The Relationship Between Corporate Governance and Company Performance

New factors, New models, New Approaches to Causality

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Overview

Motivation and Previous Work

Corporate governance models vary widely across firms, and there is much debate on the impact of these differing styles on company performance.

- How can these features be optimised for best performance?
- What defines *best performance*?

Moldovan and Mutu (M&M, 2015) attempted to answer these questions.

- Acquired data from Bloomberg financial system.
- Worked to learn predictive models.
- Proposed rules.

Motivation and Previous Work

M&M, 2015

- ✓ Claimed numerous accurate correlations across multiple algorithms and measures.
- × Limited measures and features.
- × Unexplored algorithms and techniques.
- × Correlation $\neq$ Causation.

Other Work

- Pearl, Judea. (2009) discussed causality extensively.
- King, G. et al. (2016) have proposed methodology causal inference.
- Athey, S. (2017) have explored the gap between prediction and decision making.

Approach

My Approach

1. Acquire data.
2. Reproduce some of M&M's results.
3. Use alternative algorithms and techniques.
4. Alternative features and measures of corporate governance and corporate success.
5. Apply modern work in causation.

Academic Contribution

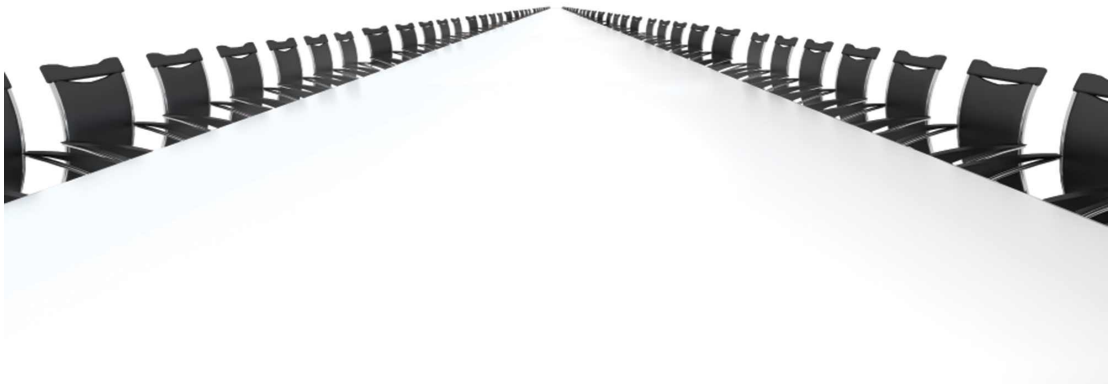
A deeper question concerns whether a given problem can be solved using only techniques for prediction, or whether statistical approaches to estimating the causal effect of an intervention are required. - Athey, S. (2017)

Much research and development has gone into producing highly efficient prediction techniques, powered by the explosion of data. Causation is more difficult to prove.

A significant contribution would be to examine and attempt to apply cutting edge research on proving causality to this domain.

Practical Application

- Data based decisions need to consider causality, not just correlation.
- Domain specific practicality, propose best practice for corporate governance.



The Data

Three stock indexes considered:

- S&P500 (SPX)
- STOXX Europe 600 (SXXP)
- STOXX Eastern Europe 300 (EEBP)

} M&M: 1400, 52

Explanatory Variables:

Tobin's Q $\propto$ *Market Cap*, *Total Liabilities*, *Preferred Equity etc*.

Altman Z Score $\propto$ *Working Capital*, *Tangible Assets*, *Market Value etc*.

The Data

Sourcing the Data:

1. Directly from the authors
   - ✓ Replicate their study.
   - ✓ Expedites the project.
     This request is with M&M.

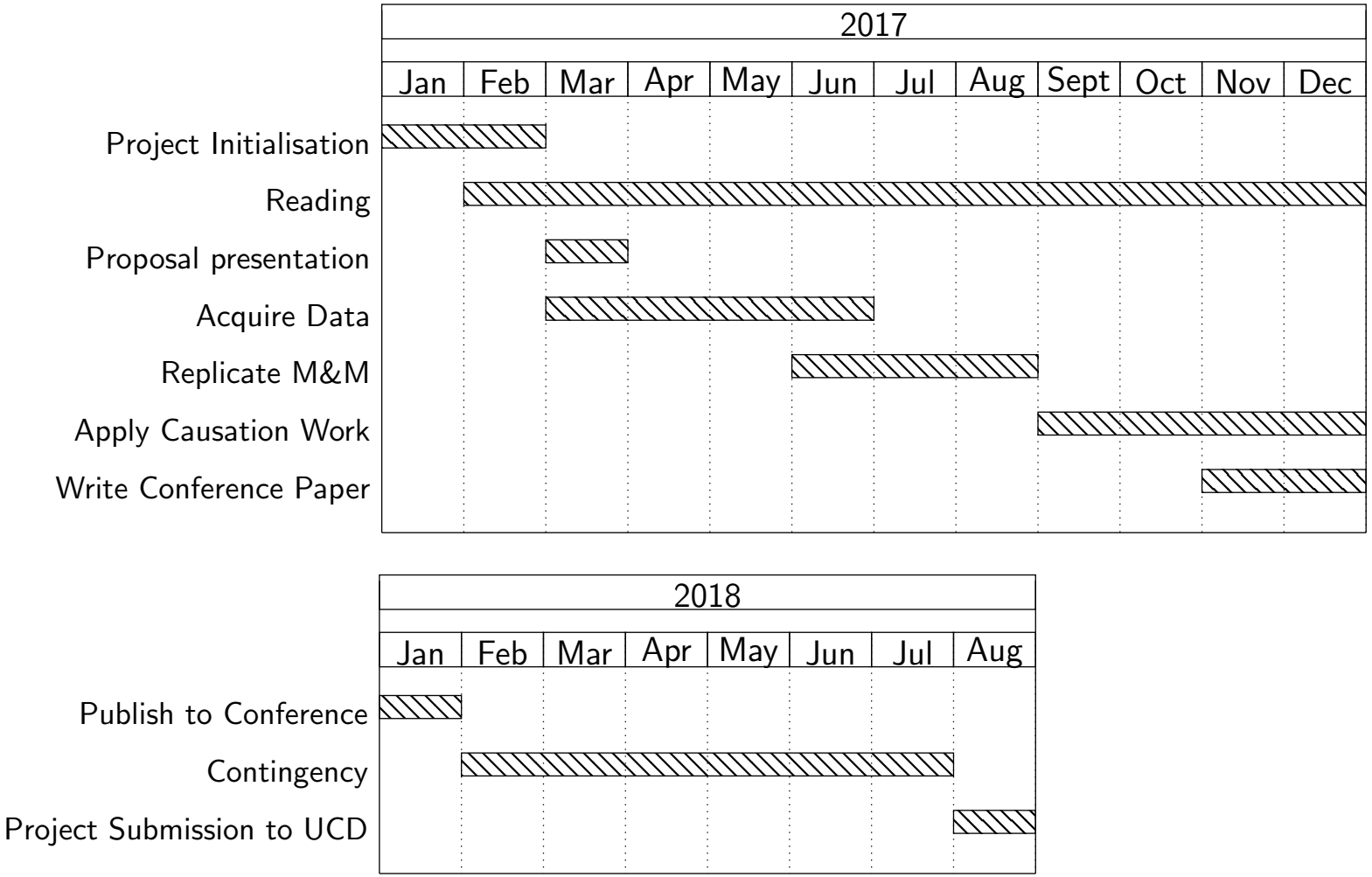
2. Extract it myself
   - ✓ More autonomy.
   - ✓ Gain experience with Bloomberg.
   - × Time commitment.

Measuring Success

Project Goals

- ↻ Consider auxiliary features beyond the current dataset.
- ■ Reproduce some of M&M's findings and seek to improve on results.
- ■ Carry out new techniques.
- ∼ Investigate and apply modern work on causality.

Project Timeline



Thank You.