The use of academic research by *real* people in the *real* world

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Outline

- What academic research can do for the real world
- How to Make Accounting Research Even More Valuable
- An Example



What academic research can do for the *real* world

- 1. Reveal incentives
- 2. Reveal if something worked
- 3. Change practice
- 4. Arm us with a new tool
- 5. Provide interesting "stylized" facts



1. Reveal incentives

Incentives drive behavior

• If you don't understand incentives, it is difficult to predict/explain behavior.



An unexpected incentive...

Barbados versus Grenada, 1994 Shell Caribbean Cup

Grenada went into the match with a superior goal difference, meaning that Barbados needed to win by two goals to progress to the finals.





An unexpected incentive...

Barbados versus Grenada, 1994 Shell Caribbean Cup

Two Issues—

- All games must have a winner. So all games drawn over 90 minutes would go to sudden death extra time.
- Secondly and most importantly, there was an unusual rule which stated that in the event of a game going to sudden death extra time the goal would count double, meaning that the winner would be awarded a two goal victory.





An unexpected incentive...

Barbados versus Grenada, 1994 Shell Caribbean Cup

Barbados was leading 2-0 until the 83rd minute, when Grenada scored, making it 2-1. Approaching the last minutes of the, the Barbadians realized they had no chance of scoring past Grenada's mass defense, so they deliberately scored an own goal to tie the game at 2-2.





Incentives drive behavior

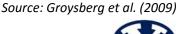
Compensation is a HUGE incentive.

 What factors do you think drive the compensation of sell-side equity research analysts?



Determinants of analysts' total compensation

- What do you think?
 - 1. Forecast accuracy No
 - 2. Recommendation profitability No as well
 - 3. Experience Not really
 - 4. Voted as an "all star" Yes!
 - 5. Brokerage trading volume Strongly yes!
 - 6. Investment banking deals Also Strongly yes!



Determinants of analysts' total compensation

	1988 -	1988 - 2005	
	Est. Coef.	Partial R ²	
Outcome-Based Performance Variables			
All-Star	0.476**	0.17	
Non-All-Star			
At least 5 votes			
1 to 4 votes (inclusive)			
Num. investment banking transactions	0.081**	0.07	
Ln relative eps forecast error	-0.056	0.00	
Buy recommendation performance ^a			
Action-Based Performance Variables			
Forecast revisions	0.000	0.00	
Stock initiations	-0.008	0.00	
Job Characteristic Variables			
Ln lagged aggregate trading volume of stocks covered	0.179**	0.14	
Human Capital Variables			
Ln analyst experience	0.072	0.01	
Homegrown analyst	-0.099	0.01	
Year controls	Yes		
Adjusted R-square	0.58		
Number of Observations	609		

^{*} and ** indicate significance at the 5% and 1% levels, respectively (based c

Three factors matter:

- 1. Whether they are an *Institutional Investor Magazine* "All Star"
- 2. Number of investment banking transactions
- 3. Trading volume of covered stocks
- ** Note that forecasting performance and buy recommendation performance is not a significant determinant.

Source: Groysberg et al. (2009)



Incentives

- How might this incentive feed into what the analysts do "on the soccer field?"
 - If they want their bank to be more likely to get investment banking deals, they will recommend...
 Buy!
 - If they want to generate trading volume, they will recommend...
 Buy!

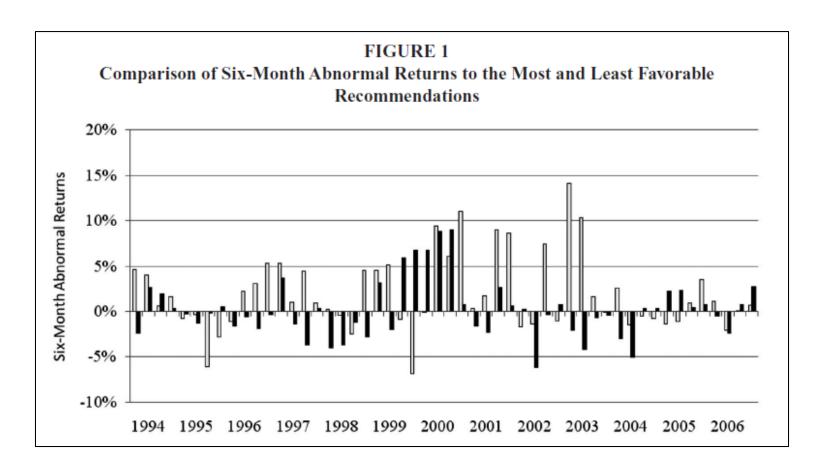


Distribution of analyst recommendations over time





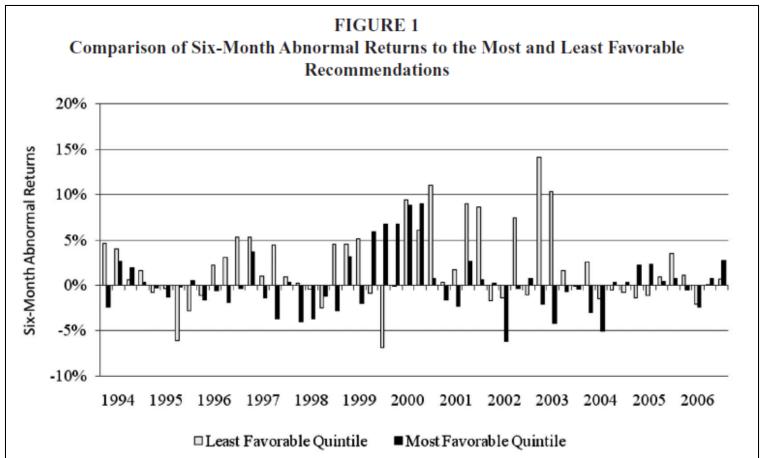
Which bar would you rather have? Black or white?





An unexpected results from the field...

• Drake, Rees, and Swanson (2011): on average, you profit more by trading against the forecasters.



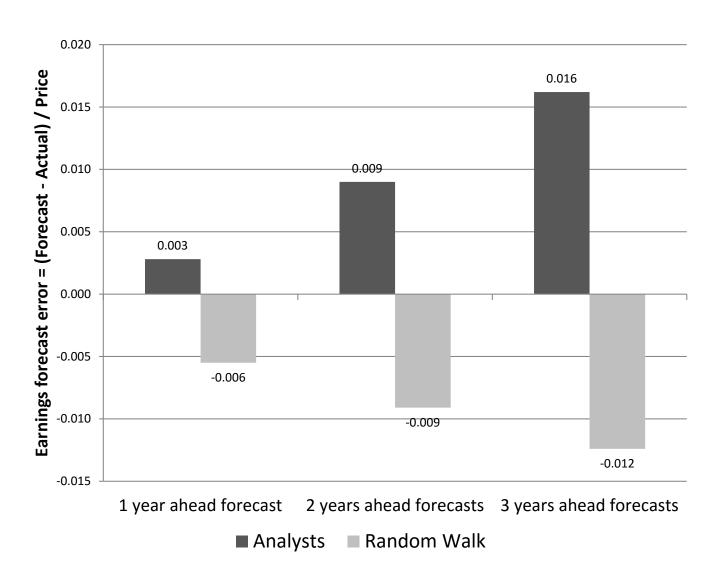
Another unexpected result from the field...

• Bradshaw, Drake, Myers, and Myers (2012)

- A forecasting comparison...
 - Comparison 1: sell-side analysts EPS forecast for the next three years
 - Comparison 2: the most naïve forecasting model ...a
 random walk forecast

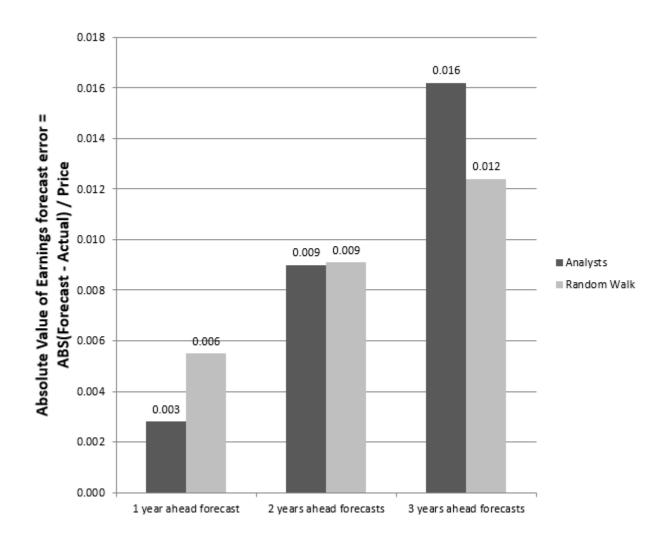


Which bar would you rather have?





Analysts only win over short horizons

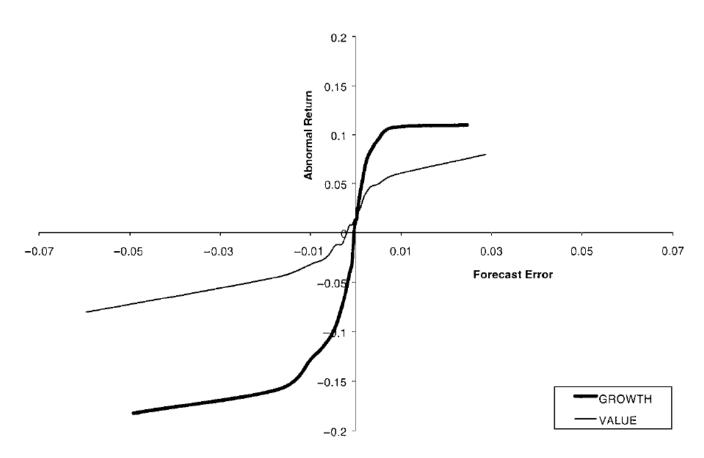


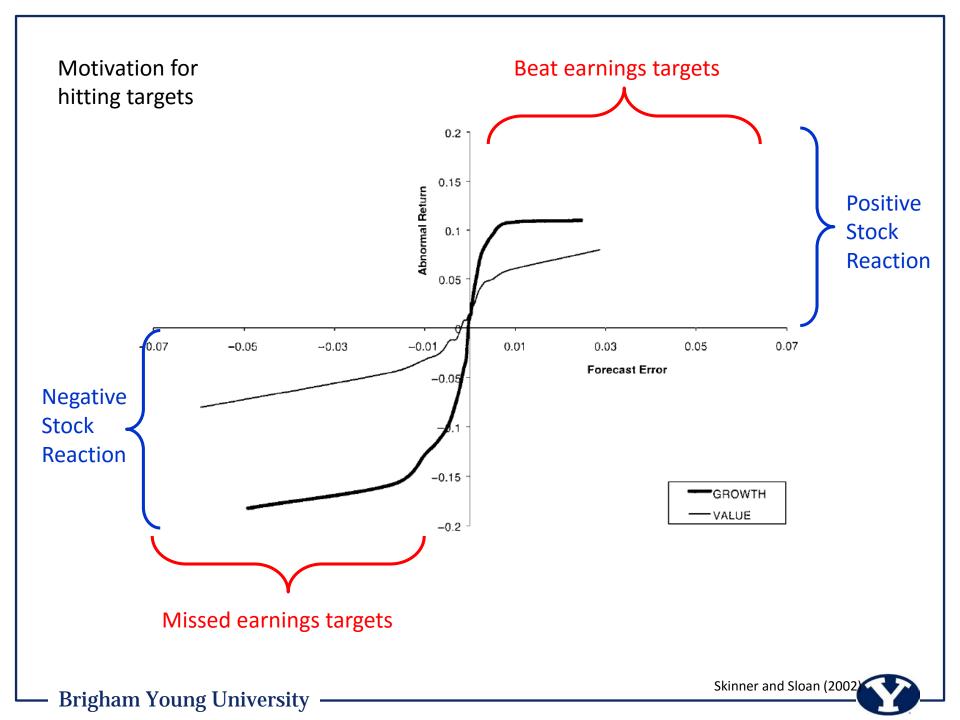


Let's now look at a different incentive in the market...

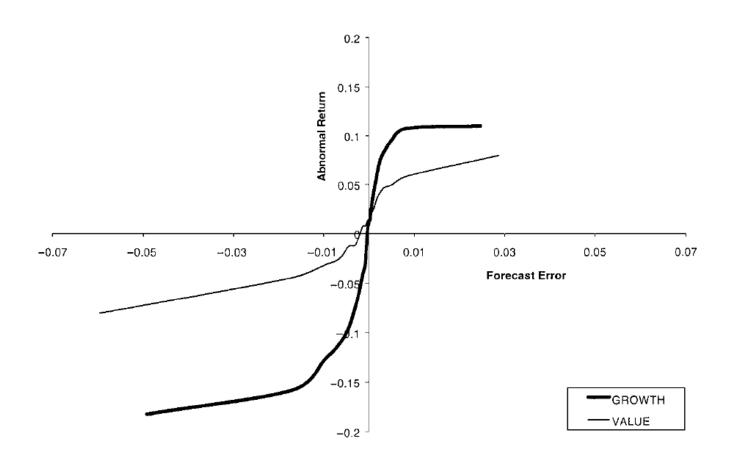


Skinner and Sloan revealed a very important incentive for public companies

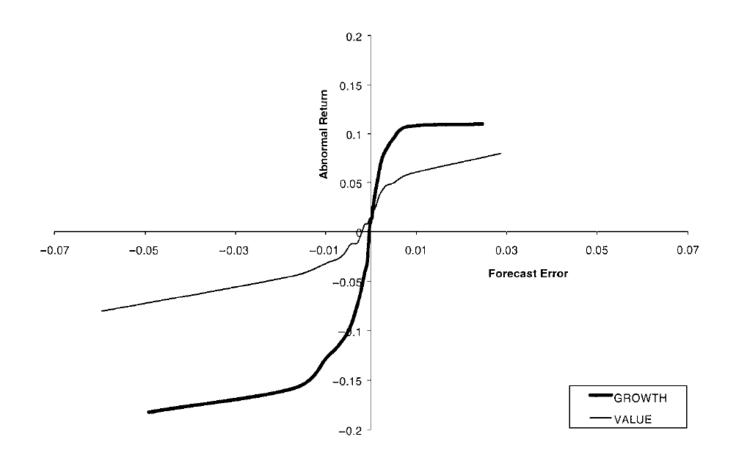




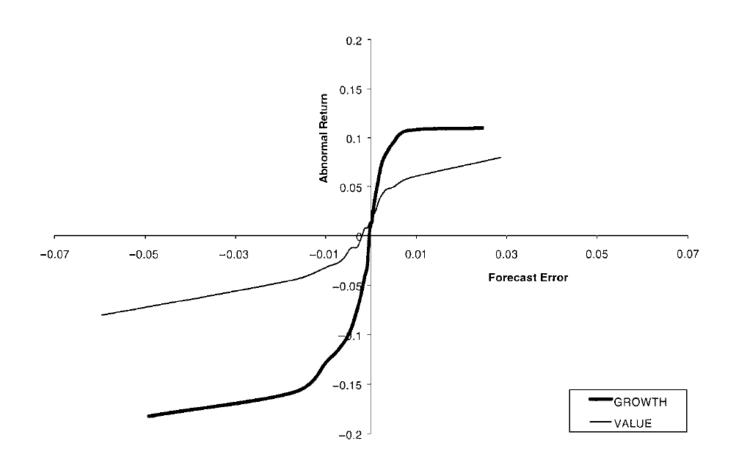
Which firms would be more likely to set up "cookie jar" reserves?



Which firms would be more likely to take a "big bath"?



Which firms would be more likely to cut R&D or change a reserve assumption?



This incentives, leads to this...



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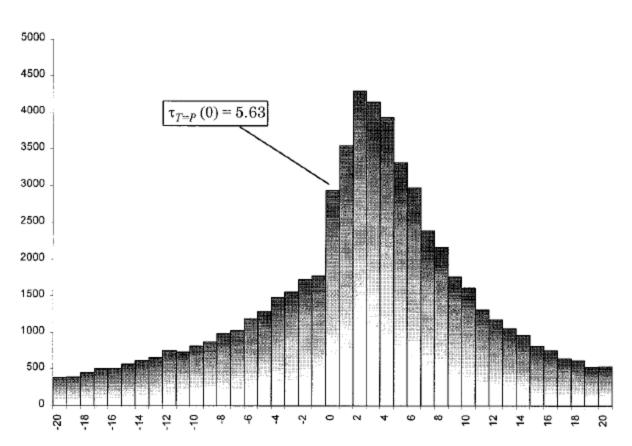


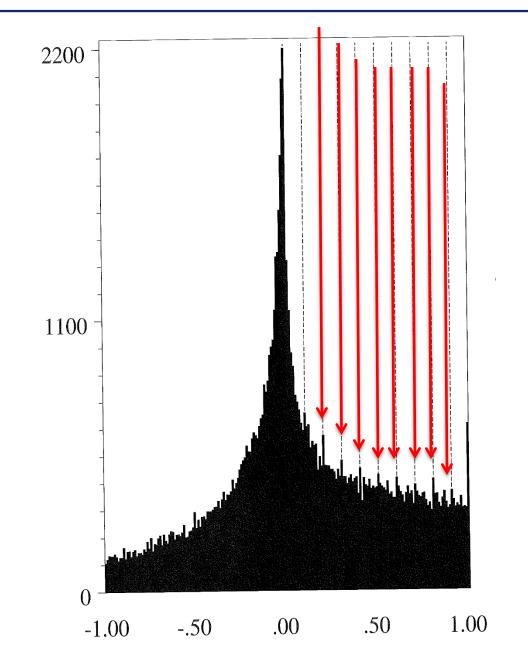
Fig. 5.—Histogram of change in EPS (Δ EPS = EPS_t - EPS_{t-4}): exploring the threshold of "sustain recent performance."

Degeorge et al. (1999)



...and this...

Another
Target:
Round
Numbers





...and this

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Das and Zhang (2003, JAE)

S. Das, H. Zhang | Journal of Accounting and Economics 35 (2003) 31-50

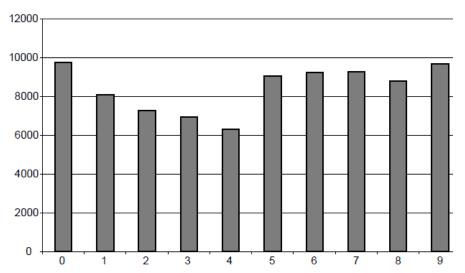


Fig. 1. Frequency of the digit for firms reporting positive net income.

S. Das, H. Zhang | Journal of Accounting and Economics 35 (2003) 31-50

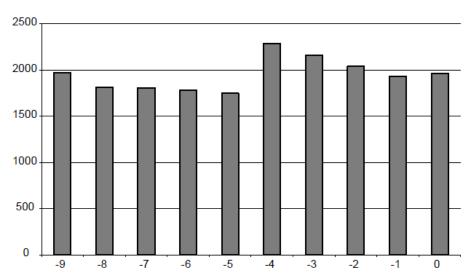


Fig. 2. Frequency of the digit for firms reporting negative net income.



2. Did it work?

When bad things happen, rule-makers re<u>ACT!</u>

• Why?

Because they feel it is their job to react.



Did it work?

- What new oversight/regulation occurred after the following apocalyptic melt-downs:
 - Crash of 1929

Securities Acts of 1933 and 1934 (SEC is created)

Internet bubble burst / Enron

Sarbanes-Oxley Act (PCAOB is created)

Housing / Credit crisis

Dodd-Frank Wall Street Reform & Consumer Protection Act.



Did it work? Let's focus on the PCAOB

Why was the PCAOB created?

 What test could we run to see whether PCAOB oversite is helping?



Did it work? Let's focus on the PCAOB

- PCAOB inspections have lead to
 - Auditors issuing more going concern opinions, more material weaknesses, and fewer firms engaging in less earnings management (Lamoreaux 2016).
 - Auditors issuing more adverse internal control audit opinions to clients that genuinely warrant such opinions (DeFond and Lennox 2015)



Unintended consequences?

- Bronson et al. (2011, *JAE*)
- PCAOB Standards No. 2 and 3 increased the work load for auditors, thus delaying audit completion dates.
- However, markets demand *timely* information, so most companies maintained the same earnings announcement date.
- What do you think was the unintended consequence here?



Unintended consequences?

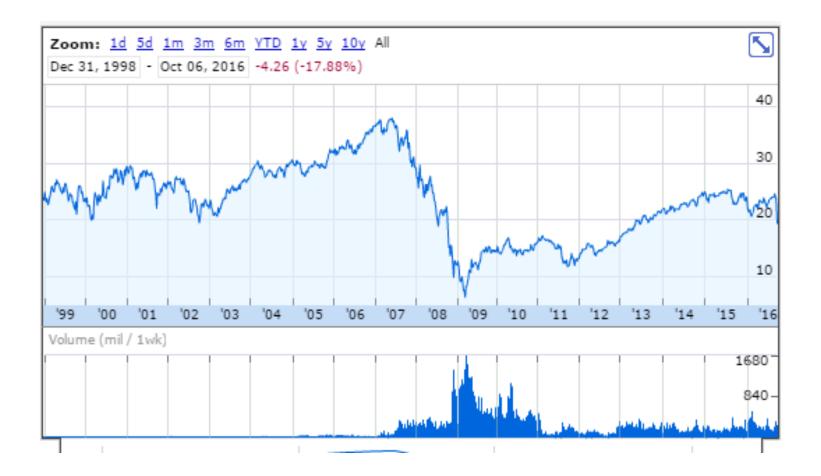
 More firms are announcing earnings prior to the audit report date (so, prior to audit completion).

 The number of revisions to announced earnings has increased dramatically (35% increase).

• Markets are getting less reliable information at the earnings announcement.



Now let's look at the credit crisis



Financial Sector ETF (ticker: XLF)



What did regulators (in this case, the SEC) do? React!!





Did it work? What were the consequences?

- Boehmer et al. (2008)
 - No measurable upward pressure on price was observed.
 - The stocks on the banned shorting list actually experienced negative returns.
 - Financial stocks suffered a severe degradation in market quality
 - Bid-ask spreads go up
 - Price volatility goes up
- Drake et al. (2011)
 - No systematic evidence that short sellers manipulate stock prices.
 - Short sellers help make markets more efficient
- Did it work? ...NO!



Headline: "SEC chief has regrets over short-selling ban"

• "While the actual effects of this temporary action will not be fully understood for many more months, if not years, knowing what we know now, I believe on balance the commission would not do it again. The costs appear to outweigh the benefits." Christopher Cox, SEC Chairman

(Source: http://www.reuters.com/article/us-sec-cox-idUSTRE4BU3GG20081231)



3. Change practice

- Stock option accounting
- Accounting for stock options in the "olden" days



Efendi et al. (2007) Fun facts

- The average amount of in-the-money options of fraud firm CEOs is \$130.2 million compared to \$14.9 million for the control firms.
- CEO's of fraud firms exercise an average of \$4.2 million in options during the fraud period, compared to \$437 thousand at control firms.



Too much skin-in-the-game Efendi, Srivastava, and Swanson (2007 JFE)

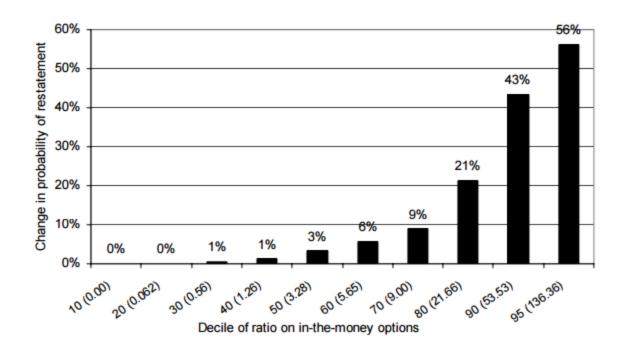


Fig. 2. Increase in restatement probability as the value of CEO in-the-money options increase

The change in probability is determined using the coefficient values in Table 4. The in-the-money options to salary ratios reported in parentheses on the x-axis are used, with the other variables held constant at their median values. (The specific calculation requires taking the anti-log of the predicted value to get the estimated log-odds. The percentage change in probability is derived from the log-odds.)



4. Arm you with a new tool

Who wants to predict fraud?



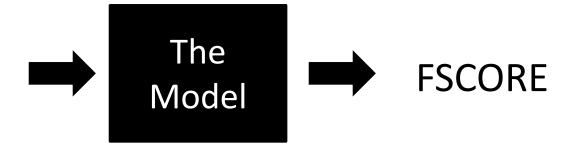
Dechow, Ge, Larson, & Sloan (2011, CAR)

- Examine 2,190 SEC AAER cases investigated by the SEC from 1982 to 2005.
- Identify the significant "characteristics" of firms committing fraud.
- Use these characteristics to develop a model to predict accounting manipulation.
- Assign a fraud score ("FSCORE") to each firm with greater scores indicating a greater likelihood of fraud.



Financial Statement Characteristics

- Accruals
- $\Delta A/R$
- Δ Inventory
- % Soft Assets
- Δ Cash sales
- Δ ROA
- Security Issuance



FSCORE = 1 means that the firm has the same probability of manipulation as a randomly selected firm from the population.

FSCORE > 1 indicates higher probabilities of manipulation.



The recipe

Variable	Coefficient estimate (Wald Chi-square) (p-value)
Intercept	-7.893
	1180.0
	0.001
RSST accruals	0.790
	24.1
	0.001
Change in receivables	2.518
	28.5
	0.001
Change in inventory	1.191
	4.4
	0.019
% Soft assets	1.979
•	86.3
	0.001
Change in cash sales	0.171
	17.0
	0.001
Change in return on assets	-0.932
	19.9
	0.001
Actual issuance	1.029
	28.5
	0.001



Enron's FSCORE = 2.76 (in 2000)

Enron in 2000

$$\begin{aligned} \text{Predicted Value} &= -7.893 + 0.790 \times (\textit{rsst_acc}) + 2.518 \times (\textit{ch_rec}) \\ &\quad + 1.191 \times (\textit{ch_inv}) + 1.979 \times (\textit{soft_assets}) \\ &\quad + 0.171 \times (\textit{ch_cs}) + (-0.932) \times (\textit{ch_roa}) + 1.029 \times (\textit{issue}) \end{aligned}$$

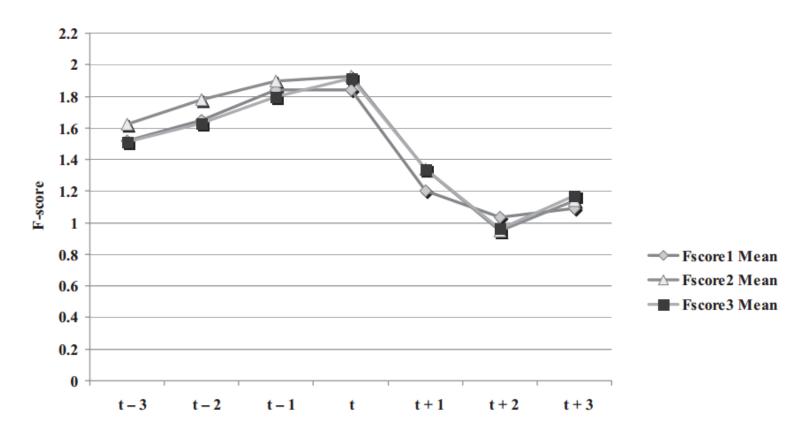
$$\begin{aligned} \text{Predicted Value} &= -7.893 + 0.790 \times (0.01659) + 2.518 \times (0.17641) \\ &\quad + 1.191 \times (.00718) + 1.979 \times (0.79975) \\ &\quad + 0.171 \times (1.33335) + (-0.932) \times (-0.01285) + 1.029 \times (1) \end{aligned}$$

Predicted Value =
$$-4.575$$

Probability = $e^{(-4.575)} / (1 + e^{(-4.575)})$
e = 2.71828183
Probability = 0.01020
Unconditional probability = $494/(132,967 + 494) = 0.0037$
F-score = $0.01020/0.0037$
F-score for Enron = 2.76

This means that Enron's probability of fraud was almost three times the probability of a randomly selected firm.

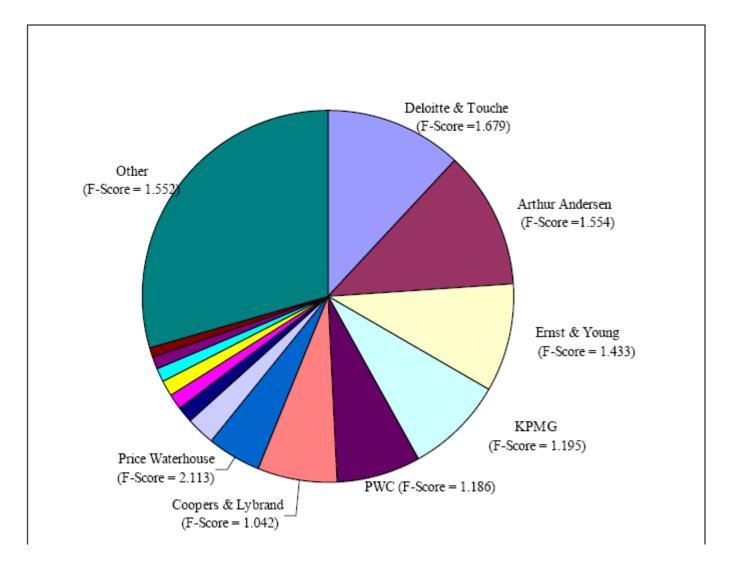
Figure 3 Mean *F*-scores surrounding misstatement firm-years.



Year relative to misstatement years



Median FSCORE for manipulating firms by Audit Firm





Other Scores

- Piotroski's F-score (predicts which "value" stocks are more likely to be winners)
- Benish M-score (predicts which companies are overstating earnings)
- Altman's Z-score (predicts bankruptcy)
- Lee's O-score (predicts which stocks are overvalued)



5. Cool stylized facts



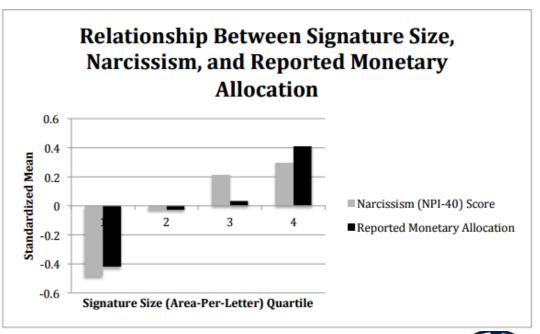
Erickson, Hanlon, and Maydew (2004)

- Are companies willing to pay taxes of fraudulent earnings?
 - Yes!
 - The median firm (from a sample of firms accused of fraudulently overstating earnings) sacrificed 11.3% of inflated pretax income in the form of tax payments.
 - In aggregate, the fraud firms paid \$320 million in taxes on overstated earnings of about \$3.36 billion.



Ham, Seybert, and Wang (2014)

- Narcissistic CEOs, as measured by their signature size, are associated with bad things:
 - Overinvestment in R&D and M&A
 - Lower productivity
 - Lower profitability





Dyreng, Mayew, and Williams (2012)

- Higher levels of religious adherence (regular church attendance) are associated with
 - Lower likelihood of financial restatement
 - Less risk that financial statements are misrepresented because of overstated revenues



Drake, Gee, and Thornock (2015)

- Markets are distracted by March Madness
 - Trading volume is down.
 - Market reactions to a given level of earnings news is lower.



Gubler, Herrick, Price, and Wood (2015)

- Exposure to human violence—especially through media—can cause individuals to make less ethical decisions.
 - exposure to violence results in an increase in individual hostility levels
 - companies headquartered in locations marked by greater human violence are more likely to fraudulently misstate their financial statements and exhibit more aggressive financial reporting



What do we do?

 Whatever your area, there are bright people doing important research.

• This research can help you think more clearly about your world.

 You can access this research free-of-charge at SSRN.com



How to Make Accounting Research Even More Valuable



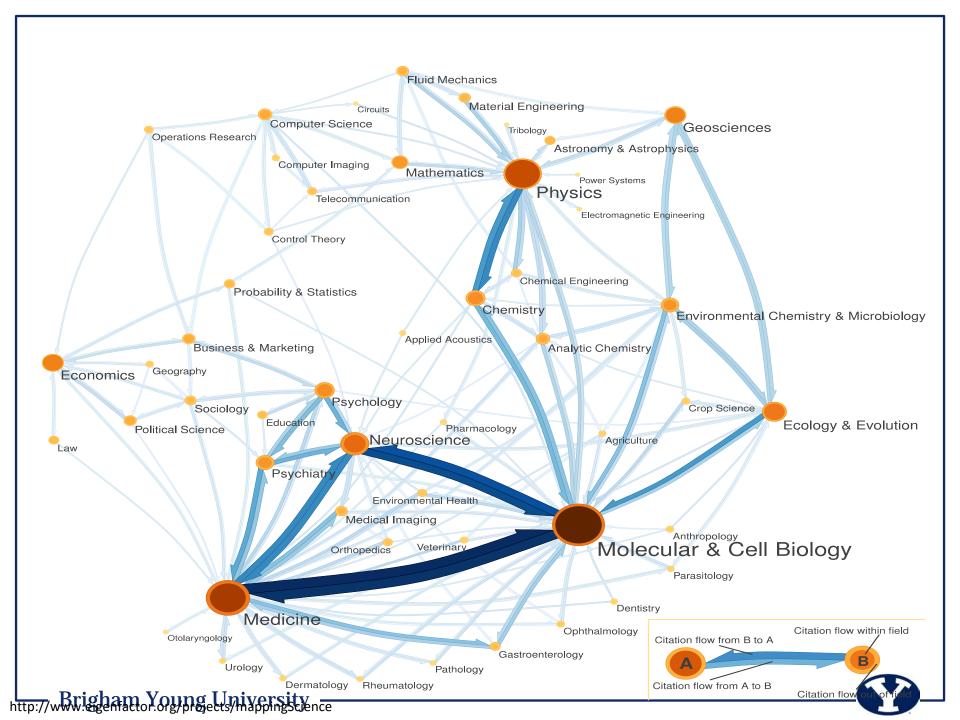


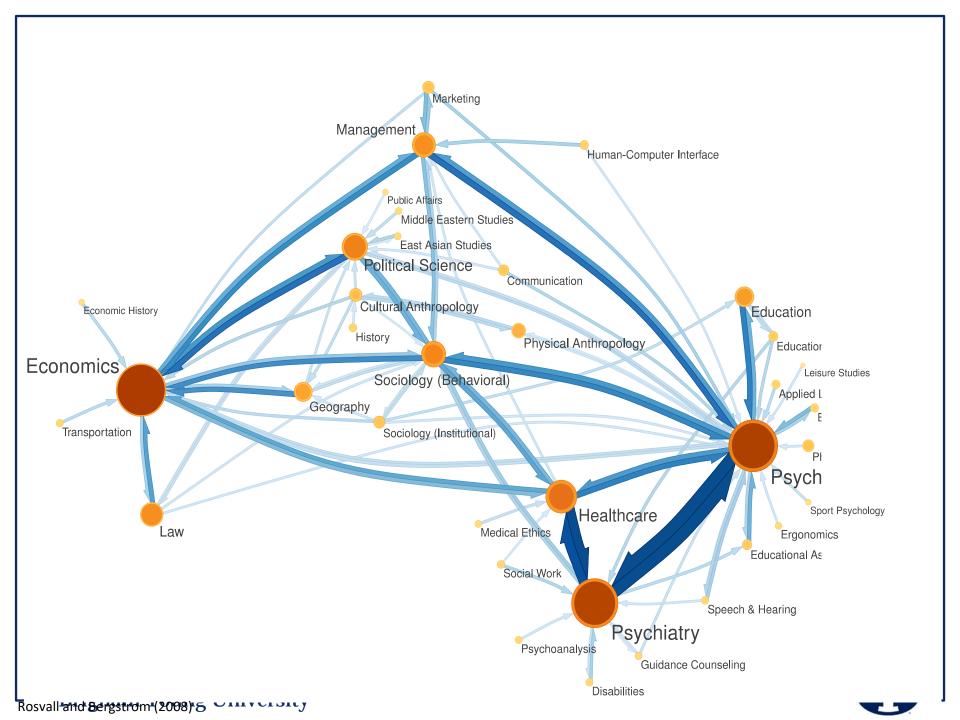
Rank	Title	SJR
1	Ca-A Cancer Journal for Clinicians	37.384
2	Reviews of Modern Physics	29.826
3	Annual Review of Immunology	28.577
4	Nature Reviews Molecular Cell Biology	24.294
5	Nature Reviews Genetics	23.991
6	Cell	23.588
7	Quarterly Journal of Economics	22.541
8	Nature Reviews Immunology	22.472
9	Nature Reviews Cancer	21.831
10	Annual Review of Astronomy and Astrophysics	21.109

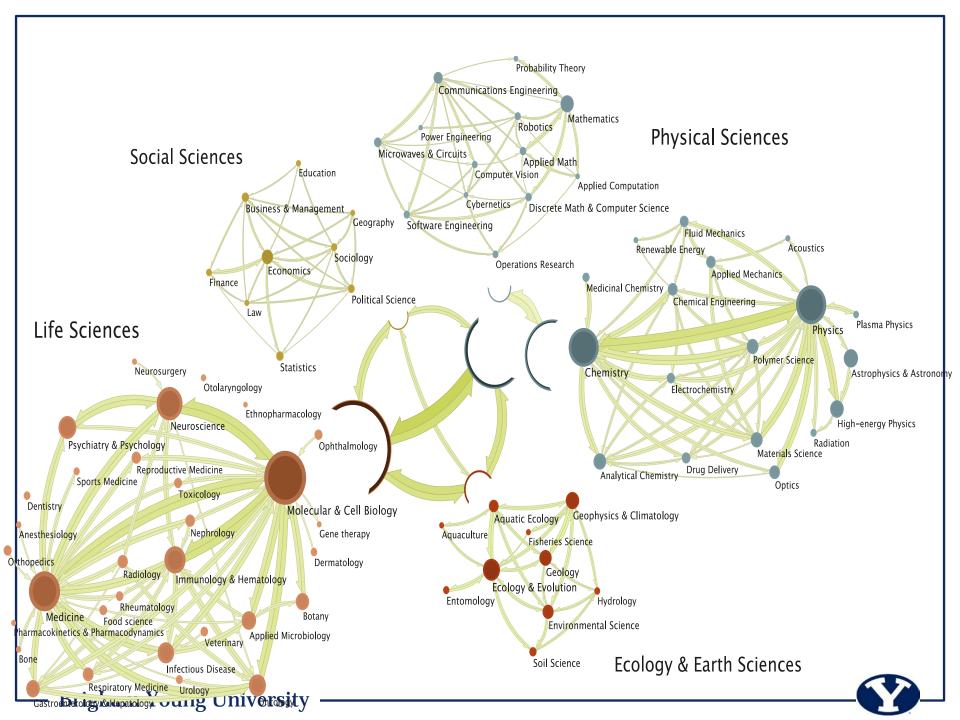


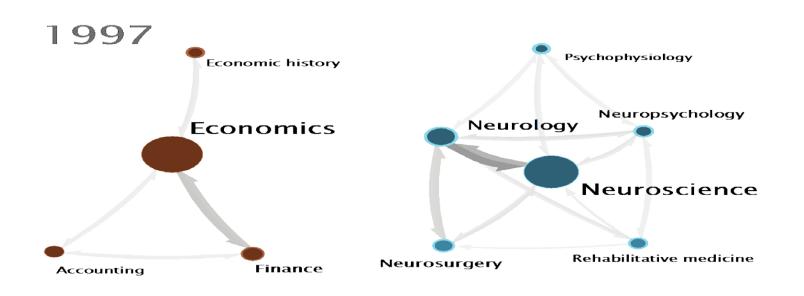
Rank	Title	SJR
1	Journal of Finance	17.138
2	Academy of Management Annals	13.230
3	Academy of Management Review	11.910
4	Review of Financial Studies	10.726
5	Journal of Financial Economics	10.116
6	Academy of Management Journal	9.398
7	Organization Science	8.098
8	Journal of Marketing	7.332
9	Journal of Management	7.232
10	Journal of Operations Management	6.599

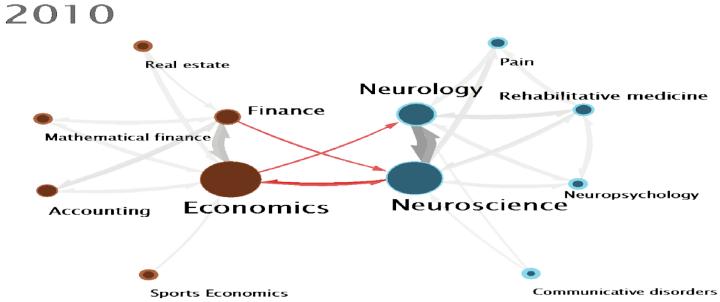






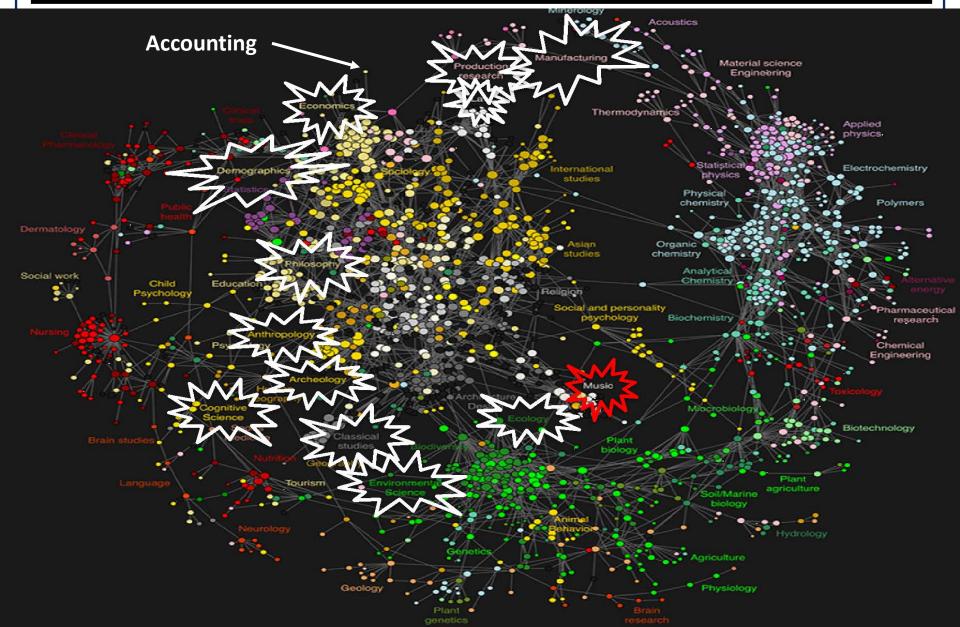








SSRN CEO, Greg Gordon, 2013



Comparison of Altmetric Scores Between Disciplines for Publications in Elite Journals

Discipline	Number of Articles	Total Altmetric Attention Score	Average Altmetric Attention Score	Total News	Total Blogs	Total Policy Documents	Total Social Media	Total Other
Natural Science	302	19,292	63.88	813	947	9	11,591	669
Psychology	282	3,704	13.13	159	178	0	1,719	31
Marketing	206	1,742	8.46	90	51	1	869	11
Economics	391	2,073	5.30	31	109	160	971	20
Management	161	477	2.96	18	13	3	318	4
Finance	232	501	2.16	4	10	90	280	8
Accounting	248	135	0.54	3	1	5	96	2

The Altmetric attention score is a weighted count of how much attention a research article has received in online sources sources like news (e.g., The New York Times), blogs, Twitter, Facebook, Sina Weibo (i.e., a Chinese microblogging website similar to a hybrid of Facebook and Twitter), Wikipedia, policy documents, etc.

Comparison of Citations Between Disciplines

Discipline	N	All Citations	Average Citations
Natural Science	302	36,338	120.3
Management	161	6,362	39.5
Finance	232	8,123	35.0
Psychology	282	7,969	28.3
Marketing	206	5,067	24.6
Economics	391	9,551	24.4
Accounting	247	5,632	22.8

Tthe natural sciences perform the best with an average of 120.3 cites per article and accounting the worst, with 22.8 citations per article.



Comparison of Altmetric Scores by Accounting Topical Areas

Discipline	Number of Articles	Total Altmetric Attention Score	Average Altmetric Attention Score		Total Blogs	Total Policy Documents		Total Other
Tax	677	305	0.45	17	8	49	44	0
Financial	3,516	1,064	0.30	43	12	147	416	18
Managerial	1,410	332	0.24	16	3	16	217	3
Acct Other	769	165	0.21	1	8	6	126	12
AIS	426	70	0.16	0	1	0	62	3
Audit	1,785	228	0.13	12	3	9	130	2

Comparison of Which Disciplines Cite Different Other Disciplines

Elite Journals

Category of Published Article	Accounting	Economics	Finance	Management	Marketing	Natural Science	Psychology
Accounting	1,092 [0.94]	1 [0.00]	50 [0.04]	14 [0.01]	3 [0.00]	2 [0.00]	1 [0.00]
Economics	6 [0.01]	470 [0.73]	102 [0.16]	8 [0.01]	8 [0.01]	47 [0.07]	3 [0.00]
Finance	165 [0.18]	56 [0.06]	663 [0.72]	30 [0.03]	5 [0.01]		
Management	7 [0.01]		2 [0.00]	743 [0.86]	14 [0.02]	1 [0.00]	96 [0.11]
Marketing	2 [0.00]	1 [0.00]		10 [0.02]	558 [0.95]	1 [0.00]	18 [0.03]
Natural Science		5 [0.00]		1 [0.00]		1,778 [0.99]	
Psychology	1 [0.00]	2 [0.00]		131 [0.23]	47 [0.08]	15 [0.03]	382 [0.66]

All Journals

Category of Published Article	Accounting	Economics	Finance	Management	Marketing	Natural Science	Psychology
Accounting	3,371 [0.59]	337 [0.06]	1,059 [0.18]	609 [0.11]	31 [0.01]	308 [0.05]	10 [0.00]
Economics	42 [0.00]	5,995 [0.70]	932 [0.11]	411 [0.05]	57 [0.01]	1,103 [0.13]	76 [0.01]
Finance	616 [0.08]	1,712 [0.21]	4,586 [0.57]	712 [0.09]	31 [0]	343 [0.04]	16 [0.00]
Management	67 [0.01]	206 [0.04]	51 [0.01]	4,093 [0.71]	207 [0.04]	764 [0.13]	360 [0.06]
Marketing	13 [0.00]	145 [0.03]	17 [0.00]	548 [0.12]	2,895 [0.62]	574 [0.12]	510 [0.11]
Natural Science		107 [0.01]	7 [0.00]	28 [0.00]	19 [0.00]	10,799 [0.96]	329 [0.00]
Psychology	13 [0.00]	96 [0.01]	14 [0.00]	1,538 [0.22]	306 [0.04]	1,287 [0.19]	3,614 [0.53]



Comparison of Which Accounting Topic Areas Cite Other Accounting Topic Areas

Elite Journals

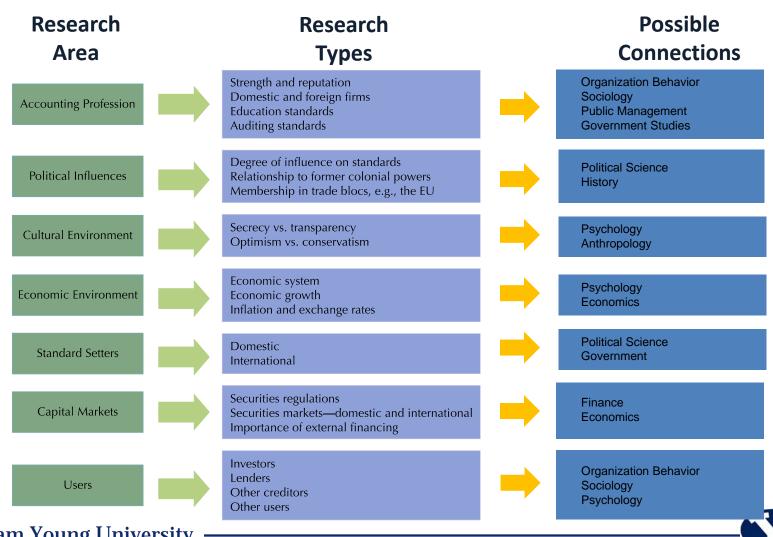
Category of Published Article	Accounting	Economics	Finance	Management	Marketing	Other Science	Psychology
AIS	261 [0.96]	1 [0.00]	7 [0.03]	2 [0.01]			
Audit	2,804 [0.98]	1 [0.00]	23 [0.01]	32 [0.01]	2 [0.00]	1 [0.00]	
Financial	10,706 [0.92]	12 [0.00]	702 [0.06]	175 [0.02]	56 [0.00]		2 [0.00]
Managerial	2,215 [0.93]	4 [0.00]	102 [0.04]	47 [0.02]	6 [0.00]	1 [0.00]	4 [0.00]
Tax	884 [0.92]	2 [0.00]	75 [0.08]	3 [0.00]			
Acct Other	1,334 [0.92]	6 [0.00]	67 [0.05]	28 [0.02]	4 [0.00]	5 [0.00]	1 [0.00]

All Journals

Category of Published Article	Accounting	Economics	Finance	Management	Marketing	Other Science	Psychology
AIS	1,606 [0.51]	83 [0.03]	212 [0.07]	365 [0.12]	26 [0.01]	807 [0.26]	28 [0.01]
Audit	13,007 [0.73]	575 [0.03]	1,674 [0.09]	1,513 [0.09]	58 [0.00]	903 [0.05]	14 [0.00]
Financial	35,139 [0.59]	3,203 [0.05]	12,436 [0.21]	5,423 [0.09]	278 [0.00]	2,694 [0.05]	43 [0.00]
Managerial	7,515 [0.59]	675 [0.05]	1,375 [0.11]	2,125 [0.17]	129 [0.01]	856 [0.07]	36 [0.00]
Тах	2,853 [0.68]	251 [0.06]	650 [0.15]	271 [0.06]	5 [0.00]	168 [0.04]	10 [0.00]
Acct Other	5,802 [0.61]	380 [0.04]	1,025 [0.11]	1,357 [0.14]	64 [0.01]	946 [0.10]	14 [0.00]

-

Factors in Accounting Practices



Brigham Young University

Source: Daniels and Radebaugh 2015

An example





2015 Global Mergers & Acquisitions reach \$5 trillion Global Mergers & Acquisitions represented 5 percent of Global GDP

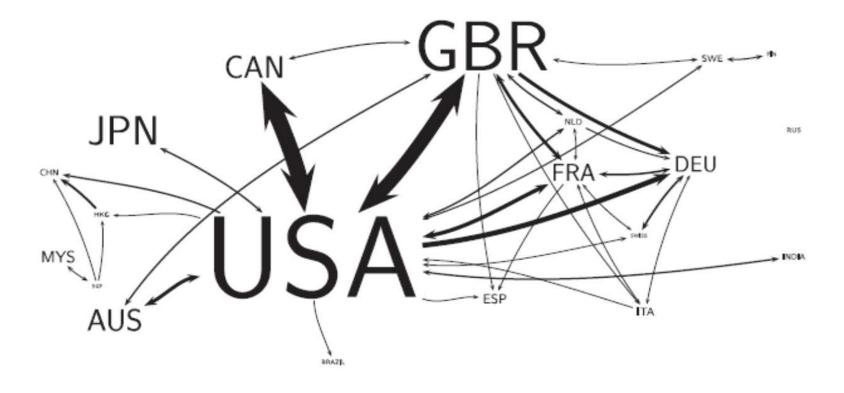
Source: J.P. Morgan, Dealogic as of January 21, 2016; Deals greater than \$10mm taken into consideration





In 2015, cross-border M&A represented over 30 percent of total Mergers & Acquisitions deal value and over 35 percent of total deal volume.

Source: J.P. Morgan, Dealogic as of January 8, 2016; M&A as a % of GDP is rounded to the nearest whole number



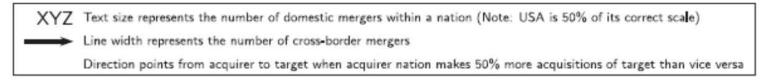


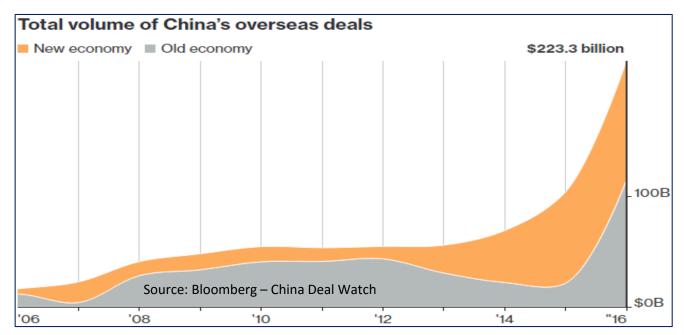
Fig. 1. Cross-border activity for the 20 most active domestic M&A markets 1985–2008. The 20 most active domestic merger markets are determined by the total number of domestic mergers over 1985–2008, where acquire is and targets are public, private, and subsidiary firms listed on SDC Thomson database.

This is a depiction of the overall cross-border deal volume between countries. Source: Ahern, Kenneth R., Daniele Daminelli, and Cesare Fracassi. "Lost in translation? The effect of cultural values on mergers around the world."



China Emerges

- As of November 4, 2016 Chinese firms had expended more than \$223.3B in foreign mergers and acquisitions.
- The \$223.3B represents a 226 percent increase from 2015.
 - Chinese Companies have purchased
 - Supercell \$8.6B (Finnish mobile game developer)
 - Legendary Entertainment \$3.5B (American film studio)
 - Syngenta \$43B (Swiss pesticide and seed producer)





How Can Accounting M&A Research Become More Impactful?

Elements of Culture



The M&A Challenge

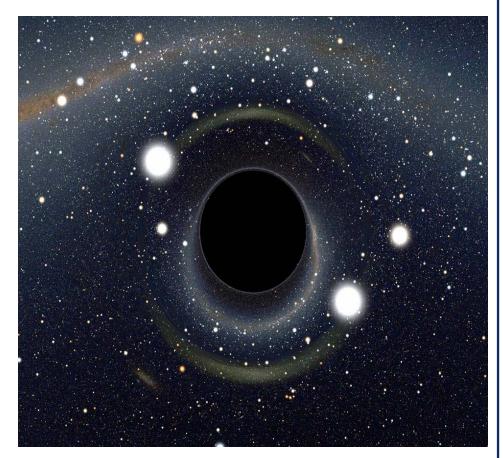
The existing literature takes mostly a financial and/or economic perspective, measuring the outcomes of IM&As in the market share or short term, while their long-term effects and nonfinancial factors remain untouched. (Andrad, Mitchell, & Stafford, 2001)



Cultural Differences

Cultural differences hinder trust from unperceived misunderstandings, so like the black holes in the heavens, we cannot see them, but we know they are there because of what affect they have on their surroundings.

Terrill L. Frantz



Source: NASA



Hazy Effects of Culture on Integration

Reference	Sample (no.)	Integration definition	Performance measure(s)	Impact of integration
Calori et al. (1994)	Cross-border; question- naire (25)	Formal control	Earnings, sales, and mar- ket share of the acquired firm	Negative
Calori et al. (1994)	Cross-border; question- naire (25)	Informal control	Attitudes toward job, enthusiasm, and willing- ness to help others in the acquired firm	Positive
Cannella and Hambrick (1993)	Domestic (97)	Degree of autonomy removal	Turnover of managers of the acquired firm	Positive
Chatterjee et al. (1992)	Domestic; questionnaire	Tolerance for multicultur- alism (autonomy removal)	Stock market value	Negative
Datta (1991)	Domestic	Level of integration	Rate of return, earnings per share, stock price, cash flow, and sales growth	No relationship
Hambrick and Cannella (1993)	Domestic (97)	Degree of autonomy removal	Turnover of managers of the acquired firm	Positive
Lubatkin et al. (1999)	Domestic; questionnaire (69)	Degree of autonomy removal	Turnover of managers of the acquired firm	Positive

Source: Weber, Yaakov, Shlomo, Reichel. "A model of the influence of culture on integration approaches and international mergers and acquisitions performance." (2011)

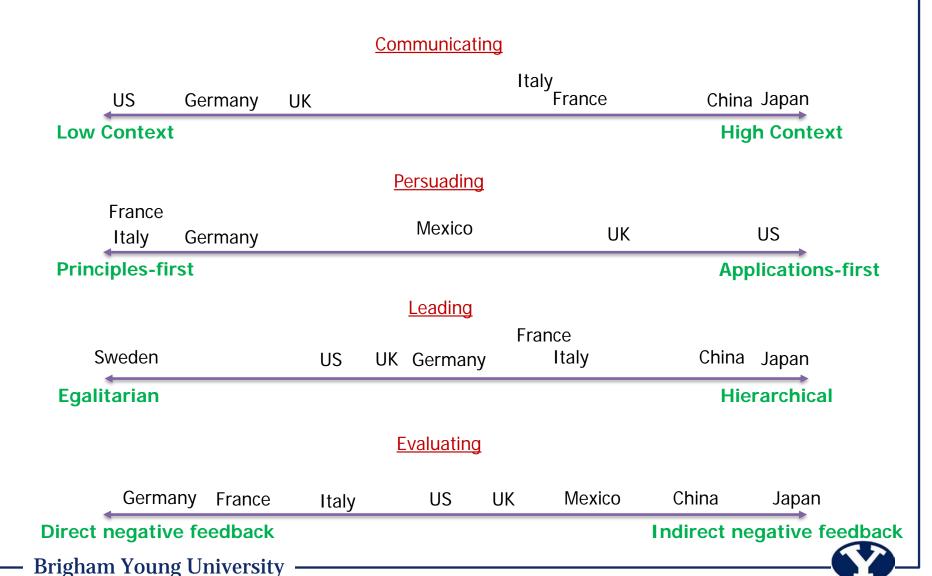


Hofstede's Societal Dimensions

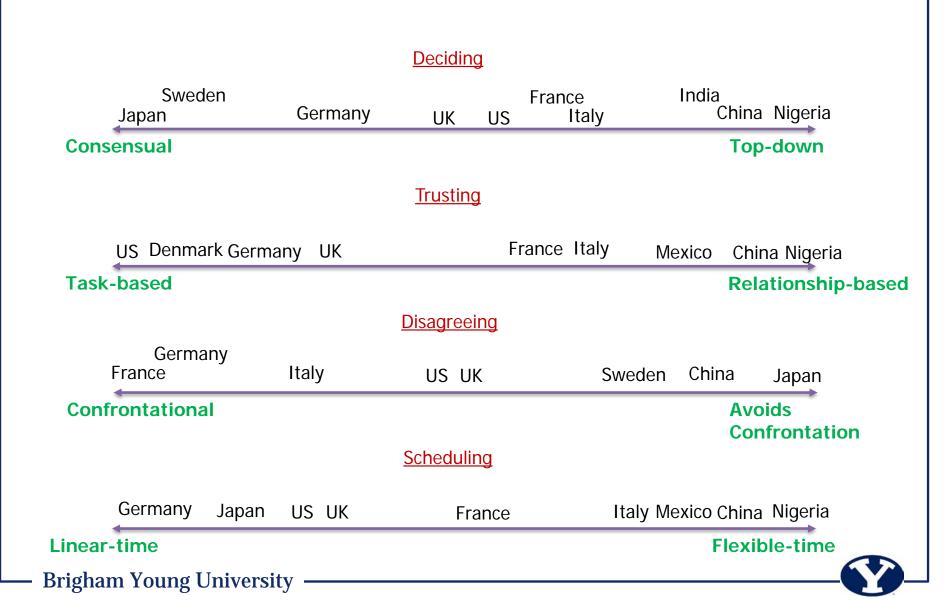
- Individualism versus Collectivism
 - People's self-concept: "I" or "we"
- Large versus Small Power Distance
 - How a society handles inequalities among people
- Strong versus Weak Uncertainty Avoidance
 - Control the future or just let it happen
- Masculinity versus Femininity
 - The way a society allocates social roles to gender
- Confucian Dynamism
 - Short-term or long-term orientation



Culture (Meyer 2014)



Culture (Meyer 2014)



Communicating



Low Context: Good communication is precise, simple, and clear. Messages are expressed and understood at face value. Repetition is appreciated if it helps clarify the communication.

High Context: Good communication is sophisticated, nuanced, and layered. Messages are both spoken and read between the lines. Messages are often implied but not plainly expressed.



Low-Context Culture

Perceive high-context communicator as

- Secretive
- Lacking transparency
- Unable to communicate effectively

"I have always believed that people say what they mean and mean what they say—and if they don't, well, then, they are lying."

(Lou Edmondson, VP Sales, Kraft)



High-Context Culture

Perceive low-context communicator as

- Inappropriately stating the obvious
- Condescending
- Patronizing

"I am not a child. I was not born yesterday. I understand very well what your point is without all the explanation."

(Italian banking executive working with an American counterpart)



