Good report on project

Finance, Investment

Team 2

EXECUTIVE SUMMARY

Our company is Prestige Worldwide Investing. Our task is to determine which property is the best investment for the three different risk investors which is the risk averse, risk neutral, and risk seeking. Richard Nixon is a risk-seeking investor. Like most VC (venture capitalist), Richard pursues the project, which is high risky and high payback. Bill Clinton is risk-neutral investor, and he is only concerned about high return regardless of the risk. Ronald Reagan is a risk-averse investor looking for safe investments. For example, risk-averse investors will prefer the one with low relative risk when faced with two investments with a similar expected return (but different risks).

We have viewed our properties by checking out the listing that had 363 properties which we had to evaluate in order to suit every investor's decision based on their needs We classified the data and calculated the return and risk for each category.

After analyzing the collected data, we could draw to three simple conclusions for each investor. We have decided that due to Richard Nixon' risky nature, he would be best suited to a property that is in the Colonial style with a basement present because it has the highest relative risk of 26. 15%. Due to Ronald Reagan' cautious nature, we agreed that a property in Location C with a sewer present is the best option because it has the lowest relative risk of 8. 71%. Because Bill Clinton desires a high return, we certain that he would be so glad with a property in Location A with a fireplace present, which has the highest expected return at $404, 861. 54.

BODY

We, at Prestige Worldwide have received the task to provide three different types of investors options for investing in real estate. Our firm is looking for what is the best option for a risk seeking investor, risk neutral investor, and a risk averse investor. Comparing 363 different homes, all with variable features and values, we fine tuned our investors needs down to two specific features. There are multiple different aspects to look into when investing into real estate. Our first features is between the location, style, and heating system. Our second features are between a fireplace, sewer, basement, modern kitchen and modern bathroom. We use a specific method into finding these matches for these features.

Interpretation

Predictable difference or standard deviation is eferred to as the representing value of the distribution of the measured responses surrounding the mean. In addition, it also provides a better understanding of the data.

Average Return is the averaged measurement of sequences of returns generated over a specific period. An average return is calculated the same way a simple average is calculated for any set of numbers; the numbers are added together into a single sum. It also indicates the historical average gains produced by an asset over a period of time.

Coefficient of Variations represent the ratio of the standard deviation to the mean, and it is a useful statistic for relating the degree of variation from one data series to another. CV can be calculated in two settings, by interpreting the model and by analyzing a single variable.

Median is the numerical value that relates or denotes the underlying quantity within the middle of the frequency distribution or the observed quantity or values, which also determines the equal probability of falling below or above the values.

Techniques

We took these same procedure and applied it to the style and the heating system fields of the available real estate options. Our team took all of the overall expected average return, absolute risk, and relative risk of each of the locations, style options, and heating systems and compared them to determine which option is best for risk seeking, risk neutral, and risk averse Investors. After finding what are the best options for the different investors, we began to fine tune the best features for each investor type.

For example, our data shows that risk seeking investors are going to want to invest in a colonial style house. With that knowledge, we took all of the variables of fireplace, sewer, basement, modern kitchen and modern bathroom for only colonial style homes only. Out of those variables, we used summary statistics to find the one variable that had the highest average return with the highest risk to then match up the best options for risk seeking investors. This same method was used to find the best matches for our risk neutral and risk averse investors.

Investors

Risk Seeking

Risk seeking investors are looking for the highest average return and the highest absolute risk. Using the aforementioned techniques, we compared the data shown in (Appendix I, Figure 1), and saw that houses in Location A had the highest average return ($387, 000) but Colonial style houses in (Appendix I, Figure 2) had the greatest absolute risk ($78. 000). Due to this conflict, our team decided to look at the relative risk per dollar invested to make the final decision. Colonial style homes had a relative risk of 23% compared to those is location A which had an relative risk of 17%. Therefore, we concluded that a colonial style home would be the best fit for a risk seeker. From there, we compared the data for homes with a fireplace, a sewer, a basement, a modern kitchen, and a modern bathroom that are of a colonial style (Appendix I, Figure 4). The colonial style homes with a modern kitchen had an expected average return of $373, 392 and a absolute risk of $87, 730. Colonial style homes with a basement had a higher absolute risk of $92, 441 but a lower expected average return of $353, 532. To determine the better fit amidst this conflict, we turned to relative risk. The homes with a modern kitchen had a relative risk of 23. 2% and home with a basement had a relative risk of 26. 1%. This means the colonial style homes with with a basement are the best fit for risk seekers.

Risk Neutral

Risk neutral investors are looking for the highest average return. We applied the same techniques used to determine our suggestion for risk seekers and saw that houses in location A had the highest expected average return at $387, 000, besting split level houses by $2, 000. Therefore we can recommend the risk neutral investors purchase a house in location A. Our team then looked at the expected average return for homes in location A that had a fireplace, a sewer, a basement, a modern kitchen and a modern bathroom and compared them. We saw that in (Appendix 1, Figure 5.)

houses in location A with a fireplace had an expected average return of $404, 862 compared to the next highest, houses with a basement, which had an expected average return of $395, 854. Therefore we can suggest the risk neutral investors buy a house in location A with a fireplace.

Risk Averse

Risk averse investors are looking for the lowest absolute risk and highest average return. Once again, we applied the techniques mentioned in the previous section. Our team found that location A had the highest average return with $387, 000 but location C had the lowest absolute risk at $30, 000. Per the techniques, we then looked at relative risk per unit invested to make our suggestion. Location C had the lower relative risk at 9% compared to 17% with location A. From there, we took all the homes in location C with a fireplace, a sewer, a basement, a modern kitchen and a modern bathroom and compared the average expected return and the risks. Homes in location C with a basement had and average expected return of $345, 700 and an absolute risk of $48, 800. Homes in location C with a sewer had an average expected return of $310, 300 and an absolute risk of $27, 000. Since homes with a basement had the higher average expected return and homes with a sewer had the lower absolute risk, we took a look at the relative risk per unit invested to make our final suggestion. Houses in location C with a sewer had a relative risk of 8. 7% which was lower than that of homes with basements which had a relative risk of 14. 1%. Therefore we can make the final recommendation for risk averse investors of homes in location C with a sewer.

Recommendations

Here at Prestige Worldwide we offer three different recommendations tailored to the risk seeking, risk neutral, and risk averse investor. We arrived at each recommendation through risk and expected return analysis. Our team determined the expected return and risk of a characteristic by calculating summary statistics. The average of all the values in a certain characteristic determines the expected return. In order to determine the risk for each investment we take both absolute risk and relative risk into consideration. The average change in expected return for all of the values in a certain characteristic determines the absolute risk; and the ratio of absolute risk to expected return determines the relative risk. The relative risk of an investment is circumstantial and decides which characteristic has a higher or lower amount of risk per unit of return. The risk seeking recommendation aims to maximize both expected return and risk. The risk neutral recommendation aims to maximize expected return regardless of risk. The risk averse recommendation aims to minimize risk and maximize expected return. Our recommendations to each investor are focused location, heating system, and style and whether there is a fireplace, basement, sewer, modern kitchen, and modern bathroom. Our recommendations to each investor are as follows:

Risk Seeking recommendation (maximize both return and risk)

Colonial Style with a basement present

Expected Return $353, 532. 40

Absolute Risk $92, 441. 82

Relative Risk 26. 15%

Risk Neutral recommendation (maximize return)

Expected Return $404, 861. 54

Absolute Risk $82, 645. 45

Relative Risk 20. 41%

Risk Averse recommendation (minimize risk and maximize return)

Expected Return $310, 295. 50

Absolute Risk $27, 038. 80

Relative Risk 8. 71%

Appendix I

Note: This is a summary of the average return, absolute risk, and relative risk of all of the locations that are available in the real estate market. This data is from a sample size of 363 different homes.

Note: This is the summary of the average return, absolute risk, and relative risk of all of the housing styles from the sample size of 363 different homes

Note: This is the summary of the average return, absolute risk, and relative risk of all of the heating systems from the sample size of 363 different homes.

Note: This is a summary of the average return, absolute risk, and relative risk of all of the features from all of the Colonial style homes for risk seeking investors.

Note: This is a summary of the average return, absolute risk, and relative risk of all of the features from the sample of all location A features for the risk neutral investor.

Note: This is a summary of the average return, absolute risk, and relative risk for all of the features from the sample of all Location C data. This data is used to determine what the best option for risk averse investors is.

Appendix II

Figure 1.

Note: This is a comparative chart showing all of the box plots for all

Figure 2.

Figure 3.

Reflective Matrix

Reflective Matrix