Why is financial misconduct research such a big thing?

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CARE conference

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Foster
School of Business
UNIVERSITY of WASHINGTON

#1: It's fun (everyone likes a good crime story…)

#2: Lots of data to identify samples for empirical work

- GAO restatement data
- Audit Analytics data
- Stanford Securities Class Action Clearinghouse
- Haas School (Center for Financial Markets Research) AAER data

"Proxies and databases in financial misconduct research"
(with Allison Koester, Scott Lee, and Jerry Martin)

The proxy/data source matters

Data Source	Prior to event year (t-1)		Event year (t)		Difference	
	N	Mean	N	Mean	Mean	t-statistic
Working capital accruals/Assets						
GAO	1,765	-0.005	1,793	-0.017	-0.012	-2.59***
AA	3,371	-0.017	3,229	-0.022	-0.006	-1.21
SCAC	1,756	0.014	1,725	-0.020	-0.034	-7.64***
CFRM	189	-0.015	179	-0.020	-0.006	-0.33
New equity issues/Assets						
GAO	1,684	0.093	1,700	0.065	-0.028	-3.88***
AA	3,422	0.138	3,121	0.125	-0.013	-1.61
SCAC	1,711	0.182	1,663	0.081	-0.101	-11.43***
CFRM	184	0.070	173	0.064	-0.005	-0.24
Share repurchases/Assets						
GAO	1,792	0.015	1,798	0.013	-0.0023	-1.29
AA	3,566	0.022	3,233	0.014	-0.0077	-4.39***
SCAC	1,771	0.014	1,730	0.018	0.0038	1.78*
CFRM	192	0.010	180	0.024	0.0136	2.33**
Return on assets						
GAO	1,751	-0.008	1,758	-0.030	-0.022	-1.60
AA	3,477	-0.177	3,163	-0.200	-0.024	-1.27
SCAC	1,737	-0.018	1,691	-0.109	-0.091	-6.38***
CFRM	187	-0.047	176	-0.116	-0.069	-1.10

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Foster School of Business

"How pervasive is fraud?"

by Alexander Dyck, Adair Morse, and Luigi Zingales

	DMZ (Stanford class actions)
Unconditional probability of fraud	15.0%
Probability of detection	26.7%
Average length of violation (years)	1.7
Annual cost of fraud in large U.S. corporations ($billions)	377

Derived from conditional probability and the probability of detection.

Calculated from the differential rate at which former Arthur Andersen clients were detected for fraud after being forced to switch to new auditors.

Falls out from model after estimating the cost of fraud per firm (from KLM 2008 paper).

Using a different proxy for misconduct, the results change a lot!

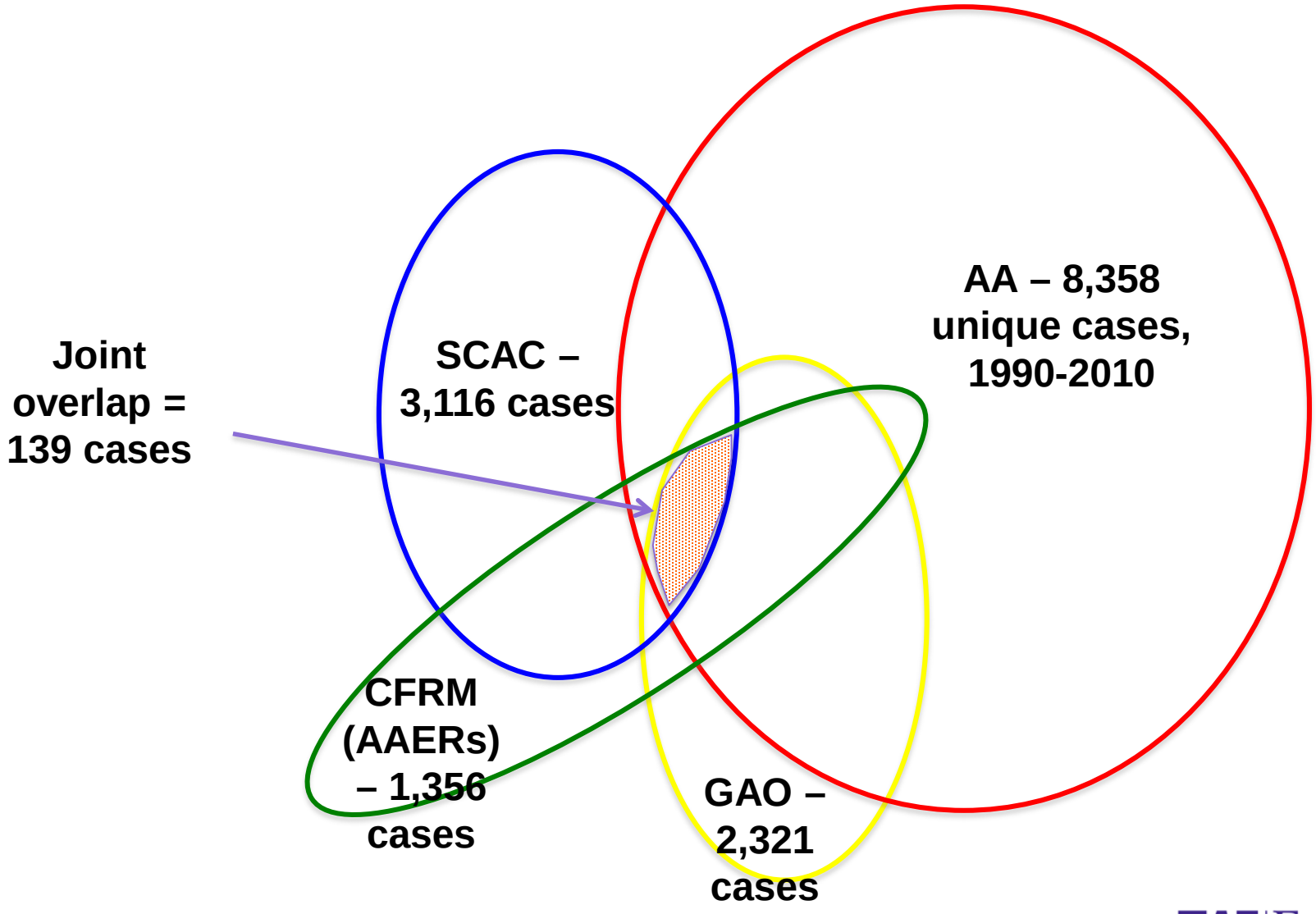
	DMZ (Stanford class actions database	CFRM (AAER) database
Unconditional probability of fraud	15.0%	3.8%
Probability of detection	26.7%	91.1%
Average length of violation (years)	1.7	3.3
Annual cost of fraud in large U.S. corporations ($billions)	377	49

Using DMZ's procedure, just changing the data source.

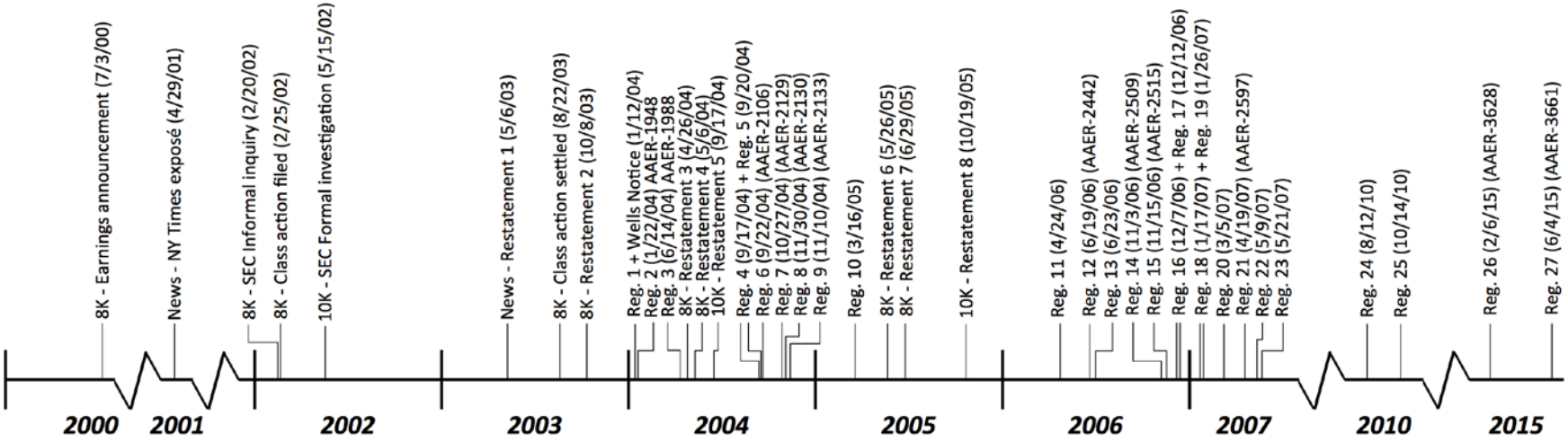
Other proxies for misconduct do not resolve the discrepancy…

	DMZ (Stanford class actions database	CFRM (AAER) database	GAO restatemt database	Audit Analytics restatemt database
Unconditional probability of fraud	15.0%	3.8%	13.2%	8.7%
Probability of detection	26.7%	91.1%	88.5%	101.0%
Average length of violation (years)	1.7	3.3	4.2 (est.)	4.2
Annual cost of fraud in large U.S. corporations ($billions)	377	49	133	87

These proxies identify different cases



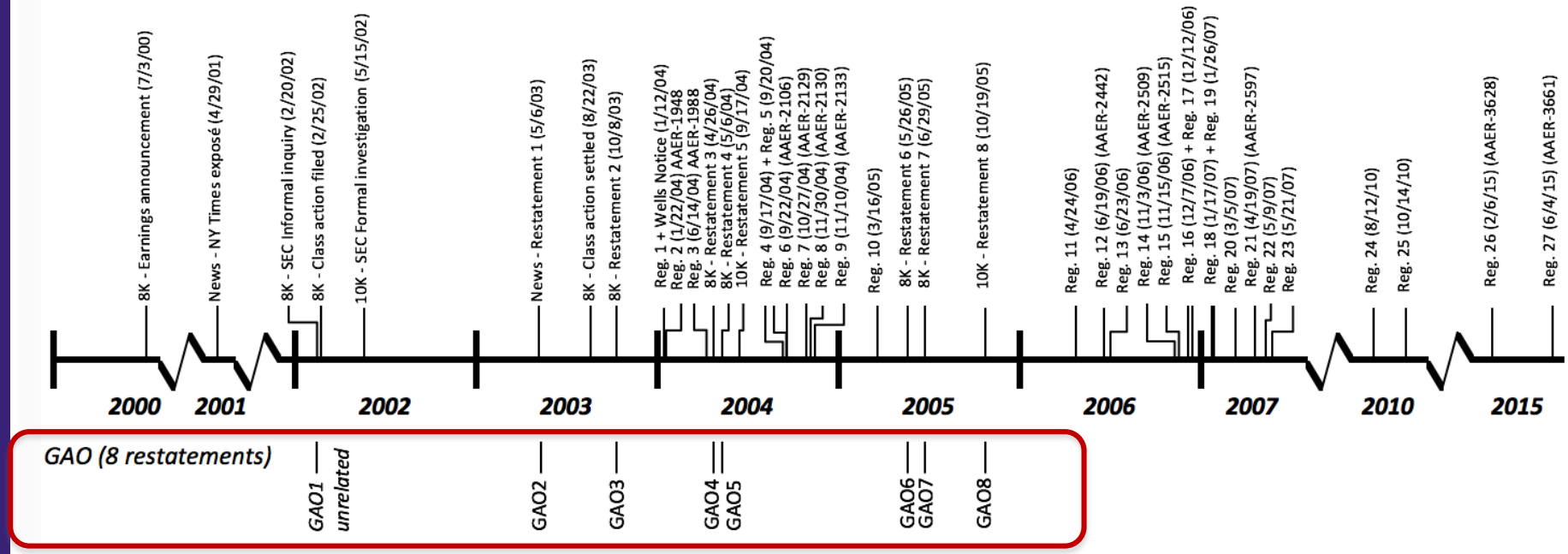
Computer Associates fraud case timeline



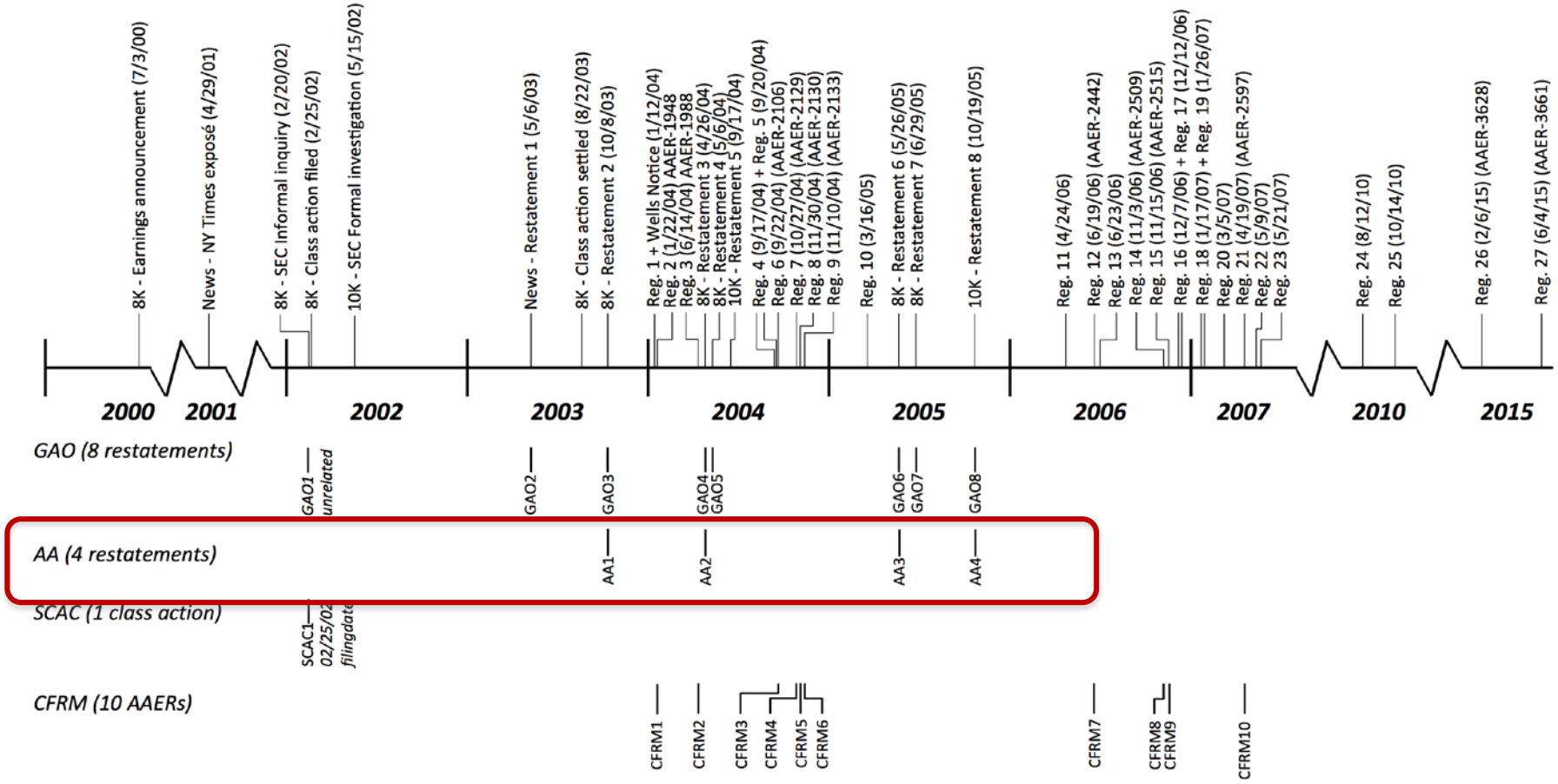
41 informational events:

- 4 press announcements (three by firm)
- 8 earnings restatements
- 1 initial class action filing
- 1 initial announcement of a class action settlement
- 27 regulatory actions (e.g., SEC administrative proceedings and litigation releases)
  - 12 of these also received AAER designation

Computer Associates fraud case timeline



Computer Associates fraud case timeline



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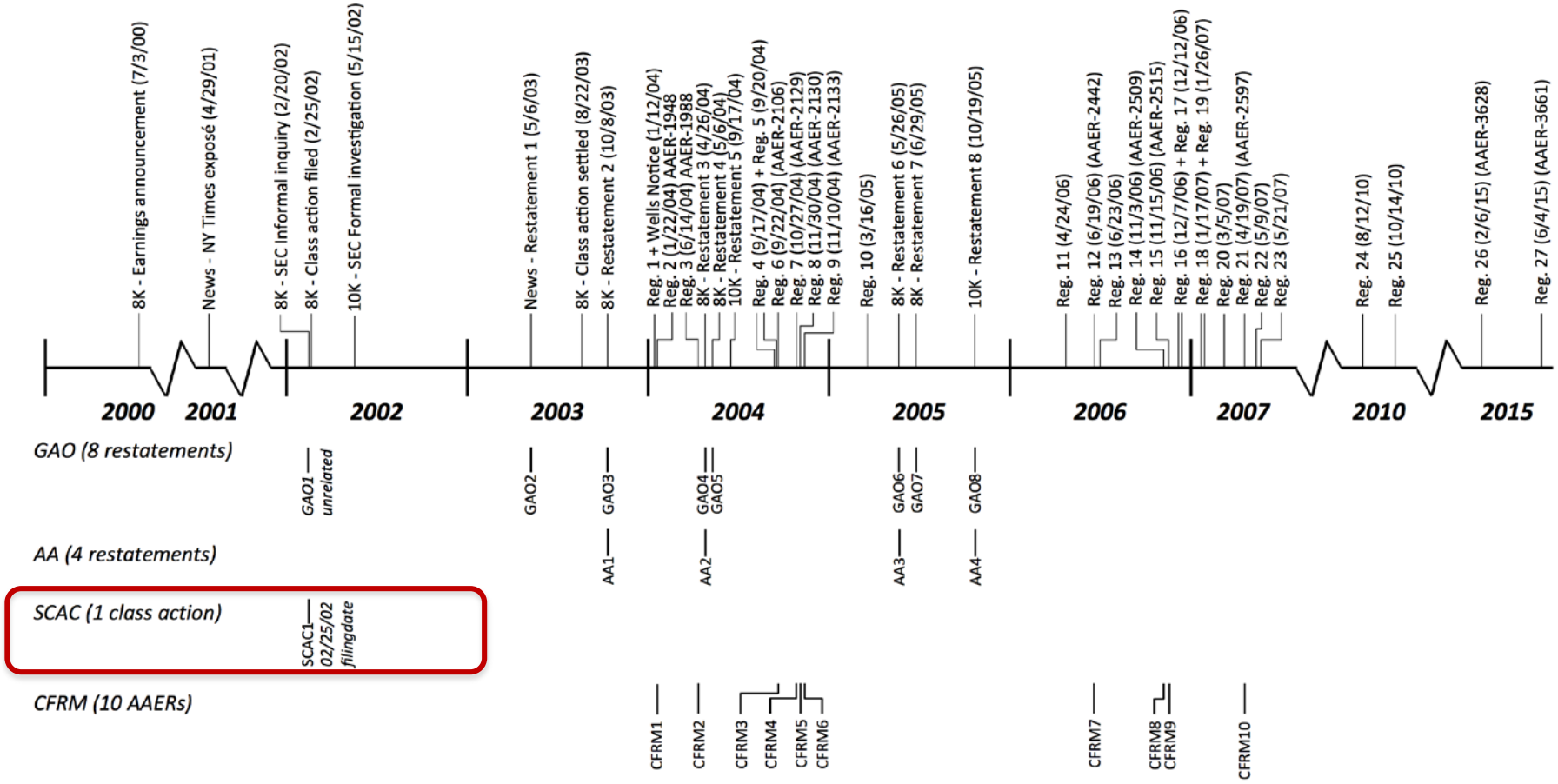

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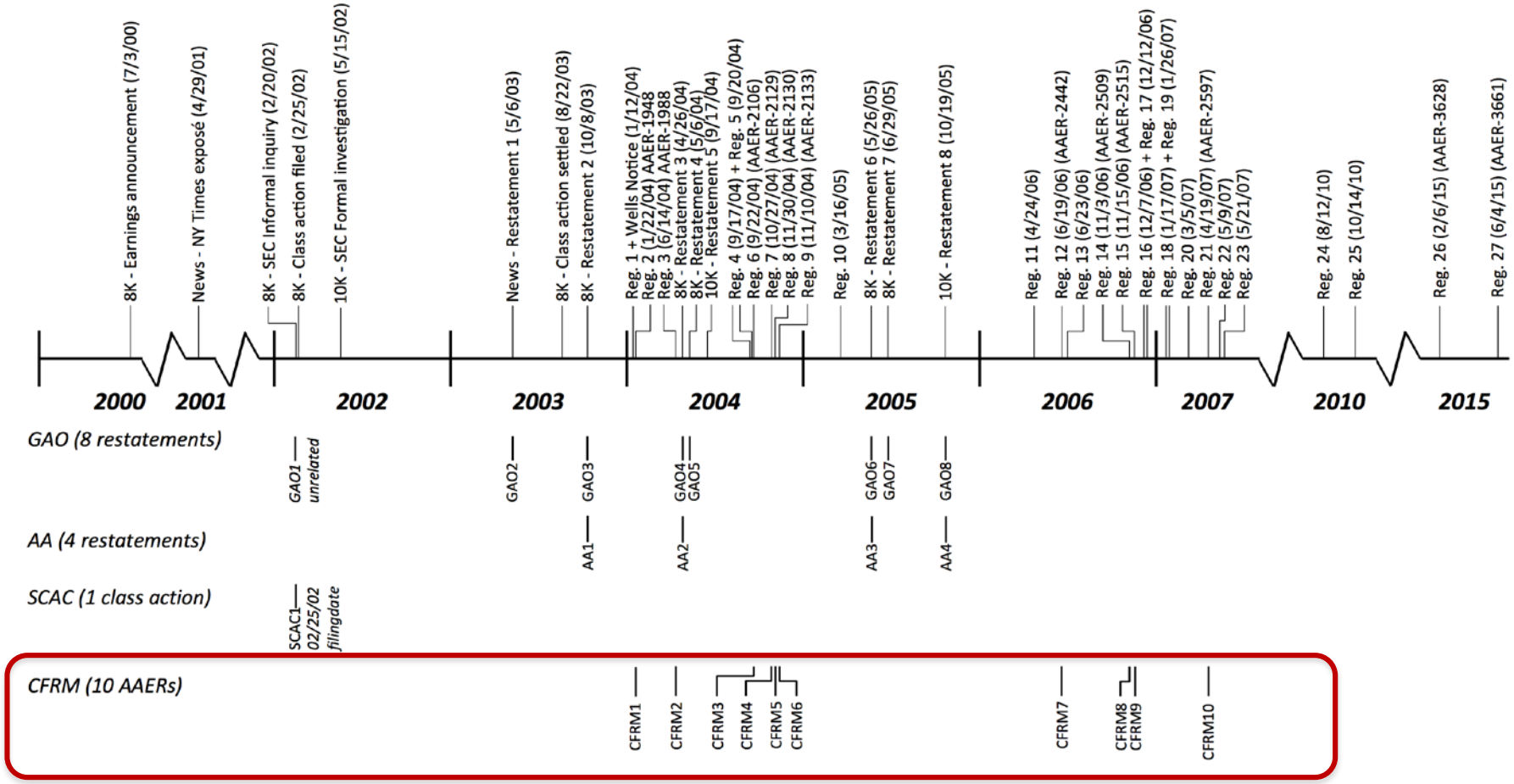
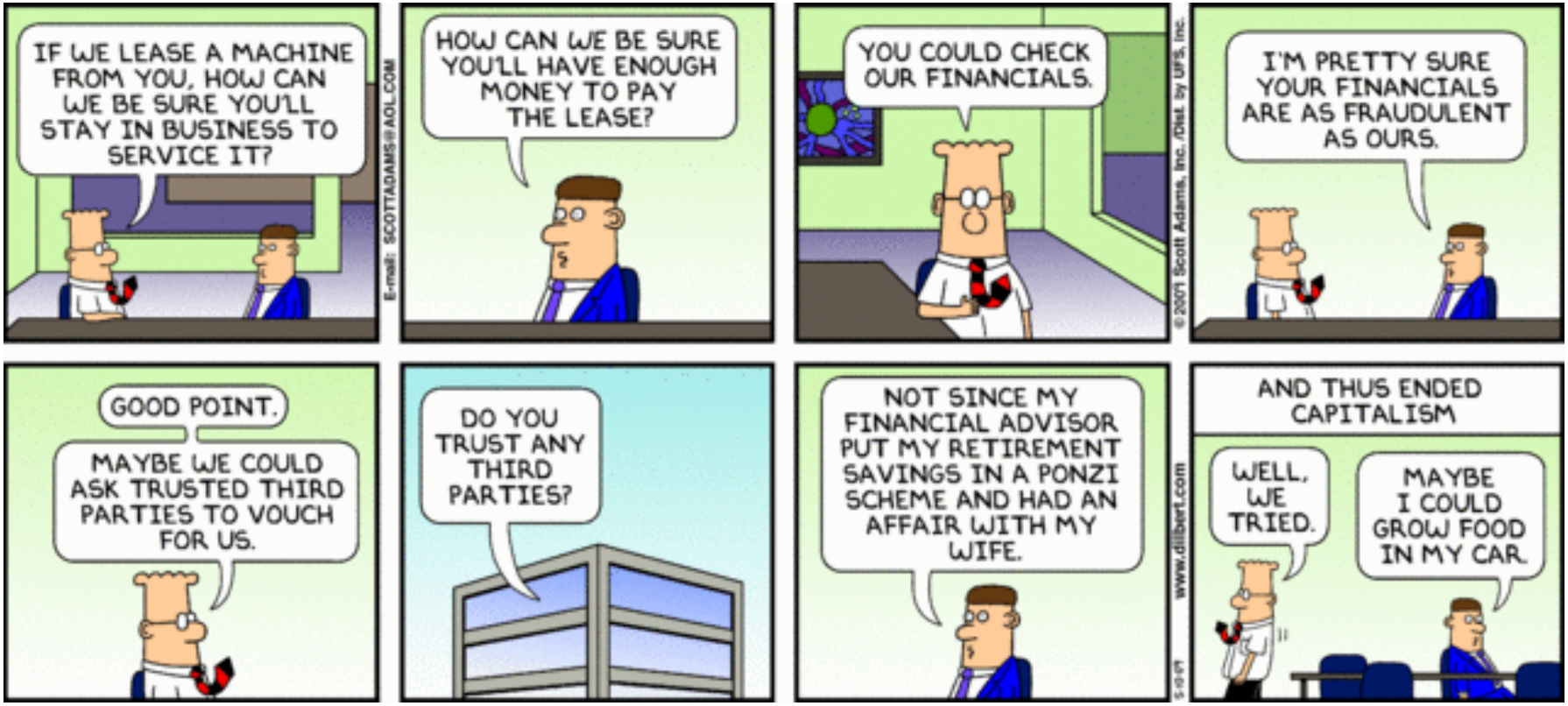


#3: It's important…



… because it yields insight into the central role of ***trust***.

A leap of trust lies at the core of virtually all economic transactions

The central economic question: How and why do we trust our counterparties?

What builds trust: Three legs of support

Market forces and reputational capital

- Obvious once pointed out, but persistently forgotten by both policy makers and researchers

Laws, institutions, regulations, and regulators

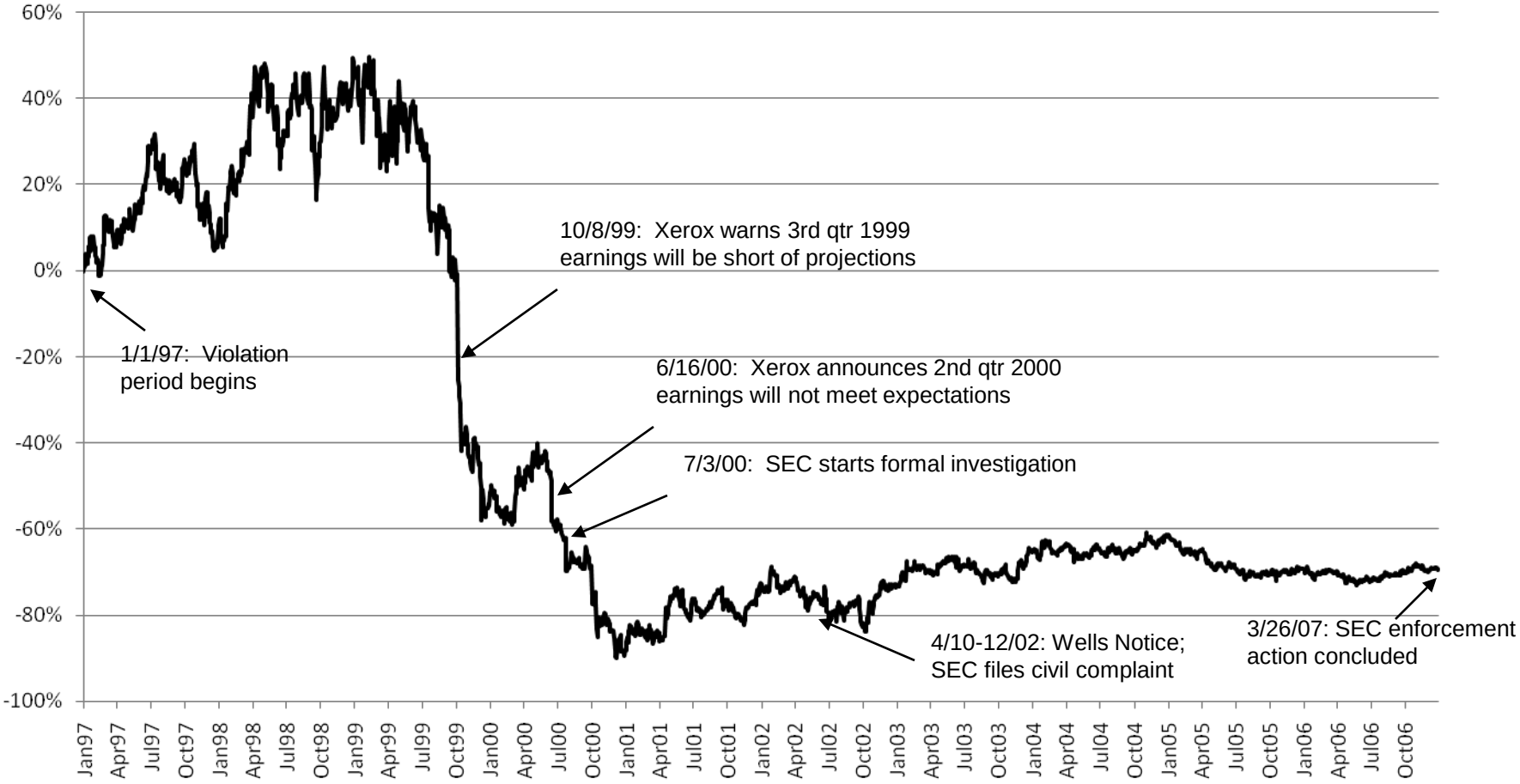
- E.g., the law and finance literature

Personal ethics, integrity, and culture

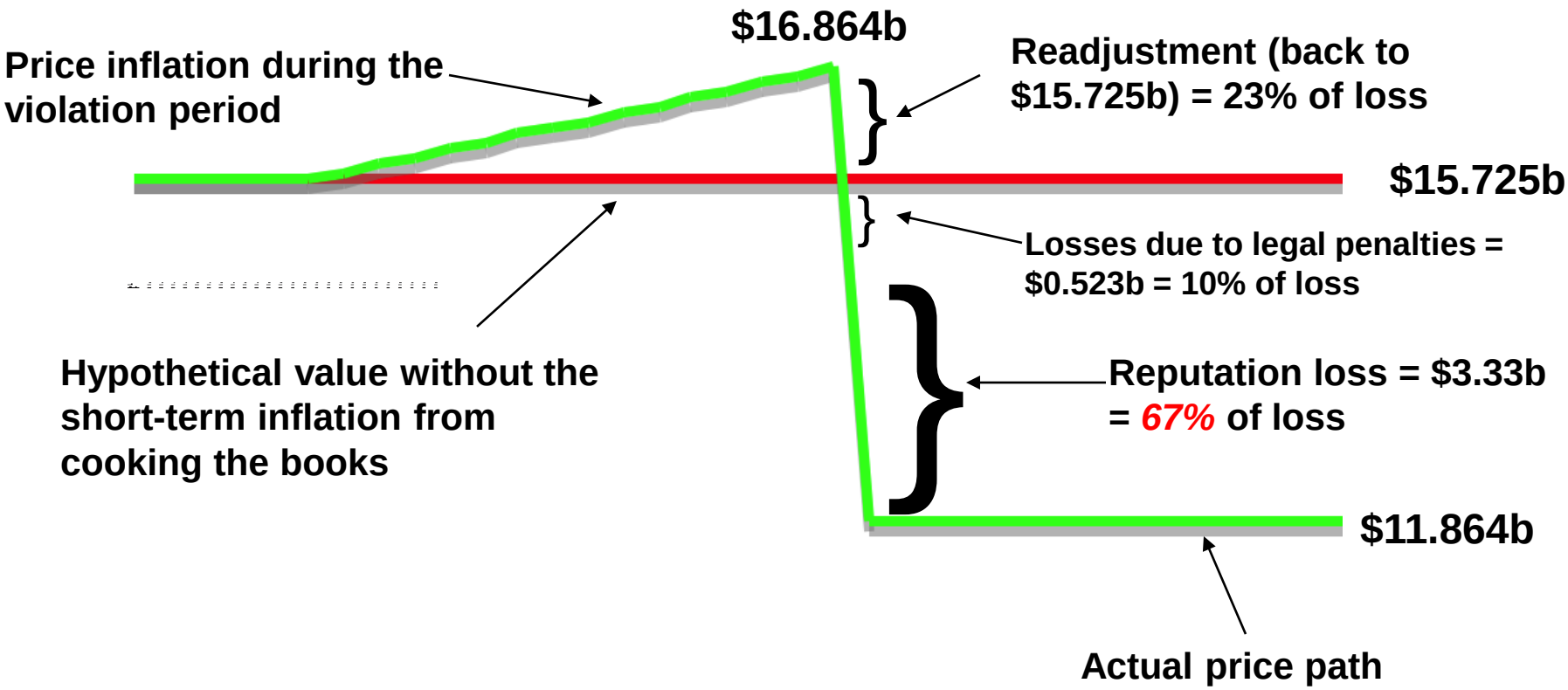
- The focus of ethics courses in business schools
- Nascent literature in finance (e.g., Zingales 2015 AFA keynote)

Measuring the importance of reputational capital: An example

(Xerox's cumulated market-adjusted returns, Jan. 1997 – Dec. 2006)



Xerox's reputation loss…



Reputational losses for other types of misconduct

Large losses:

- Financial misconduct and fraud
- Consumer fraud
- Product recalls
- Air safety disasters
- Employee violations
- False advertising
- IPO underwriting violations
- VC misconduct

Negligible losses:

- Environmental violations
- Frauds of unrelated parties
- Foreign bribery
- Government procurement fraud (for connected firms only)

Sources: Jarrell and Peltzman (JPE 1985), Chalk (Econ Inq. 1986), Rubin, Murphy, and Jarrell (Regulation 1988), Borenstein and Zimmerman (AER 1988), Mitchell and Maloney (JLE 1989), Karpoff and Lott (JLE 1993), Klassen and McLaughlin (Mgmt. Sci. 1996), Barber and Darrough (JPE 1996), Alexander (JLE 1999), Karpoff, Lott, and Wehrly (JLE 2005), Murphy, Shrieves, and Tibbs (JFQA 2009), Atanassov and Litvak (JF 2012).

How a loss in reputational capital shows up:

- ***A higher cost of capital***
  - Graham, Li, and Qiu (Journal of Financial Economics 2008)
  - Murphy, Shrieves, and Tibbs (Journal of Financial and Quantitative Analysis 2009)
  - Autore, Hutton, Peterson, and Smith (Journal of Corporate Finance 2014)
- ***Lower future sales***
  - Barber and Darrough (Journal of Political Economy 1996)
  - Karpoff, Lee, and Vendrzyk (Journal of Political Economy 1999)
  - Murphy, Shrieves, and Tibbs (Journal of Financial and Quantitative Analysis 2009)
  - Johnson, Xie, and Yi (Journal of Corporate Finance 2014)
- ***Executive turnover and leadership disruption***
  - Desai, Hogan, and Wilkins (Accounting Review 2006)
  - Karpoff, Lee, and Martin (Journal of Financial Economics 2008)
  - Brochet and Srinivasan (Journal of Financial Economics 2014)
  - Crutchley, Minnick, and Schorno (Journal of Corporate Finance 2015)

Can we say anything about the role of culture?

Market forces and reputational capital

- Obvious once pointed out, but persistently forgotten by both policy makers and researchers

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Laws, institutions, regulations, and regulators

- E.g., the law and finance literature

Personal ethics, integrity, and culture

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Empirical proxies for culture

- *Individual behaviors or values*
  - Kaplan, Klebanov and Sorensen (2012) on the importance of "integrity" in private equity transactions
  - Davidson, Dey, Smith (2015), Griffin et al. (2016), and Walkling et al. (2016) on CEOs' personal indiscretions and its impact on professional conduct
- *Religion*
  - Stulz and Williamson (2003) show that a country's predominant religion impacts investors' rights
  - Guiso, Sapienza, Zingales (2003) show that religion affects individuals' participation in financial markets

Empirical proxies for culture, continued

- *Geography*
  - Guiso et al. (2006, 2009) use national survey data to measure trustworthiness
  - Widespread use of corruption perception indices (e.g., from Transparency International)
  - Ahern, Daminelli and Fracassi (2015) show how national culture affects merger activity
  - Parsons, Sulaeman, and Titman (2016) show geographic effects on the incidence of financial misconduct.
- *Networks*
  - Hong, Kubich, Stein (2004) examine social interactions' effects on stock market participation
  - Fracassi and Tate (2012) examine CEO-directors ties, internal governance, and firm performance
  - Khanna, Kim, and Lu (2015) examine CEO connectedness and fraud

Directions for future research

How and when is reputational capital the key?

- Theoretical frameworks (e.g., Klein-Leffler, JPE 1981)
- How it is built, destroyed, and rebuilt
- Private vs. public enforcement
- Reputational capital around the world

Legal institutions

- Law and finance literature is not dead

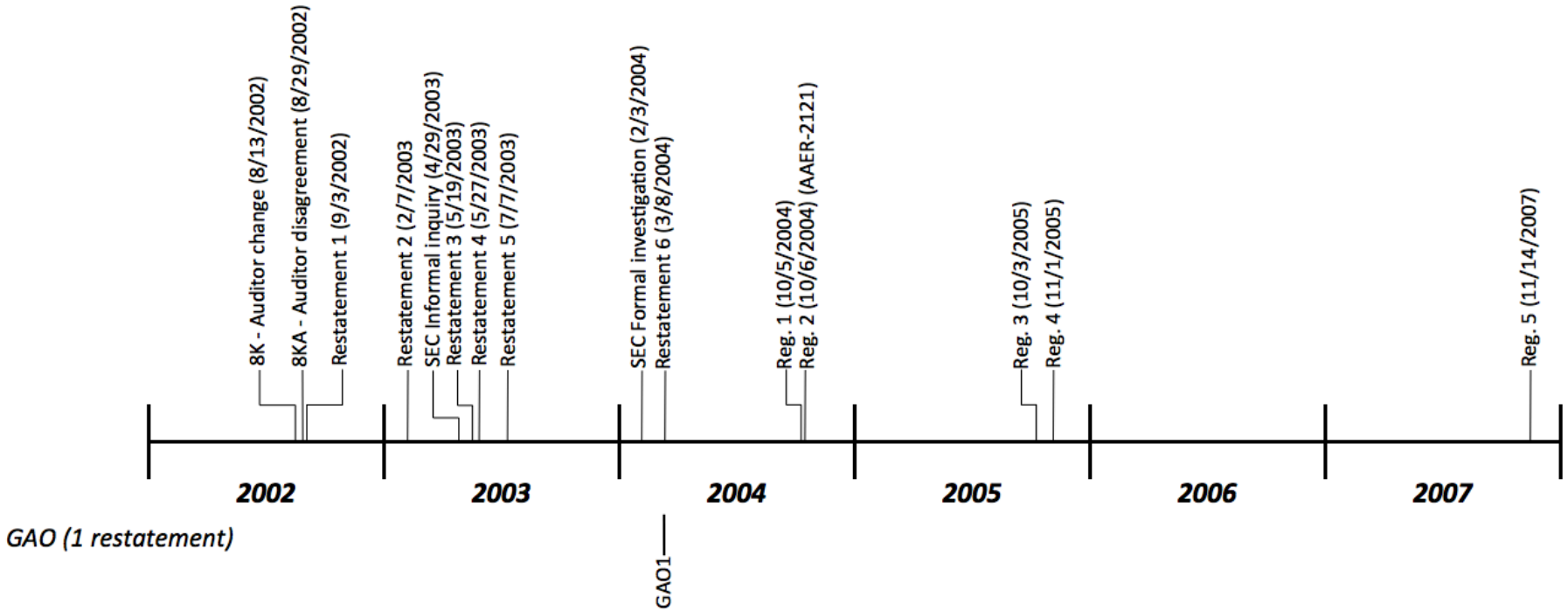
Personal ethics, integrity, and culture

- Largest innovations will be in measurement

In working with proxies for misconduct:

The devil is in the (institutional) details

Safescript Pharmacies, Inc. timeline



The 15 events include two SEC-identified trigger events in August 2002, six restatement announcements, announcements of an SEC informal inquiry in April 2003 and of a formal SEC investigation in February 2004, and five different regulatory releases revealing the SEC's and Department of Justice sanctions against Safeguard Pharmacies and four of its officers. SEC and DOJ regulatory releases are designated by "Reg." One of the SEC's releases, Litigation Release No. 18921 dated October 6, 2004, received a secondary designation as AAER No. 2121. The events identified by the GAO, AA, SCAC, and CFRM databases are denoted on the bottom four timelines. The GAO database identifies one of the restatements, and the AA database does not identify any of the six restatement announcements issued by Safeguard Pharmacies related to its misconduct. The SCAC appropriately does not identify any lawsuits, and the CFRM database effectively omits the one AAER because it fails to identify a CIK for Safescript.