



## Data Analytics Bolsters Risk Prevention Strategies

### - Quattro Processing Services

One common characteristic among financial services companies is their vast storehouses of data. From multiple data warehouses to reams of customer information stored on servers, financial services companies have access to an analytical profile of each customer whether they know it or not. What many are beginning to realize is that the keys to maximizing profitability are often hidden in their data. Unfortunately, what financial services companies lack in common is the ability to collect, analyze and make sound decisions that drive their business. As General Colin Powell once said, "Experts often possess more data than judgment."

This paper alone cannot address all the possibilities of effective use of data. Consider the many ways data can be used to drive a

business. Progressive companies have used data to: (1) develop targeted marketing segments realizing substantial return on investment; (2) understand patterns in data to help streamline their operations and enhance their customer's experience; (3) develop new products based on gaps they identify through data mining; (4) optimize their card portfolios by developing risk segments and treating them differently; and so on. Big data is quickly becoming the new raw material of business. The possibilities are quite limitless, but the road to get there is often fraught with challenges.

### Common Challenges in Data Analytics

There are common challenges associated

with leveraging data for business optimization. These must be overcome before any data can be mined into meaningful and actionable business intelligence.

**Consolidating Data.** What some banks and credit unions face is the collection of data files within specific business units that have not been integrated into a consolidated data warehouse. A line of business may collect and store critical customer information such as a call center or an account management group. For various reasons that data does not get transferred across the enterprise.

Legacy systems pose another challenge. Third party vendors like card processors might not be able or willing to extract data from their legacy systems in a way that is usable to credit unions and banks. Add to that the associated challenges of integrating that data directly into core banking systems and the problems intensify. It is imperative that data modelers have access to all critical data points for effective analysis and interpretation.

## Big data is quickly becoming the new raw material of business.

In many cases, data emanating from core processors and third-party vendors are not intuitive; they can be difficult to define. And, internal data can be just as challenging. Data fields, especially, are often truncated due to character limitations imposed on data warehouses. Before any serious data mining can be conducted, modelers and statisticians need clearly defined data dictionaries. Regardless of your objective, data sources and fields need to be clearly described. One cannot assume the modeler understands each data point simply because he/she lives in that world.

**Analyzing Data.** Assume you had to go to a doctor for a serious heart condition. Would you take your chances by visiting a dermatologist? Simple logic would tell you no. In the same vein, an operational employee resolving customer complaints should not be the one conducting advanced

**Understanding Data.** Vast riches of big data pose problems for many banks and credit

modeling or segmentation. Optimizing your efforts in data analytics requires a unique skill, and progressive banks and credit unions either choose to outsource that to trusted third parties, or staff internally with seasoned statisticians that are adept at multivariate analysis. Making those investments is critical especially if the cost of failure is high (i.e., using data to develop a new underwriting solution).

**Interpreting Data.** This step requires intense collaboration between management and the team responsible for analytics; this is where data becomes meaningful. Modern software packages like SAS and SPSS can quickly produce reams of statistical output, but the interpretation of data still requires human intelligence. It is one thing to identify patterns in data that are related, it is quite another to understand how that can be used to optimize the business. Drawing oversimplified conclusions on a project that segments a card portfolio might mean that some cardholders get a credit line increase when their risk score is too high a result that drains the bottom line. Be patient and do not rush in interpreting statistical analysis.

It is critically important that banks and credit unions understand the challenges and nuances of effective data analytics prior to conducting a high-profile project. It is common for Fortune 500 companies to outsource some of their data analytics activities to third parties in an effort to leverage statistical expertise, and as a result of internal competing priorities. In those cases, be sure third-parties can provide definitive ROI examples from previous engagements, and ensure they have experienced modelers and statisticians on staff who are knowledgeable of the industry. A good data analytics strategy can have a substantial impact on profitability.

## Data Analytics Detects Risk and Fraud

Fraud is pervasive in financial services. Financial crimes cost the global financial services industry over \$20 billion annually and the numbers continue to grow. Consider the following statistics:

- More than one in four (27%) consumers worldwide have directly experienced credit, debit or pre-paid card fraud during the past five years (ACI Worldwide, 2011).
- U.S. payment card fraud losses totaled \$3.6 billion in 2011 from all general purpose and private label, signature and PIN payment cards (Nilson Report, 2011).
- The U.S. currently accounts for 47% of global credit and debit card fraud even though it generates only 27% of the total volume of purchases (Nilson Report, 2011).

According to David Robertson, publisher of The Nilson Report: "The U.S. has a disproportionate percentage of the global total losses for two reasons . . . U.S. banks have been slow to adopt newer technologies such as EMV chip cards, and issuers are reluctant to decline card authorization from merchants because they don't want to alienate their cardholder." Fraud, in all its forms, has become a key

operational risk affecting an institution's profitability and reputation.

Today's diversified financial services firms must apply new and innovative measures to mitigate and prevent fraud. Data analytics is key. From forecasting card delinquencies and mortgage risk to more complicated projects such as developing rules-based card fraud prevention techniques and root cause analysis, data is being used to help cut the costs out of fraud and protect the bottom-line. Investments are being made that help detect risk and fraud using sophisticated and complex technology all relying on vast reams of consumer and operational data. Several examples below demonstrate how effective use of data can

drive results in a fraud and risk mitigation scenario.

**Risk Modeling.** A leading U.S. bank partnered with Quattrro to solve a key business challenge and improve overall efficiency of loan application processing. Additional challenges included various degrees of data availability for different customers including data derived from legacy platforms. Quattrro was able to secure data elements and developed three models for personal loan application processing. Models were implemented for loan application scoring and screening, and deployed for level one processing of applications. The result was overall improved efficiency of loan processing with a 13% lift in final acceptance rates.

**Rules Analytics.** A well-known U.S. bank partnered with Quattrro to improve its fraud detection capabilities while minimizing cardholder inconvenience resulting from denying genuine transactions. Quattrro's analytics uses a proprietary process of Dynamic Rules Management (DRM) to ensure continuous updates of Falcon rules and near real time responses to the latest fraud patterns. Through a combination of predictive analytics and digesting fraud trends and patterns, Quattrro was able to drive down false positive ratios for the bank, and reduce the administrative burden by up to 50%.

**Fraud Analytics.** A leading provider of financial services partnered with Quattrro to build an analytics process that pinpoints multiple transactions of the same amount by the same merchant. Just as there are high/low risk cardholders, there are also high/low risk merchants. Quattrro conducted analysis by Merchant ID and SIC codes and developed a segmentation plan by merchant risk profile. Duplicate transactions were removed saving both the financial services company and its cardholders with fraudulent transactions. Quattrro created eight new roles, implemented those rules in Falcon, and ultimately reduced duplicate transactions by 46%.

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## Conclusion

These and many other examples demonstrate the power of data. However, numbers and string characters in complex data files do little unless transformed by human intelligence into meaningful and actionable results. Merely

relying on SPSS or SAS alone to crunch the numbers does not create new unrealized revenue streams, or protect the business against risk and fraud. Only until the output is synthesized and operationalized can it give flight.

## About Quattro Processing Services

*Quattro Processing Services provides an innovative approach for your credit, debit and prepaid card processing needs. Our portfolio processing solutions are delivered by a non-legacy platform that offers a flexible and customizable alternative. Quattro also offers an integrated suite of managed services across the entire risk cycle spanning credit, fraud and portfolio management. By leveraging our Analytics and Transaction Monitoring solutions, your organization can more effectively manage your core competencies resulting in increased cost savings, streamlined operations and improved business processes.*

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