Use Cases That Move Beyond the Status Quo

In consumer finance, data analytics is a relatively mature practice with financial institutions relying on analytics to assess risk, inform investments, tailor marketing and identify fraud. While advanced analytics methodologies are well established as standard business operations, with large teams of analytics experts building and improving predictive models daily, data warehouses may not be optimized to best exploit them. The question for consumer finance firms becomes: How can new Big Data technologies further analytics processes?

By bringing technologies like Hadoop and in-memory databases into the data ecosystem, financial institutions can get more from their analytics practices. In particular, three new technologies have emerged as key enablers in consumer finance.

**HADOOP FOR DATA WAREHOUSE OPTIMIZATION**

With Hadoop, the enterprise data hub can be optimized so only the “hottest” data resides in the more expensive data warehouse. All raw data can be stored inexpensively in the Hadoop data lake and data preparation can be offloaded from the data warehouse to increase performance capabilities. Both structured and unstructured data can remain in native form forever, giving analytics teams a unified platform for continued experimentation with variable creation, modeling techniques and long-term trend analysis.

**Use Case:** Underwriting models are constantly evolving, and financial institutions are always looking to gain an edge in understanding customer risk. Giving analytics teams the ability to experiment with all of the historical data in its native form allows them to quickly build, compare and choose their “golden” models on a regular basis. Institutions can stay current with market trends and avoid being blindsided by frequent charge-offs from risky customers.

Consumer finance organizations are using new Big Data technologies, including Hadoop, data warehouse optimization, in-memory databases and parallelized algorithms, to:

- Empower real-time analytics
- Lower data storage costs
- Create a unified platform for analytics experimentation
- Reduce charge-off risks
- Improve customer service and retention
- Speed analytic model building
IN-MEMORY DATABASES FOR REAL-TIME ANALYTICS

Producing and providing real-time financial reports, credit risk scores and product recommendations to customer service representatives is a game-changer for financial institutions. So are in-memory databases, which speed data processing and allow users to analyze current and historical data together. As soon as new information is available, analytical models can be run to make predictions based on the most up-to-date information. This ability to pro-actively “know” customer behavior and react real-time allows for a more fluid and engaging customer experience, and an optimized cost profile for each customer.

Use Case: When customers call to close an account, rapid information gathering and analysis with an in-memory system can provide a recommended list of deals customer service representatives can offer to retain business. Text transcriptions of past phone calls, historical clickstream information and all other customer touch points can be used to develop the deal that offers the highest probability of retention.

PARALLELIZED ALGORITHMS FOR FAST, FULL-POPULATION MODEL BUILDING

With the paradigm shift to running distributed computing systems on Hadoop, modeling tools now offer parallelized predictive algorithms to take advantage of new Big Data technologies. Analysts can build models using all of the data instead of small samples, and because processes are distributed across a cluster of computing nodes, the model building process is extremely fast. Faster model building lets analytics teams build models more frequently, ensuring model relevancy.

Use Case: As parallelized algorithms foster faster analysis on much larger sets of data, financial services organizations can quickly develop, test and deploy detailed models that deliver a 360 degree view of evolving customer behavior to lower risk and increase profit. For example, institutions can build accurate models in hours, rather than days or weeks, that forecast spending and determine who should receive a loan or credit card, how much credit should be extended to an individual, whether to proactively extend credit to profitable customers, and identify propensity to attrite.

Find out how WWT’s Big Data and Consumer Finance experts can help you build Big Data solutions that meet your business goals by visiting wwt.com or email bigdata@wwt.com.