

2026 Alan Barton Memorial Lecture Comments

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During his comments at the recent CPA Australia/ANU Alan Barton Memorial Lecture, ADF's CFO Steven Groves provided some very interesting and insightful comments about the challenges facing CFOs, particularly in the APS. His comments underscore worldwide concerns about the CFO function, not only in the APS, but across all types of organizations and for accounting professionals more generally.

As reflected in Steven's comments and in conversations I have had both at home in Australia and during my recent travels to Europe and Asia, there are consistent concerns about the difficulty of attracting candidates into accounting and the impact of AI on our profession. My comments focus on the intersection of these two issues as organizations move to include more AI in their finance functions.

The use of AI in finance departments is increasing dramatically. Based upon a survey of a survey of over 1,000 senior finance leaders across 13 sectors and 20 countries, a recent report by KPMG notes that active AI use across finance has more than doubled since 2024, with 64% actively using generative AI and 71% actively using Agentic AI. I have seen similar types of statistics from other reports, so this finding of the dramatic increase in the use of AI is not an anomaly.

The use of AI has deep implications for organisations. Along with co-authors from University of New South Wales and The University of Newcastle my colleagues, Jon Black and Michael Davern from The University of Melbourne have been conducting a study sponsored by CIMA, for which they have interviewed managers at Australian and New Zealand companies about their use of AI. Here are some preliminary insights that they have gleaned from their interviews. The interviewees note that AI is delivering efficiencies in structured, repeatable tasks, which is freeing time for higher-value work. On the other hand, interviewees are concerned with security, with security concerns shaping which AI tools are used. The interviewees also emphasise that it is important to have a human in the loop for decisions where human judgment matters; we should not be offloading decisions to AI when it is not fully appropriate. Finally, the interviewees note that cost of using AI is an important issue. AI costs are often embedded in vendor upgrades or in joint venture charges, and benefits are not usually systematically tracked. This makes controlling costs and identifying the value of AI benefits difficult.

While providing important insights, particularly for use of AI in our region, the results of my colleagues' CIMA study are based upon a small sample of companies. There have been a number of recent publications in the accounting academic literature that have summarised

hundreds of papers examining the performance impacts of AI. Here are some of the conclusions from this literature.

Research has indicated that AI helps improve cost efficiency by improving planning accuracy and operational efficiency, along with a reduction of waste in resource usage. AI can also help increase revenue growth, allowing for differentiated and personalized offerings. There are also results indicating that there are revenue benefits from AI-powered product recommendations and business model innovations.

A nice example of improvements in both operational efficiency and revenue enhancement comes from Walmart in the U.S. During the Halloween shopping season one year, a real-time AI-based system detected that a particular novelty cookie that was very popular in most stores was not selling at all in two stores. The system's alert prompted a quick investigation, which showed that due to a simple stocking error, the cookies hadn't been put on the shelves. After proper stocking, sales immediately went up.

Other research indicates that there is an increase in accounting quality in firms that are using AI to help with financial reporting. In one study, use of AI resulted in higher quality financial reports, with a closer relationship between accruals and cash flows. On the management accounting side, related research has found an increased ability for managers to have real-time decision support.

Another significant benefit of AI documented in the literature is that AI has allowed for managers to incorporate a broader knowledge base for their analyses. This is due to enhanced accessibility of comprehensive datasets, which enables managers to consider novel concepts and trends that previously were impossible to capture.

As I have indicated, there are clearly some benefits that AI can provide. However, AI must be used with care. In addition to benefits, the academic literature has found some significant issues associated with use of AI.

A clear issue is the vulnerability of data used by AI. Concerns include data security and the potential for breaches. The recent news of the OpenAI model that escaped its test environment and hacked into Hugging Face should be sobering to any organisation that is using AI agents. In addition to boundaries associated with the AI's processing, it is important to understand where the data is located. Is it local? Is it in the cloud? Is it at the AI vendor? The data's location has huge implications for keeping it secure.

Data security can also be compromised following use of AI to perform analyses. Do the data and analyses become information that is included in training sets for future versions of the AI? This has a huge impact on data security, particularly when sensitive data are being analysed.

It is important to note that data from third party organizations or web crawlers may be less reliable than company-generated data. What controls were in place when the data was

produced? The data could also be biased, inaccurate, and, along the lines of the Australian government's current discussions about AI policy, it could be subject to copyright issues.

The AI itself can produce poor quality analyses, including hallucinations, and biases in the output due to the knowledge base and the biases of the AI developer. Quality of the analysis can also be impacted when the analysis is not carefully defined to consider the organisation's current context or environment of the organization.

In addition to quality concerns, there are also ethical and behavioural considerations associated with AI. For example, Meta recently paused a program that tracked employees' computer activity because of huge concerns by the employees that it violated their privacy.

In terms of behavioral considerations, the success of AI depends on the way that it is used. Along with her co-authors, my University of Melbourne colleague Chung-Yu Hung has a paper that examines the use of AI at a stevedore company in China. The process involves operators sitting in cranes about 23 meters above the ground to load and unload shipping containers. Since the operators are sitting high above the containers, it is difficult for them to perform the complicated task of accurately placing the containers.

To improve operator performance, the company installed AI tracking in two places. The first comprised analysis of feeds from a camera inside the crane operator's cabin. The purpose was to enhance the safety of the process by examining whether the crane operator was engaging in safety-threatening behaviours such as smoking or looking at his or her phone instead of working on their job. The second one comprised analysis of feeds from two cameras at the ground level, where the containers were being manipulated. The AI was used to provide live information about how close the containers were to where they were supposed to be placed.

Results of this study indicate that the second application was quite successful because it helped the crane operators improve the accuracy of container placement. However, the first application was problematic. While there was a decrease in operator behaviors such as smoking and looking at their phone instead of operating the crane, overall crane operator productivity and performance did not improve. Interviews with crane operators indicated that the surveillance increased their stress, disrupted workflows, diminished the restorative value of downtime, and raised significant privacy concerns. This study demonstrates the importance of appropriate application of AI.

Based upon the above issues associated with AI, there are profound implications for accounting professionals. My following discussion is based upon some conceptual work by Stewart Jones and Clinton Free in a recent publication. While I will keep the discussion at a fairly broad level, I aim to provide some insights about how accounting professionals work with AI.

Jones and Free describe the typical accounting process and implications for accounting professionals as AI technology becomes important in the process. Jones and Free describe the accounting process as comprising four activities: Accountants generate evidence; they provide inferences and predictions; they interpret results and providing judgments; and they provide governance and assign accountability for all of the inputs and outputs in the process.

AI technology and accountants play different roles during each of these activities. In the process of generating evidence, we expect AI technology to help us detect patterns and anomalies, understand what is relevant or material for a particular kind of a decision that is being made. The accountant must ensure data quality, data provenance, and governance over the data. The accountant should help identify gaps, any mismatches in context with the way that the analysis is being done by the AI, any blind spots that the AI may have missed, and must assess the assumptions and understand the data that are being used in the decision-making process. Inclusion of AI technologies greatly expands the nature of data that is used by accountants in their judgements. It also shifts the expertise of the accountants toward oversight of the data provenance and evidentiary boundaries rather than actually generating the evidence themselves.

When making inferences and predictions, technology can be extremely helpful in deploying expanded models to help us understand the decision-making context. For example, the analysis can include some nonlinear relationships that humans are not particularly adept at applying. Technology can generate probabilistic forecasts and can help identify latent structures and risks. The accountant needs to consider whether the outputs fit within the organisation's current context and environment, and should help test the robustness, reasonableness, and stability of the outputs. The accountant then should integrate inferences with their domain knowledge and appropriate standards that must be followed. Although initial inferences are now being provided by technology, the accounting professional needs to provide oversight of the reasoning that has been used to develop the inferences and needs to provide the data storytelling to ensure that the objectives of the analysis are being achieved.

For interpreting results and providing judgment, technology can provide candidate explanations and highlight important variables, perhaps generating some scenario and sensitivity analyses. The accountant needs to apply professional scepticism and carefully scrutinise everything that the AI produces. The accountant needs to weigh heterogeneous evidence and take into consideration ethical, regulatory, and strategic consequences of the decisions that are being made. These activities centre the accounting professional on interpretive judgement of the results that have been produced by the system. That said, it is important to note that reasoning is hybrid as it is shared between the technology and the human. It is important to have an appropriate balance without overreliance on the technology.

Throughout the process, there needs to be good governance and appropriate accountability. The technology should be configured to provide audit trails and documentation, to monitor its own process, drift, bias, and model integrity, and to implement checks. The accountant needs to be a participant in this as well, setting the AI governance standards, validating the model design assumptions and inputs, and communicating limitations and assigning responsibility throughout the decision-making process. These tasks make accountants AI system governors over the entire system. The OpenAI example underscores the need to have active human monitoring of the process. Responsibility for the process and judgements is fundamentally not going to reside with the AI. It will be distributed across the AI, the human, the AI vendor, the audit committee overseeing use of AI, and regulators. A question to keep in mind is, who's going to be sued if there's an issue? My guess is it's probably not going to be the AI.

In addition to changing the way that accountants work, AI technology can also have a lasting impact on accounting professionals as they start to work with the new systems. I note that this is nothing new—changes in accounting technology have historically had an impact on professionals. I will illustrate this at very high-level, with a greatly simplified view of accounting.

Consider the role of accountants when we had manual accounting systems. The accountant's role was to take information from source documents, make manual journal entries, and produce reports. The accountant was responsible for the accuracy of the journal entries and performed reconciliations to ensure the accuracy of the calculations. Accountants were very good at doing these calculations and understanding how to find and fix errors.

Computerised accounting information systems greatly changed the role of accountants, with the accountant becoming further removed from the process. The accountant's role was now to input data from source documents (until this became automated), and then the computer processed the data, largely producing pre-programmed reports. The new technology greatly changed the nature of control over the data and accounting processes. Accountants had to design and deploy additional controls to ensure the accuracy of the computer processing, data accuracy, and data security.

Changes in the way that accountants interacted with the accounting system fostered changes in their thinking skills. Accounting professionals no longer needed to do the maths, so numeracy skills became less emphasised. In my teaching, I found that as my students started using more computerized systems such as Excel spreadsheets, they lost the ability to judge the accuracy of their computer-generated reports. For example, I would have students turn in spreadsheets where the numbers were off by several orders of magnitude, as the students no longer had an intuitive understanding of the numbers nor the ability to estimate what the magnitude of answer should be.

Moving to AI technology can also affect accounting professionals. Simply stated, with AI the accountant essentially specifies the analysis parameters and the AI produces results. Similar to when we moved to computerised AIS, we now need to have additional controls. In this case, we need to ensure that the analysis is meeting its objectives, is free of hallucinations, and that there is good stewardship of the data and the analytical results. As accountants increasingly outsource the development of judgements there is a real danger that accounting professionals will lose their ability to think analytically. Several research studies have found that the more people use AI, the lower their critical thinking skills. With the advent of AI, these skills become vital. Ensuring that accounting professionals maintain and develop analytical thinking skills to effectively deploy AI technology is essential to keep our profession viable.

As Stephen discussed in his comments, there is an increased focus for accounting professionals on business partnering and strategic work. Increased usage of AI technology adds another dimension of complexity to this challenge. I believe that the entire “value chain” for the accounting profession needs to come together so that accounting professionals and their organisations can succeed. Tertiary education institutions need to rethink their accounting curriculum. Students must develop strong critical thinking and analytical skills so that they can be valuable strategic business partners and properly deploy AI. What this does not mean is that students use AI extensively in their coursework. We know that frequent use of AI can reduce analytical thinking skills. Accountants still need to understand the underlying accounting principles and techniques, so these basics must be included in curricula, but they also need enhanced understanding of the technology and its challenges so that they can use it effectively.

Accounting certification bodies need to consider the broader set of skills that accountants need to succeed in the certification process. Both CPA Australia and CAANZ are moving in this direction and are changing how they view the requirements for certification. Continuing professional development opportunities need to be available for professionals as well.

Inside of organisations, we need to be sure that employees have lifelong learning opportunities and that the organisations have strong, secure systems. Existing employees who do not have the benefit of updated curricula may require additional resources to help them succeed with their use of AI.

Throughout this value chain organisations need to help accounting professionals stay on top of the technology. The technology is moving incredibly quickly, and organisations are frequently more nimble than either tertiary education institutions or certification in updating curricula. Finally, we need to ensure that organisations have structures in place to protect both employees and the organisations themselves from additional risk stemming from AI use.

The evolution of accounting's role in organisations as strategic business partners and AI governors, along with the broadening knowledge base required for effective use of AI technology make accounting an extremely interesting profession that should become increasingly attractive to students. While these roles are exciting, they come with additional challenges throughout our "value chain". I believe that we are up to the challenges that our new roles pose, but that we have a lot of work to do.

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