

Going Big, Going Small, Strategies for Researching Audit Quality

Inaugural Lecture¹

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Abstract

My Inaugural Lecture at Maastricht University updates how archival audit research has evolved since the summary in Francis (1994) of what we then knew from archival research, and describes my own journey from “going big” and asking basic questions about the audit market and audit quality, to “going small” with a focus on smaller units of analysis (offices, partners, and engagement teams) as the key to understanding audit quality. I used to believe that audit firm differences, and differences across offices within firms, were the most important audit-related sources of variation in quality, and that differences in people and audit teams were relatively unimportant. The evidence in Cameran, Campa and Francis (2022) convinced me otherwise, and I now believe that understanding partner-led engagement teams is more important than the combined effects of audit firms and offices in studying audit quality. Audit firms are still something of a black box, and our knowledge to date has been limited to what we can publicly observe about their organizational structures. However, we cannot observe people and engagement teams beyond the identity of the engagement partner, at least not with publicly available data. To learn more means going inside the black box of audit firms, and that means getting the assistance of audit firms to help with such research. I started my career as an applied economist using publicly available data to ask basic questions about the audit market and the demand for and supply of quality-differentiated audits. As I get closer to the end of my career, I now see myself as more of a management scientist, moving inside the organization to understand the consequences for audit quality arising from the internal culture of an audit firm, the personal characteristics of the people who work in audit firms, and the behaviors within the partner-led engagement teams that result in high-quality audit outcomes. To do this research requires proprietary data from audit firms, and interaction with the professionals who work in these firms. I thank the *Foundation for Auditing Research* in the Netherlands for facilitating my access to audit firms and their staff, and for the assistance of these firms in helping me to research the organizational drivers of high-quality audits.

¹ An abridged version of this paper is to be presented as my Inaugural Lecture at Maastricht University on September 15, 2022. I thank Willem Buijink and Ann Vanstraelen for their many helpful comments and suggestions.

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Table of Contents

- 1. Prologue –Auditing, Accounting, and Audit Research**
- 2. Financial Statement Audits and the Structure of Audit Firms**
- 3. What is Audit Quality?**
- 4. A Framework for Understanding and Researching Audit Quality**
 - 4.1. Audit Inputs
 - 4.2. Audit Process
 - 4.3. Audit Firms
 - 4.4. Audit Outcomes
 - 4.5. Institutions
- 5. Audit Quality: the Empirical Evidence**
 - 5.1. Going Big: Institutions and Audit Quality
 - 5.2. Going Small: From Audit Firms to Audit Offices as the Unit of Analysis
 - 5.3. Going Even Smaller: Engagement Partners and Audit Quality
- 6. The FAR Chair**
- 7. Going Forward – Future Research**

Going Big, Going Small, Strategies for Researching Audit Quality

1. Prologue – Defining Auditing, Accounting and the Goal of Audit Research

This is my Inaugural Lecture as auditing professor at Maastricht University and holder of the *Foundation for Auditing Research* Chair. I start by briefly explaining what auditing is, how it is different from accounting, and why audit research is important. This lecture draws on my research of the past 40 years, and in many ways it also describes my personal journey as a scholar.²

The phrase “going big, going small” is a metaphor for how we frame audit research. I have used both approaches in my own research, though over time I have moved steadily toward the “going small” end of the spectrum. The broad goal in “going big” is to understand fundamental truths about auditing. For example, what is the economic value of an audit, and why are audits demanded? In contrast, “going small” views auditing in more situation-specific and localized contexts. It also poses counter-factual propositions: for example, why are audits valuable in some settings, but not others? In my own research, my early studies suggested that large audit firms do better quality audits. However, more recent research shows that this is not universally true and identifies the specific conditions in which the audits by larger audit firms may be of higher quality relative to the audits of smaller audit firms.³

Regardless of how we frame audit research, the primary goal is to understand the drivers of high-quality audits. This knowledge is important to the audit firms that produce audits so they can improve their audits, to the people who rely on audited accounting information, and to the regulatory bodies that monitor and oversee the quality of the auditing profession.

I begin by distinguishing between accounting and auditing because the two are often thought of as the same thing. Accounting is often called the language of business, and accounting systems provide basic economic information that is widely used in decision making by managers inside organizations and by outside investors and stakeholders. In contrast, an audit provides users of accounting information with independent assurance about the credibility of the information and is an important trust-building mechanism. Auditing makes possible the kind of trust needed for investors and creditors to willingly invest in and loan money to companies, which is essential for financial market development, economic growth, and prosperity (Francis, Khurana and Pereira, 2003).⁴

² Important audit research has been done by many other scholars, but this Inaugural Lecture draws mainly on my own research. As such, there is a US-centric focus in the Lecture given that much of my research is US-based.

³ Economics provides another good example of the contrast between going big versus small. The neoclassical economic model assumes that decision makers maximize utility and are risk neutral in weighting possible outcomes. This means that the prospect of a one Euro gain is weighted equally with the prospect of a one Euro loss in assessing expected utility. This is a generalizable proposition in neoclassical economic theory. However, it turns out that in many real-world decision settings, homo-economicus (economic people) are risk averse rather than risk neutral, and that they weight the risk of losses more heavily than gains in assessing the expected utility of outcomes. This is the insight from prospect theory, also called loss aversion theory, developed by Daniel Kahneman and Amos Tversky (1979). Prospect theory is a foundational work in what is now called behavioral economics, and Kahneman was awarded the Nobel Prize in economics in 2002.

⁴ The centrality of good accounting and auditing practices was recognized by the World Bank and International Monetary Fund (IMF) following the Asian financial crisis in the late 1990s. High-quality financial reporting is now understood to be a pillar of international financial architecture, and is essential to the financial stability of a country,

To be an auditor begins with a deep understanding of accounting practices.⁵ Accounting is a technology, a set of calculative practices, that measures the economic activity of an organization. Accounting numbers are a combination of relatively straightforward factual data such as the cash flows from the purchase and sale of inventory, and more complex forecasts and estimations of other items which are called “accruals.” A simple example of an accrual is for a sale made on credit, with the payment to be received at some point in the future. The sale is recognized before cash is collected, and at the end of the fiscal year the accounting system makes an accrual adjustment for the estimated amount of the firm’s uncollected credit sales that are unlikely to be collected. More complex accruals would be the calculation of depreciation and amortization, estimation of pension expense and liability for a defined benefit pension plan linked to future salaries; the required fair market value of certain assets for which there is no external market price; assessing if there is a decline in the value of a firm’s assets (asset impairments); the amount of executive compensation arising from the issuance of stock options; estimation of taxation expense and liability; estimated future warranty costs related to current-period sales, and the valuation of complex financial instruments such as derivatives.

Accrual-based earnings are a better measure of an organization’s operating performance than operating cash flows, and are more informative to investors (Dechow, 1994). However, accruals also introduce uncertainty that can potentially reduce the quality of accounting earnings. There are no black and white standards for accruals and accrual adjustments. Instead, they are the subjective judgment and estimate of managers who can have personal incentives to use these accrual estimates to “distort” or “manage” earnings numbers. Manager’s might do this to achieve their own self-serving objectives, such as meeting earnings targets for performance bonuses, or managing earnings to meet forecasted earnings targets. For this reason, the careful audit and review of accruals is where the audit can potentially have the greatest effect on the quality of audited accounting information, by providing a check on the reasonableness of managerial discretion with respect to accruals. Auditors are also now required to report on what are called “key” or “critical” audit matters in their audit report, which are areas of the audit that were especially difficult. Not surprisingly, most of these disclosures relate to accrual estimates and adjustments.

development of its financial markets and economic growth. Through its *Reports on the Observance of Standards and Codes*, and other initiatives, the World Bank has been working closely with developing countries to foster the infrastructure needed to create high-quality accounting and auditing practices (Hegarty, Gielen, and Barros, 2004).

⁵ Accounting practice is traditionally defined as having three subfields, financial, managerial and taxation accounting. My focus is on *financial accounting* which is the primary accounting information system an organization uses to record its economic activity and results in three financial statements: an income statement, an end-of-period balance sheet of assets and liabilities, and a summary of cash flows for the period. Audited financial statements are required for investors such as shareholders and creditors, as well as for other stakeholders and regulatory oversight agencies. Financial accounting systems are also used for internal organizational purposes, such as assessing the financial performance of subunits and divisions within the organization, and for setting financial targets for manager/employee performance bonuses. *Managerial accounting* can be viewed as supplement to the firm’s financial accounting system. Traditional managerial applications include the development of detailed production and costing data for manufacturing firms, the use of forward-looking budgets for planning and performance assessment, and capital budgeting decisions for long-term (plant) investments, and the analysis of corporate acquisitions and divestitures. Managerial practices also include modifications to financial accounting to better assess performance, and to use such modifications as performance targets in incentive compensation contracts with managers. *Taxation accounting* is similar to financial accounting, but it is also different because some of the rules for calculating taxable income are different than the rules and standards used for financial accounting. Further, taxation accounting can be focused on compliance, which is the preparation of tax statements for government bodies, and tax planning which involves broader strategies to structure a firm’s transactions and economic activities to reduce taxes.

The magnitude of accruals will vary from firm to firm, depending on the industry and the nature a firm's operations. Accruals can be quite small for some organizations, and very large for others. I calculated the distribution of accruals for around 6,000 US listed firms on the Compustat database for the period 2000 to 2021. For most firms, net accrual adjustments are negative in sign (expenses) and reduce earnings. The median value of accruals is 8.8 percent of revenues, with an interquartile range of 3.6 to 86.7 percent. Another way of measuring assessing accruals is their size relative to operating cash flows: the median ratio is 67%, with an inter-quartile range of 35% to 147%. Accruals are thus clearly a very large and significant component of earnings.

Lesson 1. Accruals are forecasts and estimates that improve the measurement of an organization's operating performance, but they are also large in magnitude and introduce uncertainty that potentially lowers the quality of earnings. This is where audits can have great value, by providing assurance that the accrual components of earnings are reasonable estimations.

2. Financial Statement Audits and the Structure of Audit Firms

While an auditor has deep knowledge of accounting practices, including accruals and accrual adjustments, an auditor must also have expertise unique to auditing. Auditing is the methodology of gathering evidence to determine if the accounting system of an organization produces credible information that complies with appropriate standards. Informal accounting practices are sometimes called generally accepted accounting principles (GAAP), and more specific accounting standards are the formal rules issued by the *Financial Accounting Standards Board* for US companies, and the *International Accounting Standards Board* for most other countries including the Netherlands.

The emphasis in my research and in this lecture is the audit of an organization's financial statements by an external (independent) audit firm.⁶ There are also other types of audits such as the audit of taxable income by taxation authorities. In addition, large organizations often create their own internal audit units to assess internal compliance with the firm's procedures, and to assess operational efficiencies. Other kinds of assurance activities are pervasive throughout the economy, and financial statement audits are simply one, albeit important, type of assurance for organizations and financial markets. Francis (2011) discusses examples of other assurance practices such as organic certification of food production, sustainability of forestry and fishing practices, and

⁶ Audits are not something new that regulators recently invented. Audit-like activities have been around since antiquity. The Latin root of audit is *auditus* which means to hear or listen. In the Roman empire, officials were sent out "to hear" about the economic performance of regions in the empire, and to assess the tribute payable to Rome. The modern audit and many of the legacy audit firms of today's audit profession, began in the latter 1800s as did the professional accounting bodies. For example, the American Association of Public Accountants started in 1887 (later renamed American Institute of Certified Public Accountants), the Institute of Chartered Accountants in England and Wales in 1880, and the Royal Dutch Institute of Chartered Accountants (Royal NIVRA) in 1895, which was renamed in 2013 as the Royal Dutch Professional Organization of Accountants (NBA). Audits and audit firms were largely self-regulated by the audit profession, until the current era of direct government regulation and oversight which began in 2002 in the US with creation of the *Public Company Auditing Standards Board* (PCAOB), and 2002 in the Netherlands with the creation of the *Dutch Authority for Financial Markets* (AFM).

compliance with ISO standards. Indeed, the global market for some of these assurance services is as large as that of financial statement audits.

Financial statements represent the organization's assertions that its accounting system complies with appropriate standards. An organization is asserting its recognition of accounting elements (revenues, expenses, assets, liabilities, shareholders' equity) is correct, that accounting elements are valued correctly, and that the results are reported and disclosed correctly in financial statements. Audits are guided informally by what are called generally accepted auditing standards (GAAS) and more formally by the specific standards issued by the *International Auditing and Assurance Standards Board* (IAASB), although audits are largely conducted by what might be termed a set of conventional "best practices." Audit standards require auditors to gather sufficient credible evidence to support the audit report, but just how much evidence is enough is not clearly articulated in the standards, and is ultimately the subjective assessment of each auditor.

There are two primary observable outcomes of the audit: (1) the audited financial statements of the client, including audited earnings, and (2) the auditor's report on the audited financial statements. How do auditors communicate their findings? Here are excerpts from a standard "clean" audit report for the 2020 financial statement audit of ING bank, by the Dutch practice of the international audit firm KPMG. Note the language use to describe the assurance: a true and fair view, which means compliance with appropriate financial reporting standards. The report is issued in the name of the audit firm, with the name of the primary office (Amstelveen), and signed by the engagement partner (W.G. Bakker).

Example of an Independent Auditor's Report [Excerpts]

To: The Annual General Meeting of Shareholders and the Supervisory Board of ING Groep N.V.

In our opinion:

— the accompanying consolidated financial statements **give a true and fair view** of the financial position of ING Groep N.V. as at 31 December 2020 and of its result and its cash flows for the year then ended, **in accordance with International Financial Reporting Standards** as adopted by the European Union (IFRS-EU) and with Part 9 of Book 2 of the Dutch Civil Code;

— the accompanying parent company financial statements give a true and fair view of the financial position of ING Groep N.V. as at 31 December 2020 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

We believe the audit evidence we have obtained **is sufficient** and appropriate to provide a basis for our opinion.

Amstelveen, 8 March 2021
KPMG Accountants N.V.
W.G. Bakker RA

A criticism of the audit report is that it is a simple binary pass/fail assessment that uses standardized language and conveys very little information. In response to this criticism, audit reports are now required to include a discussion of what are called key or critical audit matters, which provides a discussion on those areas of the audit (and the client's financial statements) that were especially difficult for the auditor to assess. As noted earlier, most of the critical audit matters raised by the auditor relate to the client's accruals and accrual adjustments. Current research

provides mixed evidence about the value of the expanded audit report, with little evidence the reports provide investors with new information (Lennox, Schmidt, and Thompson, 2022).

Audits of larger companies and public interest entities are primarily done by one of the large audit firms with international networks and multi-office practice locations, the so-called Big 4 firms. The audit firm Deloitte is used to illustrate the organizational structure of these firms. The firms present themselves as global organizations. For 2021, Deloitte reported global revenues of \$50.2 billion US dollars coming from offices in over 150 countries, with global employees of 345,374. Revenues came from three sources: audit and assurance services (\$10.5 billion USD), taxation services (\$8.9 billion USD), and \$31.8 billion USD in other services (risk advisory, financial advisory, and other consulting). In academic accounting circles we nostalgically still call the Big 4 accounting or audit firms, but they are really broad-based professional service firms that are focused primarily on consulting practices.⁷ Deloitte global is headquartered in London, and is collectively owned by the separate country-specific practices of Deloitte. The London office conducts no audits or other services. Rather, the headquarter function is to facilitate and monitor the quality of each of the country-specific units in Deloitte. It also has the authority to revoke the use of the Deloitte brand name by a country-specific unit. You may recall that each of the international Big 4 audit firms announced the withdrawal of their global firm from Russia following the invasion of Ukraine. The global headquarters of Big 4 firms also calculate the complex global profit-sharing arrangements among equity partners in the firms.

Despite having a global name, the audit firm is organized as a separate legal entity in each country where it practices, and must comply with the local laws and regulations of that specific country. This legal structure also insulates the global firm from litigation and thus limits legal exposure to specific countries. While there may be exchanges of partners and other professionals throughout the world, the audit report for a US company must be signed by a qualified US audit partner in the US practice, just as the audit report for a Dutch company must be signed by a qualified Dutch audit partner in the Dutch practice.

Consistent with the country-specific nature of each practice unit, the US regulator (*Public Company Accounting Oversight Board*, or PCAOB) requires the separate registration of each country practice with clients that are SEC registrants, typically foreign companies that cross-list in the US. Currently the PCAOB has registered separate Deloitte practices from 59 different countries.

Now consider the Deloitte practices in the United States and the Netherlands. These practices are organized as private limited liability corporations in each country, with ownership by the equity partners in each country. Deloitte US has offices in 97 US cities, and 2021 revenues of \$23 billion US dollars or 46 percent of global revenues. Deloitte Netherlands has offices in 16 cities, and in 2021 revenues were 1.032 billion Euros (approx. \$1.6 billion US dollars, or three percent of global revenues). The audit practice is organized as a separate legal entity.⁸ There is no public data on

⁷ There is a legitimate concern by regulators that these large international firms are focused so much on consulting growth that the development of the audit/assurance practices might be neglected which could discourage professional staff and audit partners, and could potentially diminish the quality of audits.

⁸ For legal reasons, in the Netherlands and other countries, the audit practice is typically a separate legal entity, but it is part of the larger Big 4 organization at the country level. In the Netherlands, the Deloitte audit practice is conducted

office-level revenues. However, the audit reports include the engagement office and lead engagement partner on the audit. For example, the US Seattle office of Deloitte leads the audit of Microsoft, and the current engagement partner is [Evan Gage Gregory](#). Global audit fees for Microsoft are \$52 Million (there is no detail of US fees versus other countries). In the Netherlands, the Amsterdam office of Deloitte leads the audit of Heineken, and the current audit partner is M.J. van der Vegte. Global audit fees are 10.5 million Euros, of which 3.3 million are attributed to the Dutch practice.

Lesson 2. The large audit firms are complex entities with global, national, and local office dimensions to their operations. As will be discussed later, this means that these large firms can be meaningfully studied at multiple levels of analysis.

3. What is Audit Quality?

Auditing standards imply that audits are homogenous and of acceptable quality if done in accordance with generally accepted auditing standards and the specific standards issued by IAASB. Audit standards thus imply a binary view of quality: an audit failure occurs when there is a failure to correctly apply auditing standards. This is the way audit firms and regulatory bodies like the PCAOB in the US and AFM in the Netherlands often define audit quality and audit failures.

There is, however, an important distinction between a *procedural failure* to follow audit standards, and an *outcome failure* in which the audited financial statements are misstated and the auditor inappropriately issues a clean audit report (i.e., fails to find and report a material misstatement). A procedural failure, by itself, may be a deficiency but it does not necessarily mean that there is an audit outcome failure. An audit report failure is the more critical dimension. Regulatory bodies have not been as clear as they should be in making this distinction. Regulators report statistics about the percentage of audits they desk reviewed that have “procedural” deficiencies and imply that these are audit failures. In some instances, these figures have been as high as 50 percent or more of the audits that were reviewed. These numbers are misleading though because they do not tell us about the severity of the problems or the incidence of actual audit report failures, which are very infrequent.

While the binary view of audit quality is useful, many scholars view audit quality as more of a continuum from low to high quality. Importantly, differential quality does not necessarily imply audit failures. At the low end of the quality spectrum, some audits are clearly failures. But the continuum perspective recognizes that some audits, while not necessarily failures, are nevertheless of very low quality. Research shows that less than one percent of audits are demonstrable audit failures, as evidenced by regulator investigations and litigation against auditors. While scholars have analyzed financial reporting failures (Dechow, Sloan and Sweeney, 1996; Dechow, Gu, Larson and Sloan, 2010), academic research has mainly examined the variation in quality for the other 99+ percent of audits that are not failures.

through Deloitte Accountants BV, which is a separate legal entity, but it is 100% owned by Deloitte Holding BV. Deloitte Holding BV's other subsidiaries are Deloitte Consulting BV, Deloitte Tax & Legal BV, Deloitte Risk Advisory BV, and Deloitte Financial Advisory BV.

The continuum approach to quality is best illustrated with research on the quality of audited earnings. A large body of research has looked at the association of auditor attributes with the quality of audited earnings to make inferences about audit quality. The two audit attributes that have been investigated most are audit firm size and auditor industry expertise. Theoretical work argues that audits are of higher quality when the audit firm is larger and has industry-specific expertise, and the research evidence is supportive of these arguments.

Lesson 3. Audit standards imply a binary model of quality, but the primary audit outcome – audited financial statements – are best understood as reflecting a continuum of quality.

There is an extensive literature on the development of empirical measures of earnings quality. These measures mainly focus on the discretion a firm has in making its accounting choices. Discretion arises mainly from the accruals and accrual adjustments required by accounting standards. Nissim (2022) provides a comprehensive review of the earnings quality literature. Earnings are of higher quality if they are sustainable from one period to the next (called persistence). The cash flow component of earnings is more persistent than the accrual adjustments in earnings, which reflects the transient nature of many of the accruals in earnings (Sloan, 1996). For this reason, high-accrual firms will generally have lower quality earnings, all else equal. Similarly, firms with large unexpected (abnormal) accruals are more likely to have lower earnings quality. Moreover, firms with high abnormal accruals are more likely to have subsequent restatements of earnings, and are more likely to have regulator-detected earnings misstatements (Dechow, Sloan and Sweeney, 1996; Dechow, Ge, Larson, and Sloan., 2010).

In the United States, restatements occur for around 10-15 percent of listed firms each year, with a majority of these restatements due to the misreporting of accrual adjustments. Regulator-detected earnings misstatements are less frequent (less than one percent per year), although these problems also typical revolve around a firm's accrual adjustments. If a firm's originally reported earnings are subsequently misstated, they are clearly of low quality. By implication, audits are also of low quality when a client's audited earnings are subsequently restated.

The flexibility management has with respect to accruals means that accruals can be used to "manage" the level of reported earnings, even if such earnings are not technically misstated. Managers have strong incentives to report earnings that meet benchmark targets such as analysts' earnings forecasts, or beating last year's earnings. Failure to meet these benchmarks can result in large stock price declines and can jeopardize a manager's job security. I characterize accruals as "dials" the manager can turn if a higher level of earnings is needed. Earnings that aggressively use discretionary accruals to meet benchmark targets may not necessarily be fraudulent, but such earnings are generally of lower quality, i.e., less persistent and more likely to be restated.

Earnings are also of higher quality if they give timely recognition to losses and asset impairments, which is also called conditional conservatism. As Watts (2003) explains, there is a higher standard for the accounting recognition of unrealized (paper) gains, than for unrealized losses, which leads to the adage: anticipate no gains, but anticipate all losses.

The above discussion underscores the importance of auditing. Given the discretion managers have over the calculation of earnings, independent verification by auditors is critical to the

credibility of reported earnings, and will reflect the degree of aggressiveness by the client that the auditor is comfortable with. The empirical evidence is that better auditors push their clients toward less aggressive earnings, with smaller abnormal accruals, and that such clients are less likely to meet benchmark targets, and are less likely to have a subsequent restatement of earnings.

The above discussion also implies that there is differential audit quality among audit firms, even though all auditors must comply with a common set of auditing standards. The notion that there is differential audit quality should not be controversial. In other professions such as medicine and law, practitioners are perceived to differ in quality, despite having a common certification to practice. Differential quality does not mean that some audits are failures, it just means there is variation in quality. Audit firms have incentives to develop their reputations and expertise. On the demand side, some organizations may prefer an auditor with a reputation for allowing clients to make more aggressive accounting choices, while others prefer an auditor with a reputation for more conservative (less aggressive) accounting choices.⁹ Yet other organizations simply need the formality of an audit, and any firm will do.

4. A Framework for Understanding and Researching Audit Quality

The first approach in “going small” in audit research is to recognize there is not a one single measure of audit quality. There is no Holy Grail of audit quality. Instead, audit quality is multifaceted and can be best understood by breaking it down using the framework of audit inputs, the audit process, and audit outcomes articulated in Francis (2011). The quality of an audit is potentially affected by each element of the framework.

4.1 Audit Inputs

Inputs to the audit process are people and audit testing procedures, including the technology used to support and implement testing procedures. We know very little about the people who do audits, and most audit testing procedures have evolved through “best practices” and have not been scientifically evaluated for the efficacy.

4.2 Audit Process

The audit process is the gathering and interpretation of evidence from audit testing procedures by partner-led engagement teams. In audit research, there is an extensive experimental literature that examines auditor judgment and decision making with respect to the implementation of audit testing procedures (Trotman, 2002; Nelson and Tan, 2005). Typically this research focuses on decision making by individual auditors.

⁹ Francis, Pinnuck and Watanabe (2014) report evidence that even within the Big 4 group of accounting firms, each one of Big 4 firms has its own distinct “style” which results in the earnings of their clients having a similar structure. Moreover, when a company changes auditor, its earnings become more like the new auditor’s client portfolio. Their results suggest that each firm has its own approach to the interpretation of GAAP that it imposes on its clients, and which results in earnings similarity within its portfolio. Their analysis focuses just on earnings similarity, and does not examine if there are systematic differences in earnings quality between the portfolios of each Big 4 auditor.

Inspection reports by regulators such as the PCAOB in the US, and AFM in the Netherlands, primarily focus on what they view as deficiencies in the audit process. As noted above, such procedural deficiencies do not necessarily mean there is an audit failure in which the auditor fails to issue the appropriate audit report.

4.3 Audit Firms

Audit partners and their engagements teams work in audit firms, and these-partner led engagement teams typically work out of a specific practice office, at least in some countries. Audit firms develop and prescribe testing methodologies; provide technology support to implement testing; create incentives, rewards, and punishments for auditors; and monitor individual and audit team performance through the firm's internal quality control systems. At the office level, there is evidence of inter-office differences within firms, which is suggestive that individual offices within an audit firm may have their own distinct subcultures that can also affect audit quality.

4.4 Audit Outcomes

As already noted the primary observable outcomes of an audit are the client's audited financial statements, particularly earnings, and the auditor's report on these financial statements. Audit firms and regulators have not fully embraced the idea that the quality of an audit can be inferred from the quality of the audited financial statements. This resistance is puzzling given that the explicit purpose of the audit is to express an opinion on the audited financial statements.

Francis (2011) makes an important distinction on the relation between auditing and earnings quality. Earnings quality is not a direct measure of audit quality. Rather, the audited earnings of the clients of high-quality auditors are likely to be of higher quality *as a consequence* of using a high-quality auditor. Better auditors constrain managerial aggression in the estimation of accruals and accrual adjustments: these earnings are more likely to be persistent (sustainable) and are less likely to be subsequently restated. Some research studies find that audited earnings are of higher quality, at least in the United States, when the auditor is a large audit firm and has industry expertise.

Turning to audit reports, they are issued in the name of the audit firm, with the lead engagement office identified, and signed by the engagement partner. Most audit reports are standard clean opinions, but 10 to 20 percent of reports each year are going concern opinions that raise questions about the organization's ability to survive beyond the next year. Some scholars use going concern reports as a measure of audit quality. The argument is that high-quality auditors are more likely to issue an unwanted (negative) going concern report against the objections of the client. Other scholars look at the accuracy of going concern audit reporting as a way of measuring audit quality.

Other publicly observable outcomes of auditing are external quality reviews and inspections by regulators (PCAOB, AFM), regulator-imposed sanctions (SEC), and litigation against auditors for negligent audits.¹⁰ Some additional audit outcomes are proprietary and cannot be publicly

¹⁰ Audit report lag (days after year end when the audit report is issued) is used by some scholars as a measure of quality, the idea being that longer lags suggest lower quality. The problem is that quality might actually be improved if auditors take more time to resolve problematic issues. Other researchers use audit report lag as a measure of

observed such as the audit workpapers, engagement hours, internal quality reviews, and audit fees, although fees are now publicly disclosed in most countries.

4.5 Institutions

Institutions are important because they define an auditor's responsibilities. Institutions regulate both individual auditors and audit firms, and punish misconduct through regulator-imposed sanctions. Audit firm regulators like AFM and PCAOB conduct inspections (desk reviews) that focus on (1) the audit testing process for a sample of engagements that are desk reviewed, and (2) a more holistic assessment of a firm's quality control procedures to ensure a firm has a culture that supports the production of high-quality audits. Other important institutions include licensing bodies and professional societies, and the legal system which defines the ability to sue the auditor for negligence and fraud. Research to date suggests that the ability to sue an auditor is a strong institutional mechanism that incentivizes high-quality audits.

Lesson 4: Audit quality is not a singular measurement, and can be meaningfully studied at multiple levels. Audits are of higher quality when done by (1) competent people, (2) who apply rigorous testing procedures, (3) who work in effective partner-led engagement teams, (4) are empowered by the organizational culture of their firms and offices to produce high-quality audits, and (5) who work in regulatory environments that encourage high quality and punish low quality.

This is not to suggest that all of the elements in the framework are of equal importance in explaining the variation in audit quality. The framework begins with micro-level inputs and ends with a macro-level focus on audit firms and institutions. However, for some time I have believed that importance runs in the opposite direction, that is, from institutions down to people and testing procedures. As a thought experiment, if we could look at all global audits, I would predict that the most important factor in explaining audit quality is having strong institutions in a country that create incentives for high-quality audits and punishment for low-quality audits. In terms of auditor-related factors, I view audit firms as the most important factor, with less importance for inter-office variation, and that differences in people and testing procedures are relatively unimportant in explaining the variation in audit quality. I still believe institutions are the most important overall driver of audit quality, but I have changed my view on the ordering of the relative importance of auditor-related factors and will return to this topic near the end of the presentation.

5. Audit Quality: the Empirical Evidence

5.1 Going Big: Institutions and Audit Quality

The goal of institutional research is to identify specific institutional features that are the fundamental drivers of audit quality around the world. There are two empirical strategies for conducting institutional research. First, since institutions differ across countries, one can compare differences across countries to identify specific institutional features are associated with higher quality audits. Some of the characteristics that have been examined include the country's legal

efficiency. Again, because longer audit report lags can occur for a number of reasons, it is very difficult to interpret what they mean.

regime (common law versus code law), the strength of enforcement in a country and the power of regulators, specific corporate governance mechanisms that protect creditor rights and shareholder rights, including the ability to sue companies and their directors. Collectively, these institutional features are sometimes referred to as the protection of investor rights, or, more simply, investor protection. There has also been research on more audit-specific institutions, such as the ability to sue auditors for negligence, and the implementation of inspection regimes that provide a review and oversight of auditors. For example, Carson, Lamoreaux, Simnett, Thuerheimer and Vanstraelen (2021) show that the country-level adoption of auditor inspection regimes around the world has generally had a significant positive effect on the quality of audits.

A challenge with cross-country institutional research is that causality is difficult to isolate. For example, we have observed empirically that audits are of higher quality in common law countries like the US and UK which give greater protection to investors. However, in common law countries there are also likely to be concurrently high-quality accounting standards and a strong regulatory oversight body such as the Securities and Exchange Commission in the US, and the Financial Reporting Council in the UK. In this case, what is it that drives audit quality? Is it common law legal regimes, or high-quality standards, or a strong regulator/monitor? More generally, the country-level metrics tend to be rather crude and may therefore have low power in explaining subtle cross-country differences in audit quality.

The second research approach is a cleaner design and identifies an institutional change within a country and conducts a classic pre-post analysis of the effect the change. Causality is more readily identifiable, but the limitation of this approach is that there are relative few instances of major institutional changes within a country, and when such changes do occur there may be multiple dimensions that make audit quality inferences difficult. For example, Sarbanes Oxley (SOX) in the US in 2002 created new audit requirements such as the auditor being formally appointed by the Audit Committee of the Board of Directors (subject to shareholder ratification), and mandating a separate internal control report. But SOX also made managers explicitly responsible for financial reporting quality and imposed treble damages and potential criminal charges for misleading financial reporting. So, were higher quality post-SOX audits due to the auditor's incentives for high-quality audits, or the incentives of managers and directors for high-quality financial reporting?

Examples of Comparative Cross-Country Analysis of Institutional Differences

Francis, Khurana, Martin and Pereira (2011) use World Bank data on private companies from 62 countries to investigate the relative importance of a set of country-level institutional variables versus a set of firm-specific variables in explaining voluntary audits by private entities. They find that each set of variables is significant over and above the other (suggesting equal importance). However, there is also evidence of a substitution effect: firm variables become relatively more important in countries with weaker institutions. The implication is that when institutions are weak, then firm-specific factors become relatively more important in explaining voluntary audits.

Francis, Khurana and Pereira (2003) examine publicly listed companies from 31 countries to study how a country's investor protection (IP) regime affects the quality of auditing and financial reporting, and the relation of accounting/auditing to a country's financial economic development.

They find that financial accounting is of higher quality in countries with stronger IP regimes, and that the large international audit firms have bigger market shares in these countries, implying higher quality audits. Thus, IP is associated with both high-quality accounting and auditing. They also find that financial market development is greater in countries with higher quality accounting/auditing, but only when there is concurrently strong IP. The implication is that high quality accounting and auditing alone does not facilitate a country's financial development, suggesting that IP and accounting/auditing quality are complements to each other rather than substitutes.

Francis, Michas and Seavey (2013) investigate how a country's audit market structure affects the quality of audits, and asks if audit market concentration harms audit quality? This is a concern of regulators around the world. Francis et al. (2013) find that audit quality increases when the overall market share held by large audit firms is greater. In addition, audit quality of smaller audit firms is relatively better when the large firms are more dominant, suggesting that smaller firms must compete on higher quality in these countries. They also find that audit quality decreases when industry-specific market shares are more concentrated among one or two of the Big 4 firms. There are two important implications. First, contrary to the concerns of regulators, market concentration by large audit firms does not harm quality and actually seems to improve it. However, industry-specific market concentration appears to harm audit quality, possibly due to less competition.

Examples of Institutional Changes Within a Country

Francis and Krishnan (2002) investigate how institutional changes in the auditor's legal liability exposure affect an audit firm's risk-management strategies. They examine the *Private Securities Litigation Reform Act of 1995* (PSLRA), which reduced the auditor's legal liability in the United States under Federal securities laws. Pre-PSLRA, when litigation exposure was greater, their evidence suggests auditors screened out riskier clients and issued more going concern audit reports as protective measures to manage their litigation exposure. Post-PSLRA the opposite occurred. The implication is that litigation exposure affects auditors' incentives to produce high-quality audits, with a reduction in quality – fewer going concern reports – after litigation exposure was reduced. Contrary to what audit firms might want to hear, the evidence is suggestive that legal liability exposure is an important driver of audit quality.

Francis and Wang (2005) investigate if mandatory audit fee disclosures in the US, beginning in 2002, influenced pricing in the audit market? They find that public fee disclosures were informative. Post-disclosure, audit pricing had more precision as evidenced by less cross-sectional variation in fees. They also find evidence of post-disclosure fee adjustments, with downward (upward) adjustments for firms with abnormally high (low) pre-disclosure fees, and some evidence of an increase in auditor switching by firms with abnormally high audit fees. Their findings show that the public disclosure of audit fees improved the precision of audit pricing, and affected audit-client matching.

A practical limitation of institutional research is the lack of good data for both cross-country and within-country research. At the country level, we rely on broad metrics to capture the institutional differences. For example, a country's legal regime (common law versus code law) is one of the most consistently significant institutional variables in cross-country research in

accounting and financial economics. But the metric does not capture the details of exactly what it is about a country's legal regime that is important and drives the protection of investors and leads to better audits. There is also a lack of good data surrounding institutional changes within a country because such changes occur relatively infrequently.

Lesson 5. Institutions may be the most important global driver of high-quality audits, but it has been a difficult area to research due to the lack of detailed institutional data. For this reason audit research has made relatively slow progress in understanding how specific institutions affect audit quality, so there is important work to be done.

Francis and Wang (2008) investigate if large audit firms behave differently in different countries? More specifically, how does a country's investor protection (IP) regime affect the quality of audited earnings? The large audit firms talk about themselves as if they are global businesses, but audits are undertaken by country-specific units that operate in the unique institutional setting of each country. The null hypothesis is that audits do not differ in quality across countries. Francis and Wang test this hypothesis for a sample of audits of listed companies from 62 countries, and test several proxies for the institutions in a country that protect investors and which incentivize high-quality audits. They examine the quality of audited earnings for clients of larger auditors, compared to the clients of smaller auditors and find the following. For clients of larger auditors, the quality of audited earnings is increasing in the strength of a country's institutions that protect investors. For clients of smaller auditors there are no significant differences across IP regimes. In countries with very weak institutions audited earnings are of similar (low) quality irrespective of the auditor, which is consistent with the evidence from some countries that the large firms do not appear to do better audits than other firms. The implication is that large-firm audit quality is not globally universal, but is conditional on the specific incentives created by a country's institutions and investor protection regime.

Lesson 6. Prior cross-country financial accounting research shows that earnings quality improves as investor protection regimes become stronger. What Francis and Wang (2008) demonstrate is the important role auditing plays in high-quality financial reporting, and that the conclusions from prior research are most likely driven by sub-samples of companies audited by the large international audit firms. Earnings quality does not universally improve with stronger investor protection, per se; rather, earnings quality is mediated by auditing and the institutional incentives an auditor has to produce high-quality audits.

5.2 Going Small: From Audit Firms to Audit Offices as the Unit of Analysis

Audit Firm Differentiation: Large versus Small Audit firms

Empirically, larger audit firms appear to provide a better-quality audit relative to smaller audit firms, as evidenced by that fact that they charge higher audit fees (Francis, 1984), and their clients have higher quality audited earnings (Francis, Maydew and Sparks 1999). These findings imply that there is a market for differential audit quality that is supplied by larger audit firms.

What are the economic conditions that give rise to the demand for and supply of differential audit quality? Two theories from financial economics can explain the demand for differential audit quality. Agency theory posits that the demand for audit quality is increasing in an entity's agency costs. Agency costs arise from the separation of ownership and management, in which managers may not necessarily behave in the best interests of the owners, but the owners are unable to directly observe managerial behavior (Watts, 2003). The role of audited financial statements is to provide independent third-party assurance to owners that managers have behaved appropriately. Another agency cost arises from the use of external debt, where debtholders are concerned with the security of their principal and are fearful that management may engage in asset substitution and other actions that favor shareholders to the detriment of debtholders. Here the role of audited financial statements is to provide independent assurance to debtholders that managers have behaved appropriately with respect to creditor rights. Audits are thus important to debtholders, as well to equity investors, in mitigating agency costs.¹¹

Agency costs are an abstract concept and empirically difficult to measure. Francis and Wilson (1988) and DeFond (1992) use proxies for the agency problem such as stock ownership dispersion, ownership held by managers, the use of accounting numbers in determining managerial bonuses, and the level of external debt financing. These two seminal studies show that the demand for putatively higher quality "large firm" audits is increasing in an organization's agency costs.

The other theory that explains the demand for differential audit quality is adverse selection. Adverse selection arises when there is information asymmetry between two parties that allows the better-informed party (with the information) to take advantage of the other party. The classic example is the used car market, or what has been called the market for lemons (Akerlof, 1970). While agency theory examines the problem of hidden action by managers, adverse selection addresses the problem of hidden information in which managers or insiders are better informed than outsiders. In the extreme, if information asymmetry is too great, markets will collapse. The role of audited financial statements is to mitigate the problem of hidden information, prevent market collapse, and reduce information uncertainty to a tolerable level between managers of an organization and outside stakeholders.

In a test of adverse selection, Francis, Maydew and Sparks (1999) show that the demand for large-firm audits is directly related to the uncertainty of a firm's accounting information. Information uncertainty is increasing in a firm's accounting accruals, and they find that the demand for large-firm audits is increasing in the level of accruals. Francis et al. (1999) also show the effect of a firm having a large auditor. The level of a firm's unexpected or abnormal accruals is lower, all else equal, when there is a large auditor. In other words, the potential information uncertainty arising from accruals creates the demand for high quality (large firm) auditors, but the use of a high-quality auditor has the effect of reducing the firm's level of abnormal accruals.

In related research, Francis and Krishnan (1999) show that the information uncertainty created by high levels of accruals leads auditors to report more conservatively by issuing more going concern modified audit reports, all else equal. A closer analysis of the data shows that this is true

¹¹ Consistent with this, Bandyopadhyay and Francis (2005) document the importance of audits in bank lending by showing that private bank loans to small business are more likely to be made when there is an audit, and that interest rates are lower compared to loans made with no accompanying audit.

only for large audit firms, which is another indication that large audit firms are the drivers of high-quality audits, at least in the US audit market.

Differentiation Among Large Audit firms: the Emergence of Industry Specialization

Beginning in the late 1980s, audit firms began to emphasize their industry expertise as a marketing strategy in response to the deregulation of many of the commercial prohibitions on marketing and direct client solicitation. Francis, Craswell and Taylor (1995) show that Australian audit firms with larger industry market shares also have larger audit fees, reflecting an industry premium. DeFond, Francis and Wong (2000) find similar results in Hong Kong. Higher fees imply higher quality audits, and Balsam, Krishnan and Yang (1992) report evidence consistent with industry leaders providing high-quality audits as reflected by higher quality audited earnings.

Does large-firm audit quality have positive effects beyond improving the quality of the audited financial statements? Feng, Francis, Shen and Taylor (2023) investigate this question by examining the voluntarily disclosure of non-GAAP performance measures. The rationale for non-GAAP disclosure is that GAAP requirements can distort a firm's true economic performance, and so adjustments are made to GAAP earnings to (arguably) develop a better measure of sustainable earnings. There has been global growth in non-GAAP reporting as a supplement to the GAAP-audited financial statements, with most listed firms around the world now doing this. Regulators have expressed concerns that such disclosures can mislead investors, and there have been suggestions that auditors should be required to audit such disclosures. Feng et al. (2023) examine non-GAAP disclosures by US and Australian companies, and find that the quality of these disclosures is better for companies with Big 4 auditors and auditors with greater industry expertise. Their results suggest that these high-quality auditors can restrain companies from aggressive non-GAAP reporting, in the same way that high-quality auditors restrain their clients from aggressive earnings management with respect to GAAP reporting.

Rethinking Audit Firms as a Collection of Semi-Autonomous Offices, and Audit Markets as Local City-Specific Markets

Industry expertise was initially conceptualized as applicable to all audits of an accounting firm in those industries where it had a dominant national market share. Francis, Stokes and Anderson (1999) examine US data and document that an audit firm's industry leadership is typically driven by a small number of offices with large numbers of clients in a particular industry, and that most other offices have very few clients in that industry. Another important insight from their paper was the realization that the lead engagement office on an audit is disclosed in the audit report. This disclosure makes it possible to construct office-level client portfolios, and to re-think audit markets as city-specific markets rather than a single national-level market

When we study audit firms, we implicitly treat the audit market as if it is a national market. However, when we study individual offices, we implicitly treat the audit market as if it is a city-specific market. This is a reasonable assumption given that over 70 percent of audit engagements are done by offices in the same geographical locale as the client's headquarters, at least this is the case in the US audit market.

Lesson 7. In some countries, such as the United States, audit markets may be better understood and researched as city-specific local markets.

This re-thinking of the nature of the audit firm begs the question of whether an audit firm can build industry expertise in one office where it has many clients in an industry, and then effectively share it with other offices (with less experience in the industry) through knowledge sharing practices. Ferguson, Francis and Stokes (2003) examine this question with Australian data, Francis, Reichelt and Wang (2005) with US data, and Basioudis and Francis (2007) with UK data. These three studies all show that national-level aggregate measure of industry expertise is driven by those individual offices that are the dominant suppliers in local city-specific audit markets. Their evidence also suggests that knowledge transfers do not seem to occur, that local expertise is what matters most, and reinforces the view that audit markets are better understood as local city-specific markets.

Francis, Mehta and Zhao (2017) explore the fragility of city-specific audit markets. They show that when an office gains a major industry client, the office is likely to become the new industry leader in that market, while an office that loses a major client loses its industry leadership. They also show that offices gaining a major industry client can charge higher fees for same-industry clients, reflecting a reputation premium for industry leadership, while offices losing a major client charge lower fees to retain their same-industry clients. These reputation shocks last for up to the three years. Finally, gaining or losing a major client also creates a shock to the capacity of an audit office and its ability to do high-quality audits. The evidence is that offices gaining (losing) a major client subsequently have lower (higher) audit quality on same-industry clients. An office's resources are strained when gaining a significant new client, while offices losing clients have more resources available to conduct high-quality audits. Their study illustrates the dynamic nature of city-specific audit markets as auditor reputations ebb and flow along with the office's capacity to do high-quality audits.

The research literature up to this point has viewed an audit office as being industry experts in some industries, but not others. In other words, there was not an overall single office-level measure of industry expertise, per se. Rather expertise was a function of an office's leadership in a particular industry, although Francis and Michas (2013) report that around 70 percent of audits in an office are in those industries where the office is the city leader.

Two important studies show that the quality effects of large audit firms are driven by the largest offices of Big 4 firms. Francis and Yu (2009) show that larger Big 4 offices do better audits, and that industry expertise has no effect on earnings quality after controlling for audit office size. In their study, audit quality was inferred from the client's abnormal accruals, earnings management to meet earnings benchmarks, and the propensity to issue going concern reports. The second study by Francis, Michas and Yu (2013) examines Big 4 client restatements and finds that restatements occur less frequently for clients audited by larger offices. Again, industry expertise has no effect after controlling for office size. They also find that there is no difference in the quality of non-Big 4 and Big 4 audits, except for the largest quartile of Big 4 office size (those offices with 31 or more listed clients). In short, a lot of what we have attributed to audit firm size (Big 4) and to Big 4 industry expertise, at least in the United States, is better described as a "large Big 4 office"

phenomenon. Empirically, most Big 4 audits are indistinguishable empirically from those of non-Big 4 firms. Only those audits by the very largest Big 4 offices are demonstrably of higher quality.

We do not currently understand what it is about large offices that leads to better audits. Francis and Yu (2009) speculate that larger offices have deeper labor pools of partners and staff with industry expertise which makes it easier to assemble engagement teams with appropriate industry expertise. The analysis in Beck, Francis, and Gunn (2018) suggests an additional explanation. They draw on the urban economics literature which argues and shows that labor is more productive in high-human capital cities due to knowledge spillovers and the self-selection of talented people to high-human capital cities. They do not study large audit offices, per se, but they do find that audits are of higher quality in cities with greater human capital. So, if the largest Big 4 offices in the US are in high-human capital cities such as New York, Boston, and San Francisco, where labor in general is more talented and productive, then such offices might be capable of higher quality audits. If true, then it's not necessarily office size, per se, that matters, so much as a people story, which links to issues I discuss at the end of the lecture.

The office-specific nature of auditor expertise is explored in a different way by Francis and Michas (2013). They examine if the presence of an audit failure in an office (based on an SEC action) is indicative of a contagion of other low-quality audits in the office, or alternatively, if an audit failure is an isolated event in the office. Their evidence shows that offices with an audit failure, also have other low-quality audits for up to five years after the audit failure, and that there is also a higher likelihood of having additional audit failures in subsequent years. Importantly, their results also show that there is no contagion in larger Big 4 offices, defined as the upper quartile of Big 4 office size. In other words, an audit failure is more likely to be an isolated case for a large office, with no evidence of contagion, whereas for other offices, an audit failure is indicative of other concurrent low-quality audits in the office. Again, the evidence supports that differential Big 4 audit quality is driven by large offices.

Another benefit of office-level analyses can be seen in Reynolds and Francis (2000). In the 1990s, US regulators became concerned that auditors are lax in dealing with their large and important clients. If one looks at the overall US audit market, no single client stands out as being particularly large in an audit firm's client portfolio, and there is no evidence that large clients are treated leniently by auditors. In contrast, when examining individual offices, the largest client in an office can represent as much as 30 percent or more of the office's audit revenues. However, contrary to the concern of regulators, Reynolds and Francis (2000) show that large clients in offices are not treated leniently but are in fact treated conservatively as evidenced by smaller abnormal accruals and more going concern audit reports. Audit offices appear to have incentives to be especially careful in the audits of their larger clients and to report more conservatively. This research also shows the importance of rigorously examining the claims of regulators about audit quality, just as it is important to objectively examine the claims made by audit firms about quality.

What have we learned from going smaller in firm-level and office-level research? On average large audit firms appear to do higher quality audits, and large firms with greater industry expertise appear to do even higher quality audits. However, when we look more closely at the data for individual offices, we see that the so-called large-firm effect and industry-expertise effect are driven by the largest quartile of Big 4 offices. In contrast, if we look at the smallest 75 percent of

Big 4 offices, their audits look very similar to that of other audit firms. The shift to an office-level unit of analysis also asks the question, are knowledge sharing practices sufficient for a multilocation audit firm deliver consistent audit quality across offices. The evidence to date is clearly no.

Lesson 8. Initial research suggested that audits are of higher quality when done by Big 4 firms, and by Big 4 firms with greater industry expertise. Subsequent research has shown that the Big 4 results do not hold across countries, and that Big 4 industry expertise is more salient at the office-specific level. “Going small” in audit research has resulted in a more nuanced understanding of audit quality.

Lesson 9. Going even smaller in focus has shown that the presumed superiority of Big 4 audits is driven by the largest offices of the Big 4 firms, at least in the United States. In contrast, for audits by other Big 4 offices there are no differences in quality compared to non-Big 4 firms. However, there is a need for research to understand what it is about the culture and human capital of these large offices that results in better quality audit outcomes.

From a policy viewpoint, these findings suggest it might be best if smaller offices were prohibited from auditing listed public companies, as such companies have more complexity and require greater experience and expertise from the auditor than might exist in smaller audit offices. Such a policy would require larger offices to audit more distant (non-local clients). However, we do not know if this would result in better audits, and research is needed on this very important policy question.

A recent study by Francis, Golshan and Hallman (2022) provides some initial evidence that non-local audits may not be a good idea because they are potentially of lower quality. Francis et al. (2022) use the new partner disclosure data in the US to investigate the following question: Does a partner’s geographical distance from a client influence audit quality? It turns out that about one-third of the audits of US listed companies have a partner who lives more than 100 kilometers from the client. The emergence of distant (non-local) partners is the consequence of two developments: industry specialization by partners, and the mandatory rotation of audit partners every five years. The combined effect is that an office-based partner may run out of local clients in his or her industry, and must service more distant clients. The alternative is to move closer to a client, but moving is expensive and personally disruptive. What drives the choice of a non-local partner? While a local partner is generally preferred, a non-local partner becomes more likely if the client is (1) a large firm in the S&P 500, (2) located in areas with fewer local partners, (3) in an industry with complex accounting rules, and (4) geographically dispersed.

What are the consequences of having a distant partner? After controlling for the engagement office distance from the client, audit quality is decreasing in partner distance as evidenced by: (1) a higher probability of a misstatement; (2) larger abnormal accruals, and (2) more earnings management behavior to meet or beat analysts’ consensus earnings forecasts (a measure of aggressive earnings management). However, the adverse effect of distance is mitigated if the partner has access to a nonstop direct flight to the client. Anecdotally, a Big 4 partner in St. Louis who audits a client in Tampa told me it is easier to get to the Tampa client (on a nonstop flight) than to some of the partner’s other “local” clients that require a long commute. Talking to

accounting professionals is important. In fact, the idea for this project began over 10 years ago when I had dinner with an audit partner who lamented that he did not expect to be travelling so much at this stage of his career.

5.3 Going Even Smaller: Engagement Partners and Audit Quality

The next step in the evolution of audit quality research examines how differences in engagement partners affect audit outcomes. An emphasis on partners as the focal point is made possible by the newly emergent disclosures (around the world) of the audit engagement signing partner (Lennox and Wu, 2018). Most partner research to date has focused on publicly observable partner demographics such as age, experience, busyness and gender, and there is some evidence that partner differences do matter (e.g., Knechel, Vanstraelen and Zerni, 2015).

Cameron, Campa, and Francis (2022) use UK data to extend the analysis of Chinese audit firms in Gul, Wu and Yang (2013). Cameron et al. (2022) examine the relative explanatory power of audit firms, audit offices, and audit partners in explaining audit outcomes. The audit outcomes in their study are abnormal accruals, restatements, and going concern audit opinions. Higher quality audits are evidenced by clients with smaller accruals, fewer restatements, and more going concern opinions. Client control variables are the dominant set of regressors and accounts for about two-thirds of the explained variance in the models. Their other results are startling. Audit partners are the next most important set of regressors, dominating both audit firms and offices, and represent around 25 percent of the explained variance in the three models. In contrast, engagement offices account for only 6–9 percent of the explained variance, and audit firms only 1–4 percent of explained variance. They also examine partner demographic variables like age, experience, busyness, and gender, and find that once the effects of audit firms and audit offices are controlled for, there are no significant partner variables. This is important because prior studies that investigate partner variables have not typically controlled for the concurrent effects of both audit firms and offices.

Lesson 10. Partner effects are important in explaining differences in audit quality. The relative importance of audit-related factors in explaining audit outcomes is the opposite of what I previously believed: that is, partner-led engagement teams (people and testing procedures) may be the most important factor – not the least important – and appears to dominate both inter-firm differences and inter-office differences in explaining audit outcomes. But we do not know what it is about partners (and their audit teams) that matters and how it affects quality, and this is the focus of my current research program as FAR chair.

A different kind of partner study is the “Godfather” paper by Bianchi, Francis, Mara and Pecchiari (2022). They use a proprietary criminal database of the Italian government to study if an accountant’s alleged Mafia connections are associated with the quality of the accountant’s work as an external monitor for private Italian companies. Private Italian companies are required to have a three-member Board of Statutory Auditors, BSA or “Collegio Sindacale.” Surprisingly, Bianchi et al. (2022) find that BSA’s with one or more accountants having Mafia connections are higher quality monitors. All else equal the firms that are serviced by accountants with Mafia connections have higher quality audited financial statements and fewer tax restatements compared to a control group of firms serviced by accountants with no Mafia connections. Their findings provide

evidence that the Mafia can hire “good” accountants, despite the downside risk to the accountant of having a Mafia association. The results are, perhaps, not surprising given that the Mafia is deeply embedded in Italian culture. Still, in terms of social welfare, it is disheartening the Mafia can hire seemingly good accountants who appear to suffer no adverse reputation effects from their Mafia ties. An important implication of the study is that policing of the Mafia and other criminal organizations should also focus on professionals such as accountants, lawyers and investment advisors who implicitly aid and abet criminal activities by working with these organizations.

6. The FAR Chair

I used to tell my PhD students that as an empiricist I am running out of data as my research program has “gone small” with a shift in focus from firms and offices to engagement partners. The public disclosures on partners are limited, and the evidence in Cameran et al. (2022) suggests that something else is driving partner effects. We know that partner differences are important, but demographic variables explain very little of the inter-partner variation in audit outcomes.

In 2018, I was approached by Ann Vanstraelen and Roger Meuwissen at Maastricht University about the FAR Chair. It was an appealing opportunity to move inside the black box of the audit firm, to learn more about the internal structures of audit firms and the people who do audits, and to learn what it is about partners and the internal management of the audit team that really matters. A unique feature of the FAR Chair, and the other research projects being supported by the *Foundation*, is the unprecedented access to internal propriety audit firm data and to audit professionals for experiments, field studies and surveys. The FAR research initiative has revolutionized audit research, made possible exciting and important research projects that simply could not be done before, and has supported research teams assembled from the best audit scholars around the world.

More personally, I’ve been coming to Maastricht for nearly 30 years, coming first in 1994 at the invitation of Roger Meuwissen and Steven Maijoor. My wife, Candis, and I have made many enjoyable visits over the years to this lovely city.

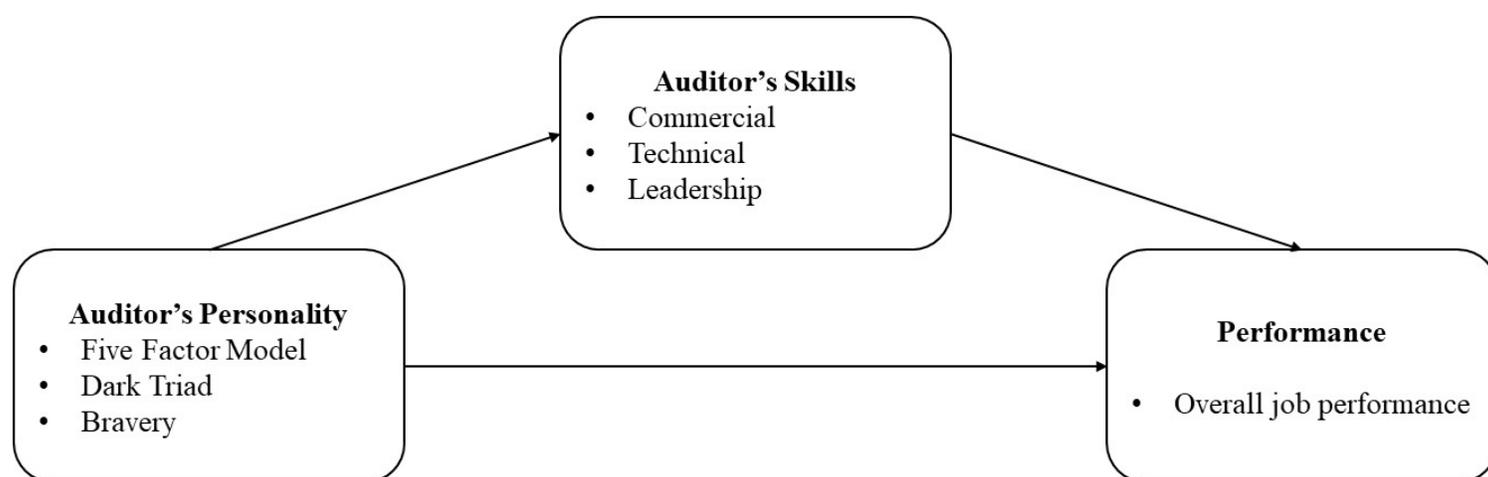
FAR (2019): What Makes Audit Partners and their Engagement Teams Successful?

My first FAR project examines personal characteristics – personality traits, competencies and leadership behaviors – of the partners and managers who lead audit teams. The broad goal is to examine if audit quality is affected by differences in personal characteristics. The project consists of three separate surveys, plus archival data from audit firms, and examines several specific questions. We have survey data for 1,608 Dutch partners and managers in the 10 largest Dutch audit firms that support FAR. Here are some of the questions we are examining. Descriptively, what are the personality traits of auditors? Are people similar across firms? Across ranks? How is personality related to competencies and leadership behaviors? The organizational behavior (OB) literature documents that personality can affect job performance. How is personality related to performance assessment in audit firms? At the engagement level, how are specific partner-manager dyads formed for engagements? Do partners choose managers or is it done by the firm? Is there homophily? Are partners and managers similar or different? How do these similarities or differences affect leadership behaviors and audit team performance?

Descriptive results show that Big 4 partners and managers generally score higher than non-Big 4 partners and managers on all of the personality characteristics: Agreeableness, Conscientiousness, Extraversion and Openness, Bravery, and lower on the Dark Triad (dysfunctional behaviors). Big 4 auditors also have higher self-assessed scores than non-Big 4 auditors for Technical and Leadership competencies, but lower scores for Commercial competencies. Commercial and Leadership competencies increase when going from manager to partner, but Technical skills peak at the senior manager level.

The effects of personality traits and competencies on job performance assessment of partners and managers, are evaluated in the structural equation model in Figure 1, in which personality traits are mediated by the skills of partners and managers.

Figure 1
Structural Equation Modelling:
Effects of Personality Traits on Firm-assessed Job Performance,
Mediated by the Commercial and Technical Competencies of Partners and Managers



Results for the mediation variables show that both Commercial skills and Technical skills are positively related to job performance. Leadership skills are not significant. However, when we analyze partners and managers separately, we find that partners are rewarded for their leadership skills. Results for each of the individual personality characteristics are as follows:

- **Agreeableness.** A negative direct effect on performance; positive indirect effects on Commercial and Leadership skills; negative indirect effect on Technical skills.
- **Conscientiousness.** A negative indirect effect on Commercial skills; a positive indirect effect on Technical skills.
- **Emotional Stability.** A negative indirect effect on Commercial skills.
- **Extraversion.** A positive direct effect on performance; and positive indirect effects on Commercial and Leadership skills.

- **Openness.** Positive indirect effects on Commercial and Technical skills.
- **Dark Triad.** A negative direct effect on performance; a positive indirect effect on Commercial skills.
- **Bravery.** A positive indirect effect on Commercial, Technical and Leadership skills.

We conclude that personality traits are important. Three of the characteristics have a direct effect on job performance (agreeableness, extraversion, dark triad), and all of the personality characteristics have an indirect effect on job performance through their mediation effect on one or more job skills. Extraversion is the single-most important trait. Note that these results are descriptive of “what is” rather than “what should be” important in job evaluation. For example, it is possible there is an extraversion bias in the performance reviews, and that extroverts are over-promoted to partner which results in less diversity among partners.

What are some other implications? First, since differences in personality traits do appear to affect job performance, firms should consider personality in hiring and personnel management decision, and in targeted training sessions taking personality differences into account. Where things get interesting is how the personality traits can have conflicting mediating effects on competencies. For example, Conscientiousness has a positive mediating effect on Technical skills which is logical, but a surprising negative effect on Commercial skills. While Dark Triad is negatively related to job performance, it has the opposite effect on Commercial skills. Thus, being conscientious apparently hinders the development of Commercial skills, while the Dark Triad helps to build Commercial skills.

Another implication is that there is clearly some tension between the commercial and technical sides of auditing, and the role that personality plays is quite different for these two skills. Dark Triad and Agreeableness negatively affects Technical skills but have the opposite effect on Commercial skills. Conscientiousness positively affects Technical skills, but has the opposite effect on Commercial skills. Technical skills it seems are benefited by being grumpy but careful, while Commercial skills are benefited by cheerfulness, being not so careful, and having a dark side. Despite the tension and seeming incompatibility, both skills are needed in audit firms. Effectively managing this tension is a challenge for audit firms.

In another study from the project, Barrick et al. (2022) examine how the dual partner-manager leadership structure of an audit team affects team performance. The organizational behavior (OB) literature identifies two general leader behaviors that drive individual and team success. *Initiating structure* is the degree to which a leader defines and organizes his or her role and the roles of followers, is oriented toward goal attainment, and establishes well-defined patterns and channels of communication. *Individual consideration* is the degree to which a leader shows concern and respect for followers, looks out for their welfare, and expresses appreciation and support.

What do we find? First, we find that audit team outcomes – *Viability* (should this team work together again?) and *Performance* (meeting expectations in a timely manner) – are mediated by audit team *Efficacy*, which is the shared sense of confidence in the team’s capability. Greater *Efficacy* leads to better team outcomes.

What drives *Efficacy*? Better audit team outcomes occur when dyads have one member (either partner or manager) with high *Initiating Structure* skills, and the other member has high *Individual Consideration* skills. However, the most effective dyads occur when both dyad members (partner and manager) have high *Individual Consideration* skills, and when the partner also has high *Initiating Structure* skills. Thus, it seems the traditional structure in which the audit partner interacts mainly with the manager and attends to the client relationship, while the manager works more closely with the audit team, is inferior to a model in which the partner is more fully engaged with the audit team. In short, a more collaborative dual leadership structure is most effective. This finding is consistent with the general trend of organizations becoming “flatter” with less hierarchical structure.

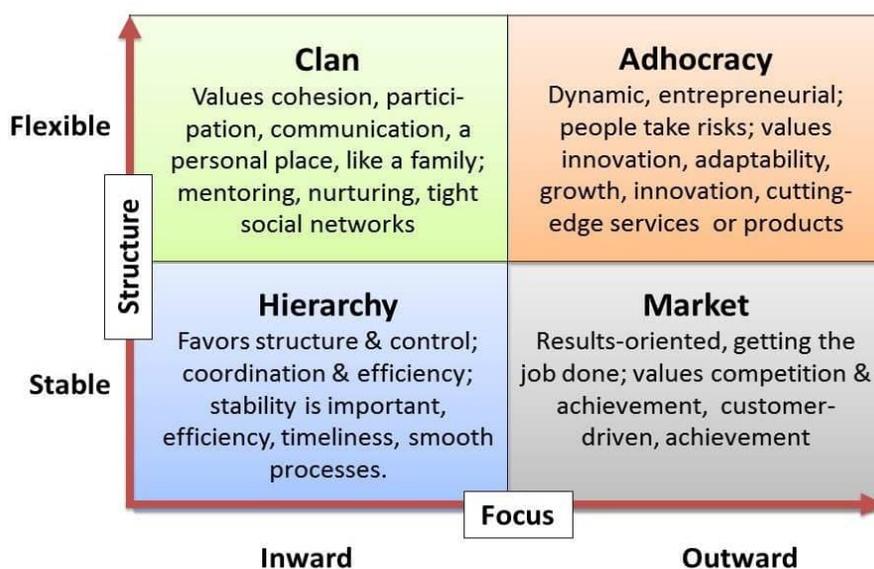
To summarize, the implications of these findings for audit firms are as follows. First, given that personal characteristics do matter and affect job performance, firms should carefully consider these characteristics in their hiring decisions and training programs. Second, certain personal characteristics such as the Dark Triad may be problematic and need to be carefully *managed* to avoid dysfunctional consequences. Third, firms need to ensure that the partner-manager dyad engage in leadership behaviors that maximize efficacy and audit team performance, and in particular that audit partners have both high *Individual Consideration* skills and high *Initiating Structure* skills. Finally, if firms desire greater diversity in the personalities of their experienced auditors, they may want to re-evaluate their performance review systems to avoid possible biases such as the potential over-emphasis on Extroversion.

Given our findings that differences in personal characteristics are important in job performance, what are the implications for experimental audit research? There is a large body of experimental research that studies auditor judgment and decision-making. The focus in much of this research is understanding the audit process, and how auditors apply audit testing procedures to gather and interpret evidence. In experiments, individual personal differences are viewed as a potential source of bias and is controlled by randomly assigning individuals to treatment conditions. Randomization is a powerful tool in classic experimental research design because it controls for extraneous variance unrelated to experimental conditions. However, our results show that individual (personal) differences are in fact important determinants of auditor job performance and leadership behaviors. The concern, then, is that randomization of subjects to control for personal differences will throw away an important source of systematic variation in explaining auditor behavior in experiments. It follows that scholars should consider experiments that explicitly test for the effect of personal characteristics on the experimental task being investigated, instead of simply controlling for personal differences through randomization.

FAR (2020): Audit Firm Culture, Audit Quality and Other Organizational Outcomes (2020)

My second FAR project examines the internal culture of audit firms, and the effect of culture on the quality of audits and the overall performance of the audit firm. We use the “competing values framework” (Cameron and Quinn, 2006) to measure a firm’s culture across two dimensions: the firm’s focus (internal or external) and firm’s control structure (tight or flexible). These two dimensions gives rise to the 2x2 framework in Figure 2 to measure the strength of each dimension in the organization’s overall culture.

Figure 2
Competing Values Framework



The four organization culture types based on the dimensions of control structure and focus are:

- **Collaborative [Clan] Culture:** high flexibility and internal focus; emphasizes employee concerns, encouraging development and open discussion, with high participation, empowerment, and collaboration.
- **Control [Hierarchy] Culture:** tight control and internal focus; a formalized culture that is structured, predictable, and emphasizes efficient processes and timeliness.
- **Create [Adhocracy] Culture:** high flexibility and external focus; committed to innovation and change, creative problem-solving, with individual freedom and discretion.
- **Compete [Market] Culture:** tight control and external focus; firms are results-oriented, emphasizing competition with others and accomplishing objectives.

Based on my discussions with audit firms, there is potential tension among these four cultural values. For example, the audit firms emphasize their zero-tolerance culture with a tight control system to ensure a high-quality audit process and audit outcome, and this is most consistent with a *Hierarchy* or control culture. However, the firms also talk about developing a culture of openness, trust, personal growth, and learning from mistakes, which more clearly resembles the values of a *Clan* or collaborative culture. In addition, the firms talked about tension between their audit quality initiatives (inward focus) and the possible neglect of their business growth and audit innovations (outward focus), which is suggestive that the outward focus on innovation, markets, and growth (*Adhocracy* and *Market* cultures) has to some extent been sacrificed in the short term.

Here are some preliminary findings. At the firm level, each of four cultural dimensions has a higher value for the Big 4 firms compared to the non-Big 4 firms, suggesting that cultural values are more strongly embedded in Big 4 firms. Among the individual dimensions, the clan or collaborative culture has the highest value, followed by the hierarchy or control culture. The external dimensions of adhocracy (create) and market (compete) have lower values, which is suggestive that audit firms are primarily inward focused.

At the personal level, how concordant is the fit between what the individual auditor sees as important versus what is perceived as important to the firm? With respect to the *Clan* dimension, individual auditors perceive it to be significantly more important to them personally than it is to the firm. There is a misalignment. They would like to see it emphasized more by the firm. This is the case in both the Big 4 and non-Big 4 firms. Similarly, the Big 4 auditors perceive a higher importance placed by their firm on the *Hierarchy* dimension, compared to the importance they place personally. Together, the CVF results suggest that that firms are more focused on *Hierarchy* or a culture of control, while people would prefer more of *Clan* or collaborative culture.

With respect to *Adhocracy*, Big 4 auditors perceive the *Adhocracy* culture to be more important to the firm than it is to them personally. On the other hand, non-Big 4 auditors would like it to be emphasized more in their firm culture. With regards to the *Market* culture, the audit firms placed greater importance than the individual auditors, and this holds for both the Big 4 and non-Big 4 firms. Thus, it seems that firms are trying to develop more of an external focus than is generally preferred by individual auditors.

To summarize, there is clearly some tension in these results that present challenges to the audit firms. Individuals appear to want more of a *Clan* culture and less of a *Hierarchy* culture compared to what the firms want. In terms of external focus, individuals want less than what the firms appear to want for both *Adhocracy* and *Market* cultures.

The next step of the research is to examine how the culture of each audit firm affects the quality of its audits and other organizational outcomes such as employee turnover and job satisfaction, productivity, and the audit firm's profitability.

7. Going Forward – Future Research

I close with some research questions that I believe are important and warrant further investigation. Going big at the institutional level, what is the optimal level of regulation and oversight in a country? How much regulation is enough? How much auditing is enough? Is it realistic to have zero-tolerance for errors (audit failures)? How much does regulation improve audit quality? These are difficult research topics, but answers are needed if we are to have intelligent regulation.

For large international companies, the cost of audits, which reflect the current regulatory regime, is relatively small. In the US, fees for large companies are less than 0.05 cents per dollar of sales (five-hundredths of one cent). This is not the case for smaller companies. For US companies with sale of less than \$8.5 million USD, audit fees are 7 cents per dollar of sales. For companies with sales between \$8.5 million and \$30 million USD, audit fees are 1.5 cents per dollar

of sales, and companies with sales from \$30 million to \$65 million, audit fees are around 1 cent per dollar of sales. These are large amounts, especially given that the typical net profit margin is around 10 percent of sales, and begs the question of whether audits are worth the cost for smaller listed firms.

Regulations that result in high audit fees might push some smaller companies into going private which can limit their access to external financing and growth. It might also deter some audit firms from auditing public interest entities because these auditors are under more scrutiny from regulators. Regulations that create disincentives to be a listed company or which lessen auditor competition need to be carefully thought about, and on the surface are not a good idea.

Going smaller at the audit firm level, what is the optimal organizational structure in terms of centralization versus decentralization? Are audits more efficient, economical and effective in a centralized structure with fewer offices, or in a decentralized structure with offices located close to clients? In other words, is the local delivery of audits through a decentralized office structure better, or is the consulting model better in which teams are sent out from large central offices? What is the appropriate balance between the two, and what are the consequences for the cost and quality of audits?

Continuing with audit firms, what is the optimal investment a firm should make in its internal quality controls? In terms of the competing values framework, should the firm have tight hierarchical controls or should the culture be collaborative with more flexible controls? Put differently, how much do you trust and empower people, versus how much do you control them? What are the long-term implications of each approach for the attractiveness of the auditing profession, for recruiting, and for job satisfaction and job turnover in the firms?

The competing values framework hints at a concern that audit firms are too anchored in the hierarchical/control quadrant due to regulatory pressures, and that they are not innovating or have a sufficient external focus to their business practices. What does innovation look like in auditing? It could be innovations in audit testing procedures such as the use of data analytics and the development of better statistical models of risk assessment. Innovation could also be a broader market focus with expansion to new assurance markets. As I noted in my paper “Auditing Without Borders” (Francis 2011), assurance services beyond financial statements are a large and growing global market that rivals traditional financial statement audits in size.

Going even smaller at the engagement team level, what is the right incentive structure within an audit firm to motivate and reward individuals in the production of high-quality audits? I heard a senior Big 4 audit partner say that he wants his auditors to be skeptical and to dig deeper, but only when it really matters. The problem of course is that you just don't know if it matters unless you do actually dig deeper and potentially blow the budget. Encouraging a culture of skepticism means that sometimes you will blow the budget, but that is the necessary price to pay of creating a culture of skepticism and high-quality audits.

Finally, building on my FAR research projects, what is the optimal structure for staffing and managing audit engagement teams? What are the key personal attributes (personality) and leadership skills needed for effective audits? How do you manage the tension between the

commercial skills needed for building the business versus the technical audit skills needed to produce high-quality audits? What's the right balance? I believe that an organizational behavior research approach is crucial to understanding how people work best together in teams to produce audits, and how audit firms can develop a culture that enables and rewards the team-based production of high-quality audits.

My wife astutely observes that I am a restless person who enjoys getting out of his comfort zone. It is this restlessness that took me to live in Australia (twice) and now to Maastricht. It is this same restlessness that has driven my research program to shift focus again and again over time. Honestly, as a scholar, I cannot imagine living my life in any other way. I began my career nearly 40 years ago more or less as an applied economist "going big" with research on audit markets and trying to understand the demand for and supply of differential audit quality. As I get closer to the end of my career, I now see myself as more of a management scientist going "ever smaller" in focus to understand the consequences for audit quality arising from the internal culture of audit firms, the personal characteristics of people who work in audit firms, and the behaviors within partner-led engagement teams.

In closing, I thank the *Foundation for Auditing Research* and Maastricht University for the unique opportunity I have as FAR chair to pursue these research topics, and for keeping me "restless" and working outside of my comfort zone.

Thank you.¹²

¹² Whatever I have achieved professionally would have been impossible without the steadfast support and encouragement of my wife, Candis. Thank you, and to my sons, Adam and Nathan, for putting up with the long hours worked on many weekends and evenings, although there were also rewards as we had great family adventures on research sabbaticals to Australia (twice), and travel opportunities to many universities and research conferences around the world.

The great economist John Maynard Keynes (1936) in his preface to the *General Theory of Employment, Interest and Money* said, "It is astonishing what foolish things one can temporarily believe if they think too long alone, particularly in economics." I have been lucky that I have not thought too long alone, but have worked collaboratively with many wonderful colleagues and doctoral students over the years, including the current research team on the two FAR projects. It has been especially rewarding to mentor and work closely with doctoral students, who in turn have taught me a great deal over the years.

I also thank my Maastricht colleagues, especially Ann Vanstraelen and Roger Meuwissen, for tempting me to come to Maastricht, and Jan Bouwens, Olof Bik, and Willem Buijink from the *Foundation for Auditing Research* for their tireless enthusiasm in convincing me to take up the FAR chair.

I thank Murray Barrick, a colleague from my days at University of Iowa, for joining the FAR project teams. I knew that my FAR research focus was moving into organizational behavior, and that I needed a world class OB scholar as part of the team. I talked with Murray about the unique research opportunities of the FAR Chair. He was excited and signed on even before I formally accepted the Chair.

Finally, I thank the senior personnel of the Dutch audit firms I have visited in recent years. I appreciate their candor and willingness to talk openly about their firms' internal operations and audit-quality initiatives, and their enthusiasm for and support of my two FAR research projects. These discussions were crucial in helping me formulate my FAR research projects, and hopefully doing important research that will be of value to the audit profession.

References

- Akerlof, G. 1970. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism." *The Quarterly Journal of Economics*. Volume 84 (3): 488-500.
- Balsam, S., J. Krishnan, and J. Yang. 2003. "Auditor Industry Specialization and Earnings Quality." *Auditing: A Journal of Practice and Theory*. Volume 22 (2): 71-97.
- Bandyopadhyay, S., and J. Francis. 2005. "The Economic Effect of Different Levels of Auditor Assurance on Bankers' Lending Decisions." *Canadian Journal of Administrative Sciences*. Volume 12 (3): 238-249.
- Barrick, M., O. Bik, J. Francis, B. Kirkman, L. Pieper, and A. Vanstraelen. 2022. "It Takes Two to Make a Team Go Right: The Impact of Dual Team Leader Consideration and Initiating Structure Behaviors on Team Efficacy, Performance, and Viability." Working Paper.
- Basioudis, I., and J. Francis. 2007. "Audit Pricing in the United Kingdom: Tests of Big 4 Audit Fee Premia for Brand Name, Industry Leadership and City Leadership," *Auditing: A Journal of Practice and Theory*. Vol. 26 (2): 143-166.
- Beck, M., J. Francis, and J. Gunn. 2018. "Public Company Audits and City-Specific Labor Characteristics." *Contemporary Accounting Research*. Vol. 35 (1): 394-433.
- Bianchi, P., J. Francis, A. Mara, and D. Masciandaro. 2022. "Does the Mafia Hire Good Accountants?" Working Paper (Florida International University, Maastricht University, and Bocconi University).
- Cameron, K.S, and Quinn, R.E. 2006. *Diagnosing and changing organizational culture: Based on the competing values framework*. San Francisco: Jossey-Bass.
- Campa, D., M. Cameran, and J. Francis. 2022. "The Relative Importance of Auditor Characteristics versus Client Factors in Explaining Audit Outcomes." *Journal of Accounting Auditing and Finance* (Forthcoming). Available Online September 13, 2020). DOI: 10.1177/0148558X20953059
- Carson, E. 2009. "Industry Specialization by Global Audit Firm Networks." *The Accounting Review*. Volume 84 (3): 355-382.
- Carson, E., P. Lamoreaux, R. Simnett, U. Thuerheimer, and A. Vanstraelen, 2021. "Establishment of National Public Audit Oversight Boards and Audit Quality." Working Paper. Available at SSRN: <https://ssrn.com/abstract=3049828>.
- Craswell, A., J. Francis, and S. Taylor. 1995. "Auditor Brand Name Reputations and Industry Specializations." *Journal of Accounting and Economics*. Volume 20 (3): 297-322.
- Dechow, P. 1994. Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals. *Journal of Accounting and Economics*. Volume 18 (1): 3-42.

Dechow, P., W. Ge, C. Larson, and R. Sloan. 2010. "Predicting Material Accounting Misstatements." *Contemporary Accounting Research*. Volume 29 (1): 17-82.

Dechow, P., R. Sloan, and A. Sweeney. 1996. Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC. *Contemporary Accounting Research*. Volume 13 (1): 1-36.

DeFond, M. 1992. "The Association Between Changes in Client Firm Agency Costs and Auditor Switching." *Auditing: A Journal of Practice and Theory*. Volume 11 (1): 16-31.

DeFond, M., J. Francis and T.J. Wong. 2000. "Auditor Industry Specialization and Market Segmentation: Evidence from Hong Kong." *Auditing: A Journal of Practice & Theory*. Volume 19 (1): 49-66.

FAR. 2019. *Foundation for Auditing Research* Research Project: "What Makes Audit Partners and their Engagement Teams Successful?" (J. Francis, with M. Barrick, O. Bik, L. Pieper, and A. Vanstraelen).

FAR. 2020. *Foundation for Auditing Research* Research Project: "Audit Firm Culture, Audit Quality and Other Organizational Outcomes." (J. Francis, with M. Barrick, O. Bik, P. Masereel, and A. Vanstraelen).

Feng, T., J. Francis, Y. Shan, and S. Taylor. 2023. "Do High-Quality Auditors Improve Non-GAAP Reporting?" *The Accounting Review* (Forthcoming).

Ferguson, A., J. Francis, and D. Stokes. 2003. "The Effects of Firm-Wide and Office-Level Industry Expertise on Audit Pricing." *The Accounting Review*. Volume 78 (2): 429-448.

Francis, J. 1984. "The Effect of Audit Firm Size on Audit Prices: A Study of the Australian Market." *Journal of Accounting and Economics*. Volume 6 (2): 133-151.

Francis, J., 2004. "What Do We Know About Audit Quality?" *The British Accounting Review*. Volume 34 (4): 345-368.

Francis, J. 2011. "A Framework for Understanding and Researching Audit Quality." *Auditing: A Journal of Practice and Theory* . Volume 30 (2): 125-152.

Francis, J. 2011. "Auditing Without Borders." *Accounting Organizations and Society*. Volume 36 (4-5): 318-323.

Francis, J., N. Golshan, and N. Hallman. 2022. "Does Distance Matter? An Investigation of Partners who Audit Distant Clients and the Effects on Audit Quality." *Contemporary Accounting Research* (Forthcoming).

- Francis, J., I. Khurana, X. Martin, R. Pereira. 2011. "The Relative Importance of Firm Incentives Versus Country Factors in the Demand for Assurance Services by Private Entities." *Contemporary Accounting Research*. Volume 28 (2): 487-516.
- Francis, J., I. Khurana, and R. Pereira. 2003. "The Role of Accounting and Auditing in Corporate Governance and the Development of Financial Markets Around the World." *Asia-Pacific Journal of Accounting and Economics*. Volume 10 (1): pp. 1-30.
- Francis, J., and J. Krishnan. 1999. "Accounting Accruals and Auditor Reporting Conservatism." *Contemporary Accounting Research*. Volume 16 (1): 135-165.
- Francis, J., and J. Krishnan. 2002. "Evidence on Accounting Firm Risk-Management Strategies Before and After *The Private Securities Litigation Reform Act of 1995*." *Asia-Pacific Journal of Accounting and Economics*. Volume 9 (2): 135-157.
- Francis, J., E. Maydew, and H.C. Sparks. 1999. "The Role of Big 6 Auditors in the Credible Reporting of Accruals." *Auditing: A Journal of Practice and Theory*. Volume 18 (2): 17-34.
- Francis, J., M. Mehta, and W. Zhao. 2017. Audit Office Reputation Shocks from Gains and Losses of major industry clients. *Contemporary Accounting Research*. Volume 34 (4): 1922-1974.
- Francis, J., and P. Michas. 2013. "The Contagion Effect of Low-Quality Audits." *The Accounting Review*. Volume 88,(2): 521-552.
- Francis, J., P. Michas, and S. Seavey. 2013. "Does Market Concentration Harm the Quality of Audited Earnings: Evidence from Audit Markets in 42 Countries." *Contemporary Accounting Research*. Volume 30 (1): 325-355.
- Francis, J., P. Michas, and M. Yu. 2013. "Big Four Office Size and Client Restatements," *Contemporary Accounting Research*. Volume 30,(4): 1626-1661.
- Francis, J., M. Pinnuck, and O. Watanabe, 2014. "Auditor Style and Financial Statement Comparability." *The Accounting Review*. Volume 89 (2): 605-633.
- Francis, J., K. Reichelt and D. Wang. 2005. "The Pricing of National and City-Specific Reputations for Industry Expertise in the U.S. Audit Market." *The Accounting Review*. Volume 80 (1): 113-36.
- Francis, J., D. Stokes, and D. Anderson. 1999. "City Markets as a Unit of Analysis in Audit Research and the Reexamination of Big 6 Market Shares." *Abacus*. Volume 35 (2): 185-206.
- Francis, J., and D. Wang. 2008. "The Joint Effect of Investor Protection and Big 4 Audits on Earnings Quality around the World." *Contemporary Accounting Research*. Volume 25 (1): 157-191.

Francis, J., and D. Wang. 2005. "Impact of the SEC's Public Fee Disclosure Requirement on Subsequent Period Fees and Implications for Market Efficiency." *Auditing: A Journal of Practice and Theory*. Volume 24 (Supplement): 145-160.

Francis, J., and E. Wilson. 1988. "Auditor Changes: A Joint Test of Theories Relating to Agency Costs and Auditor Differentiation." *The Accounting Review*. Volume 63 (4): 663-682.

Francis, J., and M. Yu. 2009. "The Effect of Big Four Office Size on Audit Quality." *The Accounting Review*. Volume 84 (5): 1521-1552.

Gul, F., D. Wu and Z. Yang. 2013. "Do Individual Auditors Affect Audit Quality? Evidence from Archival Data." *The Accounting Review*. Volume 88 (6): 1993-2023.

Hegarty, J., F. Gielen, and A. Barros. 2004. "Implementation of International Accounting and Auditing Standards: Lessons Learned from the World Bank's Auditing and Auditing ROSC Program." On the World Bank website at:
<https://openknowledge.worldbank.org/handle/10986/14354?locale-attribute=en>

Kahneman, D., and A. Tversky, Amos. 1979. "Prospect Theory: An Analysis of Decision Under Risk." *Econometrica* Volume 47 (2): 263-291.

Keynes, J. 1936. *The General Theory of Employment, Interest and Money*. London: Macmillan and Co.

Knechel, R., A. Vanstraelen, and M. Zerni. 2015. "Does the Identity of Engagement Partners Matter? An Analysis of Audit Partner Reporting Decisions." *Contemporary Accounting Research*. Volume 32 (4): 1443-1478.

Lennox, C., J. Schmidt, and A. Thompson. 2022. "Why are Expanded Audit Reports Not Informative to Investors? Evidence from the UK." *Review of Accounting Studies*. Forthcoming (Available online January 20, 2022).

Lennox, C., and X. Wu. 2018. "A Review of the Archival Literature on Audit Partners." *Accounting Horizons*. Volume 32 (2): 1-35.

Nelson, M., and H. Tan. 2005. "Judgment and Decision Making Research in Auditing: A Task, Person, and Interpersonal Interaction Perspective." *Auditing: A Journal of Practice and Theory*. Volume 24 (1): 41-71.

Nissim, D. 2022. *Earnings Quality*. Columbia University Business School Research Paper. Available on SSRN at: <https://ssrn.com/abstract=3794378>

Reynolds, J., and J. Francis. 2000. "Does Size Matter? The Influence of Large Clients on Office-Level Auditor Reporting Decisions." *Journal of Accounting and Economics*. Volume 30 (3): 375-400.

Sloan, R., 1996. "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows about Future Earnings?" *The Accounting Review*. Volume 71 (3): 289-315.

Trotman, K. 2002. "Audit Judgment Research—Issues Addressed, Research Methods and Future Directions." *Accounting and Finance*. Volume 38 (2); 115-156.

Watts, R. 2003. "Conservatism in Accounting Part 1: Explanations and Implications." *Accounting Horizons*. Volume 17 (3): 207–221.