Explore **Research Partnership** Opportunities
Introduction – AF Group’s **Innovation Team**

- **Adnan Pathan**
  Sr. Innovation Research Advisor

- **Craig Bilinski**
  Manager of Innovation

- **Kevin Lick**
  Corporate Underwriting

- **Abel Travis**
  VP – Underwriting & Product Innovation

- **Alison Durgan**
  Innovation Business Advisor

- **Dr. Dan Hunt**
  Corporate Medical Director
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>Accident Fund founded as state of Michigan workers’ compensation agency.</td>
</tr>
<tr>
<td>1993-1994</td>
<td>Michigan authorized privatization of the State Accident Fund allowing for purchase by BCBSM.</td>
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<tr>
<td>2000</td>
<td>Accident Fund began doing business outside of Michigan for the first time.</td>
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<tr>
<td>2006-2010</td>
<td>Accident Fund acquires two companies – United Heartland and CompWest – then launches new brand, 3CU.</td>
</tr>
<tr>
<td>2014</td>
<td>BCBSM privatization / AF Group granted authority to write lines outside workers’ compensation.</td>
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</tbody>
</table>
Workers’ Compensation Insurance

What’s Workers’ Compensation Insurance:
• Medical and Indemnity benefit coverage for an injured worker
• Due to accident or disease arising out of (or in) the course of employment
• No fault system – Employer assumes financial cost while the worker gives up the right to sue
• Market forces: payroll, frequency, severity, rates, soft vs. hard markets

Workers’ Compensation Market
2017 Industry Direct Written Premium: $58 Billion with 93% combined ratio

<table>
<thead>
<tr>
<th>Rank</th>
<th>Entity Name</th>
<th>Market Share (%)</th>
<th>Direct Written Premium ($000)</th>
<th>5-Year CAGR</th>
<th>Direct Combined Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Travelers</td>
<td>7.55</td>
<td>4,355,800</td>
<td>3%</td>
<td>86%</td>
</tr>
<tr>
<td>2</td>
<td>Hartford</td>
<td>5.91</td>
<td>3,406,884</td>
<td>1%</td>
<td>88%</td>
</tr>
<tr>
<td>3</td>
<td>Am Trust</td>
<td>5.06</td>
<td>2,920,153</td>
<td>20%</td>
<td>99%</td>
</tr>
<tr>
<td>4</td>
<td>Zurich</td>
<td>5.06</td>
<td>2,916,537</td>
<td>5%</td>
<td>80%</td>
</tr>
<tr>
<td>5</td>
<td>Berk Hath</td>
<td>4.82</td>
<td>2,776,306</td>
<td>17%</td>
<td>81%</td>
</tr>
<tr>
<td>6</td>
<td>Lib Mutual</td>
<td>4.24</td>
<td>2,446,733</td>
<td>-8%</td>
<td>106%</td>
</tr>
<tr>
<td>7</td>
<td>Chubb</td>
<td>4.15</td>
<td>2,395,262</td>
<td>5%</td>
<td>83%</td>
</tr>
<tr>
<td>8</td>
<td>NY State Fd</td>
<td>3.95</td>
<td>2,277,778</td>
<td>3%</td>
<td>60%</td>
</tr>
<tr>
<td>9</td>
<td>AIG</td>
<td>2.74</td>
<td>1,577,165</td>
<td>-10%</td>
<td>100%</td>
</tr>
<tr>
<td>10</td>
<td>Old Repub</td>
<td>2.53</td>
<td>1,456,609</td>
<td>6%</td>
<td>97%</td>
</tr>
</tbody>
</table>

AF Group ranked #14
$1.3B in premium
84% combined ratio
2.3% US market share
10.2% 5-yr CAGR
Current Insurance Industry Trends

- mHealth Apps
- Gamification
- Aerial & Digital Imagery
- Customer Adherence Apps
- Big Data
- Peer-to-Peer Insurance
- Internet of Things
- Non-Traditional Firms
- Cyber Insurance

Source: www.Capgemini.com
Current Insurance Industry Trends

Insurance Industry Trends
• Emergence of InsurTech startups
  o Blockchain, Artificial Intelligence and IoT
  o Automation across the board
  o Data Science / Data Analytics
• Disruption in the distribution channel:
  o Insurance companies: Direct-to-consumer
  o New agent-based InsurTech platforms
• Demand for Cyber Coverage
• Gig Economy and usage based products
• Use of aerial and digital images to asses damage
• Telematics
• Chatbots and online claim submissions and adjustments

Workers’ Compensation
• Opioid epidemic
• Use of wearable technology to monitor workers
• Gig Economy impact on the future labor resources
• Aging population and inexperienced workforce
• Increased automation of claim – reporting, payments, records etc.
• Telemedicine

Commercial Auto
• Autonomous vehicles and trucks
• Driver shortage in the trucking industry
• Usage-based/per-mile coverages
• Mobile phone applications to monitor driving habits
• E-commerce
Potential Research Topics

Wearable/Biometrics:
• Prospects for wearables + camera body/facial/object recognition technology

Gig Economy Market:
• Size of the gig economy?
• Gig economy sectors with growth potential?
• How will gig economy impact the insurance industry?
• Supreme Court - classify gig workers as employees or independent contractors?

Trade Wars & Corporate Tax:
• What will the impact of trade wars have on workers’ compensation premiums?
• How will the recent corporate tax rate cut from 35% to 22% impact the workers’ compensation line of business, if any?

Autonomous Trucks:
• How will autonomous vehicles change the transportation, especially the motor carrier/trucking industry?
• Driver shortage
• Who is going to be liable?
• **Insurance minor offered by the business school** – potentially work together by inviting insurance executives from AF Group to talk about general insurance trends, types of career paths, etc.

• **Entrepreneurship and Innovation program** – we could bring in problem statements to seek feedback from the student body. Examples could include whether millennials will buy insurance directly, or will they keep utilizing agents in the distant future?

• **Hackathons:**
  • SpartaHack: Sponsored by AF Group
  • Event: Jan 18 – 20, 2019
  • **Problem Statement:** Identify personal assistant solutions for AF Group’s customers and employees.
In partnership with John Hopkins University, we have published three papers in the Journal of Occupational and Environmental Medicine, a scientific, peer reviewed journal of the American College of Occupational and Environmental Medicine utilizing AF Group’s claims data.

- **2012** - The Effect of Opioid Use on Workers’ Compensation Claim Cost in the State of Michigan
- **2014** - Effect of Physician-Dispensed Medication on Workers’ Compensation Claim Outcomes in the State of Illinois
- **2016** - A New Method of Assessing the Impact of Evidence-Based Medicine on Claim Outcomes
- **2019** - Accepted for publication
What Do We Offer?

**Workers’ compensation data:**
- Type of injuries, treatment plans, outcomes
- Data available by industry and state
- Demographic: age & gender

**AF Group Proof-of-concepts:**
- Wearable
- Telemedicine
- AI - Claim data
- Exploring Blockchain technology in partnership with a third party.
Questions & Answers

Additional information available at AFGroup.com