Executive Summary

The current climate of increased regulation, combined with a global economic slowdown, is challenging the profitability of retail banking operations around the world. Regulatory compliance has added significantly to the cost of doing business and is impacting sources of fee income upon which banks have traditionally relied. Global economic sluggishness has resulted in depressed loan demand and historically low interest rates, creating enormous pressure on bank interest margins.

It is against this backdrop that financial institutions are attempting to concurrently address the dual objectives of streamlining operations while rethinking how to go to market with innovative products and services. To survive and flourish, banks will need to renew their operating models and develop innovative services that differentiate themselves from the competition. This can happen if they build upon core strengths and unique characteristics that allow them to continue satisfying existing account holders while attracting the next generation of customers.

As operating costs rise and income sources decline, retail banking operations require a fundamental and continuous review of their operating structures and processes. Many banks have focused on reengineering their user interfaces across delivery channels, in an attempt to provide customers with an integrated multi-channel user experience. By eliminating these channel silos, they can lower operating costs and improve time to market with new products. This type of innovation will drive customer acquisition and retention, changing methods of customer engagement from “push” to “pull” across the physical and virtual worlds.

Even as they look to do this, banks must protect their existing customer base from the growing threat of non-traditional competitors that have entered the banking space with disruptive technology advancements. With this need to innovate, many banks are turning to mobile services and social media to create operational improvements, as well as analytics-based (and thus more targeted and personalized) ways of engaging customers across all demographics, most particularly with the increasingly desirable millennial market segment.

Cloud computing has emerged as a way to drive down costs to pay for this service delivery innovation. Furthermore, analytics as a service has the potential to monetize the data proliferating from...
the explosion of mobile and social computing and enhance business case development for investment in mobile and social media.

This white paper will discuss how the retail banking industry can respond to new competitive threats while also reducing costs by transforming their operating models and enabling innovation through smart technology investments.

**Innovation Drivers**

The retail banking industry faces an unprecedented need to invest in new operating efficiencies while reducing costs. At the same time, it needs to improve customer experience across all channels and offer consumers more targeted products and services. All of this must be accomplished in an environment of limited resources and a need for near-immediate return on investment.

Technological advancements will play a key role in the dual pursuit of efficiencies and customer gratification. Developments in mobility and social computing are seen as the most exciting opportunities in decades for improving customer interaction and revolutionizing the way consumers conduct their banking. Moreover, new-age competition and demographic change are further driving investment in technologies that boost productivity and help retain competitive advantage.

**Mobile, Social Media and Collaboration**

Mobile devices are creating opportunities for banks and other financial services providers to offer customers innovative ways of performing traditional banking functions. Nowhere is this trend more evident than in the area of mobile payments. Initial mobile banking services were basic in nature — checking balances, etc. — but advancements in device and communication technologies and the creation of native applications for mobile devices are allowing these services to move up the value chain, overcoming geographical and technological boundaries.

In Indonesia, PT Bank CIMB Niaga, the country’s largest bank, is leveraging the widespread reach of mobile devices (90% penetration) to provide money transfer services to a population spread across 17,508 islands.¹

This kind of innovation is disruptive to traditional banking practices and creates cost-efficiencies for banks while also increasing customer convenience and enhancing productivity. Smartphones, for example, utilize specialized applications that allow customers to deposit checks by sending images rather than physical items. According to a 2011 Federal Reserve study,² the use of physical checks declined by 7.1% between 2006 and 2009, even as electronic payments increased at an average rate of 9.3% in the same period, to $40.6 billion.

Furthermore, mobile has proved to be the cheapest³ means for processing banking transactions. Banks that encourage their customers to use this channel in increasing numbers have the unusual opportunity of simultaneously improving customer convenience and reducing cost.

This approach would appear to match consumer banking preferences. In the UK, for example, research firm Intelligent Environment⁴ reports that smartphone penetration reached 39% of UK adults in 2011. Furthermore, given the option, one in five Britons is willing to pay bills using their mobile phone, while one-quarter are willing to transfer funds this way.

**Mobile Implications**

Retail banks have little choice but to innovate in this rapidly changing environment. Prompted by the loss of some critical components of traditional fee income as a result of new regulations,⁵ banks are scrambling to find new income sources and ways to reduce costs. For instance, nearly all retail banks are revisiting the criteria for offering no-fee services, such as for checking accounts. One trend among retail banks is to offer no-fee checking only to customers who meet far more stringent conditions than previously required, including the use of lower cost delivery channels, such as the Web or mobile.

Smartphones will be the key driver for increased demand for mobile banking services. A study by ACI Worldwide and Aite Group⁶ found 80% of respondents had used smartphones for mobile banking, while only one-third of non-smartphone users had reported doing so. Clearly, mobile banking and smartphone adoption will grow hand in hand.

Arming consumers with real-time information regarding their current financial positions is useful. However, combining financial data with GPS technology will enable banks to provide value-added services not traditionally associated
with financial institutions, as well as counter the threats of non-traditional competitors.

An example is location-specific services such as customized or special offers. Imagine receiving a message on your smartphone that you are currently standing two blocks from your favorite retailer, which is offering 50% off your favorite brand of jeans, and further, that your smartphone can also act as a payment device. Embracing the smartphone as a payment device to replace debit or credit cards will also provide banks with an answer to near field communication (NFC) and radio frequency devices, as well as new payment services such as the one popularized by Square.

It is, therefore, imperative for retail banks to create a comprehensive mobile strategy that centers around an integrated and seamless multi-channel banking experience. Banks that have been early adopters in creating a mobile banking presence are in an advantageous position compared with late-starters. However, mobile banking is moving rapidly, with continuous advances in devices and platforms, making it crucial for banks to stay on top of these developments.

The Sway of Social
If mobility is leading the way in retail banking product and service innovation, then social networking is transforming how retail banks interact with customers and strengthen their brands and reputations. The case of Singapore’s leading bank, DBS, sheds light on how social media can be exploited. The bank has launched various social media initiatives, including one that encouraged young customers to design ideas for their next branch. In another, the bank offered special incentives to customers who used Facebook Places to check into selected partner outlets.7

While social networking has been successfully leveraged across many industries overall, banks have been slow to reap its benefits (see Figure 1). Successful integration of social media into the overall strategy of a bank requires a long-term commitment as part of an overall retail strategy, and not a one-off effort that creates yet another channel silo. (see sidebar, ”Keys to Successful Use of Social Media,” next page).

Customer engagement and education are critical components of this enterprise strategy. Banks that build rapport with their Facebook or Twitter followers through frequent and genuine conversations and rapidly respond to customer queries on in-house and external blogs will be the big gainers from this phenomenon.

Examples abound of how social media can be utilized to predict and then track consumer response to new policies or products, providing banks with better information prior to making these decisions. Without question, tracking response through social media would allow banks to be more responsive to feedback, both negative and positive. An example is Bank of America’s belated decision to rescind an increase in debit card fees after seeing consumer outcry on social media.

In a positive response to social media’s widening influence, some retail banks are proactively stepping up to the plate and leveraging more evolved thinking. For example, 1st Mariner Bank in

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**Social Media Experience is Still Nascent for Banks**

Q. Which statement best describes your firm’s experience regarding social media?

- **Advanced:** We have a social media competency and regularly use social media tools.
- **Intermediate:** We have launched social media efforts but don't consider ourselves experts.
- **Novice:** We have not launched any social media efforts.
- **Beginner:** We have launched social media efforts but are not very experienced.

![Social Media Experience is Still Nascent for Banks](image)


Response Base: 166

Figure 1
the U.S. launched a product aimed at customers in their late teens based on feedback from social media interaction.

**Big Data + Analytics = Big Opportunity**

Big data — defined as datasets that are so large, fast-growing and diverse that they cannot be managed by traditional means — is at the heart of how banks can cash in on the multi-channel experience. To harness the power of big data, banks need to implement data architectures that create a single customer view and a reliable source of enterprise data. This will require a move away from siloed data management and inconsistent data.

Banks need to embrace virtualization and the power of cloud computing to reduce the capital expenditures related to building and managing IT infrastructure (see sidebar, "Cloud-Based Solutions: A Source of Efficiency"). Cloud-based models such as business process as a service (BPaaS) have emerged as a key source for further reducing costs related to technology and talent acquisition, particularly in the areas of data collection and analysis. Data arriving from various channels, typically in non-standard formats, needs to be stored and then normalized to enable consistent real-time analysis.

Deployment of analytics for various functions, such as risk management, reporting and process improvement, will be critical. The volume of data generated on a daily basis has grown exponentially, thanks to the increased use of technology. According to one recent report, the amount of data stored in digital formats (globally, across industries) grew from 25% to 94% between 2000 and 2007. A 2011 report by The Tower Group estimates that mid-tier banks’ data volumes have multiplied 150 times over the past seven years. In the UK, the Centre for Economics and Business Research (Cebr) found that data stored in banks employing more than 1,000 people amounted to 1,931 terabytes.

These factors are driving banks to improve their enterprise-level data management capabilities and deploy big data analytics. (see sidebar, "Keys for Successful Use of Advanced Analytics," next page).

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**Quick Take**

**Keys to Successful Use of Social Media**

- Develop a comprehensive social media strategy that is aligned with business goals.
- Ensure organization-wide buy-in; top management must take the lead.
- Identify key metrics and measure them regularly.
- Educate employees on the social media policy.
- Make social media a key part of the organization’s culture.
- Identify risks related to compliance and revise the strategy appropriately.

Source: Cognizant Research Center

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**Quick Take**

**Cloud-Based Solutions: A Source of Efficiency**

- Lower total cost of ownership.
- Identify and eliminate non-value-adding processes.
- Provider takes care of access to latest technology and upgrades.
- Reduced technical and operational overhead.
- Fewer proprietary products being used and vendor contracts being managed.
- Clearer measure of risks depending on the nature and criticality of the process being outsourced.
- Lower risk of acquiring talent to run functions in-house.

Insights derived from customer interactions are an important driver in continuously improving multi-channel user experience, operating efficiencies, and product and service innovations that can become important differentiators. For example, behavioral analytics can be applied to mobile banking data to understand changing patterns to modify apps and improve services, accordingly. Social media analytics can be used to monitor customer sentiment toward a bank’s brand. Banks can also identify individuals who are social media influencers and can be approached with direct marketing offers.

However, applying analytics to big data has far greater potential. New regulations require banks’ risk programs to be predictive, utilizing historical bank information and external data sources. Analytics tools will play a key role in complying with these reporting standards, as they allow banks to combine historical data with future scenarios to make better-informed predictions.

Analytics can also be deployed to improve day-to-day risk management, a function that has gained importance in the post-crisis era. Banks are now required to take a more holistic view of risk across the organization. Combined with enterprise data management, banks can use analytics to better understand their risk exposures and make decisions accordingly.

Another area where analytics can help is with fraud detection. The rise of online and mobile banking has spurred a new set of fraud schemes across banking and financial services. In fact, the sector experienced the highest number of fraud cases across industries, according to a 2010 report issued by the Association of Certified Fraud Examiners. Fraud analytics, such as real-time and repetitive analysis, can help banks identify unusual and suspicious activities.

Clearly, the big data revolution has created many new opportunities for banks. By embracing cloud-based advanced analytics solutions delivered through the BPaaS model, banks can leverage the power of big data and advanced analytics, while bypassing some of the troublesome issues related to technology and talent acquisition.

Fending Off Non-Traditional Competitors

Even as retail banks attempt to revive their revenue streams and reputations, nimble-footed, technology-driven entrants are gaining popularity and market share. These competitors vary in size and ambition, but they have all built their business models around mobile and social media. While some niche players are trying to get a piece of the revenue pie by offering banking services to specific market segments, such as the unbanked, others are far more ambitious, seeking, for example, to dominate the mobile payments landscape.

To maintain their market-leading position, retail banks will need to think and act more innovatively to improve existing products, while developing new services to meet the demands of a competitive marketplace. Meanwhile, the competitive landscape is being transformed by non-banking players, thanks primarily to technological advancements and the adoption of existing technologies for new purposes.

Among the greatest of these threats is payment services. Mobile phones are morphing into wallets, resulting in the establishment of mobile network operators (MNOs). Manufacturers, e-commerce providers, retailers and software developers

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**Quick Take**

**Keys for Successful Use of Advanced Analytics**

- Put a clear strategy in place for analytics implementation.
- Rely on fact-based decision-making.
- Use data that is unique to the bank to carve out competitive advantage.
- Identify process inefficiencies through the use of analytics; use insights to create efficiencies and improve margins.
- Review and enhance the analytics implementation on a regular basis.

Source: Cognizant Research Center
are entering the payments space, threatening banks’ traditional domain. Meanwhile, payment old-timers such as PayPal have begun targeting the retail point of sale (POS) terminal with devices that scan credit/debit cards.

Mobile payments are expected to grow exponentially over the next few years (see Figure 2), fueled by strong consumer adoption of smartphones. Among the various mobile payment options gaining acceptance are mobile wallets, NFC-enabled devices, mobile Web payments and payment stickers. These trends threaten to marginalize banks in the payment arena and impact their revenues. Of greater concern is the fact that banks have been historically slow to adopt these types of new technologies due to their heavy investment in legacy infrastructure.

For banks to maintain their preferred position with consumers, it is important that they create a strong mobile services presence. Furthermore, they can extend their already strong positions by participating in emerging consortiums to offer mobile payments. More importantly, they need to invest in key technological layers that allow mobile payment systems to work with legacy banking systems. According to Forrester Research, initial trends have shown that banks are investing in three areas of mobility: alerts, remote deposits and person-to-person payments.

An early example of how banks can leverage innovation can be found in South Africa’s joint venture company Oltio, created by mobile network provider MTN and Standard Bank. Oltio’s payD platform, launched in August 2011, generates PIN numbers through customers’ mobile phones for online payments through debit or credit cards.

Mobility has also shown great potential for banks to address the unbanked market. There are an estimated 2.5 billion adults that make up the unbanked category in the developing world. In the U.S., 7.7% of the population remains unbanked. However, mobile phones are beginning to reverse this trend. For example, in poor countries such as Kenya, mobile devices have helped overcome the lack of infrastructure by allowing person-to-person money transfer in rural areas. The service, called M-PESA and offered by Safaricom, allows individuals to cost-effectively pay for cabs, electricity and even for services such as digging wells. In a mere four years, this phenomenon has transformed banking in the African nation. The number of M-PESA outlets skyrocketed from 355 in April 2007 to 27,988 in April 2011. During 2010-2011, M-PESA was used for 305.7 million transactions worth $8.53 billion.

Direct Banks
Direct banks are generally Internet-based and, therefore, tend to have lower operating costs than their brick-and-mortar counterparts. Their ability to offer higher rates on deposit accounts has fueled phenomenal growth in recent years. Some online-only banks saw their combined deposits grow 70% since 2008 to $330 billion.

Mobile Payments Set to Grow
Gross Value of Mobile Payments Transactions, 2009 - 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tr>
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Figure 2
Prominent among these are Ally Financial Inc., American Express Co. and Discover Financial Services, which saw their deposits grow between 55% and 190% since 2008. ING Direct, recently acquired by Capital One, has also created a physical presence by opening ING Direct Café branches in eight U.S. cities.\(^2\) The banking activities offered at these locations include a physical staff that assists with account openings and answers customer questions while offering inexpensive coffee and free Wi-Fi. These banks have also built strong mobile banking capabilities.

An example of how innovations in mobile apps can drive new-age customer service is E-Trade’s mobile application. The online financial services giant provides an application that uses voice commands to enable brokerage customers to review their portfolios, initiate trades or get stock quotes. This type of application could easily be extended to banking customers, as well. Moreover, there is strong potential for service innovations utilizing voice commands.

**Crowd-Funding and Peer-To-Peer Lending**

The purpose of crowd-funding and peer-to-peer lending is to build online communities of like-minded individuals who are willing to lend or borrow at rates or terms unavailable through traditional sources. By avoiding the high overhead of commercial banks, such initiatives are able to meet the funding requirements of small businesses and start-ups. These communities are small and focused, with users highly active in day-to-day discussions.

The recent credit crunch gave impetus to these initiatives, with sites such as Kickstarter boasting more than a million users. ZestCash is a startup that provides loans to people with poor or no credit history. Utilizing extensive data analysis, ZestCash is an example of how technological innovation is making it possible for new players to enter the market, offering differentiated services. The big data revolution is what enables ZestCash to crunch through large data volumes to uncover indicators of customer credit-worthiness.

In the UK, Zopa has established itself as a successful peer-to-peer lending site and is seen as a key source for small business financing despite the fact that lenders, consisting mainly of ordinary citizens, assume the credit risk. Zopa, which expects to lend £100 million pounds this year,\(^2\) does not take any responsibility in the event of a default. Because these Web-enabled service providers are not subject to the same stringent regulations as banks, this niche is likely to remain the province of non-bank entities.

For retail banks, a key to success will lie in their ability to effectively manage credit risk while reaching out to small businesses. This is reflected in a February 2012 survey\(^2\) by the American Sustainable Business Council, which found that small businesses believe it is more difficult to get a loan today than it was four years ago.

**Rise of the Millennials**

The millennial\(^3\) generation, also known as Generation Y, is changing the rules of engagement with financial services providers. Millennials are tech-savvy, active social networkers and are committed to planning for their financial future. Their tech savvy is reflected by the fact that they lead the adoption of smartphones among all age groups.\(^4\) They want to interact with their bank online, yet they also value good service as they define it. They also want to plan for the future using sophisticated tools and are drawn to online capabilities when researching new banks.\(^5\)

Given these traits, it is critical for banks to develop products and services that meet these expectations. Millennials have fully embraced mobility and social media, and banks hoping to meet the expectations of this market segment must do the same. This means the days of adapting online applications for delivery over a mobile device have already passed. Native applications continue to be refined in ways that recognize the unique features of smartphones and iPads. Keys to success will be the effective use of the screen real estate of these devices and the delivery of information that leverages the anytime, anywhere nature of mobility.

Financial institutions that can extract meaning from mobile transactions and social media interactions – and use these insights to tailor offerings relevant to millennials – will be perceived as having greater business value to this rising demographic. Indeed, this is a market segment that is continuously looking for the “next big thing;” therefore, banks that hope to maintain a solid relationship with millennials can never stop innovating. Success requires a long-term strategy that incorporates social and mobile channels built on
an extensible foundation that can respond to – or lead – the next wave of innovation.

Conclusion
Retail banking is undergoing transformative change, driven by new regulations, technological advancements and changing consumer behavior. This puts retail banks in an unenviable situation. They must invest in innovation, while creating new revenue opportunities and retaining customer loyalty in the face of increased (traditional and non-traditional) competition. All of this is occurring at time when interest margins and profits are under intense pressure.

For banks, this means prioritizing investments in areas such as regulatory compliance, core banking system modernization, channel optimization and data management. Although most banks face similar challenges, a single solution will not suit all organizations. Culturally, therefore, banks need to inculcate an organization-wide thought process that embraces innovative thinking. Creating a culture of innovation will be crucial to making these investments count.

Footnotes
1 “Mobile Innovation Does the Business in Indonesia,” Sybase, February 2012.
8 BpaaS refers to the provision of business services encompassing the underlying IT infrastructure, platform and skilled manpower, to run specific business processes in a virtual, globalized and distributed operating model.
9 Martin Hilbert and Priscila López, “The World’s Technological Capacity to Store, Communicate, and Compute Information,” University of Southern California, April 2011.
15 “SA Firm Up for Mobile Innovation Award,” SouthAfrica.info, February 2012.
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18 “M-Pesa Moved Sh727 Billion Last Year,” Mobile Money Africa, July 2011.
19 “Online Banks' Deposits Grow at Quadruple Industry Pace,” American Banker, January 2012.
23 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.

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