

Forensic accounting teaching and research

The field of forensic accounting has received increased prominence in the twenty-first century. Widely publicised financial scandals have certainly been a contributing factor. Enron, WorldCom, the Global Financial Crisis and the Panama Papers are a few recognisable names from headlines worldwide. Scandals at HIH Insurance, Olympus, the Australian Health Services Union Fraud and Dick Smith are a few regional examples. The [Association of Certified Fraud Examiners \(2016\)](#) reported that a typical organisation loses an alarming 5 per cent of revenues to fraud. The association's CFE designation is becoming more recognised worldwide. In the USA, the rise of forensic accounting as a distinct discipline has been recognised by the American Accounting Association with the creation of a new journal dedicated to the topic, the *Journal of Forensic Accounting Research*. The discipline is less mature in the Pacific region, but it is growing. A Forensic Accounting specialisation can now be found in some accounting bodies, such as the Chartered Accountants Australia and New Zealand. Overall, Botes and Saadeh, in this issue, indicate that rigorous academic research has not kept pace with the field's growth. This special issue contributes to the production of more publishable academic research, an important way of developing the field that will be a future trend.

The papers featured in this special issue are predominantly drawn from presentations at the 4th Forensic Accounting Teaching and Research Symposium (FATRS) hosted by the Bond Business School and the Centre for Actuarial and Financial Big Data Analytics at Bond University, Gold Coast, Australia, in October 2016. The two-day symposium was attended by 78 delegates representing universities, government agencies, Big 4 accounting firms and other private firms from Australia, New Zealand and the USA. This diverse audience engaged in thought-provoking discussions that explored the links between research, education and practice in both private and public spheres. The essence of these conversations has been captured in this special issue by the inclusion of the Best Papers from the symposium. Consistent with the aim of FATRS, the purpose of this special issue is to disseminate new findings on forensic accounting with an emphasis on the Pacific region. The multi-disciplinary nature of forensic accounting is reflected in the diversity of the papers, which include a structured literature review, a review of legal and regulatory changes in an area relevant to forensic accountants and a paper on ethics and professional judgement. There are also two quantitative papers that cover rationalising fraud and the use of related party transactions. The collective findings have implications for practitioners, educators and researchers.

Botes and Saadeh performed a structured literature review of academic and non-academic sources covering forensic accounting in Australia, New Zealand and South Africa. They indicate that prior research has argued that the term forensic accounting is poorly defined with multiple, often inconsistent, definitions. A commonly understood definition is

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needed to avoid limiting the field's progress, as suggested by Botes and Saadeh based on their review – "The application of financial expertise, investigative skills and legal knowledge to undertake fraud examinations, advisory services, disputes and other review, the result of which could lead to a court of law appearance." Their definition intends to acknowledge the multi-disciplinary aspects, which they indicate have been ignored in the countries studied. This review reveals that academic research that incorporates the multi-disciplinary element of forensic accounting is necessary in the Pacific region.

As the forensic accounting discipline grows and public interest in it increases, Howieson warns, in this issue, against focusing solely on technical competencies, commercial logic and legal compliance. He explains that because of the multi-disciplinary and highly technical nature of the work, forensic accountants face a substantial risk of conflating ethics with legal compliance. Virtue ethics, particularly the virtue of practical wisdom, is proposed to counter this risk and maintain public confidence. Instead of limiting the application of professional judgement and viewing ethics as complying with rules, he challenges all forensic accountants to act as the virtuous forensic accountant would act. He outlines that meeting this challenge requires educational programs that go beyond technical competencies and equip professionals with the ability to apply skills within the ambiguous contexts. Such education would be informed by research and include work-integrated learning. Strong leadership via professional accounting associations will also be required to play a key role.

The virtuous forensic accountant needs, among other things, to have a strong competency in relevant legal and regulatory knowledge. By analysing a period that captures the key regulatory changes over the last two decades, Artiach, Gallery and Pick have documented in this issue an increase in the litigation risk in Australia related to a firm choosing to include earnings forecasts in an Initial Public Offering (IPO) prospectus. The major drivers identified were more onerous regulations and related sanctions and a more active private litigation market through the proliferation of class actions. As a result, firms have changed their forecasting behaviour, which has affected the frequency and quality of included earnings forecasts. Interestingly, less than 10 per cent of Australian IPOs include an earnings forecast in the most recent year analysed. Understanding this regulatory environment provides a critical background for forensic accounting practitioners and researchers involved in IPO-related services. Such services could include expert witness testimony, IPO valuation, dispute resolution and investigations. The authors also draw attention to the rise of IPO-related class actions, which often require a substantial amount of forensic work.

Working on fraud cases is a well-known and widely discussed part of forensic accounting. The Fraud Triangle is a theory commonly cited in research and practice in this area. Compared to the opportunity and incentive dimensions of the Fraud Triangle, the rationalisation dimension has received less attention in research. This is particularly true of quantitative research, probably because it is difficult to develop measures of rationalisations. Kumar, Bhattacharya and Hicks have taken on that challenge in this issue. They studied whether employee perceptions of the organisational culture as being lenient towards fraud play a role in assisting fraudsters to rationalise their actions. The analysis of a pilot survey study in Australia suggests that the perception of organisational culture is relevant and a large-scale study is warranted. Developing ways to reliably measure rationalisation quantitatively is an important move towards a computational model to predict the likelihood of fraud in any organisation.

Related party transactions (RPTs) can be legitimate activities, but they have been used in high-profile fraud cases such as at Enron. In this issue, Bhuiyan and Roudaki indicate that

researchers, professionals and regulators have increased scepticism about RPTs, and they study their use by failed finance firms in New Zealand. They found that an increase in the use, and extent of use, of RPTs is associated with having at least one director who also serves other New Zealand companies in a similar role. This finding has implications for best practice in corporate governance in finance firms, as well as being important to know for auditors, forensic accountants and other stakeholders when analysing finance firms. These findings are specific to finance firms, which is important because quantitative studies usually exclude finance firms because of their distinct differences, yet they remain an important sector of the economy. To overcome the lack of data, Bhuiyan and Roudaki conducted a systematic search of online sources including traditional media, government and search portals. Although performed manually in this case, it demonstrates that additional research questions could be answered by using a variety of data sources. This is something that Big Data analytics could partially or fully automate.

We agree with Botes and Saadeh that more forensic accounting research is needed as the discipline continues to become more prominent. In particular, we note key opportunities relating to the integration of Big Data analytics, the cyber environment and the multi-disciplinary nature of the field. There is also an opportunity for research to focus on providing findings directed towards the Pacific region.

Louwers (2015) outlined how forensic accounting has evolved through the use of technology. Along with the continued development of new technology, currently enormous data are being captured by businesses. Forensic accountants have an opportunity to advance their discipline by not only embracing technology, but the triad of technological advancements, Big Data and adaptive analysis methods able to effectively analyse such data. The mastery of Big Data analytics would also enable forensic accountants to offer valuable predictive services. Examples of Big Data applications include developing models for the early detection of likely frauds and the prediction of misconduct. Research is needed to develop these models and ground them in the Fraud Triangle theory. This will require the ability to quantitatively incorporate qualitative data, such as rationalisations for committing fraud. In a paper presented at the previous FATRS, Andon *et al.* (2015) point out the complexity of and difficulty involved in completing this task. Kumar *et al.* have provided a way forward in this issue, but insights from interviewing offenders in the Pacific region will likely also be required and this is a current project of Paul Andon and Clinton Free of the Fraud Research Group at the University of New South Wales.

Several activities that forensic accountants perform, such as being an expert witness, require proof; the probabilistic information provided by Big Data models is insufficient. Hence, the goal is to merge the highly developed investigative skills of forensic accountants with the power of Big Data analytics. For example, Big Data analytics could be used to pre-process the large and diverse data now involved in forensic investigations or litigation support activities. Gepp *et al.* (2018) identified real-time information and peer-to-peer marketplaces such as Airbnb as future research challenges for auditing. These also equally apply to forensic accountants who will need to be able to use Big Data analytics to analyse and utilise large stores of a wide variety of data and real-time data streams that will become more and more prevalent in the business world. Forensic accountants will also need to be able to investigate Big Data models used by organisations in the future. In the case where a model, rather than a person, is the decision maker at fault, issues of legal liability will need to be understood.

Big Data and Cyber are currently buzzwords, but both will be of sustained importance to the field of forensic accounting in the future. Louwers (2015) noted that successful forensic accountants need to adapt and know how things are evolving over time. The pervasiveness

of the cyber element is one such evolution. Forensic investigations will increasingly include a cyber element that will be of growing importance. Evaluating cybersecurity will become essential for valuable work particularly in jurisdictions with mandatory data breach notification laws such as Australia. Our economy is moving further towards the cyber world and hence forensic accounting should also move with.

The multi-disciplinary nature of forensic accounting will be extended to include Big Data and cyber experts. We need to further investigate the settings in which the work occurs, as well as the effects of such diverse teams for leadership and management practice in forensic accounting. We also join the call of Botes and Saadeh for a collaborative, cross-disciplinary research. Relevant disciplines include accounting, law, information systems, cyber security, forensics, psychology and Big Data analytics. Psychology, taken as an example, can shed light on the relationship between particular personality characteristics and counter-productive work behaviours such as fraud. The author of the most commonly used measure of criminal psychopathy has recently created the B(usiness)-Scan 360 for use in business settings (Mathieu *et al.*, 2015). This instrument along with the Corporate Personality Inventory (Fritzon *et al.*, 2017) requires further validation to fully establish predictive ability for negative and positive workplace outcomes. Findings from such research would be beneficial for forensic accountants. Personality characteristics could also be incorporated into predictive Big Data models.

It is important for research to inform practitioners and educators in the Pacific region. Similar to the work of Artiach *et al.*, reviews of other aspects of the legal and regulatory environment that are relevant to forensic accountants and presented in a business context would be beneficial. The area of data breach notification and cybercrime would be one such aspect. Howieson explained the importance of the virtue of practical wisdom and recommended a community informed by research that is committed to developing, using and abiding by a common practical wisdom. As communities of professionals are historically regional in nature, the research will also need to recognise regional differences. Other region-specific opportunities exist. For example, in a country such as Australia with strong historical links with gambling, more research is required to determine the extent to which gambling addictions are associated with corporate frauds.

There is immense scope for future research in forensic accounting, particularly involving Big Data analytics and cyberspace. There is a need for multi-disciplinary teams and research integrated with practice and education.

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