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Differences in Ethical Perceptions of Insider Trading

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KEY FINDINGS

- In most jurisdictions, trading on material nonpublic information is prohibited, even when an investment manager is required to act in clients' best interests. Instead, the requirement to maintain market integrity typically trumps clients' interests.
- Our survey results show that trading on inside information for personal benefit is viewed as significantly more unethical than is trading on inside information for the benefit of clients. Professionals with a specialized investment credential are the most stringent in their views.
- Because protecting clients from potentially adverse market movements is desirable, and is viewed as somewhat ethical, our results suggest that the legal primacy of market integrity should be reexamined.

ABSTRACT

This article examines ethical decision-making related to insider trading. Using case study scenarios, the authors shed light on differences in evaluating the use of material nonpublic information when the expected outcomes of insider trading benefit clients versus the investment professional trading on inside information. Participants perceive insider trading that is expected to benefit clients to be a less egregious ethical violation, even though it is as equally illegal as trading to benefit oneself directly. Although the judgment about insider trading should be independent of the benefit recipient, it is not. Given the increasing regulatory scrutiny of ethical behavior, this finding is important because professionals' duties to (1) pursue clients' best interests and (2) protect capital markets may represent conflicting obligations when evaluating whether to use material nonpublic information. In addition, the results show that individuals with a professional credential tend to view insider trading to be more unethical compared with others without a credential.

TOPICS

[Legal/regulatory/public policy](#), [security analysis and valuation](#), [risk management](#)*

One of the greatest challenges to the orderly functioning of capital markets is the undermining of market integrity through the use of material nonpublic information¹ (MNPI), also known as insider trading. In the context of some of the world's

*All articles are now categorized by topics and subtopics. [View at PM-Research.com](#).

¹Material nonpublic information is defined as information that is related to a business entity and that is not publicly known. Also known as inside information, examples of this type of information include

largest crises, insider trading has become a “symbol of moral bankruptcy” (Robinson 2020). A recent example is when US senators Richard Burr and Kelly Loeffler allegedly used negative inside information obtained from the Senate Intelligence Committee to sell stocks in advance and avoid losses during the COVID-19 crisis in March 2020.

Trading on MNPI is just one of many ethical dilemmas that investment professionals face in their normal course of business. Frequently, solutions to these dilemmas are clear and often guided by the law—for example, avoiding a conflict of interest. However, that is not always the case. One dilemma in particular—whether to trade on MNPI to benefit a client—pits the investment professional’s duty to act in the best interests of clients² against the responsibility to protect market integrity. Although authors such as Muhtaseb (2018) emphasize the importance of the interests of clients and society above those of investment professionals, they do not further distinguish the potential conflict between clients and society. In many jurisdictions, the required course of action is clear: market integrity (duty to society) eclipses the professional’s duty to clients, which means that MNPI cannot be acted upon even when acting on the information would benefit clients. This view is due to the far-reaching and potentially catastrophic negative impact on the integrity, and therefore functioning, of capital markets if MNPI is used to trade.

Many investment managers may question this priority of capital market integrity over client interests. In fact, we believe that managers often feel that they should rank clients’ interests above market integrity and have an internal conflict when having to curtail their trading at the expense of their clients. This dilemma serves as our motivation and sparked our interest in investigating whether our assessment was true and shared more widely by the investment community, and also whether it extended to the wider noninvestment public.

To explore this interest, we conducted a survey that gauged responses to a set of scenarios in which an investment professional decides whether to trade on MNPI. Survey participants were asked to rate the degree of unethical behavior in each of the scenarios. We find that people clearly distinguish degrees of unethical behavior when evaluating the professional’s actions related to insider trading. Survey respondents rated insider trading that is intended to benefit clients as significantly less unethical than insider trading that benefits the investment professional personally. This supports our assumption about priority of client interests, even though some may find the result surprising given the lack of difference in the intrinsic value of the use of inside information in either case.

Ultimately, we hope to start a conversation about whether the legally mandated priority of interests—compelling investment managers to disadvantage clients in order to uphold market integrity—is always desirable. Such a discussion is important given the differences in judgment of insider trading we have observed. Professionals struggle to reconcile the competing objectives of market protection and pursuit of clients’ interests, and it does not appear to be clear why a legal mandate prohibiting the use of MNPI overrides the important consideration of putting client interests first at all times. Accounting for the greater good of preserved market integrity can conflict with professional principles to put clients first. Do these conflicting objectives affect the perception of the degree of ethical violation around insider trading?

earnings announcements, changes to executives, and potential acquisition activities. For an overview of the enforcement of insider-trading laws, see Kamman and Hood (2010).

²As an example, in Australia, and with regards to financial professionals who advise clients (financial advisors), the Corporations Act 2001 was modified through The Corporations Amendment (Further Future of Financial Advice Measures) Act 2012 on July 1, 2012. It contains, among many other measures, a statutory fiduciary duty on financial advisors to act in the best interests of their clients, which defines an advisor’s *best interest duty*. This duty represents a codification of the existing common law fiduciary duty and adds penalties such as banning and disqualification.

The remainder of the article is structured as follows. First, we present the motivation for and background of this study. We then describe the survey methodology, data, and analysis. Finally, we discuss results and implications of our analysis and draw conclusions for investment managers and the broader investment community.

BACKGROUND

The ethics of trading on MNPI has been argued extensively in academic literature. The main philosophical arguments against insider trading are largely based on ethical principles such as fairness and rights. One view is that MNPI provides an unfair advantage over other participants that lack the same level of inside information. This is deemed to be unfair because MNPI provides the insider with the opportunity to earn (potentially excessive) profits or avoid losses. A second viewpoint, and often considered from a legal perspective, is that MNPI is the property of an owner (i.e., a firm) and must not be misappropriated by either insiders or outsiders for their personal gain. It is therefore suggested that firms have the right to decide on timing and circumstances of disclosure of MNPI. A final argument against insider trading is that, if investors perceive trading based on MNPI to be widespread in financial markets, they would be reluctant to participate and trade in these markets. This ultimately reduces market efficiency as trading activity decreases, potentially leading to complete market lockup or failure (Luberti 1984).

On the other side, the arguments in favor of insider trading are typically of an economic nature and based on an improvement in market efficiency (Luberti 1984; McGee 2009). This view suggests that insiders' trades should move a stock's price toward its true fundamental value that reflects all available material information at a point in time. Finally, philosophical arguments by Ma and Sun (1998) and Moore (2017) challenge the interpretation of fairness by pointing out that those opposed to insider trading typically cannot even agree on what insider trading actually means.

Our study draws its inspiration from two theoretical articles. First, Lydenberg (2014) contrasts two groups of fiduciaries in financial markets. The first group ("reasonable") is focused on legal principles concerned with the prudent and long-term stability of financial markets and the consideration of society. In contrast, the primary concern of the second group ("rational") is the sole financial benefit of individual clients. If trading on MNPI is done by any means possible (i.e., rational), it could imply doing so at the short-term expense of other market participants.

Second, in an article by Engelen and Van Liedekerke (2007), the authors attempt to bridge the gap between "reasonable" and "rational" by discussing how different types of insider trading are not all equally unethical. They distinguish between market manipulation and trading on inside information. In addition, they contrast corporate insiders and those who steal information. According to their argument, there is a case to be made for allowing insider trading if its user does not attempt to manipulate the market or misappropriate/steal information.

Our study expands on this notion by providing alternative scenarios in which trading on MNPI could be viewed as encompassing various degrees of unethical behavior. In our scenarios, similar to Engelen and Van Liedekerke, there is no attempt by a market participant to manipulate the price of a stock. However, there is a misappropriation of MNPI according to their definition because the character in the scenarios (an investment analyst) is not a corporate insider.

Our approach differs from theirs in that we hypothesize that the *motivation* and *intent* behind the trading on MNPI is the key to the perception of its ethical nature. We contend that if trading on MNPI has no direct personal financial benefit but rather leads to material gains for someone that is owed a fiduciary duty (i.e., the

firm's clients), this behavior is possibly not misappropriation or stealing of information. We question if this action could therefore be considered less unethical. This depends critically on whether the use of MNPI is taken to be for personal benefit or for another use.

The key question we investigate is whether individuals view the use of MNPI to benefit clients as less egregious an ethical violation as the use of MNPI to benefit oneself directly—in other words, whether a financial professional who fulfills a duty to clients mitigates partially or fully the unethical nature of insider trading that violates the duty to maintain market integrity.

Furthermore, among all professional credentials held by surveyed respondents, the Chartered Financial Analyst (CFA) Program emphasizes education aimed at investment professionals performing financial analysis and undertaking portfolio management. The program contains an ethics and professional standards component, making it of special interest for our case scenario investigation. Important for this study, the CFA Program's ethics curriculum incorporates in its entirety the CFA Institute Code of Ethics and Standards of Professional Conduct, with the former being a principle-based code and the latter being a rules-based set of standards, behavioral requirements, and recommendations, as well as practical examples (CFA Institute 2014). Since we consider this comprehensive framework consisting of a code, a set of standards, and examples with application to investment analysis and investment management as the most applicable professional credentialing training directly related to this study's insider-trading case and scenarios, we use it as an example of a relevant professional credentialing ethics curriculum. In particular, Standard II(A) ("Material Nonpublic Information") and Standard III(A) ("Loyalty, Prudence and Care") are relevant for our study, as they cover MNPI and duties to clients (see Appendix A). Interestingly, and related to an investment professional's potentially conflicting duties to capital markets and clients, these standards require on one hand that an individual must not engage in insider trading and on the other that the individual must put their clients' best interests before their own or their employer's best interests.

INVESTIGATION AND RESULTS

Survey Design

Our investigation is based on a survey in which we present two scenarios of trading on MNPI to a broad range of individuals, both professional investors and non-investment individuals. In both scenarios, participants rated an analyst's behavior on a Likert-type scale of 1 (*very unethical*) to 7 (*very ethical*). The storyline of the scenarios is as follows: A buy-side security analyst ("Myer") is employed by an investment firm ("AlphaCo"). During a site visit to a pharmaceutical company ("DeveloPharm"), Myer obtains MNPI³ that strongly indicates a poor outcome in a drug trial for one of DeveloPharm's most promising treatments. Upon returning to her office, Myer decides whether to act on the MNPI (see Appendix B for details).

To analyze survey participants' perception about acting on MNPI, the initial case is extended using two scenarios that reflect Myer's decision regarding what to do with the MNPI. The two scenarios are identical in all respects except for differences in which party owns DeveloPharm shares (AlphaCo's client portfolios or Myer personally)

³The case scenarios in our survey were designed to fit the Luberti (1984) definition of MNPI. The scenarios were designed to reflect an expected negative impact on the value of DeveloPharm once the information of the negative trial results becomes known to the public. This study's MNPI case is also similar to common insider-trading cases that typically lead to both prosecution and conviction (Schipani and Seyhun 2016).

EXHIBIT 1

Summary of Survey Scenarios

Scenarios	Firm Holds Stock?	Myer Holds Stock?	MNPI Used to Benefit Whom?
Scenario 1	No	Yes	Myer
Scenario 2	Yes	No	Firm

and whether the party uses and benefits from the MNPI (AlphaCo's client portfolios or Myer personally). In our scenarios, there is no attempt to manipulate the market for DeveloPharm shares, ruling out the possibility of this type of unethical behavior. The two scenarios are summarized in Exhibit 1.

In Scenario 1, only Myer holds shares—in her personal portfolio—and the firm does not own shares in any client accounts or commingled funds, so none of the firm's clients is potentially affected by the use

of the MNPI. Myer has “negative MNPI,” which she expects to cause an imminent decline in the stock price of DeveloPharm. She acts on the information by selling her personal holdings. Therefore, Scenario 1 is similar to the public's common view of insider trading as being unethical and illegal, where a character uses MNPI to enrich themselves (or, in this case, to avoid a personal loss). Clearly, this use of MNPI would be deemed unethical by many investment professionals, and it is commonly prohibited by regulators.

In Scenario 2, the firm holds many of the shares in its mutual fund, but Myer does not hold any in her personal portfolio. Myer uses the “negative MNPI” by informing AlphaCo's fund managers that she has changed her outlook on DeveloPharm from positive to negative. She does not inform the fund managers that her outlook has changed, because she holds negative inside information. As a result of Myer's changed outlook, AlphaCo immediately sells all the DeveloPharm shares held by the fund. The case makes clear that the sale is expected to benefit the firm's clients by eliminating any potential share price decline. Most regulatory authorities consider this use of MNPI to also be unethical based on fairness arguments and therefore prohibit trading on it. In essence, trading in this scenario is viewed from a legal sense as essentially the same as trading on MNPI for personal benefit. However, we were interested in whether investment professionals and noninvestment survey respondents would make that same assessment, or would instead consider protection of client interests to be more-ethical behavior.

While trading on MNPI is often thought of as undertaken for personal benefit, as in Scenario 1, professional investment managers can face an ethical dilemma: The duty to clients can be at odds with the duty to uphold market integrity. Scenario 2 represents this ethical dilemma by investigating whether survey participants place a higher priority on market integrity or on the duty the manager owes to the client—fiduciary duties that are in conflict in our scenarios.

Our article is unique in that we hypothesize that ethical behavior is not always absolute but rather that the motivation for the insider trading is key to assessing its ethical nature. We contend that if trading on MNPI has no personal benefit but rather leads to material gains for someone who is owed a fiduciary duty (i.e., the firm's clients), this behavior is not on the same level as misappropriation of information for personal benefit and could therefore be considered less unethical.

Characteristics of Survey Respondents

We administered an online survey that was developed and distributed using the Survey Monkey platform. Survey invitations were sent to the broad industry and academic network of the authors. After providing demographic information and reading the case, respondents were asked to rate the ethical nature of the analyst's action for the scenarios.

Response scores range from 1 (*very unethical*) to 7 (*very ethical*). A total of 551 responses to the online survey were received between June 5, 2017, and

July 21, 2017. After excluding 21 invalid survey results, the final sample consisted of 530 respondents.

The respondents represented an array of backgrounds, including investment professionals, professionals employed outside the investment industry, and university students. Appendix C presents a summary of key demographic statistics.

Although the majority (66.4%) of respondents are male, this overrepresentation is considerably less than the gender imbalance of investment market professionals in global capital markets. Estimates of the share of female investment professionals range from less than 10% for US mutual fund managers (Lutton and Davis 2015) to 39% of CFA Program Candidates in 2019 (CFA Institute 2019). Survey respondents spanned a broad age group with a global representation. Finally, financial professionals constitute the largest category of respondents.

The professional credentials we identified include several key designations commonly held by members of the global financial industry and fall into two main categories: investment related and accounting related. Of the 530 valid respondents, 231 (43.6%) possessed one or more of the professional credentials summarized in Appendix D. Holders of the CFA charter constituted 190 (35.8%) of all respondents.

Survey Results

As summarized in Exhibit 1, Scenario 1 denotes the use of MNPI for the benefit of the analyst (Myer), whereas in Scenario 2 the firm's clients benefit. Overall, responses to both scenarios ranged between 1 and 7, with a score of 1 meaning that survey respondents rated the behavior as very unethical and a score of 7 meaning that the behavior was rated as very ethical. In other words, a low average score for a specific scenario indicates that respondents perceived Myer's action to be unethical, whereas a high score indicates that respondents viewed her actions as ethical. As a result, we expect a lower mean score for the scenario in which Myer holds shares personally and benefits from MNPI (Scenario 1). By contrast, we expect higher scores in the scenario in which the firm's clients hold shares and benefit from MNPI (Scenario 2).

Exhibit 2 summarizes the statistical analysis of the differences between the two scenarios. The main analysis that we focused on is determining whether the average rating of the two case study scenarios differs by a statistically significant amount. Differences in means were tested using three measures: a *t*-test, Wilcoxon rank, and sign test.

First, it is important to note that the mean scores of the two scenarios were different by 0.38. The statistical analysis in Exhibit 2 indicates (the *t*-test, Wilcoxon signed rank test, and sign test) that the difference in respondents' perception between the two scenarios of 0.38 is not only economically meaningful but also statistically significant.

In other words, there is an actual and sizable difference in the perception of respondents between the two scenarios. Based on the statistical significance in a difference in means test, using the MNPI for the benefit of clients was deemed to be more ethical (a higher score of 2.87) than using it for personal benefit (a lower score of 2.49). In other words, respondents perceive trading on MNPI to be less ethical if it leads to personal benefit rather than benefiting clients.

The results from Exhibit 2 are very clear. Respondents overwhelmingly viewed the investment analyst Myer's use of MNPI for her personal benefit to be significantly more unethical than her use of it for the benefit of the firm's clients. Given the difference in

EXHIBIT 2

Mean Difference Tests for Scenarios

	Scenario 1 (Myer benefits)	Scenario 2 (clients benefit)
<i>N</i>	530	530
Mean Score ^a	2.49	2.87
Difference		0.38
<i>t</i> -Test		5.65***
Wilcoxon Signed Rank Test		6.58***
Sign Test		253***

NOTES: ^a1 = most unethical; 7 = most ethical. ****p* = .001.

EXHIBIT 3**Mean Difference Tests for Professional Credentials**

	Sample Size	Scenario 1 (Myer benefits)	Scenario 2 (clients benefit)
All Survey Respondents: Mean Score ^a	530	2.49	2.87
Group 1: No Professional Credential, <i>n</i>	299	2.89	3.37
Group 2: One or More Professional Credentials, <i>n</i>	231	1.96	2.21
Group 1 – Group 2		0.93	1.16
Group 1 – Group 2 Group 2		47.5%	52.5%
One-Tailed Test $H_0: \mu_1 \leq \mu_2; H_a: \mu_1 > \mu_2$		6.19***	7.53***

NOTES: ^a1 = most unethical; 7 = most ethical. ****p* = .001.

average scores, it is clear that respondents felt that Myer was, to some extent, acting properly in protecting client assets from the potential adverse effect of the MNPI. Although her use of MNPI to potentially avoid losses in clients' portfolios was still rated as being unethical because of the violation of duty to maintain market integrity, Myer's unselfish motivation for trading on inside information appears to be a significant mitigating factor. We next expand our analysis to examine whether individuals who have received ethics training as part of obtaining a professional credential exhibit a superior ability to evaluate observed unethical behavior. Each of these credentials is sponsored or administered by a professional testing and/or member organization and includes in its examinations an ethics component or module. The general summary of the extent of the ethics training and/or testing is shown in Appendix E.

Because earning any of the professional credentials involves a substantial amount of ethics training and subsequent successful assessment, we expect holders of these credentials to be better able to distinguish degrees of (un)ethical behavior. In particular, we expect holders of credentials to consider insider trading to be less ethical than do respondents who do not hold a professional credential.

Exhibit 3 presents mean difference test results for survey responses for the two case study scenarios. Group 1 represents respondents without any credential; Group 2 represents respondents that hold one or more credentials.

The results in Exhibit 3 confirm our expectation. For holders of a credential, the mean score is meaningfully (0.93 for Scenario 1, and 1.16 for Scenario 2) lower than for those without a credential. These results suggest that receiving ethics training as part of earning a professional credential increases the ability to identify unethical behavior. The observed large relative differences suggest that respondents who have earned one (or more) professional credential(s) judge unethical behaviors as significantly more unethical compared with survey respondents without any credential and related ethics training.

Because of the exclusive focus on investment-related matters, which include assessing insider-trading dilemmas as part of the credentialing training, we expect that holders of the investment-focused CFA designation should be in a better position to evaluate unethical investment-related behavior compared with those without CFA designation. Exhibit 4 presents mean difference tests for CFA charterholders versus non-CFA charterholders.

These results suggest that CFA charterholders rate the behavior in these (unethical) categories as more unethical compared with respondents who have not earned the CFA designation. Therefore, and on average, CFA charterholders in our sample

EXHIBIT 4**Mean Difference Tests for Chartered Financial Analyst (CFA) Designation**

	Sample Size	Scenario 1 (Myer benefits)	Scenario 2 (clients benefit)
All Survey Respondents: Mean Score ^a	530	2.49	2.87
Group 1: No CFA Designation, <i>n</i>	340	2.85	3.36
Group 2: Holds the CFA Designation, <i>n</i>	190	1.82	1.99
Group 1 – Group 2		1.03	1.37
Group 1 – Group 2 Group 2		56.6%	68.8%
One-Tailed Test $H_0: \mu_1 \leq \mu_2; H_a: \mu_1 > \mu_2$		6.69***	8.76***

NOTES: ^a1 = most unethical; 7 = most ethical. ****p* = .001.

appear to be significantly better at identifying observed unethical behavior (and assigning a corresponding lower value to express this judgment) when compared with non-CFA charterholders, irrespective of the modifications of unethical behavior presented across several scenarios. We note that the absolute differences for both scenarios are higher (1.03 and 1.37) compared with those results in Exhibit 3 that include any credential(s).

DISCUSSION

Our results demonstrate that the investment community makes distinctions when making decisions about ethical dilemmas. In effect, when people assess the degree to which behavior is potentially unethical, they take into consideration the motivation and the intended beneficiary of the behavior.

Our survey results have three important implications that are particularly relevant, not only for portfolio managers and other investment professionals but also for regulators and lawmakers.

First and most important, our study provides evidence that insider trading can present an ethical dilemma, and individuals may disagree about its ethical implications. Given that our results show that differences in the ethical evaluation of insider trading exist subject to who receives benefits from the transaction, this highlights differences in individuals' value systems and duty perceptions. Statistically important judgment differences related to the morality of insider trading must be recognized when protecting markets and clients' best interests.

Second, the analysis of survey responses indicates that individuals who hold professional credentials tend to have a more critical view of insider trading than do individuals without such credentials. In addition, holding a credential that relates more specifically to financial analysis and investment management increases the effect. In particular, we are able to show that respondents who have earned the CFA designation, and who therefore have undergone training specifically in investment-related ethical situations as part of the CFA Program, are the most stringent in their views. This finding is important because it supports the benefit to be gained from general training in ethics and from more specific training that is relevant to the ethical situations that are found in the investment profession. This corresponds to the view of Muhtaseb (2018), who suggests a professional framework and code of conduct

(such as that of CFA Institute) to be a viable solution to address ethical issues that are complex in nature.

Third, and with reference to compensatory and retributive justice, these results support starting a conversation regarding the appropriate magnitude of penalties for unethical behavior by investment professionals, depending on the motivation for their actions. It is a permissible question as to whether the manager should be punished less severely if there is no direct personal benefit, as in the case when trading on MNPI is for the clients' benefit only. This is not to say that this behavior is ethical, but rather to point out that there are shades of gray when duties conflict. When a manager is faced with conflicting duties, perhaps the penalties for unethical behavior should be tempered because of the motivation and responsibility to benefit clients.

Ultimately, respondents of all types perceive that the motivation for using MNPI is key to determining the degree to which a behavior is unethical. This indicates that, at a minimum, the industry could benefit from a discussion about whether insider trading for the benefit of clients should be punished less severely than insider trading for personal benefit.

CONCLUSION

Our study uses a survey with two scenarios in a financial analysis and investment management context where a decision is made to trade on MNPI either for personal gain or for the benefit of clients. The analysis of survey responses indicates that individuals perceive trading on MNPI for the benefit of clients to be a less egregious ethical violation, even though the intrinsic act of the trading is identical and just as illegal as trading to benefit oneself directly.

Given that survey participants clearly consider benefiting personally from MNPI to be more unethical than clients benefiting from MNPI, our results raise a question for investment professionals and regulators: Should the penalty for trading on MNPI for the benefit of clients be less severe than the penalty for trading on MNPI for personal benefit? It could be argued that, under certain ethical principles (including, e.g., duty, rights, or welfare), the priority of market integrity should perhaps be reduced relative to the fiduciary duty the firm owes to the client.

APPENDIX A

This appendix presents the two CFA Institute Standards most relevant to our study of client's best interest and use of inside information. These Standards are Standard II(A) ("Material Nonpublic Information") and Standard III(A) ("Loyalty, Prudence and Care"). The CFA Institute Standards of Professional Conduct as part of the CFA Institute Standards of Practice Handbook (CFA Institute 2014) constitute the ethics curriculum of CFA Program. The Standards are organized in categories covering professionalism, market integrity, duties to clients and employer, and additional standards, including a set of Standards addressing conflicts of interests. We also note that the CFA Program curriculum includes additional guidance as to how these and other Standards should be interpreted and applied.

EXHIBIT A1**Summary of CFA Institute Standards**

CFA Institute Standard	Standard Text
II(A) Material Nonpublic Information	Members and Candidates who possess material nonpublic information that could affect the value of an investment must not act or cause others to act on the information.
III(A) Loyalty, Prudence, and Care	Members and Candidates have a duty of loyalty to their clients and must act with reasonable care and exercise prudent judgment. Members and Candidates must act for the benefit of their clients and place their clients' interests before their employer's or their own interests.

NOTES: The guidance includes that "Standard III(A) clarifies that client interests are paramount. A member's or candidate's responsibility to a client includes a duty of loyalty and a duty to exercise reasonable care."

APPENDIX B**EXHIBIT B1****Summary of Case Study Scenarios****Case Study Introduction**

Susan Myer is an analyst at the investment firm AlphaCo that manages an equity fund in which clients invest. The country in which AlphaCo and Myer are situated does not have strict securities laws and regulations.

Myer analyses a pharmaceutical company, DeveloPharm, which is developing a new medication to treat cancer. A large trial of the medication was undertaken with test patients, but results have not yet been disclosed publicly.

As part of her analysis, Myer meets with several of DeveloPharm's senior executives. The visit includes a tour of the production facilities with one of DeveloPharm's managers. During the tour and without intent, Myer notices a document on a desk. The front page reveals to Myer that the medication's trial was a failure, that is, the medication has not proven to be effective in treating cancer.

Scenario 1

- AlphaCo does not hold any DeveloPharm shares in its fund
- Myer holds a large number of DeveloPharm shares in her personal portfolio

After returning to her office that afternoon, Myer sells all of the DeveloPharm shares from her personal portfolio. Two weeks later, DeveloPharm publicly announces that the medication trial was a failure and DeveloPharm's shares lose half of their value in that day's trading.

On a scale from 1 to 7, how do you rate the ethical nature of Myer's action to sell the shares of DeveloPharm from her personal portfolio?

Scenario 2

- AlphaCo holds a large number of DeveloPharm shares in its fund
- Myer does not hold any DeveloPharm shares in her personal portfolio

After returning to her office that afternoon, Myer informs AlphaCo's fund managers that she has changed her outlook on DeveloPharm from positive to negative. As a result, AlphaCo immediately sells all of the fund's DeveloPharm shares. Two weeks later, DeveloPharm publicly announces that the medication trial was a failure and DeveloPharm's shares lose half of their value in that day's trading.

On a scale from 1 to 7, how do you rate the ethical nature of Myer's action to inform AlphaCo's fund managers that she has changed her outlook on DeveloPharm from positive to negative?

APPENDIX C

EXHIBIT C1

Summary Descriptive Statistics of Survey Variables and Responses

	<i>N</i>	<i>%</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>
SCEN1 = Myer MNPI	530	100%	2.48	2	1.77
SCEN2 = Firm MNPI	530	100%	2.87	2	1.85
1. Gender	530	100%			
Male	352	66.4%			
Female	178	33.6%			
2. Age	530	100%	37.97	37	14.80
0–19	5	0.9%			
20–29	197	37.2%			
30–39	91	17.2%			
40–49	104	19.6%			
50–59	87	16.4%			
60–69	34	6.4%			
70 and Older	12	2.3%			
3. Birth Country	530	100%			
Australia	150	28.3%			
USA	110	20.8%			
United Kingdom	11	2.1%			
New Zealand	32	6.0%			
China	32	6.0%			
India	33	6.2%			
Canada	17	3.2%			
South Africa	24	4.5%			
Europe	56	10.6%			
SE Asia	27	5.1%			
Other	38	7.2%			
4. Residence Country	530	100%			
Australia	210	39.6%			
USA	128	24.2%			
United Kingdom	10	1.9%			
New Zealand	33	6.2%			
China	22	4.2%			
India	17	3.2%			
Canada	15	2.8%			
South Africa	15	2.8%			
Europe	42	7.9%			
SE Asia	17	3.2%			
Other	21	4.0%			
5. Residence Years	530	100%	10.37	11.00	2.05
0–2 Years	14	2.6%			
3–5 Years	20	3.7%			
6–10 Years	23	4.3%			
More than 10 Years	478	89.3%			
Migrant	530	100%			
Yes 0–10 Years	47	8.9%			
Yes >10 Years	84	15.8%			
No	399	75.3%			

(continued)

EXHIBIT C1 *(continued)***Summary Descriptive Statistics of Survey Variables and Responses**

		N	%	Mean	Median	Std. Dev.
6.	School Degree	530				
	<High School	0	0%			
	High School	109	20.6%			
	Some College	34	6.4%			
	Bachelor's Degree	131	24.7%			
	Graduate Degree	256	48.3%			
	Other					
7.	Religion	530	100%			
	Buddhism	22	4.2%			
	Christianity	236	44.5%			
	Hinduism	36	6.8%			
	Islam	8	1.5%			
	Judaism	9	1.7%			
	Inter/Nondenominational	8	1.5%			
	None/No Say	211	39.8%			
8.	Occupation	530	100%			
	Student	165	31.1%			
	Financial Professional	221	41.7%			
	Academic	84	15.8%			
	Retires	12	2.3%			
	Other	48	9.1%			
9.	Student	210	39.6%			
	Undergrad (Business)	145	27.4%			
	Postgrad (Business)	39	7.4%			
	Undergrad (Other)	20	3.8%			
	Postgrad (Other)	6	1.1%			
10.	Student Type	210	39.6%			
	Full Time	173	82.4%			
	Part Time	37	17.6%			
11.	Organization/Work	530	100%			
	Not Employed	66	12.5%			
	Corp./For Profit	257	48.5%			
	Education/University	122	23.0%			
	Government	15	2.8%			
	Nonprofit	22	4.2%			
	Self-Employed	48	9.1%			
12.	Professional Designation	530	100%			
	None	299	56.4%			
	CA	30	5.7%			
	CPA	23	4.3%			
	CFA	190	35.8%			
	CGMA	2	0.4%			
	CAIA	19	3.6%			
	CFP	15	2.8%			
	CIPM	21	4.0%			
	Other	14	2.6%			
	2 or More	63	11.9%			
	3 or More	17	3.2%			

(continued)

EXHIBIT C1 *(continued)***Summary Descriptive Statistics of Survey Variables and Responses**

	<i>N</i>	<i>%</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>
13. Income Currency	530	100%			
No Income	48	9.1%			
AUD	208	39.2%			
USD	126	23.8%			
NZD	31	5.8%			
CNY	3	0.6%			
EUR	26	4.9%			
GBP	9	1.7%			
CAD	13	2.5%			
ZAR	16	3.0%			
Other	50	9.4%			
14. Income Total (USD)	530	100%			
Less than \$25,000	81	15.3%			
\$25,000 – \$34,999	16	3.0%			
\$35,000 – \$49,999	27	5.1%			
\$50,000 – \$74,999	28	5.3%			
\$75,000 – \$99,999	27	5.1%			
\$100,000 – \$149,999	59	11.1%			
\$150,000 – \$199,999	55	10.4%			
\$200,000 or More	182	34.3%			
None/Unknown	55	10.4%			

APPENDIX D**EXHIBIT D1****Summary of Professional Credentials**

Credential	Parent/Sponsoring Organization	Credential Inception Year	Number of Members
Chartered Accountant	Chartered Accountants Australia – New Zealand	Current organization was formed in 2014 by merger of Institute of Chartered Accountants Australia and NZ ICA	120,000+
Certified Public Accountant	AICPA (US)	Predecessor organization founded 1887	431,000
Chartered Financial Analyst (CFA)	CFA Institute	Program established in 1963 (first exam cohort)	155,000+
Chartered Global Management Accountant	AICPA (US)	Established in 2012	150,000+
Chartered Alternative Investment Analyst (CAIA)	CAIA Association	Established in 2002	9,000+
Certified Financial Planner (CFP)	CFP Board	Exam started in 1972/73 by IAFFP	80,000+ (in USA)
Certificate in Performance Measurement	CFA Institute	CFA Institute founded “Certificate in Global Investment Performance Standards” in 2005	2,300+

APPENDIX E

EXHIBIT E1

Summary of the Ethical Component of Professional Credentials

Chartered Accountant (CA)	CA of Australia & New Zealand. Capstone modules (cap218 and cap318) include the following Module Outcome: 4. Behave ethically. By the end of the module, candidates will have developed competence in a range of business and professional accounting contexts to: <ul style="list-style-type: none"> • Discuss the relevant Code of Ethics. • Identify ethical dilemmas and apply a structured process to resolve those dilemmas. • Apply, and act in accord with, the relevant Code of Ethics.
Certified Public Accountant (CPA)	AICPA (US) includes ethics in 2 of the 4 modules/topic areas on the CPA exam: AUD: Auditing and Attestation—Ethics, Professional Responsibilities and General Principles (15%–25%) REG: Regulation—Ethics, Professional Responsibilities and Federal Tax Procedures (10%–20%)
Chartered Financial Analyst (CFA)	All CFA exams contains an ethics component—Level I (15%), Level II (10%–15%), and Level III (10%–15%). The curriculum is based on the CFA Code of Ethics and Standards of Professional Conduct, which includes Standards related to <ul style="list-style-type: none"> • Professionalism • Integrity of Capital Markets • Duties to Clients • Duties to Employers • Investment Analysis, Recommendations, and Actions • Conflicts of Interest • Responsibilities as a CFA Institute member or CFA candidate
Chartered Global Management Accountant (CGMA) (AICPA Designation)	Syllabus mentions “ethics, integrity and professionalism” under Leadership Skills in the Competency Framework, but main topic area weights do not explicitly identify any ethics component. Ethics is included in some of the subtopics; for example, mention is made under Organizational Management that it includes “Personal business ethics and the fundamental principles (Part A) of the CIMA Code of Ethics for Professional Accountants”
Chartered Alternative Investment Analyst (CAIA)	CAIA Level I exam contains 15%–20% ethics component at Level I and 10% at Level II. Ethics curriculum is modelled after CFA Institute and incorporates CFA Standards of Practice Handbook: Professional Standards and Ethics <ul style="list-style-type: none"> • Professionalism • Integrity of Capital Markets • Duties to Clients • Duties to Employers • Investment Analysis, Recommendations, and Actions • Conflicts of Interest
Certified Financial Planner (CFP)	CFP exam blueprint shows the following: A. Professional Conduct and Regulation (7%) A.1. CFP Board’s Code of Ethics and Professional Responsibility and Rules of Conduct A.2. CFP Board’s Financial Planning Practice Standards A.3. CFP Board’s Disciplinary Rules and Procedures A.4. Function, purpose, and regulation of financial institutions A.5. Financial services regulations and requirements A.6. Consumer protection laws A.7. Fiduciary
Certificate in Performance Measurement (CIPM)	Ethics constitutes 15% of the exam both at Level I and at Level II. CFA Institute program, so CIPM uses the CFA Standards of Practice Handbook.

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