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# On-Line Analytical Processing at Washtenaw Mortgage Company

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*In an ever-changing, competitive marketplace, executive information systems (EIS) promise the ability to simultaneously assess factors in both the internal and external environment, enabling a timely competitive response. EIS are enjoying a renaissance due to the recent emergence of on-line analytical processing (OLAP) capabilities. OLAP's power, flexibility and ease of use supports mental model (knowledge) creation better than traditional executive information systems. This case study allows you to examine the usefulness and ease of use of OLAP technology for strategic market analysis at Washtenaw Mortgage Company, a firm in the mortgage wholesale industry.*

*The key to improving competitive performance is not the technology, but rather, how the technology is utilized to focus management's analysis. Gaining strategic insights requires three ingredients – people, process, and technology. A three-stage process used for implementing an OLAP strategic market analysis application is presented. OLAP technology marks an evolutionary improvement in EIS software. The potential of this technology, however, is not likely to be realized without a better understanding of the process for achieving management focus.*

## BACKGROUND

The mortgage wholesale industry was selected for this case study because organizations in this industry experience rapid market changes and are capable of developing products quickly to target specific market niches. To prosper in this industry, organizations must understand the requirements of the distribution channels as well as the ultimate consumers.

In 1996, Wholesale Access, a mortgage research company, reported statistics highlighting organizations in this industry. The report identified organizations with growing and declining loan volume activity during an increasing interest rate environment (LaMalfa & Olson, 1996).

A firm that had declining loan volume activity during this period was selected. The CFO of the firm was contacted and this case study was proposed. The requirements for the firm to participate in this case study included: (1) a willingness to provide an overview of the firm's strategy, marketing direction, and performance metrics, (2) an agreement to provide access to the firm's historical sales data, and (3) the ability to provide a cross-functional management team to explore OLAP and its ability to enhance strategic market analysis.

The selected firm was Washtenaw Mortgage Company (WMC) located in Ann Arbor, Michigan. The volume of loan activity had declined and the firm's objective was to return to a growth position. The contacted firm has an experienced senior management team and employs over 160 people in various departments (refer to Figure 3 in the Appendix). The organization conducts business in over 30 states through 1000 correspondents (independent agents) and through direct phone sales (retail). The correspondent network is managed by 20 account executives reporting to the vice president of sales & marketing. The firm offers a variety of products and services including 30-year mortgages, 15-year mortgages, adjustable rate mortgages, and balloon mortgages.

Before beginning the case study, the CFO received a general briefing and demonstration of the OLAP tool, its analytical features and performance capabilities. The purpose of the briefing was to determine if the OLAP tool could be utilized in this organizational setting and to determine if the OLAP tool had potential value to the firm as perceived by the CFO. In this briefing, the CFO commented that OLAP had applicability, especially in the analysis of markets and products, and agreed to participate in this case study.

## SETTING THE STAGE

The future business climate will be characterized by increasing complexity and market diversity and by market and technological change requiring management to cope with market and product uncertainty (Gerwin, 1993; Doll & Vonderembse, 1991). To meet the competitive challenges of the next century, the organization's knowledge workers will require improved tools for understanding changing market environments and customer requirements (Leidner & Elam, 1993; Peters & Brush, 1996). Historically, forecasting tools have been used to analyze the competitive environment and implement strategy with the objective of helping management predict the future of a given market segment or product line (Clark, 1992). These tools aided in reducing decision uncertainty by providing a degree of confidence to those decisions related to the success of market segments and product lines.

Today, a key issue facing senior information system (IS) executives is the implementation and utilization of executive information systems (EIS) to aid in decision-making (Palvia, Rajagopalan, Kumar & Kumar, 1996). EIS are defined as computer-based information systems that integrate information from both internal and external data sources enabling managers to access, monitor, and request information of key importance to them via various presentation formats (Leidner & Elam, 1993; Millet & Mawhinney, 1992). Despite the importance senior IS executives place on these systems, only 32% of the organizations surveyed were satisfied with the information from their existing EIS (Li, 1995).

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