Deloitte.

Reading the global payments radar

Scanning for opportunities and potential threats in the payments market

Seventh edition

"[A]s some clients try to develop cross-border strategies, Deloitte is one of only a handful of firms with truly global capabilities."

Kennedy Consulting Research & Advisory

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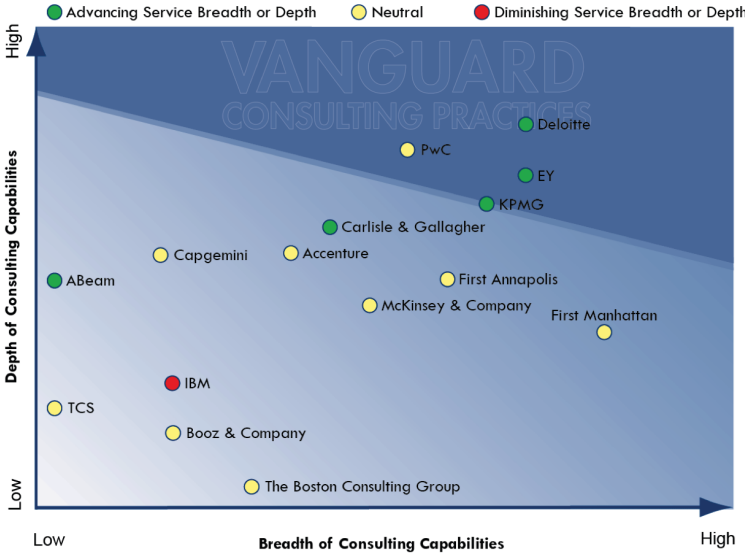
Foreword



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Continued improvements in credit quality and the underlying employment numbers have furthered our optimism for the payments industry. A shift from addressing compliance and risk weaknesses back onto the growth agenda is clearly taking place. The focus on growth has also been accompanied by an increase in payments innovation. And along with it, further uncertainty for the traditional industry leaders.

As plastic gives way to mobile payments, expectations by merchants, and the roles played by the incumbent payments companies, is beginning to change. We anticipate that the willingness to pay traditional interchange fees to the credit card industry will be further challenged by merchant exchanges and other nontraditional joint ventures currently on the drawing boards.

At the same time, the consumer experience will be significantly enhanced, led by the major brands across the hospitality and travel industries. As promising as these new solutions are for consumers, they threaten to add cost to the issuers, and be accompanied by envelopment of their brand and product into someone else's brand and experience.

While traditional banking institutions should consider participating in solutions such as the new wallets and apps managed by others, they should not allow these solutions to become the only transaction channel to the customer, or a significant loss of customer relationship and relevance will likely occur. The traditional players should turn to solutions that focus on helping merchants grow sales, offer instant credit to qualified consumers, and exploit the availability of predictive, real-time analytics using payment and bank-owned data.

By working more closely with merchants, this role offers banks an alternative path to achieve sustainable consumer engagement. The new path creates significant opportunities for banks to partner with merchants and merchant consortiums that may welcome not only a more cost effective solution, but also the opportunity to safely use consumer data to create strong value propositions through analytics. To that end, banks must evolve to serve this new era and capitalize on the opportunity to develop stronger merchant and consumer value propositions. The opportunity is as significant as the threat.

Deloitte has been at the forefront of these changes, building strategies and some of the most advanced, innovative mobile and analytic solutions. Over the past 10 years we have lead the industry as a trusted advisor to nearly all of the largest stakeholders including issuers, merchants, acquirers, networks, and processors.

We are pleased that Kennedy Consulting Research & Advisory named Deloitte the global leader in Cards & Payments based on breadth and depth of consulting capabilities in their Consulting to the Banking Sector: Cards & Payments report. Deloitte also ranked #1 for Cards & Payments Consulting globally based on revenue and market share."

On behalf of the payments leaders from each of the markets our network of member firms represents, we hope you find these insights and our Payments Radar helpful as you navigate through the change, deciphering the threats from the opportunities.

Yours truly,

Brian Shniderman
Principal, Payments Practice Leader
Deloitte Consulting LLP

Assessing the lay of the land

Once considered a very stable industry, many payments players are facing a period of significant change.

The short-term revenue picture for the payments industry, in particular credit card issuing banks, is unclear. On the one hand, card issuer revenue is increasing due to improvements in consumer credit quality and decreasing consumer charge-offs, both of which are driving improvements in revenue and net income for issuers.

However, there are obstacles ahead and uncertain market dynamics that could derail a return to historically "normal" revenue performance: stagnant or rising unemployment, interchange fee, commoditization or regulation, and systemic market disruption, such as consumer de-leveraging, or shifting to other payment platforms.[1]

With shifts in the traditional payments market, including economic and credit downturns forcing voluntary and involuntary migration across products, converging industries, the entry of nontraditional competitors, and emerging new models and innovations, the field has become more active and uncertain, with no clear path to leadership and no sure bets.

The pace and scope of change may be very significant. For those who are prepared to respond appropriately, the rewards could be equally significant. The race will go to the nimble and well informed — the leaders and fast followers with the information and insights to move quickly on smart, well-executed strategies.

As always, Deloitte will be there to help our clients in their efforts to anticipate trends, follow the right opportunities, mitigate risks, and execute effectively on strategies that are well conceived.

[1] Deloitte Consulting Banking and Payments team, July 2011.

Anticipating potential threats and identifying appropriate strategies

In recent months, we have found our clients to be highly uncertain, and largely unprepared, to address the current environment. In any uncertain market, properly anticipating trends is a prerequisite to planning an effective response strategy. The Deloitte payments team actively tracks, evaluates, and prioritizes payments industry trends using more than 25 business and technology elements and a database of market factors. Since 2007, we have published a series of articles that address the existing challenge of the global retail payments environment. We prioritize trends based on the following:

- Timing and assessed urgency associated with each trend
- Significance in expected volume, velocity, and revenue impact
- Degree to which strategic responses to trends are actionable and executable
- Trends that drive opportunity ratings high and fit with clients' capabilities (the top 25 payments companies)
- Trends that represent significant downside risk, if not addressed

Based on our most recent analyses, we see several trends that are affecting the global market today and beginning to define the global payments industry of tomorrow.

Is your financial institution prepared?

Over the next 18 months, we anticipate the following trends will be among the most significant in defining and changing the payments industry.

1	Maturing mobile and alternative payments approaches, strategies, and defenses	Compelling and threatening new payments alternatives continue to emerge from start-ups and nonbank competitors, fueled in part by increased backing from aggressive venture funding. Financial institutions have the opportunity to participate in and influence the direction of payments innovation; and the need to respond proactively to the resulting operational, fraud, and security risk.
2	Payments consolidation imperative, optimization, and "hubs"	Consolidation and optimization of currently divergent payments processes and systems may be a major emphasis as banks seek cost containment, as well as greater product flexibility and revenue enhancement. Forward-thinking payments providers will likely look to establish an enterprise payments system — leveraging technologies to establish payments hubs — which may drive down processing costs, help create shared services, and facilitate the development of new payments products.
3	Sustainable, leading positions in emerging global payments and verticals	A small number of acquirers may effectively position themselves to take dominant sustainable, leading positions in emerging global business-to-business (B2B) e-payments opportunities and key high-growth verticals. New gateways will likely emerge to fill unmet needs in and across untapped industries. Health care trends and reform will likely result in significant new challenges and opportunities in developed and underdeveloped markets, such as Africa. While many early movers in health care payments were challenged, the next 18 months is likely to be much more rewarding for those with the appropriate hybrid products to serve these segments.
4	Evolving role of Predictive and Real Time Analytics	Banks proactively apply analytic insight to find new growth opportunities, build deep customer relationships, and link goals to front line performance. Integrating unstructured, streaming data generated by innovators can provide banks the opportunity to extend the analytic application to enhance the customer experience and proactively address real-time risks.
5	Persistent M&A and private equity influence in payments	The significant industry changes and the underlying challenges brought on by financial and regulatory reform and nonbank competition will likely continue to feed the need for scale and innovation in the drive toward healthy growth. Private equity firms may continue to play a significant role, changing the dynamics in the industry, and infusing capital and energy into the system, while also introducing new types of risk.
6	Integration of payments in social media	The proliferation of monetization strategies within social media will continue to drive the development of new, frictionless payment experiences. Nonbank competitors will likely have the potential to disintermediate the market as they vertically integrate payments into the social network experience.
7	Merchant security and adoption of new technology standards	With the recent public security breaches at major retailers in the US, merchants are assessing their technology and considering new standards. EMV, tokenization and tablet based POS transactions will dramatically change the merchant experience and compliance activities.
8	Evolution of B2B payments	Interoperability and Consumerization will likely be the primary focus areas of an evolving business payments ecosystem. Data should be designed to flow across ERP and accounting platforms, supplier networks, and payment schemes. Leaders will create B2B experiences that resemble B2C across multiple channels and devices.

Organized for your success:

Recognized by industry analysts as the leading global financial services industry consulting organization for our cross-border execution

Deloitte's Payments practice extends far beyond our U.S. borders. We serve clients that have global reach and have pinpointed representative countries where we have a footprint.

Increasingly, the opportunities and threats in the payments industry transcend borders. As a result, it has become essential that our clients have an understanding of the inter and intra-country implications of their actions (or in many cases inactions). Recognized by industry analysts as the leading global financial services industry consulting organization for our cross-border execution, Deloitte's Global Payments practice brings deep market insights to our clients' most important projects, and leverages Deloitte member firms' 210,000 dedicated professionals in more than 150 countries.

Our global footprint in payments

Representative joint efforts between Deloitte and its network of member firms around the globe

- Canada and the United States worked together to execute a postmerger integration and PMO for a major processing platform migration.
- United States teamed with more than 10 countries to execute an online collections strategy for a top issuer. United States also worked with five countries to deploy a mobile payments platform.
- Mexico and the United States worked together to implement a merchant acquiring operation and advise on a commercial prepaid strategy for joint ventures and networks.
- Brazil and the United States worked together to introduce a combined social networking and mobile platform to issuers and large financial institutions.
- United Kingdom and the United States teams establishing an e-wallet license and go-to-market plan for issuer and network.
- South Korea and the United States teamed to provide mobile payments strategy for a global manufacturer and a large automobile company.
- China and the United States developed a mobile payments platform and joint ventures for networks.
- Australia and the United States worked together to assist a leading financial services organization to develop a target operating model, and devise the product, market and technology strategy to transform the organization's business based on the changing financial services landscape.


Netherlands
Belgium
UK
South Korea
China
Indonesia
India
Spain
Singapore
Australia
EAC
South Africa

Spotlight on Deloitte's payments capabilities

Mobile financial services and payments

Deloitte's "Mobile Financial Services and Payments" offering consists of end-to-end capabilities that very few can offer. Deloitte has mapped the market demand to our capabilities and drafted a set of propositions as listed below:

- Mobile Financial Services (MFS) Integrated Market Strategy
- MFS Operating Model and Organizational Design
- MFS Channel Integration, Product and Customer Experience Design
- MFS Infrastructure and Technology Integration
- MFS Risk Management and Security Plan

Deloitte has the full life cycle experience and mobile payments and processing capabilities. We also have one of the most fully integrated global teams of mobile practitioners across more than 15 countries. The organization, through its network of member firms, has an internal global collaboration call bringing practitioners from these countries together, allowing them to share ideas and collaborate on client issues. These collaboration calls also support various client projects by sharing best practices from a number of countries across the globe.

Deloitte has a myriad of white papers and articles on mobile payments underway. White papers, such as "Cell me the money" have been widely acclaimed and been used by a number of organizations across the globe to understand the mobile payments landscape.

Deloitte has one of the largest, most focused, and successful global payments teams in the industry.

- We attract and retain highly talented senior leaders from top banks and card companies, and leading strategy, operations, and IT consulting firms.
- Our ability to combine consulting, tax, risk, and audit capabilities enables us to incorporate in our service offerings, analysis and perspectives of payments issues rarely addressed by our competition. For example:
  - Tax implications to major card portfolio acquisitions
  - Risk analysis associated with new payments regulatory changes
  - Pricing implications from new market entrants

We have provided services across the full spectrum of payments-specific projects, covering virtually every major payments function and instrument. We have team members specializing in strategy, operations, and implementation and execution, which distinguishes us from the competition for delivering executable strategy.

We have effectively delivered payments-related services for clients across the transaction activity chain, including:

- Most of the top 10 retail banks (based on DDA Net Interest Margin)
- Most of the top payments processors
- Eight of the top 10 card issuers and two of the top-three debit card issuers
- Three major credit card networks
- One of the largest debit card processing networks and one of the largest third-party debit card transaction processors

Deloitte Tax LLP and affiliates in Latin America work together to design and implement a tax optimized business model for the mobile payments joint venture between a global payments and technology company and a global integrated telecommunications operator.

Deloitte is a dominant leader in serving the consumer business industry; as such, many of the largest U.S. merchants served by the payments industry are Deloitte clients. Through our global reach and collaborations, we have developed firsthand experience through interviews with overseas merchants and gained insight on processing systems, payments preferences, and trends in foreign markets.

Third-party recognition

Mobile Commerce Daily recognized Deloitte & Touche LLP as the Mobile Commerce Researcher of the Year.*

Kennedy Consulting Research & Advisory recognized Deloitte as the largest global financial services consulting provider based on revenue.**

*Source://www.mobilecommercedaily.com/2011/12/21/sears-is-2011-mobile-retailer-of-the-year?rr44b=no

**Source: Kennedy Consulting Research & Advisory; *Consulting to the Financial Services Industry; Kennedy Consulting Research & Advisory estimates; © 2013.* Kennedy Information, LLC. Reproduced under license.

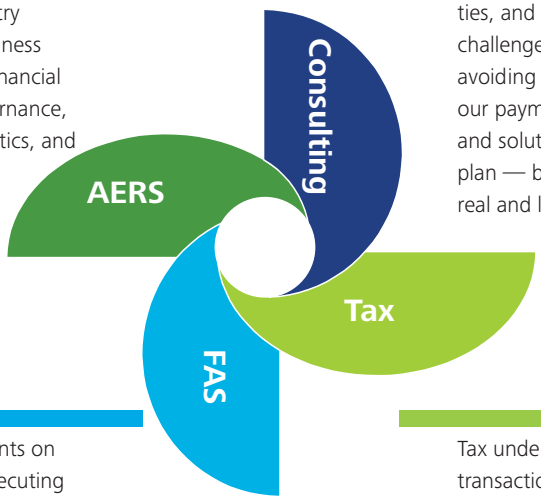
A category of one: Deep bench strength and skills that support our payments clients

Our professionals bring vast payments experience, specialized skill sets, and deep payments industry knowledge to our clients — that's particularly important given the complex nature of the payments value chain. We take a holistic view of the support needed to originate and execute payments transactions for global commerce.

The strength of Deloitte lies in our ability to address payments industry challenges. Our clients benefit directly from Deloitte's deep understanding of the rapidly expanding electronic payments system markets. Our payments practice spans a broad range of fully integrated services in areas that include accounting, assurance and advisory, risk, tax, management, financial, technology, and human capital consulting.

While your immediate needs may not require the full breadth and depth of services today, your payments Deloitte client service professionals are part of an international network of firms that can be mobilized to assist you with a full range of payments systems challenges.

Audit and Enterprise Risk Services help payments organizations create and protect value by taking a Risk Intelligent approach to managing financial, technology, and business risks. Our payments-industry market offerings assist clients in addressing business issues across the full spectrum of accounting, financial instrument valuation, security and privacy, governance, securitization, process improvement, data analytics, and risk advisory disciplines.



Consulting helps our payments clients in their efforts to take advantage of big opportunities every day. With deep payments industry knowledge, broad capabilities, and solid strategic alliances, we help them look at challenges from multiple angles and with the goal of avoiding unnecessary risk. We work side-by-side with our payments clients to develop innovative strategies and solutions. Then we stay around to help execute the plan — because we believe that's the only way to create real and lasting value.

Financial Advisory Services advise payments clients on managing business controversy and conflict, executing deals, and maintaining regulatory compliance. We provide services to payments companies to help them mitigate card issuing and merchant acquiring fraud and have first-hand payments business operations. We help payments clients address serious business concerns involving fraud, forensic investigations, litigation, and reorganization.

Tax understands a tax implication exists for every transaction a payments company undertakes, from trading to acquisition to offshoring. Even the most sophisticated global companies often struggle with balancing compliance details and long-term tax strategy. The tax specialists of Deloitte Tax LLP can help payments companies understand national and international tax structures and align tax functions with business objectives.

Turning payments innovation into an executable strategy

Innovation in the postrecession and new, challenging regulatory environment is one of the keys to many payments organizations' growth plans. Determining that the innovations can be executed is equally important as resources are limited and should be effectively put to use.

Deloitte's payments innovation methodology introduces a highly flexible approach for identifying and creating strategic options that can address the known, and help anticipate and set in place actions to address the unknown. The outcome can provide concrete results within an implementation plan that reflects a clear set of priorities.

In a recent application of the methodology, Deloitte conducted an innovation scan and developed a prototype for consumers and merchants to design and bid on their own highly relevant, dynamic affinity programs enabled by social networking. We refer to this as Social Network Affinity Programs (SNAP) Marketing.

SNAP Marketing is a way to use social networking sites and data, together with untapped consumer affinities, to expand and evolve card portfolios. It can potentially drive increased cardmember spend and new accounts by taking advantage of special interest groups, allowing consumers to create their own affinity programs. Simultaneously, it offers a way for merchants to compete for customers, further driving incremental spend through customized rewards to targeted consumers.

> Social network affinity programs create moments of opportunity that can result in card portfolio growth that is efficient, effective, and likely to provide significant cost reductions in marketing.
>
> Joseph Alt, Principal, Deloitte Consulting LLP

Implementing enterprise payments hubs

In the current regulatory environment, many of our financial services clients are experiencing margin pressures related to their payments functions. The existing silos-based payment systems result in high cost of operations due to duplication of functionalities and services across different payments instruments and products. In this scenario, our clients are looking to leverage significant cost benefits by consolidating these diverse systems.

The Enterprise Payments Hub is a demonstrated solution to alleviate these duplications and cost pressure challenges. It consists of a centralized infrastructure capable of processing multiple payment instruments, providing efficiency, flexibility, and a single customer view. The solution removes duplicate payment processing functions through the use of a central set of services for channel interface management, transaction processing, transaction support, and customer life cycle management.

Deloitte's payments hub implementation methodology introduces a highly flexible, services-based approach for consolidation and incrementally developing payment hubs. In a recent application of the payments hub implementation methodology, Deloitte helped the client to develop a detailed technical architecture and road map for implementing a large, global, multicurrency B2B payments hub supporting card, Automated Clearing House (ACH), wire and check-based payments. A phase-based implementation road map resulted in revenue generation events virtually every six months.

Securing an online payments environment

While the world continues to embrace the convenience of online transactions, the level of security involving those transactions has struggled to keep up, leaving customers at risk.

Many of the authentication products and systems currently in place and available do not provide an independent mechanism for customers to manage and control their identity. For example, in a typical username/password online banking environment, a customer's "secret" (e.g., password) can be compromised by someone using a "fake" bank website to capture and subsequently reuse their confidential information.

In an effort to secure the online environment, Deloitte Australia and Australian-based Emue Technologies have pioneered and patented the concept of "mutual authentication" for secure access to remote services. This "mutual authentication" is designed to give both the service provider (e.g., bank) and the customer an opportunity to identify each other before initiating a transaction. Unlike other one-way authentication devices, this solution can be used across multiple remote channels (e.g., telephone, web, Internet shopping, corporate VPN systems), which makes it attractive from a commercial perspective for issuers who not only want to prevent fraud, but also want to offer an integrated approach to authentication using a single platform.

While building this concept, the developers also considered customer convenience — resulting in its proprietary software being integrated into cell phones and credit cards.

Deloitte's Consumer Protection Center

The customer is a focal point of a business and the customer experience is an important driver in many business decisions. The marketplace is abuzz with words like "customer satisfaction," "analytics and insights," "customer complaints," and so on, but superseding them all is "compliance." At Deloitte's annual roundtable for senior payment executives, the Consumer Protection Center (CPC) was conceptualized as a cross-industry, shared solution for analyzing, monitoring, benchmarking, and complying with consumer regulations. As financial institutions invest in programs and processes to meet new data aggregation and reporting requirements, what focus has been placed on how to mine this data and put it to work to generate a tangible return? How many can convert raw data into concrete actions, not only resulting in regulatory compliance, but also to spur business growth? Welcome to Deloitte's Consumer Protection Center solution.

The CPC is a best-in-breed complaint management and CFPB compliance platform that can be utilized to solve the use cases financial institutions identified as high priority.

Sample use cases include the ability to:

- Identify repeat callers and escalated complaints
- Measure the impact of fraud handling on customer behavior
- Differentiate inquiries from complaints
- Measure how complaint handling affects future customer loyalty and satisfaction
- Measure churn by complaint category

Deloitte's CPC is being offered as an accelerator to our customers, combining advanced analytics including monitoring, root cause and predictive analytics. Dashboards have been constructed that provide visualizations of a financial institution's data and allow actionable decisions to be made at various levels and functions within your organization.

Card issuers — losing ground in the race to productivity?

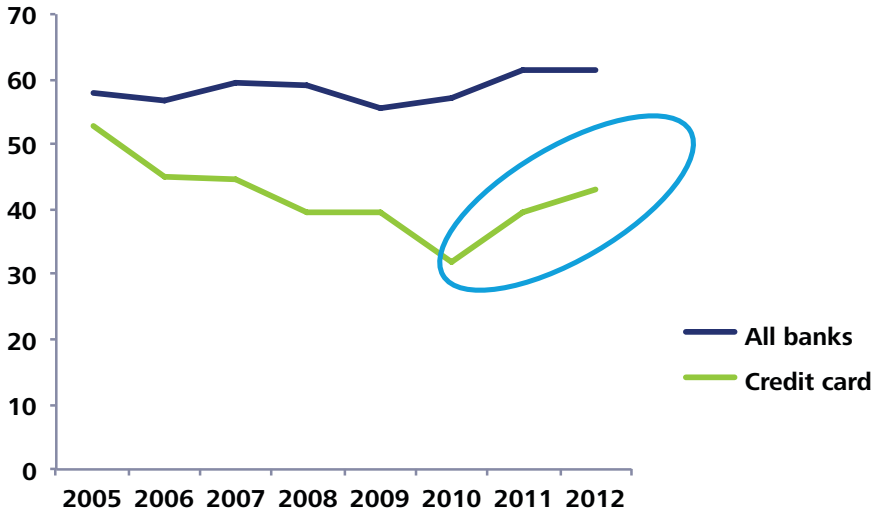
Profitability for credit card issuers in the US continues to be under pressure and there is some question concerning whether or not gains achieved as a result of actions taken in the aftermath of the financial crisis can be sustained:

- **Revenues under pressure.** Recent regulation and shifts in customer preferences to other payment types, such as debit and prepaid cards, have depressed revenue growth. Between 2005 and 2012, revenue derived from non-interest income and net interest margin declined 24 percent for credit card banks (Source: FDIC Quarterly Banking Profile, Q1 2005 through Q4 2012).

- **Improving credit environment has helped issuers' profitability.** The rebound in profit growth for card issuers has been driven predominantly by improvements in the credit environment with card delinquencies in 2013 hitting their lowest rates at 2.41% since 1990, according to data compiled by the American Bankers Association (source: http://www.aba.com/Press/Pages/070913-DBulletin-1Q2013.aspx). However, at these historic lows, further improvements in credit losses should not be relied upon to drive further profitability improvements.

- **Expense reduction has yielded strong results but appears to be stalled.** At the same time credit card issuers have made tremendous progress at taking cost out of their business, reducing non-interest expense by 38 percent between 2005 and 2012.

The acceleration in cost take out has resulted in an improvement in operating efficiency for credit card issuers from 53 percent in 2005 to 43 percent in 2012. Yet, there may be cause for concern as credit card banks' efficiency ratio has started climbing again due to a decline in revenues from 2010 to 2012 and a simultaneous increase in non-interest expenses. It is challenging to identify opportunities for reversing this trend in a way that will not undermine necessary investments in growth or jeopardize the compliance with increasingly complex regulations.



Efficiency ratios (Source: FDIC QBP)

Getting to the next level of cost reduction

Credit card issuers may need to take a holistic P&L view when identifying areas for further cost reduction. While loan loss provisions, marketing and rewards expenses, and support function/general management expenses all represent areas where cost takeouts have been achieved, let's focus on operations and technology (O&T) expense — which typically represents between 40 to 60 percent of cards' operating expenses.

In O&T expense, start with understanding the current cost base

O&T organizations have been frequent targets of "right-sizing" and restructuring initiatives over the last decade. On the technology side, many banks have built their growth on acquisitions and with that acquired a host of systems often performing similar functions — platform consolidation, while no easy undertaking, presented a logical first step. On the operations front, the ability to play on salary arbitrage, moving jobs from high cost locations to lower cost locations, such as call centers in India, provided an obvious quick hit.

Wringing further productivity out of O&T calls for a surgical approach that starts with cost transparency. It is necessary for issuers to understand process costs at a granular level for every process and sub-process along the cards value chain. Building on a detailed understanding of process costs that can be captured through tools such as costing and profitability analytics, issuers can then apply productivity analytics tools to pinpoint opportunities for further cost reduction.

Credit card value chain

O&T cost takeout considerations

- **Outsourcing:** A thorough assessment of the potential of outsourcing to further take out cost of the O&T functions can take three steps:
  - Provide a detailed understanding of the issuer's fully loaded unit costs.
  - Build a demand curve over an appropriate time horizon to forecast demand on services considered for outsourcing. This is an important step to help predict future unit costs as volume rises or falls.
  - Conduct an RFP to establish relevant third party prices
- **Offshoring:** Credit card banks have been moving jobs to offshore locations with either captive units or vendors performing services previously performed in the US. With a renewed focus on customer satisfaction, a successful roadmap to increasing offshoring may rest on three pillars:
  - Evaluate offshoring potential for each operational function across the credit card value chain and set clear goals for offshoring levels.
  - Identify activities that are non-customer facing and not mandated to be onshore by the regulatory requirement — these may be ideal candidates for offshoring.
  - Consider a differentiated offshoring strategy for customer-facing functions; this might mean serving high value segments on-shore while serving less profitable segments off-shore.
- **Support consolidation/shared services:** In an environment of multiple platforms, proliferation of products and increasingly complex regulations, support functions have sprung up across the value chain to help ensure that the correct training, controls, and measurements are in place. This has led to a ballooning of MIS, BP&A, quality control, and other functions. Centralizing support functions and moving to a shared services model within the operations function may help banks to get closer to leading industry practices of 5 to 8 percent support staff.
- **Automation:** Straight-through processing is not the norm for all processes in the credit card value chain. An approach to determining which processes to be automated should identify:
  - Priorities for automation may include processes

currently handled manually that do not require judgment but data (re-)entry
  - Processes that require decision making should be investigated to determine whether or not these decisions can be automated
  - Manual processes that may have potential for further customer self-servicing

- **Site consolidation:** Many credit card banks have grown through portfolio acquisitions and have subsequently acquired a number of web sites dedicated to specific retailer or legacy portfolios. While there is a need for a number of sites to provide business continuity, leading issuers have been able to take out considerable cost by reducing their number of sites to fewer than 10.

- **Platform consolidation:** Platforms and applications supporting the front-end of the credit card business and the operations function have grown organically as new products have been introduced, portfolios acquired and new functionality built. Taking a holistic view of technology expenses and aligning the expenses with processes and sub-processes in the credit card value chain will likely help banks uncover opportunities for eliminating duplicate systems or migrating to single platforms capable of supporting multiple products and lines of business.

- **Digitization:** Credit card banks have been investing heavily in digitizing their processes, from customer acquisition to statements and payment processing. Consumers have embraced online acquisition offers and payments, yet Deloitte analysis finds that e-statement adoption has remained below 40 percent. While banks may further the development of digitized offerings, the success of this productivity tool is dependent on consumer adoption.

Think about when to pull which productivity lever

Banks are often faced with the classical dilemma of "shift and fix" or "fix and shift" — in other words, "offshore first and then make technological investments to fix the process" or "invest in fixing the process first and then offshore." Choosing the path for a credit card bank will involve a hard and honest look at funding available for productivity initiatives and at payback expectations. In an environment of limited resources available for productivity initiatives and climbing operating expenses, immediate action is called for. The actions that can have a short-term impact are outsourcing, offshoring, and centralizing support services. With productivity gains achieved from these initiatives, additional funding becomes available for the more long-term projects of automation, site, and platform consolidation. Digitization should be seen as a parallel effort to prepare the bank to drive to digital as consumers adopt these channels.

Africa — Ample opportunity for innovative payment solutions

Across the continent, Africa presents opportunities for innovation in payments solutions and distinct differences have emerged across its various regions. In the last five years, an array of payment products has launched amidst three regional trends:

- **South Africa:** Many point to South Africa's mature banking and financial services system and its regulatory requirements as a deterrent to mass adoption of mobile payments. However, consistent year-on-year growth in ecommerce for consumer purchases of airline ticket purchases, payments of utility bills, and online shopping may encourage industry participants to take notice and consider ways how to approach the South Africa market.

- **East Africa:** With 11.6M M-PESA subscribers, this region continues to hold the largest market share of this mobile-phone based money transfer and microfinancing service. M-PESA is seen as a major non-voice revenue driver for Safaricom. The level of deep product integration with multiple payment functionalities rooted in the East African countries' economies, plus extensive acceptance by both urban and rural users and the public and private sectors will likely make it difficult for a rival product to displace M-PESA.

- **Zimbabwe:** In the last two years, Ecocash has experienced high growth and processed transactions with an approximate value of $2B. Econet is pioneering the launch of insurance-based products in the agriculture/financial services domain as well as through the acquisition and subsequent launch of Steward Bank in 2013.

Four strategic considerations for payments in Africa — A telco perspective

Revenue protection strategy for broadband Telcos/MNOs

Do not break under stress: providing trusted, secure transactions

Ecommerce for mature MNOs still in pursuit of the silver bullet for payments

OTT – embrace or be left out

Financial institutions and telcos may move away from traditional BI and CRM systems and increasingly use data analytics to:

- Understand customer spend behaviors
- Undertake revenue assurance and apply corrective measures to prevent revenue leakage
- Use predictive analysis to build churn prediction models
- Align digital marketing campaigns
- Cross-sell and upsell products using payments engines

This is a good strategy for MNOs in Africa where major regulatory intervention is envisaged. MNOs should offer payment solutions to avoid churn in a competitive market as well as diversify its revenue base ahead of competition where voice margins will be threatened due to stricter regulatory requirements.

A key success factor for payment products is large scale adoption across different customer segments and economic corridors between rural and urban areas. In order to cater for rapid payment product adoption, products need to be scalable, robust and offer secure transactions whilst being tax compliant.

Typically MNOs have treated payments as VAS services thereby neither investing significantly in this space nor looking to offer fully integrated payment, voice and data products. Large MNOs can make up for this by offering enterprise payment gateway solutions as a foundational component to launch an ecommerce platform.

Local content based applications within Innovation Hub initiatives and matched to angel funding creates room for newcomers offering niche payment solutions. M&A activity will likely attract major media and telcos towards niche players with telcos and broadcasters offering quad play products with payment wallet options.

Can risk and compliance coexist with innovation in mobile payments?

Innovation in mobile payments takes many forms. At the local grocery store, "app-heads" try to create ways to eliminate the register all together. Car manufacturers dream of ways to link service and car owners' bank accounts. Health care providers consider ways to store records in the cloud so customers can access their records through their handheld devices. Toll payment systems noodle with how to make the payment of the toll easier and less reliant on the plastic pass in a driver's windshield.

Yet, while innovators think about ways to enhance existing or create new products and services, consumers remain wary and worry about their personal data being compromised. And regulators charged with protecting consumers continue to develop and refine rules and regulations that aim to protect an individual's personal and financial information.

Faced with the dilemma of complying with consumer protection regulations and mitigating risk throughout the payments life cycle, it may seem as though risk management and innovation in the mobile payments world are doomed to be mutually exclusive.

Not so. Innovation forged in conjunction with risk management may result in a symbiotic relationship that could produce innovative products and services that benefit from the application of a compliance and risk lens. Involving the "watchdogs" in compliance and risk in the innovation process may eliminate having to fix products on the fly after they've been launched.

Coupling the actions of developers and innovators with compliance and risk executives could prove a competitive advantage. Working together, they could enhance new products with controls that could help mitigate risk. Their common goal could focus not only on creating the "killer app" but also could aim to avoid compliance and risk pitfalls — before the first consumer's finger touches the download button on the screen of a handheld device. Such a new mobile payment app could provide consumers with confidence in the end product and, most importantly, the safety of their data from the get-go.

Risk and compliance in mobile payments innovation should not be an afterthought; rather they should become part of the innovation process. Watchdogs and innovators are the new yin and yang of the mobile payments industry.

Developing the next generation of loyalty platforms

Current loyalty programs are inflexible, leaving stakeholders frustrated and seeking ways to optimize their relationships. Emerging mobile and customer analytics capabilities present an opportunity to redefine the loyalty rewards experience. Deloitte has combined its Payments practice's product innovation and technology development capabilities to design a groundbreaking new rewards redemption platform. This platform utilizes predictive models to deliver targeted merchant offers through an innovative, social network-linked mobile application.

Deloitte's rewards redemption platform benefits loyalty program stakeholders by enhancing the customer reward redemption experience:

- **Consumers**: Analytics provide targeted, relevant offers that address consumers' actual wishes and needs.
- **Merchants**: Targeted offers allow merchants to allocate marketing spend and enhance repeat purchases.
- **Reward issuers**: Enhanced customer experience and improved point utility supports card loyalty and increases rewards points turnover.

Cryptocurrency — shifting the payments landscape

The popularity of Bitcoin is leading us to consider the long-run impacts of a widely accepted cryptocurrency on the payments landscape. While the future of Bitcoin, specifically, over the long term is uncertain, cryptocurrency's presence on the financial scene in the near term is quite certain. At Deloitte, we are exploring how cryptocurrency will impact our clients in the financial, retail, and technology industries.

Many financial institutions, payment processors, and card issuers today are weighing the benefits of adopting cryptocurrencies to deliver faster and cheaper payment solutions to their consumers. Retailers are seeing opportunities to attract new customers and reduce their payment expense by accepting cryptocurrencies. Even regulators are intrigued by the possibilities cryptocurrencies provide for real-time payments; in the same breath, they are actively assessing the risks posed to the financial system and consumers inherent in the construct of a cryptocurrency.

Today's most widely known cryptocurrency, Bitcoin, must overcome some very legitimate concerns that may otherwise permanently limit its adoption in the mainstream economy. For example, wide-spread adoption of Bitcoin is unlikely without addressing financial regulation explicitly designed to fight money laundering and illicit trade – activities that an as-of-now unregulated currency attract. Inherent volatility of value and a general lack of endorsement by a "trusted" body present equally significant obstacles to widespread adoption. However, the technology behind Bitcoin is genuinely revolutionary and could form the foundation for a robust and secure electronic fiat currency in the future. This foundation, as a destabilizing technology, may force change throughout the payments ecosystem, even if gradual, and displace traditional players pursuing reactive policies.

As potential demand for a mainstream cryptocurrency grows, start-ups will increasingly build off the concept and technology Bitcoin has created to innovate and push the payments market in new directions. Companies like RippleLaps, which has reinvented how intra- and inter-company payments can be made, and Ethereum and Counterparty, which provide protocols to securely trade and transfer any digital asset, can all trace their origins to the Bitcoin phenomenon.

Given the rapidly evolving payment landscape and crypto-based technology services, we believe most large companies need to have a plan. For some, it may be passive; for others, active R&D would be most appropriate; and for still others, pilots or even deployment should be pursued. As you think through these considerations, Deloitte is prepared to support its clients by:

- Redesigning business processes to take advantage of new capabilities
- Analyzing partnership and acquisition strategies and approaches
- Assessing impact on current revenue and cost structures
- Integrating cryptocurrency payments into various technology environments across payment, compliance, risk, finance, and trading platforms
- Defining and complying with existing and new regulations
- Navigating accounting and tax-related matters
- Developing new payment products and services from wallet to payment platforms and exchanges
- Assessing and remediating cyber risks
- Performing forensic analysis to identify fraud and malicious activity
- Delivering new end user experiences

EMV readiness

Deadlines for EMV adoption have been announced by payment networks in the US and all payment industry stakeholders must put plans in place to get ready to meet those deadlines.

What is the context?

EMV (EuroPay, MasterCard and VISA) refers to the global standard for interoperability of chip cards and chip card capable point of sale (POS) terminals and ATMs, for authenticating credit and debit card transactions. The objective behind the rollout of the chip standard is to reduce card fraud. Regions where EMV has been rolled out have indeed seen a significant reduction in payment card fraud. For example, in the UK fraud was reduced by more than a third after the introduction of Chip and PIN (UK Cards Association, 2012).

How does it work?

Chip card is a payment card with a microchip that supports the principles of EMV transaction technology:

- **Strong card authentication -** this makes counterfeit fraud very difficult
- **Dynamic data (each transaction carries a unique stamp) –** transaction data can't be re-used

What do stakeholders have to do?

Card issuers: Card issuers will issue replacement cards to consumers with chip technology. These cards contain both the chip and the traditional magnetic stripe technology.

Acquirer and processor system upgrades: The deadline for processors to be able to accept and process EMV cards was 2013. Most processors have upgraded.

What are the timelines?

April 2013	Acquirer processors must be ready to support merchant EMV chip acceptance
October 2015	Debit and credit US domestic and cross-border counterfeit EMV liability shift.
	Merchants who update their POS infrastructure can waive the annual PCI validation assessment.
October 2016	MC ATM liability shift
October 2017	VISA ATM liability shift
October 2017	Liability shift expands to automated fuel dispensers and ATMs

Source: VISA, MasterCard, American Express, Discover

These dates are not mandatory deadlines for acceptance of card transactions; however, the card companies will shift fraud liability to merchants for fraud related to chip-enabled cards if the transaction is not processed using EMV technology.

POS upgrades: Merchants' and retailers' POS systems will require hardware and software upgrades to be compatible with chip card technology. EMV implementation will require hardware and software replacement and/or upgrades to retailer POS terminals and corresponding changes to host systems. Merchants also need to put in place a comprehensive training plan for their staff and a communication plan for customers.

Is the industry ready?

Several studies have been conducted that provide a snapshot of readiness among various payment system participants:

Issuers: According to a Javelin Study ("EMV IN USA: Assessment of Merchant and Card Issuer Readiness," April 2014), issuers will have issued 166 million EMV credit cards and 105 million EMV debit and prepaid cards by the end of 2015; this will account for just 29 percent and 17 percent of total cards in circulation. They forecast full coverage only by the end of 2018, reflecting the strategy many issuers have chosen to replace cards in line with the normal card expiration cycle.

Merchants: According to data quoted by the Federal Reserve Bank of Minneapolis ("The US EMV Smart Card Migration: Are you Ready?," April 2014), only about 10 percent or less of US POS systems are capable of accepting chip card transactions and only 1 percent of POS terminals are enabled.

How to get ready for EMV implementation?

EMV will require changes across the organization and it is important for issuers and merchants to take a thoughtful approach across the organization:

EMV strategy formulation

- Determine financial impacts and benefits of EMV
- Align EMV objectives with key strategic initiatives
- Develop high-level implementation plan

Operations assessment

- Identify the business processes required to execute on EMV strategies
- Determine key components for a resource plan, risk management strategy, and change management plan to support execution of EMV options
- Determine implications of regulatory requirements for strategic options, interpretation, and application

Technology assessment

- **Merchants:** Assess POS status (e.g., configuration, EMV capabilities)
- **Issuers:** Assess card production and personalization options
- Assess emerging security technologies across POS and card not present channels
- Review strategic options and assess technical platform/architecture options

Customer education

- Develop communication plan to inform internal stakeholders and associates of the potential changes and opportunities
- Develop customer communication plan for direct and POS customer communication

What are some key questions I need to be able to answer?

Operational considerations

- Cardholder verification method (CVM) — which method to enable?
  Issuers chose which CVM to support: online PIN, offline PIN, signature only or no CVM, and determines the priority order.
- Transaction authorization options — which options to support?
  Online transactions are sent to the card issuer for approval, offline transactions are submitted from the terminal to the chip for authorization by the chip. Issuers must decide the parameters that drive transaction authorization decisions.
- How do I secure the card not present (CNP) channel?
  The EMV standard does not offer additional protection for CNP transactions and options need to be considered to strengthen this channel.

For merchants

- Which chip interface should I select?
  Chip interface can be contact only or dual interface, i.e. contact and contactless.

For issuers

- Where will my cardholders be able to change their PINs?
  Options include ATM, IVR, merchant POS.
- What card reissuance strategy should I pursue?
  Issuers may segment the cardholder base to prioritize cardholders to be converted; the broader question is whether to do a mass re-issue or re-issue in line with natural re-issue and expiration dates.

Illustrative results, Deloitte's qualifications

We have extensive capabilities and experience assisting issuers, processors, associations, and networks in their efforts to address a broad range of business transformation and operational excellence challenges.

	Representative capabilities	Select engagement examples
Strategy	Market entry feasibility	• **Large U.S. retail bank:** Analysis of credit and debit card operations to identify cost reduction, process improvement, and third-party sourcing opportunities, under a Six Sigma approach. Implementation of identified initiatives that were expected to achieve operating results in excess of projected business case benefits.
	Product leading practices	• **Major U.S. credit card issuer:** Redesign of marketing and customer acquisition processes intended to reduce cycle times, improve quality, and enable increased solicitation velocity. Process diagnostic and reengineering activities spanned multiple lines of business and product sets and encompassed the marketing channels. • **One of the world's largest online, alternative payments providers:** Executed a strategic initiative to find new revenue streams, help develop cross-selling opportunities, and drive additional customers to its core products. • **Large financial holding company:** Creation of a strategic consumer credit card co-brand structure. • **Large credit card provider:** Post-CARD Act assessment of more than 200 payments products resulting in the recommendation to retire and launch products
	Global strategy	• **Top five credit card issuer:** Helped develop an organizational assessment in response to mounting cost pressures that streamlined reporting relationships and yielded over $20M in cost savings. Focus of the effort was to reduce functional redundancy, improve governance and decision-making effectiveness, and modify staff composition. • **Financial holding company:** Evaluation of a joint venture with another merchant acquirer/ processor. • **Top five U.S. payment processor and merchant acquirer:** Helped develop a valuation and joint venture strategy, including methods to enhance the value this client can bring to its current and potential global joint ventures. • **Global payments company:** M&A assessment of mobile prepaid target.
	International growth opportunities	• **Top-three card issuer:** Identified international growth strategies and potential target acquisition/ partnership opportunities and designed frameworks and tools for go-forward independent analysis.
	Business model strategy	• Major Japanese payment services provider: Assessed competitive strategies, market positions, and future growth scenarios of leading U.S. and European payment services providers to help client design a leading business model for entering a new business domain.

	Representative capabilities	Select engagement examples
Technology	Strategic sourcing	• **Large consumer card issuer:** Assessed the feasibility of entry into new payments products and markets. Included market evaluation, competitive assessment, technology scan and architecture, potential bank and third-party alliance opportunities, and business case development. • **Bankcard association:** Conducted a competitive analyses and best practice identification of corporate card products in several market segments: corporate, small business, and public sector. Included creation of tools to support market expansion under the current product set and assessment of the feasibility of developing new products and value-added services. • **Global payments processor (a major third-party organization involved in credit and debit transaction outsourcing):** Developed a global strategy. Assessed their operating profile and technology infrastructure versus industry dynamics. Established a targeted, multilayered approach for market expansion in several global regions. • **Top four bank in Canada:** Selection of a payments platform and migration planning for a post-merger integration.
	Process optimization	• **Large commercial card issuer:** Assessed the availability and quality of data between international joint venture partners.

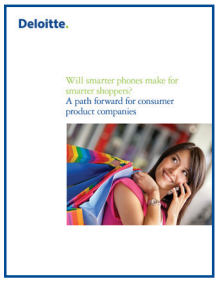
	Representative capabilities	Select engagement examples
Operations	Strategic sourcing	• **Bankcard association:** Helped develop a global, next generation transaction authorization system. Helped develop and implement a distributed authorization platform.
	Process optimization	• **Major U.S. credit card issuer:** Involved in the assessment of alternatives for the implementation of a new credit card processing platform. Supported review of available options (third-party outsourcing, vendor software, in-house), assessment of internal technology support capabilities, business case development, and the selection decision. Currently providing PMO support for initial design and configuration activities.
	Performance improvement	• **Top 10 credit card issuer:** Selection, design, testing, and implementation of a prospect pool database and campaign management platform to drive customer solicitation and acquisition activities. • **One of the world's largest payment networks:** Creation of a global, business-to-business, online payment hub. • **Leading, global money transfer organization:** Conducted premerger due diligence and postmerger integration for the global implementation of the acquired operations. • **Large U.S. credit card issuer:** Evaluation of new payments architecture to contribute cost reduction, improve product introduction, and enhance customer experience.
	Post-M&A risk-based monitoring methodology	• **Canadian bank and U.S. retailer:** Analysis and due diligence of U.S. private label credit card business acquired by a Canadian bank. Evaluated and identified high-risk card processes and drafted an inherent risk methodology. Identified strategic and operational gaps in operations, and helped develop a sustainable risk-based monitoring methodology and plan.
	Business model strategy	• **Major Japanese payment services provider:** Assessed competitive strategies, market positions, and future growth scenarios of leading U.S. and European payment services providers to help client design a leading business model for entering a new business domain.

	Representative capabilities	Select engagement examples
Financial advisory	Global buy-side advisory	• **Global provider of online payment solutions:** Analyzed and identified key targets throughout North America and Asia. Performed target qualification and assessment, corporate finance valuation, deal structuring negotiations, and management due diligence through close.
	Cross-border buy-side advisory	• **North American provider of payment processing solutions:** Gained detailed understanding of target operations in order to create a comprehensive financial model with key business drivers required for client to value target on a stand-alone and synergized basis.

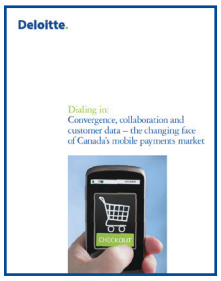
Keeping you informed

Representative thought leadership

Cell me the money: Unlocking the value in the mobile payment ecosystem
This Deloitte research study examines the challenges and benefits of mobile commerce in the United States. It sheds light on the key barriers that have traditionally challenged the mobile payment market in the United States and explains how getting ahead of the curve will require companies to develop mutually beneficial business models and take advantage of further innovations made on the mobile platform.



Will smarter phones make for smarter shoppers?
Deloitte recently released a new study, *Will smarter phones make for smarter shoppers? A path forward for consumer product companies.* This report explores the growth of mobile technology, how it is changing the shopping process, and the implications for consumer product companies.



Convergence, collaboration, and customer data — the changing face of Canada's mobile payments market
The current mobile payments landscape is filled with uncertainty, brought on by changes in consumer preferences, new technological developments and new entrants. Players in the payments ecosystem are using advancing technologies to introduce new form factors to provide ubiquitous, flexible payment options through mobile devices, leading to the rise of mobile payments, market size, expected growth, and potential opportunities with a focus on mobile payments.

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