The first visualization above is a line graph of Average Ratings of Board Games in Every 10 years from 1950. The x axis is marked by years, and the y axis is marked by the average rating given by players’ feedback during each 10 years. According to the data, the average rating of board games are having a rising trend from about 5.55 in the 1950s to about 6.70 in 2010s, the nearest ten years. And the nearest 10 years has the fastest increasing rate of average board game ratings, compared with all the 7 time periods. Such visualization shows that the board game market performance is gradually increasing year by year with the constantly emergence of highly rated board game products which meets the increasing demands of customers.

The second visualization is a scatter-plot of the average ratings of each Civilization board games since 1950.The x axis is marked by the year one game is published, and the y axis is marked by the average rating of each game. As we see from the data, most of the published Civilization board game concentrates among 2000-2010 and an average rating of 7.5, which is much higher than 6.70, the average rating of all the published board games in 2010s. Hence one can see from this visualization that compared with the overall market situation, Civilization board games have gained fairly good customer feedback approval in the whole board game market.

The third visualization is a box plot of the minimum player age and game complexity in the 2010s. The x axis is marked by the minimum player age of all board games with larger than 21-year-old data excluded, and the y axis is marked by the game complexity range for certain minimum age. According to the data, board games focusing on players at least 16~18 years old have widest game complexity range, and board games focusing on players at least 12~14 years old have the highest average game complexity. Since according to the first visualization(average rating in each 10 years), 2010s have the highest average ranking, conclude plots using the recent 10 year’s data would be most suitable for marketing strategy establishing and product development designing. Thus, according to this visualization, we can see that teenagers, especially 12-16 years old, has the greatest acceptance of high-complexity board games. Therefore, if a board game company would like to publish a new complex board game, it should be focusing teenagers, and vice versa.

The fourth visualization is a scatter plot of the average playing time over average rating pf board games published in the 2010s, with lines. The x axis is the average rating of each board game, and the y axis is the average playing time of each game. According to the data, as the average rating goes up, the average playing time also goes up, and most of the board games published in the 2010s are having less than 100 minute playing time and maintain an average rating between 5.0 and 7.5. Thus, based on this visualization and the second one, in order for the Civilization games to improve the rating feedback of customers, designing and publishing games with over 100 minute average playing time would be a suitable choice.

The fifth and sixth visualization are histograms indicating the number and average ratings of the most popular board game categories published in the 2010s. The x axis is labeled by the top 5 popular categories, card game, fantasy, war game, dice, and fighting, ranked from most popular to least. While the y axis is marked by counts(in visualization 5) and average rating(in visualization 6). According to the data, the most popular category in the 2010s is card game, which has the greatest publish numbers compared to other 4 categories. And customers seem to have higher ratings on the wargame category among all the top 5. Therefore, based on these visualizations, in order to establish stable marketing strategy to win the popularity and high ratings, research and design of new board games, if focusing on card game and war game, would be likely to receive profound effects.

The seventh visualization is a scatter plot focusing on the playing time and player number, with lines. The x axis is marked by the max number of players needed in each games(with data over 30 excluded), and the y axis is marked by the max paying time of each corresponding board game, with data larger than 500 excluded. According to the data, most of the board games published in the recent 10 years are suitable for a max player of 5, and average playing time of less than 100 minutes per game. However, this also indicates that there would be severe competition between brands and companies over such a player-time region. Therefore, based on this visualization , stable marketing strategy would either avoid such competition within board game selling, or trying to build mighty confidence of our own product, in order to emerge as more popular, highly sale rated board game company.