response	Actuaries failing to provide timely responses to inquiries and requests from principals.
EI-2	Disparage Competition	Actuaries making disparaging remarks about competitors, their products, or their employees.
EI-3	Misuse Data	Actuaries misusing proprietary or confidential information including customer data.
EI-4	False Marketing	Actuaries making false or misleading representations about products or professional services in their marketing, advertising, or sales activities.
EI-5	Assumption Pressure	Actuaries responding to pressure from principals to select inappropriate assumptions, methodologies, or data for pricing, reserving, or capital management.
EI-6	Info to Regulators	Actuaries failing to provide complete or accurate information to regulators.
EI-7	Conflict of Interest	Actuaries having conflicts of interest between opportunities for personal financial gain or personal advantage and proper performance of professional services.
EI-8	Insufficient Knowledge	Actuaries performing professional services for which they lack sufficient knowledge or skills.
EI-9	Meet Needs	Actuaries selling products or professional services that do not meet the needs of, or fail to deliver appreciable value to, principals.
EI-10	Lack of Honesty	Actuaries failing to be honest and objective with others in their business dealings.
EI-11	Conceal Limitations	Actuaries misrepresenting or concealing limitations in their ability to provide professional services.
EI-12	Failure to Act	Actuaries failing to take appropriate action when another actuary misrepresents information.
EI-13	Fairly Investigate	Actuarial bodies failing to fairly investigate, or properly discipline, violations of professional conduct by actuaries.
EI-14	Only Actuaries	Principals failing to ensure that only actuaries render advice, recommendations, or opinions based upon actuarial considerations.

Another member commented on this point: “The continued blurring of the line between where ‘services with actuarial considerations’ end and general data/statistical analytics begin {is itself an EI}. For example, just because actuaries have a skill set conducive to building predictive models doesn’t mean the models being built include ‘actuarial’ considerations (as in actuarial mathematics).”

2. Retrospective/Prospective Duality – The CIA survey made an important distinction between EI that members have experienced first-hand vis-à-vis members’ concerns for the future of the actuarial profession. Specifically, Part A asked members “To what extent have you personally observed each of the following ethical issues during your actuarial career?” The retrospective focus on EI that were “personally observed” aimed to pre-empt respondents from referring to hearsay recollections of EI in their replies, and thereby dampen any consequent upward response bias. Part B, by way of contrast, had a prospective orientation, and asked members “To what extent do you think each of the following issues may pose a major ethical problem for the actuarial profession over the next five years?”⁴

3. Answer Keys – The five-point Likert scale for each of the retrospective Part A questions spanned “Rarely or not at all” (“1”) through “Frequently” (“5”). Note that Part B had a different five-point scale, ranging from “Not a problem” (“1”) to a “Major problem” (“5”), for its forward-looking questions.⁵

The Part A/B answer keys also included “Do not know” (N) and “Prefer not to say” (P) options, in addition to the five-point scale, to help maintain data quality. Due to limitations of the survey tool, however, it was not possible to have all seven response options visible across the virtual computer screen simultaneously. Hence, submitting a blank response was deemed to be a P response (i.e. “If you prefer not to answer for a specific issue, leave its row blank.” per Appendix B). So, members could choose from six explicit, and one implicit, response options for the Part A/B questions.⁶ Note that an explicit P option was provided for all of the Part D demographic questions.

4. Open-Ended Questions – The CIA survey included four open-ended questions in Part C. They solicited additional member comments about: the 14 EI considered in Parts A and B, other unspecified EI not included in Parts A and B, reasons why the EI described in the survey exist and what can be done to ameliorate the EI. The member responses to the Part C questions have been compiled and included in a separate 33-page supplement (§S).⁷ Part C feedback received from CIA members who, to varying degrees, did not agree with the underlying premise of the survey (i.e. that there are EI confronting actuaries and the actuarial profession) has also been included in the supplement (§T).

Additionally, the online survey tool was programmed to: (a) allow only one survey response from a given computer, and (b) enable CIA members to complete the survey incrementally (i.e. “You have the option to complete the survey by stages, over several online sessions, during the response period ...” per Appendix B).

⁴ The AAA survey asked its members to what extent certain ethical situations were a “problem today for the actuarial profession”.

⁵ The Likert scale for the AAA survey ran from “It is not an ethical problem today” (“1”) to “It is a major ethical problem today” (“5”).

⁶ The AAA survey answer key did not include N or P response options.

⁷ The AAA survey asked its members open-ended questions about other EI (akin to CIA Question C-2), as well as “the most important specific ethics problem or issue facing those who work as actuaries”. Responses to these questions were not included in the AAA report.

3. Member Responses

The survey was distributed via e-mail to 3,631 Fellows, 1,434 Associates and 12 Affiliates of the CIA, totalling 5,077 members. During the three-week response period, 394 replies were received, constituting a 7.8% response rate.

Weekly reminder notices were sent to members but had only a modest effect on the response rate. The survey link was distributed to members in the early afternoon (ET) of Tuesday, November 28, 2017, and 197 member responses (i.e. 48.7% of total responses) were received by the end of that day. By the conclusion of the following day there were 279 responses (70.8%), and by the conclusion of the survey's first week a total of 346 (87.8%) were recorded.

The number of "Do not know" (N) and "Prefer not to say" (P) responses to the Part A and Part B questions varied for each of the EI. In Part A, there were as many as 71 N (EI-13) and 14 P (EI-10); for Part B there were as many as 40 N (EI-14) and 38 P (EI-4). Consequently, the numbers of member responses using the five-point scales also varied for the EI in Parts A and B.

Just slightly more than 40% of the survey respondents (i.e. 161 members) answered at least one of the open-ended Part C questions, and a total of 365 separate replies were received.

Members were invited, though not required, to respond to the Part D demographic questions. Part D responses were apportioned equally for members who selected more than one answer to a given question. For example, a member who worked in both Ontario and Québec had his/her response to Question D-4 allocated as 0.5 to each province. There were as many as 48 P responses (Question D-1) to the demographic questions.

The Part D data confirmed the broad representativeness of the survey sample (see Tables 2 through 5). Note, however, that there was a far greater number of responses from actuaries who said that they had more years of experience vis-à-vis those who said they had less experience.

Question D-1: For how many years have you provided professional services, both full-time and part-time, during your career?

Table 2

Part D: Distribution of Member Responses – By Years of Experience

	Less than 5	5 to 10	11 to 20	More than 20	Prefer not to say	Total
Number	15	59	104	168	48	394
Per cent	3.8	15.0	26.4	42.6	12.2	100.0

Question D-2: What have been your primary areas of practice over your career? (More than one response is permitted.)

Table 3

Part D: Distribution of Member Responses – By Area of Practice

	Life	Pensions	Property/ Casualty	Health	Investments
Number	84.2	114.2	46.5	33.3	24.0
Per cent	21.4	29.0	11.8	8.4	6.1

	Actuarial Evidence	Reinsurance	Non- Traditional	Other	Prefer not to say	Total
Number	5.4	20.0	13.0	8.4	45.0	394.0
Per cent	1.4	5.1	3.3	2.1	11.4	100.0

Members were able to write-in other areas of practice in response to Question D-2. Responses captured via the Other option included: academic or education, distribution, group insurance, post-employment benefits, regulator, risk management, social security, software development and workers' compensation.

Question D-3: What have been your primary actuarial roles over your career? (More than one response is permitted.)

Table 4

Part D: Distribution of Member Responses – By Actuarial Role

	Pricing	Financial Reporting	Valuation	Risk Management	Underwriting	Marketing/ Sales Support	Modelling/ Systems Development
Number	51.2	52.4	99.0	35.6	4.4	12.0	21.4
Per cent	13.0	13.3	25.1	9.1	1.1	3.1	5.4

	Inforce Management /Experience Studies	Research & Development	Senior Management	Education	Other	Prefer not to say	Total
Number	10.0	12.3	25.8	5.1	17.8	47.0	394.0
Per cent	2.5	3.1	6.6	1.3	4.5	11.9	100.0

Members were able to write-in other actuarial roles in response to Question D-3. Several members replied with “consultant” or “government/regulatory body” via the Other option. Sundry responses also included: compliance, financial forecasting, governance, innovation, investments, planning, programming, strategic advice, systems administrator/integration and training.

Question D-4: Where have you primarily performed professional services over your career? (More than one response is permitted.)

Table 5

Part D: Distribution of Member Responses – By Geographic Region

	Western Canada	Ontario	Québec	Atlantic Canada	Outside of Canada	Prefer not to say	Total
Number	50.1	162.6	95.5	11.5	30.3	44.0	394.0
Per cent	12.7	41.3	24.2	2.9	7.7	11.2	100.0

Despite the diversity of the survey’s sample, the total sample comprises but a small minority of CIA members—roughly one in 13 members. As such, one cannot reasonably presume that the survey’s findings reflect the experiences and views of the entire CIA membership.

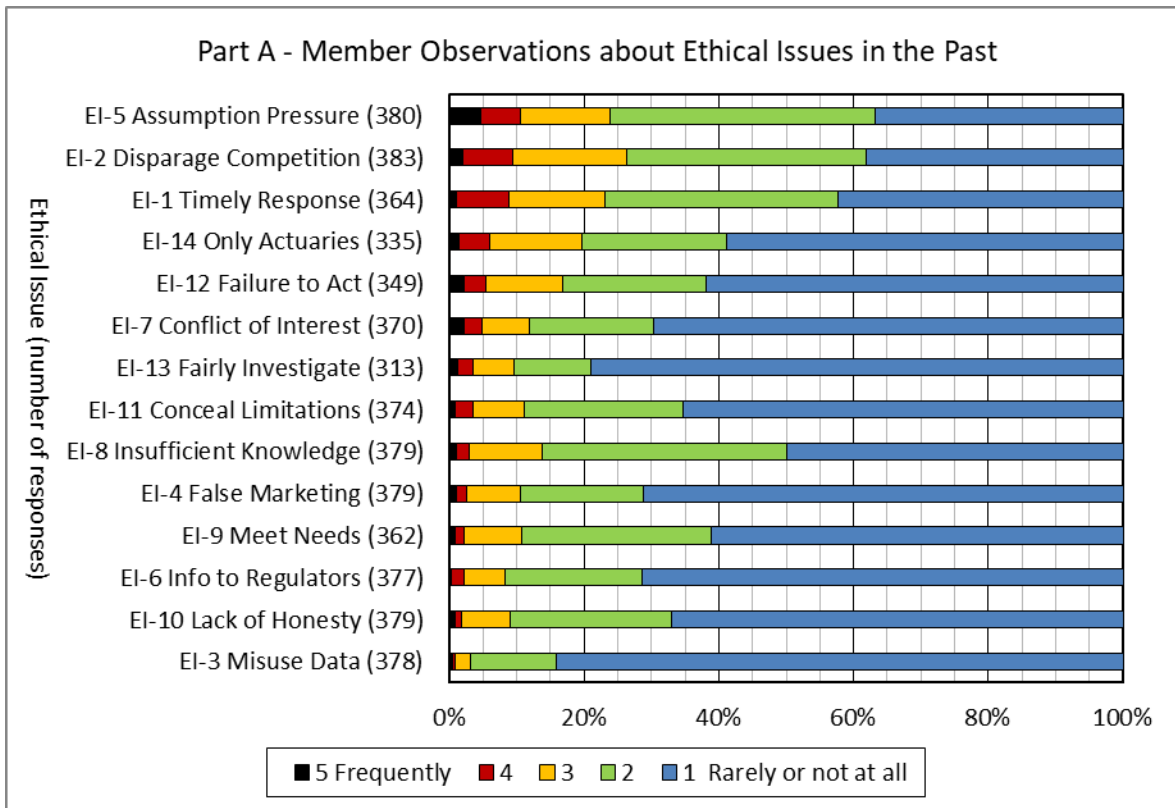
4. Part A Results

Question A – To what extent have you personally observed each of the following ethical issues during your actuarial career?

Please indicate your response on a scale of 1 to 5, where 1 means rarely or not at all and 5 means frequently. If you prefer not to answer for a specific issue, leave its row blank.

The Part A survey results are summarized in Graph 1. The combined proportion of “5” and “4” responses was used to rank the EI. The labels on the vertical axis include the number of respondents who provided an answer using the five-point scale for each EI (out of a possible 394).

Graph 1



For example, there were 380 responses on the five-point scale recorded for EI-5 Assumption Pressure in Part A: 18 replied “5”, 22 “4”, 51 “3”, 149 “2”, and 140 “1”. Hence, 10.5% of respondents (i.e. $(18+22=40)/380$) replied “5” or “4” for EI-5. In addition, there were 6 “Do not know” (N) and 8 “Prefer not to say” (P), in all totalling 394 responses.

Refer to **Part A Responses** (Appendix D), and in particular the Per cent of Subtotal columns of Table D-2, for the data underlying Graph 1.

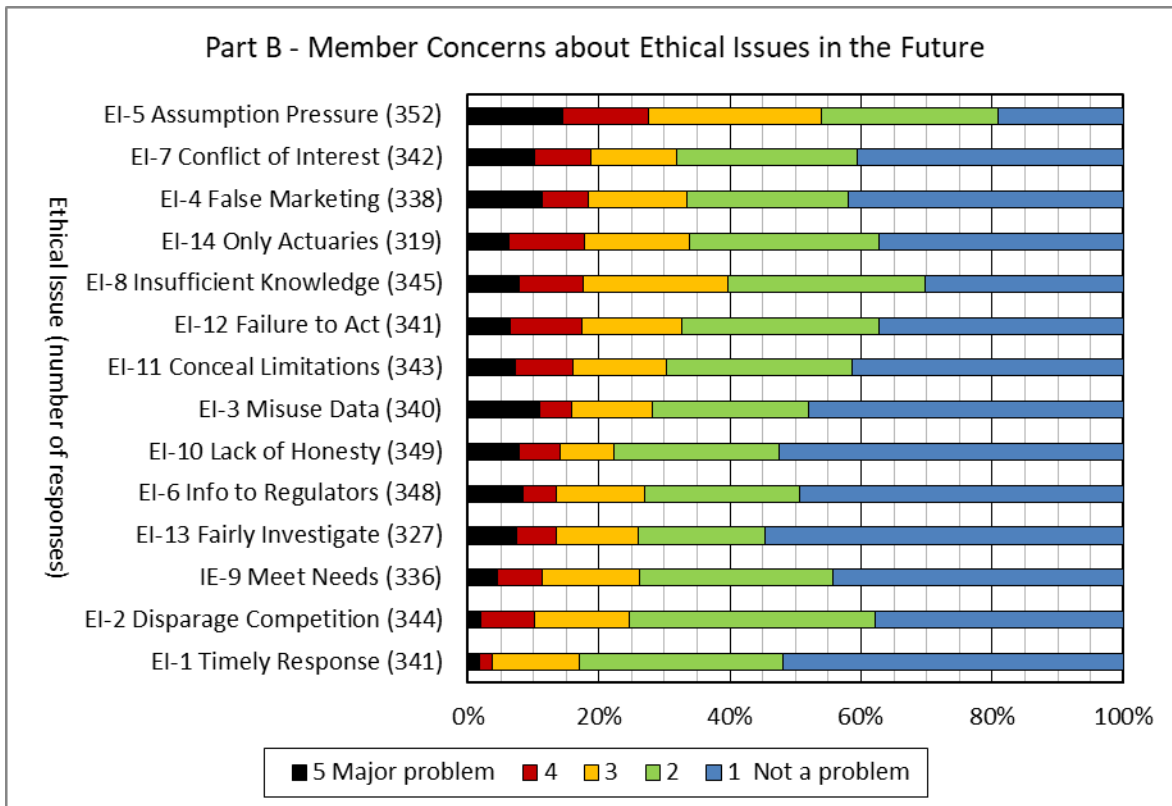
5. Part B Results

Question B – To what extent do you think each of the following issues may pose a major ethical problem for the actuarial profession over the next five years?

Please indicate your response on a scale of 1 to 5, where 1 means not a problem and 5 means a major problem. If you prefer not to answer for a specific issue, leave its row blank.

The Part B survey results are summarized in Graph 2. The combined proportion of “5” and “4” responses was used to rank the EI. The labels on the vertical axis include the number of respondents who provided an answer using the five-point scale for each EI (out of a possible 394).

Graph 2



For example, there were 352 responses on the five-point scale recorded for EI-5 Assumption Pressure in Part B: 51 replied “5”, 46 “4”, 93 “3”, 95 “2”, and 67 “1”. Hence, 27.6% of respondents (i.e. (51+46=97)/352) replied “5” or “4” for EI-5. In addition, there were 9 “Do not know” (N) and 33 “Prefer not to say” (P), in all totalling 394 responses.

Refer to **Part B Responses** (Appendix E), and in particular the Per cent of Subtotal columns of Table E-2, for the data underlying Graph 2.

6. Inter-Relating Parts A and B

It is immediately apparent that EI-5 Assumption Pressure had the top ranking in both Parts A and B based on a combined “5” and “4” statistic. In fact, all of the EI had combined statistics which were higher in Part B compared to Part A (e.g. EI-7 Conflict of Interest increased from 4.9% to 18.7%), with the single exception of EI-1 Timely Response (which decreased from 8.8% to 3.8%).

Yet it is important to recognize that combining the “5” and “4” responses as a ranking statistic is merely a construct. While certainly a helpful device, the combined statistic does not quite capture the full story of the survey’s quantitative responses. Taking a look at the survey data in a different way can yield additional insights.

Consider top-ranked EI-5 Assumption Pressure, for example, where 27.6% or roughly a quarter of Part B respondents gave it a “5” or a “4”. At the same time, 19.0% of respondents gave EI-5 a “1” or “not a problem” going forward. Another way of stating this is that 81.0% of survey respondents (the complement of “1”) thought “responding to pressure from principals to select inappropriate assumptions, methodologies, or data” may pose a problem for the profession over the next five years.

In a different EI example, this time concerning the survey’s retrospective data, half of the respondents (50.1%) have witnessed EI-8 Insufficient Knowledge during their careers (i.e. they rated it “5” through “2” in Part A). In other words, 190 members said that they have personally observed “Actuaries performing professional services for which they lack sufficient knowledge or skills”—which belies EI-8’s scant 2.9% combined “5” and “4” statistic, and ninth-place ranking, in Part A.

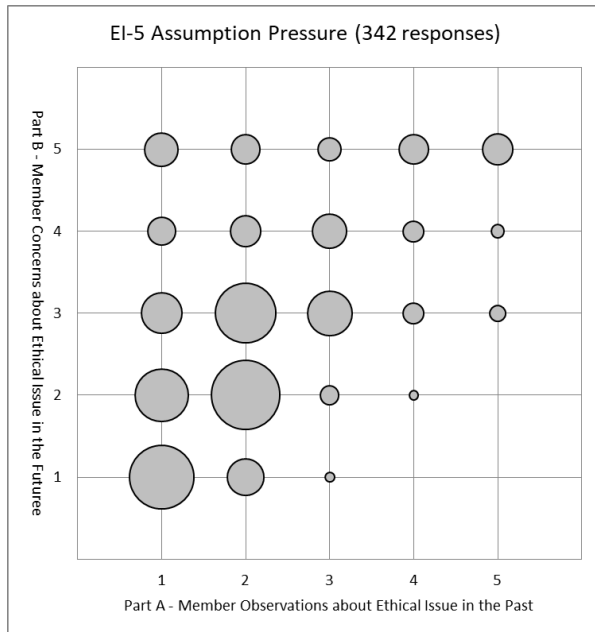
Additionally, a natural tendency to compare and contrast how various EI fared in Parts A and B should be tempered somewhat. This is because Parts A and B employed different Likert scales, reflecting the retrospective and prospective orientations of their survey questions. Consequently, the response percentages and rankings in **Part A Results** (§4) are not strictly comparable with those in **Part B Results** (§5)—even though they were tabulated in the same way and presented similarly.

A possible way forward is to use the survey’s quantitative responses to create ordered pairs on the Cartesian plane, inter-relating the Part A and B data, for each EI. This approach helps illustrate the diversity of member ethical experiences and concerns, so long as one remains mindful that the five-point answer keys for Parts A and B are not the same.

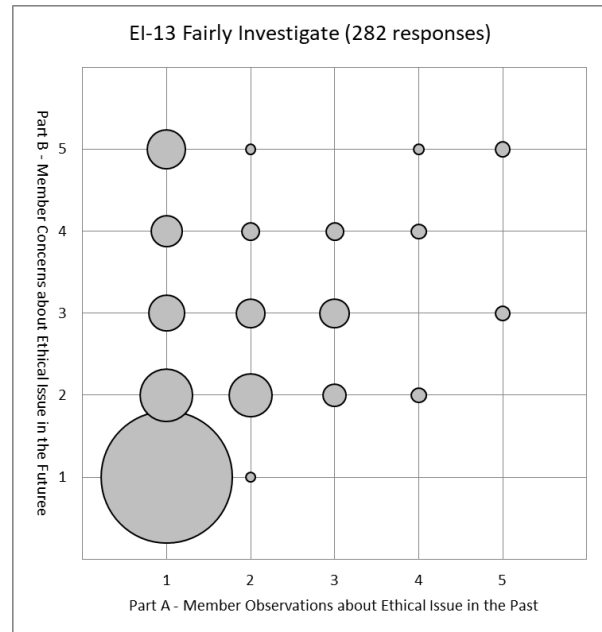
The resulting dual-response bubble graphs for EI-5 Assumption Pressure (Graph 3) and for EI-13 Fairly Investigate (Graph 4) are set out below. They are “dual response” in the sense that they illustrate how members who replied to a given EI in Part A, subsequently responded to the same EI in Part B (i.e. they submitted a numeric response for a given EI in *both* Parts A and B). Bubble graphs for the other 12 EI may be found in **Dual-Response Bubble Graphs** (Appendix G).

The size of each bubble reflects the relative magnitude of its Part A/Part B ordered pair percentage. For example, the bubble located at (1, 1) in the lower left-hand corner of Graph 3 represents 14.0% of the total EI-5 Assumption Pressure dual responses. Refer to **Dual-Response Tables** (Appendix F), and in particular the “B” tables, for the data underlying the bubble graphs.

Graph 3



Graph 4



The briefest examination of the two bubble graphs is sufficient to confirm that they have different patterns. More members within the survey sample have personally experienced EI-5 and at the same time have greater concerns for the future regarding EI-5 vis-à-vis EI-13. Other general observations about the EI, based on their dual-response bubble graphs and underlying data, follow.

- Part A Rarely or not at all/Part B Not a problem** – It is worth noting that the (1, 1) data are the statistical modes for all of the EI dual-response distributions, except for EI-5, which has its 16.4% mode at the (2, 2) datum. Many members—as many as a 58.5% majority for EI-13—have not encountered the various EI and were unconcerned about their possible effect on the actuarial profession.
- Part A Frequently/Part B Not a problem** – Another feature of the bubble graphs is that they have relatively few responses in their lower right-hand corners (EI-1 Timely Response and EI-2 Disparage Competition are possible exceptions). Respondents who have frequently observed certain EI during their careers are more likely to view them as posing an ethical problem in the future.
- Part A Frequently/Part B Major problem** – Coincident with the prior observation, where there is experience of a particular EI it tends to translate into greater concern. EI-5 offers a clear illustration: it has the modal (5, 5) datum (i.e. 3.2%), as well as the mode of the combined upper right-hand data (i.e. the sum over the four (4, 4), (4, 5), (5, 4) and (5, 5) ordered pairs) (i.e. 8.2%). On reflection, the influence of “a thorn of experience” on one’s outlook seems hardly surprising.
- Part A Rarely or not at all/Part B Major problem** – Interestingly, some members witnessed certain EI only rarely or not at all, and yet thought they may pose a major problem in the days ahead: EI-3 Misuse Data’s (1, 5) datum was 8.7%, EI-4 False Marketing’s was 8.2%, and EI-7 Conflict of Interest’s was 6.6%. In particular, EI-3 had the mode of the combined upper left-hand data (i.e. the sum of the four (1, 4), (1, 5), (2, 4) and (2, 5) ordered pairs) (i.e. 14.3%).

7. Conclusion

This summary report summarizes the ethical experiences and future views of nearly 400 Canadian actuaries. The breadth of CIA member perspectives on EI is plainly evident in the quantitative and qualitative responses to the survey. It is noteworthy that 71% of the replies arrived within the first two days of the survey period, as is the fact that 41% of respondents shared their views via the survey's open-ended questions. CIA members clearly had something to say about their actuarial ethic.

The top-ranked issue was EI-5 Assumption Pressure, in terms of respondents' personal experiences as well as their concerns for the future of the profession (§4 and 5). Eighty-one per cent of members thought responding to pressure from principals to select inappropriate assumptions, methodologies or data may pose a problem for the actuarial profession over the next five years (§6).

1. Feedback Themes – It is possible to discern several overarching ethical themes in the member responses to the open-ended survey questions. Many actuaries have personally experienced EI-5 Assumption Pressure and see it as a potential problem in the days ahead (§6 c)). Yet the existence of “pressure” from other sources—other than principals per EI-5—was also cited by many members.

Pressurizing factors included increasing competition for products and services in the marketplace, offered not only by actuaries but other risk and financial professionals too, as well as new technologies. There was a belief that actuaries are held to a higher standard of conduct than other advisors. Pressure also stemmed from the basic tension between adopting a typically long-term actuarial perspective, together with a degree of conservatism, versus a desire for short-term results. The pressure of supervisory oversight, and an increasing regulatory reporting burden, might inadvertently lead to more EI. And several members referred to a strategic misalignment of professional interests as a fundamental source of pressure.

A second theme was the reputation risk borne by actuaries. The point was made that the profession's most valuable credential is its good reputation, and that individual misconduct has the potential to damage every actuary's reputation. While the CIA may not be entirely composed of perfectly virtuous members, exceptions were seen as rare. Many respondents supported the Committee on Professional Conduct (CPC) (now a council) as well as the deterrent effect of sanctions for professional misconduct.

Another theme was the need to maintain a proper degree of professional courtesy and respect. This included working to understand different viewpoints and other actuaries better. In a similar vein, there was a desire for greater solidarity among CIA members, if only to avert a downward professionalism spiral. Many members viewed interaction with one's peers as an important system of ethical support generally, and a way of dealing with undue pressure in particular.

A fourth theme dealt with the public role of actuaries. There were concerns about actuaries making representations outside traditional areas of expertise, and that positions taken on societal issues may not be wholly in the public interest. Concerns about the ability of individual actuaries to effectively segregate their vocational responsibilities from their roles as CIA volunteers were also broached. It was suggested that participating in the public forum was an opportunity for actuaries to demonstrate their professionalism, and thereby be seen as credible and impartial experts.

2. What Can Be Done? – Member responses to Question C-4 included diverse suggestions for individual actuaries, as well as various CIA committees and working groups. Perhaps unsurprisingly, there was significant member support for continuing education, and professionalism continuing professional development (CPD). The use of real-world examples of EI and case studies was encouraged as an effective means of professionalism CPD. Several members also saw the study of ethics as an important part of basic actuarial education.

Developing clear standards and guidance, while avoiding over-reach into areas that are not exclusively actuarial, was seen as a way to deal with EI. Although members were clearly aware of the CPC, some thought cultivating a better understanding of the CIA discipline process would be a good idea. There was also some interest in having a confidential “hotline” to obtain advice or to lodge a professional misconduct complaint.

3. Future Research – Some topics for further investigation are suggested by the results of the ethical concerns survey. That 50% of respondents have personally witnessed EI-8 Insufficient Knowledge is concerning, and raises questions about the extent of these apparent gaps in some members’ knowledge and skills (§6). Another topic is data ethics, which was described as potentially the next big issue, bearing in mind that EI-3 Misuse of Data was of future concern for actuaries who had not personally encountered this issue in their work (§6 d)).

Less experienced actuaries were under-represented in the survey’s sample without an apparent reason (§3). It is difficult to imagine that this cohort has a lesser ethical sensibility. What is clear, however, is that learning more about their views regarding EI is important, particularly as younger members represent the future of the actuarial profession.

Conducting another ethical concerns survey after a suitable interval would be an opportunity to determine whether and to what degree member concerns shift over time. The current survey reveals significant variation in ethical experience and opinions among the CIA’s membership. It is possible that the presence of ethical subpopulations or cultural silos—among different areas of practice or roles, for example, or as defined by the nature of their actuary/principal relationships—may be a contributing factor.

At length, this summary report aims to provide a basis for constructive discussion about EI, and their influence on the Canadian actuarial profession. Sharing member views about EI will hopefully stimulate a greater awareness of the various issues, and may spur more actuaries to give voice to their thoughts about ethical matters. After all, an actuarial ethic is the product of an ongoing exchange of views, because nothing so important as an ethic is ever “written”. It evolves in the minds of a thinking community.⁸

⁸ Paraphrasing an idea borrowed from Aldo Leopold’s seminal 1949 essay, *The Land Ethic*.

Addendum – Abbreviations Used in the Summary Report

AAA	American Academy of Actuaries
CIA	Canadian Institute of Actuaries
CPC	CIA Committee on Professional Conduct
CPD	Continuing professional development
EI	Ethical issue(s) (EI-1 through EI-14 are described in Table 1)
N	Do not know (response option in Parts A and B)
P	Prefer not to say (response option in Parts A, B and D)

Appendix A1 – Member Communications

The survey period was originally slated to extend over four weekends, and the intervening three full weeks, beginning in late November 2017 and extending into December 2017.

Unfortunately, the survey invitation mailing to members on November 24 failed due to an inadvertent IT error. The invitations were re-sent and successfully delivered to members on November 28. As a result, the revised survey period began four days later than planned and was extended by one day to maintain a response window extending over three complete weeks or 21 days.

The various e-mail communications about the survey sent to members from the CIA Head Office are listed below, and their contents are set out in Appendices A2 through A5.

- Wednesday, November 22 – Teaser notice included in an e-mail with subject line “Ethical survey, professionalism webcast, and actuarial jobs”, and distributed to members via *Announcements* opt-in listserver (Appendix A2).
- Friday, November 24 – Survey invitation to members failed due to an IT error.
- Tuesday, November 28 – Survey invitation re-sent with subject line “CIA Member Ethical Concerns Survey”, and successfully delivered to members (Appendix A3).
- Wednesday, November 29 – Reminder notice included in an e-mail with subject line “DCAT NOI and ED note, and ethics survey”, and distributed to member via *Communications* listserver (Appendix A4).
- Wednesday, December 6 – Reminder notice included in an e-mail with subject line “Educational note, discipline report, and CPD deadline”, and distributed to members via *Communications* listserver. It was similar to the November 29 reminder, except that its title was “CIA Member Ethical Concerns Survey: Please Take Part” in place of “Reminder: CIA Member Ethical Concerns Survey”.
- Wednesday, December 13 – Final notice included in an e-mail with subject line “Standards of Practice 1000, governance, and CPD deadline”, and distributed to members via *Communications* listserver (Appendix A5).

The survey’s invitation asked members to contact the CIA Head Office “[s]hould you happen to have difficulties accessing or completing the survey”; no members did so during the survey period.

Appendix A2 – November 22 Notice**CIA ANNOUNCEMENTS**

November 22, 2017

If you do not see the message below in a proper format, please click on the following link that will take you to the Announcements on the CIA website:

<http://www.cia-ica.ca/publications/announcements>

For all Fellows, Associates, and Affiliates

CIA Member Ethical Concerns Survey

All Fellows, Associates, and Affiliates of the CIA are invited to participate in an online survey about member ethical concerns from November 24 through December 18, 2017. The survey has been authorized by the CIA Research Executive Committee, and the results will be shared with CIA members via a written report in 2018. Watch for your individual e-mail and link to the survey later this week.

Link(s)	Forthcoming
Council/Committee	Research Executive Committee
Contact with Questions	Leona Campbell, senior coordinator, professional practice at leona.campbell@cia-ica.ca
Announcement Number 2017-11(03951)	November 22, 2017

Appendix A3 – Survey Invitation

Dear Fellows, Associates, and Affiliates of the CIA,

This is your invitation to the online CIA member ethical concerns survey. Here is your link:

https://survey.zohopublic.com/zs/_____

You may complete the survey in either English or French by stages, over several online sessions, during the response period extending from November 28 to December 19, 2017. Additional information about the survey is set out in the online introduction to the survey accessible via the link.

Should you happen to have difficulties accessing or completing the survey, please contact Leona Campbell, senior coordinator, professional practice, at leona.campbell@cia-ica.ca

Appendix A4 – November 29 Reminder**CIA COMMUNICATIONS**

November 29, 2017

If you do not see the message below in a proper format, please click on the following link that will take you to the Announcements on the CIA website:

<http://www.cia-ica.ca/publications/announcements>

As you are a member of the CIA, we are obligated to communicate messages about bylaws, elections, guidance material, continuing professional development compliance, and transactions as they relate to your actuarial profession.

For all Fellows, Associates, and Affiliates

Reminder: CIA Member Ethical Concerns Survey

All Fellows, Associates, and Affiliates of the CIA are invited to participate in an online survey about member ethical concerns from November 28 through December 19, 2017. The survey has been authorized by the CIA Research Executive Committee, and the results will be shared with CIA members via a written report in 2018. You should have received an e-mail with the link to the survey on November 28.

Link(s)	N/A
Council/Committee	Research Executive Committee
Contact with Questions	Leona Campbell, senior coordinator, professional practice at leona.campbell@cia-ica.ca
Announcement Number 2017-11(03957)	November 29, 2017

Appendix A5 – December 13 Final Reminder**CIA COMMUNICATIONS**

December 13, 2017

If you do not see the message below in a proper format, please click on the following link that will take you to the Announcements on the CIA website:

<http://www.cia-ica.ca/publications/announcements>

As you are a member of the CIA, we are obligated to communicate messages about bylaws, elections, guidance material, continuing professional development compliance, and transactions as they relate to your actuarial profession.

For all Fellows, Associates, and Affiliates

CIA Member Ethical Concerns Survey Closes in Less Than a Week

Thank you to those Fellows, Associates, and Affiliates of the CIA who have responded to the online survey about member ethical concerns. If you still haven't responded, please consider doing so before the survey closes at the end of the day, **December 19, 2017**.

The survey has been authorized by the CIA Research Executive Committee, and the results will be shared with CIA members via a written report in 2018. You should have received an e-mail with the link to the survey on November 28.

Link(s)	N/A
Council/Committee	Research Executive Committee
Contact with Questions	Leona Campbell, senior coordinator, professional practice at leona.campbell@cia-ica.ca
Announcement Number 2017-12(03976)	December 13, 2017

Appendix B – Survey Text

Introduction

Welcome to the Canadian Institute of Actuaries' member ethical concerns survey.

This survey has been authorized by the CIA Research Executive Committee, and its purpose is to enhance the effectiveness of the CIA's continuing education by having a better understanding of the ethical landscape for Canadian actuaries. In particular, the survey's findings will support professionalism education by identifying the ethical issues that CIA members have experienced in the past, as well as their concerns for the actuarial profession in the future. As such, it is undertaken with the consent and support of the CIA Eligibility and Education Council.

There are four parts to this survey, and it should take you approximately 15-20 minutes to complete. You have the option to complete the survey by stages, over several on-line sessions, during the response period extending from November 23 to December 18, 2017. You also have the ability to review your responses by moving between the pages of the survey prior to submitting your responses.

In Part A of the survey, you will be asked for your observations on 14 ethical issues. Part B asks whether you think those 14 issues may pose an ethical problem for the actuarial profession in future. Please answer all the questions, even if your response is that you do not know or prefer not to say.

Part C of the survey provides you with an opportunity to elaborate on the ethical issues mentioned in Parts A and B, as well as any other ethical issues that you have in mind, via several open-ended questions. Part D has a few demographic questions to help maintain the survey's data quality.

The confidentiality of your survey responses will be safeguarded, and specific responses will not be attributed to individual members. Hence, responses to questions in Parts A and B will be communicated only in aggregate. Excerpts from responses to the open-ended questions in Part C will be included in the summary report, but in a way that will maintain the anonymity of the respondents.

Please note that several definitions have been adopted for the purposes of this survey:

- An "actuary" is either an Associate (ACIA) or a Fellow (FCIA) or an affiliated member of the Canadian Institute of Actuaries. Hence, "actuaries" includes ACIAs, FCIAAs, and affiliates.
- A "principal" is a client or employer of an actuary.
- "Professional services" are the rendering of advice, recommendations or opinions based upon actuarial considerations, including other services provided from time to time by an actuary to a principal.

We look forward to sharing the survey's results generally with CIA members via a written report in 2018, and, in the interim, thank you for your participation.

Part A – Member Observations about Ethical Issues the Past

Question A-1:

To what extent have you personally observed each of the following ethical issues during your actuarial career?

Please indicate your response on a scale of 1 to 5, where 1 means rarely or not at all and 5 means frequently. If you prefer not to answer for a specific issue, leave its row blank.

Answer Key A-1:

1 Rarely or not at all	2	3	4	5 Frequently	Do not know

Issues:

- 1 Actuaries failing to provide timely responses to inquiries and requests from principals.
- 2 Actuaries making disparaging remarks about competitors, their products, or their employees.
- 3 Actuaries misusing proprietary or confidential information including customer data.
- 4 Actuaries making false or misleading representations about products or professional services in their marketing, advertising, or sales activities.
- 5 Actuaries responding to pressure from principals to select inappropriate assumptions, methodologies or data for pricing, reserving, or capital management.
- 6 Actuaries failing to provide complete or accurate information to regulators.
- 7 Actuaries having conflicts of interest between opportunities for personal financial gain or personal advantage and proper performance of professional services.
- 8 Actuaries performing professional services for which they lack sufficient knowledge or skills.
- 9 Actuaries selling products or professional services that do not meet the needs of, or fail to deliver appreciable value to, principals.
- 10 Actuaries failing to be honest and objective with others in their business dealings.
- 11 Actuaries misrepresenting or concealing limitations in their ability to provide professional services.
- 12 Actuaries failing to take appropriate action when another actuary misrepresents information.
- 13 Actuarial bodies failing to fairly investigate, or properly discipline, violations of professional conduct by actuaries.
- 14 Principals failing to ensure that only actuaries render advice, recommendations, or opinions based upon actuarial considerations.

Part B – Member Concerns about Ethical Issues in the Future

Question B-1:

To what extent do you think each of the following issues may pose a major ethical problem for the actuarial profession over the next five years?

Please indicate your response on a scale of 1 to 5, where 1 means not a problem and 5 means a major problem. If you prefer not to answer for a specific issue, leave its row blank.

Answer Key B-1:

1 Not an problem	2	3	4	5 Major problem	Do not know

Issues:

- 1 Actuaries failing to provide timely responses to inquiries and requests from principals.
- 2 Actuaries making disparaging remarks about competitors, their products, or their employees.
- 3 Actuaries misusing proprietary or confidential information including customer data.
- 4 Actuaries making false or misleading representations about products or professional services in their marketing, advertising, or sales activities.
- 5 Actuaries responding to pressure from principals to select inappropriate assumptions, methodologies or data for pricing, reserving, or capital management.
- 6 Actuaries failing to provide complete or accurate information to regulators.
- 7 Actuaries having conflicts of interest between opportunities for personal financial gain or personal advantage and proper performance of professional services.
- 8 Actuaries performing professional services for which they lack sufficient knowledge or skills.
- 9 Actuaries selling products or professional services that do not meet the needs of, or fail to deliver appreciable value to, principals.
- 10 Actuaries failing to be honest and objective with others in their business dealings.
- 11 Actuaries misrepresenting or concealing limitations in their ability to provide professional services.
- 12 Actuaries failing to take appropriate action when another actuary misrepresents information.
- 13 Actuarial bodies failing to fairly investigate, or properly discipline, violations of professional conduct by actuaries.
- 14 Principals failing to ensure that only actuaries render advice, recommendations, or opinions based upon actuarial considerations.

Part C – Open-Ended Questions about Ethical Issues

Question C-1:

Please share any additional comments you have about the 14 ethical issues/problems described in this survey. You may choose to answer generally and/or address specific issues/problems in particular.

Question C-2:

What other ethical issues/problems not included in Parts A and B of this survey concern you? Please describe them briefly and why they are of concern to you.

Question C-3:

Why do you think the 14 ethical issues/problems described in this survey exist? You may choose to answer generally and/or address specific issues/problems in particular.

Question C-4:

What can be done by individual actuaries, as well as the CIA itself, to respond to and overcome the ethical issues/problems described in Parts A and B of this survey? You may choose to answer generally and/or address specific issues/problems in particular.

Part D – Demographic Data

The following questions are included in this survey to help ensure the data quality of responses as well as determine whether a given ethical concern is specific to particular segment of CIA members. You are invited to respond to these questions but are not required to do so.

Question D-1:

For how many years have you provided professional services, both full-time and part-time, during your career?

Answer Key D-1:

Less than 5	5 to 10	11 to 20	More than 20	Prefer not to say

Question D-2:

What have been your primary areas of practice over your career? (More than one response is permitted.)

Answer Key D-2:

Life	Pensions	Property/ Casualty	Heath	Investments

Actuarial Evidence	Reinsurance	Non-Traditional	Prefer not to say	Other (please specify)

Question D-3:

What have been your primary actuarial roles over your career? (More than one response is permitted.)

Answer Key D-3:

Pricing	Financial reporting	Valuation	Risk management	Underwriting	Marketing/ Sales support	Modeling/ Systems development

Inforce management/ Experience studies	Research & development	Senior management	Education	Prefer not to say	Other (please specify)

Question D-4:

Where have you primarily performed professional services over your career? (More than one response is permitted.)

Answer Key D-4:

Western Canada	Ontario	Québec	Atlantic Canada	Outside of Canada	Prefer not to say

Appendix C – Sundry Data Observations

One might reasonably anticipate some variation in the responses provided by any single member to the 28 questions in Parts A and B. However, this was not always the case, as some respondents gave the same answer for all of the Part A and/or Part B questions, as follows:

- One respondent answered “Rarely or not at all” (i.e. a “1”) to all of the Part A questions, and “Major problem” (i.e. a “5”) to all of the Part B questions.
- Nineteen respondents indicated “Not a problem” to all of the Part B questions, including nine respondents who also replied “Rarely or not at all” to all of the Part A questions (i.e. they selected “1” for all 28 questions).
- Five respondents answered some or all of the Part A questions, yet replied “Do not know” to all of the Part B questions.
- Thirty-one respondents answered some or all of the Part A questions, but elected “Prefer not to say” for all of the Part B questions.
- Three respondents elected “Prefer not to say” for all of the Part A questions but answered some of the Part B questions.

Notwithstanding the foregoing observations, the research project was conducted on the assumption that the survey feedback provided by CIA members was submitted in good faith, and that it fairly reflects the respondents’ experiences and views.

Appendix D – Part A Responses

Part A Response Table D-2 summarizes the information in Table D-1, net of “Prefer not to say” (P) and “Do not know” (N) responses. The Per cent of Subtotal columns of Table D-2 set out the data underlying Graph 1 (§4). Recall that in Part A regarding past experiences, “5” means frequently and “1” means rarely or not at all.

Part A Response Table D-1

	Number									Per cent of Subtotal				
	5	4	3	2	1	Sub	N	P	Total	5	4	3	2	1
EI-5	18	22	51	149	140	380	6	8	394	4.7	5.8	13.4	39.2	36.8
EI-2	8	28	65	136	146	383	7	4	394	2.1	7.3	17.0	35.5	38.1
EI-1	4	28	52	126	154	364	24	6	394	1.1	7.7	14.3	34.6	42.3
EI-14	5	15	46	72	197	335	52	7	394	1.5	4.5	13.7	21.5	58.8
EI-12	8	11	40	74	216	349	33	12	394	2.3	3.2	11.5	21.2	61.9
EI-7	8	10	26	68	258	370	16	8	394	2.2	2.7	7.0	18.4	69.7
EI-13	4	7	19	36	247	313	71	10	394	1.3	2.2	6.1	11.5	78.9
EI-11	3	10	29	88	244	374	9	11	394	0.8	2.7	7.8	23.5	65.2
EI-8	4	7	41	138	189	379	8	7	394	1.1	1.8	10.8	36.4	49.9
EI-4	4	6	30	69	270	379	9	6	394	1.1	1.6	7.9	18.2	71.2
EI-9	3	5	31	102	221	362	20	12	394	0.8	1.4	8.6	28.2	61.0
EI-6	1	7	23	77	269	377	9	8	394	0.3	1.9	6.1	20.4	71.4
EI-10	3	4	27	91	254	379	1	14	394	0.8	1.1	7.1	24.0	67.0
EI-3	2	1	9	48	318	378	11	5	394	0.5	0.3	2.4	12.7	84.1

Part A Response Table D-2
Cumulative Sums from 5 to 1

	Number					Per cent of Subtotal				
	5	4	3	2	1	5	4	3	2	1
EI-5	18	40	91	240	380	4.7	10.5	23.9	63.2	100.0
EI-2	8	36	101	237	383	2.1	9.4	26.4	61.9	100.0
EI-1	4	32	84	210	364	1.1	8.8	23.1	57.7	100.0
EI-14	5	20	66	138	335	1.5	6.0	19.7	41.2	100.0
EI-12	8	19	59	133	349	2.3	5.4	16.9	38.1	100.0
EI-7	8	18	44	112	370	2.2	4.9	11.9	30.3	100.0
EI-13	4	11	30	66	313	1.3	3.5	9.6	21.1	100.0
EI-11	3	13	42	130	374	0.8	3.5	11.2	34.8	100.0
EI-8	4	11	52	190	379	1.1	2.9	13.7	50.1	100.0
EI-4	4	10	40	109	379	1.1	2.6	10.6	28.8	100.0
EI-9	3	8	39	141	362	0.8	2.2	10.8	39.0	100.0
EI-6	1	8	31	108	377	0.3	2.1	8.2	28.6	100.0
EI-10	3	7	34	125	379	0.8	1.8	9.0	33.0	100.0
EI-3	2	3	12	60	378	0.5	0.8	3.2	15.9	100.0

Appendix E – Part B Responses

Part B Response Table E-2 summarizes the information in Table E-1, net of “Prefer not to say” (P) and “Do not know” (N) responses. The Per cent of Subtotal columns of Table E-2 set out the data underlying Graph 2 (§5). Recall that in Part B regarding future concerns, “5” means a major problem and “1” means not a problem.

Part B Response Table E-1

	Number									Per cent of Subtotal				
	5	4	3	2	1	Sub	N	P	Total	5	4	3	2	1
EI-5	51	46	93	95	67	352	9	33	394	14.5	13.1	26.4	27.0	19.0
EI-7	35	29	45	94	139	342	17	35	394	10.2	8.5	13.2	27.5	40.6
EI-4	38	24	51	83	142	338	18	38	394	11.2	7.1	15.1	24.6	42.0
EI-14	20	37	51	92	119	319	40	35	394	6.3	11.6	16.0	28.8	37.3
EI-8	27	34	76	104	104	345	13	36	394	7.8	9.9	22.0	30.1	30.1
EI-12	22	37	52	103	127	341	18	35	394	6.5	10.9	15.2	30.2	37.2
EI-11	25	30	49	97	142	343	17	34	394	7.3	8.7	14.3	28.3	41.4
EI-3	37	17	42	81	163	340	21	33	394	10.9	5.0	12.4	23.8	47.9
EI-10	27	22	29	88	183	349	13	32	394	7.7	6.3	8.3	25.2	52.4
EI-6	29	18	47	82	172	348	12	34	394	8.3	5.2	13.5	23.6	49.4
EI-13	24	20	41	63	179	327	32	35	394	7.3	6.1	12.5	19.3	54.7
EI-9	15	23	50	99	149	336	24	34	394	4.5	6.8	14.9	29.5	44.3
EI-2	7	28	50	129	130	344	16	34	394	2.0	8.1	14.5	37.5	37.8
EI-1	6	7	45	106	177	341	22	31	394	1.8	2.1	13.2	31.1	51.9

Part B Response Table E-2
Cumulative Sums from 5 to 1

	Number					Per cent of Subtotal				
	5	4	3	2	1	5	4	3	2	1
EI-5	51	97	190	285	352	14.5	27.6	54.0	81.0	100.0
EI-7	35	64	109	203	342	10.2	18.7	31.9	59.4	100.0
EI-4	38	62	113	196	338	11.2	18.3	33.4	58.0	100.0
EI-14	20	57	108	200	319	6.3	17.9	33.9	62.7	100.0
EI-8	27	61	137	241	345	7.8	17.7	39.7	69.9	100.0
EI-12	22	59	111	214	341	6.5	17.3	32.6	62.8	100.0
EI-11	25	55	104	201	343	7.3	16.0	30.3	58.6	100.0
EI-3	37	54	96	177	340	10.9	15.9	28.2	52.1	100.0
EI-10	27	49	78	166	349	7.7	14.0	22.3	47.6	100.0
EI-6	29	47	94	176	348	8.3	13.5	27.0	50.6	100.0
EI-13	24	44	85	148	327	7.3	13.5	26.0	45.3	100.0
EI-9	15	38	88	187	336	4.5	11.3	26.2	55.7	100.0
EI-2	7	35	85	214	344	2.0	10.2	24.7	62.2	100.0
EI-1	6	13	58	164	341	1.8	3.8	17.0	48.1	100.0

Appendix F – Dual-Response Tables

The dual-response tables combine data set out in the Part A and B Response Tables (Appendices D and E, respectively). They are “dual response” in the sense that they show how members who gave a particular reply to a given EI in Part A subsequently responded to the same EI in Part B.

Regarding EI-1, for example, Table F-1A presents Part A member responses in its bottom row: 154 replied “1”, 126 “2”, 52 “3”, 28 “4”, and 4 “5”, with 24 “Do not know” (N) and 6 “Prefer not to say” (P). This information is also set out in the Number columns of the third row of Table D-1 in **Part A Responses** (Appendix D). The total number of Part A numeric responses for EI-1, 364, is also included in the vertical axis label for EI-1 in Graph 1 (§4).

Analogously, again for EI-1, Table F-1A presents Part B member responses in its rightmost column: 177 replied “1”, 106 “2”, 45 “3”, 7 “4”, and 6 “5”, with 22 N and 31 P. This same information is also set out in the Number columns of the bottom row of Table E-1 in **Part B Responses** (Appendix E). The total number of Part B numeric responses for EI-1, 341, is also included in the vertical axis label for EI-1 in Graph2 (§5).

Note that only 324 members, of the 394 total respondents, gave a numeric response for EI-1 in *both* Part A and Part B of the survey. Additionally, the percentages in EI-1 Table F-1B are based on the data in Table F-1A, and in turn these percentages underlie the Bubble Graph G-1 in **Dual-Response Bubble Graphs** (Appendix G).

Dual-Response Table F-1A
EI-1 - Timely Response (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	3	2	0	1	0	6	0	0	6
	4	0	1	2	3	0	6	1	0	7
	3	8	15	12	7	1	43	2	0	45
	2	21	50	17	10	1	99	4	3	106
	1	103	46	16	4	1	170	6	1	177
	Sub	135	114	47	25	3	324	13	4	341
	N	6	4	1	2	0	13	8	1	22
	P	13	8	4	1	1	27	3	1	31
	Total	154	126	52	28	4	364	24	6	394

Dual-Response Table F-1B
EI-1 - Timely Response (Per cent)

		Part A								
		1	2	3	4	5	Total			
Part B	5	0.9	0.6	0.0	0.3	0.0	1.9			
	4	0.0	0.3	0.6	0.9	0.0	1.9			
	3	2.5	4.6	3.7	2.2	0.3	13.3			
	2	6.5	15.4	5.2	3.1	0.3	30.6			
	1	31.8	14.2	4.9	1.2	0.3	52.5			
	Total	41.7	35.2	14.5	7.7	0.9	100.0			

Dual-Response Table F-2A
EI-2 - Disparage Competition (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	4	0	1	0	2	7	0	0	7
	4	6	7	7	7	1	28	0	0	28
	3	7	12	18	10	3	50	0	0	50
	2	25	68	26	5	0	124	2	3	129
	1	83	33	8	4	1	129	1	0	130
	Sub	125	120	60	26	7	338	3	3	344
	N	7	1	2	1	1	12	4	0	16
	P	14	15	3	1	0	33	0	1	34
	Total	146	136	65	28	8	383	7	4	394

Dual-Response Table F-2B
EI-2 - Disparage Competition (Per cent)

		Part A								
		1	2	3	4	5	Total			
Part B	5	1.2	0.0	0.3	0.0	0.6	2.1			
	4	1.8	2.1	2.1	2.1	0.3	8.3			
	3	2.1	3.6	5.3	3.0	0.9	14.8			
	2	7.4	20.1	7.7	1.5	0.0	36.7			
	1	24.6	9.8	2.4	1.2	0.3	38.2			
	Total	37.0	35.5	17.8	7.7	2.1	100.0			

Dual-Response Table F-3A
EI-3 - Misuse Data (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	29	4	0	0	2	35	2	0	37
	4	11	4	2	0	0	17	0	0	17
	3	27	11	4	0	0	42	0	0	42
	2	60	14	3	1	0	78	0	3	81
	1	154	9	0	0	0	163	0	0	163
	Sub	281	42	9	1	2	335	2	3	340
	N	10	2	0	0	0	12	9	0	21
	P	27	4	0	0	0	31	0	2	33
	Total	318	48	9	1	2	378	11	5	394

Dual-Response Table F-3B
EI-3 - Misuse Data (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	8.7	1.2	0.0	0.0	0.6	10.4
	4	3.3	1.2	0.6	0.0	0.0	5.1
	3	8.1	3.3	1.2	0.0	0.0	12.5
	2	17.9	4.2	0.9	0.3	0.0	23.3
	1	46.0	2.7	0.0	0.0	0.0	48.7
	Total	83.9	12.5	2.7	0.3	0.6	100.0

Dual-Response Table F-4A
EI-4 - False Marketing (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	27	2	4	1	4	38	0	0	38
	4	10	3	9	1	0	23	1	0	24
	3	18	20	7	3	0	48	0	3	51
	2	49	26	5	0	0	80	2	1	83
	1	128	10	3	0	0	141	0	1	142
	Sub	232	61	28	5	4	330	3	5	338
	N	9	2	1	1	0	13	5	0	18
	P	29	6	1	0	0	36	1	1	38
	Total	270	69	30	6	4	379	9	6	394

Dual-Response Table F-4B
EI-4 - False Marketing (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	8.2	0.6	1.2	0.3	1.2	11.5
	4	3.0	0.9	2.7	0.3	0.0	7.0
	3	5.5	6.1	2.1	0.9	0.0	14.5
	2	14.8	7.9	1.5	0.0	0.0	24.2
	1	38.8	3.0	0.9	0.0	0.0	42.7
	Total	70.3	18.5	8.5	1.5	1.2	100.0

Dual-Response Table F-5A
EI-5 - Assumption Pressure (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	13	10	6	10	11	50	1	0	51
	4	9	11	14	5	2	41	2	3	46
	3	19	42	23	5	3	92	1	0	93
	2	33	56	4	1	0	94	0	1	95
	1	48	16	1	0	0	65	1	1	67
	Sub	122	135	48	21	16	342	5	5	352
	N	5	1	2	0	1	9	0	0	9
	P	13	13	1	1	1	29	1	3	33
	Total	140	149	51	22	18	380	6	8	394

Dual-Response Table F-5B
EI-5 - Assumption Pressure (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	3.8	2.9	1.8	2.9	3.2	14.6
	4	2.6	3.2	4.1	1.5	0.6	12.0
	3	5.6	12.3	6.7	1.5	0.9	26.9
	2	9.6	16.4	1.2	0.3	0.0	27.5
	1	14.0	4.7	0.3	0.0	0.0	19.0
	Total	35.7	39.5	14.0	6.1	4.7	100.0

Dual-Response Table F-6A
EI-6 - Info to Regulators (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	20	2	3	1	1	27	2	0	29
	4	7	2	6	3	0	18	0	0	18
	3	16	16	9	0	0	41	3	3	47
	2	42	34	4	1	0	81	1	0	82
	1	149	18	1	0	0	168	2	2	172
	Sub	234	72	23	5	1	335	8	5	348
	N	9	1	0	1	0	11	1	0	12
	P	26	4	0	1	0	31	0	3	34
	Total	269	77	23	7	1	377	9	8	394

Dual-Response Table F-6B
EI-6 - Info to Regulators (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	6.0	0.6	0.9	0.3	0.3	8.1
	4	2.1	0.6	1.8	0.9	0.0	5.4
	3	4.8	4.8	2.7	0.0	0.0	12.2
	2	12.5	10.1	1.2	0.3	0.0	24.2
	1	44.5	5.4	0.3	0.0	0.0	50.1
	Total	69.9	21.5	6.9	1.5	0.3	100.0

Dual-Response Table F-7A
EI-7 - Conflict of Interest (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	22	1	5	3	4	35	0	0	35
	4	11	6	7	3	2	29	0	0	29
	3	19	14	6	3	0	42	3	0	45
	2	52	26	8	0	1	87	3	4	94
	1	128	11	0	0	0	139	0	0	139
	Sub	232	58	26	9	7	332	6	4	342
	N	6	1	0	1	0	8	9	0	17
	P	20	9	0	0	1	30	1	4	35
	Total	258	68	26	10	8	370	16	8	394

Dual-Response Table F-7B
EI-7 - Conflict of Interest (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	6.6	0.3	1.5	0.9	1.2	10.5
	4	3.3	1.8	2.1	0.9	0.6	8.7
	3	5.7	4.2	1.8	0.9	0.0	12.7
	2	15.7	7.8	2.4	0.0	0.3	26.2
	1	38.6	3.3	0.0	0.0	0.0	41.9
	Total	69.9	17.5	7.8	2.7	2.1	100.0

Dual-Response Table F-8A
EI-8 - Insufficient Knowledge (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	11	9	1	2	3	26	1	0	27
	4	7	13	11	3	0	34	0	0	34
	3	21	30	19	1	0	71	1	4	76
	2	41	58	4	1	0	104	0	0	104
	1	89	13	2	0	0	104	0	0	104
	Sub	169	123	37	7	3	339	2	4	345
	N	3	4	0	0	1	8	4	1	13
	P	17	11	4	0	0	32	2	2	36
	Total	189	138	41	7	4	379	8	7	394

Dual-Response Table F-8B
EI-8 - Insufficient Knowledge (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	3.2	2.7	0.3	0.6	0.9	7.7
	4	2.1	3.8	3.2	0.9	0.0	10.0
	3	6.2	8.8	5.6	0.3	0.0	20.9
	2	12.1	17.1	1.2	0.3	0.0	30.7
	1	26.3	3.8	0.6	0.0	0.0	30.7
	Total	49.9	36.3	10.9	2.1	0.9	100.0

Dual-Response Table F-9A
EI-9 - Meet Needs (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	10	1	0	0	2	13	2	0	15
	4	9	5	5	1	0	20	3	0	23
	3	11	24	9	3	0	47	2	1	50
	2	40	46	7	1	0	94	2	3	99
	1	125	17	2	0	1	145	2	2	149
	Sub	195	93	23	5	3	319	11	6	336
	N	8	3	4	0	0	15	8	1	24
	P	18	6	4	0	0	28	1	5	34
	Total	221	102	31	5	3	362	20	12	394

Dual-Response Table F-9B
EI-9 - Meet Needs (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	3.1	0.3	0.0	0.0	0.6	4.1
	4	2.8	1.6	1.6	0.3	0.0	6.3
	3	3.4	7.5	2.8	0.9	0.0	14.7
	2	12.5	14.4	2.2	0.3	0.0	29.5
	1	39.2	5.3	0.6	0.0	0.3	45.5
	Total	61.1	29.2	7.2	1.6	0.9	100.0

Dual-Response Table F-10A
EI-10 - Lack of Honesty (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	17	4	2	1	2	26	0	1	27
	4	4	6	5	2	1	18	0	4	22
	3	9	9	9	1	0	28	0	1	29
	2	37	45	5	0	0	87	0	1	88
	1	159	20	2	0	0	181	0	2	183
	Sub	226	84	23	4	3	340	0	9	349
	N	8	2	2	0	0	12	1	0	13
	P	20	5	2	0	0	27	0	5	32
	Total	254	91	27	4	3	379	1	14	394

Dual-Response Table F-10B
EI-10 - Lack of Honesty (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	5.0	1.2	0.6	0.3	0.6	7.6
	4	1.2	1.8	1.5	0.6	0.3	5.3
	3	2.6	2.6	2.6	0.3	0.0	8.2
	2	10.9	13.2	1.5	0.0	0.0	25.6
	1	46.8	5.9	0.6	0.0	0.0	53.2
	Total	66.5	24.7	6.8	1.2	0.9	100.0

Dual-Response Table F-11A
EI-11 - Conceal Limitations (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	17	2	0	2	3	24	1	0	25
	4	11	9	7	1	0	28	2	0	30
	3	11	15	13	5	0	44	2	3	49
	2	47	44	4	1	0	96	0	1	97
	1	129	9	3	0	0	141	0	1	142
	Sub	215	79	27	9	3	333	5	5	343
	N	9	2	1	1	0	13	3	1	17
	P	20	7	1	0	0	28	1	5	34
	Total	244	88	29	10	3	374	9	11	394

Dual-Response Table F-11B
EI-11 - Conceal Limitations (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	5.1	0.6	0.0	0.6	0.9	7.2
	4	3.3	2.7	2.1	0.3	0.0	8.4
	3	3.3	4.5	3.9	1.5	0.0	13.2
	2	14.1	13.2	1.2	0.3	0.0	28.8
	1	38.7	2.7	0.9	0.0	0.0	42.3
	Total	64.6	23.7	8.1	2.7	0.9	100.0

Dual-Response Table F-12A
EI-12 - Failure to Act (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	7	7	2	2	4	22	0	0	22
	4	16	3	6	4	2	31	3	3	37
	3	18	10	16	2	0	46	5	1	52
	2	39	38	11	1	0	89	10	4	103
	1	112	7	2	1	1	123	4	0	127
	Sub	192	65	37	10	7	311	22	8	341
	N	6	3	0	0	1	10	8	0	18
	P	18	6	3	1	0	28	3	4	35
	Total	216	74	40	11	8	349	33	12	394

Dual-Response Table F-12B
EI-12 - Failure to Act (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	2.3	2.3	0.6	0.6	1.3	7.1
	4	5.1	1.0	1.9	1.3	0.6	10.0
	3	5.8	3.2	5.1	0.6	0.0	14.8
	2	12.5	12.2	3.5	0.3	0.0	28.6
	1	36.0	2.3	0.6	0.3	0.3	39.5
	Total	61.7	20.9	11.9	3.2	2.3	100.0

Dual-Response Table F-13A
EI-13 - Fairly Investigate (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	14	1	0	1	2	18	4	2	24
	4	9	3	3	2	0	17	3	0	20
	3	12	8	8	0	2	30	8	3	41
	2	26	18	5	2	0	51	11	1	63
	1	165	1	0	0	0	166	13	0	179
	Sub	226	31	16	5	4	282	39	6	327
	N	4	2	2	1	0	9	23	0	32
	P	17	3	1	1	0	22	9	4	35
	Total	247	36	19	7	4	313	71	10	394

Dual-Response Table F-13B
EI-13 - Fairly Investigate (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	5.0	0.4	0.0	0.4	0.7	6.4
	4	3.2	1.1	1.1	0.7	0.0	6.0
	3	4.3	2.8	2.8	0.0	0.7	10.6
	2	9.2	6.4	1.8	0.7	0.0	18.1
	1	58.5	0.4	0.0	0.0	0.0	58.9
	Total	80.1	11.0	5.7	1.8	1.4	100.0

Dual-Response Table F-14A
EI-14 - Only Actuaries (Number)

		Part A								
		1	2	3	4	5	Sub	N	P	Total
Part B	5	8	3	4	2	3	20	0	0	20
	4	16	4	8	3	1	32	5	0	37
	3	18	10	18	4	0	50	1	0	51
	2	39	37	9	3	0	88	4	0	92
	1	94	13	3	1	0	111	7	1	119
	Sub	175	67	42	13	4	301	17	1	319
	N	8	1	2	0	0	11	29	0	40
	P	14	4	2	2	1	23	6	6	35
	Total	197	72	46	15	5	335	52	7	394

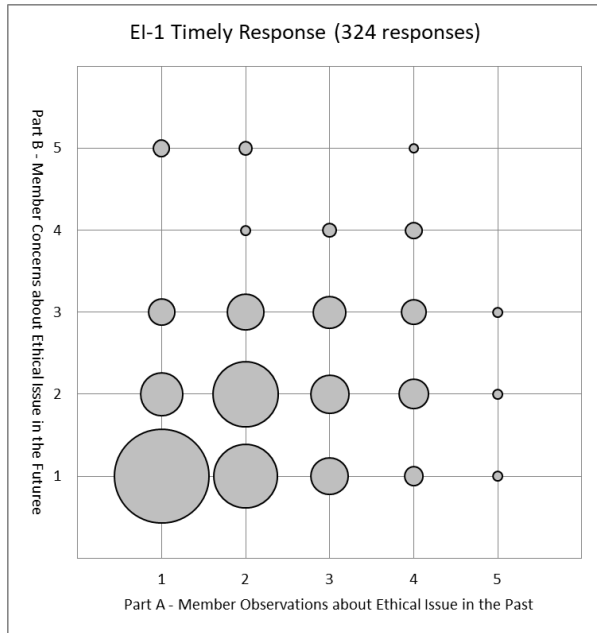
Dual-Response Table F-14B
EI-14 - Only Actuaries (Per cent)

		Part A					
		1	2	3	4	5	Total
Part B	5	2.7	1.0	1.3	0.7	1.0	6.6
	4	5.3	1.3	2.7	1.0	0.3	10.6
	3	6.0	3.3	6.0	1.3	0.0	16.6
	2	13.0	12.3	3.0	1.0	0.0	29.2
	1	31.2	4.3	1.0	0.3	0.0	36.9
	Total	58.1	22.3	14.0	4.3	1.3	100.0

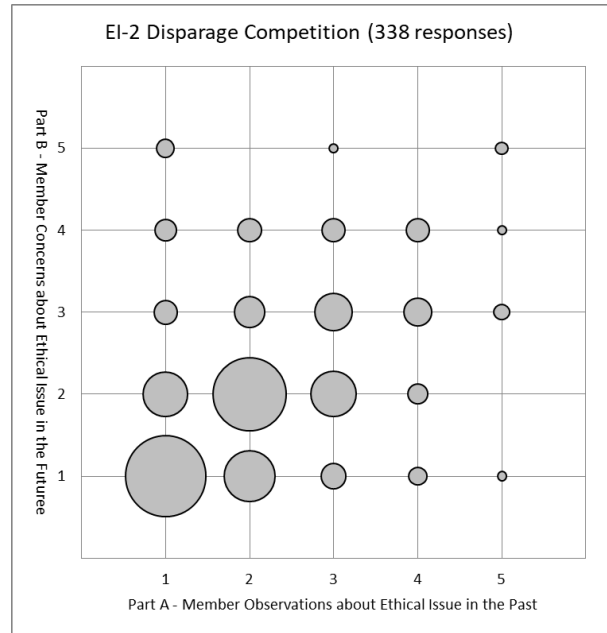
Appendix G – Dual-Response Bubble Graphs

These bubble graphs illustrate the dual-response data for the various EI set out in the “B” tables in **Dual-Response Tables** (Appendix F). Note that the bubble graphs for EI-5 Assumption Pressure and EI-13 Fairly Investigate are included within the main body of the summary report in **Inter-Relating Parts A and B** (§6).

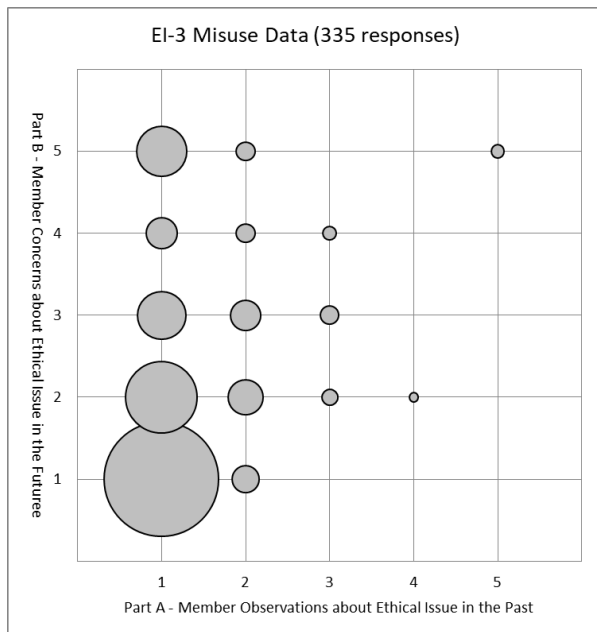
Bubble Graph G-1



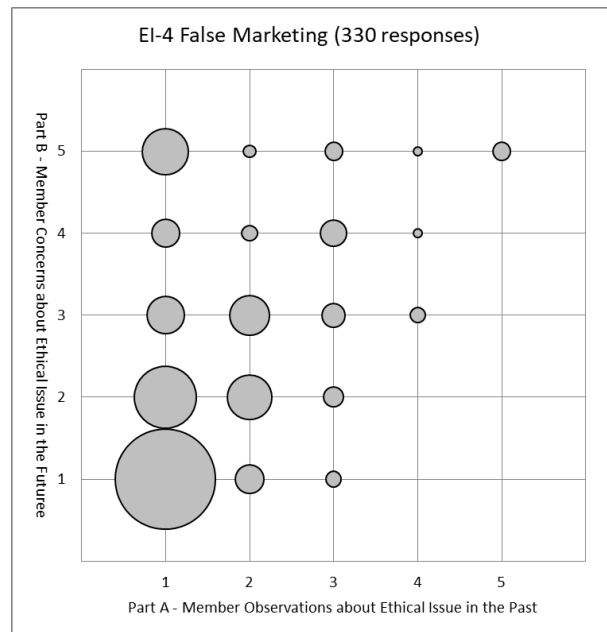
Bubble Graph G-2



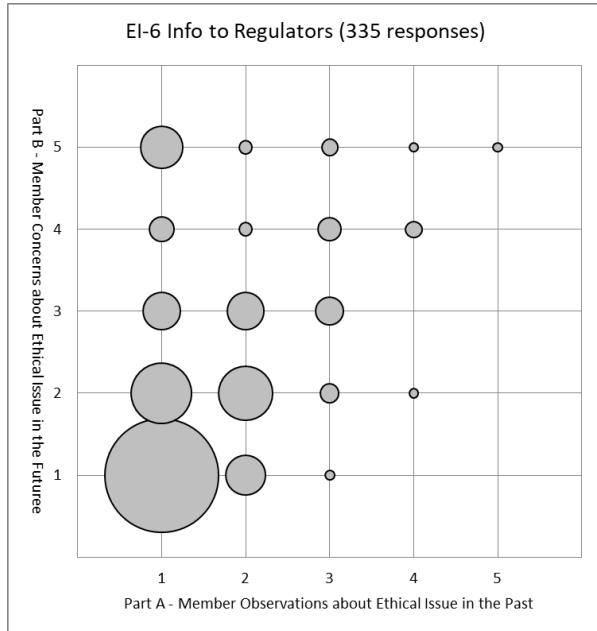
Bubble Graph G-3



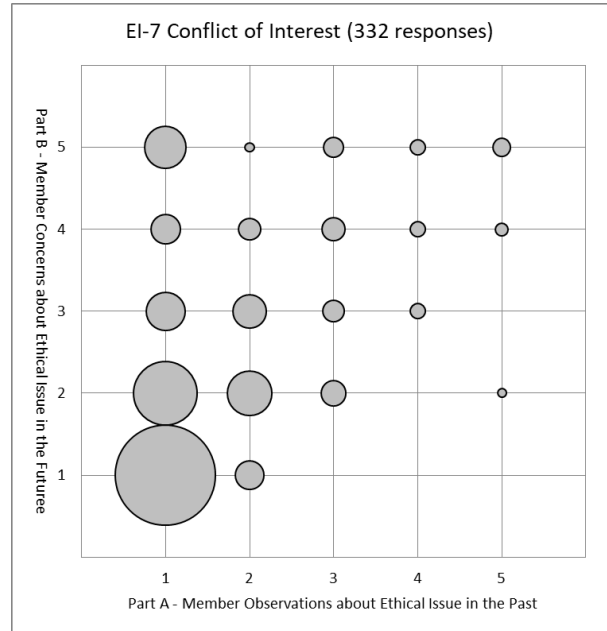
Bubble Graph G-4



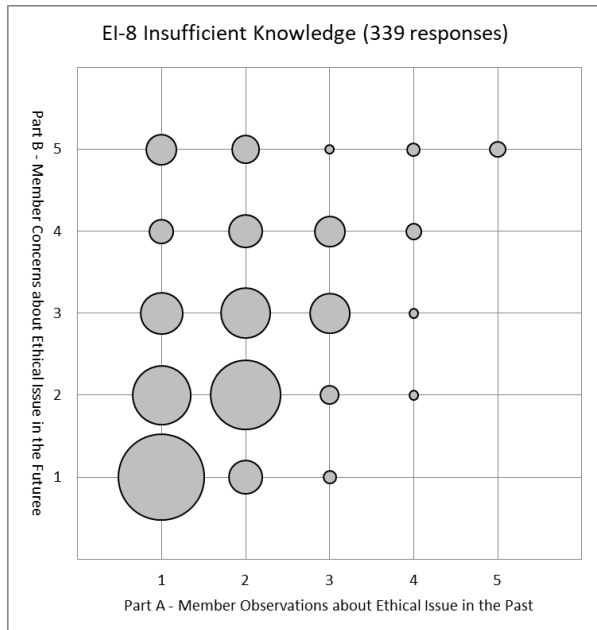
Bubble Graph G-5



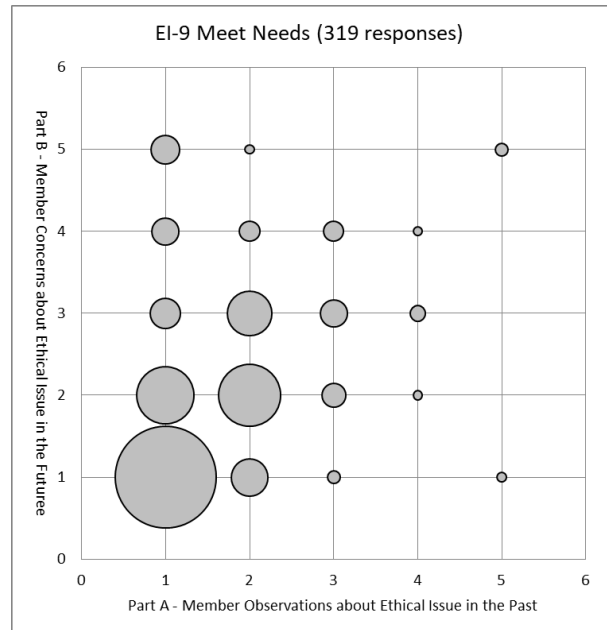
Bubble Graph G-6



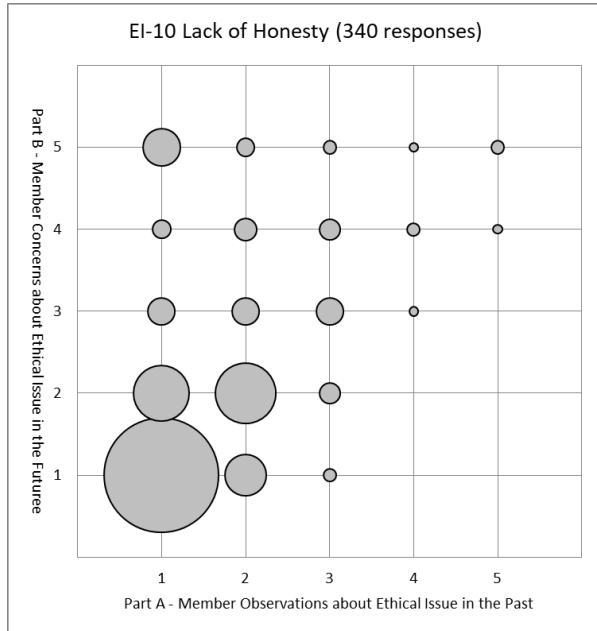
Bubble Graph G-7



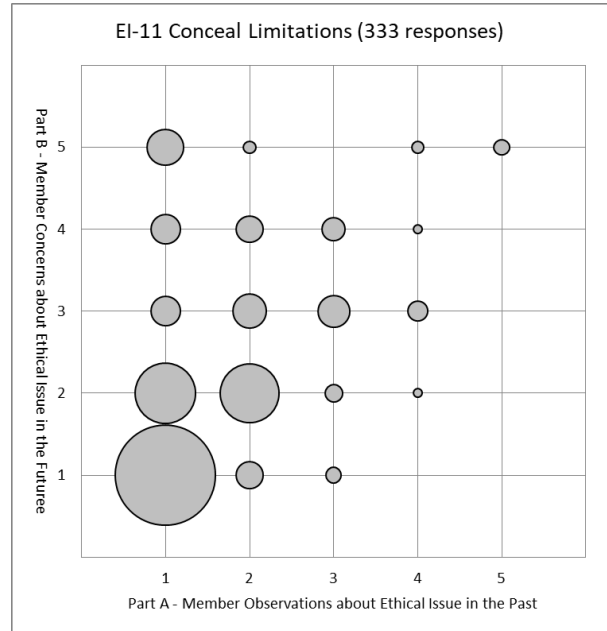
Bubble Graph G-8



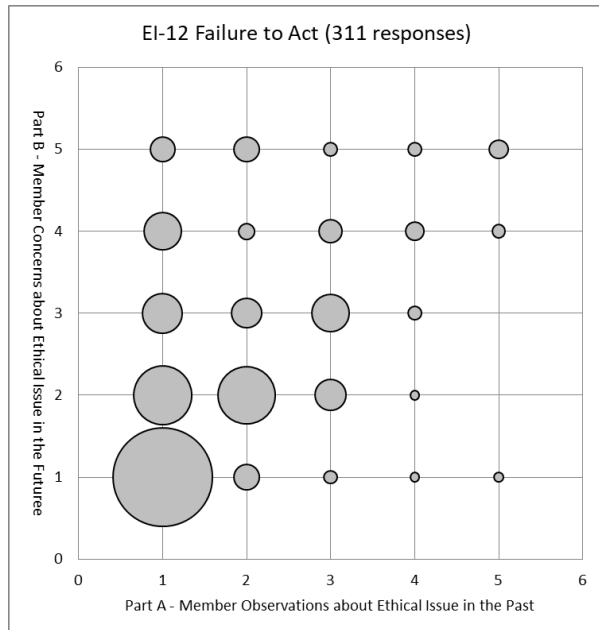
Bubble Graph G-9



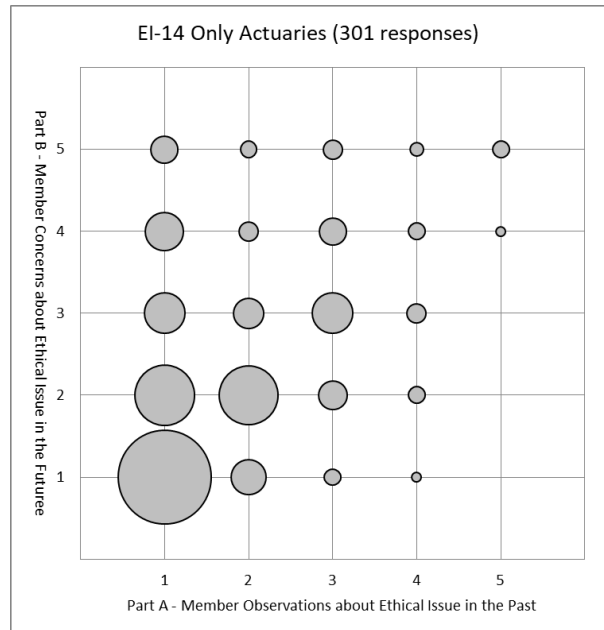
Bubble Graph G-10



Bubble Graph G-11



Bubble Graph G-12





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