RADAR Advisory Board Meeting

October 2, 2017

Erica Nelson	Jason Guthrie
Sue Coffey	Brian Collins
Brian Wolohan	Miklos Vasarhelyi
Michael Leonardson	Dorothy McQuilken
Trevor Stewart	Ami Beers
Michael Wynen	Won No
Nicole Deschamps	Kari Lee
Qi Liu	Abdulrahman Alrefai
Via Teleconference	
Kristine Hasenstab	
Katie Greehan	
Brian Miller	
Shannon Walkowiak	
Kelly Hnatt	

Meeting Minutes:

- The board approved the September meeting minutes to be posted to the RADAR website.
- The group discussed the status of obtaining data sets for research purposes.
    - The following are new data sets that have been obtained and donated:
        - Board contributed data
        - Large not-for profit data ERP log
        - European client ERP logs
        - Northeastern University data (BIBTOR)
        - Multiple test data from vendor (e.g. ACL and IDEA)
        - Volcker Alliance data
        - University of Arkansas data base
    - The research team is also working to align certain data sets with the AICPA's Audit data standards.
- An update was given on the status of the AICPA's Audit Data Analytics Guide, *Guide to Audit Data Analytics.* Over the summer the guide went through numerous reviews, and it was decided to issue it as an "other auditing publication" (i.e. a non-authoritative guide) and to keep the current Analytical Procedures *Guide* as is (i.e. will not supersede it). The guide will be available in January 2018 (eBook available in December 2017).
- The research teams gave updates on each of the projects currently underway (1) MADs, (2) Process Mining and (3) Visualization.

- **MADs Project Update:**
  - ***Firm Interviews:***
    - Over the summer the research team conducted interviews with Board representatives in order to gain a better understanding of firm practice and to better understand how the MADs framework can be applied to the current audit process. The research team was able to refine the MADs framework based on the feedback received and topics discussed during these interviews.
  - ***Refined MADs Framework:***
    - The research team presented the refined MADs framework to the board. The following items were noted:
      - The research team should begin to think about the deliverable and what that will look like (i.e. with this be a report, illustration, etc.). This may be an illustration and an underlying report that includes the methodology behind it.
      - The research team needs to show the value of the model, and be able to test it using different data sets.
      - In order to keep this framework simple (re: the stage 1 filters that were used in the example presented) the framework itself should only focus on filters that are substantive in nature rather than focusing on both substantive and controls testing.
        - It may be useful to somehow mention that there may be data points out there, which are consistent with your overall control evaluation that could be considered within your framework. This note could be included in an "other considerations" section within the underlying methodology.
      - A note should be added stating that you do not need to rely on controls to use this framework.
      - This framework should be compared to traditional sampling techniques in order to measure the effectiveness of the framework.
      - It was noted that there should be some sort of overarching assessment, before you get to the weighting step, where you rule out any immaterial items (e.g., items that in the aggregate are immaterial, not indicative of fraud, etc.). This may be a step right after step 1 or another arrow or "offshoot" of the feedback section of step 1. This is something that should be included within the methodology.
    - **<u>Next step/Action Items:</u>**
      - **In addition to the items noted about. The research team will:**
        - **Delete the right side of the framework (i.e. the boxes that discuss the process for testing or validating the framework) from the overall illustration. This side of**

the framework is for research purposes only and not something that the audit team would need to do.

- **Develop one real world example of where the MADs process could be applied to the audit (e.g. Revenue testing) and show the risks that would need to be addressed and determine the filters that would need to be applied. The team will share this with the board for approval. Once vetted with the board, the team can leverage the example to build out additional examples (or instances where MADs can be used) in order to test out the framework.**
  - **Some example areas to consider include the following:**
    - **Revenue**
    - **Expense**
    - **Payroll**
    - **Fixed Asset Additions**
    - **Financial Services**
    - **Investments**
    - **Purchases/Sales**

- **Visualization Project Update**
  - The research team presented a number of visualizations based on a governmental data set. The team had held discussions with subject matter experts in order to gain an understanding of the data set and procedures that are performed during governmental audits.
  - It was agreed that the visualization project will come to an end; however, the tools used will be considered as part of the remaining projects.
- **Process Mining Project Update**
  - An update was given on the current process mining project. The team is currently analyzing a data set and identifying acceptable and unacceptable variants (items not included in the normal process flow) related to segregation of duty violations and timestamp violations. The team is following up with the data set provider to discuss these findings. The team is also working to layer on transactional data in order to enhance their analysis.
  - The team discussed taking the original process mining process a step further to a continuous process mining audit. The purpose of continuous process mining is to actively detect and investigate deviations and exceptions as they occur along the transaction process.

- The group discussed the current environment and topics such as applying cognitive computing to the audit and using exogenous data analytics for auditing.
- The meeting concluded. The next meeting will be a conference call in November.