

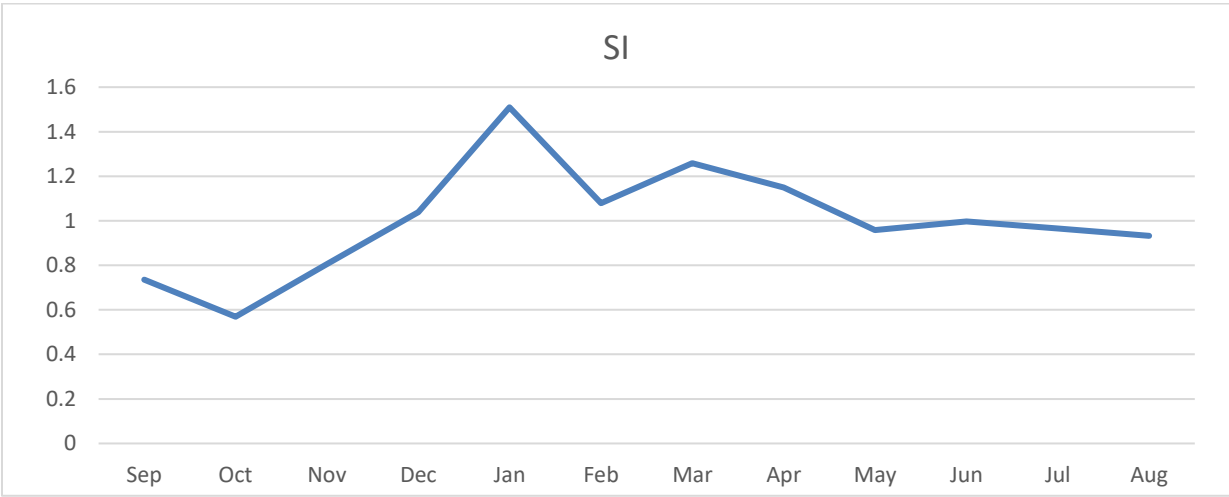
## **Demand Forecast**

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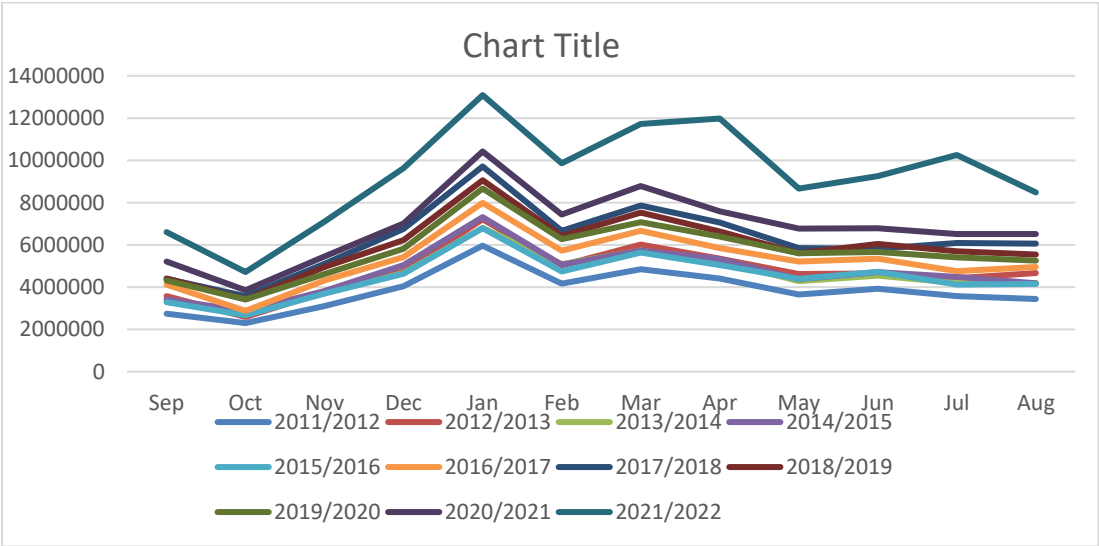
In this report, we have analyzed BC Premium Seafood’s past demand data from the year 2011 to 2022 and based on these data, I have done trend analysis and identified seasonality, and then applied exponential smoothing to calculate the monthly demand forecasts in 2022/2023 for the factory. Additionally, we have also calculated the monthly demand forecasts in 2022/2023 for the Calgary Warehouse, Vancouver warehouse, and each distribution center. All the calculations and data are attached to the report in an excel file.

**Monthly demand forecasts in 2022/2023 for the factory**

**Seasonality Index:**

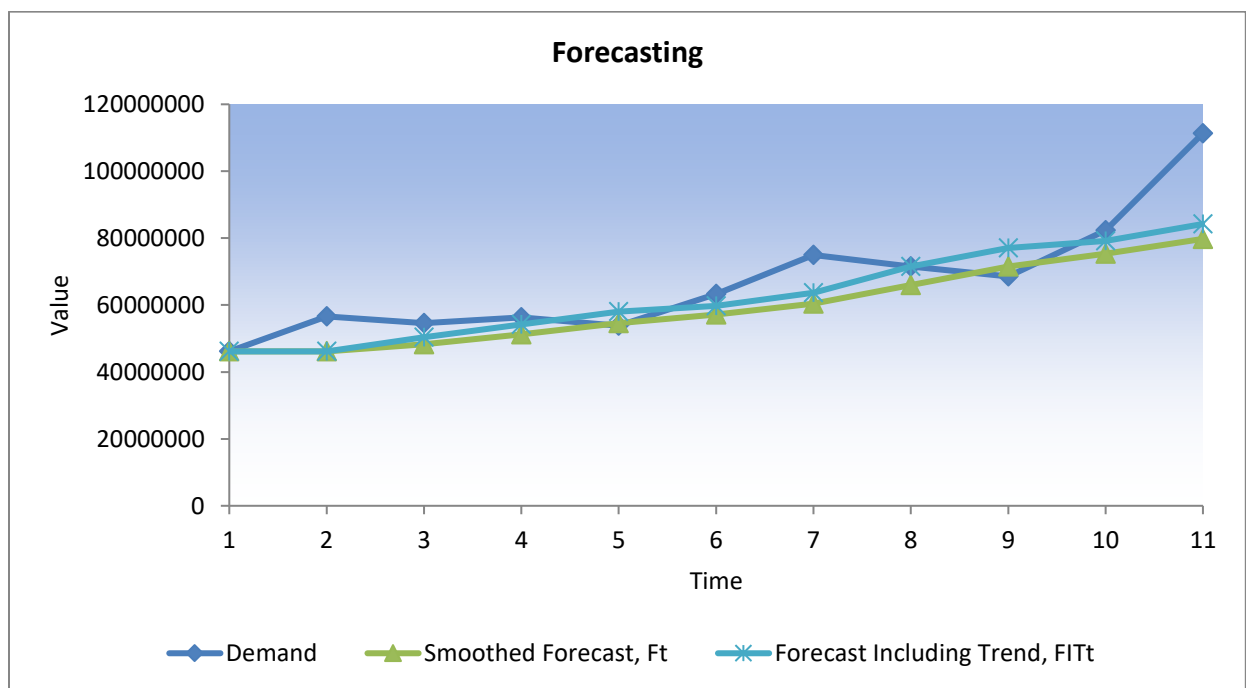


**Trend:**



From the above charts, it is clear that every year in the months of October (a downward trend in demand), January (an upward trend in demand), February (a downward trend in demand), March (an upward trend in demand), April (an upward trend in demand), May (a downward trend in demand) and July (an upward trend in demand) there is seasonality exists but the most significant seasonality that we observe in January (the biggest upward trend in demand).

### Exponential smoothing



If we observe the forecast, including the trend line, we can see that there is an overall upward trend in demand with little fluctuation.

## Demand forecasts in 2022/2023



After applying exponential smoothing and using a forecasting tool, we got the monthly demand forecast for the year 2022/2023, where we can observe that there would be a significant drop in demand for the month of October and a major surge in demand for January. We have also applied Excel solver to determine the best value for Alpha and Beta to minimize the average error for the forecast.

In summary, BC Premium Seafood should carefully consider this forecasted demand for the year 2022/2023 and produce according to the demand forecast to solve the stockout problem. This forecast will also help them to minimize inventory and supply-chain costs by giving them an idea about future demand so that they do not produce excess or less than the expected demand.