

# Banking on iSeries Systems

Defines why 16,000 banks worldwide are powered by the IBM **@server** iSeries system

Features world class ISV banking solutions for iSeries systems

Provides iSeries banking success stories







International Technical Support Organization

**Banking on iSeries Systems**

July 2005

**Note:** Before using this information and the product it supports, read the information in “Notices” on page v.

**First Edition (July 2005)**

This edition applies to the IBM @server family of products, which includes IBM @server iSeries systems.

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# Preface

Installed in over 16000 banks worldwide, the IBM® @server iSeries™ system has the world's most diverse independent software vendor (ISV) banking solutions portfolio. The iSeries system offers bank executives unparalleled freedom to choose the best applications for their banking needs. It provides integrated, secure capabilities to grow cost-effectively in concert with a bank's business growth requirements. It is designed to streamline banking infrastructure and operations, so banks can invest those savings to capture the growth in the industry today.

This IBM Redpaper introduces the iSeries system, explains why it is an outstanding system on which to run banking solutions and highlights ISV solutions that are available today. It is written for executives and IT experts in the banking industry who are looking to solve challenges in their own environment.

## The team that wrote this Redpaper

This Redpaper was produced by a team of specialists with support from the International Technical Support Organization, Rochester Center.



# Executive summary

Because of the business flexibility and cost saving benefits it offers, over 16 000 banks around the world run their businesses on IBM @server iSeries. This broad success is due to the iSeries providing unmatched support to banks to help them respond to the challenges they face. Such challenges include driving down costs, addressing regulations and business continuity and growing revenue.

Collectively, the many business challenges that the banking industry faces today are causing a transformation of the banking business. The iSeries system is at the center of this transformation, helping banks balance their complex business demands with a streamlined IT environment.

Among the top qualities that the iSeries system is known for is its security. Relative to other system environments, security on the iSeries is easy to implement and manage. Banks can secure transactions, client information and business data against breaches from inside and outside the bank. Such technologies help prevent data tampering, guarantee client confidentiality and reduce the risk of fraud.

With an iSeries system, a bank has one of the most complete and secure integrated business solutions that is designed to run many of the world's most popular banking applications. An iSeries system provides faster, more reliable and highly secure ways to help simplify the IT environment. It does this by reducing the number of servers and associated staff required, which can help save money and enable reinvestment in business growth.

By running all of the applications that a business needs on one secure, easy-to-manage system, iSeries systems facilitate server consolidation, which can help eliminate complexity, enhance manageability and deliver low total cost of ownership (TCO).

To help consolidate application and server farms, iSeries systems can run multiple operating systems and applications simultaneously. The iSeries system supports applications running in IBM i5/OS™, Microsoft® Windows® (via Integrated xSeries® Adapter or Integrated xSeries Server), Linux®, IBM AIX® 5L™, Java™, WebSphere®, Workplace™ and Lotus® Domino® environments all at the same time and all on one highly reliable system. The iSeries system greatly simplifies a bank's decision for applications by providing the ability to choose solutions based on business need, not operating system.

Built-in security features on iSeries systems can help businesses meet regulatory requirements and safeguard critical data across all of these application environments. In addition, iSeries systems can help businesses to maintain critical customer service levels and handle growth in demand by automatically balancing application resource demands and scaling up and down to match business cycles. These IBM Virtualization Engine™ system technologies give companies the freedom to run a wide variety of business applications without the costs and complexity often associated with managing multiple servers.

If your bank does not run on the iSeries system, consider becoming one of the thousands of banks around the world that does. With its extensive portfolio of solutions, integrated, business-driven design, simplicity of ownership and operation, and security and reliability, the iSeries system is tailored to meet your banking business needs.





# **The iSeries system: The world's integrated system for banking**

Sixteen thousand banks around the world rely on the IBM *@server* iSeries to give them a competitive advantage. By design, the iSeries unequivocally addresses the needs of banks, offering business flexibility and cost savings. It ships integrated from the factory, along with everything necessary to support a robust set of applications. It supports multiple operating systems and application environments on a system that is known for its reliability, availability and security. It has a solutions portfolio second to none. If you have not yet considered the iSeries system for your core banking environment or for expanding solutions around your core banking environment, you should do so now.

This chapter explains how the iSeries system brings value to your business. In particular, it explains how the iSeries system can help you address the challenges that banks face.

## 1.1 How the iSeries addresses challenges that banks face

Because of its extensive portfolio of independent software vendor (ISV) solutions along with its world-class reliability, security, integration and simplicity, over 16000 banks around the world run their business on the iSeries system. This broad success is due to the iSeries providing unmatched support to banks as they respond to the challenges they face. These challenges include:

- ▶ **Driving down costs:** Banks acquire or merge with other banks for the practical reason of driving down costs. As banks come together, they combine, consolidate and reduce redundancies in IT resource and staffing, which helps reduce operating cost. They often arrive at less complex IT environments and services that require fewer personnel. However, as staffing reduces, banks are challenged to enable higher levels of client self service. These and related issues all influence their efficiency ratio, an important measure of how the bank fiscally manages its business.
- ▶ **Growing revenue:** Among the best ways for banks to grow revenue is to expand into nontraditional areas of business. Banks are searching for new ways to position themselves not just as banks, but as complete financial centers. They look to provide traditional products and services as well as new services such as stock trading, insurance and investment services. At the same time, banks seek to serve the global market.

- ▶ **Addressing regulations and business continuity:**

Government regulations such as the Sarbanes-Oxley Act, the PATRIOT Act and Basel II are critical to banks, and governments around the world are constantly introducing them. Banks must find ways to respond quickly to these regulations and do so error free. The regulations often require banks to apply stricter controls over international transactions and to report, in detail, suspicious movements of cash.

The regulations also require financial institutions to provide greater detail about the stability of the institution and the risks to shareholders.



Figure 1-1 The IBM @server iSeries system

The iSeries system is the premier business system for banks who value integration, simplified use and support for a wide variety of business applications. It is designed specifically to integrate the latest operating systems and technologies, which are extensively tested to work together. It provides faster, more reliable and highly secure ways to help you simplify your IT environment by reducing the number of servers and associated staff required. In turn, this helps you save money, optimize your efficiency ratio and reinvest in growing your business.

## 1.2 Integrated, business driven design

iSeries systems are designed with all the components that are necessary to support a bank's solution. These components include the required hardware, operating systems, security, middleware and storage. They are developed, integrated and thoroughly tested to help ensure that all of the capabilities function cohesively, seamlessly and reliably, before the system leaves the factory instead of at the bank.

iSeries systems are designed to run an extensive portfolio of business applications and enable the broadest choice of applications available on a single system. They are available as preconfigured, preloaded systems to help simplify implementation and improve the time to benefit from new applications. iSeries systems enable banks to make the most of their investment. They are able to run at 96% processor utilization or more while still delivering subsecond response time to users.

- ▶ iSeries hardware, operating systems and middleware are designed to work together. They are tested together as part of the development process and then are built and tested again as a unit. This process ensures that all of the capabilities operate together smoothly and reliably before the system ships to the bank, not after. The iSeries system is ready for business when it arrives.
- ▶ The primary iSeries operating system, IBM i5/OS, is a sophisticated multiuser operating environment. It incorporates DB2® Universal Database™ (UDB), comprehensive security, scalable online transaction processing (OLTP), advanced systems management, networking standards, a high performance Java virtual machine (JVM™), virtualization technologies and an enterprise-class work management implementation which supports multiple, disparate application workloads at high levels of utilization with stability. By contrast, many multitasking operating systems today support a rudimentary file system and require varying degrees of system integration (by the bank or their support personnel) to achieve the advanced functions necessary to support robust business solutions.
- ▶ DB2 UDB and WebSphere Application Server – Express are integrated into the i5/OS operating system. A wizard makes configuration and deployment of WebSphere Application Server – Express quick and easy.
- ▶ Support for multiple operating systems and application environments (running simultaneously on a single system) makes it possible to select the application that your bank needs independent of any single operating system. The iSeries system is an ideal choice for server consolidation.
- ▶ The iSeries system has greater than 96% sustainable processor utilization with subsecond response time, compared to less than 10% processor utilization in a Wintel environment. A review of over 12000 Wintel platforms at more than 350 client locations shows that the average machine CPU utilization is less than 10%. While low usage of individual platforms is significant to the total cost of ownership, the sources of minimal usage are also important. Overall, the operating system takes 7% to 9% of the total CPU processing power. This is extremely significant, when combined with the average utilization of 10% mentioned previously.
- ▶ Express solution offerings are specifically designed and packaged for rapid deployment and low acquisition cost. For more information, see:

<http://www.ibm.com/eserver/iserries/hardware/520express>

## 1.3 Simplicity of ownership and operation

The iSeries system makes managing your IT environment simple. The system is self-managing and self-tuning, and requires minimal technical staff.

Because DB2 UDB is integrated and many administration tasks are automated, it requires no database administrator. The system can respond to fluctuations in demand by automatically shifting or activating additional processing power based on the changing needs of the applications running on it. It provides an intuitive graphical user interface (GUI) if manual adjustments are preferred. It can help reduce the cost of your IT operations by consolidating multiple servers, operating systems and applications onto a single system. The iSeries system also provides a single point of administration for i5/OS, Windows2, Linux2 and AIX 5L3 users and applications.

- ▶ The iSeries runs practically any application that a bank has today and adapts quickly and easily to accommodate applications that may be needed in the future. i5/OS, due to its breadth and richness of integrated function, offers the greatest versatility and operational efficiency by natively and concurrently supporting applications built in RPG, COBOL, C, C++, Java, WebSphere and Domino. Whether in one i5/OS partition or many, these disparate application workloads run with stability and scale to high levels of resource utilization.

In addition, because it is designed to support i5/OS, Windows, Linux on POWER™, Linux on Intel® and AIX 5L simultaneously, the iSeries system greatly simplifies a bank's decision about applications by providing the ability to choose solutions based on business need, not the operating system. The iSeries system is an ideal choice for server and application consolidation.

- ▶ Micro-Partitioning and shared processor partitions enable the iSeries to shift processor resources from one partition to another automatically, based on the need for more processing power in one partition and the availability of unused processing power in a different partition. Manual adjustments of processing resource can be made dynamically from one partition to the next. For more information, see:  
<http://www.ibm.com/eserver/series/hardware/virtualizationgrandslam/>
- ▶ Capacity on Demand enables clients to scale-up and scale-down processing power and memory as their business needs fluctuate. Learn more at:  
<http://www.ibm.com/servers/eserver/series/ondemand/cod>
- ▶ Basic system operations, work management, configuration and other typical tasks can be performed through a single intuitive GUI called *iSeries Navigator*. Many iSeries Navigator functions are also available from a Wireless or Web interface. To learn more about iSeries Navigator, go to:  
<http://www.ibm.com/eserver/series/navigator/>
- ▶ Storage virtualization provided with i5/OS enables a common set of storage for a variety of operating systems and application environments. Storage utilization is more efficient and more manageable as explained on the following Web site:  
<http://www.ibm.com/servers/eserver/series/storage/>

## 1.4 Secure, reliable and time proven

iSeries systems are secure, reliable and time proven. Complete with built-in security, they can help a bank with regulatory compliance (such as Health Insurance Portability and Accountability Act (HIPAA), Sarbanes-Oxley Act and PATRIOT Act) processes and safeguard customer data. They are virus resistant and can help avoid the lost productivity of managing viruses.

iSeries systems are designed and built to run with no unscheduled outages. They enable new features and hardware to be added with no disruption to business, and they exceed 99.9% uptime. iSeries systems build on more than 27 years of experience and investment in transaction processing optimization and application investment protection.

- ▶ The iSeries operating system, i5/OS, has built-in security and virus resistance. In addition, the file system has application programming interfaces that support real-time virus scanning.
- ▶ There are fewer identified and documented vulnerabilities for i5/OS than for other popular operating systems.
- ▶ The iSeries system receives the highest client satisfaction of any system in the industry.
- ▶ Investments in applications and user skills are strongly protected on iSeries systems. While other architectures require recompiling applications from release to release, the iSeries system does not. Even dramatic changes in underlying technologies, such as processor architectures, input/output (I/O) adapters and bus structures, can be introduced without disruption to the business applications supported by i5/OS. This system has been offering *object code compatibility* (the ability to run an application, without recompilation, on a later generation operating system or server) for over 27 years, more than any other system in the industry.
- ▶ Premium IBM Support options are available worldwide for the iSeries system.
- ▶ The iSeries system has high reliability for a single system, exceeding 99.9% uptime. Reliability is a by-product of its integrated design and associated rigorous testing. Additionally, it has specific offerings designed to provide higher or near continuous availability.
- ▶ iSeries systems are tested to withstand an extremely wide temperature range, from minus 40 degrees Fahrenheit to plus 140 degrees Fahrenheit.

The iSeries provides a clear roadmap for upgrades and future technology purchases. IBM has consistently delivered on its Power Architecture™ Roadmap over the past five years and has a roadmap planned for the years ahead. IBM designs and manufactures its IBM POWER processors and has full control over future product direction and strategy.

With its integrated, business driven design, simplicity of ownership and security and reliability, the iSeries system remains perfectly positioned to help banks address their challenges.





## **ISV banking solutions for iSeries: A world-class portfolio**

The IBM @server iSeries system has a world-class independent software vendor (ISV) solutions portfolio for the banking industry. The benefit of this to bankers is that the iSeries system is a competitive, long-term investment system.

The broad portfolio of iSeries core banking solutions offers banks many alternatives in every region around the world. This chapter highlights the many options that are available on the iSeries system.

## 2.1 Designed to integrate core systems and point solutions

One advantage of the iSeries system is that it can run multiple operating systems and application environments simultaneously. It offers a broad choice of available applications and few restrictions when consolidating a diverse network. The iSeries system supports applications running in IBM i5/OS, Microsoft Windows (via Integrated xSeries Adapter or Integrated xSeries Server), Linux, IBM AIX 5L, Java, WebSphere, Workplace and Lotus Domino environments all at the same time and all on one highly reliable system. This approach is simpler to manage and more cost effective than creating a network of individual servers that attempt to provide the same capability.

Banks can adopt a design strategy in which they run their core banking solution on i5/OS, for example, and then run other solutions, called *point solutions*, on the operating system that the solution requires, while tightly integrating it with the core solution. Figure 2-1 illustrates this concept.

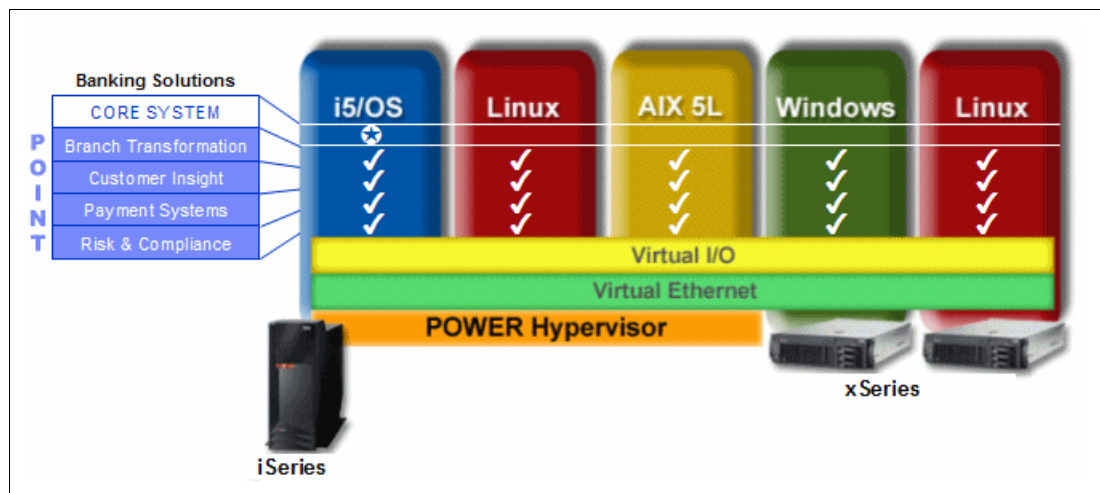


Figure 2-1 iSeries provides the flexibility to run point solutions in multiple environments

## 2.2 Core banking solutions: An iSeries advantage

The key strength of the iSeries in banking begins with the core banking environment. Core banking is the traditional environment that requires scalability, reliability, availability and security. These key characteristics of the iSeries system have drawn over 16,000 banks to use it as their banking system. iSeries software partners that provide core banking solutions offer banks a variety of options worldwide.

Table 2-1 provides a sampling of iSeries ISVs and their core banking applications.

Table 2-1 Core banking vendors cover the globe with iSeries

ISV	Core banking application
Datapro	e-IBS Core Banking (Integrated Banking System)
ERI	OLYMPIC
Fidelity Information Services	<ul style="list-style-type: none"> <li>▶ Horizon</li> <li>▶ Advanced Commercial Banking System (ACBS)</li> </ul>
Fiserv	<ul style="list-style-type: none"> <li>▶ Comprehensive Banking System (CBS)</li> <li>▶ International Comprehensive Banking System (ICBS)</li> </ul>
ITI (Information Technology, Inc.)	Premier
Jack Henry & Associates, Inc.	<ul style="list-style-type: none"> <li>▶ CIF 20/20</li> <li>▶ Silverlake</li> </ul>
Kirchman	Bankway
Misys	<ul style="list-style-type: none"> <li>▶ Equation</li> <li>▶ Midas</li> </ul>
Silverlake	Silverlake Integrated Banking System (SIBS)
Temenos	Temenos T24
Vanda Group	VisionBanking CoreBiz

The appeal to banks is straightforward. The iSeries system can support banks of any size, anywhere in the world. Many software partners can have IBM preload their software at the factory. Installation at the bank requires less than 24 hours in most cases.

Several of these vendors have bank customers that are processing client and account bases that reach well into the millions, not to mention the millions of banking transactions that they handle every day. For example, Silverlake, which is the leading independent core banking vendor in Asia Pacific, has a bank customer with over 10 million clients and over 30 million accounts. By simply expanding the number of processors deployed in its iSeries system, this bank still has room to expand its customer base without impacting response times. And they can usually increase their capacity with little to no business disruption.

This example echoes a compelling and common theme for iSeries clients and software vendors: *The iSeries system has scaled faster than banks have expanded.* What a comforting thought it presents to bank executives that the iSeries system is ready to handle growth as the bank experiences it.

Another approach that iSeries ISVs offer is an end-to-end solution for the bank. Horizon, a full service core banking solution from Fidelity Information Services, has migrated all of its bank customers to a Web-based end-user application environment. This distribution channel capability supports all of the banking application's capabilities across the bank and out to its customers.

A proof point in the long-term track record of the iSeries system is its ability to attract new ISV partners. Fiserv, the core banking vendor with the largest number of banking clients in the U.S., just selected the iSeries system to sustain its growth into the twenty-first century.

## 2.3 Point solutions

Many point solutions are also available for the iSeries system that, because of its design (shown in Figure 2-1), can integrate tightly with the core banking solution. Table 2-2 describes the various categories of banking point solutions.

Table 2-2 *Types of point solutions for banking*

<b>Solution category</b>	<b>Description</b>
Branch/Multichannel Transformation	These solutions enable full integration of all channels that customers use to service their retail banking needs, such as branch, ATM, Internet and phone. The benefits that banks derive include driving greater customer intelligence, providing more responsive service and attaining lower operating costs across the enterprise.
Customer Insight	These solutions make banks “smart” by helping them to integrate across the disparate databases and platforms of information that they currently store and expensively re-integrate into ad hoc reporting and data mining. The benefits include creating a single customer view and customer segmentation that enables highly effective marketing campaigns by understanding the right offer to make and how best to deliver that offer.
Payment Systems	These solutions optimize the payments process infrastructure, such as checks, bank cards and wholesale payments, by creating efficiencies across the enterprise. The benefits include reducing costs, eliminating redundancies, fraud protection and satisfying regulatory requirements.
Risk & Compliance	These solutions help banks to develop a view of how data is gathered, calculated, used, stored and reported in a controlled, standardized manner across business lines. The benefits include meeting complex regulatory requirements while aiding banks to sense and respond to changes and threats intuitively.

## 2.4 Reference information about iSeries ISVs

For a complete listing of the ISVs and their solutions, see the IBM Solution Connection™ at:

<http://www-1.ibm.com/servers/solutions/finder/portal/search.jsp>



## Client success stories in banking

This chapter contains several client scenarios of banks around the world that choose to run their business solutions on the iSeries system. These scenarios provide situation overviews, challenges faced by the banks that caused them to look to the iSeries system for answers, and the benefits and the roles that the iSeries system will play for them in the future.

The chapter features the following banks:

- ▶ Bank Mandiri
- ▶ Banesco
- ▶ Santander Consumer CC-Bank AG
- ▶ First American Bank

## 3.1 Bank Mandiri: Aligning IT with key business objectives

In markets all across the world, modern banks increasingly find themselves caught between two opposing forces.

- ▶ Management demands for improved revenues and profit margins mean increased pressure to reduce operating costs.
- ▶ Clients demand better service and more flexible banking options.

These twin challenges cause many banks to examine the role that their IT systems play in daily business processes.

Faced with challenges on various fronts, Indonesia-based Bank Mandiri recognized that it had to change the way it used IT to support its business. Formed following the merger of four institutions, Bank Mandiri was saddled with numerous redundant systems. With nearly seven million accounts across 687 branches, the bank needed to consolidate and restructure fundamental parts of its environment or risk its ability to compete.

The bank concluded that the most effective means to achieve its business objectives, in the shortest possible time and with minimum implementation risk, was to implement a common interim system bank wide. In essence, Bank Mandiri needed to replace their piecemeal IT environment with a single, universal banking system.

In 1999, the bank had nine core banking systems, a legacy of its four parents. Merging these systems became an immediate priority, and a consolidated interim solution was fully implemented in March 2001. However, it was only a stepping stone toward a broader business transformation. In August 2001, Bank Mandiri embarked on its Enterprise Mandiri Advanced System (eMAS) transformation project. Comprising 32 different projects under one eMAS program, the transformation spanned an enormous range of tasks from crucial core banking solutions to various parts of the network and communications infrastructure.

To assist in this ambitious undertaking, the bank began the search for a vendor that could help it evolve its existing systems and achieve its vision for the future. The bank elected to continue using the proven and scalable iSeries system. When this decision was made, the search for suitable solution providers began.

After four months of technical evaluation and negotiation, Bank Mandiri awarded a contract to IBM Business Partner, Silverlake, as the systems integrator. Silverlake was expected to undertake a complete migration to a single core banking system that would underpin crucial activities within the organization.

In addition to complex system changes, the project involved comprehensive training for 14000 staff members. New technologies and processes were brought into the institution, and 18 major system interfaces were undertaken. This was a massive exercise involving core banking, general ledger, cards, Internet banking, mobile banking, call center, payments, the data warehouse and added functionality to ATMs. As part of the program, ATMs were increased from an initial base of 500 machines to 2000 machines by the end of 2003, for which Mandiri management had planned.

From a technical perspective, other elements used to create the single core system included a high performance relational database, the IBM i5/OS operating system with simplified systems management and security, and an open network based on the Transmission Control Protocol/Internet Protocol (TCP/IP).

Now in operation, the bank's new IT environment includes a central data center, disaster recovery center with mirroring, branch hardware, an intelligent network, a command center and a company-wide help desk.

From a broader perspective, the project allowed Bank Mandiri to closely align its IT systems with its key business objectives. One of those objectives was to improve the funding mix by moving from higher cost term deposits to lower cost savings and current accounts. In early 2002, 31% of funding was through the lower cost savings and current accounts. By the end of 2003, the cost increased to 44.5%.

The bank also managed to reduce client-servicing costs by encouraging the use of new, lower cost delivery channels, such as ATM, phone and Internet. There was a significant improvement in branch and ATM transaction times despite an almost doubling in ATM and branch transaction volumes between 2001 and late 2003. Such growth would not have been possible without the support of integrated IT systems.

Another objective was to reduce the percentage of loans from corporate clients and increase the share derived from consumers and commercial entities. In 2002, commercial and consumer clients represented 37% of loans, but in 2003, they grew to 47.8%. The bank expects to reach 50% of all loans.

In addition, the bank's competitive cost-to-income ratio did not increase measurably over the 2001 level of 40%. This figure remained at 40% through 2002 and 2003, despite the considerable investments made during this period. This proved that its investments were paying for themselves and ensured top management support.

Perhaps most impressive is the fact that the eMAS project ended up 16% under budget and delivered ahead of schedule. It was completed in August rather than in December 2003 as planned.

The bank's objective of transactional integration was achieved and work began on interaction integration. As part of this process, plans are in place to implement new Customer Relationship Management (CRM) and enterprise resource planning (ERP) systems. Together they will form a critical part of the new infrastructure.

Bank Mandiri also plans to add more business intelligence capabilities, balanced scorecards and improved risk management capabilities. As the bank continues its transformation, it will tightly integrate the business and IT organizations. This will ensure that the goals of all groups complement each other and provide a solid foundation for future growth.

## **3.2 Banesco: How the iSeries system helped Banesco become Venezuela's fourth-largest bank in ten years**

Banesco is seen by its customers and other banks as a technological bank and is recognized as a leader in the use of the latest technology. This case study shows how the iSeries system helps Banesco with its day-to-day operations, and how it has helped Banesco overcome some challenges along the way. It also shows how the system adapted to the bank's IT needs and the financial marketplace demands.

Banesco was established in 1992. The company adopted the iSeries system as their primary core business system, even though the System/390® was considered by major banks as "the system" for serious banking. Since their beginning, Banesco counted on the support of IBM Business Partner ISF Alpiz. Being a new bank with minimal IT staff, Banesco found the iSeries system to be a perfect fit for them.

Internally, the first challenge Banesco faced was to start a bank with minimal IT staff. Banesco needed a system that would help put their banking applications into production in the shortest possible time with the lowest possible cost. An additional challenge was that the majority of Banesco's IT staff had mainframe experience and skills. With the support of IBM and ISF Alpiz, Banesco chose Datapro's IBS as their core application, which at the time covered most of the requirements for a bank of their size and target market.

Banesco's challenge was to provide their customers with services that would help them accomplish their banking tasks more quickly. Banesco also wanted to offer additional distribution channels such as Internet banking, ATMs and Point of Sale (POS). Another important challenge was to provide a warranty of services availability for the critical systems.

In the marketplace, Banesco was challenged by external factors:

- ▶ A major economic crisis that eventually caused the bankruptcy of several local banks
- ▶ Many European banks taking over local traditional banks, for example, BBVA and Banco Santander

Banesco partnered with Datapro to acquire IBS as their core banking application. This partnership forged a strong business alliance with ISF Alpiz and IBM de Venezuela. Over time, Banesco, ISF Alpiz and Datapro's relationship matured. The relationship became so strategic that many changes that were introduced into the application and applied to other customers worldwide came from Banesco's experience and aggressive approach to resolving business issues.

The alliance with IBS helped Banesco grow from 12 branch banks and 300 employees, in 1992, to 400 branches and over 7000 employees in 2004. Banesco advanced from Venezuela's twelfth largest bank to its fourth largest bank in twelve years. They compete successfully with major overseas banks. Banesco was able to merge four times with different financial institutions over the years, regardless of their technology base, making a smooth transition in the eyes of their clients.

Banesco now has their own network of ATMs, POSs and most importantly its own division of credit cards (Visa, Master Card and American Express). They have the largest base of credit card holders in Venezuela.

To manage these distribution channels, Banesco acquired an iSeries system-based application called Autoriza400 from a Colombian independent software vendor (ISV), CLAI Ltda., through ISF Alpiz, who represents the application in Venezuela. This application allows Banesco to administrate, control and audit the ATMs and POSs as well as manage the credit and debit cards, including a cryptographic solution to use the iSeries cryptographic processors.

The introductions of new applications, such as Domino, helped Banesco implement messaging and collaboration in record time with minimum downtimes. Also, the introduction of Linux and WebSphere helped Banesco extend and integrate applications, so that they are now positioned on the leading edge of On Demand Business technology.

To assure the highest availability for critical applications (services) residing in the iSeries system, Banesco bought one of the strongest replication tools from Lakeview Technology, called MIMIX. With this tool, Banesco maintains a replicated environment in real time. If they have any planned or unplanned system downtimes, they switch their operations to the backup system without impacting client services. MIMIX is much more than a replication tool, because it allows Banesco to plan backups and keep down-times to a minimum, for example, in client acceptable ranges.

Banesco has always aligned its IT environment and IT strategies with their business needs. This alignment helped them to become one of the most cost efficient financial institutions in the region and allows them to provide top-of-the-line client services. In 2003, Banesco purchased two upgrades to iSeries model 890s (24/32-way) with capabilities to implement up to 20 partitions per system. Portals play a key role in integrating several IT technologies, with the iSeries system being the strategic integrating system. New applications are being developed on Intel servers and then put into production in partitions on the iSeries system.

Investment protection is one of the key iSeries benefits that Banesco realized. Their first AS/400® was a model B50, and today one of their iSeries model 890s still has the original hardware serial number. Banesco's investment in the iSeries system has been preserved as their business has grown.

The recent IBM @server i5 and POWER5™ processor-based system announcements convinced Banesco that the iSeries product line will continue to be their choice for the future. They see the iSeries system positioned to meet the future technology demands of the financial sector. Banesco believes that the iSeries system's ability to provide multiple operating systems, based on the latest POWER5 processor technology, helps them build a more efficient and affordable IT environment by consolidating operating systems, applications, databases and software licenses, which reduces costs and simplifies operations. The ultimate result is that Banesco will continue to maintain their best-of-breed client services with no downtime.

### **3.3 Santander Consumer CC-Bank drives costs down, flexibility up, with eServer i5**

Santander Consumer CC-Bank (CC-Bank) offers traditional retail banking and provides motor vehicle and consumer goods finance packages indirectly through retailers. Originally established as CC-Bank AG in 1957, the company is now one of the leading independent car financing companies in Germany. CC-Bank has around 1 700 employees and annual sales of approximately 7 billion euro. Its parent company, Santander Central Hispano, is the largest bank in Spain, and one of the ten largest financial institutions in Europe.

While Santander has owned CC-Bank for some 15 years, it has only recently moved to re-brand the company and integrate its internal systems, which were previously running on two separate platforms.

Manfred G. Hanke, Managing Director of CC-ITS GmbH, explains: "Our IT systems derived from a merger between two separate banks. When Santander set out a strategy for efficiency improvement and cost reduction, we decided to consolidate to the most cost-effective platform for our needs. The new @server i5 server is our strategic choice for the future, giving us the power to consolidate all our workloads to a highly flexible and scalable environment."

CC-Bank has invested in two @server i5 570 servers, each with 16 POWER5 processors, offering both excellent performance and enormous flexibility. The @server i5 can run i5/OS (the latest release of OS/400), IBM AIX and Linux in up to 254 logical partitions (LPARs), and can support 32-bit Microsoft Windows Server and 32-bit Linux distributions using Integrated xSeries Server or Integrated xSeries Adapter technologies.

"The 570 servers offer outstanding price-to-performance," says Manfred Hanke, "and enough capacity to enable us to migrate all our existing AS/400 and mainframe systems to just two physical servers. We have used AS/400 for a number of years, and we judge that @server i5 offers the same qualities, reliability, availability and ease of management, in an extremely advanced new architecture."

CC-Bank's core automotive financing applications are being migrated to the new 570 servers, where they will continue to employ DB2 Universal Database (UDB), an integral part of the i5/OS operating system. Other systems to be migrated include leasing applications, Internet-based applications and the corporate Web site.

The Micro-Partitioning capability of @server i5 allows each POWER5 processor to be sub-divided into LPARs, each of which can be dynamically resized as utilization changes. The LPARs can even run different operating systems, enabling processing resources to be shared between completely different types of workload.

The automotive finance operations at CC-Bank are growing at around 20% per annum, so it was vital for the company to implement a powerful, highly scalable system. Manfred Hanke remarks, "To handle our business growth without risk of disruption to operations, we needed a central server architecture capable of responding flexibly to changing demands. The Micro-Partitioning offered by the 570 servers gives us tremendous flexibility in the way we use our computing resources, and will help us to ensure high availability even when demand for applications rises rapidly or unexpectedly."

In financial services, a perpetual concern is data security; the advanced i5/OS V5R3 operating system helps to protect sensitive commercial data from unauthorized users and from external threats. Says Manfred Hanke, "The 570 servers build on the legacy of high security, stability and ease of use of AS/400, adding phenomenal performance and even greater flexibility."

He concludes: "We are now considering introducing Linux partitions on the 570 servers, perhaps as a platform for consolidating our legacy UNIX® workload. This kind of flexibility opens up many possibilities for cost savings in the future."

### **3.4 First American Bank: A server consolidation success story**

First American Bank is a full-service bank with headquarters in Elk Grove Village, Illinois. They have more than 30 Chicago-area locations and 250 ATMs. In business for more than 30 years, First American Bank has over USD \$2 billion in assets. They are privately held and 80% owned by officers, directors and family members. They have a full range of services:

- ▶ **Personal Finance**  
Checking and deposit opportunities, loans and retirement planning
- ▶ **Commercial Services**  
Corporate loans, cash management, real estate, international banking and small business banking
- ▶ **Wealth Management**  
A wide range of trust and investment services, estate planning and employee benefits plans

Today, First American Bank has an iSeries system which manages their computer network from their corporate headquarters. They have a second iSeries system located 30 miles away that serves as a disaster recovery backup.

First American Bank purchased the Silverlake core banking solution from Jack Henry and Associates and installed it on the iSeries system. Prior to the iSeries system, the bank ran their core banking application on a Tandem computer. In addition to Silverlake for core banking, First American Bank runs Mosaic Software's Postilion on the iSeries system to drive their ATMs. The bank plans to cut over to full production mode of Postilion in 2005. Prior to

Postilion on the iSeries system, First American Bank had an existing ATM driving solution that they ran on a separate mainframe.

First American Bank is one of the first banks to consolidate their core banking system and their ATM driving system onto a single iSeries system. This consolidation resulted in considerable savings for First American Bank, and it proves that consolidation is viable on the iSeries system in the banking industry.

Due to growth, in 2003, First American Bank began discussions with IBM. They were interested in investing in an upgrade to their iSeries system to add functionality that would help the core banking solution keep pace with the bank's growth. In addition to adding more horsepower to their core banking, First American Bank wanted to modernize their ATM driving system. They would update their ATMs in response to upcoming federal regulations, and the new ATMs would allow them to do more communication with their clients. Their existing ATM solution, however, would not allow them to use the full function of the new ATMs, and they would likely miss significant revenue and marketing opportunities. First American Bank started searching for an ATM solution with modern technology, one that was server-based, iSeries system-based and open standards-based.

Mosaic is a software development and implementation leader in the world market for electronic funds transfer (EFT) and financial services transaction processing. Postilion, their ATM solution, is at the forefront of next-generation payment processing software. It drives payments through ATMs, POS terminals, phones and Internet access points. Its strengths include:

- ▶ Reducing transaction processing costs
- ▶ Speeding time to market for new products and offerings
- ▶ Improving analysis of client transactions and business opportunities
- ▶ Increasing profitability

First American Bank decided to upgrade their iSeries system and purchase the Postilion solution from Mosaic. In talks between First American Bank, IBM and Mosaic, it became apparent that the bank would be a perfect candidate for server consolidation. The bank could upgrade their iSeries system and then run their new ATM driving solution on it, rather than on their mainframe system. IBM and Mosaic worked closely to make it possible, and now Postilion runs on the iSeries system using its integrated DB2 UDB relational database.

First American Bank was extremely pleased that they could run core banking (Silverlake) and ATM driving (Postilion) on one system (iSeries) rather than on two systems. Their system administration was greatly simplified. Also, the internal integration and communication work between the core banking solution and the ATM driver is much easier when they run on the same system. There is no need for different types of communications translators and routings through multiple boxes. Data backups are much simpler and quicker on a single system than on multiple systems. In addition, the disaster recovery process is more streamlined. The list of benefits continues to grow.

First American Bank is excited about the future and the roles that IBM and Mosaic will play in its success. With regard to the iSeries system and Mosaic, Noel Levasseur, Executive Vice President of First American Bank, says, "A key challenge in banking these days is about developing new ways to offer better services to our clients, while at the same time driving down cost. Mosaic Software and our iSeries banking system are enabling us to extend and to integrate our core banking environment with the Mosaic ATM solution on the same system."



# Related publications

These following Web sites and URLs are relevant as further information sources:

- ▶ Midrange systems: iSeries  
<http://www-1.ibm.com/servers/eserver/series/>
- ▶ iSeries customer success stories  
<http://www-1.ibm.com/servers/eserver/series/success/>
- ▶ IBM Solution Connection for iSeries  
<http://www-1.ibm.com/servers/solutions/finder/portal/search.jsp>

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# Banking on iSeries Systems



**Defines why 16,000 banks worldwide are powered by the IBM @server iSeries system**

**Features world class ISV banking solutions for iSeries systems**

**Provides iSeries banking success stories**

Installed in over 16 000 banks worldwide, the IBM @server iSeries system has the world's most diverse independent software vendor (ISV) banking solutions portfolio. The iSeries system offers bank executives unparalleled freedom to choose the best applications for their banking needs. It provides integrated, secure capabilities to grow cost-effectively in concert with a bank's business growth requirements. It is designed to streamline banking infrastructure and operations, so banks can invest those savings to capture the growth in the industry today.

This IBM Redpaper introduces the iSeries system, explains why it is an outstanding system on which to run banking solutions and highlights ISV solutions that are available today. It is written for executives and IT experts in the banking industry who are looking to solve challenges in their own environment.

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