

## Time for real time? Why banks should be giving real-time processing a serious look.

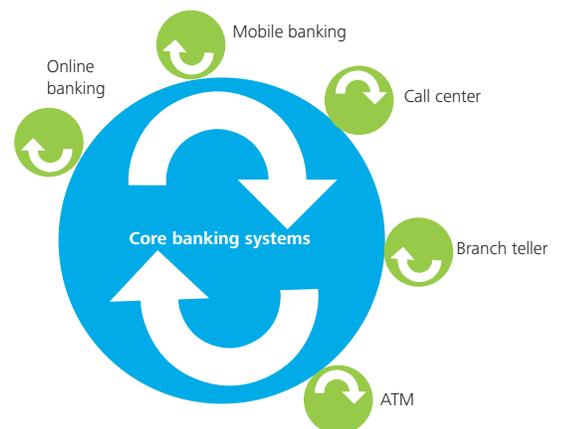
Given the current rate at which technology is evolving, the decades-old processing technologies and processes in place at most banks may belong in the Stone Age. Migrating to a real-time processing model that completes transactions with no delays can be a game changer. Real time has the power to improve the customer experience, increase back-office efficiency, and boost analytics capabilities at a time when real insight is at a premium.

While real-time banking isn't a new concept, for the most part it's failed to advance in practice. Other industries have leveraged real-time technology in areas, such as for their logistics operations, thus transforming how goods are shipped, tracked, and delivered. This has resulted in improved customer service and considerable savings for businesses. Meanwhile, many banks have adopted a host of technologies and mechanisms to provide a near real-time customer experience, particularly on customer-facing channels. But these incremental improvements are becoming elusive and decreasing in marginal benefit; most banks have already grabbed the low-hanging fruit. At the same time, the core engine and processing have gone virtually untouched and it'll likely take considerable investment to modernize such systems at banks.

That doesn't mean the costs, risks, and efforts of moving to real time outweigh the benefits – not anymore. Many banks have exhausted its tactical options for improving service and making operations run more efficiently. However, several dramatic changes – technology advancements, regulatory pressures, increased competition, and evolving customer expectations – are giving many banking leaders reasons to rethink real-time banking. Management should consider moving to a real-time processing model that can help the bank to gain the upper hand in an intensely competitive environment.

### What is real time?

Ask customers (and even some banking employees) whether today's banks already provide real-time capabilities and many will likely say "yes." After all, when you make an ATM deposit the receipt is often updated with your new balance. Maybe it's updated according to your ATM deposit slip, but try confirming online or asking a teller. These updates still take some time to work their way through the system. Behind the ATMs, websites, and tellers, each transaction is queued up with many others and processed at a later time, usually overnight. In the meantime, customers are seeing a temporary credit or debit (called memo posts) made to the account until the batch process is processed.



While real-time processing may be enabled in different parts of the bank, eventually it's all subject to the timing of the slow-moving wheel of core banking systems.

Many banks have gone to great lengths to present the appearance of real-time processing to customers. In recent years, they have made significant investments to improve capabilities in their customer-facing channels, including branches, call centers, ATMs, websites, and, increasingly, mobile applications. Customers who contact a call center representative or go online might think they're banking in real time, but, in reality, their transactions churn through a machine that spins at a much slower rate than the outer channels.

Many banks have chosen to invest in areas of their technology platforms to maintain this near real-time environment – one that offers low risk and incremental benefits. These investments have gone into building the same functions multiple times across the different channels rather than build a real-time core platform once and leverage that functionality – and investment – to the outer channels.

Technological advancements in service-oriented architecture, complex event processing, distributed computing, and virtualization can help banks transform their environments to unlock the power of real-time transaction processing. Closing the information gap – between when the transactions are initiated, queued, and processed – opens up numerous opportunities for strategic growth. This is significant at a time when many banks are under increasing pressure to lower costs and increase profits.

As banks face increased regulatory pressure, consolidation, and rapidly shifting consumer trends, many are refocusing their efforts on becoming more customer-centric as a way to increase their bottom lines, improve their reputation, and help drive performance. But enhancing the customer experience isn't the only thing on their agenda. Their checklist also includes: integrating social business and mobility into their operations; creating new products and services; blending ATMs, contact centers, and other channels into one seamless interactive experience; improving fraud and risk management; and reducing back-office expenses. Implementing a real-time processing model can help banks transform these items into reality and gain a competitive edge.

### **Seven imperatives enabled and enhanced by real-time banking**

#### **Enhancing customer experience**

Much has been written about the rippling influence of the millennial generation across society. Banks aren't

immune. This generation, those largely in their 20s, are much more tech-savvy, networked, and have a high-earning potential. They have grown up in a real-time world, and demand better-tailored products and services, greater responsiveness, more convenience, and increased transparency. And right now, they probably think real-time banking is the reality. They're likely to be "underbanked," relying on a stripped-down portfolio of banking services. As a result, they haven't experienced the disconnect between their real-time perceptions and the reality. So they may be dismayed to discover the creaking machinery of the bank lurking just below the surface of shiny, real-time perceptions. Many banks will have to scramble to catch up to consumer preferences – and, in that environment, real-time core banking systems won't be optional.

Just as important, a real-time model would improve the banking experience for the larger customer population as well. Instead of making customers plan around bank schedules, such as dealing with cut-off times and waiting for transactions to clear, banks can process transactions instantly and provide around-the-clock service. Customers do a more effective job managing their money, while enjoying an improved experience that drives loyalty.

#### **Enabling social business and mobility**

As banks become more customer-centric, social media – especially popular among younger generations – will undoubtedly begin playing a larger role in the financial services sector as it has across other industries. Besides building stronger ties and raising their reputations, social business can help banks gain insight into the needs and preferences of their customers, who create and share information about products and services with friends and others in their networks.

Some businesses use analytics to monitor, measure, and respond to the online chatter, but it's usually after the fact. Using real-time technology could take that information to a whole new level. With real-time data, banks could use it to customize a product or pricing model, for instance. They could also use social data, for example, as a factor to help determine a person's creditworthiness based on the networks in which a customer is a member.

While smart phones and other mobile devices provide another channel for customers to bank, they're also valuable in facilitating discussions on social media sites. People take such computing devices everywhere so they can instantly tell their networks where they are, what they're doing, what they're shopping for, and other

activities. This level of information when coupled with financial history can provide a new business opportunity for banks.

#### **Unleashing product innovation**

Many banks are generating and collecting more information about their customers than ever before. But when it comes to analyzing that data, it's all after the fact. A bank may not be able to offer a product or service to a customer until weeks after it has analyzed the data. Real-time analytics changes that.

Banks want to get a broad view of their customers – that means demographics, purchasing behavior along with credit card transactions, deposit and brokerage accounts, and loans. With real-time banking, they can methodically pitch products and services that fit customer needs. For example, a bank could combine transaction activity with location-based services. If a customer has just made a large deposit in their checking account, a bank may promptly respond with the offer of a bonus rate CD and, recognizing they are near a branch, invite them in to discuss the offer with a named resource working currently in the branch.

Analytics could also help banks spot potential problems – cancelling direct deposits, declining account balances, or other changes in behavior – signaling that their customers may switch to a competitor. In that case, a bank manager could intervene and inquire about the account and try to retain that customer. With real-time analytics enabled by real-time transactions, banks can get an up-to-the-minute understanding of customer needs, develop more effective relationships, and provide on-the-spot business opportunities.

#### **Improving multichannel integration**

Many banks have added new service channels at a dizzying pace in recent years to keep up with customer preferences and technology developments. While these channels are much more sophisticated than a bank's back-end machinery, they are essentially stand-alone systems, providing inconsistent functionality and information. Regardless of how adept customers are using those channels, they still must wait for transactions to be processed at a later time, which can be confusing.

Real-time processing can help banks deliver a blended multichannel experience. For example, consider a customer who has an opening balance of \$250. That customer today deposits \$750 through the ATM. In a near real-time environment, that customer has to wait until the bank

processes that deposit, which can take a day or two. So if a point-of-sale transaction for \$500 were attempted today, the customer would be denied that sale due to insufficient funds. In a real-time processing system, that \$750 deposit would be cleared promptly, allowing the customer to make a transaction using a bank's debit card, online or through a smart phone.

With real-time technology, channels could even interact with one another. For instance, a customer could use a smart phone keypad to communicate with an ATM or even queue a transaction and wave the smart phone in front of the ATM to process a transaction. In addition to opening up a plethora of customer experience options, this enhanced channel functionality may help banks sell other financial products at branches and reduce complaints and other inquiries to their call centers. Banks might also save money by driving customers to use lower-cost channels, such as through smart phones, for more routine, lower-value transactions. This could free up time at high-cost branches for more complex, higher-value transactions and services.

#### **Strengthening fraud management**

Real time can help speed the work of identifying and responding to potential fraud. In the current banking environment, transactions can be initiated on many different channels – online, branch, ATM, point-of-sale – with each channel communicating separately with the core platform. Right now, some banks use stand-in files, while others memo post and process transactions at the end of the day; some do both depending on the time of the day. Since these channels operate independently of one another, the core platform becomes among the only point of synchronization where banks can identify potential criminal activity.

With a real-time system, which could also incorporate other types of data like location information, banks could detect fraudulent transactions as they happen by analyzing aggregate pattern of transactions. For example, a series of withdrawals across several channels – a \$500 withdrawal from an ATM in Toronto and a \$250 branch withdrawal in Chicago – may appear to be normal if viewed separately. But when these transactions are examined in aggregate across these multiple channels within minutes, they may represent a series of fraudulent transactions. Without a real-time system, such activity might go undetected for days, weeks, or even months.

### **Informing risk and compliance decisions**

Due to the complex patchwork of channels developed in an effort to appear real time, such banks may not be as nimble as they need to be to respond to and comply with changing industry regulations. Under growing regulatory pressure, most banks will likely need to improve their risk management and reporting capabilities, such as fraud detection and customer liquidity.

Banks can potentially provide customers with certain benefits that are impossible now with a near real-time system. Future consumer protection regulations, for instance, may require banks to provide increased transparency and awareness around a customer's true financial status. As an example, if a customer is about to initiate a transaction that's going to overdraw an account, banks could send a text message informing the customer of the potential overdraft. The customer could either authorize the transaction or not, but the customer is at least notified of the overdraft fees involved and presented with the ability to direct the outcome. In this case, banks are not only adhering to regulations but also improving the customer experience.

### **Increasing back-office efficiency**

Many banks spend considerable time and cost on staffing, facilities, and transportation needs when it comes to processing transactions later. A real-time system processes transactions promptly – at the front end – reducing the need for manual and automated back-office cycles. This reduces risks such as data entry errors, which can lead to write-offs and lower profitability. Banks can shift investment from back-office operations to other needed areas, such as helping customers resolve complaints and other inquiries.

With a real-time system, banks can use their infrastructure investments more wisely. Computer systems are freed from running batch processes that last several hours, which may reduce delays or bottlenecks that occur if the system breaks down. The time is more effectively spent running other system activities to drive growth, resulting in much more manageable data center costs. Since these costs are closely tagged to peak usage, and batch processing results in extreme peaks, a real-time approach can smooth out usage patterns, enhance efficiency, and significantly impact costs.

### **Future forward**

The banking landscape in general is poised to dramatically change over the next decade. Many predict further consolidation among the roughly 7,700 banking institutions in the United States. This environment will likely force banks to focus more on operational efficiency and growing equity. Additionally, they may face rising shareholder expectations for risk-adjusted returns and increasing industry regulations and scrutiny.

Greater competition may also motivate financial institutions to consider real-time systems. U.S. banks face credible competitive threats from foreign banks and nontraditional organizations, such as Internet-only or direct banks, many of whom run on real-time banking platforms. These competitors are more technologically advanced, have lower operational costs, and may offer more products and services tailored to their customers. As competitors gain a larger foothold, some U.S. banks may lose market share, customers, and revenues.

The focus on investing only in customer-facing channels, such as ATMs, websites, and now mobile applications, has generally resulted in near real-time processing for most banks. But it's created rigidity, complexity, and a rapidly diminishing return on investment. No matter how fast the smaller gears on the edges (the channels) spin, the slow-moving wheel at the center (the core platform) controls when transactions are processed and therefore visible and actionable across the channels. Ultimately, that wheel limits the total value generated by the overall system.

Real-time banking can have a big role to play in helping banks address these challenges. With a real-time core in place, banks can simplify their channel solutions and reduce the total cost of ownership of their technology infrastructure. Improved efficiency is only part of the story. Real-time banking also means happier customers – in this hyper-competitive banking environment.

Very soon, the code will be cracked on real-time banking – and when it is, it will open up a huge competitive advantage. Real-time banking is within reach today.

**For additional information, please contact:**

**Brian Johnston**

Banking Consulting National Leader, Principal  
Deloitte Consulting LLP  
bjohnston@deloitte.com

**Greg Kelly**

Banking Consulting, Principal  
Deloitte Consulting LLP  
grekelly@deloitte.com

**Richard Walker**

Banking Consulting, Principal  
Deloitte Consulting LLP  
richardwalker@deloitte.com

**Rakinder Sembhi**

Banking Consulting, Senior Manager  
Deloitte Consulting LLP  
rasembhi@deloitte.com

This publication contains general information only and is based on the experiences and research of Deloitte practitioners. Deloitte is not, by means of this publication, rendering business, financial, investment, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte, its affiliates, and related entities shall not be responsible for any loss sustained by any person who relies on this publication.

**About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see [www.deloitte.com/about](http://www.deloitte.com/about) for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms. Please see [www.deloitte.com/us/about](http://www.deloitte.com/us/about) for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.