Market Analysis of loopable 1-Cost Jellyfish Cards in Altered TCG

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Figure 1: my favorite jelly

1 Introduction

This document presents a comprehensive market analysis of the 1-cost YZMIR Moonlight Jellyfish cards in the trading card game (TCG) *Altered*. The analysis focuses on pricing trends before and after the Angers Tournament, where significant price fluctuations were observed. We utilize statistical models to estimate future prices based on historical data and card power levels. This document is 3h of redbull induced theorizing and is most probably not worth the bytes its saved in.

2 1-Cost Jelly Power Level Calculator

First we must establish a baseline of the different "power" of 1 cost Moonlight Jellyfish cards. The following calculator aims to categorize them in a comprehensive way:

- Power Level 1: 1/- sacrifice from hand equivalent
- Power Level 2: 1/2-3 arrow sacrifice no extra effect equivalent
- Power Level 3: 1/2-3 arrow sacrifice with added basic effect (draw, resupply, etc.)
- Power Level 3.5: 1/1 arrow no added effect
- Power Level 4: 1/1-2 arrow with one-two basic effects
- Power Level 5: 1/1 extremely strong effect

3 Data Collection

The dataset consists of sales data for 1-cost jellyfish cards collected from various online marketplaces (very painstakingly). The cards are characterized by their power levels, which range from 1 to 5. The key points in our dataset include:

- Pre-Angers prices, which show a range from 25€ to 40€ for lower power levels.
- Post-Angers prices, which demonstrate a dramatic increase, with some cards selling for over 300€.
- A new data point introduced: a sale of a power level 3 jellyfish for 250€ four days after the Angers Tournament.

4 True Jelly Price Calculation (TJP

To account for the influence of power levels on pricing, we defined a *True Jelly Price* based on the observed sale price adjusted by the card's power level. The formula used for the True Jelly Price is:

$$\text{TJP} = \frac{\text{Price}}{\text{Power Level}^{1.05}}$$

The choice of a scaling factor of 1.05 was made to achieve a more realistic representation of the price variance among different power levels, reflecting the diminishing returns on price as power levels increase.

5 Hype Decay Model

To model the price trends post-Angers Tournament, I utilized a two-part decay function defined as:

$$f(x) = \begin{cases} a_1 e^{-b_1 x} & \text{for } x < 10 \\ a_2 e^{-b_2 (x-10)} + c & \text{for } x \geq 10 \end{cases}$$

Where:

- a_1 represents the initial price influence.
- b_1 is the rate of rapid decay in the first 10 days.
- a_2 is the secondary price influence.
- b_2 is the decay rate after the initial period.
- c acts as the floor price, below which the prices are unlikely to fall.

The initial parameter estimates were chosen based on the observed maximum prices and a realistic market response to the tournament. The bounds for these parameters were set to avoid overestimation, although considering that Altered is a new TCG, these prices may vary drastically depending on the state of the game, we're still aiming for plausible market predictions though.

6 Results

The fitted parameters for the two-part decay model were found to be:

- a_1 (initial price influence): 102.86
- b_1 (initial rapid decay rate): 0.0500
- a_2 (secondary price influence): 70.94
- b_2 (secondary slower decay rate): 0.0149
- c (floor price): 10.00

These results indicate a rapid decline in prices following the tournament, stabilizing towards a floor price over time. The fitted model allows us to visualize the trends in price movements effectively.

6.1 Graphs

Figure 2 illustrates the projected True Jelly Price trend for different power levels based on the fitted decay model. This graph highlights the expected price behavior over the next 60 days following the Angers Tournament.

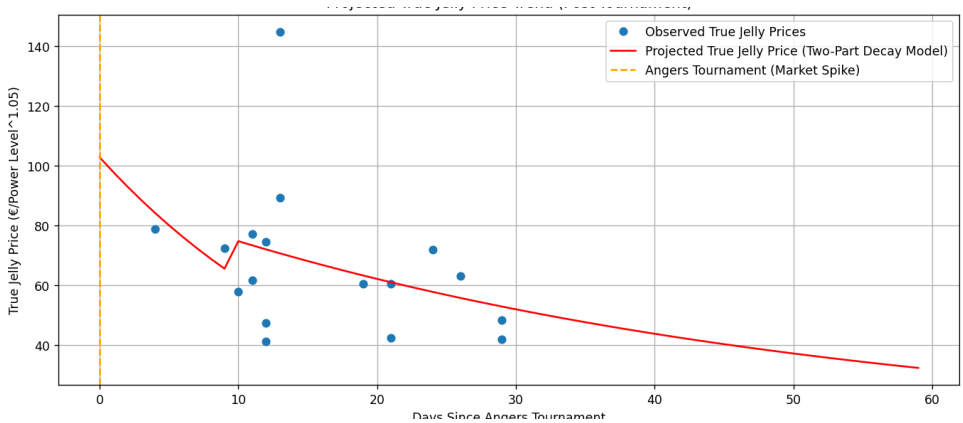

Figure 2: Projected True Jelly Price Trend by Power Level (Post-Tournament)

The graph clearly shows how prices are expected to decline rapidly initially and then stabilize as they approach the floor price.

7 Future Price Projections

Building on the fitted decay model, I generated future price projections for the next 60 days. These projections consider different power levels, providing insights into how pricing estimates will change over time, without taking into consideration the expansion release, as any new reveal might bump or decrease the pricing. If I were to analyze this I'd say it's pretty clear that although prices are currently quite boosted, holding on to loopable jelly's seems like a decent investment, and the price decreasing drastically in the incoming months (pre expansion) would not make much sense considering the competitive viability of the deck.

Figure 3 presents prediction of prices of Jellyfish of different power levels.

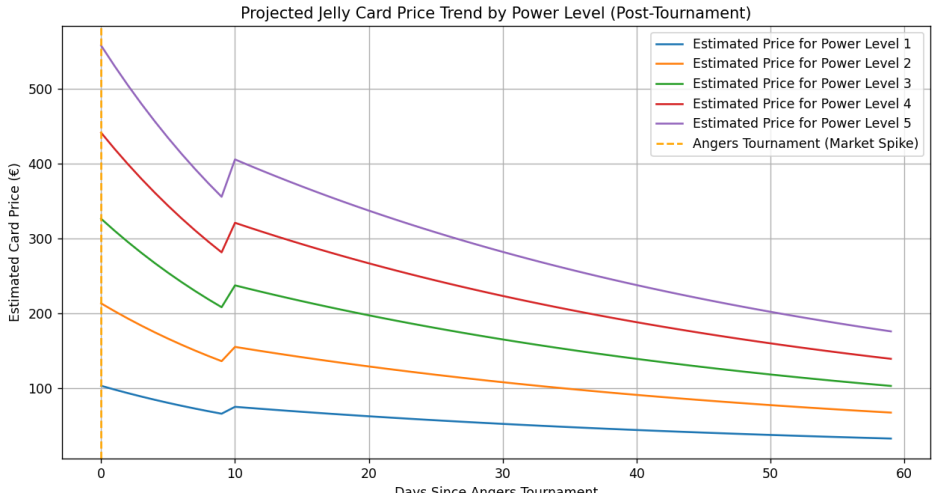

Figure 3: Post-Angers Tournament Jelly Prices

8 Conclusion

This redbull-fever-dream fueled analysis provides insights into the pricing dynamics of 1-cost loopable jellyfish cards in *Altered*. By employing statistical modeling techniques, we can get a clearer view of market trends and can make informed predictions about future pricing based on historical data. The graphs presented illustrate the expected trajectory of card prices, which is useful but not very, since owning a set of loopable jelly's instantly makes you the coolest player in your circle of friends, especially if you traded for them.