Discussion of Edmans, 2007
“Does the Stock market Fully Value Intangibles? Employee Satisfaction and Equity Prices”
CFEA 2007, NYU

Mozaffar Khan
Massachusetts Institute of Technology
Discussion Outline

- **Story**
  - “Macroeconomists have predicted 9 of the last 5 recessions” – Samuelson
    - If we make enough random predictions, we will be right about half the time.
    - This critique does not apply to the present paper, but the point is that it is vulnerable to this critique in the absence of a clearly articulated story.
  - A story helps reduce the risk of drawing inference from accidental patterns in the data.
  - Mapping from employee satisfaction to improved corporate performance is needed.

- **Research design**
  - Generalizability

- **Results**
  - Strength
The Story

- A clearly articulated story:
  - allows more refined predictions, and
  - makes subsequent evidence more convincing.

- Interesting hypothesis, and existing evidence in HR and other literatures:
  - theory is unclear;
  - empirical evidence is mixed.

- What is it about the present setting that would make the author’s evidence more convincing?
  - discussing this would be useful;
  - full circle back to need for more explicit story.
Mappings from Employee Satisfaction to Corporate Performance

- It seems clear we are looking for a cash flow (not discount rate) effect.
  - First clarify satisfaction to value mapping, and then worry about whether this is impounded in prices in a timely fashion.

- One cash flow channel is productivity:
  - higher satisfaction -> higher productivity -> improved performance
  - But, duress -> higher productivity -> improved performance!
    - E.g., sweatshops
  - Should managers make employees happier or more desperate?
  - Not promising route?

- Second channel is ‘public good’ type benefit:
  - firm captures surplus by providing ‘convenience yield’ to employees;
  - testable prediction relating these specific benefits to firm value.
Mappings from Employee Satisfaction to Corporate Performance

- Third channel is improved retention and savings on hiring / training, work proficiency:
  - but why are the savings not offset by the added cost of satisfaction (why does firm capture surplus)?
  - need some external labor market friction / internal labor market benefit?
  - testable prediction related to employee turnover / industry labor market conditions.

- Another channel is organizing work differently:
  - Southwest Airlines – one type of plane, team competition;
  - work organization -> satisfaction -> performance;
  - Again, testable predictions relating to work organization.

- Plausible hypothesis, but challenging to convince without explicit mappings.
Research Design: A theory of the tail or a general theory?

- Satisfaction is from Fortune list – about 67 public firms in sample:
  - Roughly 1% of public firms?
  - Extreme right tail of cross-sectional satisfaction distribution.

- Could the evidence be tail effect or a general phenomenon?
  - think about the left tail – duress!
  - If we looked at the left tail, we might conclude that satisfaction reduces firm value!

- Suggestions:
  - there are existing broader surveys;
  - conduct own survey;
  - explicitly recognize lack of generalizability.

- No evidence provided on effects of intangibles generally:
  - enumerate, develop predictions, test.

- More background on Fortune survey procedure useful.
The Evidence

Performance outcome measure is long horizon stock return
- unexplained portion (alpha) could be due to rational structural uncertainty about payoffs to satisfaction;
- Could also be due to ex post realized externalities (e.g., publicity effect could attract new business), rather than satisfaction.
- Is there a benchmark/optimal satisfaction level for each firm? E.g., does Google overinvest?
- Controlling for investment opportunity set is challenging.

- 4 portfolios:
  - I – annual rebalancing
  - II – original 1998 firms only
  - III – all ever on list
  - IV – all dropped from list

- Predictions about relative performance of I vs II vs III?
  - Intuition suggests portfolio I should be best performer.
  - But portfolio II outperforms I in 4 of 8 years, and on average.
Short Sample (1998-2005) Evidence

- II has higher average returns and alphas than III:
  - is result primarily driven by original set of 1998 firms?
  - This would be inconsistent with general hypothesis.

- Useful to report results for portfolio V: all non-1998 firms.

- Do companies that appear more often have higher average returns?
  - not trading strategy because of look ahead bias;
  - but would speak to relation between satisfaction and firm performance.

- *Best case* scenario seems to yield 7% annualized
  - Comparison with other trading strategies in literature…
To assess robustness, exclude 1998-2005:

Survey results not published in Fortune prior to 1998
- If story is true, abnormal returns should not be weaker pre-1998.

Results inconsistent with this:
- \textit{best case} alpha drops to 4\% annualized, even including original 1998-2005 data;
- portfolio IV outperforms II, inconsistent with prediction.
Conclusion

Better articulated story will:
- yield more precise predictions;
- make supporting evidence more convincing.

Research design:
- consider broader surveys or conduct one;
- recognize generalizability issues.

Results:
- consider alternative performance measures;
- consider forming other portfolios to provide additional evidence.

Effect of employee satisfaction on firm performance is interesting!
Discussion of Wu, Zhang, Zhang, 2007
“The Accrual Anomaly: Exploring the Optimal Investment Hypothesis”
CFEA 2007, NYU

Mozaffar Khan
Massachusetts Institute of Technology
Discussion Outline

- Story:
  - some existing evidence on ostensibly new predictions;
  - some unclear predictions.

- Results:
  - some potentially mechanical results.
The Story

Motivated from standard q-theory of investment with stochastic discount rates:
- negative relation between investment and future returns;
- when discount rate is low, marginal q is high (controlling for expected marginal productivity);
- this leads to higher investment.

This is the investment – return mapping known from q-theory.

Next we need an accrual – investment mapping:
- seems immediate, since accruals are an increase (or ‘investment’) in working capital by definition;
- investment and working capital (hence accruals) should be positively correlated.

Now we can explain the accrual – return relation (accrual anomaly) in terms of a rational investment – return relation.
- Similar to Xing (RFS 2007) who applies same story to value effect.
The Story

- Need one more fact:
  - investment responds with a lag;
    - e.g., due to costly reversibility, fixed costs of investment;
    - these adjustment costs (e.g., Abel and Eberly 1994) introduce nonlinearity into the optimal investment rule.
  - so returns positively predict investment;

- Authors test:
  - if investment responds with a lag to discount rate changes, then returns positively lead accruals;
  - in the cross-section, accrual anomaly (-ve relation btw accruals and future returns) is stronger where the correlation between accruals and past returns is stronger;
  - an investment factor explains the accrual anomaly.
First prediction, that accruals are positively related to contemporaneous and past returns, has been known since at least:

- Zach, 2003, for contemporaneous returns;
- Kothari, Loutskina and Nikolaev, 2005, for past returns;
- Khan, 2006, summarizes this.
Unclear Prediction

- Second prediction relates to $S = \text{cov}[\text{acc}_t, (\text{ret}_t + \text{ret}_{t-1})]$: accrual anomaly is stronger when $S$ is higher.

- Should it relate to $S' = \text{cov}[\text{invest}_t, (\text{ret}_t + \text{ret}_{t-1})]$: accrual anomaly is stronger when $S$ is higher?
  - otherwise, there is no investment in this picture…

- Another potentially more serious problem:
Does S Proxy for Extreme Accruals?

- Consider the following:
  - S is highest for the extreme accrual deciles
    - S > 0 so think of it as a magnitude
    - the accrual anomaly exists in the extreme accrual deciles.
  - If firms with high S in the cross-section have a more pronounced accrual anomaly (relation btw accruals and future returns):
    - is this simply because they are extreme accrual firms??
  - Does the second prediction retell what we know?
  - Another reason to consider S’.
Results

- Correlation between accruals and investment seems low (0.21) despite:
  - investment includes change in inventories, and accruals include change in inventories.
    - Perhaps this is because we are looking at unconditional correlations?
  - useful to examine accrual-investment correlation for each accrual decile separately;
    - story would predict highest for extreme accrual portfolios?

- Table 5 reports accrual hedge portfolio alphas from 4-factor model:
  - this is one test asset;
  - since this is a new model, it may be useful to first validate -
    - test of model fit on variety of test assets (25 size and book-to-market, 25 size and accruals….)?
Results

- Lower future returns may be due to overinvestment:
  - authors show that high accrual (high investment) firms do not have weak governance
    - so overinvestment story unlikely.
  - I like this test, but..
    - I worry about the shifting burden of proof.
  - Note: this test closely follows Lyandres, Sun and Zhang (forthcoming, RFS), so useful to cite them.
Conclusion

- Useful extension of existing finance literature.

- Rational explanations for pricing puzzles are useful.

- I like the tests on the overinvestment hypothesis, though I worry about assuming an unnecessary burden of proof.
Discussion of Hribar and Nichols, 2007
“Does Conservative Stock Option Accounting Lead to Aggressive cash Flow Reporting?”
CFEA 2007, NYU

Mozaffar Khan
Massachusetts Institute of Technology
Discussion Outline

- Story
  - normative flavor

- Materiality of TBESO’s

- Results
  - some potentially mechanical results;
  - strength?
Research question is one of SCF geography (from Section 2):
- should TBESO be in the operating or financing section?

Authors recount standard arguments on both sides, but suggest they have yet another argument:
- inclusion in OCF will degrade earnings predictability of OCF;
- ex ante reason for this is lower persistence of TBESO relative to other components of OCF.

Problem compounded by lack of transparency of TBESO under FAS 123R:
- now reported as part of change in DTA;
- otherwise, could circumvent earnings predictability problem by simply removing TBESO from OCF.
The Story

- Authors suggest one possible perverse effect is:
  - more conservative estimation of compensation expense will mean higher TBESO in OCF;
  - this will degrade earnings predictability of OCF even more.

- Final part of story is that investors misprice TBESO:
  - they overestimate its persistence;
  - more mispricing with more conservative estimation.

- Authors conclude:
  - remove TBESO from OCF and include in FCF.
Whose Norm?

- To assess the appropriateness of a particular geography:
  - Why are earnings predictability and proper pricing the criteria?
  - Are financial statements used solely for these purposes?
  - Are there tradeoffs between the demands of different user groups?
  - What about future OCF predictability, or future accrual predictability, as criteria?

- Are other components of OCF homogeneous in persistence and predictive value for earnings?
  - Discretionary capitalization decision?
  - R&D with large discretionary component?
  - Investment income from temporary cash stockpile?

- Could probably tell a similar story for other OCF components.
  - Discuss why the TBESO story is more compelling or sufficient.
Whose Norm?

- Why is the solution to remove TBESO from OCF?
  - What if it is simply reported as a separate line item in OCF?

- Is there evidence on the transparency argument?
  - if most of the change in DTA comes from TBESO, there may not be an *effective* loss of transparency (Poterba, Rao, Seidman, 2007?);
  - evidence is needed!
Materiality

- TBESO average value is about $15m in sample of about 500 firms.
  - Roughly 10% or so of public firms?

- TBESO as percent of:
  - OCF is about 6% excluding outliers;
  - total assets is about 1.5%;
  - but, I think there is a small denominator problem.

- We know (e.g., Smith and Watts, 1992) that ISO’s are high for growth firms:
  - not much evidence for non-statutory options, but think of high-tech firms;
  - now, growth firms have low cash flows and few assets in place;
  - Scaling by OCF and total assets may exaggerate materiality.
Results

- Descriptive stats in Table 2:
  - should report Investment Opportunity Set variables such as M/B, size, leverage, etc.
  - useful to understand what type of firms we are looking at.

- TBESO significantly predicts future OCF positively (T 4) and accruals negatively (T 8):
  - this suggests including TBESO in OCF should enhance the predictive ability of OCF for future OCF and accruals;
  - perhaps we should be trying to predict OCF and accruals separately (rather than earnings) since the two have different valuation implications (e.g., Sloan 1996);
Results

- \( OCF = X\beta_1 + e_1; \) \( Acc = X\beta_2 + e_2; \) \( ROA = X\beta_3 + e_3; \)
- \( ROA = OCF + Acc; \)
  - then \( \beta_3 = \beta_1 + \beta_2; \)

- Is the lack of earnings predictability of TBESO a problem of statistical detection?
  - is the \( t \)-statistic in the ROA regression insignificant simply because the numerator \( \beta_3 \) is smaller?
  - think of \( t \)-statistic for annual returns vs. for monthly returns (e.g., Fama 1998) – mean decreases like \( t \), but standard error decreases like \( \sqrt{t} \);
  - does TBESO significantly predict aggregate 3- or 5- year earnings, which is of interest to investors?
  - I don’t know, but worth considering.
In Table 5, model 3 includes TBESO in OCF; model 5 includes TBESO in Acc:

- adjusted R-sq is 34.4% for model 3 and 36.9% for model 5.
- authors conclude that TBESO should be removed from OCF;
- conclusion seems strong for the modest improvement in adjusted R-sq;
- model 2 has highest adjusted R-sq (naturally, since it is unrestricted)
  - would this suggest that TBESO should be left in OCF but reported as separate line item?
Results

- Table 6 reruns the models of Table 5, replacing both the LHS and RHS variables with their proformas;
  - intent of authors here is to show that Table 5 results will also obtain under FAS 123R;
  - results in Table 6 match those in Table 5;
  - but, correlations (T 3) between the regression variables and their proformas are 0.95!
  - is the Table 6 result mechanical, given Table 5?

- Size-adjusted returns used in the Mishkin test:
  - Could use Fama-French abnormal returns?
Conclusion

- **Story:**
  - Perhaps recognize and discuss normative assumptions.

- **Materiality:**
  - Some information on IOS variables for sample would be useful to examine whether there is a small denominator problem.

- **Evidence:**
  - consider forecasts of aggregate 3- or 5- year earnings;
  - are there other ways to address the statistical detection issue in earnings predictability?
  - consider alternatives to tests with proformas.

- Issue seems topical, and should be of interest to readers!