**Eastern Housing Limited (EHL)**

**Analyzing the daily (2008-2022) stock return of EHL by using the Autoregressive Models**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | AR 1 | AR 2 | AR 4 |
|  |  |  |  |
| returnt-1 | **0.0886\*\*\*** | **0.0904\*\*\*** | **0.0905\*\*\*** |
|  | (0.0169) | (0.0169) | (0.0169) |
| returnt-2 |  | -0.0204 | -0.0195 |
|  |  | (0.0170) | (0.0170) |
| returnt-3 |  |  | -0.00752 |
|  |  |  | (0.0170) |
| returnt-4 |  |  | 0.0332 |
|  |  |  | (0.0170) |
| Constant | 0.000706 | 0.000718 | 0.000707 |
| Prob > F | (0.000474)  0.000 | (0.000475)  0.000 | (0.000475)  0.000 |
|  |  |  |  |
| Observations | 3,501 | 3,500 | 3,498 |
| R-squared | 0.008 | 0.008 | 0.009 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**returnt-1**: From all of the **AR** models - The coefficients of returnt-1 are from 0.088 to 0.09, which states that the EHL Stock Return can be estimated only around 8.8%-9% from the previous day’s stock return.Here the coefficients of all lag return 1 (returnt-1) in the AR (1), AR (2), AR (4) models are highly statistically significance at 1% (p<0.01) significance level.

Lag variables **returnt-2, returnt-3, returnt-4** has less impact on the EHL Stock Return than returnt-1 in AR (2) & AR (3), AR (4) models. Here, t value is smaller and p value is greater than 0.05 and makes it statistically insignificant at 95% confidential interval and therefore cannot reject the null hypothesis. So, these variables have no impact on EHL stock return.

From all of the AR models, returnt-1 variable is only statistically significant at 95% confidential interval where the value is close to 0, which means that EHL stock return is highly volatile. we can ‘t really predicts the EHL stock return based on the previous stock return data.

**R-squared:** At AR (1), AR (2) models r2= 0.008 means that only 0.8% of the variance in EHL stock return can be predicted from its lag 1 (returnt-1) & lag 2 (returnt-2) variable and 98.2% variance remained unexplained by the model. On the other hand, AR (4) model only explained 0.9% variance in the EHL stock return.

In conclusion, all the models are suggesting that none of them are useful to predict the EHL stock return.