Δ **BANKERS AS** BUYERS

A collection of research, observations and articles regarding technology solutions and services that U.S. bankers will buy in 2014 & the changing financial industry landscape.

Prepared by:

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From The Editor

Dear friends,

2014 is shaping up to be a very interesting year for banks, credit unions and technology providers. According to our sources, we will finally see significant changes to branch strategy, real benefits gained by using big data, mobile 3.0 for better engagement and new ways to conduct business, a shift in spending toward outside providers and much more.

We asked the major core providers (some of the largest fintech companies in the World) to give us their insights on the coming year. We are pleased that CSI, D+H (Harland), FIS, Fiserv and Jack Henry & Associates have contributed to this edition of *Bankers As Buyers*.

This report includes its first ever reference to digital payment advisor (DPA) applications, a new category Gartner addresses that helps consumers decide what type of payment to use for the most value.

The goal of *Bankers As Buyers* is to collect thoughts, ideas, concepts and research about financial technology and those forces driving change into one easy-to-read report. We rely on the expertise and research of sources we trust. As such, this report is enhanced greatly by the work of:

- Aite Group Ron Shevlin
- American Banker
- American Bankers Association (ABA)
- Beyond the Arc Steven Ramirez
- CEB TowerGroup Nicole Sturgill
- Celent Bob Meara, Zilvinas Baresis
- Clientific JP Nicols
- Cornerstone Advisors Sam Kilmer, Bob Roth
- Computer Services Inc. (CSI) Steve Powless
- Credit Union National Association
- Crone Consulting, LLC Richard Crone and Heidi Liebenguth
- CTS North America Glen Fossella
- CU Wallet Paul Fiore
- D+H (Harland Financial Solutions) Scott Hansen
- Equifax Mike Griffith
- Federal Deposit Insurance Corporation
- Federal Reserve
- FIS Nancy Langer
- Fiserv Steve Shaw
- Gartner, Inc. Alistar Newton

- I7strategies David Peterson
- IDC Financial Insights Jerry Silva
- IPSOS
- Jack Henry & Associates Mark Forbis
- Javelin Strategy & Research
- Malauzai Software, Inc. Robb Gaynor
- Mercator Advisory Group Pradeep Moudgal
- Mortgage Bankers Association (MBA)
- Sawyers & Jacobs, LLC Jimmy Sawyers

If you see something interesting in this report or believe the companies referenced can be of service, let me know and I'll share contact details with you.

I hope 2014 is a great year for you and your organization.

Best regards,

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Scott Mills, APR President William Mills Agency

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I. Year in Review

The previous 12 months saw the economy start to strengthen, unemployment drop but still stay relatively high, more stabilization of banks and an increase in interest rates.

All major economic indicators started strengthening by the end of the year to the point that the Federal Reserve began to taper its latest economic stimulus program, also known as QE3, in December. Outgoing Federal Reserve Chairman Ben Bernanke said that if the economy continued on course with no major hiccups, the unwinding of the program would be complete before December of 2014.

Unemployment dropped from 7.8 percent in November 2012 to 7 percent in November 2013. However, a high percentage of the new jobs are in the low-paying service sector, rather than in the manufacturing and construction jobs that either went overseas or went away entirely. Though construction is showing signs of rebounding, it is still far short of the level it was at in the mid-2000s.

The improving economy has helped the financial services industry become much more stable. Through early December, financial regulators had taken over only 24 banks, compared to 150 in 2010 at the height of the most recent financial crisis.

Lenders, however, started seeing their business decline sharply once interest rates started trending up, and mortgage refinancing dropped, a trend that is expected to continue in 2014.

The Mortgage Bankers Association (MBA) estimated in October that 2013 would finish with \$1.7 trillion in mortgage originations, about the same as the previous year, but the total amount of refinancing was down by about one third, with the difference made up in new mortgages.

The MBA expects to see \$1.2 trillion in mortgage originations during 2014, a 32 percent decline from 2013. While MBA expects purchase originations to increase 9 percent, it expects refinance originations to fall 57 percent.

"We expect mortgage rates will increase above 5 percent in 2014 and then increase further to 5.5 percent by the end of 2015," said Jay Brinkman, MBA chief economist, at the lender's group annual conference in October. "As a result, mortgage refinancing will continue to drop, and borrowers seeking to tap the equity in their homes will be more likely to rely on home equity seconds rather than cash-out refinances."

With mortgage lending declining, bankers are looking to improved commercial lending – thanks to the improving economy – and improving cost control to help boost earnings in 2014.

On the retail side, banks continued to work their way deeper into mobile banking offerings as smartphones and tablets continued to become more pervasive and shift consumer habits for communications, shopping and banking. Mobile capabilities, including the ability to take pictures of checks for deposits, make person-to-person payments, to pre-stage ATM activity and a few more advanced uses inside and outside of the bank have started serious reconsideration of bank branch strategy and investments.

Banks also started accessing more data from social networks to combine with the traditional information they have collected to get a more holistic picture of customers and prospects. They are also trying to increase their potential customer base by better targeting the wealthy and to selectively target the underbanked.

Compliance continues to be the 800-pound gorilla for the industry. The cost of meeting the increasing regulatory demands is causing banks to rethink compliance strategies, using outsourcing, resource sharing and technology to help meet the burden. Compliance costs are also making the prospect of selling smaller financial institutions more compelling. Another factor in the sales of healthy smaller banks is the current and pending retirement of top executives.

IDC Financial Insights predicts that overall IT spending in financial services will exceed \$430 billion in 2014, growing to \$500 billion by 2020. In 2014, financial institutions are expected to leverage their IT investments of the last three years, improving compliance data management and enhancing analytical capabilities.

Banks are proportionally spending less on internal IT resources and more on third-party providers. The spending on the later has grown to 45 percent of total IT spending, compared to only 28 percent 10 years ago, according to Jerry Silva, research director of global retail banking for IDC Financial Insights.

II. Size of Market

The total number of financial institutions continues to decline, but unlike a few years ago, the shrinkage is due primarily to the merger of healthy institutions rather than bailouts of failing ones. According to the FDIC and the Credit Union National Association (CUNA) September 2013 data, the depository landscape is as follows:

Total	13,706
Credit Unions	<u>6,815</u>
Banks	6,891
Number of:	

The total is 926 fewer, about 6 percent less, than in last year's report.

Banks by asset size:

 Table 1

 Insured Commercial Banks and Savings Institutions as of September 30, 2013

 Distribution of Noninterest-Bearing Domestic Deposits by Asset Size

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Asset Size	Number of Institutions	Total Assets (\$ Bil.)	Total (\$ Bil)	Amount Above the \$250,000 Coverage Limit (\$ Bil.)	Average Account Size (\$ Thou.)	Average Number of Accounts Per Institution	Other Noninterest- Bearing Deposits** (\$ Bil.)
Less Than \$1 Billion	6,223	\$1,369.0	\$78.7	\$49.9	\$682	19	\$129.2
\$1 - \$10 Billion	561	1,453.1	117.4	84.4	890	235	114.5
\$10 - \$50 Billion	71	1,461.3	120.7	96.7	1,260	1,349	91.4
\$50 - \$100 Billion	17	1,344.0	157.6	139.9	2,217	4,182	48.5
Over \$100 Billion	19	8,968.9	1,345.4	1,227.6	2,855	24,804	356.9
Total	6,891	14,596.2	1,819.8	1,598.5	2,055	128	740.5

Source: FDIC

According to CUNA's Q2 2013 data, here is the breakdown by asset sizes for numbers of credit

unions:

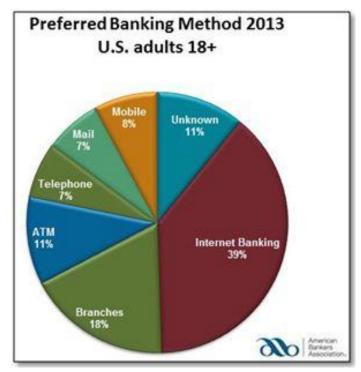
< \$5M	1,454
\$5M-\$20M	1,799
\$20M-\$100M	2,067
> \$100 M	1,495
Total	6,815

III. Branch Network Transformation

After endless years of discussions of the need to transform the branch to make it more productive in terms of revenue and less costly to operate, financial institutions are indeed moving in this direction.

In the third quarter of 2013, banks shuttered 390 branches, a trend that is expected to continue in 2014. The closures came as consumers continued to gravitate to mobile and the Internet for their basic banking needs – payments, deposits, balance queries and money transfers.

"The virtual branch is becoming the bank's largest branch," said David Peterson, chief strategic officer of i7strategies and executive consultant of Q2.



Source: American Bankers Association

The most successful financial institutions will be those that can deliver an omni-channel experience to customers and prospects, so the experience is seamless regardless if the customer is online, in the branch or communicating through a mobile device, according to Silva. By leveraging mobile as part of their omni-channel strategy, banks can also save significantly on costs, according to Javelin Strategy and Research.

An Average FI Can Save Almost \$50 Annually with each Customer that Uses Mobile over Branch for a Single Monthly Deposit



Source: Javelin Strategy & Research

Banks are following numerous redesign strategies, removing teller lines, adding kiosks, and sharing branches with other retail businesses in order to make better use of what are now oversized locations. Some of these strategies have been discussed for years, but now such transformation is a necessity, according to several experts.

The actual branch design depends on various factors, such as, urban or rural location or the type of customers the bank is targeting, e.g., small business. So Silva sees a few different branch models that make sense – from the full-service money center facility, complete with brokerage and insurance functions to smaller 400-square-foot locations for handling basic transactions, with video specialists to augment the basic services.

Banks are investing in an increasing amount of remote deposit capture and bank counter capture equipment to make those transactions that still come to the branch as quick as possible, said Glen Fossella, COO of CTS North America.

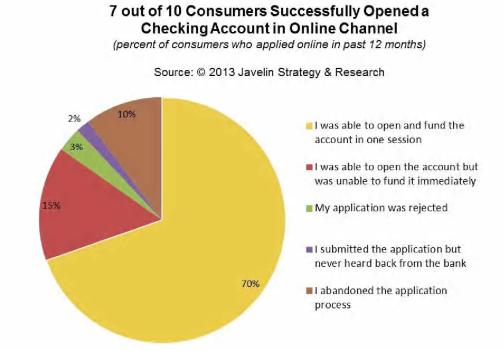
His company saw sales of teller cash recycler equipment grew 113 percent between 2012 and 2013. He expects similar strong growth in 2014.

Video is starting to make sense from a cost/benefit standpoint because speed and quality continue to improve, and consumers are becoming more comfortable with interactive video technology. The video helps the bank leverage its specialists across several locations. But banks planning to use this technology can't rely on low quality video or connection speeds that are less than optimum.

Despite some of the investments in improving the branch experience for customers, said Peterson, he doesn't see some of the planned branch transformations working because the facilities are becoming less relevant as mobile banking catches on and as younger customers become a larger percentage of the bank's business. So banks that replace teller lines with centralized pods in the middle of the facility are unlikely to recoup their investments.

"They're trying to bring more people in, but people are finding self-service to be more convenient," Peterson said.

Indeed, Javelin Strategy & Research finds that that 88.5 million Americans attempted to open an account online or with a smartphone or tablet device between mid-2012 and mid-2013. Though this certainly shows growth, the potential of digital accounts remains largely untapped, especially as consumers place growing importance on mobile capabilities, according to Javelin.



Source: Javelin Strategy & Research

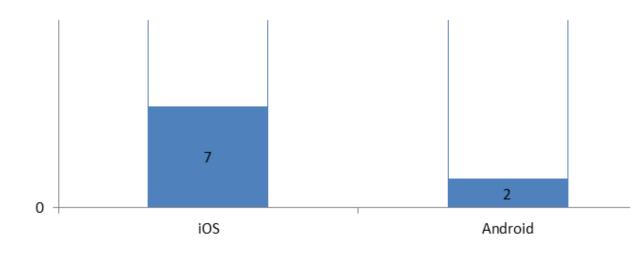
While he expects to see more branch closures, Peterson admits it's easier for a Chase or Bank of America to make such a move than a community bank, due to the public perception of what such a closure means.

A better solution, according to Peterson, is to share the facility. For example, First National Bank of Bastrop, Texas, has brought a Starbucks into one of its branches, shrinking the bank's own footprint to three-fifths of the facility. Peterson expects other banks to seek out retailers, or business customers (e.g., Kinko's) to share facilities to reduce branch size and also to add to revenue from rent.

One move that Peterson disagrees with is a recent Bank of America decision to remove drive-up lanes from some branches in Massachusetts. Branches tend to see much more driveup than walk-in traffic.

The branch investments that do make sense and continue to gain traction are those that make the branch staff more efficient, from cash counters and teller-based remote deposit capture equipment to tablets and video presence capabilities that permit the leveraging of skilled personnel and consultative selling.

Top 13 US Banks with iPad or Android Applications



Source: Celent

IV. Mobile 3.0

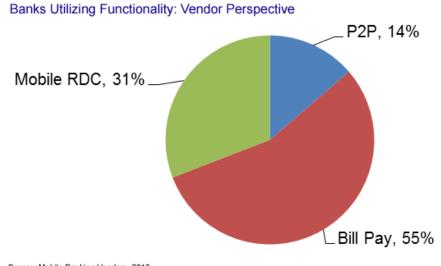
Mobile banking has gone through a few iterations. The first attempt was made in 1999 by the Bank of Montreal, but the technology infrastructure wasn't in place, the proliferation of smartphones didn't exist and the banks and public weren't ready for it. Those factors were all settled when the industry tried again, but the second iteration was limited to very basic capabilities, such as balance checking.

Mobile 3.0 brings more functionality so that consumers can use their mobile devices to not only check balances, transfer funds, make payments (including person-to-person payments), but soon banks will also be relying on mobile for account opening, for customer relationship management, marketing and income generation.

An ABA/Ipsos survey of 1,000 U.S. adults revealed that while the Internet remains the most popular banking method, mobile banking has eclipsed the popularity of the telephone and U.S. mail and is now preferred by 8 percent of customers—a 30 percent increase from 2012. It was the fifth year in a row that customers have named the Internet as their favorite way of conducting their banking business, with 39 percent of respondents once again saying it is the method they use most often to manage their bank accounts.

"Today 15 million people use their mobile devices to log in, check balances, look at history, transfer money (internally), look at check images and deposit checks," said Robb Gaynor, chief product officer and co-founder of Malauzai Software, Inc.

Though there has been some online account opening, there is still plenty of room to grow that usage as well as to start the loan application process, Gaynor says.



Source: Mobile Banking Vendors, 2013 Q: What percentage of your customers are currently live on the following products?

Source: Celent

Mobile offers a critical platform for banks to keep the customer engaged," says Sam Kilmer, senior director for Cornerstone Advisors. The longer the bank can keep the customer engaged, the deeper the relationship, and the better the ability the bank has to sell the customer additional products and services.

Though the number of customers using mobile banking today is still relatively small, the entire industry benefits when Citibank, Chase and other large banks advertise their mobile remote deposit capture capabilities, Kilmer adds.

"Banks will have to think more Geek Squad meets Milburn Drysdale meets Genius Bar," said Jimmy Sawyers, co-founder of Sawyers & Jacobs LLC. In other words, the banks need to combine the ability of the technology with the inherent trust that people have with the bank in order to fully leverage mobile banking.

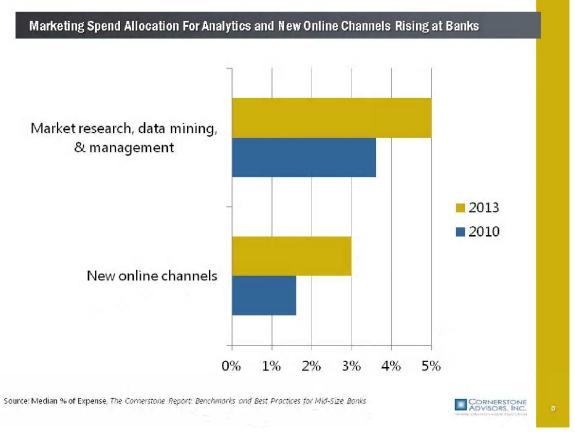
Trust is an advantage banks still have over many of their competitors. So banks need to leverage their trust to be at the top of the customer's mobile apps.

"The one who enrolls is the one who controls," is the mantra of Crone Consulting, LLC. If a third party enrolls the consumer in the mobile wallet, the third party can capture the important customer information and be top of mind for payments.

By enrolling customers in mobile banking and mobile payments, banks position themselves to provide not only mobile alerts to customers about potential fraudulent transactions and to bank products, services and promotions, but also to promotions from advertising partners. With mortgages and many fee income opportunities limited, the additional revenue opportunity is important for many banks.

Offers can be combined with geo-location features to offer relevant, timely offers to customers at the right time. For example, if a customer is near a coffee shop that is a merchant partner – information that the mobile device's GPS will provide – the bank can send an offer for \$1 off a coffee good for a limited time. The bank collects revenue for delivering the ad and receives additional revenue if the consumer redeems the offer.

Mobile is also essential for banks to collect more information on customers to get a better picture of their financial services needs, Gaynor adds. One way to capture this information is to offer a personal financial management (PFM) application. This will help the bank learn not only of the customer's financial assets not with the bank, but also of spending habits. The latter can help indicate appropriate credit offers.



Source: Cornerstone Advisors, Inc.

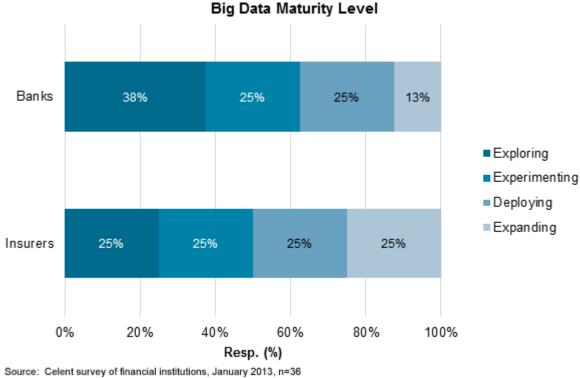
V. Big Data Helps Drive Marketing, Fight Fraud

The more data that a financial institution has, the better the bank can anticipate a customer's needs and the better it can detect a potentially fraudulent transaction. Banks have collected basic information on customers for several years, but most of that information was structured data that would fit neatly into a spreadsheet for quick analysis. But even this information was often siloed by bank departments.

These walls are coming down. Now banks also have access to unstructured data, including information culled from contact center emails and online chats, data from a financial institution's own social media site and from third parties, including exterior social media sources. Banks can also get more granular information and get data faster than ever before. The resulting Big Data can provide banks with many advantages, though many are still unrealized today as financial institutions try to understand and maximize their use of Big Data.

Most of the advances in data use and analysis today are with a financial institution's own information, said Mike Griffith, vice president of strategic management for the data and analytics group of Equifax. Banks have been collecting some of this information for many years, but are now seeking to collect it more quickly and from more channels. Any use of exterior social media data is still in its embryonic stages.

"Big Data is overhyped and ill-defined," said Bob Meara, senior analyst with Celent. "Big Data has a very nascent infrastructure. There are gobs of analytics applications." With so many applications, banks are still trying to fully understand Big Data's implementation and uses. Another challenge is that different departments within a financial institution may know about different applications, again leading to a potential silo issue. If used correctly, though, Big Data does offer advantages. So, according to Celent, only 38 percent of banks are deploying or expanding Big Data implementations.



Big Data Remains Nascent Among North American Financial Institutions

There can be several advantages for banks that successfully deploy Big Data strategies. For example, banks can now drill down to transactions by individual ATM. A high number of rejected transactions may indicate a problem with the specific ATM, a problem that would not have surfaced without a customer complaint with less granular information, said Steve Ramirez, CEO of Beyond the Arc.

Banks can also see a customer's interactions with the financial institution across different touchpoints, enabling them to find and quickly address potential glitches, such as the ATM problem, as well as underutilized resources (e.g., branches) and better use of human resources (e.g., call center and branch staff levels). Such information can also help in a bank's fraud-fighting efforts.

The social media information helps a bank better target a customer on a one-to-one, personalized basis, Ramirez added. "We have better information about customer lifestyle and behavior so we can serve up different offers for different customers. We can have a deeper relationship with customers."

Banks can use this information to engage in precision marketing with customers, just as The Coca-Cola Company does. Through the My Coke Rewards loyalty program, the soft drink maker encourages consumers to like Coke products on Facebook, enabling the company to gather more information (e.g., favorite product Diet Coke, Sprite, or something else). With this information, combined with information from social media and other sources about the weather, the user's activities, etc., the company can make targeted offers at specific times.

Similarly, banks can make targeted offers when a customer has life events such as children entering or graduating from college – which typically can be revealed from social media - gets a promotion, has a child or gets married. Many of these events lead to financial needs that the bank would not be aware of otherwise. So it can use this information to offer credit or other products that fit with these life events as well as smaller offers.

Financial institutions can also use this information in a loyalty program that helps build relationships with consumers and business alike, as Bank of America has done with its BankAmeriDeals program, powered by card linked marketing provider, Cardlytics.

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Viewing Offers and Engaging with BankAmeriDeals Program through Online Banking

Bank of America, Celent

Such information can prompt financial institutions to change marketing plans. For example, in 2013 Wells Fargo changed the rewards on its mortgage rebate card from strictly rebates on Wells mortgages to a variety of rewards for the customer to choose from.

BMO (Bank of Montreal) used Big Data to help it in being more responsive to customer product preferences, according to Meara. Rather than concentrating on those products it wanted to grow, BMO officials decided to become more customer centric.

They realized that they did not have a 360-degree view of the customer across channels, resulting in poorly targeted and untimely offers, leading to sales close rates of only 1 percent.

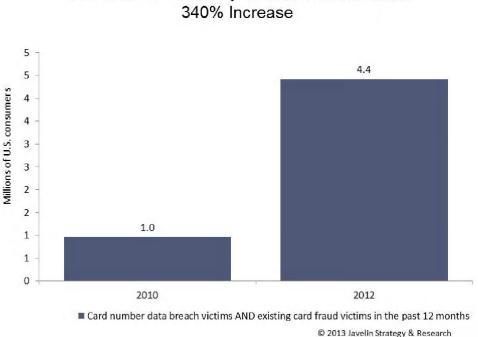
So they created a lead management engine to present leads through multiple channels. The engine works in conjunction with channels, data, analytical and legacy systems to keep offers fresher and more relevant. The technologies plus staff training led to an increase in positive outcomes (sales, service appointments, etc.) by more than 150 percent, according to Meara.

Big Data also enables a financial institution to be more proactive in detecting and preventing fraud. The threat continues to increase, meaning that all financial services companies have to use a variety of tools to fight it. The more data a bank has and the more timely it receives the information, the quicker it can determine if there is a fraudulent transaction or a pattern of fraud (as in multiple stolen credit card numbers). The quicker the recognition, the quicker future fraudulent transactions can be stopped.



Source: Aite Group

Large credit card issuers have questioned atypical (e.g., higher amount than normal, transactions from distant states) transactions for years. With additional data, card companies and other financial services firms can more finely tune their algorithms to better determine when a transaction is potentially fraudulent.



Data Breach is Primary Source of Card Fraud:

Source: Javelin Strategy & Research

Griffith says that banks are starting to use channel behavioral data to combat fraud. If a customer always writes physical checks for certain transactions, then starts using bill payment for the same transaction, it can indicate fraud.

Similarly, if a customer habitually negotiates the bank's web site in a certain pattern, then that pattern changes dramatically, it can indicate the account has been compromised. Celent estimates spending on Big Data in risk management will grow from \$470 million in 2014 to \$730 million in 2016 as tools mature and financial services and other firms deploy more enterprise-wide solutions.

Managing Big Data is a big challenge, Ramirez said, so an increasing number of financial institutions are turning to Apache Hadoop, an open-source software framework for analyzing unstructured and structured data.

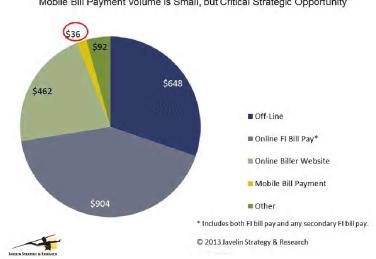
Payments Technology Stampede VI.

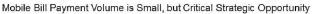
Financial institutions and non-banks alike are making huge investments in payments technologies, including mobile wallets, prepaid debit and other solutions. For the non-banks, the payments technology provides an entree into a service that has historically belonged to banks and credit unions. For banks, the investments are necessary to defend one of the last parts of the financial systems where they have majority ownership and to try to win or win back younger customers.

Gartner, Inc. predicts that worldwide mobile payment transaction values will reach \$235.4 billion in 2013, a 44 percent increase from 2012 values of \$163.1 billion. The number of mobile payment users worldwide will reach 245.2 million in 2013, up from 200.8 million in 2012.

The research firm says that the development of digital payment advisor (DPA) applications residing on customer smartphones and mobile devices has the potential to fundamentally change the way many customers approach their choice of payment solution for higher-value purchase transactions.

"By encouraging the use of alternate currencies – loyalty points and social currencies – for purchases of day-to-day products and services, DPAs may start to alter the very subtle psychological balance in place when customers make purchases using cash and payment cards," said Alistair Newton, Gartner research vice president, in the press release with Gartner predictions. "Spending hard-earned money can feel very different to consumers, compared with spending loyalty points that may have been allocated freely by retailers or airlines. Such shifts will bring significant changes to the entire retail purchase experience and the associated payment value chain."





The growing number of payment options and technologies (NFC, QSR, Bluetooth, cloud options) has led to plenty of confusion in mobile payments, according to Bob Roth, managing director for Cornerstone Advisors.

With all of the different mobile payment options, IDC Financial Insights predicts that mobile and alternative payment options will remain muted in 2014 as the large number of providers seek value propositions that meet the needs of consumers and merchants.

Pradeep Moudgal, director of the emerging technology advisory service for Mercator Advisory Group, agrees, expecting the different technology options to battle for supremacy in 2014, with the dust not settling until 2015 or 2016. With Apple and PayPal opting to avoid NFC, he sees that technology having a difficult time surviving.

For banks, mobile payments are as much as a defensive play as a way to offer another product to tie the customer to the financial institution.

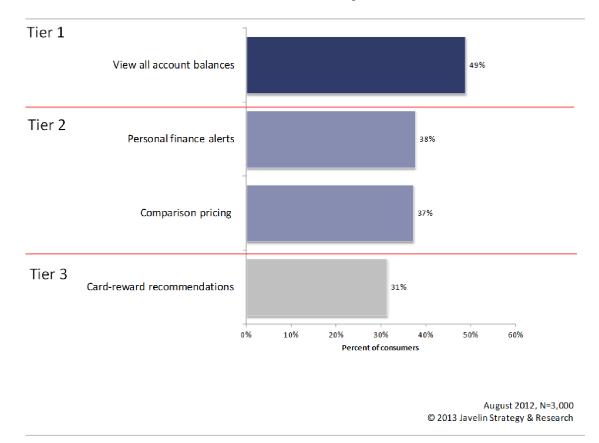
The financial institutions used to be the only trusted brand for payments, explains Paul Fiore, CEO and founder of CU Wallet, Woodland Hills, Calif. But now PayPal, Ameritrade, E-Trade and several others are just as trusted as the banks for payments. Thanks to PayPal and the others, consumers are ready to use mobile wallets with trusted brands such as Starbucks. But Starbucks is a "closed loop" solution – the Starbuck's card can't be used at another coffee chain for any other type of purchase.

Mobile payments are also critical for financial institutions as the Baby Boomer generation continues to age, adds Richard Crone, chief executive officer of paymentsconsulting firm Crone Consulting, LLC. "For the last five to 10 years, the age of the average customer continues to go up. The average age of the credit union member is 48. The fastest growing customer segment for financial institutions is the deceased account holder."

So enrolling the customer in mobile payments rather than letting a third party do it puts the bank brand in front of the customer every time he makes a payment, Crone says. "Banks don't want to be anonymous to the mobile user."

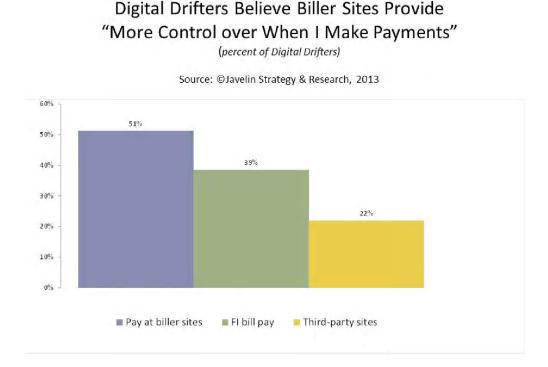
Indeed, a Bain & Co. survey showed a high correlation between digital usage, loyalty and share of wallet. An aggressive mobile strategy helped JP Morgan Chase change from a net promoter score of a negative 7 (more complainers than advocates) to a positive 29 percent over the course of three years, according to an *American Banker* article.

Mobile helps across all demographics, Crone adds, pointing out that even many Baby Boomers and younger consumers are jettisoning land lines rather than paying for both a landline and a mobile device. Banks can help drive this adoption – which is in their own selfinterest. According to Crone, 80 percent of branch transactions are to deposit a single check – so it would be much less expensive for the bank to actually provide consumers with tablets or other wireless devices and teach them how to deposit a check via remote deposit capture than to have those customers continue to make those deposits at the branch.



Selected Features Consumers Want in 21st Century PFM Tool

Crone cites Javelin's research on mobile account opening. By leveraging mobile payments, banks can further leverage the use of other channels as well. Javelin further estimates that banks can increase household adoption of online banking by 22 percent by targeting 29 million Americans who are just one step away from paying their bills at the bank. The younger consumers not only want this option, they expect to pay their bills this way.



Source: Javelin Strategy & Research

"Banks do have the opportunity to win back these younger customers," said Heidi Liebenguth, managing partner with Crone Consulting. "They have to start with a digital format." So mobile payments should be only part of a mobile strategy that includes mobile account openings, mobile alerts, etc.

CU Wallet and other mobile wallets that are "open" are more acceptable to consumers and merchants alike because the wallet can be used anywhere; the merchant can use it in conjunction with loyalty programs; and he can also gain valuable customer purchase information. With ISIS and similar mobile payment efforts, someone else owns the data, Fiore explained.

However, Zilvinas Baresis, Celent senior analyst, expects a blend of closed and open wallets to continue to be popular, citing the ability to gather customer payment information, offer loyalty programs and other marketing incentives as the reason some retailers will opt for the closed-loop model.

"All merchants have to use the model that works best for them," said Baresis.

Fiore expects the hundreds of mobile wallets in existence today to drop to a dozen or so in a year or two as consumers and merchants gravitate to them and drop others due to convenience, lower cost and other advantages in these offerings compared to the competitors.

VII. Banks Focus on Underbanked and Wealthy

Banks continue to seek to expand their customer base by attracting the wealthy and the underbanked.

"The thing that both groups have in common is stress around money," said JP Nicols, CEO of Clientific. "Those with low-income (typically the underbanked) have high stress about late payments, overdraft fees, and how to accumulate money. The wealthy have stress about how to maintain their wealth and pass it down to their heirs."

According to the FDIC, 8 percent of all households are unbanked.

		012)
	Underbanked	All Consumers
18-24	29%	12%
25-34	23%	18%
35-44	23%	20%
45-54	15%	20%
55-64	6%	15%
65+	5%	15%
Under \$15k	28%	9%
\$15k to \$25k	14%	9%
\$25k to \$35k	11%	10%
\$35k to \$50k	13%	13%
\$50k to \$75k	13%	19%
\$75k to \$100k	9%	14%
\$100k to \$150k	6%	15%
\$150k+	6%	11%

Banks will not seek to attract many of the underbanked because, frankly, they don't want them, said Ron Shevlin, senior analyst with Aite. Many of these people simply can't afford the bank fees, and the banks can't afford to give away their services. So any focus on this portion of the unbanked is "political pandering" without any real substance behind it, according to Shevlin.

Yet there is a subset of the underbanked that Shevlin refers to as the "de-banked." These are former bank customers who have chosen to leave the financial institution because they find that they can use prepaid debit cards rather than a checking or savings account and these enable them to better control their own spending and pay lower fees over the course of a year. Two or three overdrawn checks will typically cost more than a prepaid card's annual fee.

For a bank to be profitable with prepaid debit cards, it has to be committed to issuing about eight per month for every renewal, according to Roth. So he sees these programs limited to the largest banks.

Some of those financial institutions have seen an opportunity in prepaid debit cards. Recognizing the loss of the "de-banked" customers who could provide some profits, some banks like BB&T, U.S. and Chase have rolled out and are marketing their own prepaid debit cards. Shevlin adds that there are customers who have both DDA accounts and prepaid debit cards because they like the spending control the prepaid debit cards force – they cannot be overdrawn.

Being overdrawn is not the concern of the wealthy, instead they are concerned with maximizing the use of the money they do have. The first step for banks to capture more of this business is offer to aggregate financial information, then to provide access to some financial planning information for free, according to Nicols.

Video presence technology and tablets are other critical technologies for attracting and retaining wealthy customers, according to Nicols. The video presence technology enables banks to share the skills of professional financial advisors across numerous locations. The tablets enable a bank advisor to collaborate with a customer on financial plans shoulder to shoulder, which fosters a more personal relationship than working across a counter or a desk.

VIII. Compliance Strategies

Bankers have lamented the high cost of compliance and regulation for years, and even more so since the writing of the Dodd-Frank rules.

"Regulation is also causing significant changes to the business model, leading banks to exit or enter specific lines of business and financial products," CEB TowerGroup said in an advance announcement of its 2014 outlook, which will be released in February. "In 2014, rules will be implemented at a faster pace than ever before, necessitating that institutions enable automated, flexible, and continuous operational changes to ensure optimized compliance."

CEB TowerGroup added: "There are numerous examples of compliance impacting strategy at both the national and global level. As of Dec. 2, 2013, the Consumer Financial Protection Bureau has implemented only 42 percent of new rules mandated by the Dodd-Frank Act and has proposed rules for an additional 31 percent. Globally, financial institutions are facing multiple year implementations for Basel III."

With rules changes happening faster than ever before, banks will need to increasingly rely on automation to help them meet compliance mandates, says Nicole Sturgill, CEB Tower research director of retail banking.

Community banks and small credit unions have been particularly concerned because they have to abide by many of the same rules as their larger counterparts without the same level of financial resources.

"The good news is that regulators are now better distinguishing community-based financial institutions from larger banks," said Sawyers. "The smaller ones are getting some breaks from legislators, but [compliance] is still costly."

Ninety-two percent of the country's chartered banks have less than \$1 billion in assets, according to Sawyers. Technology, working in collaboration with a third party through cosourcing and outsourcing of compliance functions are all helping banks meet the increasing cost of compliance. Sawyers says that banks are using enhanced fraud detection systems and better transaction monitoring systems in order to meet compliance requirements regarding risk.

One of the compliance areas where financial institutions of all sizes and regulators are paying more attention is Enterprise Risk Management (ERM). ERM looks at risk across the financial institution as a whole, rather than in silos. For example, a financial institution might have a significant percentage of residential mortgage loans, with total risk determined by the loan department, as well as investments in residential mortgage-backed securities, with total risk determined by the investment department. Each silo might have acceptable risk, but combined, the bank may have too much concentration in single-family mortgages.

Some banks' leaders have cited the cost of compliance as a reason to sell. According to Sawyers, that reasoning is a smoke screen. Some of the banks that sold in 2013 and an increasing number expected to sell in 2014 are doing so because bank leadership is retiring and are looking to cash in their bank stock for retirement.

Even if the cost of compliance is not the real reason some of these bank executives are cashing in, one thing that is certain is that the cost of compliance will continue to increase.

IX. Core Perspectives (in alphabetical order)

- a. CSI Steve Powless
- b. D+H (Harland) Scott Hansen
- c. FIS Nancy Langer
- d. Fiserv Steve Shaw
- e. Jack Henry & Associates Mark Forbis

Building the Future on the Foundation of the Past Three Key Trends Continuing in 2014 *By Steve Powless, CEO of Computer Services Inc. (CSI)*

At the beginning of each year, we commonly look back at the preceding 12 months and evaluate the landscape: How has it changed? What issues captivated us? Where are the opportunities that should be seized in the new year?

But as leaders in the banking industry, we know that issues, trends and growth don't start and stop in tidy, neat boxes every 12 months. Often the biggest issues we'll face in the next year have already begun bubbling up in the previous one. Or in many cases, huge topics dominating conversations in boardrooms across the country do not go away, but in fact continue to affect the decisions made for the foreseeable future.

To that end, three topics strongly affected bankers last year, and these topics will continue to factor into decision making throughout 2014. From technology decisions to staffing to risk management, the issues of profitability, compliance and cybersecurity will guide and influence every decision made this year.

Identifying the bottom line–Calculating and Raising Profitability

When it comes to profitability, the good news is that it's up, specifically on the lending side of the house. In general, profits and asset quality are improving, while loan delinquencies and loan loss provisions are shrinking.

The outlook is positive, but in 2014, banks cannot afford to take profitability for granted. The key to maximizing profits this year will be the adoption of more sophisticated profitability and data analysis. While profitability analysis can be applied to any department in the bank, the resurgence in the lending market means that loan data analysis for performance over time will be especially important to loan portfolios.

Employing a profitability-analysis system can evaluate the risk factors, profit margin and relationships associated with a customer's loan. By utilizing automation tools, banks can generate the most significant contribution to bottom-line profitability, and poor decisions can be avoided when making loan-pricing decisions. Advanced profitability reporting enables banks to make informed decisions that create better results in today's marketplace. Banks must begin by analyzing margin performance across all sectors of the bank—branch profitability, product profitability, and customer and loan officer profitability. This level of profit analysis also can assess customer preferences to categorize those who use such cost-efficient delivery channels as online resources and mobile banking offerings. Using automation for product-level analysis enables the bank to show the profit margin of each loan, instead of grouping them, before the loan is booked.

Playing by the Rules-The Impact of Compliance

While loan performance is improving and a cause for celebration, the top concern keeping bankers awake at night is the continuing burden of the regulatory environment.

The Dodd-Frank Act (DFA) and the Consumer Financial Protection Bureau (CFPB) touch every department of the bank, and the uncertainty of how new regulations will play out still induces high levels of anxiety among bank managers.

Unfortunately, compliance is proportionally more expensive for community banks. In a 2011 benchmark study on compliance costs for all industries, the Ponemon Institute found that the per capita cost for compliance was directly inverted to the size of the company. Across all companies, the average cost of compliance per employee was approximately \$222, yet the smallest organizations in the study incurred costs of \$535 per employee, versus \$131 per employee at the larger institutions.

With an additional 4,000 pages of new regulations that went into effect on Jan. 10, banks are planning how to keep up with the changes. I met with 25 of CSI's largest banks in December, and the consensus at that roundtable discussion was that compliance costs could increase up to five times that of current levels, with some banks finding it necessary to add up to five full-time employees just to ensure compliance in 2014.

Related closely to compliance and profitability is portfolio stress testing. While this is a requirement for banks with an asset size of \$10 billion and up, regulators still want smaller institutions to demonstrate an awareness of their portfolios to ensure that no single lending area—be it commercial real estate, residential, agriculture, etc.—covers too high a concentration.

There are tools and processes that can minimize the cost impact, but banks must be proactive in identifying the best ways to achieve compliance in a manner that fits their technology and business needs.

Locking the Virtual Doors-Cybersecurity Goes Mainstream

Cybersecurity roared into the mainstream in December when retail giant Target revealed that more than 40 million card accounts were stolen in a massive data breach. But Target was not

alone: every month brought news of another breach–sometimes from retailers, sometimes from financial institutions.

DDoS, spear phishing, identity fraud and advanced persistent threats have become words every bank executive should know and understand as the tactics hackers use to defraud the financial industry constantly grow in sophistication.

Banks are looking at many options for slowing down cybercrime. Some methods work to better authenticate users and ensure that only the right people access and use account information. Other approaches work to protect the bank's IT infrastructure.

A few simple steps will help mitigate the risk of a successful cyberattack of any type. One of the first things every bank should do is build enhanced perimeter security to stop hackers before they get in. That seems obvious, but it's important to go beyond traditional measures. Firewall security is no longer enough. The new gold standard is an Intrusion Prevention System (IPS), which helps the bank to identify, log and block malicious activity at the outset. Banks should use a diversified line of defense that includes border routers, web application firewalls and an IPS.

While no security system is 100 percent foolproof, taking carefully considered steps and investing in solutions that protect both the consumer and the financial institution can make your bank more difficult to breach and your systems more secure, encouraging criminals to look elsewhere for a victim.

Certainly no one knows exactly what the year ahead holds, and there are sure to be new factors that come into play that will affect our industry. However, as the past is a good indicator of the future, we know that issues associated with profitability, compliance and cybersecurity will be topics all bankers must face in 2014.

About the Author

Steven Powless, CEO of Computer Services Inc. (CSI), joined the company in 1987 as vice president of Corporate Development. After holding the titles of executive vice president, president and chief operating officer, Powless is now CEO of CSI, only the second person in 47-year history of the company to hold that position.

Over the past year, Powless' focus has been developing and executing CSI's Strategic Growth Initiative (SGI), a four-pronged approach to rebranding and continuing to grow the company within its core customer base as well as new opportunities through a healthy appetite for acquisition, while maintaining the fiscally responsible day-to-day operations of the company.

A Changing Financial Landscape: Exploring the Top Trends of 2014

By Scott Hansen, Executive Vice President, Marketing, D+H

The financial industry has undergone some radical changes in the past few years, emerging from an era of economic downturn and housing crisis into a highly regulated, digital world where agility and connectivity are key. Consumer behavior is changing, security threats loom and operational efficiency is critical to counterbalancing the impact of shrinking profit margins.

After five years of belt-tightening, financial institutions are investing in technology to help them compete in this changing world. Where are they investing? And, how have their strategies changed?

The answers can be found by exploring these five major trends.

Vendor Consolidation: Less is More

In the past, most banks and credit unions took an "a la carte" approach to technology; purchasing individual solutions from multiple vendors, then interfacing these ancillary products with the core.

Fast forward to today. In the new self-service digital world, banking technology has become more complex, uptime more critical and integration essential to success. Managing multiple vendors is a time-consuming job.

While vendor consolidation is typically more common in community institutions, the efficiency gains, coupled with the added demands made by regulators around vendor management processes, are making it appealing to institutions of all sizes. As a result, many institutions are embracing a technology model that favors a smaller number of more capable vendors. Financial institutions have come to understand the importance of aligning with a technology partner that not only provides the most complete spectrum of products and services, but does it in a way that optimizes integration among its various systems in a turnkey and seamless fashion. A single partner whose applications don't work well together doesn't offer a benefit beyond the situation many institutions find themselves in today, supporting 10-15 major technology vendors.

Increasingly, financial institutions are seeking to implement complete enterprise solutions, including core, lending, risk management, branch automation, self-service products, remote deposit capture, item processing, payments, business intelligence and business management tools, that come fully integrated, right out of the box. In addition to the inherent efficiency gains, simplified vendor management and cost benefits, a single enterprise solution can significantly improve the customer experience.

Self-Service Expansion: The Rise of Do-It-Yourself Banking

We are now a connected society, with people of all ages and every demographic embracing the anytime, anywhere, "right now" convenience of today's devices. For many, mobile is not an alternative channel, it is the only channel they use – and smart institutions are taking note. The question is, how can financial institutions capitalize on this trend, and how can financial institutions meet expectations of consumers?

It is no longer enough to let customers check balances or find ATM locations from their mobile devices. Whatever consumers can do in the branch, with the possible exception of conducting cash transactions, they should be able to do from their phone, tablet, laptop or desktop.

The real challenge is ensuring that banking experience is consistent across all of the platforms, from login credentials to the terminology to the functionality. The only way for institutions to effectively accomplish this level of consistency is to choose a single solution that supports all self-service form factors and is also tightly welded to the core.

Emerging Payment Technologies: Moving to Mainstream

Emerging payment technologies have the potential to follow the same trajectory as mobile; moving from value-add to table stakes at light speed. The time is now for financial institutions to jump into the game, or, quite quickly, they could be left behind.

Two of the most exciting evolving payment technologies are: Mobile Card Acceptance and person-to-person (P2P) payments, each with great potential for financial institutions that effectively counter stiff competition from alternative providers.

Mobile Card Acceptance brings the cash register to the customer, transforming tablets and smartphones into mobile point-of-sale devices. This technology is being embraced by retail stores, field sales teams and a host of small businesses alike. Savvy institutions are providing these services as part of their commercial product portfolio – creating an offering that is often safer, better and easier to manage than its non-bank alternatives.

P2P payments enable individuals to send and receive money to and from their account to another person, knowing only his or her email or mobile number. This payment option offers customers convenience, speed and safety, while keeping the financial institution frontand-center in the personal payments arena...the best defense against non-financial institution disruptors.

Financial institutions need to make sure their payment providers are ready to support them with these newer technologies. Additionally, they should not ignore the growing trend amongst their commercial customers to move away from paper statements/invoices in favor of presenting bills electronically, and accepting online electronic payments. This represents a great value-added service (and fee income opportunity) for them to bundle with their other business services.

Increased Adoption of Outsourced Solutions: "You Run My Technology, I'll Run My Institution"

While consumers want to "do it themselves," financial institutions are taking the opposite route, outsourcing technology management, system maintenance, and other functions to trusted providers. A number of factors are driving this trend.

First and foremost, to counter the impact on margins of declining fee income, compressed net interest margins and overall higher costs, institutions are doing everything possible to utilize system functions to make their employees more efficient. For some institutions, that means automating workflow, reducing steps or eliminating repetitive tasks. Others take the efficiency one step further by outsourcing their IT infrastructure and operations to trusted providers.

Outsourced solutions may take several forms. One is the classic SaaS model of delivery which involves running a single system on behalf of hundreds or thousands of clients, with all of the efficiency that it entails.

Some institutions look to providers to host their in-house systems for them, providing them maximum flexibility over their own instance of the software, while eliminating their need to maintain and harden their own datacenters, which is increasingly difficult for them to do and afford. The desire for more sophisticated disaster recovery capabilities and higher availability of all solutions is a key driving force behind this "move to the cloud."

Regulatory Compliance and Risk Management Support: Calling in Reinforcements

This final trend centers on a familiar topic: how to deal with complex regulatory compliance and risk management issues. Nearly every institution in the U.S. today is struggling to keep up with the regulatory requirements inherent in the Dodd-Frank legislation and, from a payments perspective, The Durbin Amendment. Upcoming mortgage regulations represent a monumental change in the way mortgages are originated and, more importantly, in how they are documented.

Instead of trying to go it alone, financial institutions are seeking out technology partners that stay on top of the regulatory changes for them. It is not enough to create the technology. Institutions now assess technology providers based on their regulatory knowledge, the staff they devote to keeping up with compliance changes and their track record for updating solutions prior to new regulations going into effect.

Exemplary regulatory compliance and risk management support has become the new differentiator for solution providers. As consumers expect more from their financial institutions, banks and credit unions expect more from their technology partners. It is all about "How can you add value?", "How can you make my life better?"

Deploying fraud solutions that "monitor" the entire enterprise is another growing need. Gone are the days of monitoring the teller system for large cash transactions, and the core for out of the ordinary ACH activity. The two may be related, and must be studied holistically, or a fraudulent activity composed of two seemingly innocent transactions may escape scrutiny and ultimately result in a loss.

The Times, They Are A-Changing

Today, the financial industry has dramatically changed. While the challenges are great, the opportunities are even greater. Institutions that stay at the forefront of trends, rethink their operational structures and embrace the technologies that give consumers the right-now convenience they expect will thrive in the coming years.

Modernizing the Consumer Experience

How financial institutions will improve IT in 2014 By Nancy Langer, Division Executive, Money Movement, FIS

For many people, the thought of leaving the house without their cell phone or mobile device is almost like forgetting a family member. Our mobile devices are with us all the time; they're our portals to the modern world – they connect us not only to other people, but to the lifestyles we lead.

Early results from the Black Friday-Cyber Monday weekend showed that mobile commerce was responsible for nearly \$940 million in sales, according to Business Intelligence. Mobile commerce, which represented 26% of all online transactions on Thanksgiving Day, also grew 63% over 2012.

Those numbers show what many of us already have found in our daily lives: convenience and instant access are what the public wants. However, financial institutions and their customers remain in a massive conversion of technology to reach that point. To keep pace and to modernize the experience for their customers, banks and other financial institutions will continue to focus on several key areas for IT growth in 2014.

Mobile

A few financial institutions already have begun to offer comprehensive mobile financial management – banking, real-time and international transfers, payments and more – across smartphone and tablet platforms. Continuing to expand those services will remain a goal of

2014. With the evergrowing number of companies working to compete with banks in the areas of transfers and payments, it's imperative that financial institutions keep pace.

Mobile wallets and other payment technology available



Consumers want to use their mobile phones to move their money whenever, wherever



Read as: 52 percent of overseas money transfer users want the ability to conduct real-time overseas money transfers using a mobile device (a mobile phone or tablet) Source: FIS, March 2013, n = 1,508

directly on mobile devices also will continue to grow in popularity. The ease and safety of such payments – no wallet, credit cards or money to lose or be stolen and, in most cases, a customer's information is only transmitted during the actual transaction, which limits the amount of time it can be at risk – will continue to attract customers and be a safer, more cost effective option for banks.

Smartphones are now one of the first points of contact a company can have with a customer; designing a customer experience that respects and takes advantage of that access will be of growing importance to financial institutions. Ultimately, providing customers the ability to bank anytime, anywhere, and eliminating the physical limitations of the traditional branch and call center environment, will make continued spending on mobility a key for the year.

Real-time payments

Along the same line as mobile growth, studies have shown real-time payments are the future of money movement. A 2013 study by global market research provider Ipsos Vantis, on behalf of FIS, found that consumers who transfer money person-to-person – especially those sending

money overseas – want to make those transactions immediate. It also found that, while young consumers are more likely to be among the early adopters of realtime payments, most importantly, they want the process to be convenient and easily accessible.



While banks are a convenient, trusted source for person-to-person transfers, there is mounting competition for this business. If financial institutions wait too long to provide strong options for their customers, they risk losing that business.

Active analytics

As consumers have become more knowledgeable about how and why companies use information to follow and market to them, they also have become more sophisticated about what they expect in return.

This move to a customer interaction business model is a major shift for financial institutions. However, the power of data and predictive analytics to increase the effectiveness and personalization of marketing offers to consumers is clear. In addition, active analytic solutions allow financial institutions to both better serve customers and tap into new revenue streams.

Consumers benefit from personalized, timely offers based on their transactional behavior and lifestyle attributes, much like has been seen only in retail environments to this point. Such personalization creates a feeling of trust and intimacy between consumers and their financial institution that is a key to customer loyalty. Meanwhile, banks gain access to more precise customer segmentation and optimized pricing, as well as improved marketing and cross-selling opportunities by delivering targeted, relevant and timely offers to customers across multiple delivery channels.

Expect to see banks already using analytic solutions to expand their repertoires in 2014 and for those banks that aren't already using such analysis to start.

Omnichannel

Omnichannel has become an industry buzzword, but it's for good reason. In order to best serve customers, financial institutions must find a way to make a customer's experience the same whether it takes place in a branch, on a computer, via mobile device or elsewhere. In other words, the process to complete a banking transaction or other interaction with the bank is the same no matter how that customer came to the bank.

For instance, a customer could reach out to his or her bank via the internet on a computer or mobile device, work with a teller or someone in a call center, and complete a deal without ever stepping inside a branch if he or she so chooses.

In addition, a bank's appearance and interface carry over from ATM to mobile to web and any other interactive portal – customer's know where and how things will work on each portal and don't have to learn new steps.

As the ways customers connect with financial institutions continue to change, the banks that best meet their customers' needs and desires will be the ones to succeed.

Cloud technology

Expanding their service footprints in so many technological areas also requires additional security measures. Cloud technology allows financial institutions to better protect trusted data across the multitude of devices they are allowing customers to use.

So far, cloud technology has not been used as heavily in retail banking. However, those numbers will continue to change. Cloud technology provides a central location for information that individual devices then access to receive information only when it's needed. For instance, if a consumer wishes to use a smartphone to make a payment at a retail location, the cloud would transmit their private information only during the transaction, making it harder for thieves to access it; also, because the person's information is not stored on the phone itself, there is no risk of giving away their data should their phone be lost or stolen.

To this point, "the cloud" is the best option for maintaining security across a system while giving access to a variety of outlets. Numbers of financial institutions turning to it for security should continue to grow in 2014 and beyond.

The future

The financial industry has seen a number of major, very rapid changes over the last few years. However, the paradigm shift brought on by cellphones and the web is a long way from over. iPads and other tablets only became mainstream items in the last couple years and yet customers already have begun to lose tolerance for design that doesn't adjust automatically from computer to tablet to phone. And as big banks raise the bar for what customers expect, the speed of change will only continue to grow.

So while 2014 may not be a year of headline-grabbing breakthroughs in IT, financial institutions can be expected to continue to increase their expenditures on many of the areas they've been focused on for the last few years.

Delivering Tailored Experiences Across Digital Channels Demands a Holistic Approach

By Steve Shaw, VP, Digital Channels and Electronic Payments, Fiserv

Over the past few years many financial institutions have had an almost myopic focus on mobile, working to deliver new services to accommodate a range of devices, operating systems and access modes. While this focus on mobile was merited, other digital banking and payment services were often pushed to the back burner, receiving relatively little attention. In the digital banking age, it's increasingly clear that a more holistic approach is necessary. Instead of viewing online, mobile, tablet, bill pay and emerging payment capabilities as individual services, more financial institutions will be making enterprise-wide investments in digital product suites in 2014.

Why the shift? A decline in branch traffic has led to an examination of every consumer touch point, and as a result, financial institutions are increasingly focused on offering a seamless, consistent experience across all channels. Because many – if not most – consumers now prefer to access financial services through online and mobile channels, digital is no longer the alternative channel. It's therefore more important than ever for financial institutions to deliver an exceptional customer experience across all channels.

Customers approach financial interactions from a task-oriented perspective. They may want to make a payment, check their balance, transfer funds or make a deposit. Whether consumers choose to accomplish this task using a PC, smartphone, tablet, call center, ATM, branch or non-bank competitor is generally not as important to them as convenience and ease – and a successful outcome.

A Holistic Digital Channels Approach

In 2014, we expect to see financial institutions focus on creating a seamless multi-channel approach to the consumer experience. Although consumers can look at account information, pay a bill and check a balance on a PC, smartphone, or tablet, how those capabilities are presented and combined with other products and services will vary from one device to the next. And, even though the experience is tailored to each device, the holistic approach strives for coherence and commonality across all channels.

In the coming months, how should financial institutions invest in technology, especially digital channels, to reduce cost, improve service and cater to the growing consumer preference for mobile and tablet channels? A solid digital strategy focuses on the delivery of a best-in-class

customer experience, which may require across-the-board enhancements to existing online and mobile products and services. At the same time, implementing emerging technologies as quickly as possible helps a financial institution acquire and retain customers, and remain competitive.

Looking at digital banking one product at a time is not likely to result in desired outcomes for a financial institution. Instead, consider online, mobile, tablet, bill pay, personto-person payments and other capabilities as part of a digital suite that works together to provide an integrated, cohesive experience. Of course, digital channels can and should be tailored to deliver the best overall banking experience, and it's important for financial institutions to understand how and why these channels differ for consumers

While online, mobile and tablet banking undoubtedly share close relationships, each is distinctive and defined by not only the characteristics of the device, but also by the location, reason and context in which the channel is accessed.

Distinct Devices

The unique attributes of digital devices are a big part of what defines today's digital banking channels, and taking advantage of these across each device is essential to providing a tailored experience. For example, smartphones are fitted with cameras that can be used to capture information, tablets offer tactile functionality and a portability that encourages leisurely browsing, and PCs have keyboards, a mouse, and a large screen that facilitates the input and review of information.

To offer a truly tailored experience, financial institutions should leverage each digital device's capabilities to boost the functionality of the channels. This could manifest itself in features such as mobile check capture or mobile photo bill pay that allows customers to deposit checks or pay a bill by taking a picture, visual displays of "touchable" personal financial information that reveal transaction details with a tap, and online personal financial management tools to categorize spending.

Behavioral Differences Across Channels: How and Why

While the unique capabilities of smartphones, tablets and PCs do impact their respective digital banking channels, it is important to note that the devices themselves do not define the channels. To optimize each of the different channels, financial institutions must consider where and how consumers use the channel, the context and reasons for its use and the tasks that users want to complete. Once financial institutions have a good grasp of these details, they

can begin to create digital banking experiences that allow consumers to conduct channelspecific activities with ease.

Creating Tailored Digital Banking Experiences

Financial institutions should consider the following variations in experience for each channel: **Online** – Consumers turn to PCs for tasks that require data input or a larger screen, require considerable effort, and which would often be cumbersome on a mobile phone or tablet. When using a PC, consumers typically sit down and lean in to focus, often in a room away from others. They expect detailed, comprehensive information to be at their fingertips, making indepth product information and access to long-term history of financial records appropriate for the online channel.

Mobile – The typically brief, on-the-go interactions that take place in the mobile channel necessitate easy navigation to facilitate quick access to information such as account balances or ATM locations, as well as the ability to execute just-in-time transactions such as transferring funds prior to making a purchase. For consumers engaged with mobile technology, services like remote check capture and the delivery of contextually relevant data (such as rewards earning and redemption opportunities presented during a transaction) are also a good fit. Low balance notifications, bill reminders, and security alerts serve to keep the user connected with their finances.

Tablet – The casual, at-home use of tablets encourages relaxed browsing in a lean-back posture, calling for simple, visually compelling content that is navigated with swipes and taps. This could include large and interactive calendar displays, and the ability to easily set up reminders, add notes, and access online chat capabilities. In addition, tablets are often used in multiscreen situations with multiple people present, such as when a user watches TV with their tablet in hand. The context of tablet use, in combination with its capacity to provide relevant content and chat capabilities to connect with customer service representatives that can answer questions relating to specific products, provides a compelling proposition to financial institutions who have struggled to engage task-focused PC users for cross-sell opportunities.

Consistency in Design, Detail and Data

Although there are a range of digital banking channels and differing experiences, there is also a need for financial institutions to balance the variations with elements of consistency. This includes displaying the same account names and information, ensuring the same preferences

can be used and of course having the same feel and look. Above all, it is essential that data is accurate, real-time and consistent across all channels.

Achieving balance between tailored experiences and consistency is what financial institutions must strive for. A holistic approach requires that financial institutions adopt a strategy that includes an enterprise-wide examination of and investment in digital banking. New channels will emerge and the experiences consumers expect will change – but even as this happens the principles of and reasons for delivering tailored experiences will remain.

About the Author

As Vice President of Strategic Marketing for Digital Channels and Electronic Payments at Fiserv, Steve Shaw is responsible for the overall marketing and communications strategy, as well as product marketing and industry intelligence activities for the Digital Channels and Electronic Payments divisions. With years of progressive experience in the financial services industry, Shaw is a well-respected thought leader, regularly presenting at industry trade shows and often quoted in top-rated industry publications.

Five Areas of Focus for Banks in 2014 *Mark Forbis, Chief Technology Officer, Jack Henry & Associates*

Before looking forward, let's take a look at what happened in the marketplace in 2013 based on our experience with more than 11,000 financial institutions nationwide. This "rearview mirror" approach can provide insight into trends that will continue their momentum into next year. Despite a better lending environment, banks continued to experience margin compression in 2013, which led to a heavier focus on tools that would drive efficiency and profitability. Perhaps this is why we saw banks take big ideas like branch re-design and mobile/tablet banking from the drawing board to their clients. In these areas, bankers stopped talking and started doing in order to meet consumer demand and increase the adoption of cost-saving self-service channels.

There was also an ongoing interest in mergers and acquisitions (M & A), but it wasn't necessarily driven by the size of the institution. The 2013 M & A landscape was based more on a "merger of equals" philosophy that spawned partnerships between similar-sized institutions. We expect this approach to carry over to 2014. An uptick in community and mid-tier banks purchasing branches of money center banks also occurred as those top tier banks looked to shed branch assets and their smaller counterparts sought to grow branch networks.

Looking at the road ahead, there are five specific interconnected areas on which banks will focus their resources in 2014: mobile, user experience, efficiency gains, revenue growth and fraud and risk avoidance. It is hard to talk about them separately as each of these categories is somewhat dependent on the others. Through these five strategic focuses, banks are setting their sights on a year that will improve customer retention and raise profitability.

The Mad World of Mobile Banking

We just can't get enough of it. Bankers now understand that mobile is the new Internet banking. Just like during the late 1990s and early 2000s when we were surprised by consumers' proclivity for banking on the Internet, we are now seeing the same reaction to mobile banking, except it's been a much, much faster transition. The phrase, "If you build it, they will come," could not be truer in this case. It was thought that functions such as adding a payee were a nice perk, but would not be used by consumers. Instead, consumers have shown that if they can perform a task via mobile banking, they will. In fact, within two years we could see mobile banking with higher usage rates than Internet banking. As community and mid-tier banks prepare their mobile offerings to potentially be the primary channel, the institution's size could have an impact on their approach. There are always exceptions, but generally speaking, community banks are still using mobile banking as a defensive maneuver, while mid-tier institutions are moving into an offensive position against the regionals and money center banks. While a few banks in both segments have been first-to-market with new features such as debit card management and mobile photo bill pay in the past couple of years, pressure will increase in 2014 for mid-tiers to develop mobile services on par with those of their larger competitors. This will create a trickle down effect as community banks ramp up their offense against mid-tier competitors. The good news for both groups: If they achieve tech parity with the money center banks, they will win customers based on relationships.

On the consumer side of mobile, 2014 will usher in ever-growing adoption numbers, as well as developments in geo-location capabilities and other customized rewards and offers. Banks will also turn their attention to the opportunities around enterprise mobile banking, and the mobilized bank employee will emerge. This trend is fueled by the growing popularity of tablet devices that allow bank staff to perform cashless transactions, account opening and other functions anywhere in the branch. More importantly, tablets and mobile phones facilitate the idea of a 'mobile branch' or what we consider to be "anywhere, anytime" banking by the consumer. The convenience afforded by these applications will improve employee efficiency and customer service.

Mobile payments and wallets continue to garner media attention, but does the current consumer demand make it a high priority for banks? No, the future potential does. Customers aren't knocking down the door for these technologies, but pressure from non-bank competitors such as PayPal is keeping banks on their toes. Ideally there will be some stabilization of players and strategies in this space before banks must set a plan, but with a new idea (or technology provider) emerging almost daily, stabilization seems unlikely in 2014. In this age of digital disruption, banks must push through the clutter and create strategies around these technologies before alternative providers are able to penetrate their customer base. The key goal for banks as they navigate this new landscape is keeping themselves top-of-wallet. To that end, banks and their vendors will be upping spending on mobile banking research and development (R & D) in 2014. Jack Henry dedicated more than 10 percent of revenue to product R & D last fiscal year, with plans to increase the portion dedicated to mobile development in 2014.

User Experience in the Spotlight

The proliferation of smartphones and tablets has made consumers nearly obsessed with the experience. They want to touch, scroll, swipe and customize to their heart's content. In the beginning, retailers and consumer technology providers took the brunt of the demand for new and flashy interactions. Now consumers are seeking a similar level of visual appeal and usability from their banking technology.

This brings us to the omnichannel phenomenon and the "branch of the now." That's right, we're not going to predict what the branch will look like in five years, but instead we'll focus on what banks are doing today. We have clients employing video conferencing, touch screens, self-service stations, video teller-staffed drive-through services and mobilized employees in their branches today. These banks realize how integral the branch is to a true omnichannel strategy. Customers should be able to perform the same set of tasks across all of their devices and have that experience extend into the branch as well. In 2014, banks that haven't done so already will begin firming up their own branch of the now visions and putting those strategies into action. Some banks will choose to make changes to existing locations while others will close branches and open new, more compact centers.

But user experience doesn't stop with the customer. Vendors are beginning to look at user experience through the eyes of the bank employee and make improvements to the interfaces of in-branch technology. The green screens of the past are being replaced by more intuitive, streamlined systems that have positive impacts on efficiency and service levels.

Efficiency Rules the Day

One of the most important debates bank decision-makers will have in 2014 is how to effectively leverage burgeoning self-service channels for efficiency gains. Mobile and online banking, ATMs, remote deposit capture (RDC) and in-branch self-service stations all take a transaction that would traditionally be handled by a teller and put it in the hands of the customer to do whenever and wherever is convenient for them. Taking customers out of line frees up time for tellers to ramp up cross-sell efforts and promote new services. If a bank is hesitating to invest in one of these channels due to a lack of ROI promise, these efficiency gains should be heavily considered.

Another way in which banks will increase efficiency ratios in 2014 is through the implementation of enterprise workflow technology. Workflow principles have been expanded from document imaging systems into everyday processes. Banks can see strong efficiency gains by leveraging technology and taking a checklist approach to these tasks. Standardizing the

steps for each process in the bank promotes consistency and higher service levels. Take new customer on-boarding as an example: after the account is opened, the workflow checklist can ensure that the new customer is satisfied and fully leveraging the bank's offerings. Within 10 days, has the customer used his/her debit card or activated mobile banking? If not, the appropriate correspondences can be sent to make him/her aware of the products and offer assistance in activation. This process drives adoption of sticky services.

Banks will also emphasize ongoing education related to their existing technology platforms to improve efficiency. Before making new tech investments, decision-makers will ask, "What can we do with what we have?" It's an age-old problem that spans beyond financial services. The most efficient use of technology occurs immediately after implementation, but then a growing utilization gap appears. One cause is that banks might not be able to keep up with learning the new features introduced through releases from vendors. We have conducted many successful re-training sessions with banks that find new features that drive fee income.

Not having the resources to leverage the full capabilities of in-house technology is one of many reasons banks will continue to look to outsourcing in 2014. Never before have we seen such a focus on managed services. Bankers want to focus on the business of banking, but with the constant demand for innovation, regulatory scrutiny and lower margins, their time is stretched too thin. They don't want to spend time and money on hosting servers, applying patches and other tech maintenance when those resources could be applied to making loans and processing transactions. The 24/7/365 availability demanded of banking services also limits what banks can handle themselves. We as consumers are more prone to use services after business hours. Many community and mid-tier institutions can't keep up with what's happening when they're not in the office. How can they ensure self-service channels are running properly overnight? How can they have someone available to answer online banking questions at 9 p.m.? The answer is additional staff, which is not a feasible solution in many cases.

We expect to see more than just large pieces of technology moved to an outsourced environment. Banks will also explore moving data to the cloud and having a vendor manage items such as Microsoft email services, servers, firewalls, office software products – everything that a bank may use. Consumers are using cloud services – why not banks?

Revenue Generation

All the efficiency plays in the world mean nothing without a concerted effort to find new sources of revenue. For community and mid-tier institutions in 2014, those efforts will be focused in on new fees for service and expanding small and medium size business outreach. © 2014 William Mills Agency Pg.47

We have spent nearly 10 years fine-tuning the self-service model and now is the time to decide how banks can delicately monetize it. With the number of customers currently using these channels, banks must get creative in their plans to add fees so as to avoid losing customers and/or reducing usage of these products. Despite the threat of customer dissatisfaction, banks will experiment with ways to make money from self-service.

At the same time, everyone will be seeking small and medium sized business customers. Commercial business is the holy grail of revenue for community and mid-tier banks. There are a number of tools currently being leveraged separately to garner these accounts, including merchant RDC, as well as mobile and tablet services to mobilize the business. But how can banks close the elusive small business account? By providing a packaged suite of business services that can be customized to that customer's needs, such as cash management, wire transfers, ACH origination and loans, among other products.

Fraud and Risk Abound

Unfortunately for all of us, this could be an article all by itself. Fraud attacks dominated headlines in 2013 – don't expect it to change in 2014. This new fraud reality is here to stay. And so too is a greater scrutiny by regulators on risk management. The tides could turn soon as more institutions look to integrate stronger enterprise security monitoring into their systems and more importantly into the core platform. This process must be automated in order to thoroughly protect the bank and its customers. While each of the areas discussed in this article opens doors to greater risk of fraud and potential mishaps for both banks and consumers, we cannot allow the threat to hinder growth and innovation.

While not an exclusive list, a significant portion of banks' time and energy will be spent in the five areas outlined above in 2014. Buzzwords will continue to bounce around, but banks should always concentrate on selecting technology platforms that are inclusive of all things needed to drive consumer adoption, retention and loyalty; help the institution drive efficiency ratios; improve the management of resources and generate new revenue.

X. Top Ten Trends Impacting Bank Technology for 2014



Jimmy Sawyers Sawyers & Jacobs LLC

Taking the bank to the customer will be bankers' top objective in 2014. To accomplish this objective, bankers will require a mix of old-time personal service and new-age mobile technology.

In my early career as a community banker, one of my fondest memories was the honor of personally delivering the Christmas Club checks (beautiful red and green checks with images of holly and bells on them) to local companies' employees. Remember Christmas Club accounts? That was a big deal back then, in 1986. For those who are too young to remember, the Christmas "Club" was no club at all. This novel savings account peaked in popularity in the 1970s and offered the implied status of membership and the mental accounting that led to disciplined saving. The account was very appealing as customers' year-long savings culminated in a festive and colorful check to fund their Christmas shopping.

In the coming year, bankers will be called upon to take the bank to the customer once again, albeit in a more high-tech fashion than the red and green checks I was delivering in 1986, but with the same personal touch. To prepare bankers for this special delivery, we offer our annual top ten predictions:

Prediction #1 - Debit Makes a Comeback

Smart bankers will revisit their current debit card provider relationships and will perform the necessary due diligence to determine if their current agreements are delivering value.

With the benefit of a clearer post-Durbin Amendment view (pending Judge Leon's decision and the Fed's appeal), high debit card transaction volumes, and significant changes at Visa and MasterCard, bankers will find such due diligence has a very positive return. Clearly still one of the best sources of non-interest income, one community banker reported an 80% increase in interchange revenue after switching providers recently. The Visa-MasterCard duopoly is showing some signs of weakness as Discover and other lower cost providers move © 2014 William Mills Agency Pg.49

in. Debit card interchange has always been a bit of a pig-in-a-poke for bankers but changes coming in 2014 will shed light on this cryptic yet growing revenue source (especially for those banks below \$10 billion in total assets).

Challenge Question: Is your bank getting the most value in terms of interchange income and processing expense from its debit card provider?

Prediction #2 - Bankers Demand Relief from Third-Party Security Breaches, Stricter Oversight of Retailers, and Better Risk Mitigation Methods

History will show the Target security breach as the tipping point that led to the death of the magnetic stripe and the acceptance of more advanced, more secure payment technology. Passing payment data through the merchant terminal is old school and will have to change. The Target breach affected 1/3 of the U.S. shopping population who will now demand more secure methods of payment. Expect smart cards and chip cards to finally gain traction and become as widely used in the U.S. as they have been in Europe for years. While certainly not hack-proof, EMV (Europay, MasterCard, Visa) standards will offer improved security as more devices support it. Already in use through some processors, new mobile banking apps that allow consumers to turn their debit cards off when not in use will become more popular and will be widely used to mitigate the risk of unauthorized use.

Bankers continue to be heavily regulated regarding customer information security, yet retailers, where most of the risk exists, are allowed a free pass. Consumers and bankers are fed up with retailer and other third-party security breaches that leave them on the hook for lost funds and reputational risk, leading to demand for increased government oversight (beyond the weak and toothless Payment Card Industry Data Security Standard (PCI-DSS)) of such retailers and third parties. Always remember, "compliant" does not mean "secure." Don't expect Version 3.0 of the PCI-DSS, effective January 1, 2014, to be a game changer.

Bankers worried about more debit card fraud would be wise to consider that for every \$100 in transactions, card fraud accounts for just 5.2 cents (Source: Nilson Report). Debit card interchange will continue to be an excellent source of non-interest income for banks.

Challenge Question: Is your bank and its customers experiencing card re-issue fatigue and do you plan to evaluate new card security methods?

Prediction #3 - Mobile Banking Gets More Mobile

Mobile banking will continue to evolve as bankers take the bank to the customer and see increased demand for mobile banking services via tablet computers and smartphones.

Of the current 69 million people banking online, more will turn to their TVs as online banking finally gains utility on Smart TVs which allow consumers to access banking apps from their couches.

Speech recognition and natural language understanding will bring truly mobile banking to the automobile via technologies such as the next generation of Ford SYNC® which runs on Microsoft's Windows Embedded Automotive operating system.

Wearable technology (on the wrist, head, and elsewhere) will give consumers digital access anywhere, anytime.

Challenge Question: Does your bank's mobile strategy extend past the smartphone screen?

Prediction #4 - Apple Falters and Microsoft Surges While New Devices Emerge

Long-regarded as the most innovative company in the world, Apple will be dethroned as Samsung, Google, and Microsoft out-innovate and outperform Apple by creating new devices and new applications that change the way we live, work, and bank. While Apple continues to suffer from the loss of Steve Jobs, Microsoft will prosper as a result of Steve Ballmer's retirement.

Windows 8 will continue to be a disappointment but expect Windows 9 to be better, much like Windows 7 was superior to Windows Vista.

As we predicted last year, Microsoft stumbled out of the gate with its tablet endeavors but by late 2013, the Surface Pro tablet was making inroads and being marketed and distributed more effectively. As a user, I can tell you that having a USB port and Microsoft Office on my Surface Pro tablet is wonderful and has relegated my iPad to web browsing and multimedia viewing, what it does best. It's past time for Apple to produce something new or the iPad will be left in the dust by Microsoft and Samsung. Almost half (49%) of U.S. adults ages 35-44 own a tablet computer. (Source: PewResearchCenter-Tablet Ownership 2013)

When viewed as a percentage of personal computing device sales, iPad sales were down in 2013 compared to the previous year along with desktops and notebooks. Windows tablets, Android tablets, and Google Chromebooks were trending up. (Source: The NPD Group)

Challenge Question: Do your bank's mobile banking services work well on newer, rapidly evolving devices?

Prediction #5 - The Mobile Workforce Gets the Tools They Need to Succeed

Open-minded bankers will untether their employees and allow them the mobility they require to be productive. Expect more banks to implement wireless networks and less Draconian BYOD (Bring Your Own Device) policies to facilitate this positive change.

Telepresence systems that sold for \$300,000 just five years ago can be had for \$5,000 in 2014. Even less expensive alternatives will exist in the cloud. Bankers will no longer have an excuse not to implement high-quality, affordable videoconferencing.

Challenge Question: Can your bank's employees video call their grandmas in their senior living communities but not their colleagues at work?

Prediction #6 - Bill Pay Enjoys a Resurgence Due to the Mobile Channel

Thanks to mobile bill pay, we will see consumers migrate away from the direct biller model back to banks' bill pay offerings with all of their bill payees on one view. The ability to pay bills via one's smartphone has brought new utility to a mundane but necessary task.

This is an incredible opportunity for bankers who are prepared to capitalize on this movement and market bill pay services aggressively to secure more customers on this sticky service.

Paperless e-bill reminders from payees will increase the likelihood that consumers will pay such bills via mobile bill pay and will help bankers drive this business.

Any road warrior who has paid a bill from his/her smartphone while waiting at an airport gate, or even in the air via an in-flight wireless connection, can attest to the convenience of mobile bill pay.

Consumer bill payments still represent the largest share of checks written. According to the most recent Fiserv Sixth Annual Billing Household Survey, the percentage of consumers who pay bills from their mobile phone doubled in the past year. Expect that trend to continue as bankers incentivize this channel and convert consumers from paper checks to their new, improved bill pay services.

Challenge Question: Did your bank give up on marketing bill pay years ago or does your bank have a plan to seize the new bill pay opportunity?

Prediction #7 - Bankers Get Helpful Via the Online Customer Concierge

When talking with bankers about new technology and new delivery channels, they often respond with "Our customers just aren't demanding this service." This reminds me of what Henry Ford said about the automobile: "If I'd asked people what they wanted they would have said faster horses." If bankers continue to wait for customers to ask for high-tech services, their banks biggest innovation might be pictures of kittens on debit cards.

In 2014, bankers will be challenged to educate customers on the benefits of new technologies and introduce new services in creative ways, not just ask customers what they want.

Expect progressive bankers to offer more direct help to customers via customer tech lounges, e-branches, and concierge services whether it's for initial sign-up for new services or to improve the user experience with current services. Such customer education and marketing will reap big rewards.

Bankers will embrace the digital lifestyles of their customers and offer online appointment scheduling to facilitate in-person or video meetings with time-stretched people who are normally working during regular banking hours. These customers will not sit in a bank lobby reading year-old magazines while waiting for a banker to see them.

Challenge Question: Does your bank work with customers on their schedules or the bank's schedule?

Prediction #8 - Risk Management Requires a More Sophisticated Approach

Managing risk enterprise-wide will continue to be a challenge for bankers in 2014 and beyond. Regulatory agencies will require more documented risk management efforts and will begin to enforce laws and regulations on a more uniform basis across the nation.

Banks' mortgage divisions, an excellent source of revenue in 2013 due to the Fed's Quantitative Easing (QE), will face more scrutiny from regulators and will be called upon to tighten up information security standards as they process a treasure trove of customer information. Balancing productivity and risk will prove a challenge for this function long ignored in most IT audits and regulatory IT examinations.

Bankers barely getting by with weak IT Audits and no Network Vulnerability Assessments will be required to engage qualified help to assess and maintain secure operations.

Enterprise Risk Management (ERM) programs will move beyond a strong recommendation from examiners or a best practice and will become a regulatory mandate.

Challenge Question: Has your bank reviewed its risk management efforts in a holistic manner to encompass the enterprise?

Prediction #9 - Bankers Co-Source and Adapt to New Compliance Requirements

Over the past few years, many bankers have found it difficult to innovate while cost-cutting. When there are no more costs to cut the business becomes unsustainable.

The old British saying, "Penny wise, pound foolish," applies to many bankers who spend more time and effort complaining about new regulations instead of adapting to change and obtaining the resources needed to succeed in a changing environment. A banker who tries to do everything in-house or does nothing at all will face the wrath of overworked employees or unhappy regulators. More bankers will step back and assess their compliance strategy and will co-source with trusted providers to comply while competing. Expect Washington to continue the positive trend of delineating community banks from larger banks and Wall Street banks.

Challenge Question: Is your bank cursing the darkness of compliance requirements or lighting a candle and adapting to a changing environment?

Prediction #10 - Next-Generation ATMs Become Viable Alternatives to Traditional Branches

Available for a few years now, 2014 will be the year that next-generation ATMs take off and enjoy widespread deployment. In all their varieties and names, video tellers, interactive tellers, smart tellers, smart ATMs, personal teller machines (PTMs), all will improve the customer experience.

PTMs will allow bankers to offer more retail hours in the 7:00AM-7:00PM timeframe instead of the current 8:30AM-5:00PM at most banks, inconveniently the same hours most customers are at work. Such machines will increase efficiency as banks can centralize their employees in one location to interact via video with customers at PTMs located in retirement communities, universities, and other strategic locations.

Smart ATMs will allow bank customers to withdraw exact dollar amounts, make deposits, load prepaid cards, and perform a variety of banking tasks. Many will work wirelessly with one's smartphone to eliminate the need for a plastic card.

Challenge Question: Are next-generation ATMs part of your bank's strategic technology plan?

Summary

As we sit so snug and isolated in our modern world of 2014, I would like to take it back to the 1980s one more time and quote a true icon of that era, Rick Springfield, who reminded us that, "We all need the human touch." Today's technology allows bankers who strategically deploy it to compete effectively on the high-tech landscape but with a relationship-building and powerful human touch.

Here's to an exciting 2014 filled with incredible opportunities, new beginnings, and the strategic application of new technology to better serve customers and improve bank profitability.

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