

Foundation for Auditing Research: Call for Research Project Proposals 2023:

**Topic II: Audit innovation**

*December 2022*

*Introduction*

With this Call for Research Project Proposals 2023 the Foundation for Auditing Research (FAR) invites scholars to submit a proposal for research projects that provide academics and/or practitioners insights into audit innovation. This note introduces FAR and seeks to provide some guidance regarding the research proposals FAR would like to receive.

This **call II** takes issue with audit innovation. The call is the result of a joint working group of academics and practitioners and seeks to investigate how new data sources and new modes analyses affect the (future) of audit and audit quality. The projects on audit innovation extend to four dimensions: (1) Data and Reliability; (2) Nature of audit services; (3) Organizational impact of data-driven audits and (4) Risk assessments. In Table 1 we further elaborate on potential research questions.

*What is FAR?*

Established in 2015, the Dutch Foundation for Auditing Research (FAR) aims to enhance the knowledge of what makes a good audit today and to academically inform audit practices in their continuous improvement efforts. To this end, FAR facilitates original, relevant, and rigorous academic research that (a) adds to the practical insight for sustainably strengthening auditing practices and education, (b) is of such quality that it can be published in the reputable international auditing and accounting journals, and (c) is executed by the best international, multi-disciplinary research teams (contributing to the strengthening of the research infrastructure in the Netherlands and abroad).

FAR research is aimed at disseminating new academic knowledge and insights, as well as scientifically informing ongoing debates about the subject of audit quality. FAR conducts its research projects through a unique collaboration between science and practice of the auditing profession and stakeholders in the auditing field. By applying specific protocols and established methods geared towards working with confidential data, the nine affiliated audit firms provide FAR access to research data including (proprietary and publicly available) archival data and research subjects for surveys, experiments, or interviews needed for the research projects defined. With its scientific output, FAR

aims to feed auditing education and sustainably bolster the auditing research community in the Netherlands and abroad. FAR disseminates this knowledge to practitioners and standard setters, regulators, and other stakeholders for practical development and improvement.

Please see the website for further information: [www.foundationforauditingresearch.org](http://www.foundationforauditingresearch.org).

### *Research objectives and focus*

FAR is seeking to identify the **drivers and root causes** of audit quality as a means to improve audit practices. This objective can be broken down in at least three main parts:

- the underlying **drivers** of auditors' behavior and decision making, which may include the organizational conditions which stimulate or hamper auditors to work in the way that is expected;
- **root causes** of poor audit quality (rather than the symptoms of the underlying root causes); and
- effectiveness of possible **interventions** (organizational changes and levers of control) implemented to enhance audit quality, including **monitoring** thereof.

While factors have been identified by experts as determinants of audit quality, we have yet to learn how these factors inter-connect to each other. Based on DeFond and Zhang (2014)<sup>1</sup> and audit quality frameworks provided in Francis (2011) and Knechel et al. (2013), FAR proposes that audit quality can be studied from three perspectives throughout the corporate reporting assurance supply chain:

1. Clients' control environments, reporting systems and innate characteristics: Firms are becoming increasingly complex, in terms of business models, systems of control, and how the audited firms' underlying economics are reflected in their financial statements;
2. Audit firms' organizational settings and conditions for creating an organizational culture and architecture that increases the likelihood of audit staff achieving greater assurance and that strengthens incremental learning; and
3. Stakeholders and environmental forces, which may include auditors' communication (effectiveness of auditors' reporting), audit quality from multiple stakeholder perspectives, the environmental context of the audit (e.g., in terms of audit industry and markets), and the external supervision and regulatory environment.

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<sup>1</sup> "We define high audit quality as greater assurance of high financial reporting quality. (...) [i.e.,] greater assurance that the financial statements faithfully reflect the [audited] firm's underlying economics, conditioned on its financial reporting system and innate characteristics" (DeFond and Zhang 2014: 275-6). This definition "reflects audit quality's continuous nature, encompasses the auditor's broad responsibilities, and recognizes audit quality as a component of financial reporting quality that is bounded by the [audited] firm's reporting system and innate characteristics" (p.313).

The Dutch audit profession has decided to commission research projects through FAR to enhance our knowledge of how these factors affect audit quality. FAR believes that research has the potential to identify those factors that influence audit quality in daily practice.

*Call for Research Projects on Audit Innovation*

FAR empirical research projects generally have a project timeline of one to four years (depending on the scope of the research project) and include a research synthesis at the start (see guidance for proposal applications) and proactive contributions to FAR's knowledge dissemination strategy such as practice notes, society papers, master classes, and conference presentations.

In this call, FAR invites scholars to submit proposals for research projects (FAR Research Program B: <https://foundationforauditingresearch.org/en/research-publications/research-projects/>) for the following four topics selected for this year and included in Table 1.

[ SEE TABLE 1 ON NEXT PAGE ]

**Table 1: description of the research areas and research questions on audit Innovation**

<b>Topics 2023 call for research projects on audit innovation (program B)</b>	<b>Topics and illustrative questions</b>
1. Data and Reliability	<p>RQ1:</p> <p><i>How can auditors process, analyze and combine various (un)reliable data sources into an overall conclusion that provides a sufficient level of assurance? One important sub question would pertain to how combinations of data sets can increase reliability of the underlying data.</i></p> <p>In the working group we also discussed the output produced when using new technologies.</p> <p>RQ2:</p> <p><i>Once the data sorted and analyzed the new technologies produce a vast output pointing to anomalies, variances and potential mistakes. How can we use technology to decide where to start dealing with these anomalies? How does competence affect the use of these techniques. To what extent do these new technologies increase or decrease audit efficiency? Do these techniques affect the risk of making mistakes in establishing the quality of internal controls?</i></p>
2. Nature of audit services	<p>In his famous report <a href="#">Sir Donald Brydon</a> identifies four obstacles to the adoption of new technologies: availability of the data in a usable form; the willingness of companies to permit access to 100% of data; the possible need to assure the systems used to create the standardization and consistency of the data as presented for analysis, and, the need to assure the algorithms used in analyzing the data to create conclusions. <a href="#">Elifsen et al.</a> (2021) confirm that the auditing profession is slow to adopt new technologies. It would seem important to learn what determinants are affecting the introduction of these new technologies in organizations. For instance work by <a href="#">Dietvorst et al.</a> (2015) suggests that people stop trusting</p>

	<p>algorithms outcomes as soon as they contain errors, while humans making the same mistakes are forgiven for making the same mistakes.</p> <p>RQ:</p> <p><i>How can an audit firm enhance the likelihood that data-driven audit methods are accepted? One can think of design problems that help increase the likelihood of acceptance.</i></p>
<p>3. Organizational impact of data-driven audits</p>	<p>New audit approaches such as the application of process mining or anomaly detection, might require a different skillset from an auditor. In addition, most newly proposed methods rely heavily on data. Consequently, audit firms could become large data processors and more technology driven. This might not align with the current organizational structure of an audit firm. Can the audit practice still be serviced by auditors only or should this be a collaboration between auditors and, for example, data scientists? In addition, the new technologies could introduce new risks - for example, it is well known that AI techniques could suffer from unintended biases. How would an audit firm organize itself to manage those risks effectively?</p> <p>RQ:</p> <p><i>How can an audit firm best organize itself to accommodate data-driven audit methods?</i></p>
<p>4. Risk assessments</p>	<p>A. Risk and audit services. One important possibility of the increased data availability and processing and analyzing technologies like AI/ML is that these technologies facilitate risk assessments in ways that have yet to be explored. Recall that the combination of internal with external data offers the potential to identify risks, for instance when estimating a required provision level on loans. AI/ML can take the analysis again further provided that the quality of the data lend itself for the applications of these techniques. It would appear important to learn how these techniques are helping (or exacerbate risks) when they are applied.</p> <p>The other side of the coin present itself when the application of data collection and ML/AI techniques are used by the audited entity. This topic brings us back to the question of whether the data that underlies the audit opinion is sufficiently reliable and relevant.</p>

	<p>RQ:          How do additional audit methods enhance risk assessment of auditors</p>
	<p>B. Hybrid decision making</p> <p>The impact of algorithmic outcomes on the decision-making process is also interesting. How do auditors incorporate such information in their judgement? For example: the M-score (<a href="#">Beneish &amp; Messod, 1999</a>), Benford's law (<a href="#">Benford, 1938</a>) and, more recently, process mining (<a href="#">Jans et al., 2013</a>), journal entry anomaly detection (<a href="#">Schreyer et al., 2017</a>), and the analysis of financial statement networks (<a href="#">Boersma et al., 2020</a>). How can such analysis effectively be incorporated into an audit approach. In addition, it would be interesting to study this from a psychology perspective. How do people perceive the output of algorithms, and what kind of impact does this have on the auditor's decision-making process? Could this result in unacceptable risks when techniques are not well understood by the auditor?</p> <p>RQ:          How can we effectively embed risk assessments within an audit approach?</p>
	<p>C. AI and risk</p> <p>A third category of questions on risk pertain to the features of AI. A significant risk with ML/AI is that the outcome and decisions based on algorithms may impact the integrity of the audited company, putting them at risk (and the auditor for that matter too).</p> <p>It then becomes important that the AI is explainable. What do we mean by Explainable AI in the audit domain – do we need to explain the formulas, the input and output data, or the risks involved in deploying the AI. More importantly,</p> <p>RQ:  <i>When is an AI audit method sufficiently explainable to be used as part of an audit?</i></p>

## **Guidance for proposal applications**

FAR supports research projects that adopt an interdisciplinary approach by using multiple research approaches and methods. This, for example, means that FAR would encourage a leading auditing / accounting academic to submit a project that includes researchers with a diverse background, be it in methods, and/or in research focus. Such projects would attract special attention of the review board. The rationale behind this is that FAR believes that the multi-dimensional /-theory /-disciplinary projects that potentially evolve from such teams, while embedded within institutional knowledge, would provide novel insights into the working van auditing and the into the context in which audit comes about and how they are used. Such studies by independent research groups may have a project timeline of 1 to 4 years (depending on scope of the research project). Research is preferably to cover multiple industries, including listed and non-listed companies, public sector, not-for-profits, and owner-managed-businesses.

A strong focus of the program is to expand the knowledge of how audit works in practice and which factors affect their working. To that end, support that FAR will provide for successful applications of empirical research projects may include, but is not limited to, access to (proprietary and publicly available) archival data that it collected from audit firms.<sup>2</sup> Participating audit firms have also agreed to cooperate with survey research, interviews, experiments, and field case/event studies. FAR would expect applicants to pay specific attention to the data gathering plan at this stage already as to gauge the level of effort at the affiliated firms. Please note that final acceptance of research project proposals and commencement of the research in the field will be subject to agreement on a detailed data gathering request and plan that will be initiated and discussed for those projects that FAR (conditionally) accepts as to make sure that FAR can meet the data requirements.

In turn, FAR strongly believes that academics should share and discuss their findings to inform professional and public policy making. Therefore, all FAR research projects start with a FAR "Practice Note" and a "Research Synthesis" (FAR research program A). The idea of a FAR **Practice Note** is that academics discuss what they already know from new or existing research about current issues and questions in practice, are geared to academically inform the current professional and public debate with regard to the audit profession in the Netherlands and have an expected completion timeline of **9**

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<sup>2</sup> Over the past years FAR started a large number of archival studies using data from audit firms. In order to optimize data collection it is therefore that priority may be given to finish data collection for the projects that have commenced already before starting (large) archival data gathering efforts required from the audit firms for incoming projects.

**months** after commencement of an empirical project. FAR Practice Notes are concise notes (a brief research synthesis of maximum 2,000 words, preceded by a 200 words executive summary) that aim at informing stakeholders, and make practical recommendations relevant to audit practitioners, audit firm management, standard setters, regulators, or other stakeholders to the auditing profession. A FAR **Research Syntheses** is intended to unlock what we already know from science (in accounting and in other fields) about a specific question and potential interventions that can be suggested to strengthen audit quality and have an expected completion timeline of **6 to 9 months** after commencement of an empirical research project. A FAR Research Synthesis should have the potential to be published in one of the leading accounting journals.

While FAR does not intend to impose undue constraints on meaningful research, some of the criteria that will be used to determine successful applications for support include:

1. Proposals that aspire to inform practitioners as well as the research community: While it is of course vital that each project will be scientifically rigorous, it is important that the research proposal also speaks to the practical relevance of the study.
2. Projects led by a researcher who has a strong track record of publication in world class journals (including, but not limited to, *JAE, JAR, TAR, CAR, AOS, RAST, MIS, Management Science, and AJPT*): The researcher is encouraged to seek collaboration with one or more talented junior researchers at his/her discretion (e.g., PhD students, assistant professors, etc.).
3. Deliverables include a FAR Practice Note within 3 months and a FAR Research Syntheses between 6 to 9 months after project commencement, as well as intermediate FAR Practice Notes / Professional Papers, research/working papers, and presentations at FAR Masterclasses and the (annual) FAR conference throughout the project (e.g., annually or per sub-study or working paper). It is also important that the research teams are willing to communicate their findings both with their peers and with auditors working in practice (e.g., by writing or including a survey directed to auditors in practice).
4. For international scholars, collaboration with at least one person employed at a Dutch university is highly recommended and preferred.

### ***Application Procedure***

Research groups in accounting and auditing are invited to submit a written proposal to the Scientific Committee of FAR **not later than 1 March, 2023**. The FAR board will evaluate the projects and will seek the advice of academic reviewers to decide on the project proposal. During the admission process, FAR may ask the research groups to elaborate on their data needs. Such a request may be necessary to ensure the appropriate support from participating audit firms and *does not in itself signal that the project will be accepted*. The Board may conditionally select the projects and notify all applicants accordingly. FAR will subsequently work with the selected applicants towards a final research proposal. Application forms may be downloaded from the FAR website: <http://www.foundationforauditingresearch.org/>.

Please send application forms, including appendices, to Frank Verdouw at [info@foundationforauditingresearch.org](mailto:info@foundationforauditingresearch.org). Applicants will receive a confirmation of their submission.

### ***What may FAR funds be used for?***

While FAR will support the research groups in gaining access to public data and the appropriate data from the participating audit firms, FAR is, under certain conditions, also prepared to fund research projects financially should the research group wish to be funded. Research groups may submit research proposals that include expenses for both established academics and PhD candidates. In the case of established scholars, FAR funds are intended to be used to acquire release time at their home university. Such funds can be used at different universities and internationally if appropriate. In addition, funding may include coverage of travel costs (up to € 6,000 a year per core team member to visit designated international conferences and the like) and / or support for research assistants.

When PhDs are included, the home university must demonstrate a clear willingness to provide joint support for the student (i.e., FAR support is not intended to cover 100% of the cost of a doctoral student). In cases that includes PhDs, FAR funding can be awarded for a period of one to five years, or until the student completes his or her thesis, whichever comes first and depending on the nature of the project. Project funding may include salary and travelling costs that a student typically has to make. In addition, FAR may cover 5% of the salary costs of the supervisor for each student he/she supervises (for the period concerned). The university may claim a maximum of 25% of the project related salary costs to cover other project-related costs. Office space and overhead costs will not be funded by FAR.

FAR may fund small and large projects. For example, projects spanning one year of a PhD student or to buy release time for a seasoned researcher up to a four-year project of a PhD candidate plus expenses that allow for travelling and some allowance for the (senior) researcher(s) in charge. As a benchmark, project funding could amount € 10,000 up to € 200,000. Of course, if a project has exceptional features FAR may still consider a project that requires further accommodation.

**For further information or questions, please contact FAR at  
[info@foundationforauditingresearch.org](mailto:info@foundationforauditingresearch.org)**