



## **The Great Divide in Business Analytics for P&C Insurance: Actuaries vs. Data Miners**

The primary advantage for P&C insurers using predictive analytics is their ability to create more accurate rating structures that provide the best match between risk and rate. The use of multi-variate (MVA) analytical techniques is commonplace to Direct Marketers and Credit Risk Managers, but the notion of using these tools still remains a challenge for most players in the P&C industry. Actuaries responsible for setting rates have strong mathematical backgrounds, yet these challenges persist. There would appear to be a “disconnect” here.

This disconnect is not due to any lack of knowledge among Actuaries in the mathematics being employed. A key issue is the lack of expertise in using the data in the right manner to take full advantage of MVA techniques. In order to fully leverage the results of any MVA tool, hundreds of thousands of individual policy records with several hundred variables per policy record need to be created –a core skill set of the data miner. With the discipline of data mining being relatively new, most P&C industry actuaries have not received specialized training in this area. Certainly the academic training that actuaries receive regarding mathematics and statistics is applicable in the field of data mining. However, the most important component of data mining and arguably the one that is the most resource intensive, is the data environment. The right data environment must be created for MVA-type techniques to deliver superior results over the current pricing methods.

Recognizing the knowledge gap that exists in this area, more and more insurers are creating a risk management structure that promotes a strong collaboration between data mining practitioners and Actuaries within the organization. MVA solutions can be produced that more fully leverage this rich data environment. Capital and Regulatory concerns that are the domain of the company Actuary are augmented with more precise risk prediction tools, resulting in rating structures that assign premiums more accurately for each risk *and* meet portfolio adequacy requirements. The best rating solution requires a team-based approach between data miners and Actuaries. This implies that data mining practitioners better understand filing requirements and regulatory limitations, while actuaries have a better appreciation of the data environment and how it is critical to delivering an optimal MVA solution and a better rating structure.