



How Analytics Can Transform the U.S. Retail Banking Sector

Executive Summary

No matter how you slice it, banking is a data-heavy industry. But despite the proliferation of data, effective mining of insights has remained elusive. Given the tremendous advances in analytics software and the processing power generated by cloud-based utility computing architectures, the banking industry is ripe for change. As the industry works its way out of the financial crisis (amid continued uncertainty over the future), retail banks, in particular, must seriously consider using analytics to improve decision-making, uncover unseen innovation opportunities and improve compliance within a more stringent regulatory environment that is emerging through the Dodd-Frank Act and other impending mandates.

These regulations place a high priority on transparency and are pushing banks toward enterprise-wide data architectures. This will command a significant (and much-needed) move away from the siloed approach to computing that has defined banking since the dawn of the digital age, toward a more integrated model in which a single version of the truth is needed to drive business effectiveness and efficiency.

Such an approach will power the industry's push to reinvigorate its relationship with customers. In today's rapidly changing competitive landscape, regaining customer trust is a top priority for

banks as they look to boost revenues and profitability to survive and thrive in uncertain times.

Following the economic crisis of 2007-2008, consumers have become more frugal. The age of conspicuous consumption has been replaced by needs-based pragmatic purchasing, a transformation that pundits interpret as a return to traditional American values. The personal savings rate, which had decreased dramatically in the 1990s, is now showing a small but steady rise.

Despite shrinking discretionary spending budgets, consumers (especially those in the millennial demographic) have eagerly adopted new technology, especially smartphones. They have also embraced social networks in big numbers, replacing, in some cases, expensive physical-world interactions with a free social variant. Their rapidly evolving behavior and preferences cannot be ignored. For banks looking to boost their top lines, these channels offer a simple and powerful way to spread their gospel and build tighter relationships with customers.

At the center of this ongoing change is pervasive data – information that banks have possessed all along but never quite figured out how to exploit. Given that the quality and quantity of data varies greatly, banks need to prioritize the unique information they hold to accelerate time to insight.



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By applying new analytical tools and service delivery methods, banks can more quickly convert data into knowledge to acquire market- and service-differentiating capabilities. Such an effort requires the backing of the organization's leaders and a cultural shift toward evidence-based decision-making.

New regulations require banks to provide data that is predictive and risk-based. This will require deployment of analytical tools on data aggregated from various business units. Reaching customers effectively via new channels and enhancing the multichannel banking experience will require continuous analysis of the structured customer data residing inside traditional databases and the unstructured bits of data created by customers via mobile phones and social media.

In our view, the winners in this unfolding scenario will be those financial institutions that realize the value of their data and capitalize on it by employing advanced analytics. We believe that banks should seek to achieve the following through their analytics deployment:

- Predict future scenarios and enhance compliance.
- Gain insights into what makes them unique and put this insight to use to gain a competitive edge.

- Drive a customer-centric strategy and improve customer-focused activities.
- Improve decision-making.
- Enhance process efficiencies and operating margins by analyzing data to identify inefficiencies.
- Leverage the emerging analytics-as-a-service model to better manage risk and tap three key resources: people, processes and infrastructure, bundled together to serve as a utility.

Forces Driving Analytics Growth in Retail Banking

U.S. banks face a challenging scenario in the form of stringent regulations and consumers who have become averse to borrowing, compared with the pre-crisis days of profligate borrowing and spending. This will continue to put pressure on the industry's margins, just as complying with emerging regulations will push banks to improve efficiencies. As banks mobilize by creating enterprise-wide data architectures to ensure compliance, many are deploying advanced analytics within various functional areas to help overcome continued business risk and uncertainty (see Figure 1).

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Drivers for Increased Use of Analytical Tools

Area	Drivers	Implications for Retail Banks	Analytics Opportunities
Regulations	<ul style="list-style-type: none"> Heightened regulatory scrutiny 	Under new regulations, banks need to report data that is risk-based, calculated and predictive.	Deploy analytics technologies that allow financial and risk reporting as required by the regulations; transform enterprise-wide risk architectures to improve reporting.
	<ul style="list-style-type: none"> Dodd-Frank 	Regulations requiring increased capital allocations will make it important to have high-quality and accurate underlying data.	
Risk management	<ul style="list-style-type: none"> Demand for greater transparency 	Increased focus on transparency and better management of risk will be prevalent in the post-crisis area.	Improve risk analytics across risk types and business units; implement predictive risk management.
	<ul style="list-style-type: none"> Improved risk management 	There will be a need to go beyond traditional risk assessment techniques.	
	<ul style="list-style-type: none"> Fraud detection 	This will be a key area of focus post-crisis.	Employ techniques such as point-in-time or repetitive analysis to investigate frauds; identify unusual and suspicious activities.
Strategy	<ul style="list-style-type: none"> Need for improved decision-making 	Banks will need a better understanding of the forces that affect their performance.	Go beyond historical data and combine it with analysis of expected events to predict scenarios that can help analytically supported decision-making.
	<ul style="list-style-type: none"> Need for increased profits 	There is a renewed focus on improving the profitability of retail operations, especially from basic services such as deposits and loans. Internal process efficiencies will need to be improved.	Customer data analytics can help banks improve revenues and enhance service. Spend analytics can be employed to boost lending. Employ process analytics to identify and address inefficiencies.
	<ul style="list-style-type: none"> Transformed multichannel banking 	This allows banks to interact with customers through various channels, thereby creating an opportunity to improve customer experience. Banks need to communicate consistently across channels.	Data integration and analysis across departments and channels will be key to a successful multichannel communication and banking experience.
CRM	<ul style="list-style-type: none"> Growing use of social media by consumers 	Banks can track customer activity on social media for feedback and look for opportunities.	Use social media analytic tools on data gathered via these media to generate crucial feedback on products and services and create targeted marketing campaigns.
	<ul style="list-style-type: none"> Millennials as pragmatic and technology-empowered customers 	Young consumers are technology savvy; post-crisis they are trading down, deleveraging and seek long-term financial planning. Millennials generate huge amounts of data using smart devices. Banks need to make sense of this data.	Analyze the data to understand customer needs; create apps and targeted marketing campaigns.
	<ul style="list-style-type: none"> Declining customer satisfaction with banks 	Customer satisfaction needs to be improved.	Behavioral analytics can help banks understand customers better. Banks can create personalized products and offers based on these insights.

Source: Cognizant Research Center

Figure 1

An Era of Compliance

For banking industry regulators, the financial crisis was more than just a wake-up call. The industry meltdown set in motion a wave of regulatory change. The rules that are now being put in place will have a huge impact on almost all areas of a bank, including the way banks manage risk. Enterprise-wide data architectures are a key component for compliance, and they require the overhaul of existing systems to remove the data silos that have long existed in many banking organizations. More than ever, banks must employ a holistic approach to data management to present a single version of the truth to guide more informed decision-making.

Banks now need to report information that goes beyond historical data, into risk-based and predictive information. New systemic oversight allows regulators to ask for information on an ad hoc basis, too, meaning banks will need systems that can handle such on-demand requests, quickly and effectively.

Not surprisingly, the risk management function has gained importance in many banks' strategies (see Figure 2). This urgency has meant that the function is undergoing a dramatic change. Traditional techniques are now giving way to sophisticated analytics that can enhance decision-making by predicting a multiplicity of possible business scenarios.

For banks, this means a significant investment in revamping the existing IT infrastructure. Accord-

ing to research firm Ovum, banks' IT spending in 2011 is expected to increase by 4.5%, a significant amount of which will be applied to implementing changes mandated by the Dodd-Frank Act.

Compliance costs have steadily increased over the past few years, and surveys reveal that this trend is unlikely to slow down in the coming years. Non-compliance could entail unnecessary penalties. Compliance with regulatory requirements is expected to help banks improve transparency and rehabilitate their battered images.

Greater transparency requirements under regulations such as the Credit Card Act, Basel III and the Dodd-Frank Act that demand greater quality and accuracy of underlying data will also introduce much needed efficiencies, build competencies and create opportunities for innovation across product and service lines.

Customer Behavior Shifts

If surviving the effects of the crisis was crucial for banks before signs of growth emerged in 2009, the focus now is on boosting profitability. Banks that weathered the stormy days are now looking to get back to the basics.

On the other side of the counter, however, there have been important changes in customer behavior and preferences. The crisis ensured that banks lost much of the trust and loyalty they enjoyed with their customers. This is reflected in surveys that reveal customer willingness to source their financial services and products from different



Figure 2

banks, and their reliance on advice from friends and family rather than banks in important financial matters (see Figure 3). This means banks will

by Microsoft reveals that this generation puts an emphasis on online service capabilities of banks when researching a new financial institution. This

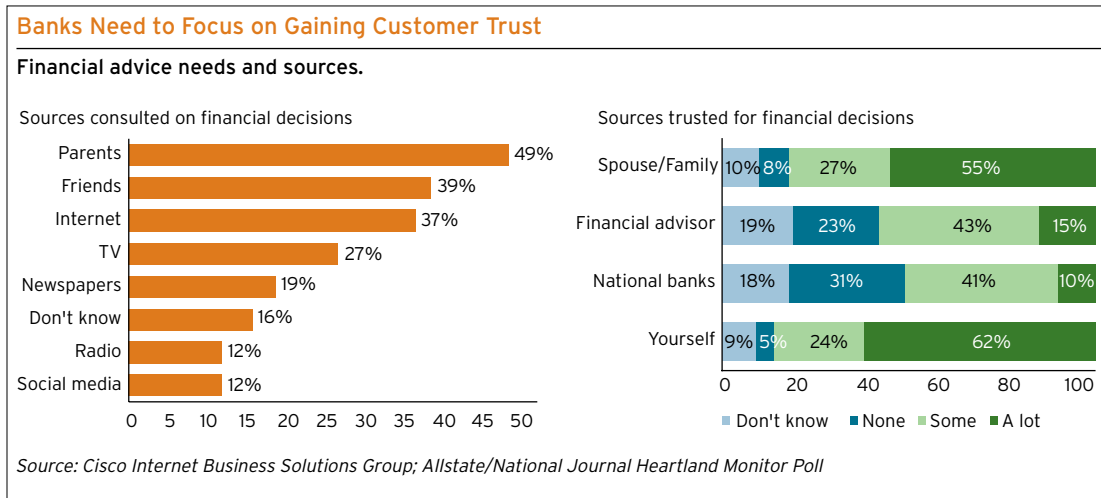


Figure 3

now have to compete harder and considerably improve the quality of their customer service.

demographic presents the next opportunity of growth for retail banks.

Generation Y, also known as the millennials, is changing the rules of engagement for banks. This generation of digital natives is tech-savvy, socially active online and craves tools to plan for the long term. Despite the financial strain from the crisis, millennials have taken to technologies such as smartphones in a big way. They prefer online banking to in-person branch banking, and they value good service. The tech-savvy customer is also self-reliant and likes to use advanced tools to plan future investments. A January 2010 survey

The rise of millennials is accompanied by important economic changes. Following the global economic crisis, the U.S. savings rate has trended upward, while household debt has decreased (Figure 4). Going forward, this trend is likely to continue; some estimates suggest the savings rate will touch 10% for the first time since the 1970s. Tougher regulatory requirements and waning expectations about the future, meanwhile, could affect credit uptake.

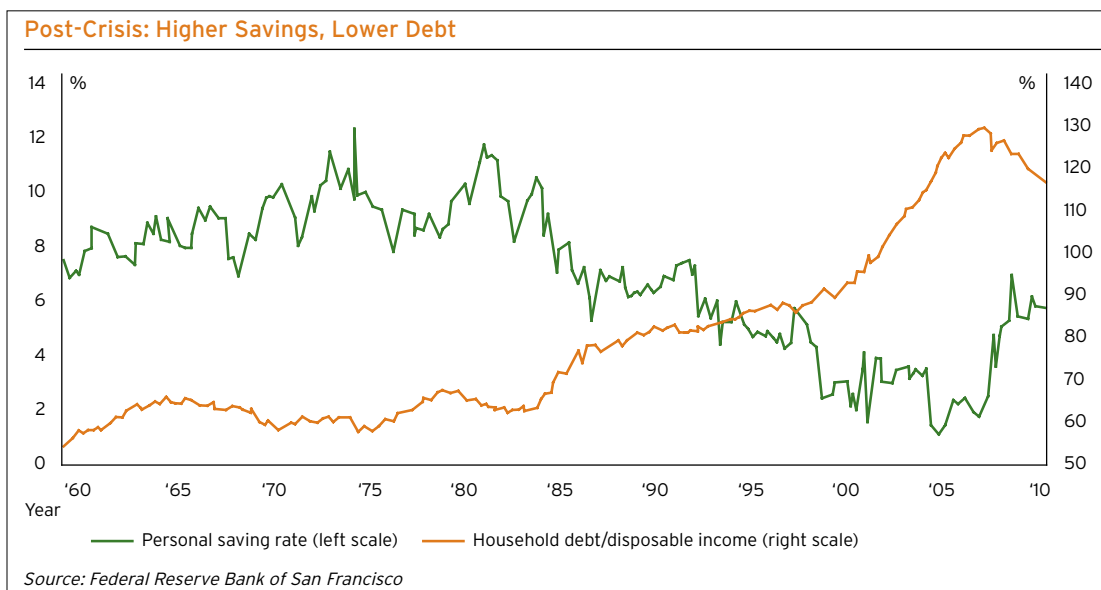


Figure 4

Shifting From Push to Pull

With competition heating up in the retail banking arena, banks are tuning their strategies to be more customer-centric. There is a realization that customer retention will be key to future success, and banks are busy reworking their approach to the tech-savvy, pragmatic and savings-oriented customer.

At a time when customers are interacting with banks through multiple channels, the explosion in customer data could help banks generate key insights into their behavior. This could help banks create better products and a personalized service experience across profiles, geographies, etc. Simultaneously, banks have increased their focus on going local rather than merely expanding to other shores. The approach is to pull consumers in rather than push products out.

At the heart of this new strategy is data that tells banks how to reshape their offerings based on the likes and dislikes of customers. With the necessary data available, banks can employ relevant analytical tools to their advantage.

Analytics Green Shoots

Analytics and business intelligence tools are not new to banks. But the scope of their applications has grown over the past couple of years, thanks to changes in the regulatory and economic landscape. Driven by regulatory demands and changing customer needs, banks see analytics as a key enabler for their overall growth strategy. Banks realize that the power to take on these challenges lies within them, in the form of important data that they continue to amass. Future success depends on their ability to harness proliferating data to their advantage in several areas (see Figure 5).

Compliance & Risk Management

One important fall-out from the crisis was the realization that banks had failed to properly understand the forces that affect them. This led to the kind of risky decision-making that drove many banks to insolvency during the financial crisis. In the post-crisis era, banks know they cannot afford to make similar mistakes. Perhaps more importantly, regulators are taking no chances, either. They want banks to provide a comprehensive view of the market forces and risk-return scenarios across business areas and asset classes.

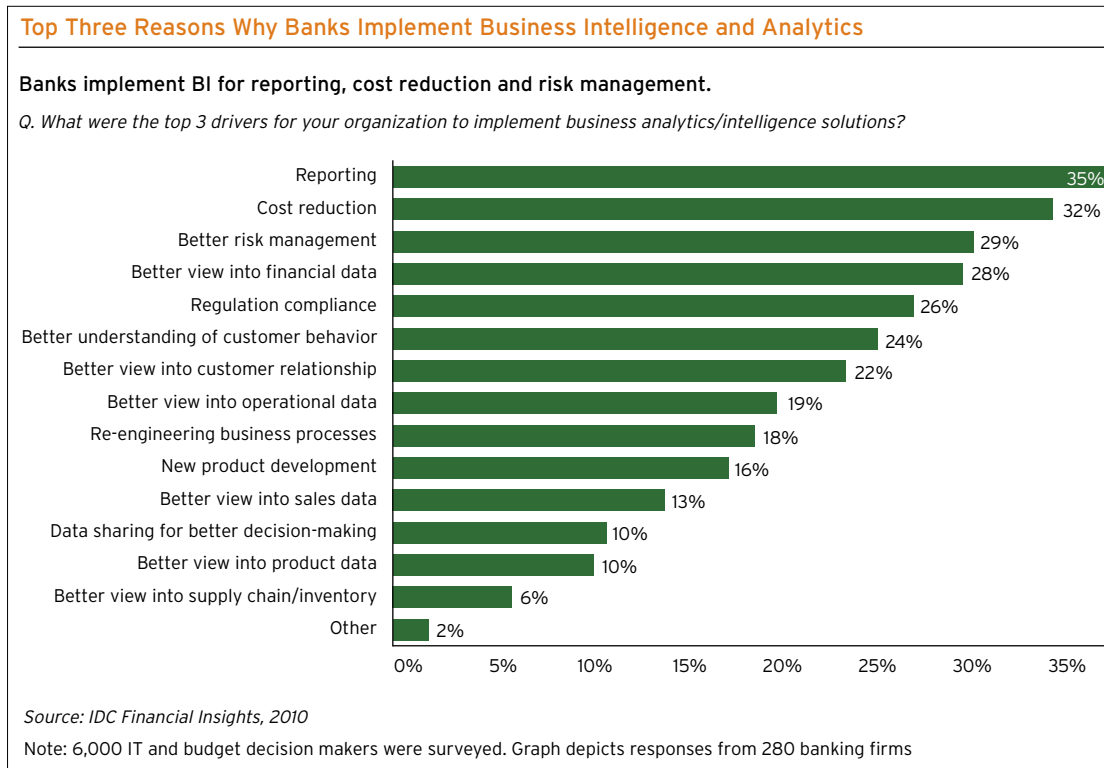


Figure 5

Risk management has evolved as a result of these new requirements. This area has traditionally relied on expert judgment supported by certain quantitative techniques within narrow scopes. Banks are increasingly looking for an enterprise-wide view of risk management, going beyond a fragmented understanding of exposures. Therefore, traditional techniques are now being replaced by sophisticated analytical frameworks that take into consideration everything from exposures through market liquidity to enhance decision-making.

In doing this, there is a clear move away from relying too heavily on past experience. Having a dynamic view of the risk-return scenario is seen as a key to improved decisions. Analytical tools allow the combination of historic data with expected events to predict future scenarios. For example, a bank that wants to launch a new product can analyze whether it can make the cut in the newly regulated market. Similarly, it can predict the kind of response the product would generate among its customers or when a customer might default, using predictive default management tools. Such a view will also help with better capital allocation across product classes and business units.

Another area that stands to gain heavily from the advancements in analytics is fraud detection. Banks have given scant attention to this area compared with the more important concerns of growth and market risk. Nevertheless, banking fraud remains a big threat for banks, and advanced analytics can help counter this threat. According to a 2010 study by the Association of Fraud Examiners, the banking and financial services industry experienced the highest number of fraud cases across industries, accounting for more than 16% of frauds. Analytics can help identify fraud patterns and help banks connect the dots between fraudulent activities and suspicious accounts. Banks can perform point-in-time analysis for one-off investigations or repetitive analysis for areas where fraud tends to occur or keep an eye on areas that do not lend themselves to preventive controls.

Improving Customer Loyalty and Profitability From Multichannel to Cross-Channel

Multichannel banking is rapidly evolving. Banks are not new to this concept, but the race is heating up to provide a truly seamless experience across channels. Banks need to allow customers to interact and transact in a consistent fashion as

they move among Web sites, branches, ATMs and their smartphones. Doing so will enable a transaction that starts at a teller machine, for example, and is completed on the Web site or in-person.

Mobile banking is seen as the next big area of growth, but usage has grown across all channels. This means that banks are managing more transactions every day. It is imperative, therefore, for banks to integrate data from all channels to ensure a consistent experience. Going further, application of analytics to this data will help banks make meaningful and incremental enhancements to “delight” customers and improve the customer experience.

Amid the growing complexity of customer interaction, however, there is a counter-intuitive need to keep things simple, from customer navigation across channels, to the products offered. Easy-to-use products, marketed to the customer via the right channels, will help banks stay ahead in the multichannel race. Customers can be empowered with tools and simulators that allow them to validate their own ROI, based on the historic customer data available with the bank.

On the banks’ side, there needs to be a unified view of the customer. Without this, a seamless multichannel experience will remain a distant reality. This will require going beyond data integration across channels to create a real-time view of the customer. Nevertheless, having accurate data is crucial to obtaining the right insights. Master data management² (MDM), which enables a unified view of existing data by integrating data from across corporate locations, can help create a single version of the truth. This data can then be analyzed and applied across channels for delivering a consistent and high-quality experience to the customer.

Enhancing customer experience will require significant technology investments. However, the key to long-term success lies in the huge amounts of data that are generated daily. According to the Tower Group, midtier banks’ data volumes have multiplied by as much as 150 times over the past seven to eight years. These growing volumes of data hold key information about customer preferences and how customer relationships are evolving. Technologies such as customer data analytics can provide insights to enable banks to make the right recommendations and offers.

Analytics can aid in profitability when these tools are deployed to uncover institutional process inefficiencies. For instance, banks can track returns from channels in order to optimize cost distribution. Smart allocation of funds on the basis of channel performance could help banks create a more cohesive multichannel strategy to improve customer experience and create cost efficiencies. Advanced analytics can drive cost savings on the service front, as well. By employing service cost analytics, banks can prioritize services they want to provide, such as servicing loans, originating loans or both.

Better Marketing Campaigns

Banks can further deploy analytics to create dynamic marketing campaigns that target customers based on products matching their current preferences. In a highly competitive market, banks need to communicate with customers at the right time and through the right channel. Analytics can be employed to track product performance and incentivize product sales. Banks can enhance their margins by pushing high-margin products through various channels. In doing so, it will be crucial to ensure that customer data privacy is maintained and that customers can opt in or out of receiving messages promoting new products and services. Tracking customer behavior will allow banks to understand them better, create new segments based on behavior patterns and push the right product through the right channel at the optimal time. This is the ability that will separate the winners from the crowd in the post-crisis era.

An example is the target demographic of First Time Defaulters (FTDs). These borrowers, roughly 11% of the total U.S. bank defaulters as of September 2008, had no history of defaults before the financial crisis. Many of these defaulters have the ability to get back on their feet. Banks can deploy analytics to identify such customers and create products tailored to their needs.

Making Sense of Social Media

Social networks have established themselves as an important channel of customer engagement. It is now accepted that retail banks stand to benefit from these networks if they engage in them the right way. However, not many banks have reached a comfort level with social media interactions. This is an area that can no longer be ignored.

The number of bank customers who spend their time on social networks has increased dramatically, and these customers generate huge amounts of chatter that can be distilled using social media analytics to gain specific insights. Banks that have taken the leap into this arena are already reaping the benefits. Using various social media analytics, banks can track customer sentiment and gain a better appreciation of what they think about a new product, leading to possible product enhancements. Or, they could stumble upon a particular aspect of what customers dislike about the bank. Used effectively, this channel will serve as an ideal medium for launching new products, as well.

Benefiting from Analytics

Focusing on customer-related analytics is set to become a key differentiator in the competitive landscape of retail banking. As more banks seek to exploit data, success will increasingly depend on how effectively they convert data to insights. Investment banking firms have used analytics for a long time; as seen in Figure 6, they lead several other industries in adapting analytics. The banking sector has remained in the middle of the back, applying analytics to risk management. This is now changing as banks increase their focus on the customer.

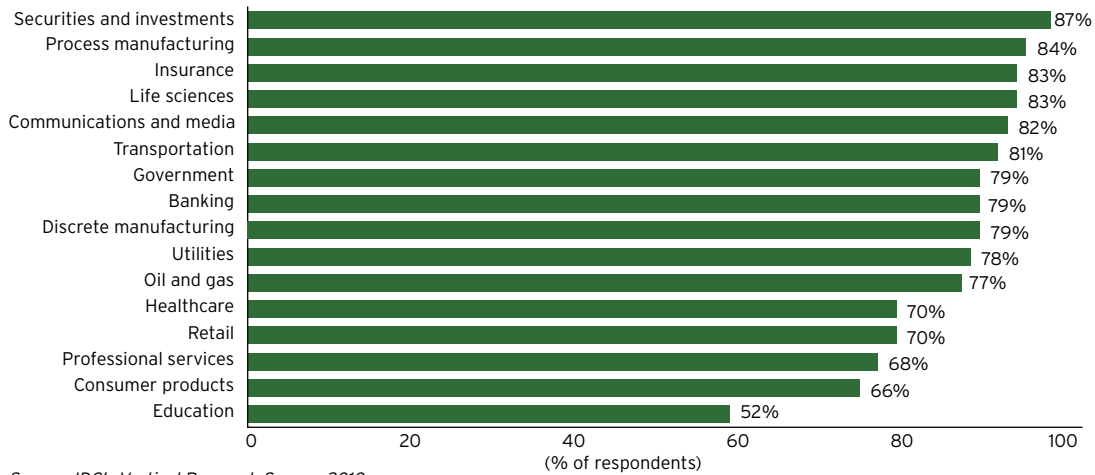
Given the nature of the industry, banks tend to possess the kind of information about their customers that other industries cannot match. Within banks themselves, however, no two banks have the same data. The key, therefore, lies in tapping into those customer-related bits of information that banks know to be unique to them.

From there, banks must convert this data into useful information quickly. Real-time processing of data reduces decision time cycles dramatically, but it also puts a premium on speed, especially because customer-related analytics find usage at the tactical level. Advances in cloud computing could meet all these needs effectively. Banks can embrace the analytics-as-a-service model that combines advanced analytics algorithms with utility computing, while allowing access to global talent pools in applying and consulting on these issues, all delivered via the cloud. This model is ideal for banks seeking to ease their investment pain and improve their business performance.

Banks Realize the Importance of Analytics

Business analytics adoption levels by industry

Q: Has your organization implemented a business intelligence/analytics solution?



Source: IDC's Vertical Research Survey, 2010

Base: 2,771 respondents

Figure 6

Challenges Along the Way

While adopting new technologies may not be new for banks, the rise of analytics in retail banking comes at a time when banks' IT infrastructures are under pressure to change.

Given the wide application of analytics across a bank's operations, it is imperative that analytics are a key component of any retail bank's move-forward strategy. Employing analytics at a tactical and strategic level requires banks to find relevant data. For this, it is necessary that data structures across the organization be standardized so that analytical processes can focus on identifying contextually relevant data.

Resolving data issues, therefore, is very important. Research firm IDC says that data issues account for 70% to 80% of the effort in implementing an analytics project. Therefore, the chance of failure due to lack of resolution is high. Legacy core banking platforms across the industry, traditionally dependent on mainframes, are now giving way to platforms based on service-oriented architectures. Tomorrow's core banking platforms should be able to support the data requirements that arise from analytics implementations. For many banks, this may mean not only upgrading legacy systems but also integrating data across multiple locations and business units to even out the data quality across the organization and create a single version of the truth.

Success relies on the support and initiative of key stakeholders across the organization. Given the market conditions in which banks find themselves, stakeholders will do well to support such initiatives.

The next important requirement for successful analytics implementation is expertise. Banks may have all the data they need, but it takes an expert's judgment to identify the relevant data points. Hence, banks need to either invest in the right analytical talent pool or source these capabilities from a trusted partner.

Finally, banks need to realize that they are unique in terms of internal culture and dynamics. Organizations that understand the importance of building a culture of fact-based decision-making will stand a better chance of success. Banks that see themselves as highly competitive relative to their peers tend to have a high analytical orientation. Creating a culture amenable to analytics requires strong leadership support. Ideally, such an effort should be led by the CEO. These leaders must lay the foundation for a shift to an analytics-based approach by providing a clear focus on the effort.

Embracing Analytics as a Service

Staying competitive in the future will depend greatly on the decisions banks make. Events of the past few years have shown the price that they

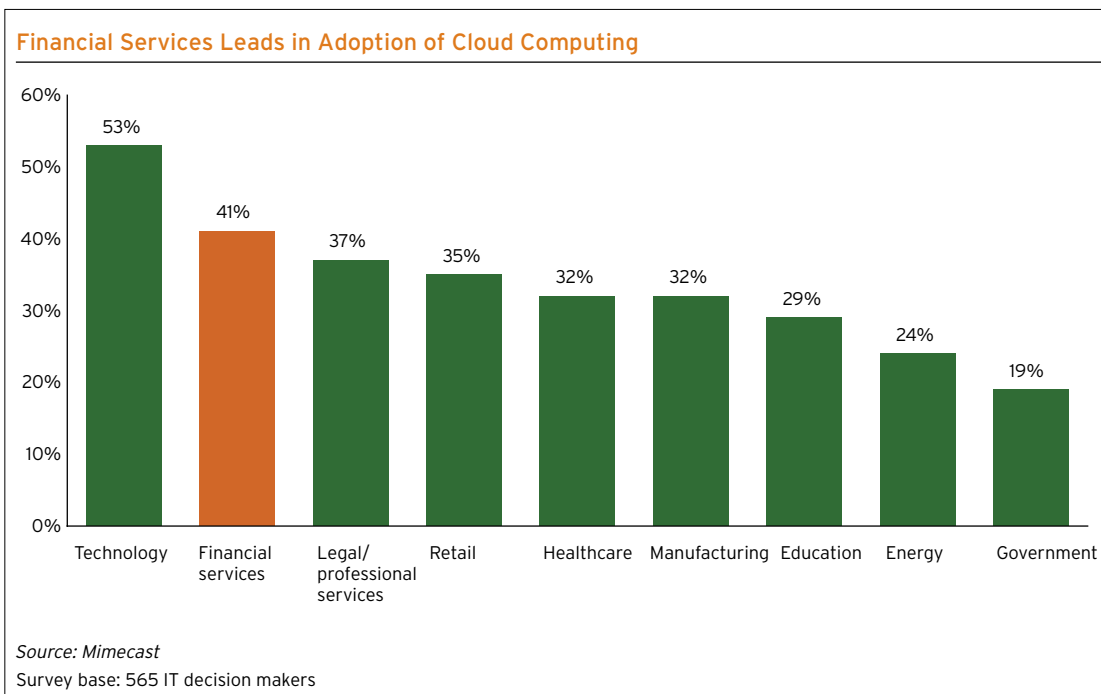


Figure 7

might have to pay for poor strategic decisions. As complexity in the banking system grows, it will be important for banks to carefully navigate the troubled waters to counter the risk of future shocks. And analytics, with its wide application and the ability to meet the growing complex decision-making needs of banks, will play a crucial role in this.

Simultaneously, banks need to find the right partners, with the ability to handle complex analytics tasks. With virtualization and cloud computing, opportunities exist now for cost-cutting through global sourcing via the business process as a service³ (BPaaS) model. BPaaS is a flexible model that helps banks save critical Cap-Ex by eliminating the cost of acquiring expensive hardware, software and key talent and pay for computing resources and services depending on their usage. BPaaS, combined with knowledge process outsourcing (KPO) capabilities, also eliminates several of the technology- and talent-related challenges that banks face with regards to analytics. It allows banks to deploy solutions tailored to their needs that help in lowering costs.

The financial services industry is ahead of many other sectors in adopting cloud computing (Figure 7). BPaaS presents another opportunity

to reap the benefits of the cloud platform. The options such a model provides are more extensive than traditional business process outsourcing (BPO), which focuses primarily on labor arbitrage and continuous process improvement to generate better business performance. As analytics processes become standardized and can uniformly be applied via cloud-enabled BPaaS models (harnessing the growing cloud of utility computing architectures), we believe that banks stand to benefit greatly by associating themselves with partners that have invested in such capabilities.

In our view, successful banks will take the following actions:

- Create a clear strategy for analytics implementation.
- Nurture a culture of fact-based decision-making.
- Capitalize on unique data, creating an approach that works for them, instead of copying the competition.
- Continuously renovate and renew their analytics implementation.
- Enter into relationships with the right partners capable of providing analytics as a service to aid their attempts at building and strengthening competitive advantage.

Footnotes

- ¹ The Pew Research Center defines millennials as the generation that was born after 1980 – the first generation to come of age in the new millennium.
- ² Gartner defines MDM as “a technology-enabled business discipline in which business and IT organizations work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountability of the organization’s official, shared master data assets,” in its “Predicts 2011” report (<http://www.gartner.com/it/page.jsp?id=1488515>), by Andrew White, John Radcliffe and Chad Eschinger.
- ³ BPaaS refers to the provision of business services encompassing underlying IT infrastructure, platform and skilled manpower, to run specific business processes in a virtual, globalized and distributed operating model.

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