WHITE PAPER

MAXM Database Advisor from BMC Drives IMS Agility at Multimillion-Dollar European Financial Services Firm

Sponsored by: BMC Software

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SITUATION OVERVIEW

This global group of companies offers a complete range of financial and nonfinancial products and services in over 30 countries around the world. The company's total assets are over $500 billion, and the company serves more than 40 million customers and employs over 100,000 people. Of those employees, over 20,000 people are employed in its European operations.

Supporting the European operations is a set of large mainframe databases, running under both DB2 and IMS. 700 of those are IMS databases supporting online banking, front-office activities, and client management activities and online banking services.

The international banking world is increasingly competitive and requires the ability to continually adjust, improve, and extend banking services. In order to maintain its premier position in this environment, the financial services company needs to push the envelope, offering nimble systems using the latest technology.

The IMS database system has seen its transaction rates growing at a steady rate of approximately 10% per year. As the database grows in size and complexity, the administrative staff must deal with another challenge: the company mounts customer attraction and loyalty campaigns on an increasingly frequent basis. These campaigns involve changes to the IMS database structure as well as surges in demand, yet the performance must remain constant. This creates a hugely complex database management problem.

The Problem: Improper Use of Valuable Staff

One of the company's most valuable assets supporting business agility is the database management staff. Yet these expert, talented people have been tied up performing routine maintenance tasks on the company's 700 IMS databases and have been unable to focus on system evolution and improvement. In the given environment with a highly complex database and application management environment, the staff's priority was to keep this environment well tuned and operating at peak performance with the right resources available at all times including systems and storage.

The 700 databases include 180 IMS Fast Path databases and 520 that support full-function DL/1. They drive a large number of Web applications in addition to branch applications and often handle as many as 1,000 banking transactions per minute. Any slowdown in service affects banking operations across Europe, including 46,000

users in branch offices and over 4.5 million Internet banking users. These databases have evolved over time so that they not only process user banking requests but also perform an "upsell" function, identifying and offering service enhancements to customers based on situational business rules.

In order to keep these systems humming, the 10-person DBA team has been constantly engaged in analyzing statistics, identifying potential problems, reallocating resources as necessary, and tuning the databases. These tasks leave little time for the higher-value activities involved in evolving the databases and applications to meet changing business needs. Also, as staff members move over to the DB2 side of the house to support the development effort there, the company has been concerned about finding qualified IMS experts.

The Solution: BMC MAXM Database Advisor for IMS

To address these concerns, the financial services company turned to BMC MAXM Database Advisor for IMS. This product collects and analyzes IMS statistics and provides recommendations for system and storage allocation and database tuning, thus saving the staff hours of effort. It is designed to anticipate problems before they happen and to streamline tuning, reorganization, and other database maintenance activities.

One of the reasons why the company chose the BMC product is the ease with which it can be integrated with their environment and with other BMC products for IMS that are already installed.

BMC MAXM Database Advisor for IMS proactively manages IMS database maintenance and prevents unplanned outages by notifying the DBA of user-defined exceptions. It collects database statistics automatically and generates JCL to reorganize full function, HALDB, and Fast Path databases. It provides a graphical user interface that enables less-experienced users to manage complex IMS environments, and that helps make more experienced DBAs more productive.

A key benefit of the product, according to the company's database manager, has been its ability to streamline all the operations involved in the process of making changes to the IMS database. BMC MAXM Database Advisor for IMS also determines what databases need maintenance — and when — and notifies the DBA. This eliminates unnecessary maintenance and saves a significant amount of time and CPU resources.

### Experience with BMC Database Management for IMS

The company has carried out a full evaluation of this product, operating with test databases that fully represent the production environment. The product — and the results — exceeded the company's expectations by dramatically reducing the amount of staff time necessary to manage the IMS environment, especially reducing the time for adjusting the system to support customer campaigns and other operational changes that impact the databases. The company is now rolling the product into production for its full suite of IMS databases serving European operations, a process that it expects to have completed by the spring of 2010.

Benefits

The benefits the company experienced fall into two categories: IT staff efficiency and improvement in system availability (reduced downtime). In summarizing the benefits of the solution, the company's database manager said, "The BMC tool lets us detect more complex types of problems inside the structure of the database. He said that his staff has been able to improve the diagnosis of problems that are caused by how the database is structured." These benefits and their proportions are shown in Figure 1.

FIGURE 1

Benefits of BMC Database Management

$183,570 $734,28

■ IT Staff Efficiency
□ Performance Improvement

Total = $917,850
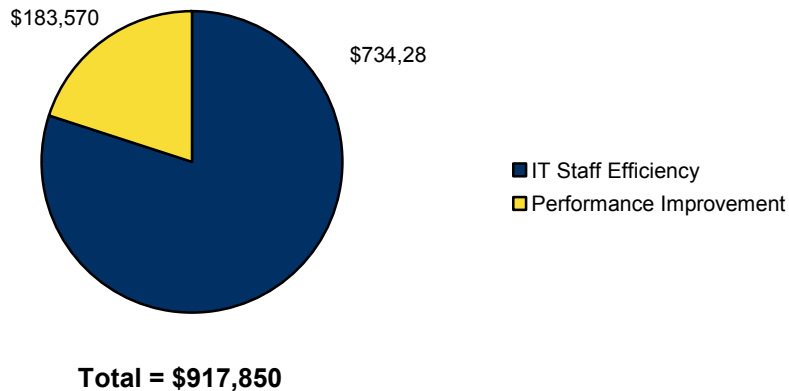
Source: IDC, November 2009

New customer campaigns and online services have had an unpredictable effect on the IMS databases, making tuning and maintenance reactive to problems as they occur. BMC MAXM Database Advisor for IMS has made the IMS team proactive, anticipating and addressing problems before they happen and keeping the system running at peak efficiency as it changes.

BMC MAXM Database Advisor for IMS also enables IT to add and adjust the upsell functions of the IMS system fairly quickly. As the databases, applications, and operational demands change, the BMC product analyzes the effects of those changes and makes operational recommendations. So far, the staff has found the recommendations offered by the product to be 100% reliable.

The financial services company reported in the interview that overall the IT staff was 5% more productive since the BMC deployment. This benefit stems from a savings of 12 hours per month due to the automation that the IT organization has been able to build into its processes.

Savings are partly due to the time the IT staff saves during marketing campaigns. When campaigns are successful, they can create an unexpected level of database demand. Because the demand can increase rapidly, the staff needs to be agile as it manages the database. The database manager said, "BMC MAXM Database Advisor for IMS helps the organization make adjustments to the database quickly. The staff is able to automatically start the whole reconstruction process of the database and satisfy the campaign needs effectively."

Carrying these hours of savings out across the 2,000 IT staff members and factoring their weighted hourly salary results in an average annual benefit of $734,280.

The company has also found a clear reduction in the number of problems that would generate help desk calls since using BMC MAXM Database Advisor for IMS. The company indicated substantial staff time savings in addressing potential problems before they impact the system and pointed to the JCL generation feature as a clear factor in this regard. A technical services manager said, "The bank executes campaigns to generate new business and more accounts. These days, all of that information goes up against our full-function database. If not watched closely, we could have a noncontrolled data overload. BMC MAXM Database Advisor for IMS helps us control the surges because we can see an overgrowth in a database and make decisions accordingly."

Also, downtime has been slashed from an average of 2 hours per year to 30 minutes, with the number of unplanned downtime incidents reduced from 2 to 1 per year. IDC applies these hours of downtime savings to the IT staff (2,000 people) and its weighted annual salary over the course of each year in the ROI model. The result is an average annual savings of $91,785.

Analyzing Costs Versus Benefits over Time

Figure 2 illustrates the annual benefits, annual investment, and cumulative cash flow over three years. With respect to investment, the financial services company has an enterprise-level agreement with BMC. The agreement covers the costs of new BMC software, licenses, and hardware required for a new deployment. In this case, the actual investments made are the IT staff's time required for deployment and time to maintain in the years going forward. After deployment is complete, the benefits begin to accrue and are relatively flat over time but still result in a significant cumulative benefit after three years, as shown in the IDC analysis.

FIGURE 2

Investment, Benefit, and Cash Flow over Time
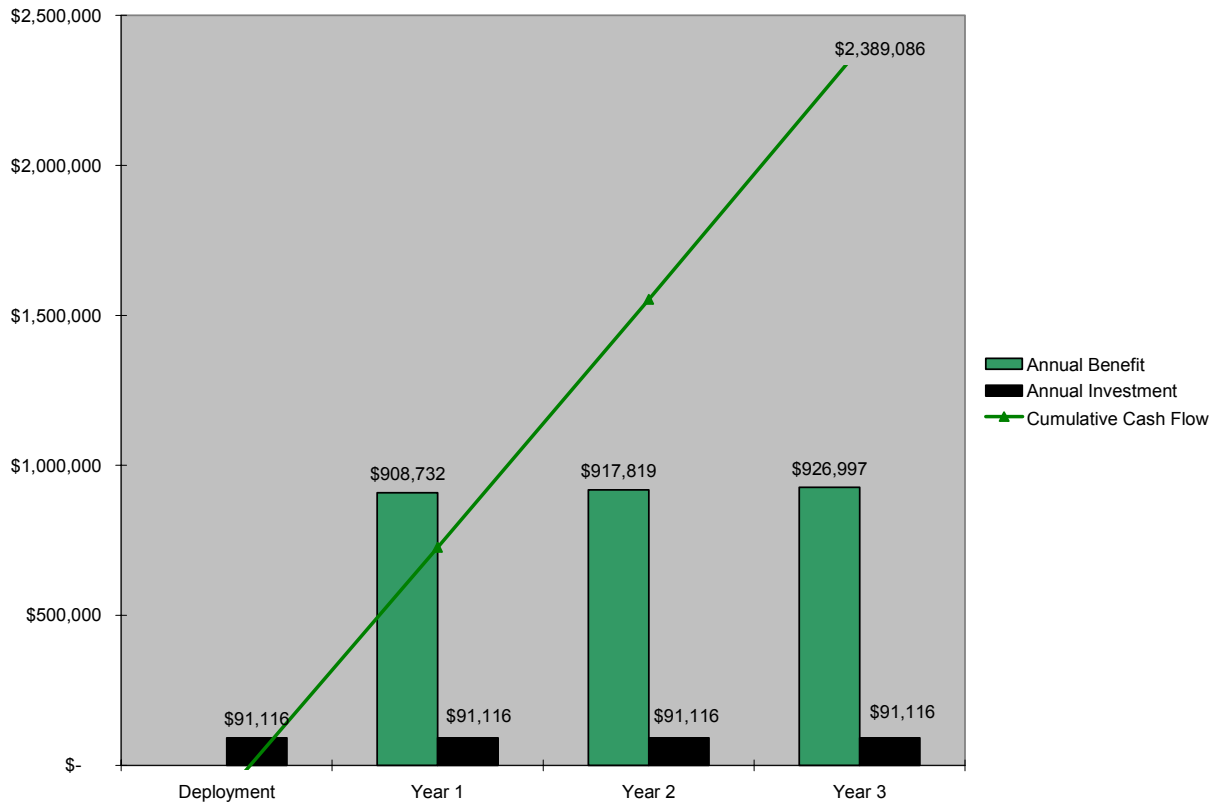
Source: IDC, November 2009

BMC Database Management Return on Investment

The three-year IDC ROI analysis on BMC Database Management is based on the IT time needed for deployment and maintenance compared with the benefits over the three years. Based on the data gathered from the financial services company, this solution offers an ROI of 611%, and payback occurs in 1.34 months. The payback term is longer than one year because the implementation lasted approximately one year. Table 1 displays the ROI results.

TABLE 1

Three-Year ROI Analysis

Three-year benefit (discounted)	$2,202,866
Three-year investment (discounted)	$309,960
NPV	$1,892,906
ROI	611%
Payback	1.34 months
Discount factor The discount factor is a proxy for the cost of capital that is used to determine the present value of annual cash flows. The discount percentage accounts for the uncertainty and time value of money.	12%

Source: IDC, November 2009

CONCLUSION

In the highly competitive and fluid world of international banking, having the ability to evolve products and services quickly and easily to meet the needs of customers and the challenges of competitors is key. Underlying those products and services is a substrate of IT functionality that includes, at its heart, database technology. When staff members are tied up keeping the system running, tuning the database, and fighting fires, they can't be contributing to the kinds of database and application enhancements and evolution that keep the enterprise competitive.

BMC MAXM Database Advisor for IMS has enabled this financial services company to keep its IMS databases humming even as their requirements change constantly. Because they do this in a way that requires not more, but less staff time, the valuable people on the company's database management team can concentrate more of their time on the important work of continually pushing the technical envelope, enabling the organization to innovate and excel.