A Price Forecasting Model of Magic: The Gathering Cards

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The market pays more for White cards

This is surprising because Blue cards have always been considered the “professional’s color of choice”; ironically, it’s the lowest

Introduction & Background

- Magic: The Gathering is a collectible card game with an active secondary market for playing cards
- Object of the research project: develop a statistical model to explain & predict price movements of “Rare” & “Mythic Rare” cards from sets seen in standard play; 406 cards in total
- Built a software tool using PHP to scrape daily price data from third party card trading websites, online card databases, & Magic Online tournaments
- Built a MySQL database to manage scraped data
- Used R statistical software to analyze data

Main Findings from Regression Model:

- Other things equal:
  - Black/Green is the most valuable color combination, while Colorless are the least valuable once we control for rarity, type, etc.
  - No significant difference in price between near mint & lightly played cards
  - Rare lands are the most valuable card type
  - Price of a card increases 5-7% for every showing in a winning Magic Online deck
  - Mythic Rare cards are 150% more valuable than Rare cards

Example: Sphinx’s Revelation

- Factors: Mythic Rare, Instant, Multicolor

Conclusion

- We use our coefficients to derive percentages, since we use the natural log of card price as our independent variable
- Regression $R^2 = 0.65$, so we explain about 65% of the variation in Magic card prices

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