

Discussion:
Rating on A Curve
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Basic Idea: Grade Setting Matters

- Comparison Set
 - “A” students in Computer Science Class
 - MIT v.
 - Community College
 - Buy Stock Recommendations
 - Analysts covering overvalued stocks
 - Analysts covering undervalued stocks
- Grade Inflation
 - “A” students
 - MIT CS class with 90% A’s v.
 - MIT CS class with 10% A’s
 - Buy Stock Recommendations
 - Analysts at broker with 50% buy recommendations
 - Analysts at broker with 90% buy recommendations

Example: Does coverage affect ratings?

		Strong Sell	Sell	Hold	Buy	Strong Buy
Analyst A	Coverage	X	X	X		
	Bias Rec	Sell	Hold	Str. Buy		
		Str. Sell	Sell	Hold		
Analyst B	Coverage			X	X	X
	Rec			Sell	Hold	Str. Buy
				Hold	Buy	Str. Buy

Paper Summary

- IBES, 1997-2017
- 5 million stock-analyst-month observations
- Ratings are related to analyst pool quality
- Conditioning on Analyst Pool Quality affects Value of Recommendations
 - Buys from analysts in a strong pool are valuable
 - Sells from analysts in a weak pool are valuable

Summary

- Nice Idea – Does pool quality affect analysts?
- Discuss the economic significance of the question.
- Measure pool quality independent of stock quality
- Provide evidence that return results are distinct from extant literature.

Big Picture

- What is the economic significance of this finding?
 - Better portfolio returns?
 - Documenting the “reference set” effect?
 - Does the “reference set” effect translate to other areas?
Corporate or Sovereign Bonds
- Is the “reference set” effect distinct from an “anchoring effect”
 - With anchoring, subjects focus on a reference object and do not adjust sufficiently: arguably influences recommendations, target prices, and earnings forecasts.
 - With reference set, subjects give top 10% of set an “A”: influences only recommendations.
- Vast Literature on Analysts
 - Numerous stock/analyst characteristics predict recommendation returns.
 - How does the return result fit into this literature?

The Grade Inflation Effect

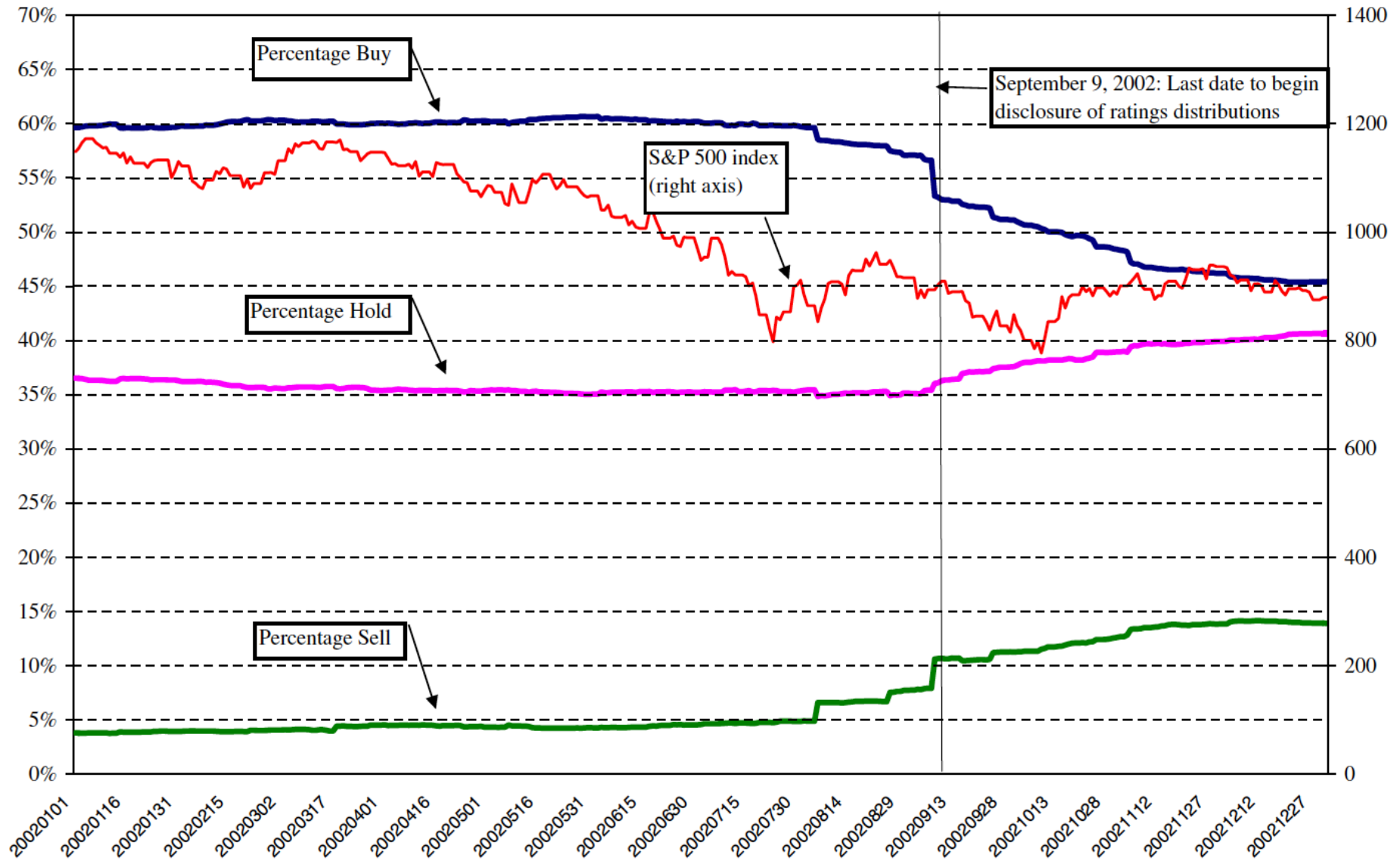
- Brokers differ in their willingness to issue sell recommendations.
 - Less favorable brokers will have “buy” recommendations that are more valuable.
 - More favorable brokers will have “sell” recommendations that are more valuable.

Barber, B. M., Lehavy, R., McNichols, M., & Trueman, B. (2006). Buys, holds, and sells: The distribution of investment banks' stock ratings and the implications for the profitability of analysts' recommendations. *Journal of Accounting and Economics*, 41(1-2), 87-117.

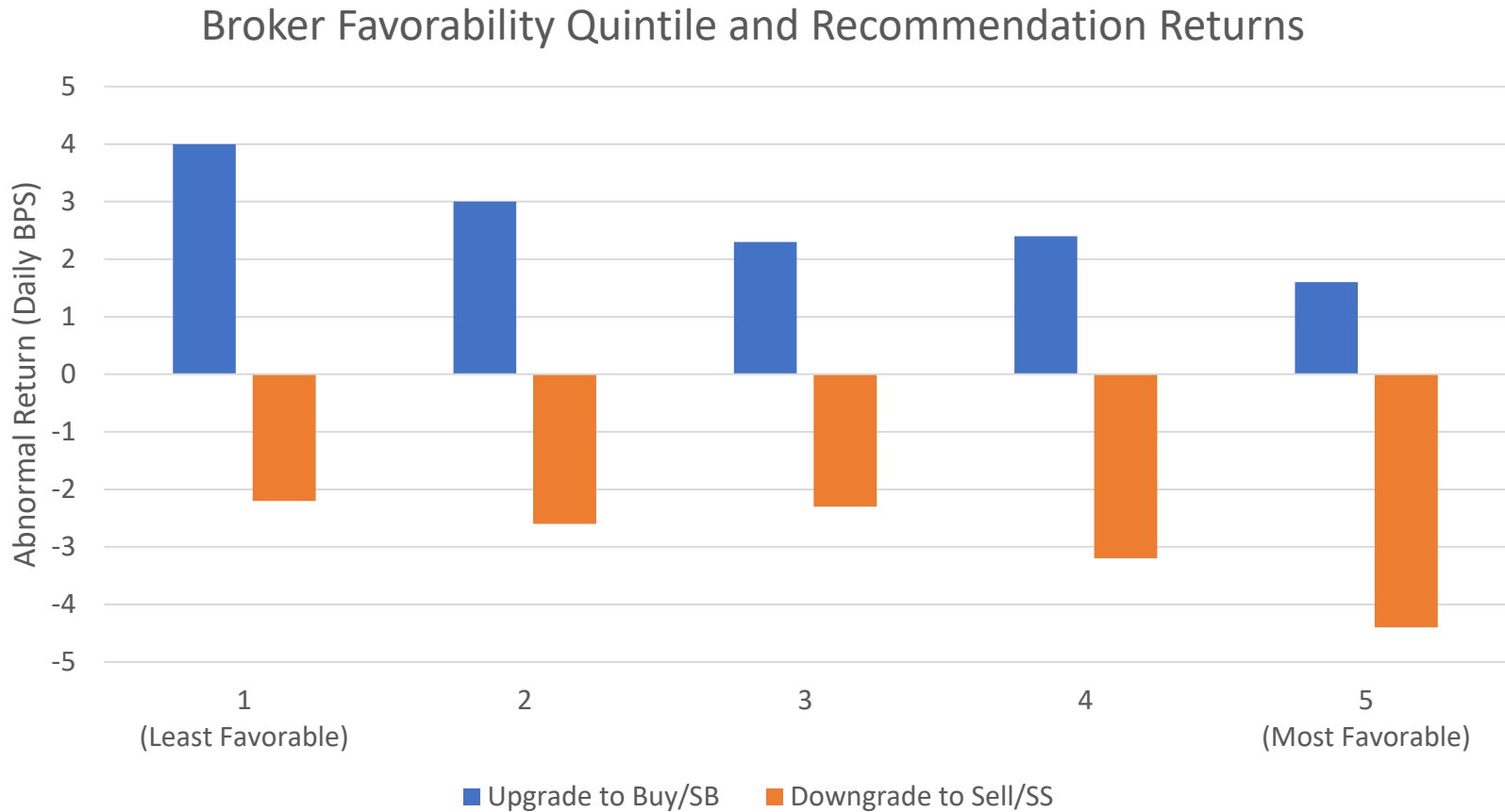
Brokers differ in their favorability

Favorableness quintile	Average quarterly percentage buy recommendations	Average quarterly rating	Average quarterly number of brokers	Average quarterly number of recommendations	Average market value of firm covered
(1)	(2)	(3)	(4)	(5)	(6)
1 (least favorable)	45	2.4	50	5,137	6,098,450
2	57	2.2	25	5,043	5,848,713
3	62	2.1	23	5,122	5,551,187
4	67	2.0	27	5,130	5,215,182
5 (most favorable)	79	1.8	98	5,082	4,115,469

Temporal Variation in Grade Scale



Grade Scale and Rating Value



Does reference set affect recommendations?

Baseline Regression

$$rec_{a,s,t} = \beta_1 TR_{s,t} + \beta_2 rank_{a,s,t} \times Middle_{s,t} + \beta_3 rank_{a,s,t} \times Corner_{s,t} + \theta IBP_{a,s,bt} + \eta_{s,t} + \gamma_{a,s} + \epsilon_{it}, \quad (1)$$

- Dependent variable: Recommendation level (1 to 5)
- TR – median target return for stock s in month t
- rank – rank of stock in analyst's portfolio based on global TR

Target Prices

- The target price “...is the price that analysts believe is the intrinsic value of the stock.”
- For each analyst-stock-month:
$$\text{target return} = \text{target price} / \text{current stock price}.$$
- Calculate median across analysts for each stock.
- Corner stocks
 - Each month, stocks are sorted into quintiles based on median target return.
 - Corner stocks are quintile 1 and quintile 5.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variable	$rec_{a,s,t}$ (1= Strong Buy, 5=Sell)						
$TR_{s,t}$	-1.026*** (0.009)	-0.663*** (0.010)	-0.856*** (0.011)	-0.450*** (0.008)	-0.548*** (0.009)		
$rank_{a,s,t}$		-0.431*** (0.005)		-0.268*** (0.004)		-0.022*** (0.005)	
$rank_{a,s,t}$ $\times Middle_{s,t}$			-0.469*** (0.005)		-0.285*** (0.004)		-0.030*** (0.006)
$rank_{a,s,t}$ $\times Corner_{s,t}$			-0.216*** (0.006)		-0.157*** (0.004)		0.002 (0.008)
$IBP_{a,s,b,t}$				-0.154*** (0.024)	-0.155*** (0.024)	-0.122*** (0.023)	-0.122*** (0.023)
Constant	2.502*** (0.003)	2.673*** (0.003)	2.685*** (0.003)	2.538*** (0.002)	2.543*** (0.002)	2.319*** (0.003)	2.317*** (0.003)
Analyst-Stock FE	No	No	No	Yes	Yes	Yes	Yes
Stock-Month FE	No	No	No	No	No	Yes	Yes
Observations	5,022,576	5,022,576	5,022,576	4,735,398	4,735,398	4,731,240	4,731,240
R-squared	0.045	0.057	0.063	0.555	0.556	0.645	0.645

Rank measures more than pool quality

Concern:

- Rank measures two things:
 - Stock quality - high quality stocks receive better rankings
 - Pool Quality - stocks with in poor quality pools receive better ranks
- To conclude rank is about pool quality, we must control for stock quality
 - Rec is related to rank under the null (of no pool quality effect)
 - TR must control for this underlying relation, but surely is a crude measure of quality
 - Stock-month FEs are better, but highlight the concern.

Example: Does coverage affect ratings?

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		Str. Sell	Sell	Hold		
Analyst B	Coverage			X	X	X
	Rec			Sell	Hold	Str. Buy
				Hold	Buy	Str. Buy
Target Return		-10%	-5%	0%	5%	10%

Replace rank as key dependent variable
Exclude stock being rated

- Use a variable that measures average quality of **other** stocks covered
 - Mean TR of “other” stocks in the analyst
 - Mean global rank of TR of “other” stock in the analyst portfolio
- **Exclude the covered stock!**
 - Will help convince readers this is about pool quality (rather than some unobserved stock characteristic).

What about earnings forecasts?

- Analysts regularly increase/decrease earnings forecasts.
- Should pool quality affect earnings forecasts?
 - If you believe target prices are unaffected by pool quality, then earnings forecasts should also be unaffected
- Suggestion
 - Rerun analysis with earnings forecast revisions as the dependent variable (-1,0,1)
 - Rerun analysis with target price revisions as the dependent variable (-1,0,1)
 - If you find results, perhaps this is more of an anchoring effect than a reference set effect?

Portfolio Tests

- 3 x 3 sorts:
 - Pool Quality (Mean(?) of the TR): worst/normal/best
 - Recommendation (SB, Buy, Hold/Sell)

FF5+Mom alphas	Strong Buy	Buy	Hold and Sells	All recommendations	Strong Buy-Hold and Sells
Worst Pool	0.36%	0.32%	0.06%	0.25%	0.29%
Normal Pool	1.17%	1.11%	0.70%	0.99%	0.47%
Best Pool	1.24%	1.53%	0.91%	1.22%	0.32%
All pools	0.92%	0.99%	0.56%	0.82%	0.36%
Best-Worst	0.88%	1.20%	0.85%	0.98%	

Portfolio Tests

- Analyze announcement reaction and drift separately
 - “The returns are estimated using the period from one day before the announcement of the report to 20 working days after the announcement.”
 - A tradeable strategy would be based on transaction prices after the recommendation.
- Nitpicks
 - Are these calendar-time returns?
 - Each portfolio s/b daily return series. (The monthly alphas confused me.)
 - The table needs standard errors
 - Why is the relation non-monotonic?
 - Why do sells have a positive alpha?
- Need controls for analyst/broker/stock characteristics.
 - A robustness table that breaks this down by various characteristics to show results survive finer controls.
 - Glamour v. Value (Jegadeesh et al. 2004)

Portfolio Tests

- Do Earnings Forecasts and Target Price revisions provide a placebo?
 - Depends on whether this is about reference set or anchoring.
- Assume pool quality is unrelated to earnings forecasts or target prices
 - Portfolios formed on the basis of upward/downward forecast/target revisions should not vary across pool quality.
 - Controls for analyst-stock matching
 - Goes a long way toward showing novelty of the pool quality channel.
 - Relies on forecasts/target prices being independent of pool quality, but you can test this empirically.

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