

**RISK & INSURANCE STUDENT RESEARCH CLUSTER**  
**UPDATE**  
**FOR**  
**BRANTLEY RISK & INSURANCE CENTER**  
**ADVISORY BOARD RESEARCH COMMITTEE**

**Submitted by: Lori Medders**

**Overview & Team**

The App Risk Research Group is busy and growing. Our target goal is to conduct 4-5 research projects annually. The group began its first two projects in June, 2018. We have completed a loss retention analysis small-to-medium sized farm-to-table agricultural concern located in the Southeast US, and are in the thick of our work on Employment Practices Liability and the #metoo movement impact on it. Additionally, we have begun work on a captives insurance essay competition sponsored by the Captive Insurance Companies Association (CICA) and a flood risk and insurance project sponsored by the North Carolina Surplus Lines Association (NCSLA).

The group now consists of nine student members and me, with active recruitment underway for three more to be selected by end of November. Current student members include:

Harrison Cameron @ cameronhw@appstate.edu (junior in rmi & finance)  
Christian Ferrara @ ferraracl@appstate.edu (junior in rmi & finance)  
Avery Fink @ finkam@appstate.edu (senior in rmi & finance)  
Charles Fisher @ fishercd1@appstate.edu (junior in rmi)  
Sean James @ jamessm2@appstate.edu (sophomore in rmi & finance)  
Josh Johnson @ johnsonjc13@appstate.edu (senior in rmi)  
Amanda Kurland @ kurlanda@appstate.edu (senior in finance)  
Catherine Lattimore @ lattimoreca@appstate.edu (senior in actuarial science)  
Roberto Sibrian @ sibrianrc@appstate.edu (junior in rmi)

The students have proposed a name for our group – App RISE (the acronym, RISE, representing Risk Initiative for Student Engagement). Personally, I like it especially because it leaves open the possibility that this group may engage in experiential teaching-learning-doing projects other than traditional research. We are interested in the research committee's feedback as well.

## **Research Projects**

Research topics described below include the set on which the group is already working, a set “in the hopper” – already vetted – to be tackled in the near future, and a set of proposed topics not yet vetted.

### **Current**

***Risk and the #metoo movement.*** Social media activity placed in the broader and historic context of discrimination and harassment risk management (policy analysis); potential implications & interventions for business risk management, management liability and insurance markets; may lead to multiple papers/ reports over time. The expected completion date is January 15, 2019. (Principal researchers: Medders, Harrison Cameron, Avery Fink, Sean James, Catherine Lattimore, Amanda Kurland)

***Captive insurance and cyber-supply chain risks.*** Our team has entered the Captive Insurance Companies Association (CICA) essay competition. The topic chosen is the feasibility and efficacy of utilizing captive insurance for commercial cyber, and related, liability and supply chain risks. Winning essays will be presented during the 2019 CICA Conference in mid-March, 2019. (Principal researchers: Christian Ferrara, Charles Fisher)

***Flood risk and insurance.*** The North Carolina Surplus Lines Association (NCSLA) invited the Risk Research Group to propose a flood risk and insurance research project with the overall purposes to review historic flood losses in North Carolina and assess the possibility of expanding the private flood insurance market. Our proposal was accepted by the NCSLA, and we began work on the project this week. We will compare historic flood losses to current physical flood potential (by county), including discussion of major historic flood events. We also will address coastal versus inland and eastern versus western county flooding. Last, we will evaluate alternatives for how to manage North Carolina’s flood risk on a private market, or public-private partnership, basis. Project to be completed early March, 2019. (Principal researchers: Medders, Harrison Cameron, Catherine Lattimore, Sean James)

### **Upcoming**

***Emerging & future risks.*** Evaluation of relative likelihood and magnitude of known emerging risks and creative speculative assessment of potentially critical future risks (not necessarily yet emerged) (policy & innovation analysis); forward-looking policy and innovative view of risk, with an emphasis on visuals, such as heat maps; may lead to an annual work effort and report. Project to begin January, 2019. (Principal researchers: Medders, Avery Fink, Christian Ferrara, Charles Fisher, Josh Johnson, Roberto Sibrian)

***Contracts & liability analysis.*** Contract examination for up to three AppState advisory boards and student groups interested in obtaining feedback on their groups’ by-laws, contracts and liability insurance policies (technical analysis); after conducting up to three case-by-case examinations, plan to development a template for AppState groups to use in determination of liability insurance coverage needs

**Cognition and decision making under risk.** The connections between cognition, biases and decision making under uncertainty, having implications for disaster risk, insurance purchases/ marketing, ethical dilemmas, insuretech, etc. (policy & innovation analysis); continuation of a research stream in which Medders has been engaged for some time; expected to result in multiple papers/ reports over time (and has potential to be used in conjunction with some of the additional proposed topics below)

**Climate change and critical infrastructure risk.\*** Potential impacts of climate change on critical infrastructure risk in the US (power plants, highways, bridges, water availability, etc.), and implications for (re)insurance and public policy (policy analysis); a one-off report/ paper expected

\*This topic was initially set to be funded by the American Association for Water Distribution & Management. Since funding has not yet come through, additional proposed topic(s) below may supercede it.

### **Additional proposed topics**

**Insurability of space transportation.** Evaluation of the insurability of space transportation (i.e., people, cargo, transport vessels, etc.) within a “characteristics of insurable risks” framework (policy & innovation analysis); implications and recommendations for changes to insurance and regulatory policies to make the uninsurable insurable; one paper expected

**Regulatory and rating agency challenges of insurance innovations.** Analysis of the regulatory and rating agency environment in the context of one or more innovations in the industry (policy & innovation analysis); innovative areas could include anything from price optimization to a sharing economy to (re)insurers finding inventive ways to reduce underlying risks; could constitute a stream of research, resulting in multiple topics and papers

**Risk and opportunity within a sharing and on-demand economy.** Impact of sharing and on-demand economy on insurance products and pricing (i.e., evolution of insurance to insure moments in time versus standard annual policies) (policy & innovation analysis); likely one paper, although so related to the previous rating agency/ regulatory topic, could easily springboard into other related topical ideas

**Telematics and insurance pricing.** An evaluation of possible future insurance policy pricing (e.g. forward looking or retroactive on a monthly basis based on experience, leveraging different sources of information to price, etc.) (policy & innovation analysis); previous on-demand insurance topic may be good springboard for related paper on this topic

**Intersection of venture capital arms and (re)insurance companies.** Assessment of (re)insurance company capital opportunities, with emphasis on innovating for risk reduction, market efficiency and enabling technologies (policy & innovation analysis); could result in one or more papers

**Agricultural risk management education & innovation.** Thoughtful consideration of the unique sets of risks faced by agricultural businesses, especially family farms, with recommendations for risk management policy (technical, policy & innovation analysis); may be worthwhile if grant funding from the USDA or other sponsoring agency becomes available

### **Next Steps**

Members of the research committee and the Brantley Board are encouraged to vet existing ideas and to submit their own ideas as well. Brainstormers should keep in mind potential research topics are vetted for their saliency and timeliness to our constituents as well as for student interest in working on them. All topics fall within one or more of the following categories:

**Technical analysis.** Analytical, results oriented research with external “clients” who have precise problems that need solutions.

**Policy analysis.** Private and public policy research having public presentation and publication outlets, and making recommendations for the context within which risk and insurance decisions are made (e.g., informing standard business practices, regulatory, legislative).

**Innovation analysis.** Innovative, future oriented research intended to utilize analytics, technology, psychology and cultural knowledge for the purpose of progressive thinking in risky decision making, business models and markets.

Industry mentors are appreciated for all topics (and more broadly for technical versus policy versus innovation analysis) – volunteers are welcomed. If any Board member has an interest in mentoring the group or knows someone who would be a helpful mentor to students, Medders can assist in “containing” the mentor’s commitment to particular topics, analysis style, and/ or time frame that is do-able for the mentor to provide.

Finally, for some topics the availability and affordability of data may be a deciding factor in whether to pursue a particular topic. Volunteered company/ industry data (with a strict memo of understanding as to its confidentiality) will be incredibly helpful.