The value of transforming core banking systems

Creating agility, flexibility and long-term growth by streamlining core operations
Introduction
Banks around the world face huge economic and regulatory challenges. New competitors are wooing customers with non-traditional business models. New platforms could sideline banks altogether. In addition, the pressure on banks to cut costs and build income has not and will not let up.

If one thing keeps bankers from meeting these challenges, it is the complexity of core banking systems. Complexity can add up to 40 percent overhead to a bank’s operating expenses. Estimates place the yearly cost of these systems in mature markets at US$200 billion. Their inflexibility can be a constant drag on innovation and income growth.

Some banks have launched multi-million-dollar projects to upgrade their core systems. But bankers often question if and how well those investments will pay off. Will they lower costs? Will they raise revenues?

Research now shows that banks can speed time-to-value and maximize ROIs. The key is to focus on certain key competencies that yield the best financial benefits.

The core of the challenge
Banks once commonly built core banking systems around products, not customer needs. Over time, this caused basic banking processes to depend on many inter-related applications.

This may have worked in a more forgiving, less competitive era. But no longer. New products, technologies and business models are winning over once-loyal customers. As a Wal-Mart executive told The New York Times, “We’re not a bank, but we can serve a lot of types of functions you would see someone go into a bank for.”

To compete today, banks must become much more nimble. They need to quickly meet marketplace threats and opportunities. Core systems can’t be allowed to block change and innovation. Isolated stacks of rigid processes must be transformed into horizontal, closely integrated core systems. Data needs to flow freely. Processes must be interoperable if they are to drive better decisions and faster responses.

A path to greater agility
Restructuring data and processes is not a casual undertaking. But it needn’t require “rip and replace.” Banks can save many legacy components. And they can start building processes with modular elements they can quickly mix and match into new, game-changing products and services.

Banks can benefit by breaking projects into stages geared to four critical competencies outlined on page 3. This can mitigate the risk of disjointed projects that only compound the problem. And this can yield savings and revenue growth even before the full project is finished. Those early benefits can also help maintain the buy-in of key stakeholders.
The key competencies are:

- **Streamlined operating environment**– Banks align business, operations and technology using a common, de-duplicated banking architecture and infrastructure platform that can help eliminate redundancies, drive out complexity and costs, and increase flexibility.

- **Standardized business processes**– Organizations can deliver needed business capabilities faster by introducing modular business services comprised of common data, business rules and processes that can be configured quickly to get new products and services to market with less risk and cost.

- **Automated operating environment**– Back-office performance can be improved by monitoring operations, predicting systems performance, simulating outcomes and dynamically changing workflows—all in real time.

- **Adaptable core banking system**– A flexible and agile banking environment can enable a bank to adapt to ongoing structural shifts, continuously realign itself to new business needs, proactively manage customers, and deliver products faster and more consistently.

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“*My definition of an integrated core back office is when all your application systems pull from the same customer database, same business rules database and are fully integrated with each other in a real-time environment.*” — ex-CIO and Board Member, large European bank

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**How we put a value on “smart”**

Throughout this paper you’ll see references to how smarter core banking competencies can deliver real financial benefits. This information is based on primary research conducted by the IBM Center for Applied Insights with financial institutions around the world and supported by secondary industry information. The research findings were then reviewed with industry experts and key banking executives. As part of the research, a hypothetical Tier One bank with US$1.2 trillion in assets was modeled in detail to determine how smarter banking competencies can impact key value drivers.
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Figure 1: Successful core banking system transformations evolve. Banks build and integrate key competencies to achieve greater agility and adaptability. Typically, the first competencies gained produce cost savings. Those in later stages help produce and sustain higher revenues.


Figure 1 shows the optimal progression of competencies. It begins with designing a common architecture and infrastructure platform to drive out complexity and costs. And it leads to the agility banks need to cope with and conquer the industry’s greatest challenges.

Along the way, banks can gauge their progress towards practical, profitable core systems. By closing critical gaps, they can avoid efforts that don’t speed time-to-value and maximize ROI.

Banks may find that they already have a good start towards the needed improvements. It’s essential, however, to develop a vision for actually reaching those goals. Banks shouldn’t let the first project benefits (usually cost savings) be the last. As they develop these competencies, the increased revenues can be substantial.

A large Colombian bank centralized a fragmented, time-consuming and risk-prone loan management process. Processing times dropped from 17 days to as little as 30 minutes. Loan sellers now use mobile devices to check credit histories – even in customer homes. The bank assesses risks using consistent protocols and better information. These and other capabilities have generated an annual ROI of US$1 million through higher interest income.”
Streamlining the operating environment

A bank in Spain used a common data and infrastructure architecture to outsource 475 full-time employees. The result: 60 percent cost savings coupled with top-line growth. And all within 29 months.8

Core systems often reflect well-intentioned but antiquated design strategies. Highly siloed, they can’t drive today’s much more interrelated processes. Too often, support is limited to one product, product line or financial instrument. While optimized for throughput and response time, current systems can contain duplicated, inconsistent data and drive redundant functions. This can cause errors, delays and high costs.

Matters often get worse over time. Redesigns and modifications can produce massively complex and unwieldy systems. Even a slight change to one element can disrupt processes across the enterprise.

Meanwhile, bankers want broad-based management intelligence. They see product and service innovation stalled by system complexity. Lucrative marketing and delivery channels remain untapped because the bank can’t quickly aggregate, analyze and act on the wide-ranging information they provide. Automated responses are extremely difficult.

Fortunately, all this has the potential to change with a common banking architecture and infrastructure platform based on a clear, consistent vision to guide development and maintenance. Banks can then almost immediately start seeing major cost reductions. Employees would no longer need to waste resources chasing data among lines of businesses and reconciling the differences. They could lower the expense of storing, securing and maintaining duplicate data.

“By reducing systems, straight-through processing has increased in efficiency by 63 percent.” – VP of IT for a major bank9

Business complexity need no longer equal system complexity. Expansions, market shifts, regulatory compliance—all can be simplified. Mergers and acquisitions become easier to accommodate. Best of all, core system streamlining sets the stage for more valuable competencies down the road: even greater streamlining, cost reductions, information exploration and revenue increases.

Ask yourself…

- Can our bank easily access and integrate customer and product information to address customer needs?
- Is our banking activity supported by integrated systems and common data sources?
- Do our data and systems drive complexity—and unnecessary labor and IT costs?

Streamlined Operating Environment

US$189M to US$374M
(0.34% to 0.63% of revenue)

Contribution by value driver

- 16% Reduce IT maintenance
- 20% Reduce cost of deposits
- 64% Reduce operations cost

Figure 2: Banks can dramatically cut operational and other costs by moving to a common platform and infrastructure. Economies gained here can also help fund the latter stages of transformation, where the potential benefits shift toward gains in revenue.
The value of transforming core banking systems

Ask yourself...

- Do we have a bank-wide process framework guiding the processes and systems within our business units?
- Are most of our processes automated? Are we minimizing manual intervention?
- Are our business processes modular? Do they provide flexibility and transferability to the bank’s business units?

Standardizing business processes

An Australian bank re-engineered its personal loan application process. This reduced loan approval times by 20 percent. It also increased loan values by 25 percent. The bank recovered its investment in the upgrade in less than a year.  

Many banks struggle to run and maintain non-standard processes across different products and lines of business. But they could raise efficiency by integrating modular processes within a common, enterprise-wide business architecture. A leading Asian bank did this and cut the time needed to change policies from three months to three days.  

Banks can also link modular processes to create innovative products and services. For example, a bank could program a proprietary account sign-up procedure to feed important data into a cross-selling tool. It could extend services to mobile devices. It could quickly test and rollout new security features. Planning, monitoring and analytic systems could also be linked to share key information in real time.  

In response to increasing competition, a large Turkish bank undertook a process optimization initiative to support its strategy of organic growth and improve efficiency to deliver greater return on equity. The bank was able to free up valuable resources and witness improvements in cross sales, campaign effectiveness and service level. Thanks to an integrated information architecture, the bank developed advanced analytical capabilities and was able to enhance its effectiveness through better straight-through processing. 

A study of 12 leading retail banks across North America, Europe and Asia-Pacific makes another case for standardization. Banks that synchronized their operations and frontline organizations saw higher levels of cross-selling and customer retention. They also increased productivity. In fact, the best performers were serving 80 percent more new current accounts per full-time operations employee than the group average.  

“The ability of our product development group to roll out new products is pretty fast. The problem is the supporting infrastructure to support back-office processes.” – VP, IT, European bank

Potential annual operating profit benefits from Smarter Core Banking Solutions for select banks, after implementation

<table>
<thead>
<tr>
<th>Contribution by value driver</th>
<th>Percentage</th>
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<tr>
<td>10% Increase customer acquisition</td>
<td>10%</td>
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<tr>
<td>14% Increase revenue per customer</td>
<td>14%</td>
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<tr>
<td>4% Reduce IT maintenance</td>
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<tr>
<td>23% Reduce cost of deposits</td>
<td>23%</td>
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<tr>
<td>49% Reduce operations cost</td>
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Figure 3: Moving to standardized, modular processes can bring significant cost reductions. The flexibility of these processes and the speed with which they can be deployed also open the way to new or enhanced banking products and services. The result: gains on both sides of the income statement.
Automating the core

A Spanish bank now analyzes customer data in hours, not weeks. Using predictive analytics, it plans, automates and executes highly targeted marketing campaigns tailored to likely customer behavior. The bank projects 20-percent higher customer retention. This largely stems from cross-selling and up-selling that is in step with changing customer preferences.¹⁵

Like any business, banks often find it hard to keep up with change. First, they need the ability to spot it. This means tracking countless variables. Then, they need to take the right action. This can be especially tough in today’s banking world. Change is coming at banks from many directions. And each change can trigger many more. Delayed or inadequate responses often make it even harder to overcome threats and capture opportunity.

However, banks that reach this stage of core system transformation can start to dynamically respond to change. They can also sharpen those responses, reducing labor and capital costs while improving results.

Armed with an integrated data and a common architecture, banks can find it easier to adapt to change in all of its forms. New analytical tools can be put in play. Banks can at once broaden and sharpen their understanding of their businesses. Automated systems can track the constant flux in customer preferences, branch workloads, new regulations and other variables. Performance monitoring can become more timely and precise. Simulation and modeling can improve workflow. In addition, better ways to align processes can reveal themselves.

Banks can get in front of change by simulating its impacts before they occur. They can also use advanced data mining tools to learn about customers as individuals. In Argentina, for example, one of the largest banks used modeling and data mining to hone its marketing efforts. It was able to predict which customers would best respond to which sales offers. Using this deeper insight into marketplace behavior, the bank began to target offers to the most likely prospects. In its highly competitive marketplace, the bank increased consumer revenues by 40 percent.¹⁶

Figure 4: At this stage, a bank can be automatically monitoring business activities and operations for opportunities to improve performance. This can lead to improvement in both costs and revenues.

“We can detect customer patterns based on existing data and deliver extremely targeted offers and promotions to both retain and attract customers.” — Spanish bank executive¹⁷
Ask yourself…

- Can our enterprise use a plug-and-play approach to integrate internal and external parties with our core banking system?
- How quickly do our systems and business processes adapt to a changing marketplace?
- Are we able to easily keep our operational model aligned with a changing business landscape?

Agility achieved— and sustained

A Japanese bank beat its closest competitor into Internet banking by gaining a single view of customers across many lines of business. Now it can quickly create customized products and both cross- and up-sell via the web. In its first 18 months, the bank opened 400,000 new accounts and brought in 600 billion yen in new deposits.18

The fourth and final competency can empower banks to integrate their new capabilities and rapidly adapt to change. Some of the underlying themes are those of earlier competencies. These include common architectures, integrated monitoring, analytics and the like. But now the impact expands to a bank’s different geographies, business lines, market segments and regulatory jurisdictions. It can enable the institution to sustain its gain by continuously adapting to structural shifts and business needs.

In one sense, banks at this point will have come full circle (albeit at much higher levels of sophistication). They may have decades of growth behind them and millions of customers on every continent. But core systems transformation will have restored the basic attributes that launched them on their way, reconnecting them to customer needs. Banks will be tuned in to the subtlest moves of competitors and smarter at responding to change. By shedding the complexities that growth can bring, they will have turned their size and reach into assets of unprecedented scale.

“Our issue is not just a systems issue. How do we retool products so we market the right products to retain and acquire deeper customer relationships; it’s about how to create dynamic product offering… that would be a complete transformation.”

–MD IT– large North American bank19

![Adaptable Core Banking System](image)

Adaptable Core Banking System

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<th>Contribution by value driver</th>
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<tbody>
<tr>
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<td>Reduce cost of deposits</td>
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<td>Reduce operations costs</td>
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Potential annual operating profit benefits from Smarter Core Banking Solutions for select banks, after implementation

Figure 5: Competencies gained here are primarily aimed at increasing revenues. They can enable a bank to create an agile environment—and sustainable successes.

Characteristics of a smarter core banking system

Core system agility can help a bank to achieve true agility. Its new platform will help it operate as the bank of the future, quickly and effectively responding to changes in:

- The business model by fully leveraging modular components to smoothly integrate existing processes and those of new partners, suppliers and customers
- The product/service portfolio, including complex offerings requiring lightning-fast development and implementation
- Customer insights, needs and segmentation
- Channel use driven by a flexible platform enabling fast, easy channel addition, integration and enhancement
- The internal environment, including the bank’s organization, risk appetites, employee base and other factors requiring enterprise-wide information and implementation
- Regulatory requirements
Making the case for investment in core systems transformation

This report describes a strong, flexible framework for core system transformation. Banks can use it to drive fast successes, long-lasting improvements and a strong ROI. It can also help banks identify and prioritize the competencies that can speed those benefits.

The findings shown here result from a rigorous research process designed to quantify the potential returns from a key set of competencies. We based the model on a hypothetical bank with US$1.2 trillion in assets. We projected a phased, five-year investment of US$622.5 million in core system transformation. This enabled the bank to break even in just over two years. After five years, it was generating annual, pre-tax returns of US$1.9 billion. Most of the early returns came from reduced costs. Later gains reflected higher revenue.

Some banks may choose a slower approach to systems transformation. The size and timeframe of their returns will vary accordingly. Nevertheless, the potential returns warrant any bank to investigate the benefits of core system transformation.

Could this be you?

Contribution by value driver

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<tr>
<td>36%</td>
<td>Reduce operations cost</td>
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<td>20%</td>
<td>Reduce cost of deposit</td>
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<tr>
<td>4%</td>
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<tr>
<td>24%</td>
<td>Increase revenue per customer</td>
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<tr>
<td>16%</td>
<td>Increase customer acquisition</td>
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Potential value: US$300M to US$1.9B

Potential annual operating profit benefits from Smarter Core Banking Solutions for select banks, after implementation.

Investment highlights

- **Streamlining the operating environment**
  - alone can reduce costs by nearly two thirds.

- **The greatest potential for overall gain comes from adopting standardized business processes.**

- **As banks automate their operating environment**
  - they can begin to see some very substantial revenue increases.

- **Nearly 75 percent of the benefits of adaptable core banking comes in the form of higher revenues.**

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*Figure 6:* To determine the potential of investments in core banking transformation, we modeled a hypothetical bank with US$1.2 trillion in assets. These results indicate what may be possible after five years, assuming a full range of investment and typical levels of business and IT sophistication. The same methodology that produced these results can be applied to any bank to indicate its potential for gain.
Seize the opportunity
Core system transformation can propel your institution into smarter banking, lower costs and higher revenues. Maybe your competitors have a head start. But you could still overcome them. The idea is to focus on the competencies yielding the fastest and largest returns.

IBM is ready to help you find your bank’s best path to transformation. We can help you leverage both your current capabilities and new assets to achieve your objectives. We encourage you to contact us to find out more about the full scope of our work and how it can be a benefit your organization.

About the author
Cormac Petit dit de la Roche is the Principal Consultant for Banking with the IBM Center for Applied Insights. He has over 25 years of experience leading innovation and business transformation strategy development with banking clients. Having held various leadership positions in consulting and finance, he brings a unique perspective to his current role where he is focused on helping banking clients explore the value potential of improving operational competencies across their businesses. Mr. Petit can be reached at cormac-petit@nl.ibm.com

Acknowledgments
We would like to acknowledge the contributions of the IBM teams that worked on this research and modeling project:

Key Research Analyst and ROI Model Developer
Veena Gupta is responsible for leading the development of a full range of marketing science and marketing research analytic capabilities for pricing optimization of IBM offerings. She has developed best practices for objective economic analysis of customer value from both IBM and competitor offerings. Prior to joining IBM, Veena was a director of economic analysis at a major telecommunications carrier.

Industry Team
- Saket Sinha
  Core Banking Framework Leader
- Pablo Suarez
  Global Banking Center of Competence
- Reto Gruenenfelder
  Global Banking CTO
- Keith Tutton
  Banking Business Solutions Leader
- Francisco Rios Vallejo
  Core Banking Lead Global Banking CoC

Research and Modeling Team
- Josephine Guevarra
  Market Insights Value Pricing and Optimization
- Esme Laubscher
  Market Insights Value Pricing and Optimization
- Stephen Rogers
  Director, IBM Center for Applied Insights
- Clayton Henke
  Manager, IBM Center for Applied Insights
- Pascal ter Horst
  Consultant, IBM Global Business Services
At IBM, we collaborate with our clients, bringing together business insight, advanced research and technology to help give them a distinct advantage in today’s rapidly changing environment. Through our integrated approach to business design and execution, we help turn strategies into action. And with expertise in 17 industries and global capabilities that span 170 countries, we can help clients anticipate change and profit from new opportunities.

The IBM Center for Applied Insights integrates deep industry and analytical expertise to help chart the course to new value for clients. The Center develops research and tools with pragmatic guidance to provoke organizations to action.

The model for smarter banking investment that emerged from this research, along with the hypothetical value projections, is designed to help banks gauge their potential returns from their own, similar investments. The model can be scaled for different industry segments and maturity profiles to produce individually tailored results directly applicable to your organization.


6 Source: Banking executive interviews, IBM Center for Applied Insights. October 2011

7 IBM case study

8 IBM case study

9 Source: Banking executive interviews, IBM Center for Applied Insights. October 2011

10 IBM case study

11 IBM case study

12 IBM case study


14 Source: Banking executive interviews, IBM Center for Applied Insights. October 2011

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19 Source: Banking executive interviews, IBM Center for Applied Insights. October 2011