Executive Summary: Sales Forecasting for Alomega Food Stores

This project presents a time series forecasting analysis conducted for **Alomega Food Stores**, a Midwestern grocery chain with 27 locations.

Objective

To improve Alomega Food Stores' sales planning and inventory management, we developed a monthly sales forecasting model using historical data from 2003–2006.

Key Findings:

- We tested multiple forecasting approaches using historical sales data. The Holt-Winters model, a time series technique designed to capture seasonality and trends, provided the most accurate results between the two models.

- The Holt-Winters model consistently outperformed other approaches, forecasting January 2006 sales within 20% of actual figures.

- In contrast, a simple 3-month moving average showed significantly lower accuracy, missing the mark by nearly 30%.

- Based on the Holt-Winters model, **projected sales for December 2006 are $226,910**.

Recommendation
Adopt the Holt-Winters model as the foundation for monthly sales forecasting. This approach offers stronger predictive accuracy, enabling better inventory control and budgeting. We recommend updating the model periodically to ensure it continues to meet assumptions and performance standards. For greater accuracy, incorporating external drivers like promotions, seasonality effects, and macroeconomic indicators is also recommended.