

The effect of management consulting services on investor perceptions of audit quality

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ABSTRACT

At Big4 audit firms, audit fees decreased from 57% of total revenue in 2004 to 34% in 2018, while management consulting service fees increased from 11% of total revenues in 2004 to 39% in 2018. This study experimentally investigates how investors perceive this revenue mix trend. Although audit firms provide consulting services to non-audit clients, regulators have expressed concerns that a consulting-focus firm will allocate less resources and effort to audits. There is concern that investors will lose trust in audit firms that focus on consulting at the expense of auditing (Harris, 2014). This study directly addresses this concern about investor perceptions.

Forty non-professional investor participants perceived auditor competence and auditor independence to be significantly lower for consulting-focused firms as compared to audit-focused firms. Audit quality perceptions and investment likelihood were not affected. Although lack of differences could allay regulators' concerns, auditor knowledge and independence perception differences indicate the need for further investigation.

Keywords: Management consulting, audit fees, audit quality, auditor independence, investor decision-making, regulatory concerns

INTRODUCTION

For publicly traded companies, the attestation role played by public accounting firms is very relevant: the function enhances the reliability of the published financial statements and enhances the stability of the capital market system. Although the Sarbanes-Oxley Act (2002) addressed concerns about the non-audit services (NAS) that major accounting firms provided to their audit clients, new concerns have arisen about the increase in the proportion of management consulting service (MCS) revenue, along with a decrease in audit and attestation revenue, at the major international accounting firms. For instance, at the Big 4 accounting firms, at the beginning of 2018, consulting fees accounted for 38.9% of Big 4 revenue (up from 10.7% in 2004) while fees from audit and attestation accounted for 33.8% of revenue (down from 57.5% in 2004). Tax revenue has remained stable. Although MCS are not provided to audit clients, regulators from the Securities and Exchange Commission (SEC) and Public Company Accounting Oversight Board (PCAOB) have expressed concerns about the change of focus, and allocation of best resources, from auditing to consulting, that these fees may indicate. Audit firms feel that their consulting activities within an industry enhance their specialized knowledge and therefore enhance their audit function, so the trend toward a greater percentage of fees from consulting compared to auditing is an advantage.

But are investors concerned? This study contributes to the auditing and public interest literature by directly investigating how investors perceive this increasing consulting focus at Big4 audit firms by informing investing participants about the trend, regulator concerns, and audit firm perspectives, and asking subjects directly if they are concerned. Forty non-professional investors, (MBA students and other university community members) participated in the study.

While non-results might have allayed regulator concerns, actual responses indicate that investors are concerned about the trend toward consulting. The great majority (77.5%) said they would be more confident in the financial statements audited by an audit-focused firm, versus a consulting-focused firm, and were somewhat more concerned that the trend would impair rather than enhance audit effectiveness. To test this experimentally, two groups of participants were presented with a specific investment decision, with the only difference being the audit firm revenue mix (consulting focus versus audit focus). In this analysis, perceptions of the auditor's knowledge (ability to discern a financial reporting problem) and auditor's independence (objectivity, likely to disclose a problem) were lower when the audit firm had a consulting focus compared to an auditing focus. While perceptions of overall audit quality and investment likelihood were not statistically different between groups for this experiment, the perceived effects on audit quality components suggest that this trend could become an issue for a less successful firm, or in a more volatile economic environment. Thus, this study contributes to the audit and regulatory community by suggesting that the concerns expressed by regulators should not be ignored.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

In times of increasing global crises and economic uncertainty, the attestation role played by public accounting firms is very relevant. The SEC and other global corporate regulatory bodies require publicly traded companies issue audited financial statements (and internal control reports). Independent auditors perform these audits and attest that the company's reports present

the information fairly and in accordance with accounting standards. The auditor's report(s) enhances the investing public's confidence in the reported information. (Elliot and Jacobson 1998; Carmichael 1999, Kinney 1999).

During the late 1990s and early 2000s, regulators became concerned about the mix of fees received by audit firms from their publicly traded audit clients. The concern was that the same accounting firm was serving the public through attestation services while simultaneously receiving increasing NAS fees, advocating for the public company they were "independently" auditing. When the SEC passed and implemented a requirement that firms report fees paid to the independent accountant, broken down into Audit, Tax, Information Technology, and "other" (SEC, 2000), it was revealed that the largest firms' NAS fees were almost three times the audit fees paid (Weil and Tannenbaum 2001). Studies suggested that audit quality was impaired in fact and appearance by the presence of these fees. (E.g., Habib 2012, Frankel et al. 2002).

In the wake of major accounting scandals (e.g., World-Com and Enron), Congress enacted the Sarbanes Oxley Act in 2002 that severely restricted the ability of audit firms to provide NAS to their audit clients. Audit firms are restricted from providing IT, consulting, bookkeeping, internal control systems, and other NAS to their audit clients. Following the passage of the of the Sarbanes-Oxley Act, the large audit firms divested, or seriously tried to divest, the management consulting arm of their practice. After 2002, audit firm revenues generated from consulting services shrank dramatically and non-audit service fees plunged (Ciesielski and Weirich 2006) as three of the Big 4 accounting firms divested major portions of their consulting services.

Over the last 15 years the pendulum has swung back, and the Big 4 accounting firms steadily increased the proportion of their revenue from consulting services while revenue proportion from audit services has decreased, as indicated in Table 1 (Appendix). (Accounting Today, 2004-2018). Some audit firms have repurchased their former consulting practices, while other firms have purchased some high-profile consulting firms. A major difference from pre-SOX times is that the consulting is done for companies that are not audit clients. Therefore, these services do not violate the Sarbanes-Oxley Act. Most prior research on the effect of audit firm fees, auditor independence, and audit quality relates to the NAS an audit firm provided to its audit clients (See Habib, 2012 for a meta-analysis on the subject). However, even though management consulting services (MCS) are not provided to audit clients, regulators and investor protection groups have raised other reasons for concern. (Rappaport, 2013, 2012).

This time, there is concern about how major accounting firms allocate their scarce resources and effort between audit services and the more profitable and growing consulting services (Doty 2015, Verschoor 2014, Harris 2014, Lumb 2014). James Doty and Steve Harris of the PCAOB, and Arthur Levitt and others from the SEC are among those who have expressed concerns. The issue has also been addressed in mainstream media such as the Wall Street Journal (for instance see Rapoport 2012 and 2013) and Strategic Finance (see Verschoor 2014). Even the accounting profession itself (e.g. the CPA Journal) has been considering the impact of the growing consulting focus (e.g. see Doty 2015, Ciesileski & Weirich 2006, Levitt 2015). One aspect of the concern is about the allocation of resources. If an accounting firm focusses on their consulting arm, they will allocate their best effort and personnel to the consulting function, while relegating fewer resources and effort to the audit function. (Doty 2015, Verschoor 2014, Harris 2014, Levitt 2015). In addition, audit partners may have less influence within the firm to obtain such resources (Lumb 2014). With less influence, resources, and effort, audit quality, auditor knowledge, and auditor independence could be negatively impacted (Verschoor 2014, Harris

2014). Also, in a consulting focused audit firm, a client focus can affect firm culture away from the watchdog responsibility they have as auditors (Doty, 2015, Harris 2014). Harris (2014) notes that investor representatives are also concerned about the effect of a consulting focus on investor protections and audit quality.

Audit firms maintain that the industry expertise acquired through MCS improves the overall expertise of auditors and leads to improved audit quality. That is, this industry expertise benefits and supports the audit function (Lumb 2014). For example, Rapoport (2018) cites EY chairman Mark Weinberger saying that consulting provides technical and industry skills necessary for high quality audits. This is the rationale audit firms used pre-Sarbanes-Oxley when audit firms were aggressively increasing their NAS to audit clients. This argument assumes that there is sufficient intercommunication within an audit firm between the audit and consulting personnel. Doty (2015) questions this “knowledge spillover” assumption, stating that different personnel perform each function, calling the crossover benefit into question. However, it may be that investors perceive this benefit to a consulting firm focus.

Investor Perceptions & the Regulatory Environment

Regulator concerns are not only about audit quality “in fact”, but also how the investing public perceives the quality of the audit. That is, if the public does not perceive that the audit enhances the value of the financial reports, or if they consider that audit quality is negatively affected, their reliance on these statements and their investing decisions can be negatively affected. In the early 2000s, due to concerns about auditors providing NAS to audit clients, the SEC required publicly traded companies to disclose the fees they paid to their auditor for auditing and non-auditing fees (SEC, 2000, 2003). At that time, NAS fees were revealed to be over 200 percent of audit fees for a cross section of public companies (Frankel et al, 2002) and over 300 percent for Standard and Poor’s 500 firms (Weil and Tannenbaum, 2001). In the wake of these revelations, and the Enron and WorldCom scandals, a 2002 study revealed that investors’ perceptions of audit quality, auditor independence, and investment attractiveness were negatively affected by the provision of NAS to audit clients (Flaming 2008). And even though some research suggested that auditor knowledge would be enhanced due to “knowledge spillover” by the provision of NAS (Simunic 1984), investors’ perceptions of auditor knowledge were not affected by the provision of NAS (Flaming 2008).

More recent evidence suggests that investing decision-makers do care about and consider regulatory concerns in relation to audit firms and the quality of audits they provide. In addition to the papers above, Smith (2012), tested whether knowledge of two new regulatory standards (the switch from Auditing Standard 2 to Auditing Standard 5, and the proposed legal liability limitation for auditors) affected investors’ audit quality perceptions and investment decisions. He found significant reductions in audit quality perceptions in the face of each regulatory change and noticed a reduction in investment allocation following a reduction in auditor liability.

This study differs from the above studies in that investor’s perceptions gathered are about the proportion of management consulting service revenues compared to audit revenues earned by Big4 auditors. In addition, the fact that these consulting revenues are not paid by the firm’s audit clients could alleviate perceptions of an economic bond between auditor and client and mitigate the negative perceptions found earlier.

Table 1 (Appendix) illustrates how Big 4 audit firms’ revenue proportions have shifted over the last 15 years. While all Big4 firms show an increase in total revenues, the revenue

proportion from audit and attestation has continued to decrease, while their proportion of revenue from consulting has consistently increased by a much greater rate, to the point where consulting fees account for a higher percentage of revenues than auditing, both domestically and globally (Rapoport, 2018). Thus, this trend is not just a domestic concern. Tadros (2016) cites a similar trend toward consulting revenue in Australia, while the Financial Times highlighted the trend in Europe as well (Agnew, 2015).

Little research exists about this new concern over the increasing percentage of total revenue earned for MCS versus audit services and how it is perceived by investors. Would investors perceive that a focus on consulting might reduce the auditor's resources and effort, and negatively affect the quality of the audit, and thus reduce their reliance on the audit and the financial statements? Harris (2014) commented that investors would lose trust in audit firms if investors perceive that audit firms focus on consulting at the expense of auditing and perform lower quality audits. This study directly addresses this concern about investor perceptions.

Lisic et al. (2019) empirically examine the effect of increased consulting revenue on audit quality in both the pre-SOX and post-SOX period. Their findings suggest an association between higher percentages of consulting revenue and lower audit quality and lower perceptions of audit quality in the pre-SOX period. These relationships did not hold in the post-SOX period. However, Lisic et al. (2019) use an empirical proxy for market perceptions (short window earnings response coefficients), while this study directly asks actual investors what they perceive after being made aware of the trend.

Questionnaire

A consideration when investigating auditing related issues is whether individual investors are even aware enough of the issue to consider it as part of their decision process. In this study, to assess individual investor perceptions about the audit firm trend toward consulting revenue, the issue is introduced and both regulator concerns and audit firm assurances are presented uniformly to all participants¹. The questionnaire was conducted first to assure that participants were aware of the revenue mix issues when they made decisions about a particular firm and its auditor.

Following this information, all participants are asked the following questions. The first 3 questions asked for a response on a scale from 1 (no concern) to 7 (very concerned).

1. In general, does this major audit firm shift in focus from auditing to consulting concern you?

¹“over the last 10 years, consulting fees have risen at a vastly greater rate than audit fees. This has resulted in a proportional shift away from auditing, (where the firm acts as an agent for the public), toward consulting, (where the accounting firm acts on behalf of the client company”). Concern: Although accounting firms are prohibited from providing consulting services to the companies they audit, regulators are still concerned that the accounting firms' best resources will be allocated to consulting, rather than auditing, reducing the quality of the audits the accounting firms provide. On the other hand, the accounting firms themselves claim that their industry focus due to consulting helps them develop a rich understanding of audit clients' businesses and gives them the insight, skills, and resources required to address industry-specific issues and opportunities, potentially enhancing the quality of the audit.

Kahneman and Tversky (1984) show that the way a decision is framed can affect how decision-makers decide. Since the effect of the audit firm revenue trend toward consulting has been posited both positively (by audit firms) and negatively (by regulators), participants are asked separately if the trend is perceived positively (as enhancing the audit firm's effectiveness) and if it is perceived negatively (as impairing the audit firm's effectiveness).

2. In general, to what extent do you feel that an audit firm's consulting focus enhances its ability to effectively audit a particular company?
3. In general, how concerned are you that an audit firm's consulting focus impairs its ability to effectively audit a particular company?

Finally, to obtain a more decisive response to the trend toward consulting fee revenue, participants also make a definitive choice (Yes or No) whether they are more confident in financial statements if the auditing firm has an audit focus rather than a consulting focus.

4. Would you be more confident in the financial statements and information presented in your prospectus if the company you are considering is audited by a firm whose focus is auditing rather than consulting?

Experimental Manipulation

If the concerns voiced by the media and members of the accounting regulatory bodies (PCAOB, SEC) are reflected by the investing public, then awareness of the trend toward consulting could affect potential investors' perceptions of audit quality and their investment decisions. Two randomized groups saw identical financial information about the ABC Company and that the ABC Company had received a favorable audit report from their Big4 auditor XYZ. Each group saw "After hearing about the concerns and checking on the revenue and revenue percentages for XYZ audit firm, you find total audit revenue were \$31 Billion and, over the last 15 years, either the XYZ audit firm had shifted to a consulting focus (group 1) or that XYZ had maintained their audit focus (group 2). Hypotheses related to their perceptions of audit quality, audit quality components, investment likelihood, and the importance of revenue mix on the investment decision follow.

Audit Quality and Auditor Knowledge and Auditor Independence Components

We test to see if investors perceive a difference in audit quality when the audit firm has a consulting focus compared to an audit firm with an auditing focus. If investor participants view an audit done by a consulting-focused auditor differently than one by an auditing-focused firm, these differences should be reflected in investor perceptions of audit quality and their likelihood assessments of investing in a company.

However, audit quality is viewed as a combination of auditor knowledge ("ability to detect a financial reporting problem if one exists) and auditor independence, ("objectivity, lack of bias, likely to disclose a problem, if one exists) (Elliott and Jacobsen 1998; Carmichael 1999). DeAngelo (1981) supports a two-part definition, defining audit quality as the combined probability of (1) detecting a material misstatement in financial statements (a competency issue), and (2) disclosing that misstatement (an independence issue). Concerns have been voiced on both aspects of audit quality. Therefore, any effect of auditor revenue mix on audit quality perceptions would be reflected in perceptions of the two aspects of audit quality. In addition, an investors' perception of the effects of social norm theory could influence their responses.

According to social norm theory (Blay et al. 2018, Bicchieri, 2006) social norms can be initiated and supported by individuals within an organization, even subconsciously. If investors perceive these firm-wide norms to affect the auditors, even subconsciously, auditor knowledge and independence perceptions may vary between a consulting-focused audit firm versus an audit-focused firm.

Kowaleski et al (2018) tested this social norm effect, using an experimental markets methodology. They investigated whether an attitude of client cooperation within an accounting firm that provides consulting services might lead to a culture of “client cooperative behavior” that would exist whether the consulting services were provided to audit clients or to different clients. They compare audit quality (whether auditor-actors choose high or low verification options) across three situations: a baseline of audit provision only, compared to provision of audit and consulting services to the same client, compared to provision of audit and consulting to different clients. They hypothesized that a client-cooperative-social-norm might influence accounting firm members to please their audit clients, whether those clients were consulting clients or not. While their planned test did not find a difference in audit quality across service provision options, they did notice more variance in audit quality for the auditors who also provided consulting services. When disaggregating by client preference (of low- or high-quality audits) they found that providing consulting services increased auditors’ cooperation with managers’ preferences, resulting in higher (lower) audit quality when the client wanted that level of audit.

Auditor Knowledge

Related to auditor knowledge/competency, the concern expressed by regulators (e.g., the decreased audit resources and effort at a consulting focused firm) suggests that investors may perceive a consulting-focused firm’s auditors are less able to discern a problem if one exists. This perception could be exacerbated by the view that the auditor expends less effort due to audit being deemed of less value. However, if investors give weight to audit firms’ claims of increased audit expertise and technical proficiency due to consulting resources, they may perceive consulting-focused firm auditors’ knowledge to be enhanced.

H1: Participants’ perceptions of auditor knowledge (ability to discern a financial reporting problem if one exists) will be different for a company whose audit firm has a consulting-focus compared to an audit-focus.

Auditor Independence

In considering auditor independence and objectivity, the fact that the consulting work is for non-audit clients may mitigate the perceived economic bonds of consulting fees and its resulting independence impairment perceptions. On the other hand, an audit firm’s consulting focus could lead to a client-cooperative social norm within the firm, in conflict with the audit function’s responsibility to the investing public. Investors might perceive this subconscious focus on pleasing the client could pervade the audit function, even if the audit clients are not consulting clients, inhibiting the objectivity and professional skepticism that auditors are supposed to display toward audit clients in their role as public servants. Thus, there will either be no difference or lower independence perceptions when the auditor is consulting focused versus audit focused.

H2: Participants' perceptions of auditor independence (objective, unbiased, willing to disclose a problem if one exists) will be the same or lower when the audit firm has a consulting focus rather than an audit focus.

Audit Quality

If participants perceive an effect of audit firm focus on their auditor knowledge and/or auditor independence perceptions, they may perceive the quality of the audit differently when viewing an audit done by a consulting focused firm compared to an audit focused firm.

H3: Participants' perceptions of audit quality will be different when the audit firm has a consulting-focus rather than an audit-focus.

Investment Decision

Ultimately, the concern about investor perceptions of audit quality and financial statement reliability matters in how those perceptions affect actual decisions. In an attempt to see how investor's actual decisions might be affected, participants are told to assume they are planning to invest in the near future and are asked the likelihood of investing in the ABC Company. Depending on the outcome of the prior questions, decision-makers should consider the likelihood of investing differently based on the audit firm focus, their preference of an audit-focused versus a consulting-focused auditor, and how they have evaluated audit quality and its components

H4: Participant's likelihood of investing in a company will be different when the client's audit firm is consulting-focused versus audit-focused.

Importance of Revenue Mix to Investment Decision-making

Because there are so many factors used in an investment decision (financial, personal preference, etc.), participants were also asked how relevant the audit firm revenue mix information was to their investment decision. Because of the salience of the audit firm's revenue mix, participants' attitude toward audit-focus versus consulting-focus should affect its importance in their investment decision.

H5: Participants viewing a consulting-focused accounting firm will consider the importance of revenue mix differently when evaluating investment decision likelihood.

METHODOLOGY

Questionnaire

The instrument begins with a description of the audit function and the concern about rising consulting services (decreased audit revenues) at the Big4 audit firm, along with a description of regulator concerns (resource allocation) and accounting firms' response (industry focus). The instrument asks participants if this audit firm revenue shift is of concern, and if they perceive that it would enhance or impair the auditor's effectiveness.²

² The University's IRB approved the experimental materials.

Experiment

The experiment uses a 2 x 1 between-subjects design, in which participants are given basic financial information about a company (ABC) and information about the audit firm (XYZ) and its revenue mix. In the experiment, the audit firm's revenue mix is made salient to participants to see if regulators concerns are supported. All information is identical except the audit firm's revenue mix, which is either consistently audit-focused, or shifted to a consulting-focus. The percentages approximate the revenue ratios evidenced in Table 1 (Appendix).

Dependent variable

The dependent variable was the description of the audit firm's revenue mix. The two manipulations were

Consistent: The audit firm's revenue mix has not shifted over the last 15 years and remains focused on auditing: audit fees are 60% of total revenue, tax related fees are 20%, and consulting fees are 20% of total revenue.

Shifting: The audit firm's revenue mix has shifted significantly over the last 15 years, from an auditing-focus to a consulting-focus: current audit fees are 30% of total revenue, tax related fees are 20%, and consulting fees are 50% of total revenue.

Independent variables

- Auditor knowledge perceptions
- Auditor independence perceptions
- Audit quality perceptions
- Perceived likelihood of investing in ABC,
- Relevance of revenue mix in investment allocation

Procedure

Participants were invited to participate in the experiment from a pool of MBA students, faculty, and employees of a regional private university. The University's IRB approved the experimental materials. The entire potential participant pool received an email announcing a study on Investor Decision-Making and contained a request for responses from individuals with a variety of backgrounds and investment experience. The email (and announcement) included a link to the online materials, including an electronic consent form, positive and negative information about the issue of the trend toward consulting revenue at the Big4 auditing firms, and four general questions about the issue. The online form then continued with abbreviated financial information about the ABC Company and its auditor, XYZ, and questions about investment likelihood and perceptions of audit quality. Most responses were indicated on a scale of 1 -7. The last part of the online form consisted of a follow-up questionnaire that collected demographic information and manipulation checks. (See Appendix for a version of the complete questionnaire.) All participants received the same information except that the revenue mix of the XYZ auditor was different for each of two electronically randomized groups.

Participants

One hundred and nine people responded to the survey, although only 55 completed the entire survey, including the experimental manipulation³. Of these, 40 reported having investment experience, so these investor responses were used for the analysis. Of these participants, 28 had personally invested, 14 had invested through a financial advisor, and 23 through an investment fund.

DATA ANALYSIS & DISCUSSION

Means and t-tests were used to assess responses to the questionnaire, the experimental manipulations, and the manipulation checks.

Questionnaire

The questionnaire portion of the study was intended to familiarize participants with the revenue mix issue, the concerns expressed by regulators and the assurances made by the audit firms, and to assess, given the salience of the issue, whether there might be any concern. Results indicate that, for all questions, the great majority of participants expressed some level of concern, as indicated in Table 2 (Appendix). The distribution of Questions 2a and 2b suggests that participants considered both the regulator and audit firm arguments. However, participants were more concerned that effectiveness could be impaired (mean = 4.31) compared to the possible enhancement of audit effectiveness (mean = 3.68, $p = 0.03$, although this effect was small. (Cohen's $D = 0.04$). Question 3 responses indicate that 77.5% of the participants would be more confident if the audit firm focused on auditing. This agrees with Kahneman and Tversky (1979) who note that decision-makers tend to weight a loss contingency more strongly than a gain. Results from these questions suggest that, made aware of the issue, investors are concerned about the revenue trend toward consulting and would prefer audit focused auditors.

Experiment

Results of the experimental manipulation are illustrated in Table 3 (Appendix) and described below. T-test analyses were used to determine differences between the two manipulations.

Hypothesis H1 (Auditor knowledge) was supported ($p = 0.012$). That is, the perceptions of the auditor's ability to detect a problem if one exists was different (lower) for the consulting-focused audit firm (mean = 3.68, standard deviation = 0.749) than for the audit-focused firm (mean = 4.62, standard deviation = 1.359). This result implies that participants did not perceive a knowledge spillover benefit but were concerned that resource allocation and effort away from auditing to consulting could impair an auditor's ability to detect an error if one exists.

Hypothesis H2 (Auditor independence) H2 was supported ($p = 0.052$). Perceptions of auditor independence were lower when the auditor was consulting-focused (mean = 3.68, standard deviation = 0.749) compared to audit-focused (mean = 4.62, standard deviation = 1.359). This result suggests that, even though audit clients are not consulting clients, a client pleasing

³ The high number of incomplete instruments could be due to the length of the survey or the fairly complex nature of the financial information. The targeted population consisted of individuals from varying education levels and occupations.

social norm of client cooperative behavior at a consulting-focused audit firm could be perceived to impair the professional skepticism and objectivity an investor expects an auditor to display.

Hypothesis H3 (Audit quality) was not supported. Overall audit quality was not perceived differently ($p = 0.517$) when the audit firm focused on consulting (mean = 4.79, standard deviation = 1.228), rather than maintaining an audit focus (mean = 4.52, standard deviation = 1.327). This result is counter-intuitive in the light of lower perceptions of auditor knowledge and auditor independence. A possible explanation would be that the audit firm in the experimental manipulation was a Big4 audit firm, which, by definition, implies high quality audits. The 2019 Main Street Investor Survey, conducted by the Center for Audit Quality indicates that 74% of investors had confidence in the US capital markets, 79% had confidence in audited financial information, and 83% expressed confidence in public company auditors, at least in the United States, where this study was conducted. Confidence was much lower, with only 47% expressing confidence in markets outside the US. Thus, with a less successful economy, audit quality perceptions might be impacted more.

Hypothesis H4 (Investment likelihood) was not supported ($p = 0.625$). Although most participants expressed concern over the shift toward consulting and considered the consulting-focused firm less likely to detect a financial problem if one existed, and was less objective, there was no statistically significant difference in the decision to invest between groups. Consulting-focused firm participants' investment likelihood (mean = 3.58, standard deviation = 1.610) was not significantly different from the mean of those whose audit firm was audit-focused (mean = 3.85, standard deviation = 1.814). However, the ABC Company in the experiment was a profitable company in a stable market. It is possible that these other considerations, positive financial information about the ABC Company and its industry, along with the perception of a successful US economy, were enough to overcome the concerns about the auditor.

Hypothesis H5 (Revenue mix importance) was marginally supported ($p = 0.064$). Revenue mix was more relevant in the investment decision for the participants whose audit firm has maintained an auditing focus (mean = 3.48, standard deviation = 2.089) than when the audit firm was consulting-focused (mean = 2.42, standard deviation = 1.261). One logical explanation for this is confirmation bias. Confirmation bias is a tendency to weight confirmatory evidence more strongly than disconfirming evidence (see, for example, Nickerson, 1998). Since over 77% of participants favored an audit-focused audit firm in Question 4, seeing an audit-focused firm confirmed their confidence in their investment decision. The consulting-focused audit firm information disconfirmed those participants' investment choice and was therefore considered less relevant.

Manipulation checks

When participants were asked how understandable and realistic the materials were on a scale of 1-7, the mean for understandability was 5.42, and for realism was 5.75, indicating that the questions were considered both understandable and realistic. When asked to recall the auditor's audit, tax, and consulting revenues, the audit fee percentage was significantly higher for the audit-focused firm versus consulting-focused firm (6.62 vs 4.63, $p < 0.001$) and the consulting fee was significantly lower for the audit-focused vs consulting-focused firm (3.76 vs 5.76, $p < 0.001$), indicating that the experimental manipulation was successful. The tax percentages were not significantly different between groups.

LIMITATIONS & FUTURE RESEARCH

One limitation is that the study discussed an issue that is not currently apparent to the general public. For this reason, the Big4 revenue mix trend itself was made salient to the participants, as well as pro and con discussions of the issue. In less positive economic conditions this issue might be publicized more widely, and therefore considered more strongly. Recent articles in the European press (e.g. Giles 2019) criticizing Big4 auditing firms, even to the point of recommending legislation for the separation of auditing and consulting services (Giles 2019, Trentmann 2019) support the idea of increased attention to this trend.

Source credibility might also be an issue since regulators are the ones expressing concerns and accountants are the ones supporting the trend towards MCS. Participant's perceptions could be influenced by the perceived credibility of regulators versus the accounting profession. On the other hand, the Center for Audit Quality (2019) survey reports that the general public holds the accounting profession in high regard. Also, the amount of pro and con information was balanced and abbreviated to highlight the two views while minimizing information overload.

A third concern could be that all information about accounting firm revenues are provided voluntarily by the accounting firms themselves. However, this information has been made publicly available and has been distributed through a number of outlets (e.g., Accounting Today, Wall Street Journal, etc.).

Another caveat is that the participants were all non-professional investors. However, Goldman Sachs (Ro 2013) reports that households directly own 38% of the corporate equity market. When including indirect ownership, the percentage is closer to 80%. This seems a significant and relevant segment of the investing public. Further research could consider the effect on professional investor perceptions. Additionally, the regulatory concerns have been expressed on behalf of the entire investing public. And, as was seen when the Sarbanes Oxley Act was passed, it is the investing public, and even the public in general, that could be affected in more turbulent economic conditions or if any large public accounting scandals emerge. This is a limitation, but future research could extend the study to professional and institutional investors.

A more specific limitation of the study is that the concern over the accounting firm trend toward consulting was expressed in general, while the investment decision was made for a particular firm. In this experiment, the ABC Company had primarily positive financial indicators that might have overcome any potential concerns the participants had due to accounting firm revenue mix. As seen globally (Giles 2019, Trentmann 2019) in more volatile investing markets, the accounting firm trend away from auditing toward consulting services could potentially be weighted more heavily, lowering investors' confidence in the financial information they are provided. This could negatively affect investment decisions and possibly impact the capital market itself. In this study, most participants indicated they would be more confident in financial statements audited by an audit-focused accounting firm.

In general, this study suggests that the concerns expressed by non-professional investors about the auditor's knowledge and independence should not be ignored. As stated above, the ABC Company in this experiment was consistently profitable and functioned in a stable industry in a growing economy. However, we exist in a global marketplace, and concerns could be exacerbated if the company, industry, or economy was perceived to be less successful. In the 2019 Center for Audit Quality Main Street Investor Survey, while US markets were perceived positively, only 47% of investors (down from 56%) expressed confidence in capital markets

outside the United States, a sharp decrease. The difference is attributed to lack of confidence in other countries' governments and economies. Also, in other economies, concerns about the dual provision of auditing and consulting services continues to be an issue, even to the extent that the separation of consulting and audit services is being proposed (Giles 2019, Trentmann 2019). Thus, future research could assess the impact of the trend from auditing to consulting for a less successful company, in a more volatile industry, or in a foreign global market

CONCLUSIONS

This study assessed non-professional investor perceptions about the continuing trend toward consulting at the Big4 accounting firms. One consideration in conducting this study was that a complete lack of concern for audit firms' revenue mix could have assured regulators that individual investors did not perceive the major audit firm shift to consulting to be problematic. This was not the case, since general questionnaire responses clearly indicate that investors prefer audit firms that focus on auditing and have concerns that audit firm assurances only partially assuage. In the experimental study, investor participants indicated their perception of an auditor's knowledge and independence were lower when the audit was performed by a consulting-focused audit firm compared to an auditor whose firm maintained a focus on auditing.

The rise of MCS provided by the Big4 accounting firms has been a concern since 2011, and as the trend continues, regulators continue to be concerned about their effect on audit independence and audit quality, both in fact and in perception. This study is one of the first to investigate this trend and is unique in that it incorporates both survey and experimental methodologies to give a more complete analysis of whether these concerns are justified. Even though the experiment did not indicate a negative effect on the trend on the overall quality of perceptions and investment likelihood, the fact that auditor knowledge and independence perceptions were affected suggests that the effect of this trend should continue to be assessed. Investor concerns expressed in this study when considering a profitable company in a strong economy indicate a potential for a substantial negative public reaction for a less successful company, or with a global, more volatile market, or in the presence of an economic downturn.

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J B
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APPENDIX

Table 1a Big 4 revenue mix in percentages from Accounting Today (2004 – 2018)

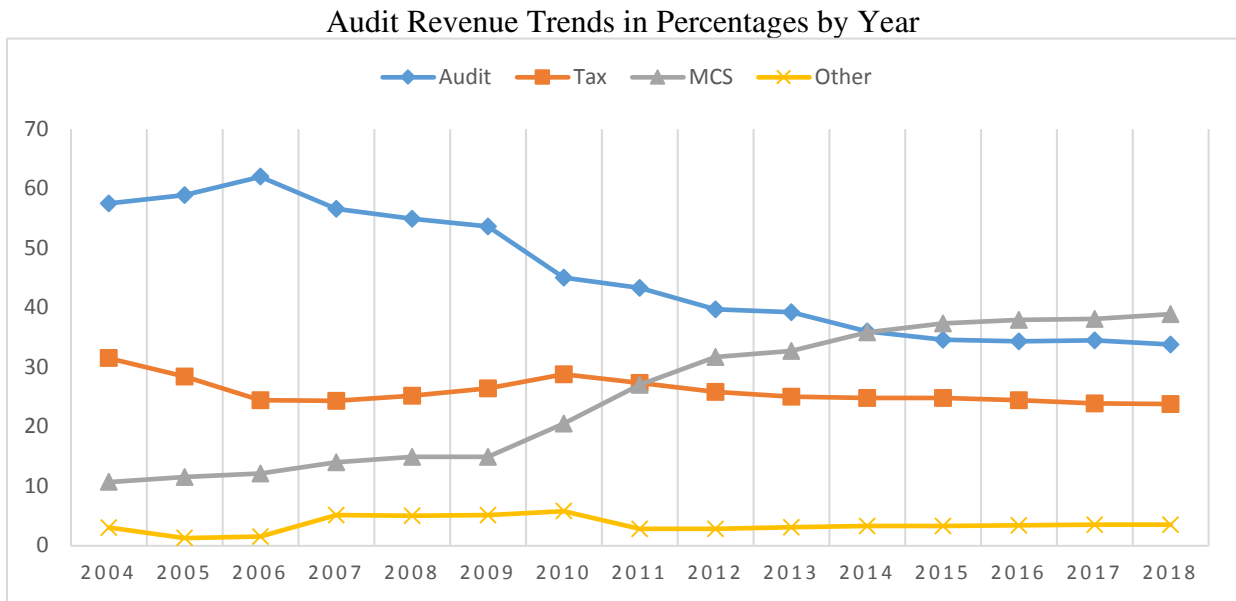
Panel 1

Year	2004	2005	2006	2007	2008	2009	2010	2011
Audit	57.5	58.9	62.0	56.6	54.9	53.6	45.0	43.3
Tax	31.5	28.4	24.4	24.3	25.2	26.4	28.8	27.3
MCS	10.7	11.5	12.1	14.0	14.9	14.9	20.5	27.0
Other	3.0	1.3	1.5	5.1	5.0	5.1	5.8	2.8

Panel 2

Year	2012	2013	2014	2015	2016	2017	2018
Audit	39.7	39.2	36.0	34.6	34.3	34.5	33.8
Tax	25.8	25.0	24.8	24.8	24.4	23.9	23.8
MCS	31.7	32.7	35.8	37.3	37.9	38.1	38.9
Other	2.8	3.1	3.3	3.3	3.4	3.5	3.5

Table 1b



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Table 2

Questionnaire Results								
Responses:	Frequency of responses							<u>mean</u>
	1	2	3	4	5	6	7	
Q1. In general, does this major audit firm shift from auditing to consulting concern you (1= no concern – 7=very concerned)	5	5	5	12	8	3	2	3.75
Q2. In general, to what extent do you feel that an audit firm's consulting focus enhances its ability to effectively audit a particular company? (1=no enhancement – 7=greatly enhanced)	3	6	8	13	6	2	2	3.68
Q3. In general, how concerned are you that an audit firm's consulting focus impairs its ability to effectively audit a particular company? (1=no concern – 7=greatly concerned)	3	4	3	10	8	9	2	4.31
Q4. Would you be more confident in the financial statements and information presented in your prospectus if the company you are considering is audited by a firm whose focus is auditing rather than consulting (1=YES and 2=NO)	YES 31 77%	NO 9 23%						

Table 3

Experiment Results

Question	Audit-Focus Mean (Standard Deviation and <i>t</i> - <i>test</i>) n=21	Consulting- Focus Mean (Standard Deviation and <i>t</i> - <i>test</i>) n=19	Sig. (df = 38)	Hypothesi s support
H1. How knowledgeable is the auditor about this company? (1=not at all to 7=totally knowledgeable)	4.62 (1.359) (2.653)	3.68 (0.749) (2.727)	P = 0.012	H1 supported
H2. How independent is the auditor from the influence of ABC's management? (1=not at all to 7=totally independent)	4.62 (1.359) (1.662)	3.95 (1.177) (1.674)	P = 0.052	H2 supported (one-tailed test)
H3. Overall quality of the XYZ's audit of the ABC company? (1=very poor to 7=very good)	4.52 (1.327) (-0.655)	4.79 (1.228) (-0.657)	P = 0.517	H3 not supported
H4. How likely are you to invest in the ABC company? (1=not at all to 7= very likely to invest)	3.85 (1.814) (0.493)	3.58 (1.610) (0.494)	P = 0.625	H4 not supported
H5. Will revenue mix of the XYZ firm affect your decision to invest in ABC? (1= not at all to 7= greatly affect)	3.48 (2.089) (1.908)	2.42 (1.261) (1.955)	P = 0.064	H5 supported

Note: Effect size is measured for H1, H2, and H5 (the supported and significant hypotheses) using Cohen's D. For H1 D = 0.857, H2 D = 0.527, and for H5 D = 0.614. All effect sizes are over 0.50 indicating at least a medium effect size for all three hypotheses, and a large effect size for H1.