

Changing Economics of Listed Firms

And

The Declining Relevance of Financial Statements

Anup Srivastava

Changing economics in one generation

Today's companies with largest market capitalization

- **Apple Inc.**
- **Alphabet Inc**
- **Microsoft Corporation**
- **Amazon**
- **Facebook Inc**
- **Alibaba Group**

1955

- **General Motors**
- **US Steel**
- **General Electric**
- **Chrysler**
- **Standard Oil**
- **AMOCO**
- **CBS**
- **General Electric**
- **Goodyear Tire**

21st century corporation

- Business Idea
- Innovation, patents
- Brands
- Organizational strategy
- Peer and supplier networks
- Customer and social relationships
- Computerized data and software
- Human capital
- Growth options

20th century corporation

- Factories
- Buildings
- Land
- Warehouse
- Mines
- Oilfield
- Inventory
- Raw material

Contrast Walmart's \$160 billion of hard assets for its \$300 billion valuation against Facebook's \$20 billion dollars of hard assets for its \$550 billion valuation.



Contents lists available at ScienceDirect

Journal of Accounting and Economics

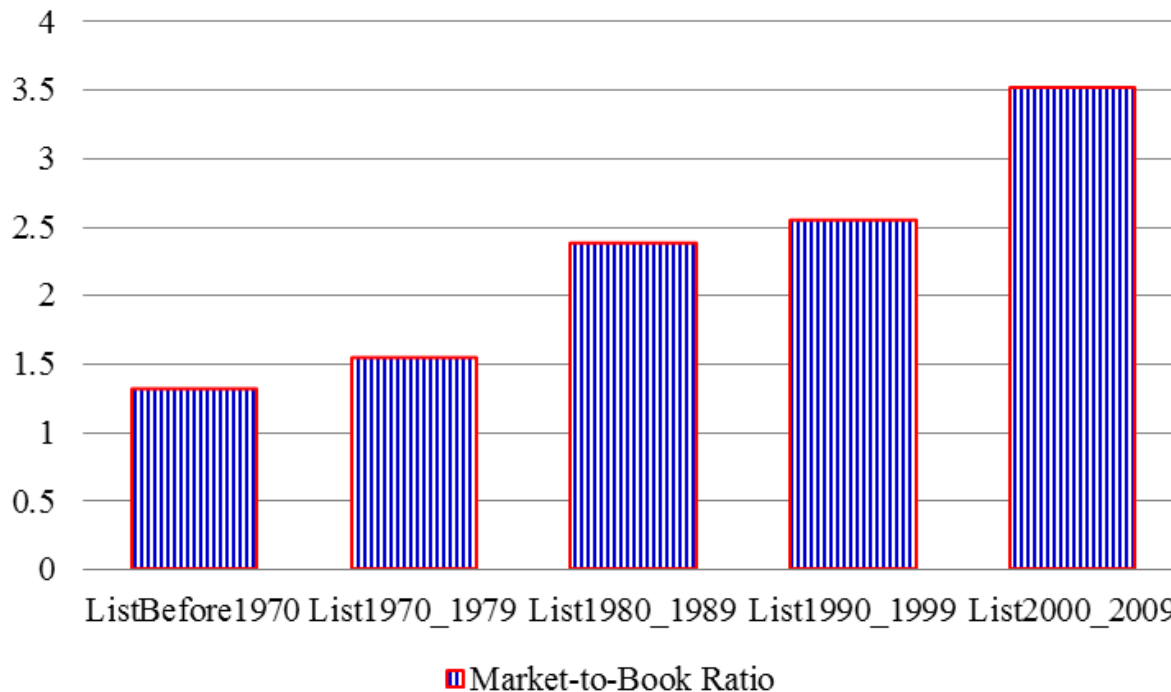
journal homepage: www.elsevier.com/locate/jae



Why have measures of earnings quality changed over time? ☆



Anup Srivastava *





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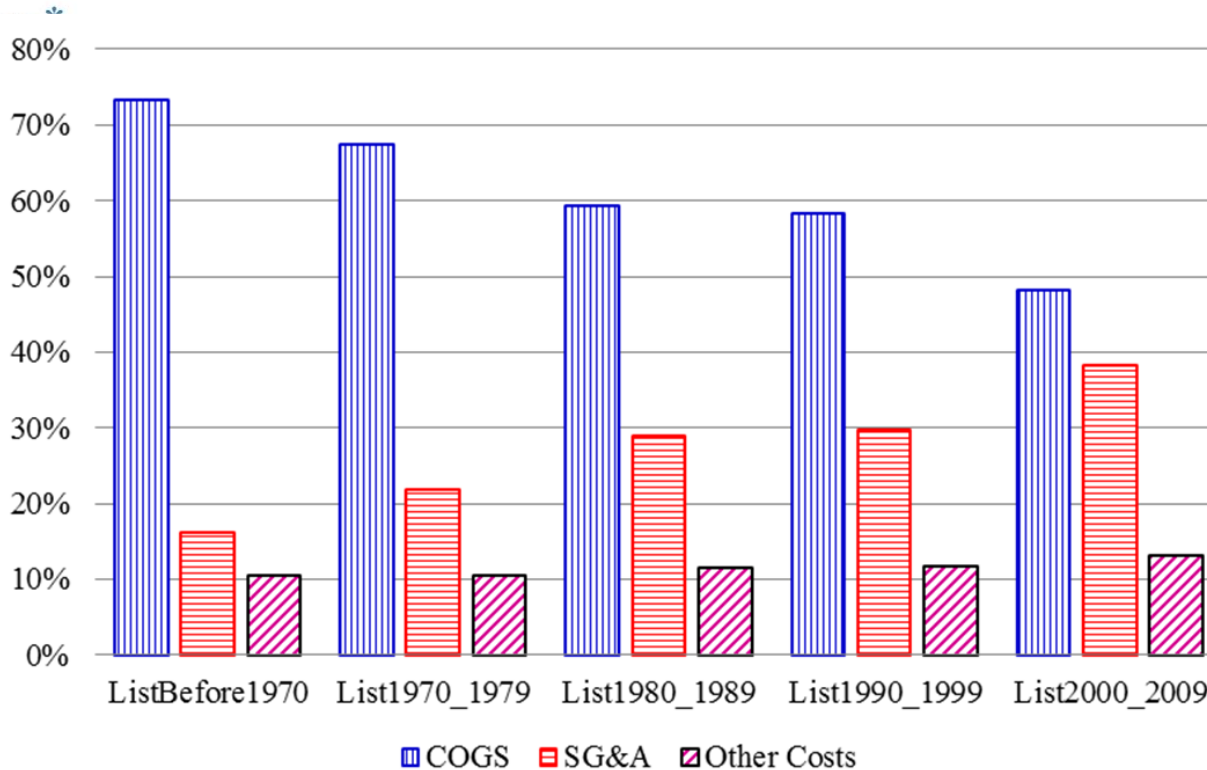
journal homepage: www.elsevier.com/locate/jae



Why have measures of earnings quality changed over time? ☆



Anup Srivasta



COGS is no longer the largest cost item for many intangible-intensive firms (\$M)

Data Year -	Company Name	SG&A	COGS
2010	NESTLE SA/AG	48,885	44,394
2018	MICROSOFT CORP	36,949	28,453
2017	JOHNSON & JOHNSON	31,974	18,987
2016	ALPHABET INC	31,418	29,038
2010	PFIZER INC	28,796	12,441
1991	INTL BUSINESS MACHINES CORP	27,978	27,325
2011	NOVARTIS AG	27,720	14,093
2010	GLAXOSMITHKLINE PLC	25,169	8,813
2017	ROCHE HOLDING AG	23,941	14,571
2008	MERCK & CO-PRO FORMA	23,595	16,246
2017	LVMH MOET HENNESSY LOUIS V	23,511	15,582
2010	MERCK & CO	21,363	8,916
2016	INTEL CORP	21,037	15,313
2017	BAYER AG	20,922	10,430
2017	SANOFI	18,691	12,553
2017	ANHEUSER-BUSCH INBEV	18,199	17,321
2015	CISCO SYSTEMS INC	18,058	17,373

Why Are Successive Cohorts of Listed Firms **Persistently Riskier**?

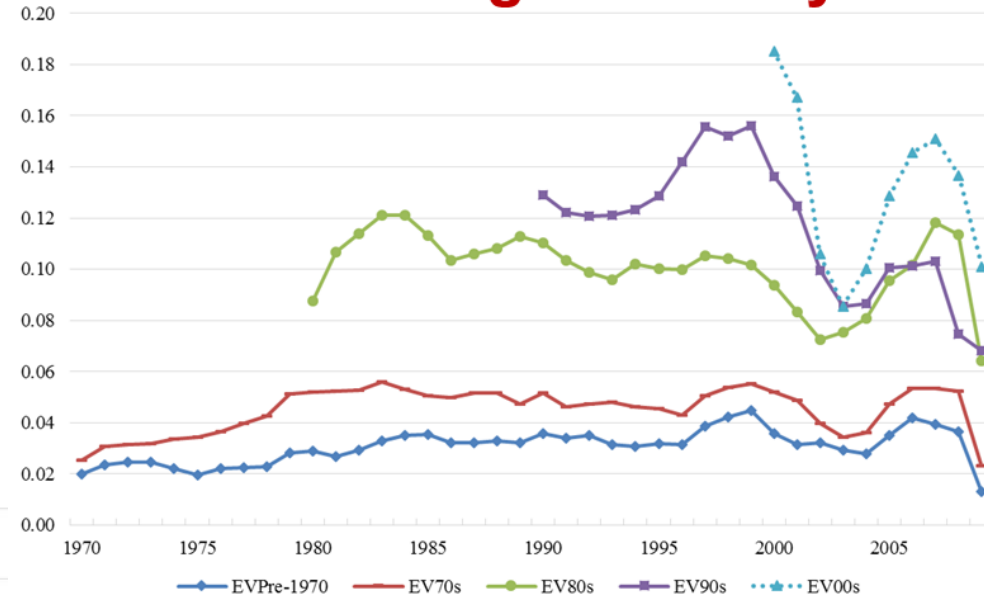
Anup Srivastava

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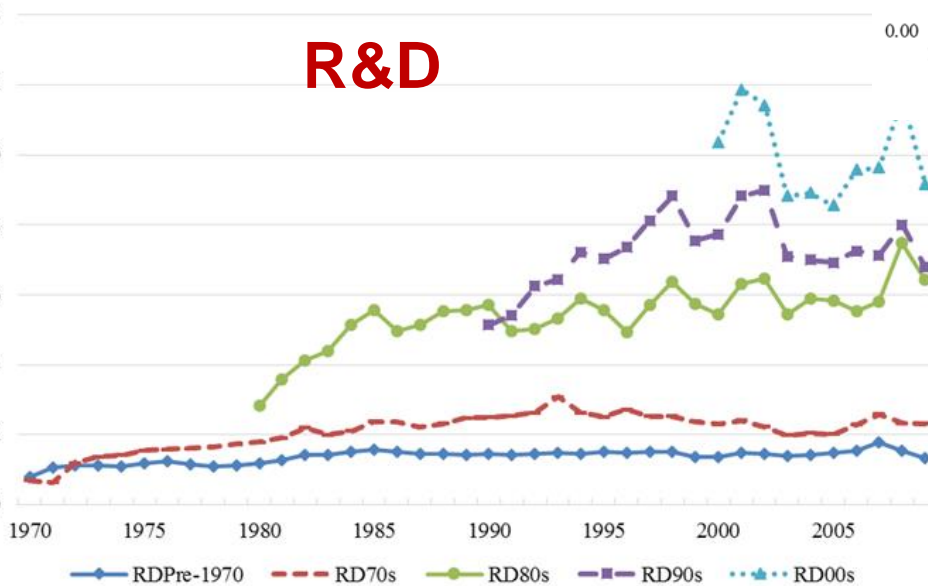
Senyo Y. Tse

Mays Business School, Texas A&M University, 4113 TAMU, College Station, TX 77843, USA
E-mail: stse@mays.tamu.edu

Earnings Volatility



R&D



Increasing Industries

Diminishing Industries

Fama–French industry code

Composition Fama–French industry code

Composition

	Industry name	Recency		Industry name	Recency
13	Pharmaceutical Products	3.48	17	Construction materials	1.97
34	Business services	3.34	38	Business supplies	1.94
27	Gold and precious metals	3.30	39	Shipping containers	1.93
11	Healthcare	3.24	16	Textiles	1.92
12	Medical equipment	3.15	25	Shipbuilding railroad eqp	1.87
32	Communication	3.10	5	Tobacco products	1.85
35	Computers	3.09	24	Aircraft	1.73
7	Entertainment	3.01	31	Utilities	1.49

Srivastava (JAE 2014)

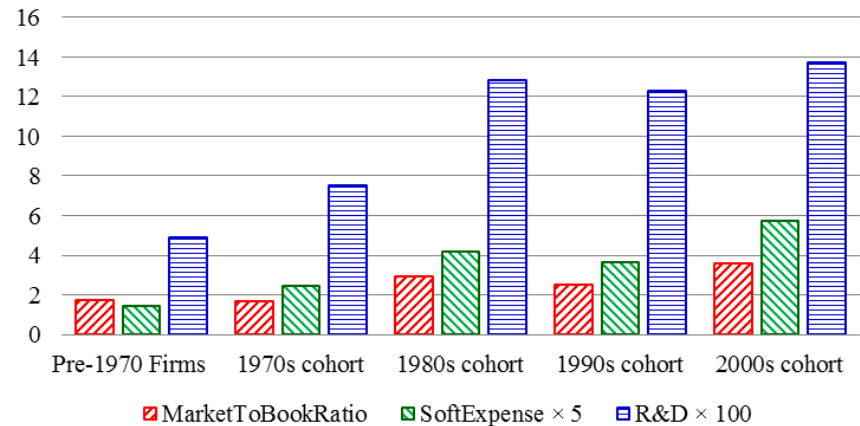
This is not just “changes in industry” effect

Also, within industry trends

Consumer durables

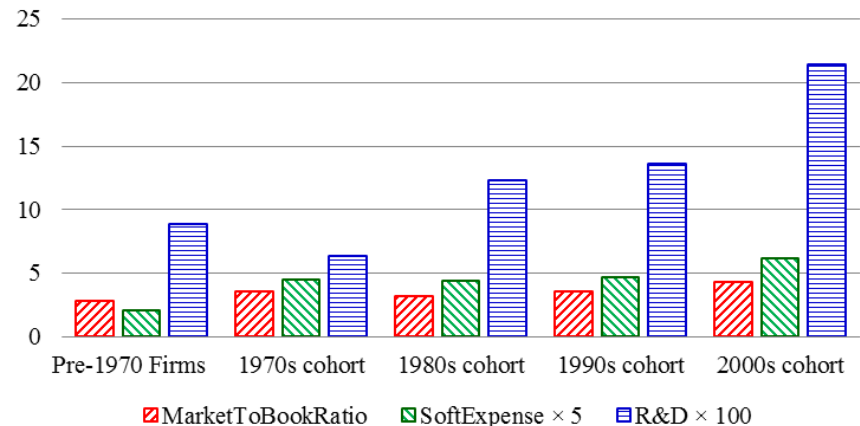


Chemicals and allied products



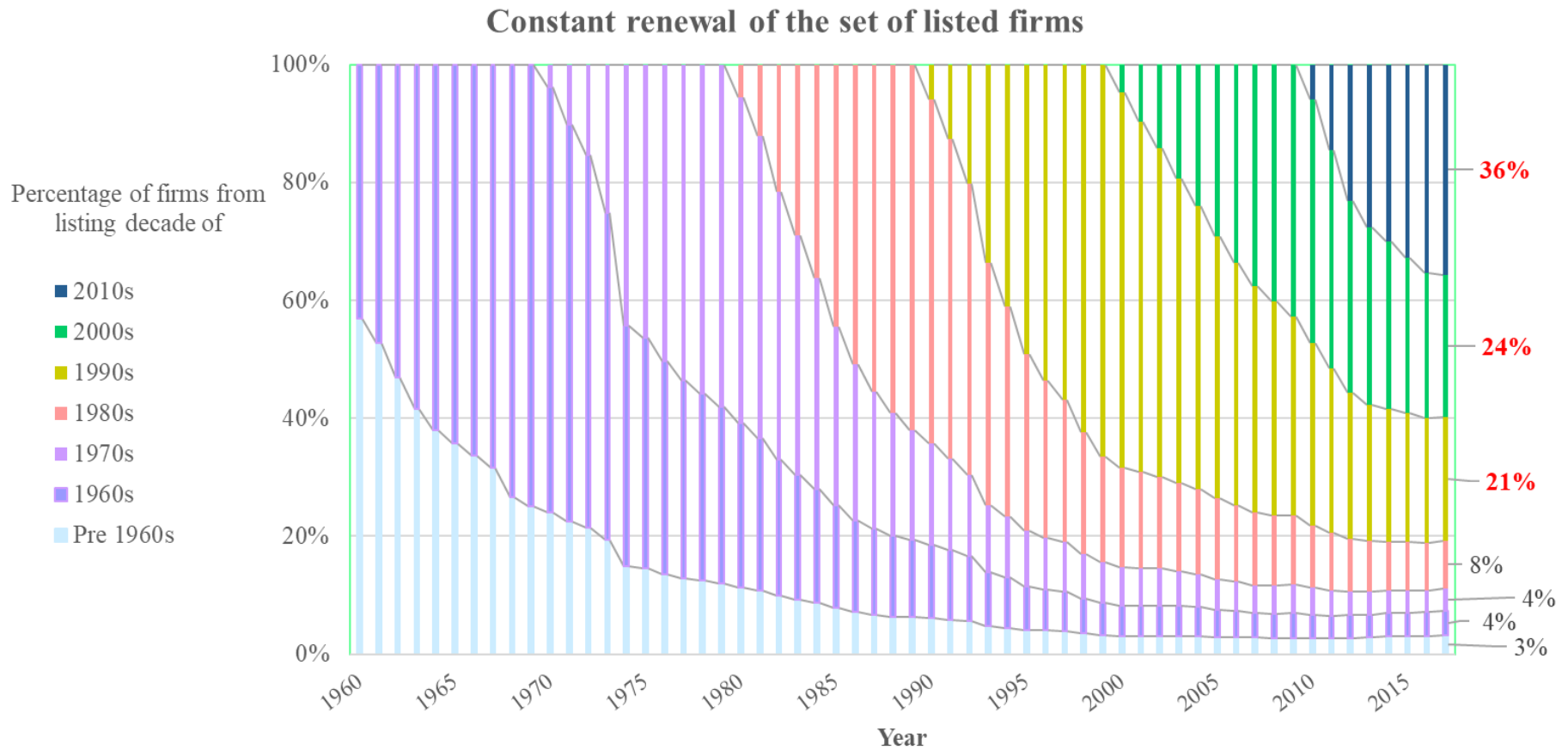
Measured over a common period of
2001–2010

Healthcare

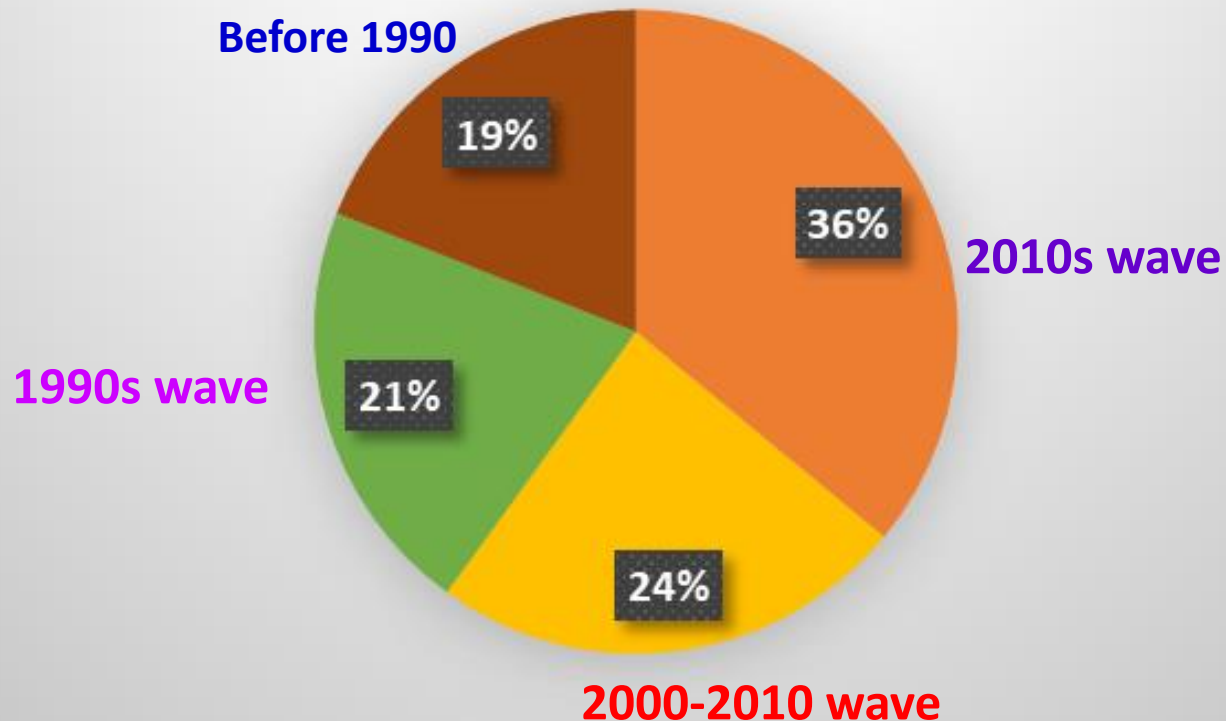


**The Construct Validity of Industry-Based
Measures of Real Activity Manipulation**
Srivastava (2017)

Changing composition of the set of listed firms.



Percentage Distribution in 2017



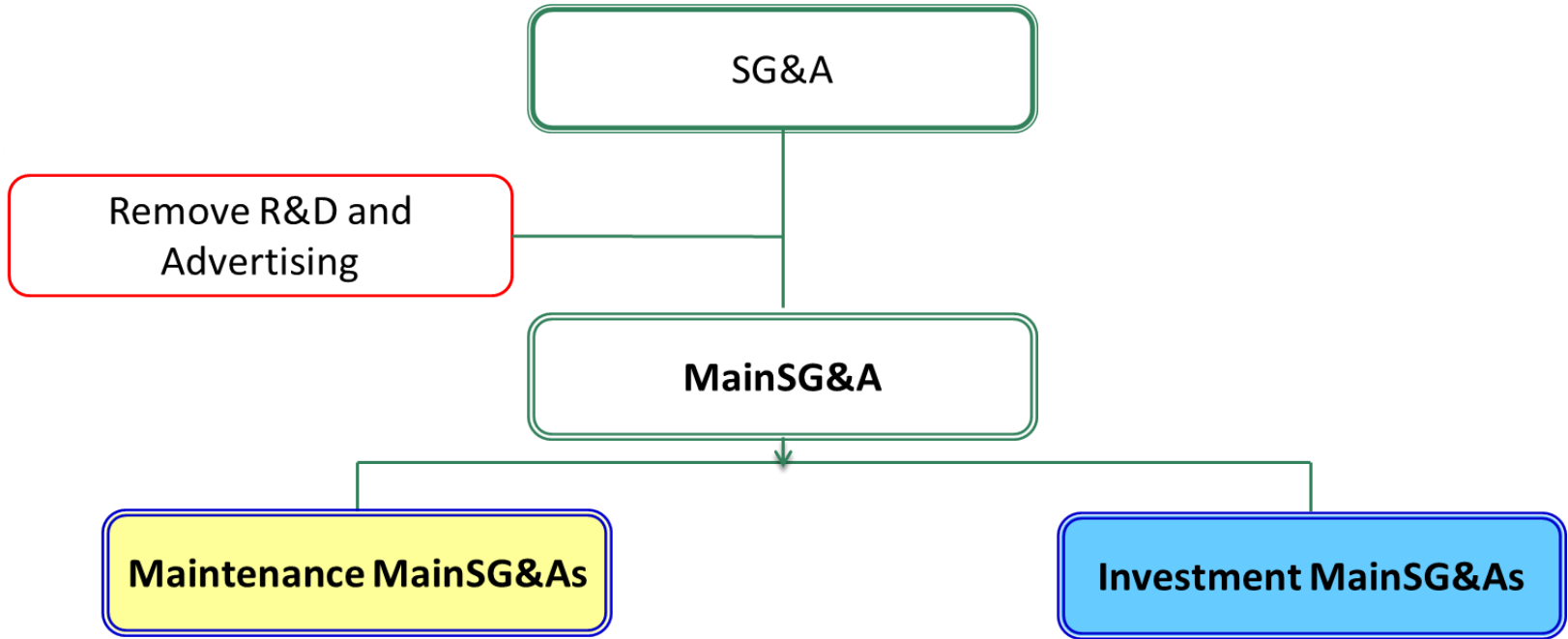
81% of firms listed today were listed after 1990
What kind of firms are they?



Publication details, including instructions for authors and subscription information:
<http://pubsonline.informs.org>

Should Intangible Investments Be Reported Separately or Commingled with Operating Expenses? New Evidence

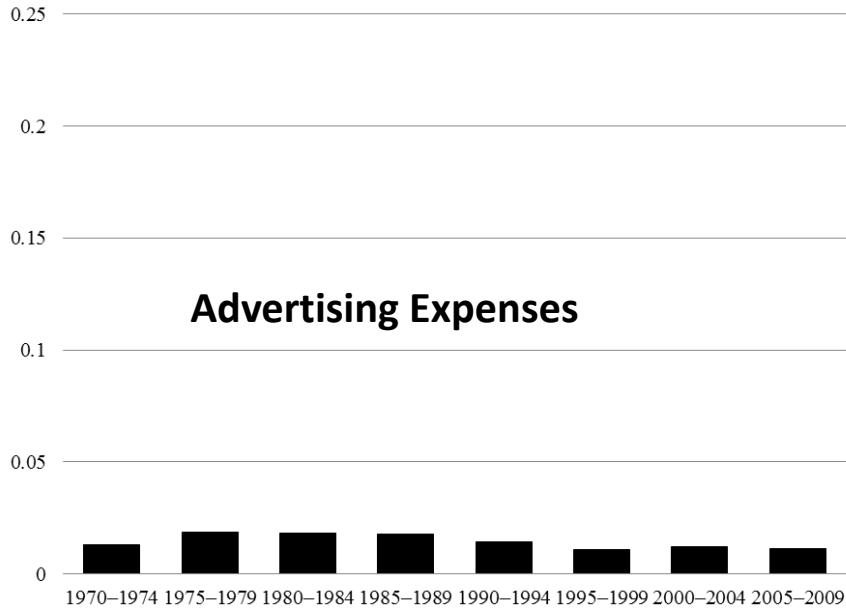
Luminita Enache, <http://orcid.org/0000-0001-5646-614X>Anup Srivastava



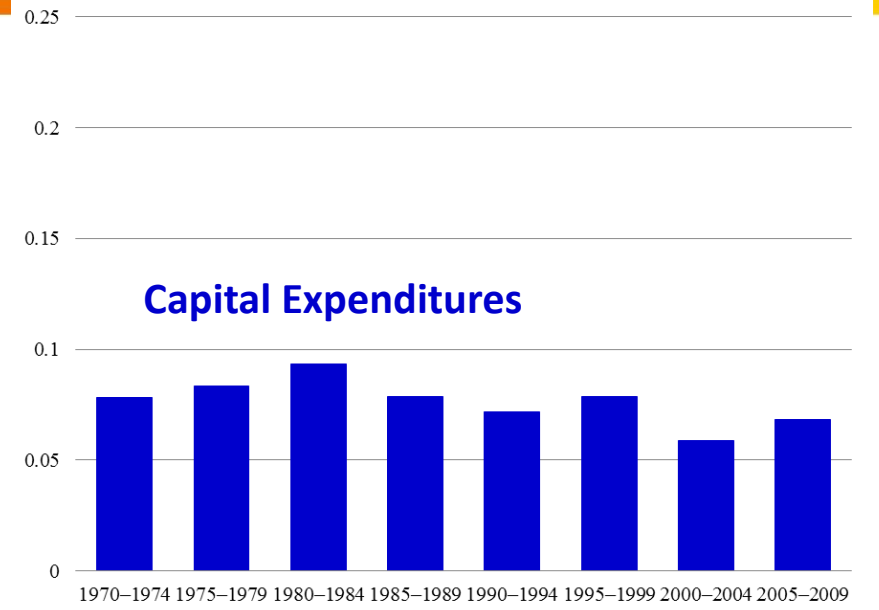
E.g., organizational strategy and competency, customer and social relationships, computerized data and software, and human capital



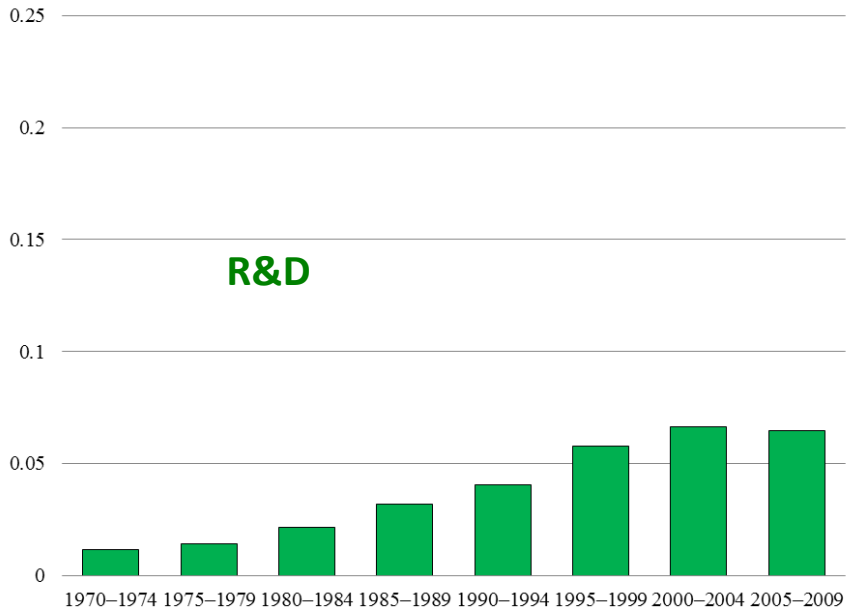
Advertising Expenses



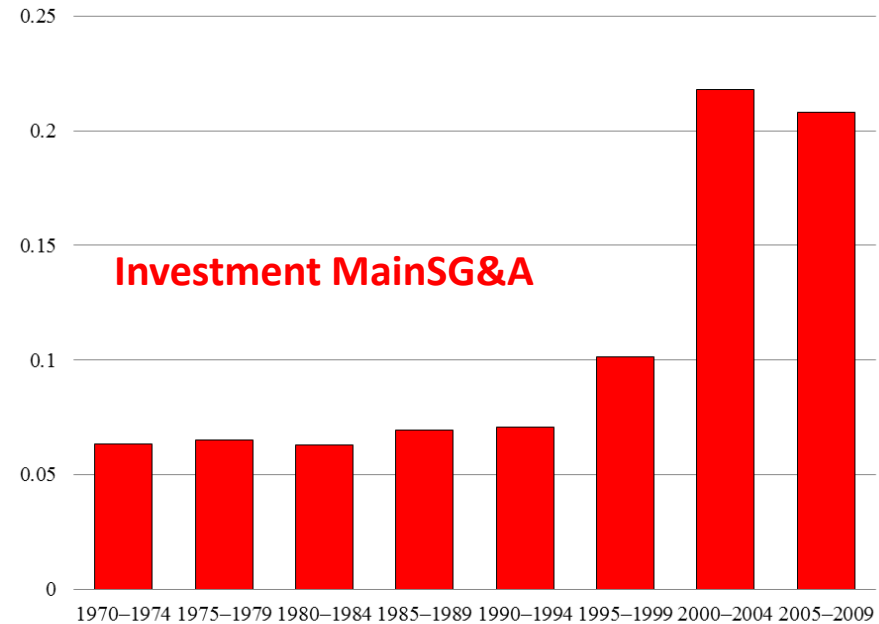
Capital Expenditures



R&D



Investment MainSG&A



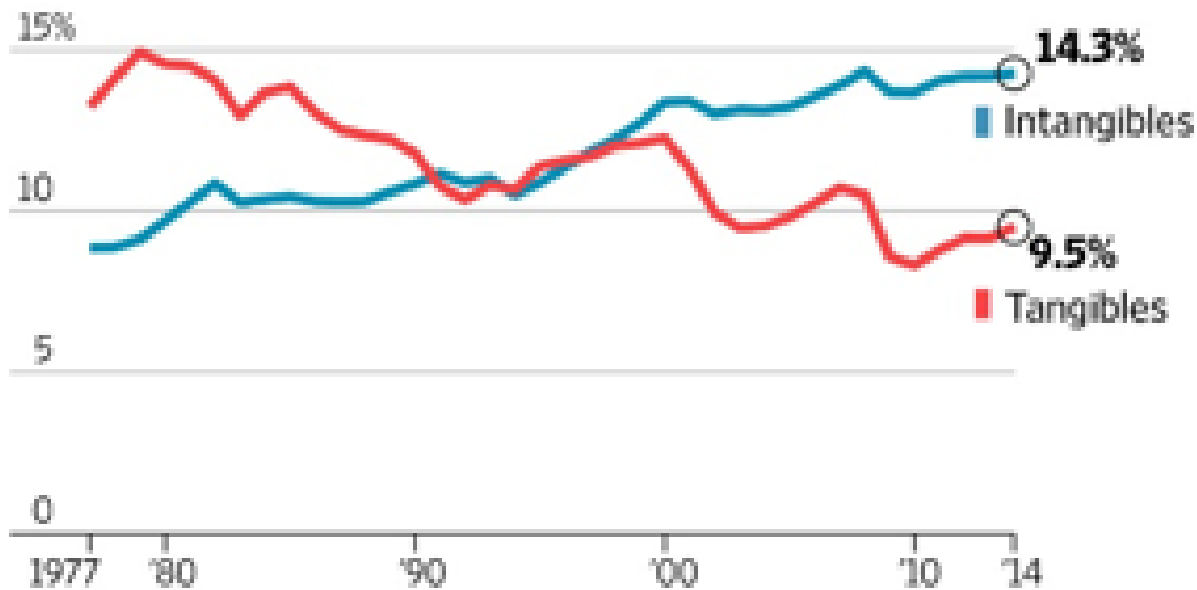
■ R&D expenses

■ InvestmentMainSG&A

Changes in operating investments over time

Intangible Investment

Investment rates in assets, as a percentage of private-sector GDP



Source: Carol Corrado and Charles Hulten

THE WALL STREET JOURNAL

FASB: Statement of Financial Accounting Concepts No. 1

- The **primary focus** of financial reporting is information about **earnings** and its components.
- Financial reporting is expected to **provide information** about an **enterprise's financial performance during a period** and about how **management of an enterprise has discharged its stewardship responsibility** to owners.
- Financial accounting is **not designed to measure directly the value** of a business enterprise, but the **information it provides may be helpful to those who wish to estimate its value.**

**Primacy
of
Income
Statement**

Decline in Matching

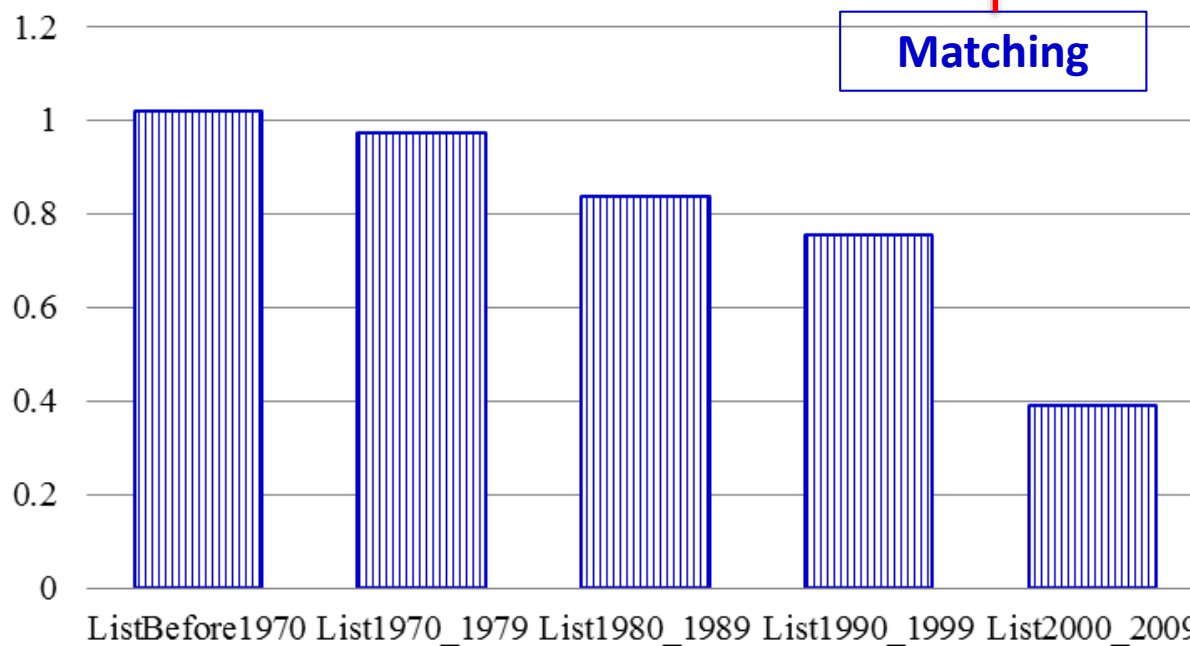


The extent to which expenses
are matched to revenues

Without **matching**, profit margin is
a meaningless concept

Decline in Matching

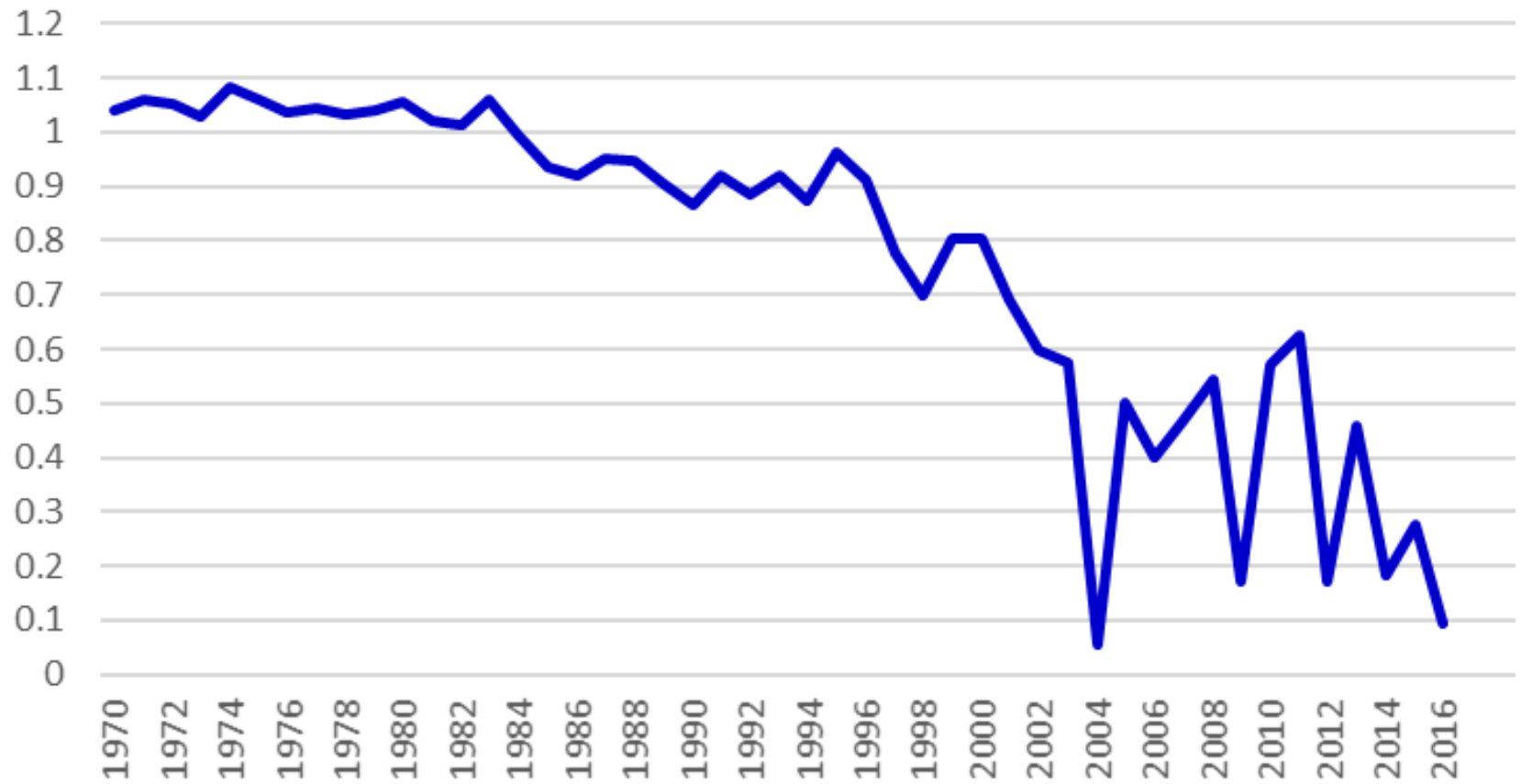
$$Revenues_{i,t} = \beta_1 + \beta_2 \times Expenses_{i,t-1} + \beta_3 \times Expenses_{i,t} + \beta_4 \times Expenses_{i,t+1} + \varepsilon_{i,t}$$



■ Current Revenue-Expense Relationship

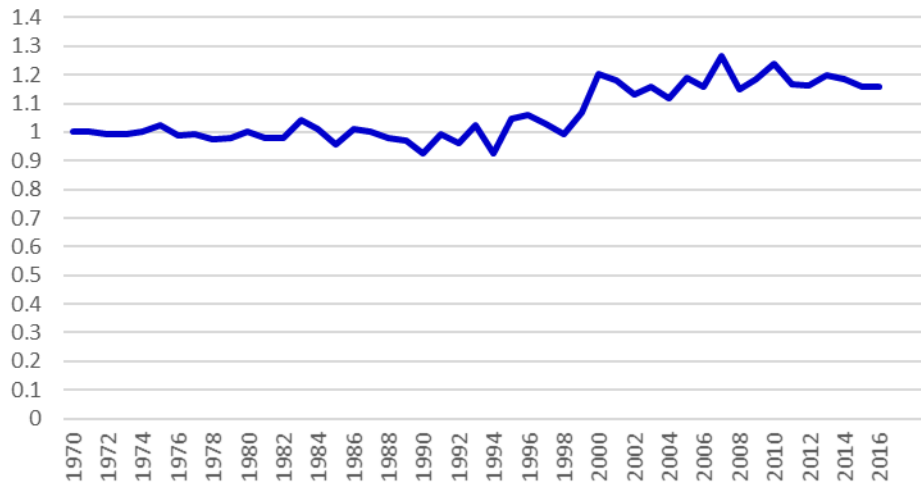
Srivastava (JAE 2014)

Current Matching





Matching of COGS

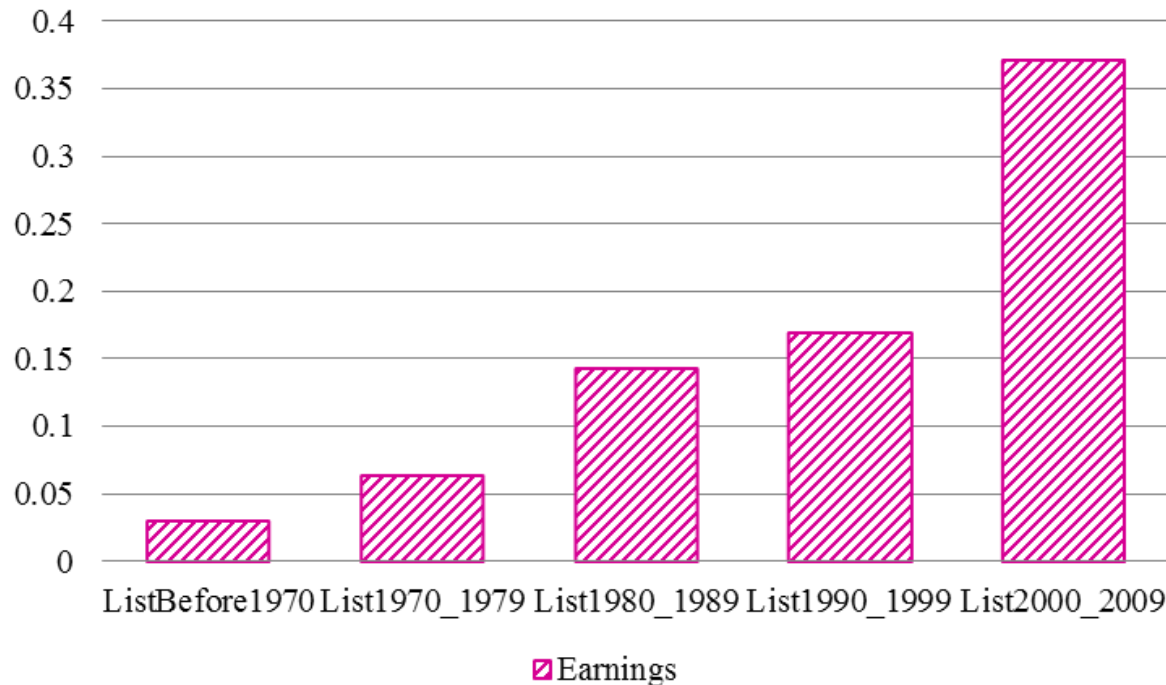


Matching of SG&A



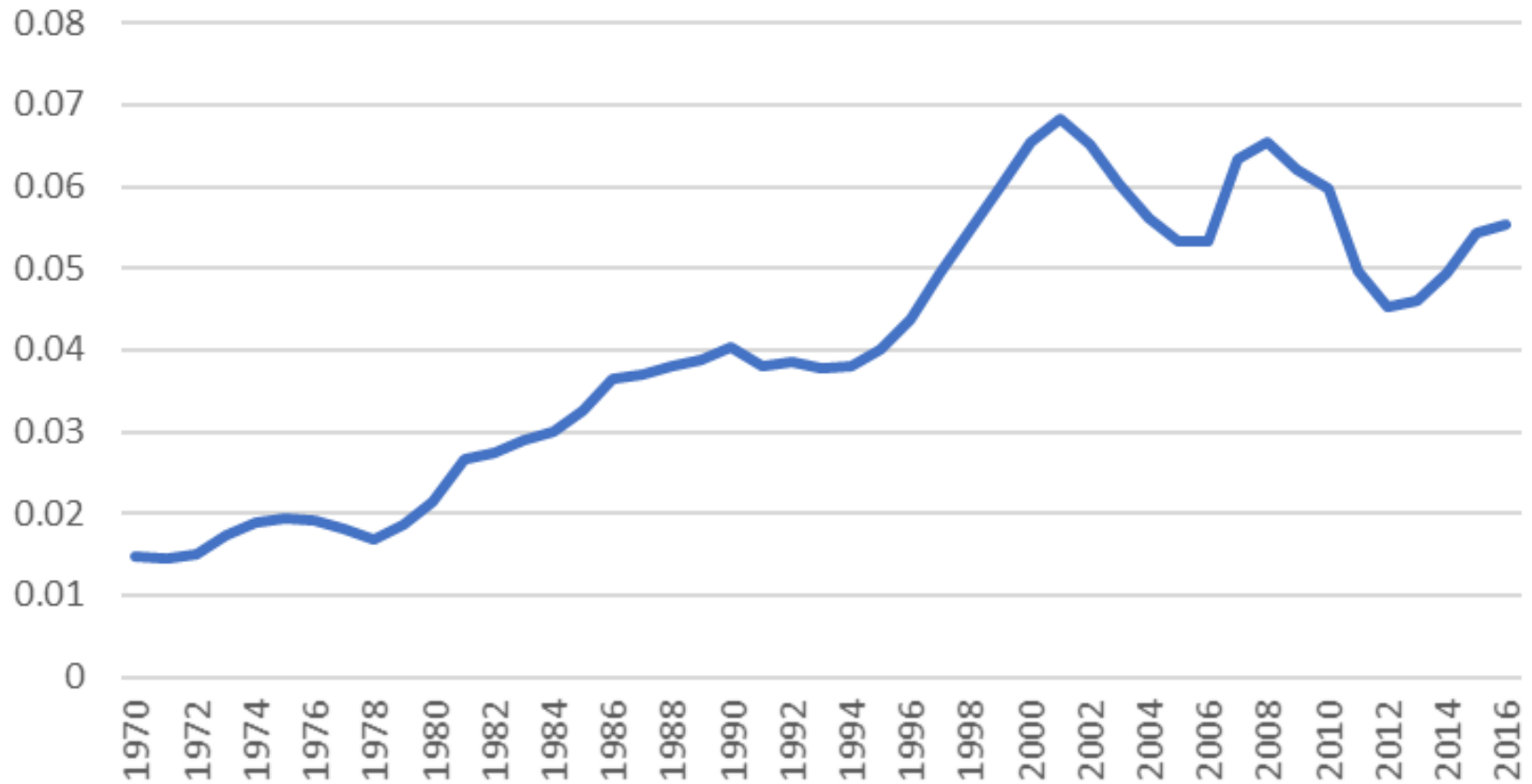
Increasing Earnings Volatility

(Rolling four-year stand dev on a firm-specific basis)



Srivastava (JAE 2014)

Median Volatility of Scaled Earnings



Decline in Relevance

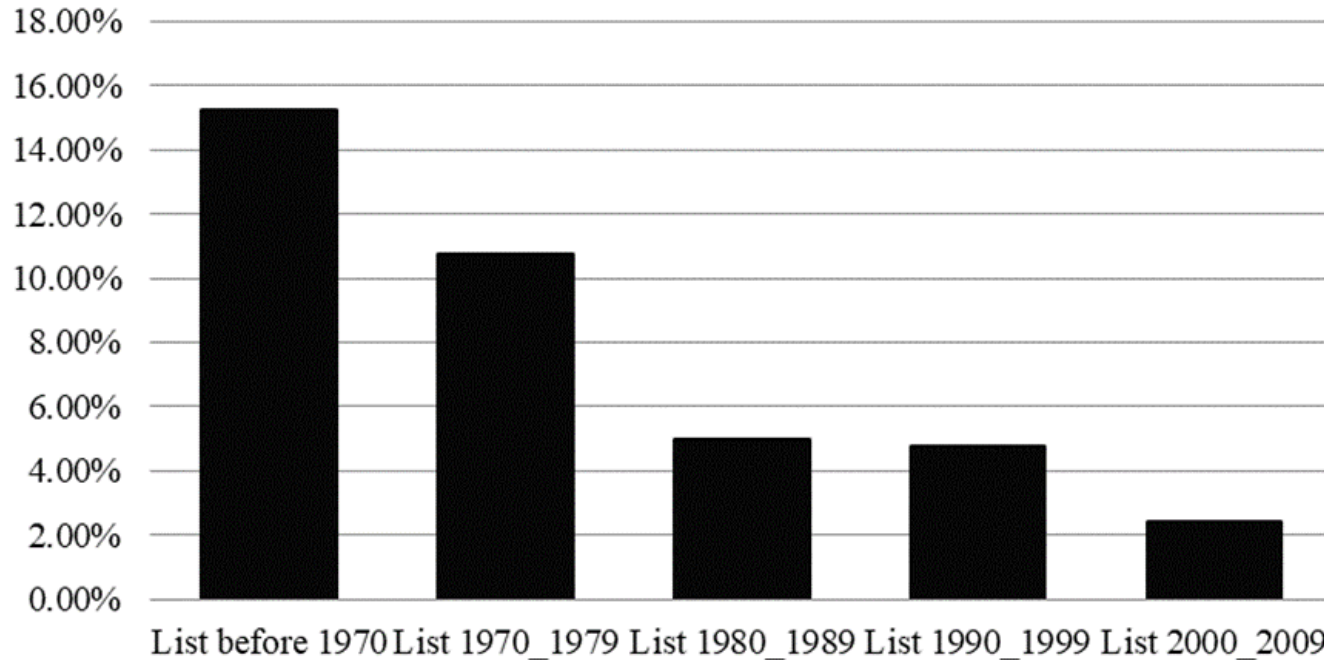
Earnings are useful for investors decisions.

The extent to which earnings carry the same information as that priced by stock markets

$$Ret_{i,t} = \beta_{1,t} + \beta_{2,t} \times \Delta Earnings_{i,t} + \beta_{3,t} \times Earnings_{i,t} + \varepsilon_{i,t}$$

Relevance: **R-square**

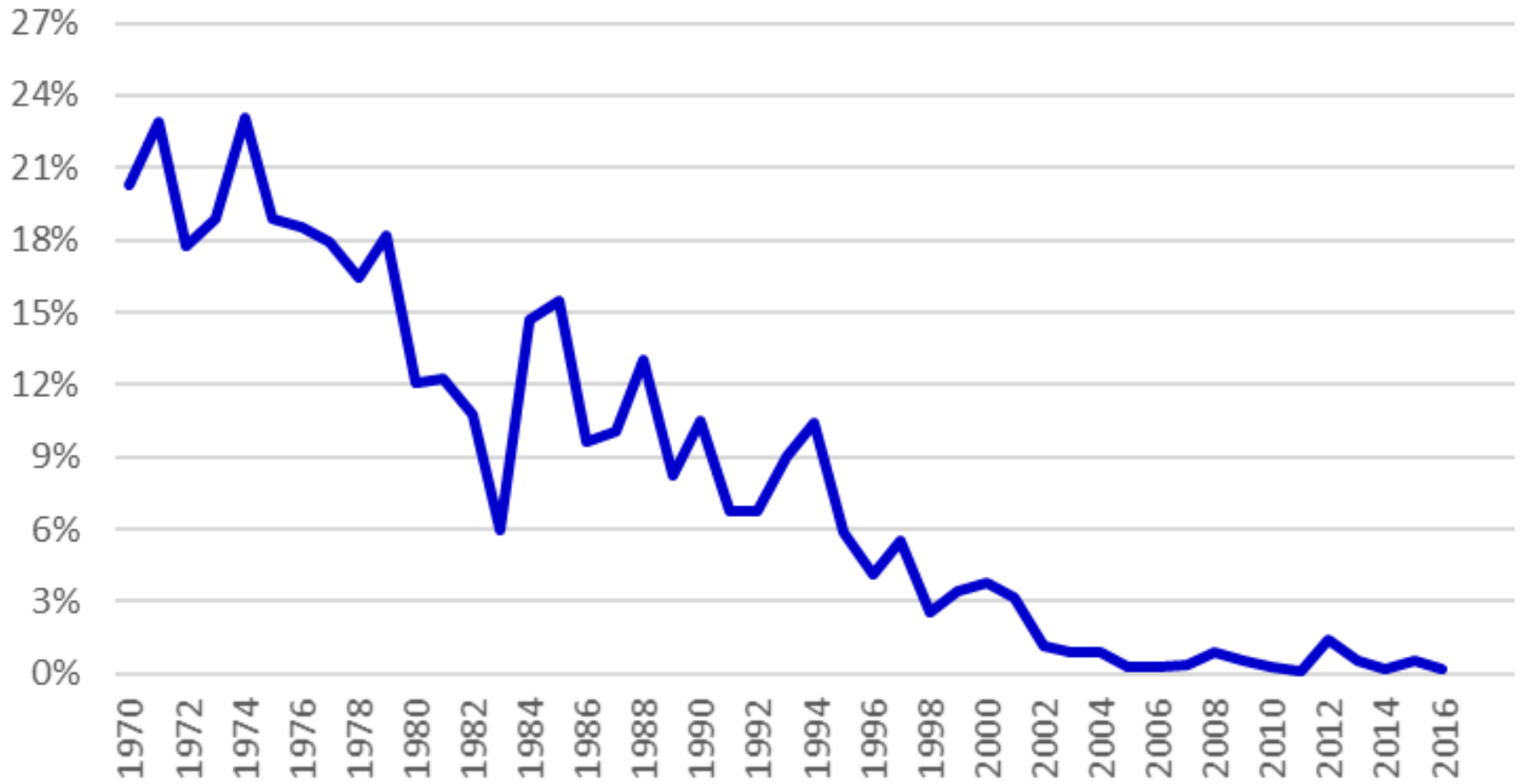
Decline in Relevance



Srivastava (JAE 2014)

Earnings explains only 2.4% of variation in stock returns for a 21st century company — which means that almost 98% of the variation in companies' annual stock returns are not explained by their annual earnings

Relevance





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A few HBRs

ACCOUNTING

Why Financial Statements Don't Work for Digital Companies

by Vijay Govindarajan, Shivaram Rajgopal, and Anup Srivastava

Harvard
Business
Review

FINANCIAL MANAGEMENT

Why We Need to Update Financial Reporting for the Digital Era

by Vijay Govindarajan, Shivaram Rajgopal, and Anup Srivastava

**A trilogy of articles
in 2018**

Harvard
Business
Review

FINANCE & ACCOUNTING

A Blueprint for Digital Companies' Financial Reporting

by Vijay Govindarajan, Shivaram Rajgopal, and Anup Srivastava



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Two points for
consideration

Today's companies with largest market capitalization

- **Apple Inc., Alphabet Inc, Microsoft Corporation, Amazon, Facebook Inc,**
- **Alibaba Group**

A) Supply side and demand side network effects exist,

- where both customers and suppliers get locked into the given company's product.

B) Increasing returns to scale,

- The value to a user or supplier increases with the size of the network.
- Firm's value increases with network.



- **Size by itself creates value**
- **Network effect—the biggest source of value for today's corporations**
- **Basic tenet of financial accounting**
 - **(assets depreciate with use).**

“Negative” depreciation?

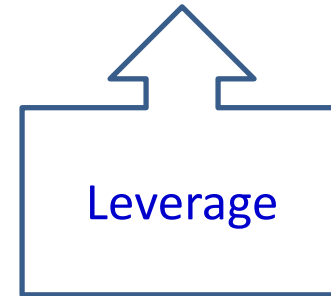
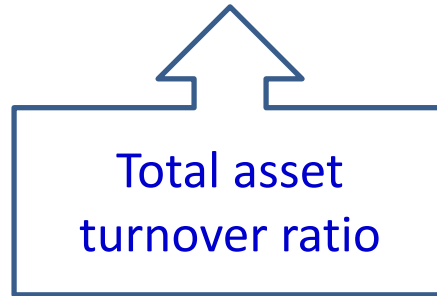
DuPont Analysis

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholder EQ}}$$

$$\frac{\text{Net Income}}{\text{Sales}} \times$$

$$\frac{\text{Sales}}{\text{Total Assets}} \times$$

$$\frac{\text{Total Assets}}{\text{Sh. Eq}}$$



Can anyone calculate any of the three ratios for Facebook?



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thank you 😊