Tap into the true value of analytics
Organize, analyze, and apply data to compete decisively

INFOsights
Technology Insights for the Financial Services Industry

In this issue
- Structuring the Unstructured Data: The Convergence of Structured and Unstructured Analytics
- Post-Crisis Analytics: Six Imperatives

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In a service-based economy, companies strive to derive revenue by creating and nurturing long-term relationships with clients. A case in point is retail banking, where customer value is of utmost importance. In today’s hyper-competitive environment, banks are aggressively leveraging their customer base to engage in revenue driving activities such as cross-selling and up-selling. To be successful, it is imperative for banks to embrace the power of analytics to gain insights and appropriately evaluate risks and opportunities—enabling more effective decision-making in the quest to enhance wallet share. This article examines the various applications of analytics in retail banking and provides pointers for analytics implementations.

**Introduction**

In retail banking, where customer value is at the core of operations, creating and nurturing long-term relationships with the customer is the key to maximizing wallet share. Advances in technology and the emergence of multiple service channels has resulted in customers using personal computers and smart phones to access banking services. Hyper-competition, loss of “personal touch” and the use of the internet as an effective channel, has resulted in reduced stickiness and switching costs of customers, denting bank profitability.

In this context, it is imperative for banks to offer an interactive and consistent online banking experience coupled with high-quality branch banking service. To do so, and to achieve faster time-to-market, it is crucial for banks to anticipate customer expectations well in advance.

Banks also need to ensure that their existing customers remain satisfied with service quality and offerings. The cost of customer acquisition is much higher than the cost of customer retention. Considering the above, it is essential for banks to effectively use analytics to enhance customer value and maximize wallet share.
Bank Challenges that make Analytics an Imperative

In the absence of a robust analytics solution, many banks grapple with numerous challenges, ranging from the evolving nature of their competitive environment to regulation and disruptive technologies. A number of these are highlighted below.

**Environment:** The financial services operating environment is becoming increasingly challenging—acquisitions are not yielding desired results, organic growth is becoming difficult, new branch growth is proving costly, and locations have been rendered irrelevant by online players. Furthermore, there is increased pressure to shrink the product development lifecycle.

**Customers:** Customer loyalty can no longer be taken for granted. In spite of CRM technology investments, banks are unable to maintain a close customer relationship; in fact, many customers don’t feel valued by their bank. Compounding this bank-customer disconnect, is the emergence of multiple channels and an increasingly diffused customer base. Finally, customers are increasingly demanding personalized, customized and real-time product offerings, requiring banks to manage many products—a significant IT challenge.

**Strategic:** In the new world of banking, old strategies (i.e. blanket cross-selling) often prove to be costly and ineffective. Many banks have been criticized for focusing on customer acquisition rather than retention. Changing strategies mid-stream has proved to be difficult—many banks do not have the infrastructure required to identify what they want, nor the data management capabilities to figure out where to start. Segmentation strategies are difficult to develop in an environment plagued by siloed infrastructure. This limits a bank's ability to effectively cross-sell and up-sell.

**Tactical:** Banks have failed in making “emotive” contacts with the customer, despite having success in “logical” aspects like correcting errors. Many banks rely on inefficient blanket outbound marketing, and are unable to leverage focused and segmented marketing. In the online channel,
banks are unable to provide satisfactory answers to many customers’ queries. These factors compound one another, making it difficult for banks to sell to their established customers.

**Technology:** Banks have immense amounts of customer data, but many lack the infrastructure to predict customer behavior and provide appropriate responses. They struggle to pull in disparate data from various systems and lack the capability to track a customer profile across channels.

Many are stuck with legacy systems—often built to support siloed business processes producing fragmented data. Such systems have isolated marketing and sales, leading to sub-optimal customer service. Traditionally, a bank’s technology investments have been only in areas of problem and escalation management, where customer hygiene is given priority and innovation takes a back seat. Although essential, this approach is reactionary.

**Competition:** In a hyper-competitive environment, the bank's traditional power of market share, pulling in deposits, cross-selling, and pricing has waned. Non-banks are grabbing market share (for example, in credit card and deposit substitutes). Money portals (for example, PayPal) which have real-time transaction analytical capabilities, pose a tremendous challenge to banks. Competition has reduced switching costs significantly.

**Regulatory:** Customer privacy regulations (for example, spam rules, opt-out programs) have made advertising difficult. Banks in many countries are also seeing new regulatory directives (for example, in lending). In the absence of a robust analytics solution, banks are unable to optimally judge their risks and exposure—while meeting the increased pressure to lend. Business analytics tools can help in creating refined customer risk profiles.
Banks spend a lot of energy in studying customer data—with a goal of understanding drivers of customer attrition, repositioning offerings and using targeted marketing to differentiate their services and help improve customer retention. For a bank to meet its objectives, a robust analytics solution—incorporating defined metrics that provide a unified view of customers, across lines of businesses and channels—is crucial. Good analytics provides banks with many benefits (see Figure 3). Analytics can cover a gamut of banking functions (see Figure 4).

**Campaign Management:** Using analytics, the right offer for multiple product campaigns can be determined. A campaign optimizer helps score competing product campaigns against each other, helping to limit the number of campaigns per customer to those with the best scores. Predictive response scoring, channel selection for campaigns, campaign performance monitoring, and cost-benefit analysis are all tools that can be leveraged for effective lead generation.
Marketing: Blanket and unsolicited marketing interactions lead to customer annoyance and wasted marketing expenditure. Analytics help reduce the number of untargeted outbound marketing contacts with customers. Inbound channels (like the internet) can be more effectively utilized—messaging and offerings tailored to individual customer needs. Cross-channel analytics tools help identify the most appropriate inbound channel. Using thousands of variables in an automated analytics model to calculate product propensity, banks can identify the best product/ price/ time/ customer/ channel match, and tailor offerings appropriately. Use of event-trigger engines can help alert the bank of marketing opportunities proactively (for example, insurance when a person moves).

Customer Profitability and Lifetime Value Analysis: Using analytics, products can be priced according to a customer’s likely future value. The long-term profitability of a customer can be gauged by analyzing different cost and revenue components across products.

Attrition and Loyalty Management: Using analytics, segment-wise customer service satisfaction levels can be gauged. Targeted offerings—of only relevant products and personalized communication, using preferred customer channels—will help gain customer satisfaction. Utilizing analytics along with predictive models to analyze past usage, customer service logs, and spending patterns, banks can establish early warning systems that indicate customer attrition. This helps devise appropriate retention strategies.

Attrition scores can be computed to predict attrition probability at the account and customer levels. Profitable customers at risk of leaving (for example, at a mortgage tenure end) can be identified. Offers to encourage such customers to renew their relationship with the bank can be made, based upon past experiences and the customer’s profile. Analytics also help banks design effective loyalty programs by providing insights on customer loyalty parameters.
Service Request Analysis: Analytics can help monitor customer satisfaction on service quality, by providing insights on evolving customer needs and satisfaction levels. Customer satisfaction levels on non-financial interactions made with the bank can also be monitored using analytics.

Corporate Function: The sales decision-making process can be strengthened by linking analytics to fraud and money-laundering detection and credit/ risk scoring. Analytics can also help to get the marketing department involved in product configuration, pricing and placement decisions.

Another potential function is developing multi-dimensional views on aggregate, segment-wise and trend insights to help banks identify focus areas for maximum improvement. Location-specific insights can also be attained and strategies defined (for example, focus on customer acquisition in one market and on retention in another). Market behavior can be understood better and responses built. Expeditious and meaningful branch goals can be set by intelligent segmentation.

Transaction Behavior Analysis: Analytics can help financial institutions analyze transactional behavior aspects (for example, recency, frequency, and the monetary value of a customer’s transaction and profile). They also help reveal channel preferences, and usage for specific products and transaction patterns across customer segments.

Cost Analysis: Analytics help compute operating costs per activity type. The cost can be referred for various combinations of channel, product and customer segments. Customers using live channels (for example, branch, call centers) cost much more to serve than customers using self-service channels. Analytics are very useful in determining channel profitability; banks can then design strategies for migrating customers to low cost channels. Cost containment through effective credit risk analysis is also possible.

Predictive Modeling: Analytics can be leveraged to analyze past customer behavior and, thereby, predict future behavior. Sometimes, a rapid increase in customer base, through organic or inorganic growth, creates huge challenges for banks attempting to know their customers better. Predictive analytics can be of great help here. As customers mature, they shift into new segments. Analytics provide insights into evolving customer needs during various life stages, allowing the bank to evolve along with the customer.

Cross-Sell and Product-holding Analysis: Cross-selling and up-selling are crucial to ensure higher wallet share. Analytics can be used to check spending patterns and other customer behavior, thereby strategizing for cross/up-sell. Using a prospect’s detailed profile and behavioral information, banks can pre-select high product propensity customers and make targeted offerings on their preferred channels. Proper customer segment analysis and understanding of optimal profit-to-risk mix, using analytics, can help banks sell more to established customers. Perhaps most importantly, analytics can be used as a tool to achieve the goal of a connecting hub, meeting all financial needs of the customer.

To enable banks to fully benefit from analytics, a structured approach for implementation is crucial. Many banks follow a three-phased approach. In the first phase, banks master customer data. In the second phase, banks attempt to gain insights through automated analysis (for example, profitability and cost) of existing data. In the final phase, banks
Analytics implementation – Three-phased approach

Figure 5

Hindsight
Data
Knowledge
Wisdom

Insight

Foresight

• Customer Information File

• Product Profitability
• Customer Profitability

• Customer Value-oriented strategies / tactics

Proposed analytics infrastructure

Figure 6

Analytics Infrastructure

Business Intelligence

Campaign Management
Cross-Sell and Product Holding Analysis
Customer Profitability and Lifetime Value
Attrition and Loyalty Analysis
Transaction Behavior Analysis
Service Request Analysis

ETL and Date Cleanup

Data Warehouse

Analytics Datastore

Data Sources

Customer Data
Account Data
Transaction Data
External Data
Service Request Data
attempt to build rules and predictive models based upon insights gained in phase two (refer to Figure 5).

In the first phase, banks typically don’t falter. The second phase is where things become challenging. In this phase, banks often lack coherent strategies and attempt half-hearted analysis, top-down profitability analysis (rather than bottom-up), and/or a siloed, unit-level undertaking.

In the third phase, planning and preparation is critical. Successful completion of phase three requires a bank to have built an organizational infrastructure for harnessing analytics, customer segmentation, and actual/potential life-time value computation.

Effective analytics implementation necessitates a flawless transition of business strategy into analytics architecture strategy. All applicable analytics architectural stacks, including Base Infrastructure, Data, Discovery/Integration, Analytics Applications, Performance Management, Reporting, and Delivery must be thought through and planned for implementation. Refer to Figure 6 for a proposed analytics infrastructure.

Before undertaking an implementation, financial institutions should consider the following.

**Basics:** Before delving into analytics set-up, banks must have a core banking solution in place. The basic needs of the bank should be met first. If systems are inefficient (for example, the account opening process is too long), they must be addressed first. Pulling data from different channels and sources should be possible and relatively efficient. Finally, banks having relatively crude metrics must plan for more sophisticated ones to be used with analytics.

**Strategies:** Fail to plan and plan to fail. Banks must have a strategy on the information they want to collect. The right type of data collection, not just basic banking transactions, is crucial. Where complexities are immense, banks must start small and then scale up. Furthermore, for an effective customer-profitability analysis, a bottom-up approach is recommended (for example, building from the customer account level).

![Effective analytics](image)
Real-time Analytics: At times, a bank’s analytics don’t lead to real-time promotion of products or pricing. This is because many banks implement analytics with bought-in tools that have simple propensity models instead of real-time event triggers and personalized pricing. Building real-time predictive analytics capabilities will give banks a “bigger bang for their buck”. Take the example of a daily data scan to identify customers fitting the cross-over or retention risk pattern. Here, real-time analytics can enable automatic alerts to customer-facing personnel (for example, account managers) for timely action.

Cross-Functional Effort: Effective implementation of analytics is a cross-functional effort. Close collaboration amongst all concerned lines-of-business and technology leaders is crucial in defining holistic analytics strategies and eliminating silos. To build good, predictive analytics, developing robust business rules is crucial. For this, all concerned business units of the bank need to contribute the typical patterns of their businesses. As with any major initiative, senior management support and a collaborative culture is crucial.

Experts: Banks must provide expert employees the discretion to augment the analytics output with their own knowledge, where appropriate. Sales agents should have the final word. Banks using analytics must train and trust their agents to make the final decisions.

Social Media: Banks should leverage social media and Web 2.0 features (for example, social networks, wikis, blogs, podcasts). They should align these with analytics infrastructure to gain useful customer insights. Banks can consider partnering with online social networks.

Conclusion

Understanding and utilizing the power of analytics has become imperative for retail banks. Potential applications of an effective analytics program are nearly limitless. When implementing, banks must follow a structured approach and ensure that specific needs are kept in mind, proper stakeholders are involved, and a long-term strategy is developed. Those that do, will achieve a significant competitive advantage—selling the right products to the right customers at the right time.
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