CHAPTER 5

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

The following are the summary of findings extracted from the Analysis and Interpretation of data:

- The **Gold price** ranged from 2970 to 12303.7, with a mean of 6327.77, standard deviation 2690.67 and coefficient of variation of 42.5 % during the period from Jan 1980 to Dec 1994.
- The Gold price had a positive growth during the period of study @ 0.70 % and its cubic trend is significant and the trend coefficients put together explain the variation of $Y_t$ to the extent of 96.7 %.
- The **Gold price** ranged from 11083.20 to 19796.10, with a mean of 13810.62, standard deviation 2252.09 and coefficient of variation of 16.3 %, during the period from Jan 1995 to Dec 2005.
- The Gold price had a growth positively during the period of study @ 0.44 % and its cubic trend is significant and the trend coefficients put together explain the variation of $Y_t$ to the extent of 94.5 %.
• The **Gold price** ranged from 18341.20 to 95072.20, with a mean of 53844.59, standard deviation 24514.54 and coefficient of variation of 45.5 % during the period from Jan 2006 to Dec 2015.

• The Gold price had a growth positively during the period of study @ 1.12 % and its cubic trend is significant and the trend coefficients put together explain the variation of \( Y_t \) to the extent of 95.0 %.

• Independent variables namely X1-Sensex, X2-Interest rate, and X3-Dollar price are significantly and positively correlated with the dependent variable Y-Gold price.

• The Path Analysis showed that the two variables X1-Sensex and Dollar-X3 are substantially important contributing variable for the dependent variable Y-Gold Price.

• The Multiple regression analysis showed that 2 Variables namely X1-SENSEX and X3-Dollar price have significantly contributing to Y-Gold price and these variables put together explained the variations of Y-Gold price to the extent of 95.7 %.

• All the explanatory variables except X1, are significantly correlated with the dependent variable Y-Gold price.

• Two Variables namely X1 and X2 have significantly contributing to Y-Gold price. That these variables put together explained the variations of Y-Gold price to the extent of 41.2 %.
• The independent variables namely X1-Sensex, X2-Interest rate, and X3-Dollar price are significantly correlated with the dependent variable Y-Gold price.

• The Path analysis showed that the two variables X2-Interest rate and X3-Dollar price are substantially important contributing variable for the dependent variable Y-Gold Price.

• Two Variables namely X1 and X2 have significantly contributing to Y-Gold price. and these variables put together explained the variations of Y-Gold price to the extent of 63.2 %.

• Using the monthly data of Gold price during Jan 2006 to Dec 2015, ratio to 12 months moving average method the Seasonal Index was obtained and the result is furnished below:

  Seasonal Index:

<table>
<thead>
<tr>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>103.</td>
<td>92.</td>
<td>93.</td>
<td>117.</td>
<td>111.</td>
<td>111.</td>
<td>129.</td>
<td>101.</td>
<td>74.</td>
<td>96.</td>
<td>75.</td>
<td>92.</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>9</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

• General model is a mixture of the AR (p) and MA (q) models and is called autoregressive moving-average model, ARMA (p, q) model.

• All the parameter estimates are significant and the residual series are random, it can then be concluded that \((0, 1, 1) \ (0, 1, 1)_{12}\) model is
adequate for the gold price data. Therefore, ARIMA (0, 1, 1) (0, 1, 1)_12 is used to forecast the price of Gold.

- The estimates of autoregressive, moving average and the seasonal moving average parameters are labeled “AR..1”, “MA..1” and “SMA..12”, which are -0.6413, -0.8268, and 0.8840, respectively. Based on 95% confidence level.

To forecast price of gold, but based on minimum AIC and BIC values and after the estimation of parameters and series of diagnostic test were performed, ARIMA(0,1,1)(0,1,1)_12 model was judge to be the best model for forecasting after satisfying all model assumptions.