Business analytics for banking

Three ways to win

Contents

Overview

In today's post financial crisis environment, banks face a costly and complex web of challenges that have become their new normal. Customers are now more savvy, demanding and less loyal. New regulations continue to emerge that require more granular and frequent demonstrations of governance and control. The ability to understand risk well enough to act on insights remains a challenge. And capital remains scarce, requiring a tighter focus on operational efficiency and decisions that are both risk-informed and capital adjusted. The competition for profitable returns in this marketplace is extreme.

The information that banks need to address these challenges is out there. "Big Data" represents a huge opportunity for organizations that are able to harness it. Globally, trillions of dollars in payments are processed every day. Stock exchanges may undertake trillions of securities calculations in a minute. A bank may process more than 100 million loan records in a single day. All of these transactions can provide deep insights into customer behaviors, preferences, and risk. New transaction channels such as smart phones are also generating a massive data trail of valuable information.

As many organizations now realize, the key to unlocking the value within all that data is business analytics. According to research from The Economist and IBM, organizations that adopt analytics achieve significant benefits compared those do not, including:

- 1.6 times greater revenue growth
- 2 times greater EBITDA growth
- 2.5 times stock price appreciation[1]

In this white paper, you will learn how business analytics helps banks overcome their challenges to improve profitability, increase revenue and drive growth.

Business analytics defined

With business analytics, you can optimize performance and use predictive insights and trusted information to make more informed decisions. By bringing together all relevant information in an organization, executives can answer fundamental questions such as *What is happening? Why is it happening? What is likely to happen in the future? and How should we plan for that future?*

IBM Business Analytics software helps your organization rise to the challenge with better business insight, planning and performance. It does this by unlocking data captured in operational and financial systems and transforming it into useful, relevant insights that you can act upon. It helps you understand what's behind critical issues, trends and opportunities and provides an accurate, forward-looking view of the business. Everyone across the organization can use this information to make strategically aligned decisions that drive better business outcomes.

The core components of business analytics for banking include:

- **Business intelligence.** Easily find, analyze and share the information you need to improve decision-making with query, reporting, analysis, scorecards and dashboards.
- **Performance management.** Guide management strategy in the most profitable directions with timely, reliable insights, scenario modeling and transparent and timely reporting.
- **Predictive analytics.** Discover patterns and relationships in data to predict behaviors and optimize decision-making.
- **Analytical decision management.** Use predictive analytics, rules, scoring and optimization techniques to empower workers and systems on the front lines to optimize customer interactions and improve business outcomes.
- **Risk management.** Make risk-aware decisions and meet regulatory requirements with smarter risk management programs and methodologies.

Three ways to win

Banks have always been high on the maturity curve for employing business analytics to solve business problems. While the implementations are as individual as the companies themselves, three common areas are always of particular focus: customer profitability analytics, risk management and increasing operational efficiency.

Customer profitability analytics

Determining customer profitability is not a simple endeavor for most financial institutions. Disparate data sources and disconnected systems make it difficult to aggregate client account level information for key dimensions like product, line of business, geography and to gain actionable insight from structured and unstructured data related to marketing, sales and service interactions. These obstacles can prevent banks from determining what makes a customer profitable in the long term, identifying their most valuable customers, developing account retention strategies, and raising the lifetime value of the rest of their customer base.

The IBM Customer Profitability Analytics solution combines powerful Cognos business intelligence and SPSS predictive analytics technologies to help you overcome these challenges. It enables you to maximize the value of your customer base by understanding the interconnected factors that influence profitability through a single, at-glance-view. Profit and loss statements at the individual account level, aggregated customer information including household data, personal and business connections, line of business, products owned, geography and other profitability factors create a 360-degree view of each customer. These insights can then be delivered across the organization to optimize customer interactions, determine the most profitable pricing decisions and take actions that increase customer satisfaction, retention and profitability.

For example, a call center representative could easily access information about a particular customer to determine which products he or she would most likely be interested in, or which actions to take that would increase their profitability for the bank. Or when selling credit products, a bank could go beyond simple credit scoring to determine the most effective pricing decisions for maximizing profitability and improving that customer's lifetime value to the organization. Whether it's a commercial bank, retail bank, a marketing analyst or financial analyst, everyone in the organization has a consistent data set they can slice and dice to understand the individual customer from their perspective.

Scotiabank: Enabling real-time credit analysis

Scotiabank is the wholesale banking arm of the Scotiabank Group, with 29 offices and more than 300 relationship managers organized around industry specialties. The counterparty risk systems that Scotiabank had in place provided overly conservative measures, and could not support a consolidated view of counterparty credit risk (CCR). Scotiabank wanted to efficiently manage capital and credit so that it could conduct more business without increasing overall risk.

With IBM Business Analytics software, Scotiabank gained a unified solution for measuring and managing counterparty exposures and CVA in the front, middle and back office. With access to more sophisticated analytics on different types of trades, Scotiabank's traders can conduct more scenario analyses to make the best trading decisions. Traders and the credit group now know what a trade will look like and how the exposure increases or decreases with time.

"IBM provides us with an integrated risk infrastructure that helps us meet our business objectives, and we'll be expanding it across other business lines to extract further value."

– Alyson Bailey, Director of Global Analytics and Financial Engineering, Scotiabank

The foundation of the solution is a profitability calculator which can efficiently produce customer profitability statements. The solution uses best practice management accounting theory to calculate cost of funds, risk-adjusted return on capital (RAROC), provision for losses, and non-interest expenses using both activity-based costing and allocation methodology. It also calculates many key performance ratios (RAROC, return on equity, expense ratio, loan yields, deposit rates, return on asset, etc.) at the instrument or customer account level. The calculations are summarized in a multi-dimensional view to support best practice profitability reporting and analytics.

Banking organizations that implement the IBM Customer Profitability Analytics solution can gain a unique view of their customers that cannot be easily replicated by competitors. They are able to understand who their most valuable customers are, what they want and how they will likely behave in the future. More importantly, they are able to act on those insights in order to improve marketing ROI, increase customer satisfaction retention and grow revenue.

With the IBM Customer Profitability Analytics solution you can:

- Calculate and monitor the profitability of each customer.
- Measure profitability across key dimensions such as product, line of business/organization, geography, customer demographics and time.
- Understand customer needs and propensity to buy new products.
- Enable real-time "What if" profitability scenario analytics.
- Predict customer lifetime value.
- Perform profitability forecasting and planning.
- Provide a consistent, 360-degree view of customers across the organization.

Managing risk

According to a recent IBM study of nearly 500 executives, an overwhelming 77 percent feel as though their risk exposure has increased year-to-year. And not a single respondent said risk is decreasing.[2] Driven by both external and internal forces, banks are under great pressure to adopt more sophisticated and effective strategies for managing risk across the enterprise, to ultimately improve performance and sustain competitive advantage. These forces include increased oversight from ever expanding global, regional and national regulations such as the Dodd-Frank Financial Reform Act and Basel III. There are also increasing internal demands to improve profitability by aligning risk, capital and performance management objectives, and to instill greater confidence among investors, customers and line-of-business units.

Yet, at the same time, there is a lack of trusted, integrated and consumable risk information available across banking organizations. For many, the ability to provide relevant, consistent risk data for a number of distinct stakeholder groups such as senior executives, analysts and regulators, seems out of reach. In order to meet these challenges, banks require more accurate risk assessments to support forecasting, planning, financial reporting and decision making at both the strategic and transaction levels. To achieve this, they need an integrated view of their risk across divisions, geographies and risk classes.

IBM Risk Analytics helps banks gain a comprehensive, integrated approach to risk management that improves decision-making capabilities throughout the organization, so that they can:

- Make risk-aware decisions.
- Optimize capital across the enterprise.
- Reduce the cost of compliance.
- Accelerate and streamline risk processes.
- Dynamically evolve as risk practices and regulations change.
- Align strategy to risk appetite.

IBM Risk Analytics provides advanced analytic capabilities for transforming risk data into risk insights. Banks can then apply these insights and take the most effective actions across these essential risk management arenas:

- **Financial Risk.** Understand and act on financial uncertainty and exposure across the business including: market risk; credit risk and collateral; ALM and liquidity risk; capital management and actuarial risk.
- **Operational Risk.** Manage operational risk to improve visibility into risk exposures across the enterprise, reduce unexpected losses and improve business performance.
- **Regulatory Compliance.** Manage against evolving regulatory change and provide senior management with confidence that regulatory compliance is achieved, risks are mitigated and corporate policies are enforced.
- **IT Governance and Risk.** Sustain compliance across multiple IT best practice frameworks and understand the impact of IT risk, threats and vulnerabilities to the business processes they support.
- **Strategic Business Planning.** Apply advanced risk aggregation across the enterprise to stress test risk-adjusted performance, and build agile risk-informed strategies and plans to optimize capital.

Operational efficiency

Banks must also respond to their challenges by shoring up internal operations to ensure that the entire organization is running at peak efficiency. They need to streamline operations and increase flexibility so they can respond more quickly to market changes. However, achieving a high level of operational efficiency can be an overwhelming goal considering the broad scope of people, processes and assets within a banking enterprise. Factors such as process bottlenecks, disconnected systems, outsourcing options, the lack of best practices, compliance requirements, waste, manually intensive tasks and other potential inefficiencies exist at every level of the organization. And any cost savings must be made without reducing the bank's ability to effectively service its customers.

Banco Itau: Improving customer cross-sell and acquisition with business analytics

Banco Itau Argentina is the Argentinean branch of Itau Unibanco Group, one of the 15 largest financial institutions in the world. In a highly competitive environment, Banco Itau Argentina wanted to find a more effective way to increase customer satisfaction and lifetime value while maximizing the bank's profitability.

The bank chose IBM Business Analytics software and used it to create predictive models that identified clients with a high probability of accepting marketing offers. Then it used IBM Business Analytics sales optimization technologies to maximize the effectiveness of its marketing campaigns. By implementing predictive modeling and marketing optimization technologies, Banco Itau Argentina was able to increase revenue from existing clients by 40 percent in one year, and its total retail customer contribution margin by close to 60 percent.

"We wanted to increase customer satisfaction and life-time value while maximizing bank profitability through the analysis and execution of optimal cross-selling and acquisition strategies. That´s why we chose IBM Business Analytics solutions."

–Mauricio González Botto, COO, Banco Itau Argentina

With IBM Business Analytics, banks gain deep insight into the actions that will improve operational efficiency. They help banks understand the factors that can reduce costs and optimize business and financial performance, payments processing, branch and channel performance and sales management. IBM Business Analytics helps banks:

- Align organizational objectives across branches and divisions.
- Identify and predict process bottlenecks.
- Marry cost of activities, functions, processes, partners and value derived.
- Intelligently extract cost from the business.
- Model alternative sourcing and delivery strategies.
- Optimize capacity.

Improving branch performance

If a bank has branches that are not aligned with the organization's overall objectives, it can lead to reduced revenues and deposits, lower profits and poor customer satisfaction stemming from an inconsistent experience. Banks need a multi-dimensional view into the performance of their branches to ensure they are operating at peak efficiency.

IBM Business Analytics Branch Performance blueprint helps bank monitor and analyze the performance of their branches. It provides both district and branch managers with direct insight into revenue, cost and profitability measures by branch, product type, product profile by customer, customer segmentation by household and then combine it with local market intelligence. Managers have near real-time feedback on profitability, branch volume, accounts, rates, spreads, fee income, compensation, staffing, direct and assigned expenses. Forecast planning and profitability targets can be created with high accuracy and effectiveness for the organization as a whole and for each branch in particular.

For example, with IBM Business Analytics Branch Performance blueprint:

- A district manager can review profitability, sales and customer service KPIs for the branches in a region. Those branch managers can then drill into market share and demographic analysis for their specific locality.
- A branch manager can leverage a tailored set of dashboards to interactively analyze sales, retention, staffing levels and customer service.
- A branch manager can update plans to analyze how expected sales, costs and headcount levels will impact branch profitability and customer satisfaction performance.

Best practices for peak efficiency

Best practice budgeting, plans, forecasts and financial reporting are also a cornerstone of better performance and efficiency. Becoming a leaner organization means swapping out inefficient processes in favor of new systems capable of driving ongoing performance. For instance, rather than setting targets at specific numbers, decision-makers may want to begin tying performance targets to events, trends and risk factors.

Rather than engaging in planning on an annual basis, they might consider adopting shorter planning cycles focused on the achievement of specific tactics and initiatives.

With IBM Business Analytics, banks have the ability to understand which practices will provide the greatest benefits for cost reduction and improved efficiency.

Why choose IBM Business Analytics for Banking?

IBM Business Analytics for Banking solutions are built on the expertise and innovation of IBM's leading analytics platform. They provide bank across the globe with the ability to gain valuable insights from data and act quickly to improve profitability, increase revenue and drive growth. IBM Business Analytics for Banking solutions offer:

Superior capabilities
- Analytic capabilities that are dually specialized to the task and interconnected to allow shared insights across the organization.
- Analytics capabilities that scale from small and midsize businesses to enterprises.

Flexibility
- Analytic capabilities for all decisions, all people, all data, when and where you need them.
- Multiple delivery options, including appliances, hardware, cloud and mobile.

Innovation
- Nearly 600 analytics patents a year and first in overall patent ranking for the past 20 years.[3]
- Next-generation analytics systems that are able to reason and learn.

Proven
- Recognized technology leader with a significant number of analytics innovation use cases.
- More than 20,000 analytics engagements and 9,000 dedicated analytics consultants around the globe.

Conclusion

In order to meet the challenges of the "new normal," banks need a way to transform massive volumes of organizational data into actionable insights and strategies. IBM Business Analytics provides comprehensive capabilities to help banks use analytics to perform customer profitability analytics, manage risk and improve operational efficiency.

About IBM Business Analytics

IBM Business Analytics software delivers data-driven insights that help organizations work smarter and outperform their peers. This comprehensive portfolio includes solutions for business intelligence, predictive analytics and decision management, performance management, and risk management.

Business Analytics solutions enable companies to identify and visualize trends and patterns in areas, such as customer analytics, that can have a profound effect on business performance. They can compare scenarios, anticipate potential threats and opportunities, better plan, budget and forecast resources, balance risks against expected returns and work to meet regulatory requirements. By making analytics widely available, organizations can align tactical and strategic decision-making to achieve business goals. For further information please visit **ibm.com**/business-analytics.

Request a call

To request a call or to ask a question, go to **ibm.com**/business-analytics/contactus. An IBM representative will respond to your inquiry within two business days.

IBM Corporation
Software Group
Route 100
Somers, NY 10589

Produced in the United States of America
April 2013

1 "Outperforming in a data-rich, hyper-connected world," The Economist Intelligence Unit and the IBM Institute of Business Value, 2012. http://www.ibm.com/smarterplanet/global/files/se__sv_se__intelligence__Outperforming_in_a_data-rich_hyper-connected_world.pdf

2 Combating risk with predictive intelligence, IBM Institute for Business Value, 2012. http://www.ibm.com/common/ssi/cgi-bin/ssialias?subtype=XB&infotype=PM&appname=GBSE_GB_TI_USEN&htmlfid=GBE03500USEN&attachment=GBE03500USEN.PDF

3 IFI CLAIMS® 2012 Top 50 US Patent Assignees, http://ificlaims.com/index.php?page=misc_top_50_2012 .

YTW03328-USEN-00