Can Deal Failure Be Predicted?

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Background

- **Motivating Question**: Do mergers and acquisitions create or destroy value?
- **The Rub?**: Measuring value (or value destruction) from M&A is a sticky wicket
  – Want an ex post measure of performance of the firm with vs without (the counterfactual) the merger occurring
  – Ex post long run returns and performance suffer from bad benchmarks (see Bessembinder and Zhang, 2013; Bessembinder et al., 2018)
- Given the difficulty measuring counterfactuals (however, see Malmendier et al., 2018), the literature has settled on CARs to assess deal quality (authors report between 2007 and 2016, almost all papers at top-3 journals studying deal quality used CARs)

Summary

- **Actual Research Question**: How do CARs do in predicting extreme deal failure?
- **Methodology**: Study whether and how well CARs predict the sign and magnitude of the write-down (impairment) of goodwill *specific to a transaction* using a hand-collected sample of goodwill impairments relative to deals with goodwill but no write down
- **Primary Results**:
  - CARs statistically predict the incidence of goodwill impairment
  - *But*, the economic magnitude of the prediction is small
  - Conditional on impairment, CARs do not predict the magnitude of goodwill impairment
- **Additional Results**:
  - Goodwill impairment correlates with other ex post deal failure measures (CEO turnover, LR performance and returns, and distressed delistings), which CARs also don't predict well
  - CARs predictability varies in the cross section in reasonable ways

My Thoughts?

- The current literature doesn't have a bulletproof way to evaluate deals
- It's important to validate CARs as a measure of deal quality and allow us to understand what CARs actually can and can't tell us
- **What I liked**:
  - The paper
  - Identifying and coming up with a way to test the above
  - I'm reasonably confident of the main empirical findings (with a few minor quibbles) that (1) goodwill impairments are a good measure of extreme deal failure and (2) announcement CARs have a difficult time in predicting ex post goodwill impairments in the sample
- **What needs work**:
  - The generalizability of the above results: coming up with a general measure of deal performance/value creation (or the lack thereof)
  - What do we actually expect announcement returns to tell us?

Big Picture Comments: How to think about Goodwill Impairments

- Goodwill = Purchase Price – Fair Value of Net Identifiable Assets
- Goodwill = Value from Synergies + Value of Control of Target Assets + Overvaluation
  - Obvious positive correlation between overvaluation and goodwill
  - Likely positive correlation between overvaluation and impairments
- Given the nature of goodwill, this creates the possibility of a sample selection bias

Thought Experiment

- Let's assume that goodwill is only composed of overvaluation (or that undervaluation can swamp "core goodwill"), meaning that non-overvalued deals have zero goodwill
- Let's also assume that deal failure is probabilistic, but the market can predict ex ante which deals might fail (are overvalued) and which deals definitely won't
- An ex post measure of deal failure will yield the following outcomes:

Market Prediction	Deal Outcome
Good Deal	No Failure
Bad Deal	No Failure
Bad Deal	Failure

- However, good deals will have zero goodwill and are excluded from the sample (950 deals excluded by the authors) since they will not (and cannot) write down goodwill
- Sample selection is correlated with the outcome variable
- **Takeaway:** You need a measure of deal failure for all deals. Goodwill captures ex post realizations of potential failures and won't cut it without an appropriate counterfactual
  - It's possible that CARs do a great job predicting deal failure, but this gets lost when the counterfactual isn't (and can't be) included in the analysis
  - Look at CARs and other measures of ex post deal performance for deals with no goodwill

Goodwill Impairment Generalizability

- Deal-specific goodwill impairments are clearly a measure of ex post extreme deal failure (the left tail of outcomes)
- As the authors note, it’s less clear whether they are a good general measure of ex post deal value creation/destruction (the rest of the distribution)
  - Skewed (average impairment magnitude is well below the 25th percentile) and censored estimate of deal performance (only captures extreme failure and can’t “write-up” goodwill)
  - Likely biases estimated coefficients (but pretty easy to fix)
- Does predicting the incidence and magnitude of an ex post negative realization of a probabilistic outcome (extreme deal failure) represent a reasonable benchmark for the market’s ex ante assessment of the deal (CARs)?
  - Was it a problem that Samsung’s returns on the announcement of the Galaxy Note 7 didn’t seem to reflect information about the fact they would subsequently spontaneously combust?

Too Much to Expect?

- If we're requiring investors to impound all past, current, and future information, we're no longer talking about semi-strong or strong-form efficiency, but *super-strong-form efficiency*™
  - Given the need for future information, I assume this involves time travellers
- Less flippantly, this isn't necessarily a critique of the authors, since many pa… un…
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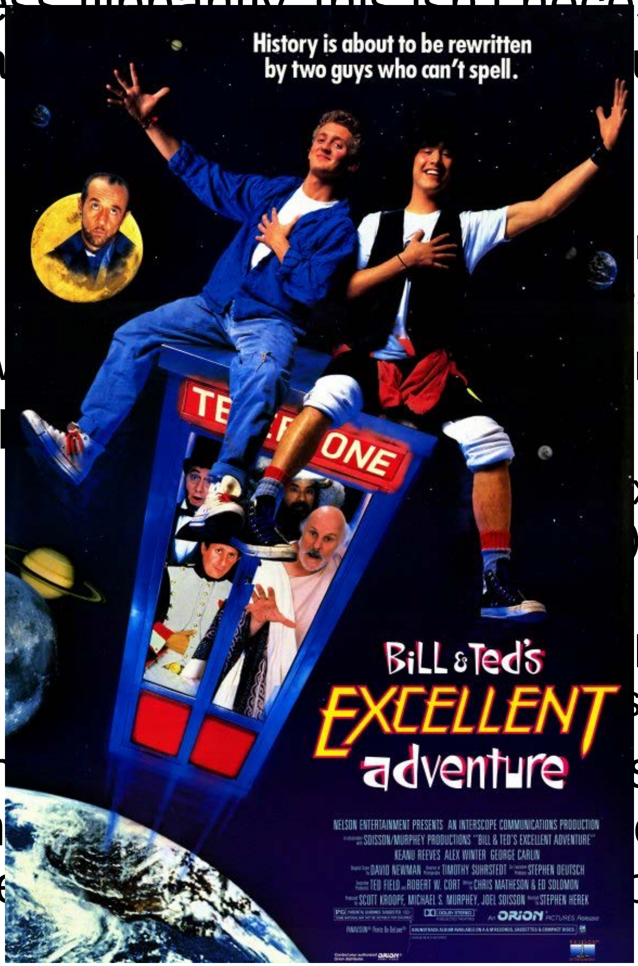

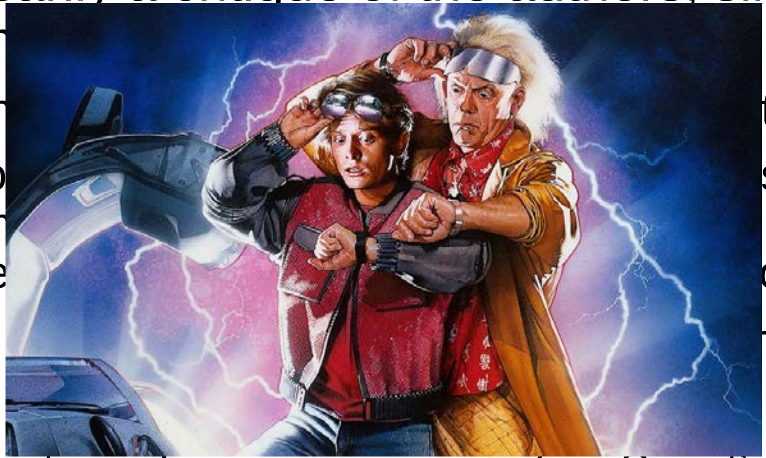

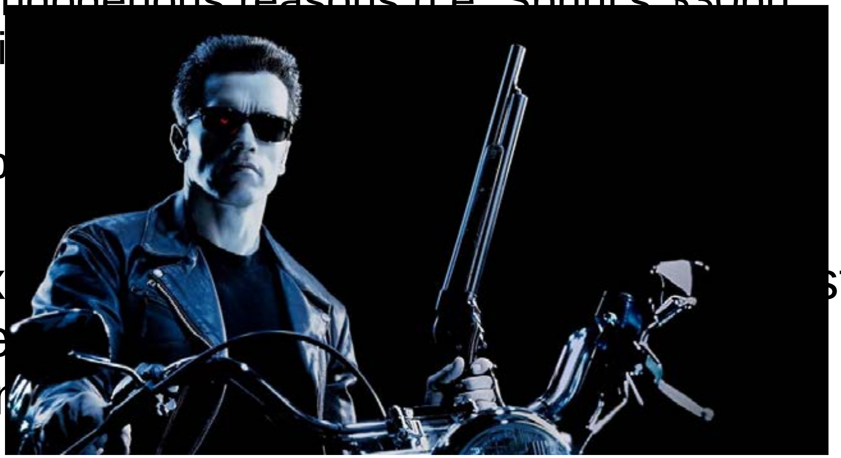

Medium Picture Comments

- **Characteristics associated with impairments**
  - Related to earlier, could help identify expected vs unexpected impairments, but would also be nice to rule out alternatives
  - For example, is impairment driven by pre-deal firm risk-factors that also drive poor follow-on performance (Bessembinder et al., 2018)?

VARIABLES	(1) lret	(2) Log ret - Log ret based on C5	(3) Log ret - Log ret based on C14	(4) ret	(5) ret - ret based on C5	(6) ret - ret based on C14
ma_noimp	0.19	0.05	-0.05	-0.21	0.08	0.01
	(0.90)	(0.23)	(-0.21)	(-0.92)	(0.36)	(0.05)
ma_imp	-2.24***	-1.55***	-1.43***	-1.82***	-1.23**	-1.28**
	(-4.20)	(-2.91)	(-2.69)	(-3.63)	(-2.47)	(-2.57)
Constant	0.18	0.18	0.18	1.36***	0.11	0.11
	(0.39)	(0.36)	(0.36)	(2.90)	(0.21)	(0.22)
Observations	566,087	566,087	566,087	566,087	566,087	566,087
R-squared	0.000	0.000	0.000	0.000	0.000	0.000

  - The presence of material customers can lead to destroyed RSI and value in M&A activity (Cen et al., 2015; Harford et al., 2019; Johnson et al., 2015).
    - Does the impairment sample have more major customers that could be harmed in mergers, leading to greater value destruction?
    - Possibly: Impairment bidders are significantly more likely to list a major customer than non-impairment bidders (64% vs 52%) and impairment public targets are more likely to list an important customer (64% vs. 55%).

Medium Picture Comments

- **The lack of economic significance of CARs ability to predict incidence of impairment is a bit misleading**
  - Unconditional proportion of impairments is 24%
    - An increase of 0.38% in the probability of impairment for a 1% decrease in CAR
    - or a 2.25% increase in the probability of impairment for a move from Q4 to Q1 in CARs seems relatively small
  - The 24% includes the very large clustering of impairments during the financial crisis and dramatically drops without it
    - i.e. deals after 2009 have a 9% unconditional probability of impairment
  - Makes the economic size of the predictability a bit more impressive

Medium Picture Comments

- **Performance of Hand collected vs. Compustat impairments?**
  - This was a lot of work on your part, but does it materially change anything about the analysis?
  - This could also capture negative, within-firm spillovers
  - If you're looking for other researchers to incorporate this methodology to evaluate deals, I assume this would be of interest (or you could just share the data)

Minor Comments

- Incidence regressions (Table VII)
  - Tests use an endogenous regressor, need to adjust standard errors accordingly
  - Given the logit, an odds ratio might be nice to report
- Given sample period (ending in 2013), it might make sense to either (1) reduce impairment window from 10 to 5 years, or to show that results are also robust to only including years where you have 10 years to look for impairments post-deal
- Table 8 is a bit less straight-forward to understand than Table 7, doing robustness checks on both would be useful (if only in an appendix)
- Could CAR predictability conceivably vary across industry? If so, you're stacking the deck against it by not including industry fixed effects in the baseline model.
  - You show that predictability of the control model isn't driven by year fixed effects, it would be good to do the same for industry fixed effects
- Table VII description and in-text discussion: I'm assuming the "1 percentage point *increase* in acquirer CAR" is meant to say "*decrease*"
- Table VI: "t-test" is used to refer to the p-value from a t-test instead of the t-stat. It's a bit unclear

Conclusion

- I think the authors ask an important question and that this paper’s empirical results are solid and it’s obvious the authors have done a lot of work in the data collection and testing process
- I think the authors would benefit from thinking about the implications and takeaways of the paper in relation to what the goodwill impairment represents.
  - The current writing seems to move back and forth
- I think this is an excellent paper and I learned a lot. I look forward to future iterations and its eventual publication.