

## MARKET COMMENTARY

# Making Cents of Big Data

Big Data is shaping the way financial institutions develop competitive and personalized experiences for consumers. With vast amounts of data collected regarding nearly every aspect of a consumer's behavior, interactions, and activity with a financial institution, both online and in person, the amount of raw data grows exponentially every day.



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By properly employing data analytics, financial institutions can improve and individualize the consumer experience while improving efficiency and productivity across a wide range of operations. As the resources available for financial institutions, from cloud computing to machine learning tools, continue to advance, it is increasingly more feasible and necessary for even smaller financial institutions to take advantage of the power of data analytics to remain competitive in the market.

### Growing Analytics

In today's agile business world, Big Data provides multifaceted insight into nearly all the habits and desires of consumers as well as a deep assessment of an institution's performance. Big Data analytics continues to build better and more reliable models as it replaces traditional methods of insight such as close relationships with account holders or direct comparison to peer competitors. One recent study by Mordor Intelligence projects the compound annual growth rate of Big Data analytics in the banking market to grow by nearly 13% between 2019 and 2024.<sup>1</sup>

The International Data Corporation (IDC) similarly forecasts that global revenue for Big Data and business analytics solutions will reach \$189.1 billion, an increase of 12% over the previous year, with the pace of growth expected to continue in the upcoming years.<sup>2</sup>

### Finding the Right Data

Although data analytics offer a tremendous potential of insights for financial institutions, the concept of Big Data may sound intimidating, especially for institutions with limited budgets. Extracting and sorting the vast and ever-growing amounts of raw data can be challenging both in terms of cost and the expertise required to successfully convert the data into productive insights.

For many financial institutions, legacy systems and technological limitations make this process prohibitive to set up internally. Similarly, not all data that is collected and available is useful, so data must be refined into what is valuable for an institution's goals.

1. [Big Data Analytics In Banking Market - Growth, Trends, And Forecast \(2019-2024\)](#). 2018

2. [https://www.idc.com/getdoc.jsp?containerId=prUS44998419&utm\\_medium=rss\\_feed&utm\\_source=Alert&utm\\_campaign=rss\\_syndication](https://www.idc.com/getdoc.jsp?containerId=prUS44998419&utm_medium=rss_feed&utm_source=Alert&utm_campaign=rss_syndication)



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Even after the valuable data is extracted, the cost of computing power and the talent to perform the intricate analytics can be burdensome. Institutions desire Big Data to provide quick and scientifically sound insights to ensure improvements in their decision-making and business processes. However, errors in these initial phases of data collection can plague analytics through a domino effect of erroneous or misinformed calculations. As such, it is essential that financial institutions define clear objectives for data analysis and that pertinent data feeds the models to provide accurate insights.

### Security is Top of Mind

With the collection of massive amounts of consumer data, both financial institutions and consumers may also be wary of security concerns over identifiable information. Proper data analytics, however, does not rely or collect personally identifiable information or seek to portray a snapshot of individuals or groups, but rather analysts use aggregate data to paint a broad picture of a financial institution's performance as well as the behaviors and desires of consumers. This information can also be compared directly with peer institutions to enhance their competitive stance in the market.

### Making Cents: Return on Investment

With the access to reliable services for these resources, however, the conversation for financial institutions today has less to do with whether to invest in Big Data analytics and more to do with how to take advantage of their potential. Financial institutions have found data analytics to hold a wealth of valuable insights that they can leverage to enhance

their business operations across a myriad of categories, such as optimizing risk management, providing key benchmarks, processing loans more quickly, enhancing employee engagement, personalizing services and products through consumer segmentation and targeting, and increasing client retention and application conversion rates.

In other words, using Big Data is not just a trendy way to develop whimsical charts and graphs. Insights from Big Data analysis make solid contributions to business decisions that create positive changes for both consumers and employees. In simple terms, Big Data insights can reduce costs across operations as well as increase profit margins.

With large samples of anonymized data and an enhanced level of detailed targeting, Big Data can provide segmentation that is estimated to increase the return on investment by 5%-7%.<sup>3</sup> Additionally, one US bank increased revenue by 8% in only a few months after using analytics to identify patterns of unnecessary discounts.<sup>4</sup>

Although larger banks have been quicker to invest in these insights, with over half of banks with over \$50 billion assets already implementing Big Data analytics by 2016, services offering data analytics are not only expanding, they are also providing better and more individualized insights to meet an institution's objectives.<sup>5</sup>

Using data analytics to learn how to effectively engage consumers across digital channels is increasingly important as a recent study revealed that two-thirds of the decisions customers make are informed by the quality of their experiences all along their journey.<sup>6</sup>

3. [Huffman, David. "In Banking, Big Data Is Great... But Right Data Is Better." 11 April 2019.](#)

4. Amit Garg, Davide Grande, Gloria Macías-Lizaso Miranda, Christoph Sporleder, and Eckart Windhagen. [Analytics in banking: Time to realize the value.](#) April 2017.

5. Koechlein, Frank. [Community Banks and Credit Unions Falling Behind In the Data Arms Race.](#) 20 December 2017.

6. Peter Dahlström and David Edelman. [The coming era of 'on-demand' marketing.](#) April 2013.



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### **Predictive Analytics**

One important way data insights improve operations is by accurately forecasting activity. For instance, data analytics may discover important trends that stand out during digital banking experiences or during a loan application. If the insights show a significant drop off of use of a product or of applications after a certain screen, institutions can reevaluate that particular element of the service, from considering any confusion of the wording of a question to deciding whether the level of detail may be too overwhelming for consumers.

With this information, institutions can fine-tune the application itself as well as learn how certain responses are predictive of successful users. Recently, McKinsey & Co. found that one European bank was able to reduce churn by 15% after investing in data analytics.<sup>7</sup> By tailoring a loan or mortgage application to better understand what yields a successful result, for instance, institutions can allocate resources, such as credit history requests, only to applicants who are likely to complete the application. On the other hand, understanding successful applicants can help institutions set criteria to expand their services and optimize risk management by not setting criteria that is overly conservative through predictions with high levels of confidence.

### **A Tailored, Unique Experience**

Additionally, these insights can provide accurate and detailed information regarding the times and days of the week that consumers access these applications or other services. With access to these activity forecasts, institutions can reliably allocate resources to ensure that consumers receive the appropriate amount of attention. For example, institutions may recognize trends of loan applicants during certain times of the week, allowing them to make more loan officers available during these times.

For smaller financial institutions where employees have multiple functions inside a branch, these insights may be particularly useful to optimize both employee engagement and consumer experience.

Additionally, knowing trends of activity can allow banks to maximize technological resources more efficiently as well by anticipating when and how to allocate more energy to computing power and online customer service. After using machine learning to analyze how code affected energy use, one bank was able to reduce costs by 15% by implementing more efficient codes.<sup>7</sup>

By using data analytics to develop more profound and complex profiles of customers, financial institutions can accelerate growth across their products. Besides evaluating these detailed profiles, data analytics provides insights across consumers' transactions to uncover potential areas for improvement.

As an example, one bank was able to increase commissions, add revenue for its merchants, and provide more value to customers by using data from credit card transactions from its own terminals and those of other banks to develop incentives for regular purchases at one of the bank's own merchants.<sup>7</sup>

The seemingly endless ways Big Data can be harvested to provide insights into operations offers community banks and credit unions in particular tremendous potential to expand and enhance their products. Besides identifying reliable methods to both retain current clients as well as expand their services to new ones, data analytics delivers an essential and insightful comparison of an institution to its peers. With the complex and changing paths that consumers interact with banks, data analytics identifies reliable avenues for smaller institutions to channel their resources and optimize their relationship to their communities.

7. Amit Garg, Ibid.



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