CHAPTER 1

INTRODUCTION

1.1 Background

Nowadays, Trend of globalization has been creating competitive market. Companies are forced to operate more effectively and efficiently to win the borderless economy battle. They are not only competing in giving better value added to customer but also competing in their operation performance.

Inventory play important role in manufacturing company. Inventory level must be maintained carefully since both excessive and shortage in inventory is considered as a cost for the company. Too much inventory may create opportunity cost in which the money attached in inventory should be used for other more profitable reason or may result in cash flow difficulties. Further, shortage in inventory may lead to unsatisfied customer and give competitor opportunity to grow.

1.2 Problem Definition

PT.Batara Indah has more than 4000 sku, in which 53% is imported items, and the other 47% is manufactured in-house. However, in terms of value, 80% is generated from manufactured product and 20% is from imported product. "Availability" of the product to the end user is the crucial factor in stationary business, especially in Indonesia. Customer will not loyal to certain brand and easily move to other brand if the item is not available in store. Thus, the company should pay careful attention toward its inventory management and control. Inventory problem is mainly caused by:

1. Sales demand is not smooth within the year. Resulting in difficulties to decide buffer stock level
2. Currently, company set minimum buffer level based on production and lead time quantity, therefore it will not adequate to anticipate sudden sales demand
3. Warehouse layout, that sometimes makes stock outflow obstructed

4. Warehouse doesn't have any guideline to set up opimum inventory cost, which is slow moving goods with big value should be treated carefully since it has high warehouse cost

5. There is no separation line in warehouse between retail picking & box picking

6. Maximum inventory that can be loaded in container or transpotation unit hasn't been calculated effectively

7. There are some limitation and constrains regarding to import materials such as :

    a. There are more than one suppliers for one specific item

    b. Supplier has a minimum quantity or amount order for each item and they have different standard in minimum order quantity, like minimum volume or minimum amount for each supplier

    c. Different production time for each supplier

    d. Different delivery time, because the goods are imported from different countries

    e. Sufficient orders to maximize order volume to fit with container space and to get efficient transport cost

    f. Different items category with different import duty. It implies the way to ship the goods

1.3 Goals and Purposes

The goal of this thesis project is to provide better forecasting technique in order to improve availability of the product. This thesis will propose most suitable forecasting technique for the company which is customized to each item characteristic.

1.4 Scope of Writing and Limitation

In this thesis, there are some aspects that could not be covered that may interfere or affect the results. Therefore, the following limitations should be made:

1. Assuming that future sales figure can be forecasted from the historical data.

2. Assuming there are no uncertain factors from the suppliers that are beyond the company's control

3. Assuming that historical data are enough to make forecasting.

4. The analysis start from historical sales, current buffer stock review, operation procedure, warehouse layout and other factor that involve in company's supply chain.

5. The analysis will limit on finished goods only, disregarding raw material and work in process.