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Financial Services Industry



Bankers As Buyers 2008

A collection of research, observations and articles about what technology, solutions and services bankers will buy in 2008 and the changing financial industry landscape

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Bankers As Buyers 2008

The focus of *Bankers As Buyers* is to help financial institutions (banks, credit unions and lenders) and those companies serving them, validate their strategic IT direction/concerns and compare investments in technology by type and/or direct further research.

Mobile Banking on the Move

This past year saw real progress by large banks in offering mobile banking. This year's report discusses what we can expect to see in 2008 and a few suggestions on how banks should approach roll out strategies. You might want to check out the article by Richard Crone, Crone Consulting, LLC and Debbie Wood, Jack Henry & Associates.

Credit Markets Reshape Industry

2007 was rocked by the slow down in the housing and mortgage markets. I expect lenders to look at improving fraud detection; property value analytics and any technology or process that will turn fixed costs into variable costs. We could also see additional spending in the coming years to address new compliance/disclosure rules that have yet to be defined.

U.S. Banks Now Thinking Green

We may be behind Europe in going "Green," but we started to see announcements from banks about green programs. Were you aware that there is an Environmental Bankers Association (www.envirobank.org)? Some technologies, such as, Remote Deposit Capture, can be positioned as solutions which support financial institutions good works initiatives. Green programs are discussed in the "Other Spending" section of the report.

Security Continues to be Major Issue

Some themes continue to resonate, particularly, systems and data security. With more services shared over the Internet and email with customers; and customer data handled by bank vendors, we will continue to find weaknesses in systems and look to technology to help us solve those problems. Security, fraud and data integrity are discussed in several sections of the report and in our featured articles section.

Banks Use Technology to Aid Customer Growth

Are banks getting better with the "customer experience" than last year? While banks often look at customers in silos, our take is that most vendors are working on solutions to help banks better know their customers; analyze the opportunities/risks; present offers through multiples channel and close business faster. Bank employees will rely more on technology moving forward to grow business. For more on this topic, please

see the "Mobile Banking" and "Customer Service" sections and the article by Terence Roche, Cornerstone Advisors.

Bankers As Buyers is created with the help of knowledgeable consultants and professionals in our industry. This year's survey has been greatly enhanced by information provided by or originally published by:

ABI Research
Aite Group, LLC
Celent Communications
Cornerstone Advisors
Credit Union National Association
Crone Consulting, LLC
Dove Consulting
Federal Deposit Insurance Corporation
Financial Insights
Independent Community Bankers of America
Javelin Strategy & Research
Securas Consulting Group, LLC
TowerGroup, Inc.

It is our pleasure to provide you with this 2008 edition of *Bankers As Buyers*. While the material is copyright protected, you have our blessing to share this document with your business associates, clients, prospects and friends within the industry.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Mills".

Scott Mills, APR
President
William Mills Agency

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Introduction to Mobile Financial Services

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Five Reasons Why Small Business Remote Deposit Capture Will Take-off in 2008

By Paul Rupple, Digital Check Corp.

I. Spending Outlook

A. Market Size

According to the FDIC June 2007 and SourceMedia* September 2007 data, the depository institution landscape is as follows:

Number of:	
Commercial Banks	7,350
Savings Banks	1,244
Credit Unions*	8,329
Total	16,923

The total number of institutions declined about two percent from a year ago, continuing the direction set by one percent shrinkage last year. While industry consolidation has been relatively slow over the last couple of years, the weakness in the lending markets, and in the U.S. dollar, could well lead toward fewer institutions overall as foreign banks take a hard look at making acquisitions here, according to Jim Eckenrode, global banking research fellow for TowerGroup.

Deposits of all FDIC-Insured Institutions
National Totals* by Asset Size
Data as of [Run Report](#)
(Dollar amounts in Millions)

Asset Size as of June 30, 2007	All Institutions			Commercial Banks			Savings Institutions			U. S. Branches of Foreign Banks		
	Number of**		Deposits	Number of		Deposits	Number of		Deposits	Number of**		Deposits
	Institutions	Offices		Institutions	Offices		Institutions	Offices		Institutions	Offices	
Less than \$25 Million	580	693	7,593	519	628	6,867	61	65	725	0	0	0
\$25 Million to \$50 Million	1,123	1,713	34,001	1,008	1,562	30,648	114	150	3,344	1	1	8
\$50 Million to \$100 Million	1,863	4,184	113,358	1,670	3,812	102,281	193	372	11,078	0	0	0
\$100 Million to \$300 Million	2,830	11,716	404,809	2,424	10,189	347,784	403	1,624	56,448	3	3	376
\$300 Million to \$500 Million	870	6,344	269,852	712	5,313	223,461	157	1,030	46,383	1	1	28
\$500 Million to \$1 Billion	675	8,086	367,090	513	6,361	280,390	159	1,702	85,404	3	3	1,296
\$1 Billion to \$3 Billion	394	9,710	485,487	301	7,785	376,637	93	1,925	108,820	0	0	0
\$3 Billion to \$10 Billion	146	8,188	528,467	112	6,400	403,410	32	1,786	119,995	2	2	5,062
Greater than \$10 Billion	123	46,667	4,491,681	91	41,308	3,758,739	32	5,349	732,942	0	0	0
TOTALS	8,604	97,271	6,702,108	7,350	83,358	5,530,218	1,244	13,903	1,165,118	10	10	6,771

* Includes deposits in domestic offices (50 states and DC), Puerto Rico, and U.S. Territories
** Does not include U. S. Branches of Foreign Banks whose deposits are included in the amounts reported by affiliated branches

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[Questions, Suggestions & Requests](#)

Source: FDIC

Since 2003, the number of credit unions has decreased by 1,245, however, there are more than 4.5 million new members and "average assets per credit union" has grown every year.

U.S. CU Profile

	U.S. Credit Unions					Asset Groups - Sep 2007			
	Sep 2007	2006	2005	2004	2003	< \$5M	\$5-\$20	\$20-\$100	> \$100 Mil
Demographic Information									
Number of CUs	8,329	8,535	8,877	9,209	9,574	2,485	2,411	2,182	1,251
Assets per CU (\$ mil)	91.4	85.1	78.2	71.9	65.1	2.0	10.8	45.8	503.5
Median assets (\$ mil)	13.0	12.5	12.0	11.4	10.6	1.7	10.0	39.4	237.4
Total assets (\$ mil)	760,880	726,208	694,151	681,796	623,193	5,016	26,089	99,849	629,925
Total loans (\$ mil)	531,717	506,686	469,888	424,596	384,853	3,002	15,667	64,086	448,963
Total surplus funds (\$ mil)	197,406	190,548	198,284	213,778	217,156	1,952	9,642	31,343	154,469
Total savings (\$ mil)	642,379	615,303	590,781	589,065	539,875	4,090	21,866	85,595	530,828
Total members (thousands)	88,522	87,386	86,171	85,206	83,960	1,602	5,584	16,420	64,916
Growth Rates									
Total assets	6.1	4.6	4.9	6.2	9.5	-1.6	0.7	3.7	8.3
Total loans	6.3	7.8	10.7	10.3	9.4	-1.6	0.9	2.7	8.3
Total surplus funds	4.5	-3.9	-7.2	-1.6	9.4	-1.8	0.0	5.0	7.1
Total savings	5.8	4.2	3.8	5.4	9.1	-2.4	0.4	3.7	7.9
Total members	1.2	1.4	1.1	1.5	1.8	-1.1	-0.9	0.1	3.3
% CUs with increasing assets	57.4	45.5	46.9	63.4	80.5	37.1	52.8	70.4	83.5
Earnings - Basis Pts.									
Yield on total assets	592	552	497	472	503	631	608	602	590
- Dividend/Interest cost of assets	277	235	173	141	165	181	192	221	290
+ Fee & other income	135	129	125	116	114	63	97	136	138
- Operating expense	341	333	324	320	319	422	417	421	324
- Loss Provisions	37	31	39	35	34	44	32	32	37
= Net Income (ROA)	73	82	85	92	98	47	64	64	75
% CUs with positive ROA	85.2	88.9	87.7	86.4	87.0	77.1	86.6	88.5	92.6
Capital adequacy									
Net worth/assets	11.5	11.5	11.2	11.0	10.7	17.7	15.4	13.0	11.1
% CUs with NW > 7% of assets	98.7	98.5	98.0	97.8	97.3	97.5	99.0	99.4	99.2
Asset quality									
Deficiencies/loans	0.82	0.68	0.73	0.72	0.76	2.75	1.51	1.10	0.74
Net chargeoffs/average loans	0.48	0.45	0.54	0.53	0.56	0.69	0.54	0.48	0.47
Total borrower-bankruptcies	148,341	121,265	348,977	259,501	261,667	1,041	7,119	23,680	116,501
Bankruptcies per CU	17.8	14.2	39.3	28.2	27.3	0.4	3.0	10.9	93.1
Bankruptcies per 1000 members	1.7	1.4	4.0	3.0	3.1	0.6	1.3	1.4	1.8
Asset/Liability Management									
Loans/savings	82.8	82.3	79.5	74.6	71.3	73.4	71.6	74.9	84.6
Loans/assets	69.9	69.8	67.7	64.2	61.8	59.8	60.0	64.2	71.3
Long-term assets/assets	28.7	26.4	24.6	24.8	26.4	4.9	13.1	22.5	30.5
Liquid assets/assets	15.6	15.8	15.8	16.1	17.1	32.9	27.4	20.3	14.2
Core deposits/shares & borrowings	38.4	41.0	45.9	47.9	47.9	78.8	64.7	50.2	35.1
Productivity									
Members/potential members	7	8	8	9	11	18	10	6	8
Borrowers/members	50	50	50	50	50	32	39	43	54
Members/FTE	378	383	390	395	400	428	450	388	370
Average shares/member (\$)	7,257	7,041	6,856	6,679	6,430	2,552	3,916	5,213	8,177
Average loan balance (\$)	11,937	11,525	10,878	10,060	9,244	5,854	7,287	9,107	12,885
Employees per million in assets	0.31	0.31	0.32	0.33	0.34	0.75	0.48	0.42	0.28
Structure									
% Fed CUs w/ single-sponsor	14.6	14.8	15.4	15.7	16.0	27.6	15.3	5.3	3.7
% Fed CUs w/ community charter	14.1	13.6	12.5	11.4	10.3	5.0	12.1	22.0	22.4
% Other Fed CUs	32.1	32.4	32.8	33.4	34.0	32.8	35.2	31.2	26.2
% CUs state chartered	39.2	39.2	39.3	39.5	39.7	34.6	37.5	41.5	47.7
% of CUs w/ CAE 1 or 2	65.0%	65.8%	63.3%	60.5%	63.5%	51.2%	67.0%	71.8%	76.7%

* Current period flow statistics are trailing four quarters.

US Totals include only credit unions that are released on the NCUA FOIA file.



Source: CUNA

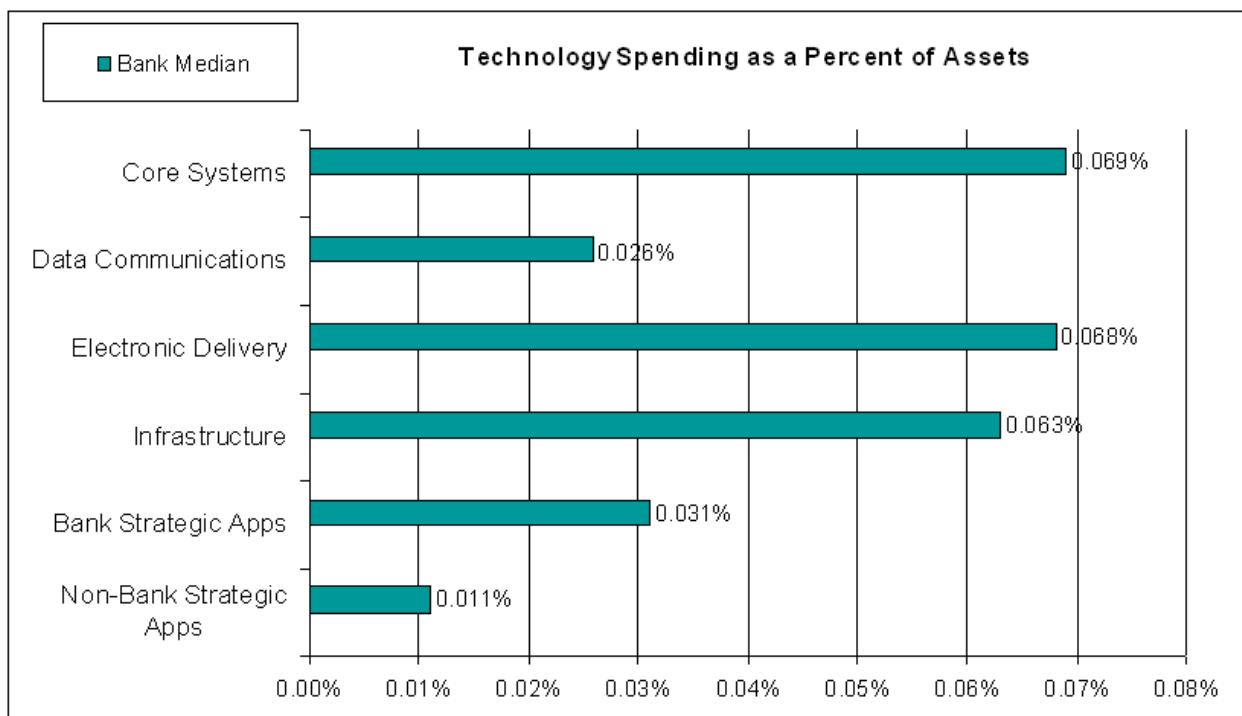
B. Spending Projections

The credit crisis has led to weaker financial institution profits, particularly in the second half of 2007, and will result in financial institution spending growth being at the low end of the three percent to five percent range of the last several years.

"In 2007, banks were able to get a lot of big technology initiatives funded, so technology spending growth was a little over five percent, a little higher than we initially projected," said Jeanne Capachin, research vice president, global banking for Financial Insights, an IDC company. "But in 2008, holding the line will be more the norm. Due to the lending difficulties, much of the spending that will occur will be defensive in nature – with analytics, compliance, anti-fraud and security taking the brunt of the new technology dollars, though some are putting a strong emphasis on mobile initiatives."

Eckenrode added that technology investments would be scrutinized more closely. Some projects that were already approved for 2008 may not be funded and executives will look for quicker return on investment before funding any projects.

Financial institutions will also continue with customer service, payment system and integration investments as well as starting to undertake projects involving "green" and other newer initiatives.



Source: Cornerstone

II. Spending Breakdown

A. Credit Watch

With lower expected earnings because of the credit crunch, many financial institutions will shift some of their technology dollars toward better analytics and enhanced collections technologies so they can better recognize "good" risks and better collect from loans that go late, according to Capachin. "We're seeing a boom in collections technology. The outsourcing of collections seems to be growing, too."

Terence Roche, principal with Cornerstone Advisors, added that many mid- and small-size banks have already moved to stricter lending standards than those espoused by Fannie Mae and Freddie Mac. Among those stricter standards are collection calls as little as 15 days after a payment becomes delinquent, rather than the more traditional 30 days. Some of those institutions are even going outside of legacy service bureau relationships to get better control of credit decisions, Roche added.

Yet most of the problem with the credit decisions wasn't the underlying technology, but the loose credit policies some lenders had and the disregard for better credit policies by other lenders, according to Gwenn Bézard, a research director with Aite Group. "Stricter lending policies will need to be backed up by systems that provide better transparency, financial control and secondary analysis of credit scores," said Jacob Jegher, Celent senior analyst.

Capachin added that some financial institutions will add to existing systems (marketing, Web site, etc.) to ensure that borrowers and prospects have better information about lending programs and terms.

Eckenrode expects that financial institutions will shift some of their technology spending to default management, collections and recovery technology, with particular attention to analytics that help better analyze risk for new credit and more quickly recognize problem loans.

If done right, beyond defending against threats to the organization, a more integrated approach to risk management can drive other business and client-centric benefits, including: improved quality and transparency of information; relationship pricing; process simplicity and efficiency; more effective decision making; and overall resilience, TowerGroup analyst Guillermo Kopp said in a report on the "positive side of risk."

B. Fraud Prevention

Part of getting a better handle on credit decisions is getting a better handle on fraud in mortgages, consumer loans and in payment card applications. Beyond strengthening security controls in the lending arena, financial institutions will continue to strengthen anti-fraud and security measures throughout the enterprises in 2008, experts predict.

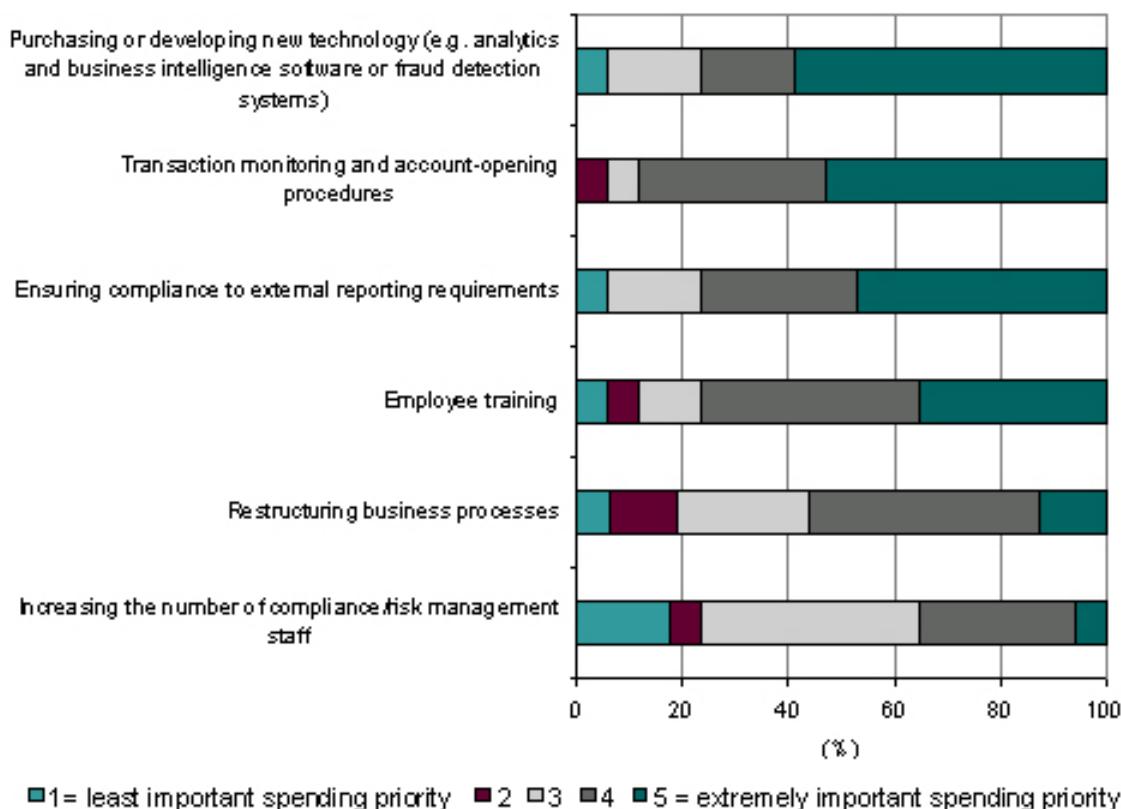
"Banks and retailers are coming to the realization that they have to take a holistic view on security," said Jimmy Sawyers, vice president of financial institutions consulting for Securas Consulting Group, LLC. Financial institutions are strengthening security within the enterprises as well as ensuring that those vendors and even customers who do business with them adhere to certain security standards. Banks that have even small retail customers are ensuring that their systems meet Payment Card Industry (PCI) rules. If there's a security hole in ACH transactions between the institution and the retail customers, it won't be too long before someone will use a "keylogger" (Trojan Horse that intercepts keystrokes) or some other technology to exploit the flaw, compromising the retailer's customers and opening the bank up to some liability issues.

"There have been a lot of cases of fraud stemming from small businesses who had PCs that were not protected," Sawyers said.

Within the institutions themselves, banks are using layered security solutions, 24x7 monitoring and intrusion detection systems to try to protect themselves and customers from security threats.

To protect customers from the increasing number of attacks from a variety of sources, the Federal Financial Institutions Examinations Council (FFIEC) recommended in 2005 that all financial institutions have multi-factor authentication. Though the implementation of the technology lagged the recommendation, by the end of 2007, 95 percent of financial institutions were in compliance, using a combination of device identification, IP geolocation and challenge/response questions to authenticate customers, according to TowerGroup.

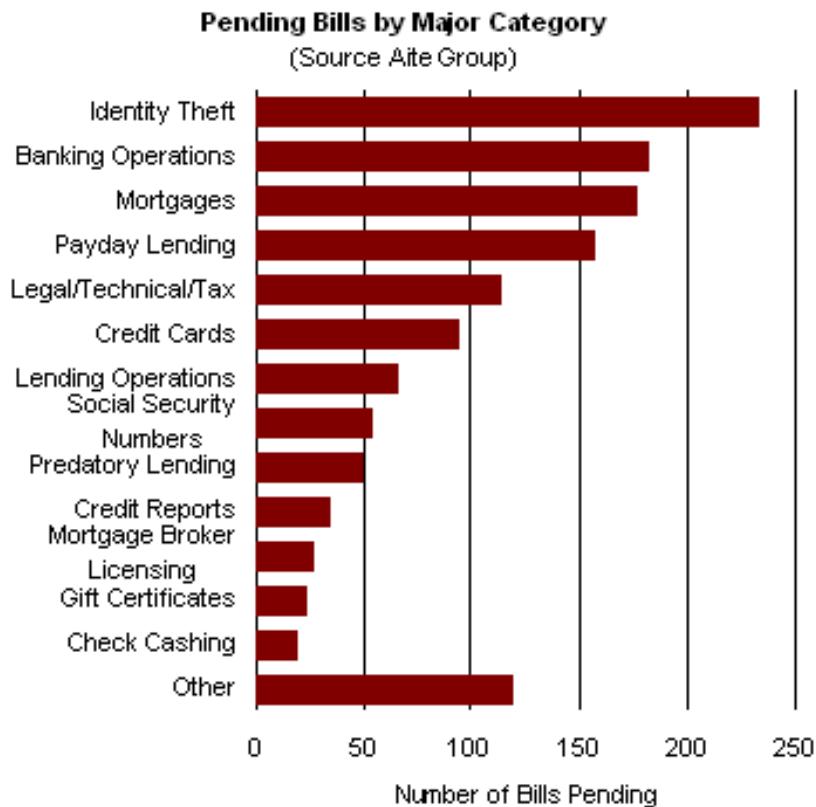
Focus Areas for AML-related Investments



Source: Financial Insights AML Survey, 2007

Anti-fraud and security spending will shift to internal fraud prevention initiatives now that multifactor authentication has been largely adopted, Eckenerode said. "Banks will concentrate more on procedures and processes so that data is not usable outside of the financial institutions."

Identity theft continues to be a top issue among legislators as well, with more than 200 different bills on identity theft and another 150 on mortgage issues alive near the end of 2007, according to Aite Group. Many of those bills could see new life in 2008.



Source: Aite

"We're hearing that there's a lot of nervousness within data centers about where security holes are," Capachin said, pointing to the heightened concerns over mobile devices that can connect to, and therefore, intentionally or unintentionally infect systems with viruses and other malware. "A first tier bank recently eliminated laptops due to security concerns."

"Almost everyone in 2007 or 2008 is adding some type of intelligent fraud detection software," Roche said. "Check fraud is still a big problem in our banks."

Financial institutions are looking at improved check fraud detection technologies for the back office and for the teller line. A related technology, though not specifically for check fraud, are applications that notify a customer when a direct deposit check has posted. "If you notify them, they are happier and more loyal customers," Bézard said. "And [automated notification] doesn't involve the expense of the call center."

Another related technology that Capachin expects to start gaining some traction is automated data destruction. Financial institutions need policies for not only data retention, but also for destruction to balance regulatory needs with storage capacity demands.

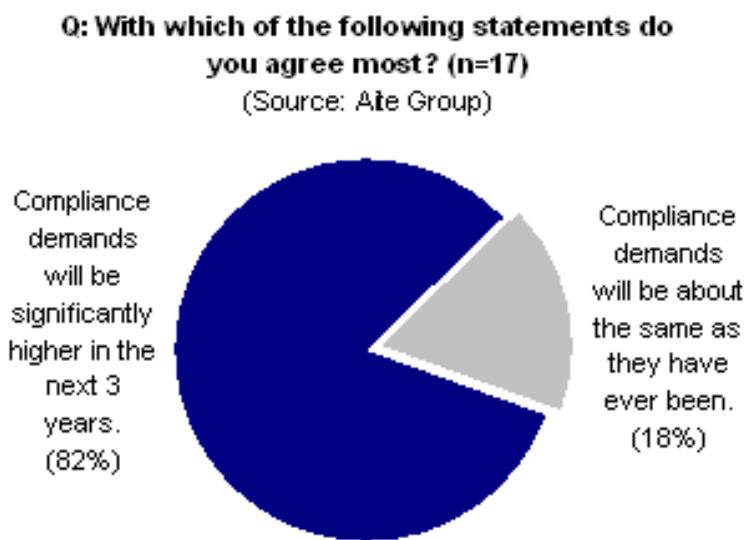
C. Regulatory/Compliance Spending

Regulatory/compliance spending is closely related to fraud spending, which is driven as much or more by regulations such as the Bank Secrecy Act, the Patriot Act, state notification breach laws (most notably California SB 1386) and other regulations as by business, market and reputation risk.

"A lot of the compliance spending will be around 'know-your-customer' rules," Capachin said, echoing what several other analysts forecast.

"We're in a period of regressive oversight," Eckenrode said. "The subprime issue will only turn up the heat on that."

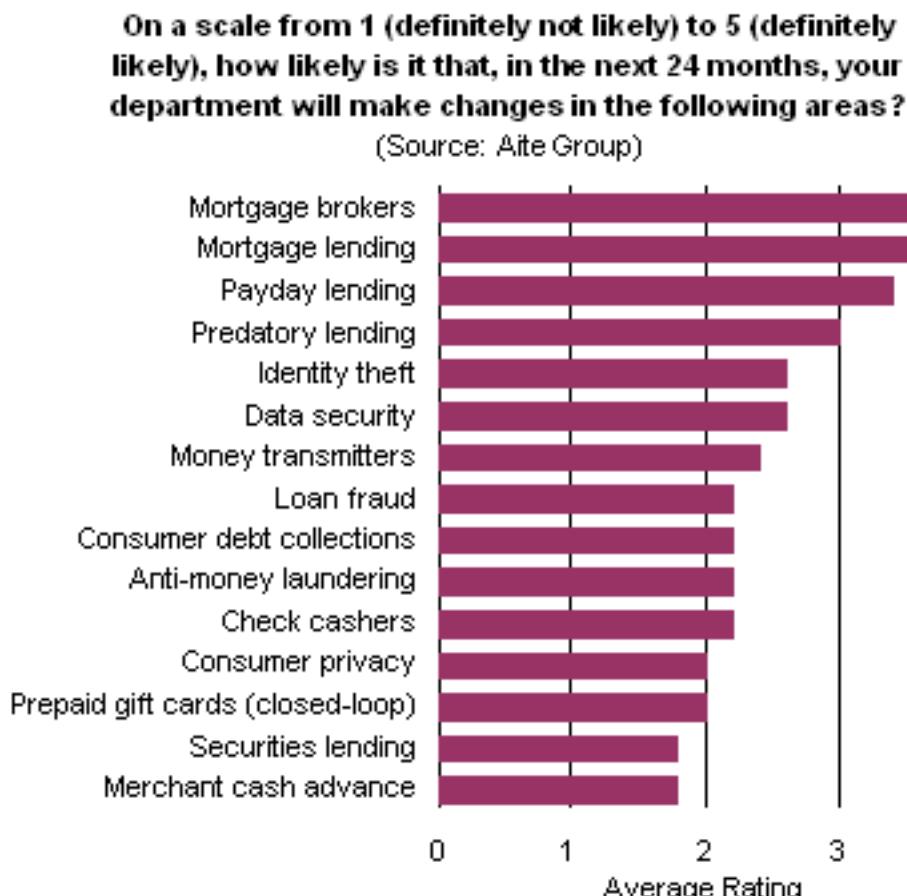
Financial institutions have tended to rely on "siloed" compliance and regulatory solutions, according to Eckenrode. He expects movement to enterprise wide solutions, which, if they had been in use, may have identified the many of the subprime problems much earlier.



Source: Aite

According to an Aite Group report on state banking regulations, compliance topics likely to receive the greatest amount of regulatory focus relate to the mortgage industry and are a direct result of the subprime mortgage crisis. State regulators surveyed expect both mortgage brokers and mortgage lending to be top priorities into 2009.

As attention to these and other compliance issues increases, state regulators will be under pressure to track more issues at a higher level of detail than ever before. However, survey results also show regulators' budgets are either flat or rising. The implication for institutions is that they must expect regulatory scrutiny to continue to increase.



Source: Aite

Jegher pointed out that financial institutions have very little wiggle room when it comes to compliance spending. So these projects will get higher budget priority than other technology projects.

D. Community Bank Perspective

The one area where community banks must continue to increase their technology spending is in compliance, particularly with systems that help them meet the mandates of the Bank Secrecy Act, Roche said. "Regulators are looking at [BSA compliance] very closely in audits."

Many of the technologies that had been the purview of larger financial institutions, such as Voice over Internet Protocol (VoIP), videos for YouTube, unified communications, Vista-powered PCs and applications that leverage the Microsoft Office Suite are now making their way into community and mid-sized banks, according to Sawyers.

Some community banks have continued to utilize aging phone systems, but now are replacing them with VoIP systems that not only provide lower cost communications, but offer integration possibilities with other technology systems, Sawyers said.

While community financial institutions have tended to trail large financial institutions in technology adoption, Eckenrode agreed, the cost of systems has come down to the point that smaller institutions may be able to implement some processes before their larger peers.

Some community banks are spending on branch improvements, including flat panel screens to promote products, and systems to provide tellers with better cross-sell indicators, like alerts to bank products the customer does not currently have and for which he may be a good prospect, according to Sawyers.

Bézard added that much of what community banks do in technology spending depends on what the service providers will add to their offerings.

E. Mobile Banking

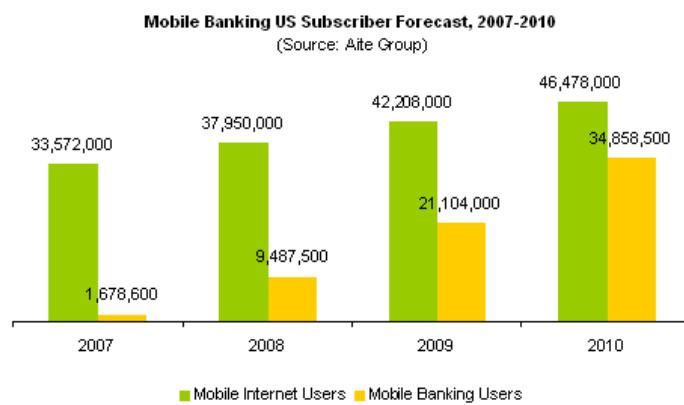
The ubiquity and increasing capabilities of handheld devices are key factors in the current mobile banking investments, which include many of the nation's largest financial institutions.

Several experts see 2008 as the year for major progress in the adoption of mobile services. TowerGroup estimates that more than 40 million consumers will use mobile banking by the year 2012.

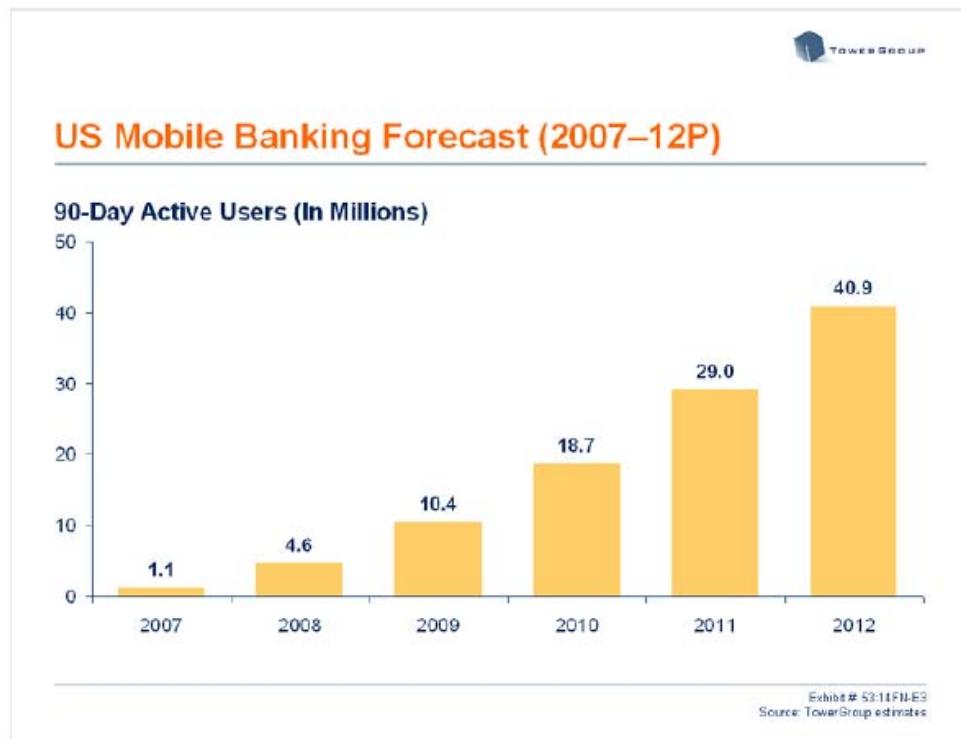
Celent predicts that 2008 will be a "build" year for mobile banking services. Following the lead of most top-10 banks, most top 50 banks will launch some form of mobile banking service in 2008. Multiple technologies (i.e., SMS ((text messaging)), downloadable application, mobile browser) will be used within a single bank to enable mobile banking for diverse demographics. Celent expects that many individual end users will use two of the three and hence agrees with banks that are supporting all three. The more aggressive banks will expand mobile banking services out from basic functionalities, such as, balance inquiries, to more advanced functionalities, like, bill pay or intrabank transfers.

An Aite group panel discussion in the second half of 2007 found that bankers, mobile carriers and analysts see the better devices, network capacity and increasing consumer desire to be untethered should make the current launch of mobile banking successful, unlike the attempts near the end of the 1990s. What remains unknown is the degree of end-user acceptance that will be required to make such an offering successful.

Views differ on how the relationship between banks and mobile operators, including who owns the end user, will play out, according to panelists. Representatives from the financial services community would like to claim ownership, as they will have been the primary drivers of end-user adoption. However, in mature markets, such as the European market, mobile operators tend to claim end-user ownership, especially once mobile banking services evolve to include transaction services.



Source: Aite



Source: TowerGroup

There are four times as many wireless phones provisioned as babies born every minute, says independent financial services consultant Richard Crone. "It's the most successful technology in history. Everything is going mobile. Most calls going to the call center now are from mobile devices. Fifteen percent of consumers don't have a land line any more."

Consumers want real-time information and the ability to conduct self-service transactions, hence the increasing popularity of mobile devices and applications, according to TowerGroup.

But for financial institutions to capitalize on this trend, they need to have technologies in the call center that capture the number when a customer phones in. Some customers, particularly Generation Y and younger consumers, prefer to be contacted via cell phones and SMS messaging, Crone said.

By connecting to customers on mobile devices (with permission), financial institutions can offer just-in-time payments, which would help customers attempting to meet mortgage and other credit obligations, said Crone, who added that customers will pay a small convenience fee for the speed.

Customers will also select a financial institution that offers mobile banking applications over one that doesn't, Crone added. As evidence, Crone pointed to the Bank of America

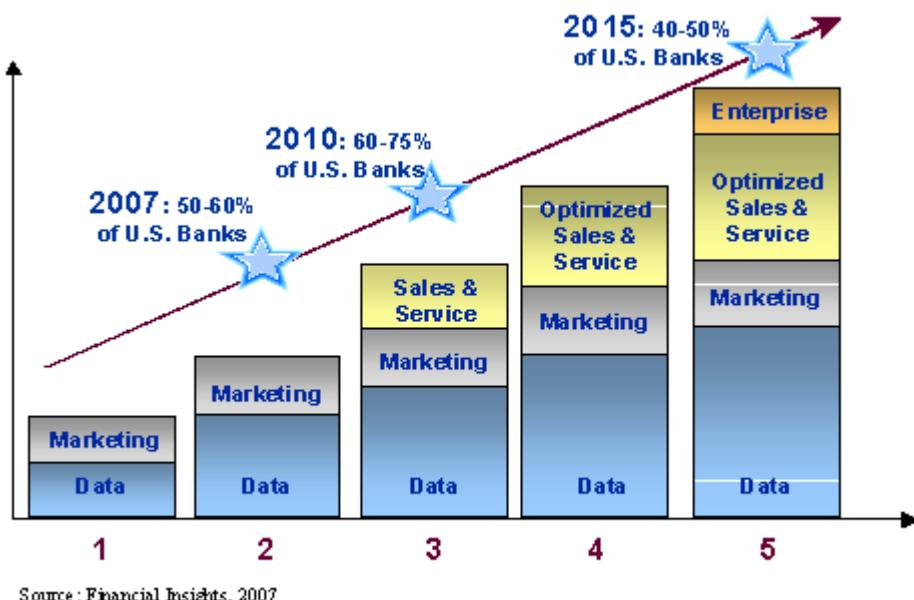
mobile banking program, which had 500,000 active mobile customers after only six months, according to the bank.

The onset of mobile banking initiatives could aid national financial services providers, who will be much quicker to add them than community banks, which will typically wait for their service providers to add new technological capabilities, according to Crone. Many community banks will have to wait for their service providers to add mobile capabilities, which Crone said will cause them to lose some business to larger financial institutions that will tend to add these services more quickly.

F. Customer Service

Improving customer service is critical to many financial institutions as they attempt to retain current customers and expand the share of wallet with them as well as attract new customers, Bézard said. He expects to see some expansion of analytics systems to provide more information about customers to agents in the call centers and tellers in branch locations.

Capachin noted that financial institutions are moving to a more customer-centric product and delivery model, renewing or building on older customer relationship management (CRM) projects.



"Customer-centricity is the key to cross-selling," added Jegher, who expects financial institutions to provide better service by enabling customers to fill out forms and conduct other self-service transactions more easily online and through other channels.

Eckenrode said some financial institutions are attempting to provide better customer service via single sign-on (one sign on for several accounts).

Crone pointed to the need for financial institutions to identify a customer's preferred channel of communication and provide proper scripting for contact center agents and automated systems to communicate via each method.

A few analysts said that financial institutions are also looking more closely at customer profitability and product pricing as portions of CRM efforts.

F. Payment Systems

The trend away from paper and to other forms of payment continues to be strong, and financial institutions are investing more in systems that enhance the efficiency of electronic payments.

According to Dove Consulting, a division of Hitachi Consulting, checks now account for less than 20 percent of the transaction mix of most retail banks, and check volume is declining by more than four percent annually.

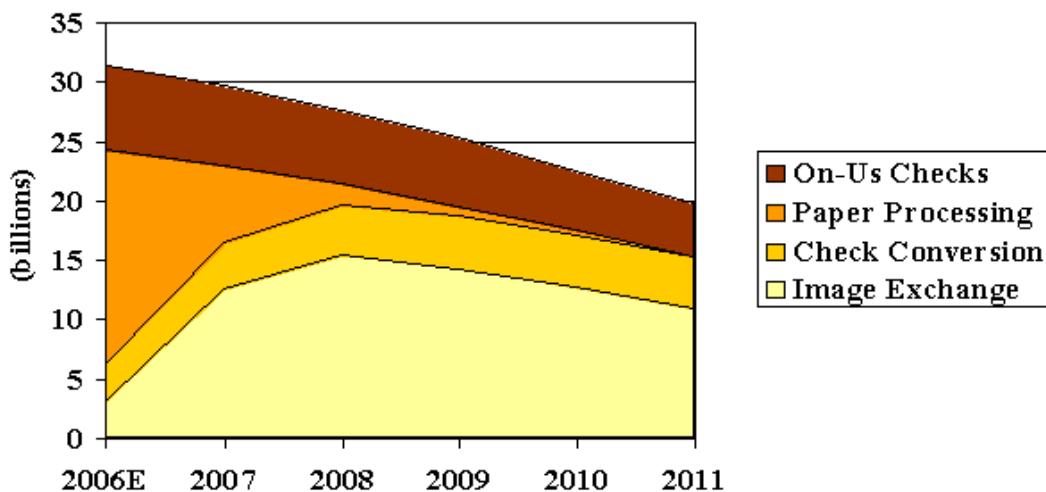
Debit is by far and away the big growth driver, adding anywhere from 15 to 25 percent per annum for retail banks, according to Dove Consulting. Because you can't have debit without a checking account, you will continue to see banks market "checking" as a lead brand, often modified by words like "free."

ABI Research forecasts further growth of contactless payment systems, making secure payments with credit cards, key fobs, smartcards or other devices using RFID, among consumers who like the speed and convenience that contactless payments provide.

Check image exchange has all but saturated the market, according to Financial Insights. Check image exchange network volumes will begin to decline as soon as 2009, forcing the networks to find other applications for their technology in order to keep growing.

After a slow start in 2005, image exchange exploded in 2006, growing at an average rate of 21.8 percent month over month, according to Financial Insights. By the end of 2006, nearly 14 percent of total check volume had been converted to image, and Financial Insights believes that this percentage was to increase to 65.8 percent by the end of 2007. This success, however, brings problems, because the number of checks written will continue to decline by almost nine percent a year, while ACH check conversion will continue to siphon about 20 percent of the checks off the top, causing the image exchange networks to literally run out of new checks to exchange by 2009.

Figure 1 - Number of Checks Processed by Method, 2007-2011



Source: Financial Insights, 2007

Similarly, the Remote Deposit Capture (RDC) systems that removed many of the paper checks from the system at the point of presentment – at the branch and at business offices – are expected to be promoted by banks to ever-smaller businesses and even some consumers.

Large and small institutions alike were already enabling some consumers to use RDC in 2007, according to Eckenrode, who pointed to \$280 million Sharon (Mass.) Credit Union as an example of a small institution with a consumer RDC offering.

According to Independent Community Bankers of America's (ICBA) second biennial Community Bank Payments Survey, community banks are implementing check image clearing and settlement at an unprecedented rate. Community banks are implementing image clearing and settlement on a large scale. Currently 45 percent of respondents deposit image cash letters, with 88 percent expecting to do so by 2009.

G. Integration

System integration continues on a slow path for many financial institutions because they tend to test integration on a departmental level before extending the technology on a wider scope, according to Capachin.

Service oriented architecture (SOA) advances will be the driver of the integration initiatives, according to Celent.

Banks have been struggling for years to achieve a single view of the customer. Recently, a few have been gradually dismantling IT infrastructures built around specific products to ones built around services and customers (line of business) through SOA.

Early success stories will fuel SOA projects across the midsize to large bank segments, according to Celent. Financial institutions will increasingly build SOA-based middle layers to reduce application redundancy, assure data integrity, facilitate data sharing, and lower overall maintenance costs. Some banks are striving to move away from proprietary applications to open systems as well, especially in Asia and Europe. SOA will become the method for Tier 1 and Tier 2 banks (over \$20 billion in assets) to incrementally modernize core systems. Few banks of this size – and among larger banks, even fewer – are willing to do a “rip and replace.” Most U.S. financial institutions are at least a year away on SOA projects, according to Jegher.

H. Other Technology Spending

Several other technology projects are starting to appear on the radar of financial institutions, including ones that are getting some funding and others that may get approved in 2008, but may not get funded until 2009 or later.

"Green" initiatives are starting to emerge, many as an extension of Internet billing, electronic payments, remote deposit capture or some combination of the three.

In September of 2007, NACHA formed a "green coalition" to educate consumers about the positive environmental impacts of choosing electronic bills, statements, and payments over paper. The leadership partners include Bank of America, Citibank, Citizens Bank, EPN, the Federal Reserve Banks, Fiserv, JPMorgan Chase, Wachovia, Wells Fargo and U.S. Bank.

A 2007 survey by Javelin Strategy and Research revealed that if all U.S. households received and paid their bills electronically, the country would:

- Save 16.5 million trees each year, or the amount of lumber needed for 216,054 typical single-family homes;
- Reduce toxic air pollutants by 3.9 billion tons of carbon dioxide equivalents, akin to taking 355,015 cars off the road; and
- Reduce by 1.6 billion pounds the solid waste generated in a year, equal to 56,000 fully loaded garbage trucks.

The defaults in the consumer lending market and the need for better efficiency will also have some financial institutions looking at systems to automate commercial lending, according to Roche. "This is the last of the truly manual processes. Banks tend to use a combination of Word, Excel, document preparation software and a document tracking system. There is a sore need for better workflow. There's a real opportunity here to improve productivity."

TowerGroup reports that a number of leading financial institutions have already adopted some green/sustainability measures. These initiatives range from sourcing power from "green" suppliers or affiliating themselves with associations such as the U.S. Green Build Council, to offering "green-friendly" products to the marketplace, including a growing push to reduce paper statements and increase online account access by customers).

Inside the financial institution, sustainability initiatives must be shaped around key internal dynamics (such as corporate culture), operational processes (such as recycling and telecommuting) and image/marketing (such as the "branding" of sustainable initiatives). As these efforts broaden and deepen, the sustainable financial services enterprise must also address and engage three external constituencies: suppliers, regulators and customers, according to TowerGroup.

Leading Financial Services Institutions' Sustainable Enterprise Initiatives (2007)

% Green Power ⁽¹⁾		Industry Alliances and Partnerships	Known Products and Investments
Bank of America	NA	Chicago Climate Exchange member, US Green Build Council member, EPA Climate Leaders partner	\$20 billion (USD) against global warming for the next 10 years; seeking Platinum LEED Certification for new headquarters in 2008
Citi	5%	Working on LEED Certification on new office buildings, Equator Principles, EPA Climate Leaders partner	\$50 billion toward green investments in the next 10 years, offering loans and energy subsidies for energy saving investments; Gold LEED designation in newly built office tower
Fireman's Fund Insurance	NA	Member of US Green Build Council	Certified Green Building Replacement, Green Upgrade Coverage insurance offering discounts to certified buildings
HSBC North America	35%	Green Power Partnership, EPA Climate Leaders Partner, US Green Build Council member	100% carbon neutral since 2005; partnership with environmental organizations like World Wildlife Fund
JPMorgan Chase	NA	UN Environment Programme Finance Initiative, Equator Principles	Opened green branch with LEED certification; seeking Platinum LEED certification for New York headquarters; credit cards that donate a share of proceeds to environmental charities
New Resource Bank	NA	Recipient of LEED Gold Award (USGBC)	Nation's first commercial green bank, dedicated to "green finance," offering solar home equity financing
Wachovia	NA	US Green Build Council, Equator Principles	Plans to build 300 green branches by 2010; financing and providing mortgages to LEED buildings.
World Bank	100%	EPA, Climate Leaders partner	Published the Little Green Data Book
Wells Fargo	42%	Green Power Partner of the Year Award, EPA, Equator Principles	Credit card rewards include REC certificates

Note: LEED = Leadership in Energy and Environmental Design, USGBC = US Green Building Council.

(1) % Green Power indicates the percentage of an organization's energy consumption that it will offset by buying renewable energy certificates (RECs).

Exhibit #: 53.13B-E2

Source: Company information, EPA,

USGBC, TowerGroup

Source: TowerGroup

"Green initiatives have a lot of PR value," Capachin said. Larger financial institutions will also be looking for ways to employ virtualized server environments as part of green initiatives.

Core Renewal

In 2008, Celent expects a growing number of banks to undertake the first steps of core renewal, which is simply service-enabling the core to reduce the cost of maintaining front end applications that need to access information in the back end systems.

Internet banking and call center typically lead the charge here. The next level of core banking is creating products that rely on multiple core systems. Relationship pricing is a common application driving such a renewal.

As a result of core renewal efforts, Jegher anticipates new types of products that combine features of loans and deposit products or loans and securities to be launched. Offset mortgages, for example, may drive the need for coupling a mortgage system with a DDA system. Once banks have moved to a SOA, they will be able to mix and match granular services to create new types of products and out-innovate their competitors to offer superior returns.

III. Featured Articles

Vendor Strategies in the Financial Services Sector



Jeanne Capachin

Research Vice President, Global Banking
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2008 will be a tumultuous year for the banking industry and the technology vendors who serve this market. Banks will continue to invest in non-discretionary areas, such as risk, and compliance; security; and technology refresh. However, the spending reins will be tight and costs must be justified. Although North American banks are hardest hit, other regions are facing unpredictable times also. To get banks to buy, vendors will be well served in tuning their sales and marketing organizations.

In 2007, North American banks spent \$61.1 billion on IT, including hardware, software, services, and internal spend. For 2008, Financial insights is predicting an increase in spend to \$63.6 billion overall. For technology vendors, there will be \$43.5 billion in external spending in 2008 up for grabs – the remainder of spending will be internal to the bank (data center expenses, staffing, etc).

Just as there are structural shifts in the banking market as the large banks account for a larger portion of assets, the largest FinTech vendors are growing faster than their peers. Part of this is due to acquisitions, but there is a great deal of organic growth going on as well. Vendors that can demonstrate the connection between technology investment and business priorities of their clients are reaping the greatest returns. Banks are getting even more conservative with their technology investments, and are attracted to those vendors that have both depth and breadth of product capabilities. But it's not enough to have that product offering, where the really successful vendors differentiate themselves is in the ability through their sales and marketing organizations to connect with clients and prospects. Vendors that have the best-kept secret are doomed to failure.

Serving banks, like selling into any other vertical industry, has its challenges. To meet the needs of banks, successful vendors must look beyond redesigning product literature to include industry-specific terminology – there must be real thought leadership to have

success. A common misconception is that only large, diversified technology vendors suffer from insufficient knowledge.

There are many small firms, that only sell to banks, that also suffer from an inability to link their technology solution to the needs of the market. It's not enough to have a strong technology solution. Banks must be led to understand the business needs that can be addressed with the appropriate investment in technology. Especially now with banks so internally focused, a strong sales and marketing approach is crucial.

IDC completed research in 2007 examining the approaches technology firms take to serve industries. Following are some of the top business challenges technology vendors reported:

- We do not do enough to train our sales force on industry issues (67 percent)
- Our company does not have the appropriate organizational structure to support a vertical strategy (65 percent)
- Our marketing personnel do not have enough industry experience (61 percent)
- There is no formalized feedback loop to capture industry-specific product needs (61 percent)
- Our company's marketing message centers too much around product and not enough around industry business issues (56 percent)

Improving Sales Effectiveness

One of the biggest problems technology firms have when selling into banks is sales people who are expected to be consultative, but lack the ability to link the technology they are selling to the business problems of their prospects. For horizontal technology firms, this is particularly problematic.

The IDC Vertical Strategy Leadership Survey found that one-third of the technology firms surveyed organize their sales teams geographically. Of those with an industry focus, 47 percent of those only focus on the top tier accounts by industry, with the rest of the sales team geographically focused.

Just 19 percent of respondents organize by industry for all size clients.

With firms that only sell to banks or that have an industry focused sales team, there remain barriers, and one of the biggest is lack of effective sales tools. Although the top 20 percent of sales people have internalized the process such that they can win clients using their internal skill set, the majority of sales people require support to meet with success. Some of the most effective sales tools are industry training, case studies, ROI analyses, and participating in events. These tools enable sales people to connect with prospects around business-related topics, and provide buyers with more ammunition to "sell" a technology purchase internally. This process cannot be under-estimated, as all discretionary expenses are under the financial microscope. Hard financial metrics, peer references, and strong benefits will help prospects develop their business cases to capture funding.

Improving Marketing Effectiveness

Just as sales teams need to connect technology benefits to bankers' needs, so does the marketing team. The previously cited IDC study reports that participating in industry events is a key marketing activity. Yet 57 percent of respondents report their role is consigned to booth sponsorship. Thirty-one percent typically obtain speaking roles, and only 12 percent are typically involved in agenda setting. An alternative and increasingly common marketing tool is the vendor-driven event. These range from executive level relationship building forums to large scale user group meetings.

Whatever the format, technology vendors report far better results from these events which they control compared to industry-wide events where their message is diluted and delivered primarily in the expo hall. Increasingly, banks see these events as replacements for the traditional industry events where they can network with their peers and obtain specific information about the technologies they are using. With travel and expense budgets constricting, banks will be attending fewer events in 2008 – those vendors that can demonstrate value will attract more travel-starved executives to their events.

Essential Guidance

As usual, banks must balance their long-term, strategic IT investments against short-term "run the bank" initiatives. In 2008, there will be less funding available for projects without demonstrable short term benefit. FinTech vendors must fight harder for fewer opportunities. A focus on improving sales and marketing effectiveness will be critical to be invited into deals and get them to closure.

Jeanne Capachin is the Research Vice President for the Global Banking and Insurance practices. Capachin has more than two decades of experience working in and consulting to the banking industry. Capachin works with the global analysts to develop the client driven research agendas, our spending forecast methodologies and guides, and oversees the Financial Insights ranking programs.

Top Trends Impacting Bank Technology for 2008



By Jimmy Sawyers
Vice President of Financial Services Consulting
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We live in truly exciting times. Our world is more interconnected than ever before resulting in amazing social and economic benefits. Technology has not only spurred incredible innovations but perhaps more importantly it has served as a tremendous source of democratization as more people than ever before have access to the same information and are free to work, communicate, and socialize in ways never imagined. The same applies to banks that leverage the latest technology to increase productivity and profitability, and their customers who demand competitive services, security, and convenience. To that end, we offer ten predictions:

1. Video Kills the Static Website

Many websites are still products of 1990's technology resulting in dull and boring content and a severe lack of interactivity. Thanks to the advent of YouTube, blip.tv, and other viral video sites, bankers will incorporate video into the web experience. The New Generation does not like to passively view, read and be lectured to; they like to interact, explore, and choose their content. Expect more banker videos on topics ranging from security awareness and identity theft prevention to instructional videos on personal finance and online banking.

Video is a significant component of the Microsoft Vista operating system and will grow in importance as Vista is widely adopted in 2008.

2. Mobile Banking Takes Off

As cell phones and handheld devices become more robust and functional, they will finally provide a suitable platform for mobile banking. 3G technology on the receiving end and Java-based applications on the banking end have made mobile banking a reality. Whether a consumer has a Razr phone and needs a very scaled-down, text-based, light version of mobile banking, or whether the device can handle a more graphical, browser-based version, mobile banking will be a hit. If teenagers can use

basic cell phones for text-messaging, parents will learn how to use them for banking. Consumers spend more time with access to their cell phones than any other device making such devices the channel of choice for basic online banking.

3. Business Continuity Planning Extends Enterprise-Wide

Long relegated to the information technology area, business continuity planning will extend across the enterprise as bankers conduct business impact analyses of all business functions from email to teller operations. This fresh look at business continuity will shine new light on just how unprepared many banks are, technologically and psychologically. Roundtable testing and better communication intra-bank will improve bank business continuity and disaster recovery postures as bankers learn to look beyond IT preparedness to all areas of the bank. New technologies such as branch capture, remote backup, and wireless will help bankers reduce costs and become more self-sufficient.

4. Remote Deposit Comes of Age

A few years ago, most bankers dismissed remote deposit as a service that customers simply did not demand. Now, bankers have learned that customers cannot demand what they do not know. As bankers and customers have become more educated on the benefits of remote deposit, demand has skyrocketed. As a result, bankers are retaining and attracting commercial deposits that they otherwise would have lost. Business customers are actually switching banks for remote deposit services.

As bankers enjoy this phenomenon, they now realize that matters of scale will become a challenge. The community bank with 100 remote deposit customers can handle installation and tech support just fine. When 100 customers balloon to 1,000, the system will be stressed. Currently, remote deposit systems are being installed and supported by high-paid bank employees...treasury management professionals and commercial lenders in some cases. Such employees are not best utilized crawling under customer's desks hooking up cables. Expect bankers to outsource the installation and support of remote deposit freeing their people to do what they do best, sell more services and grow the bank.

5. Managed Security Services Become Ubiquitous

Ten years ago about half of PCs were protected against viruses. Today, it is rare to find any PC not equipped with anti-virus. The same is becoming true for managed security services. Bankers are learning that 24/7/365 security monitoring of their networks is a significant business issue and one that can rarely be managed in-house. No banker wants to experience a security breach and then face the media and explain that the bank's network is only secured and monitored from 9 to 5. Such part-time security is simply not commercially reasonable or acceptable. Bankers will continue to outsource

firewall monitoring, intrusion prevention, giving them peace of mind and fewer sleepless nights knowing someone else is watching their networks.

According to Insight Research Corporation, the total US managed services market will grow from \$29B in 2007 to \$47B in 2012.

6. New Communications Technologies Present New Opportunities

What is the most important technology in the bank? It's not online banking. It's the telephone system. Such systems are often taken for granted and the last to be upgraded. Banks are full of 10-year old telephone systems that are unreliable and carry costly maintenance. As bankers upgrade their systems, they are experiencing a whole new world of communications advances beyond basic IP telephony. Not only can they perform moves, adds, and changes without calling the telephone company and waiting three days for a technician to come on-site, but **Unified Communications (UC)** is bringing email, voice mail, faxes, teleconferencing and other functions together to improve communication throughout the enterprise. By decreasing the time wasted tracking down co-workers, human delay will be minimized resulting in streamlined customer service and increased productivity.

Cisco's **TelePresence** will bring high-definition, life-sized, net-based communications to the boardroom, bridging the current gap between low-end web-based solutions and high-end proprietary videoconferencing systems. Improved morale and less expense related to business travel will easily justify such systems.

Additionally, 10Gb Ethernet (10GbE) and MPLS (multi-protocol label switching) replace old ATM (asynchronous transfer mode) and frame relay networks.

Banks will deal with the blurring of business and personal applications as employees introduce BlackBerrys, iPhones, and iPods to bank networks.

Social networking will take hold in banks starting with Human Resources but extending to other areas of the bank as bankers launch their own internal versions of Facebook or MySpace to improve intra-bank communications and knowledge exchange.

7. Online Account Opening Gets Right

Some bankers think online account opening is downloading an application from the website, completing it with a pen, and taking it to the nearest branch for processing. Today's consumer, accustomed to ease of use at sophisticated online sites, will demand online account opening, and funding. Expect bankers to seek solutions not offered by website hosts or Internet banking providers, as many of these services have fallen short of finding the right balance of security, convenience, and usability.

Online account opening services will help branches, contact centers, and the web converge to open accounts cost effectively and quickly.

Bank customers want their banks to be more like a Waffle House...always open.

8. Risk Management Requires More Resources

Globally and locally, bankers will continue to fight the battle against new security threats, both internal and external. Accordingly, more resources will be devoted to risk management.

Security goes enterprise-wide as bankers track activity on their networks ranging from simple use of jump drives to sophisticated intrusion attempts. A holistic approach will be required to sufficiently secure bank networks.

Physical and information security merge as bankers battle to secure their buildings and networks. IP-based video surveillance and electronic access controls (i.e., proximity cards/badges) will help secure the physical environment while intrusion prevention systems and advanced security solutions from trusted providers round out a comprehensive approach to bank security.

Security awareness among the bank's employees will continue to be one of the most important mitigating factors as bankers formalize such education and provide it more frequently.

9. Remote Backup Refines and Takes on Many Forms

Fewer and fewer bankers are taking backup tapes home, to a branch, or to a third-party offsite storage facility thanks to new advances in remote backup.

Automated real-time backup, complete disk imaging, and offsite replication will provide newer, more robust solutions to the backup challenge faced by bankers.

Backups in batch will become insufficient as our always-on businesses require real-time backups and quick recovery. Bankers will re-examine their backup strategies and consider mobile workers using laptops and handheld devices, the growing volume of image-based data and email, single points of failure associated with on-site backup systems, unencrypted backup tapes, and increased scrutiny from auditors and examiners.

10. Technology Planning Merges a Winning Combination - People and Technology

The sheer volume of information and new technologies can be daunting. Instead of bankers allowing different departments to scatter in different directions, buying

incompatible technology with no regard for the business goals of the bank, technology planning will help bankers set goals, determine priorities, and allocate resources effectively.

Gaining input from empowered bank employees and outside experts will help banks craft winning strategies for banking technology.

Summary

Benjamin Franklin once said, "Be at war with your vices, at peace with your neighbors, and let every new year find you a better man." To paraphrase Mr. Franklin, "be at war with network intruders, fraudsters, and identity thieves, at peace with your regulators, and let 2008 find you a better bank thanks to smart technology planning and wise technology investments."

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Ten Top Questions a Bank Director Should Ask About Technology



By Terence Roche
Principal
Cornerstone Advisors

As technology and its uses within and outside financial institutions continues to evolve, directors need to be aware of many factors so that they can protect shareholders and knowingly address critical technological issues at the board level.

Following are 10 questions board members should ask themselves about technology, as well as some factors to take into consideration when finding answers to these questions.

1: How quickly will our customer base migrate to non-branch channels?

Mobile channels are taking off as consumers, particularly younger ones, opt for anytime, anywhere communications through a variety of "smart" handheld devices and simpler cellular phones. The expanding availability of broadband wireless through hot-spots and WiMax initiatives is dovetailing with increasing consumer demand for wireless connectivity.

As Intel CEO Paul Otellini says, "The next inflection point for the industry is broadband to go."

2: What is our bank's future payments strategy? How will revenue and costs change?

The payments revolution is real. Check 21 and remote deposit capture have caught on quickly with businesses and at many bank branches. Contactless payments and stored value cards have grown in popularity, and consumers continue to get multiple payment card (credit and debit) offers each month, even with the ongoing credit crunch. Financial institutions need to recognize this shift in the payments landscape and react accordingly. Financial institutions that continue to invest in older payments systems rather than migrating to newer ones will see their bottom lines suffer.

3. Is our bank taking advantage of the Web?

Web 2.0 has gone mainstream as user-generated content proliferates. YouTube and Wikipedia are just the beginning. Collaboration will become the primary way for knowledge workers to gain information, with wikis, blogs and tagging become essential components of a financial institution's knowledge base. Additionally, social networking continues to advance through consumer-oriented platforms like MySpace and more professional-oriented services like LinkedIn.

On the business side, Software-As-a-Service (SaaS) is becoming the norm. Software delivery via the Internet will soon displace other forms of delivery.

4: Is our bank creating a 21st century infrastructure?

Microsoft Vista has arrived, but with mixed reviews. Vista "Aero" interface promises greater user-friendliness, but also brings a training tab for banks that must train personnel on the new platform.

Vista offers new search capabilities and enhanced security, but older desktop hardware may not have the power to operate the new platform. So for most banks, there is no compelling reason to fast-track Vista until compatibility issues with other upgrades become material and force a move to the new operating system.

A 21st century technology infrastructure also includes a service oriented architecture (SOA), network monitoring/software distribution/co-browsing tools, VoIP for telecommunications, capacity and performance management software/tools for a converged network (voice, data, video), server consolidation (e.g., HP blades), virtualization of servers (e.g., VMware) and SAN for exploding data requirements

5: Do we know how much we spend on technology compared to peers?

Banks that we follow, those with \$1 billion to \$50 billion in assets, spend .268 percent of their assets on technology on an annual basis.

Bank technology spending is migrating to electronic delivery and strategic sales/service systems, reaching 0.068 percent of average assets (bank median), just behind core systems (0.069 percent), which share draft, loan, general ledger and MIF systems. Data communications and electronic communication costs are trending up as more people choose to communicate electronically, but this is still less than it would cost the bank for traditional, paper- and human-intensive transactions.

Among other areas to consider when looking at technology spending compared to peers is the amount spent on voice response units; cash management systems; infrastructure, including hardware, software and operating systems; strategic applications – systems and programs needed by specific business units; branch automation systems; optical and imaging systems; and data warehousing, MCIF, CRM/sales tracking and profitability systems.

6. How Easy Is It for Our Employees to Sell and Service Our Customers?

Integration of systems at the front line means everything when it comes to cross-sales. Front-line employees need to have at their fingertips access to new account, contact management/CRM, loan, e-mail, card ordering, check ordering, check imaging and other systems in order to provide complete customer service. Complete service includes recognizing where a financial institution can strengthen its relationship with the customer through additional products and services.

7. How is my bank using profitability and analytic information to make better decisions?

It's time for banks to act on business intelligence. Banks have plenty of data that can be mined to help determine risk-based pricing, customer and product profitability and as a basis for profit-based incentive plans. Yet most financial institutions are not investing the time/resources to mature analytic systems and few actually drive decision-making with these tools.

8. Which strategic partners are integrating their outsourced processes and technology with our bank?

The Web is creating a financial supply chain, with online, business-to-business networks growing in a variety of areas. For CIOs, managing technology is increasingly about managing and integrating a network of Web-based suppliers, the importance of which will continue to grow as human resources, benefits administration and payments and other traditional in-house operations are outsourced. The estimated savings of offshoring banking to India is roughly \$18,000 per full-time employee.

9. How is our bank addressing emerging technology risk management requirements?

IT is the focal point of enterprise risk management. While financial institutions have moved ahead quickly with the adoption of multi-factor authentication, numerous risks still exist.

The continued reports of data breaches points out the importance of encrypting data. Mobile devices are becoming more powerful and computer-like, making them increasingly a potential source of data compromise. So perimeter and internal monitoring of systems is more important than ever.

Banks also need to look at strengthening security via employee biometric/smart cards and through vendor scrutiny, the latter to ensure that security compromises don't come through third-party sources that have access to your systems.

Another consideration is risk from acts of nature, including electricity loss and more devastating natural disasters. Ninety-three percent of companies that lost their data center for 10 days or more due to a disaster filed for bankruptcy within one year of the disaster. Half of businesses that found themselves without data management for this same time period filed for bankruptcy immediately.

10. Has the bank created the right IT governance model?

The CIO is more than just a manager of technology projects; now he's a strategic executive. So IT needs to have business disciplines like the bank as a whole, including disciplined governance, steering committees, an office or individual responsible for project management, service level agreements with suppliers and a strategic plan with short- and long-term outlooks.

Terence Roche, a Principal at Cornerstone and a monthly contributor to GonzoBanker, has over 20 years' experience in bank operations. He is an expert in community bank systems and products and has conducted numerous technology and strategic planning engagements. Terence has been published in the American Banker and Bank Technology News. He has taught at the BAI and ACB schools of banking and is a faculty member of the University of Wisconsin Graduate School of Banking.

Introduction to Mobile Financial Services

A tutorial on Customer Self-Service (CSS), electronic payment and two-way marketing opportunities using mobile phones



By Richard Crone and Debbie Wood

Market Landscape

Mobile phones are everywhere: the first ubiquitous technology. There are already 2.7 billion cell phones worldwide, an increase of a half-billion over the past 12 months. As a frame of reference: there are 1.7 billion television sets and only 1.1 billion personal computers in use today. And the number of mobile phones is expected to reach 4.2 billion by 2011.

If your mobile phone isn't in your hand, it's within easy reach. Lose your wallet, you discover it's gone within six hours. Lose your mobile phone, and you notice in just six minutes. Today, even children as young as three years old are carrying a cell phone. According to SNL Kagan, U.S. mobile phone penetration will extend to 84 percent of the consumer and business population by the end of 2007, growing past 100 percent by 2013.

Today, most banks are doing mobile banking and don't even know it. Nearly 55 percent of all calls to bank contact centers in 2007 are coming from mobile phones, and this will grow to over 70 percent by 2010 according to Celent.

Nearly 30 percent of people ages 25 to 29 have no landlines – only cell phones. The "Mobile Society" is here, with the challenge for banks, and all businesses, to rapidly adapt their customer self-service (CSS) scripts and electronic payment options to take advantage of the computing and enhanced two-way communications capabilities of mobile phones.

A Preview of Mobile Potential Overseas

Unlike the advent of the Internet, the United States significantly lags parts of Asia and Europe in the use of mobile technology for banking and payments. Mobile technology

is used to leapfrog primitive infrastructures in such countries as Kenya and to transform the customer experience in technologically sophisticated countries such as Japan.

In Europe alone, Celent estimates there are some 12 million people using their phones for banking-based customer self-service functions. Additionally, Arthur D. Little projects worldwide payments using mobile phones will grow from \$3.2 billion in 2003 to more than \$37 billion in 2008.

Mobile commerce, as well as mobile banking and CSS, is already well under way in other parts of the world, and U.S. bankers are taking notice.

Mobile phones are getting smarter and more powerful. The next generations of mobile phones are really miniature computers, complete with e-mail, Web browsers, productivity software, pictures, video, Voice over Internet Protocol (VoIP) and substantial processing capability. The Apple iPhone is just a preview.

It is with this in mind that bankers need to understand and update their customer self-service and electronic payment strategies to address the three waves in mobile financial services, namely: mobile self-service and banking; mobile payments, and mobile marketing.

1. Mobile Self-Service and Banking – CSS extensions that are typically available through the Internet or Voice Response Unit (VRU), optimized through one of the various mobile sub-channels such as text-based, simple message service (SMS), mobile Internet browsers using the Wireless Access Protocol (WAP2), downloadable proprietary applications loaded on the phone, and several other options under development.
2. Mobile Payments – Enabling cell phones to double as an electronic wallet and initiate payments in the physical, point-of-sale and virtual worlds such as tap-and-go situations using NFC technology, person-to-person via SMS text message, or expedited remittances to a service provider, and many other novel ways being developed.
3. Mobile Marketing – Initiating the ultimate in personalization and real-time mass customization with location-specific offers, electronic coupons, interactive review and release transactions, alerts, loyalty programs and bank-sponsored mobile marketplaces that connect the bank's own retail customers with its own business customers instantaneously.

The business case for launching mobile self-service and banking can be viewed on a continuum ranging from reducing the cost of doing business, to relationship building, to creating new lines of business.

Typically, the motivation behind increasing the use of customer self-service has been to reduce costs. But the mobile channel represents a new and improved touch point with

customers, and as such, is the catalyst and launching pad for other value-added services that can deepen the relationship and generate new sources of revenue.

Start at the Contact Center

The best place to start this effort is by first identifying and understanding the top five to 10 call types to the bank contact center. Banks can redefine the customer experience using mobile capabilities for the most frequent customer issues.

If, for example, balance inquiries dominate your call center mix, then a great first step is to examine and update the "alerting" capabilities from the core banking system, allowing customers to select alerts regarding balances, check postings, withdrawals, bill payments, etc. to go directly to their mobile device as a text message, as well as their e-mail address. Using mobile text messaging and/or outbound calling with caller ID holds the potential for eliminating a majority of calls before they are ever originated by the bank's customers.

Mobilizing Calls Relating to Billing and Payment

According to one bank's early pilot experience, 79 percent of mobile banking transactions today are balance and transaction history checking, followed by funds transfer (11 percent) and bill payments (8 percent). These call types are easily addressed through a Web browser (whether on a personal computer or mobile phone), Interactive Voice Response (IVR) systems and any one of the various mobile channels.

Customers who use self-service channels to address these service requests are proven to have higher satisfaction rates and are many times more loyal with lower attrition rates.

Contact center managers would agree there are many benefits of customer self-service when compared to CSR-based interactions: lower costs, greater consistency of service, greater customization potential and flexibility.

Speed is a key benefit too. In annual studies conducted by Crone Consulting, LLC and Javelin Strategy & Research, the phone is repeatedly affirmed as the fastest way to initiate bill payments – even faster than the Internet. In fact, more than 90 percent of people surveyed were willing to pay a fee for an expedited bill payment, contributing to the approximate \$1.5 billion in annual revenue generated for recurring billers and banks offering these services.

But those preferring the phone are not just "panic payers" expediting remittance payments. The surveys also showed that there are an equal number of consumers who just prefer to pay by phone and are willing to incur a fee to do so. They value the phone's convenience.

Prior to Mobile, CSS was limited to IVRs, the Web, and some computer software applications. With the mobile channels, you can have a customized, two-way customer

experience, which integrates the best features of voice, text, Web and proprietary customer self-service applications.

Ten Steps to Evaluating Mobile Options and Devising Your Bank's Mobile Strategy

As the banking industry learned from the deployment of Internet banking services more than a decade ago, an impartial business case analysis is needed to mitigate the risk of a decision of this magnitude. Banks need to organize a cross-discipline team to analyze their mobile options, objectively evaluate the business case, and define an enterprise-wide mobile financial services strategy that is closely linked to their core banking applications.

To accomplish this, banks need to go through the following 10 steps to ensure the success of their mobile banking strategy.

1. Organize a cross-discipline, enterprise-wide mobile project team.
2. Define customer self-service (CSS) scenarios, potential mobile use cases and profile the mobile consumer (by business unit and aggregated enterprise-wide).
3. Assess the competitive environment and the potential to move or lose market share with mobile functionality (banking versus payments versus marketing).
4. Analyze and assess the viability of each emerging mobile channel for each major wave: banking, payments and marketing.
5. Define mobile functional requirements, evaluate and score mobile channel options.
6. Objectively evaluate sourcing options and service providers (buy, build or buddy), keeping in mind that the one who enrolls is the one who controls. When you enroll your customers for self service, you position your bank to be their portal for payments and marketing, reserving your corner lot on the mobile deck for the bigger opportunities to come.
7. Correlate channel options with customer profiles and use cases and compare to deployment options and suppliers.
8. Prepare the independent business case and return on investment (ROI) analysis.
9. Define and gain approval for mobile financial services strategy.
10. Mobilize to implement.

Turbo Charging the Value Chain

Faster account balances and transaction history barely skim the surface of mobile banking's value. Through new technologies in voice recognition, interactive SMS texting, Internet browsing of images, video and more, the mobile channel offers a rich, customizable environment. Not only can banks cut costs, but they can deepen

customer relationships and develop new revenue streams from added products and functionality.

Mobile can create value previously unavailable in traditional banking through self-service and mass customization, where customers can manipulate financial information to create new value for themselves. This information is a valuable asset: Google, a search tool, and TV Guide, a programming listing guide, have higher market capitalizations today than the businesses they provide information about. How can banks turbo charge the basic data they generate to create new products and services?

Not unlike an automobile turbocharger that re-processes exhaust fumes to boost an engine's power, banks can leverage transaction data, resident in their core data processing, to create new value even more powerful than the source business. Are banks ready to use this turbo charging to move into the fast lane?

A noted expert in the payments business for nearly 30 years, Richard Crone founded Crone Consulting, LLC, to help companies unlock the power of electronic payments to create strategic advantage in the financial services marketplace. With extensive current experience in mobile banking and payments, as well as all forms of electronic payments, Crone Consulting, LLC, offers a wealth of knowledge to financial institutions, data processors, merchants and payments providers.

Debbie Wood is general manager of marketing for Jack Henry & Associates, (NASDAQ: JKHY), a 30-year provider of core information processing solutions for community banks. Today, the company's extensive array of products and services are processing transactions, automating business processes, and managing mission-critical information for more than 8,700 financial institutions and corporate entities.

Five Reasons Why Small Business Remote Deposit Capture Will Take-off in 2008



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Use of remote deposit capture applications has grown dramatically as financial institutions seek more competitive advantages in customer deposit acquisition. Celent's 2007 industry research found that remote deposit units have grown from 45,680 in 2005 to an estimated 244,789 in 2007. It has forecasted more than 5 million seats by 2012. In the next year, a variety of factors will influence small businesses to implement remote deposit capture at a significant rate.

The general definition of a small business is \$10 million or less in annual revenue, making up approximately 99.6 percent of businesses in the United States, 34 percent of business revenues and 65 percent of payment transactions, according to Celent. Certain factors will cause the increase in demand for remote deposit capture among these organizations, including affordability and competitive advantage.

Prediction #1 – Full Capability Devices at a Lower Cost

2008 will mark the emergence of new full capability check scanners at lower price points ideal for cost conscious businesses looking for quick economic payback. The purchase of an electronic check scanner is necessary for implementation of a remote deposit capture solution, and small businesses will be presented with new options that fit within most budgets. As the products and market matures, the prices will decrease for electronic check scanners.

Electronic check scanners are composed of technology that reads the vital information on paper checks to convert to an image for deposit. Small businesses want a check scanner that has high reliability and quality, yet want to minimize costs as much as possible. The introduction of a device that provides high image quality, performance and reliability at a low-cost will be a major influencer for the decision to implement remote deposit capture. Financing options will be offered to small businesses to set up payment plans, reducing cost of entry barriers that currently exist.

Prediction #2 – Web-based Applications: The New Standard

Web-based applications will speed the adoption of remote deposit capture for small business customers. According to Celent research, more than half of current remote deposit implementations are Windows clients, or thick clients. In the upcoming year, Web-based client applications will increase and become the de facto standard for small business remote deposit customers.

In addition, instead of banks investing capital in a deployment of remote deposit capture, 80 percent of new implementations will be through an application service provider (ASP) business model.

Prediction #3 – Moving Off the Sidelines

More than 4,000 financial institutions have adopted a remote deposit capture solution to date, according to Celent, yet the average number of remote deposit capture deployment has been small with the exception of a few large banks. As an increasing number of small businesses implement remote deposit capture, financial institutions seek to increase their competitive advantage. To stay competitive, financial institutions will launch aggressive marketing strategies to create a greater awareness of their remote deposit capabilities.

With the increase in marketing from financial institutions, small businesses will become more aware of the solutions. By targeting marketing campaigns toward small businesses, financial institutions are taking advantage of a rapidly emerging market for remote deposit capture.

Prediction #4 – The Tipping Point

The volume of overall industry deployments of remote deposit capture will reach the critical tipping point volume needed to drive acceptance from early adopters to mainstream buyers. As mentioned, Celent predicts that by 2012 remote deposit capture will be deployed to more than 5 million seats (currently, the number of seats is approximately 250,000). As volume of deployments increase, it will reach its tipping point in 2008 and become the catalyst for rapid adoption of the solution.

As more small businesses integrate a remote deposit capture solution into their company's operations, the costs will come down, and the ROI will be proven out for smaller business to justify adoption. Through electronic deposit of checks, businesses increase efficiency and reduce costs by eliminating a variety of fees, as well as multiple trips to their financial institution.

Prediction #5 – Reaching Out to Small Businesses

Awareness and visibility of remote deposit capture will increase significantly, as banks become more aggressive and non-bank oriented companies launch independent efforts to penetrate the small business marketplace with financial institution independent remote deposit capture solutions. In addition to marketing efforts from smaller financial institutions that want to reach small businesses, non-traditional entities will target the same market in 2008. Providers of the technologies used in remote deposit capture will launch their own aggressive campaign, informing potential customers of the benefits of implementing remote deposit capture.

2008 will be an important year for remote deposit capture and the small business market. With influences from multiple sources from financing options to increased marketing and check scanner improvements, the solutions will be easier and more affordable than ever.

Paul Rupple is the director of marketing and product development of Northfield, Ill.-based Digital Check Corporation, a leading manufacturer of electronic check scanners. He came to Digital Check with more than 25 years of marketing and sales experience, having spent much of it within the financial services industry. Prior to joining Digital Check, Rupple headed his own consulting practice developing customer strategies for clients within the financial services industry, following a successful career as sales director at BAI.