

# Accounting As Measurement System – A Research Paradigm

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## Elements of a Measurement System

Users

User Decision Models

Objects to be measured

Relevant Attributes of Objects

Rules of Measurement

Creators of rules

Methods of recording and summarizing measurements

Measurers

Verifiers

Reports

## Some Research Questions

What do investors want to know about company performance?

What is the right entity to measure? (controlled group? Legal entity? Cost center?)

Do users understand the financial reports?

What types of cost or revenue data do managers find most useful?

How commonly do certain types of transactions occur?

What are the effects of different measurement rules on

- Investment or credit decisions?
- Employee or managerial motivation?

What rules would lead to the “best” decisions?

Can certain rules have better or worse effects on the whole economy? Did fair value accounting contribute to the 2008 fiscal problems?

What motivates fraud or “earnings management”?

How can fraud or errors be best detected?

What controls can best minimize errors and frauds?

Are particular measurement or disclosure rules useful?

What affects the performance of auditors?

Can financial statement information predict future performance?

Can financial statement data predict bankruptcy?

What types of systems can accumulate financial data most effectively?

Some of these questions are:

Descriptive  
Explanatory  
Predictive

## Some Typical Research Methods

### Statistical hypothesis tests using archival data

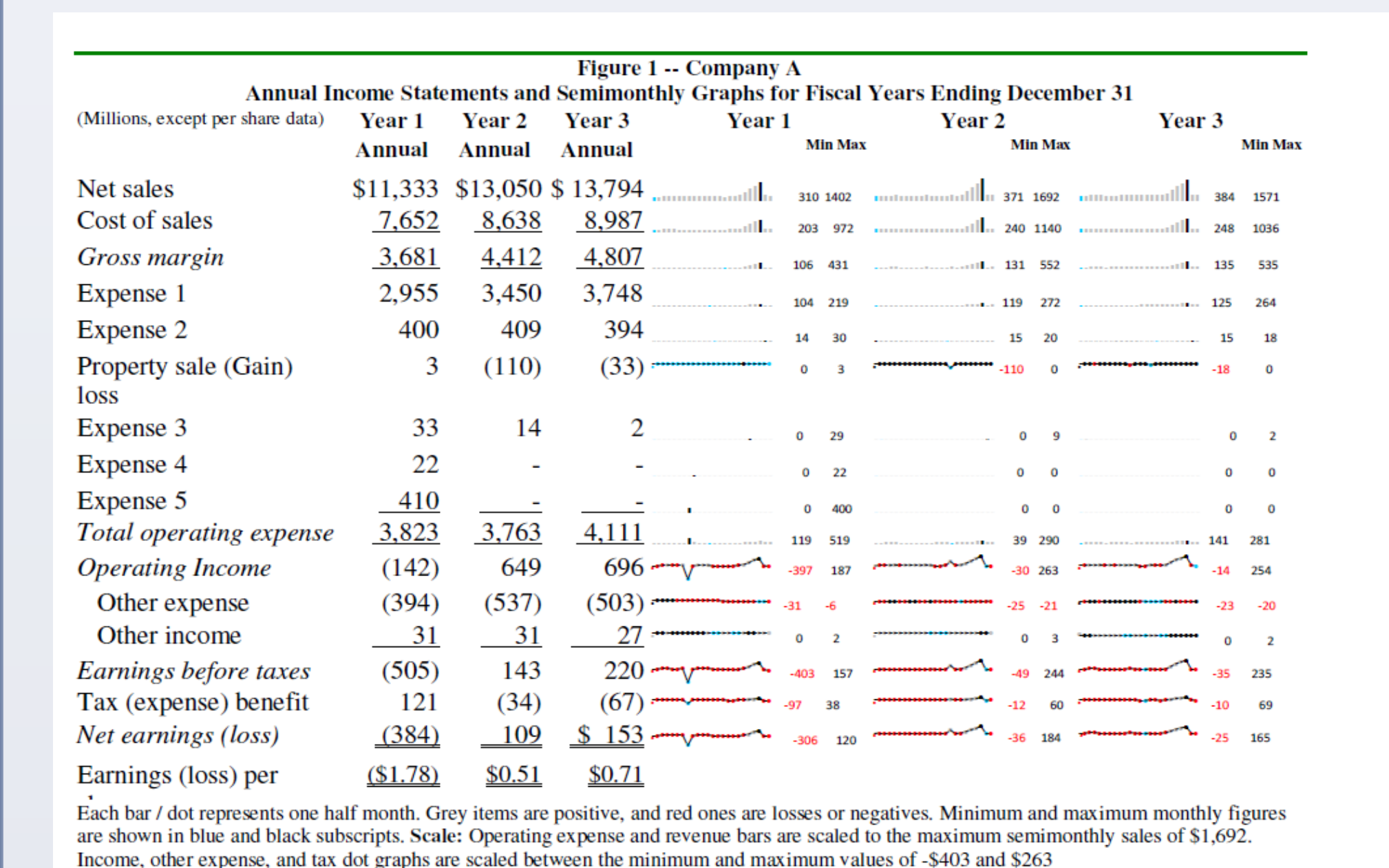
Ex. – Regression analysis of various disclosures against company stock returns, to test if markets react to certain data.

### Descriptive statistical reports using archival or survey data

Ex. – Graphs of numbers of companies reporting earnings just above, as opposed to just below, analyst forecasts, to look for earnings management.

### Laboratory experiments using human subjects

Ex. Tests to see if people understand tables better than graphs, or laboratory tests to see how large a difference people consider significant.



### Field experiments, using controlled situations

Ex. A nonprofit organization sent out different types of financial information along with fund raising appeals, and measured which type of data was associated with the highest donations.

### Case studies

Ex. Studies of particular companies with frauds, or of how particular companies manage and control their businesses.

### Theoretical analysis

Ex. Mathematical models of how firms should use cost data, or how managers react to different incentives.

### Historical studies

Ex. Studies of disclosures made in different time periods

### Comparisons of international differences

Ex. Comparisons of what income looks like under U.S. and International accounting standards

## Accounting Research Is Interdisciplinary

### Bankruptcy Law

Related to bankruptcy prediction models, as well as proper rules for valuing items in companies in financial distress.

### Communications Science

Related to the proper structure of reports, as well as what is the appropriate level of summarization of data.

### Computer Science / Information Systems

Affects the appropriate rules for summarizing and reporting information, studies of internal controls, and the best techniques that should be used by auditors.

### Economics

User models are typically based on economic theories. The value of auditing is based on theories of the economics of information.

### Education

How should accountants and auditors be trained? How can accounting data be best understood by users?

### Engineering

What factors affect the costs of products?

### Ethics

Which people have rights to information? Should rule makers consider social consequences of their rules?

### Finance

How is accounting information used in financial markets?

### Law

Law defines many of the things measured by accountants, such as what a “sale” is. Law also affects the behavior of managers and auditors. Law is often reliant upon accounting measures.

### Management Science

Various types of management and governance structure affect audit risk. What information is most useful to different management methods?

### Perceptual science / Psychology

What affects the ability of auditors to detect anomalies? What affects users’ ability to understand financial data?

### Process design

How do production processes affect cost behavior? How do control processes affect audit risk?

### Tax

How do tax laws affect behavior and financial reporting? What values and measures should the tax code use?

## My Own Nonprofit Research

### Do donors penalize nonprofits with “bad” cost ratios? YES

- (1998). Differences in Sensitivity of Financial Statement Users to Joint Cost Allocations: The Case of Nonprofit Organizations. *Journal of Accounting, Auditing, and Finance*

- (1999). Factors Affecting the Relation Between Donations to Not-For-Profit Organizations and an Efficiency Ratio. *Research in Government and Nonprofit Accounting*

- Tinkelman, D. & Mankaney, K. (Spring, 2007). When is administrative efficiency associated with charitable donations? *Nonprofit and Voluntary Sector Quarterly*.

### Should donors do this? PROBABLY NOT

- (2006). The Decision-Usefulness of Nonprofit Fundraising Ratios: Some Contrary Evidence. *Journal of Accounting, Auditing, and Finance*

- Donabedian, B. & Tinkelman, D. (September, 2007). Street Lamps, Alleys, Ratio Analysis and Nonprofit Organizations. *Nonprofit Management and Leadership*.

- Tinkelman, D. & Donabedian, B. (2009). Decomposing the Elements of Nonprofit Organizational Performance. *Research in Government and Nonprofit Accounting*.

### Do Board Characteristics Affect Performance? SOMETIMES

- Callen, J., Klein, A. , & Tinkelman, D. (2003). Board Composition, Committees, and Organizational Efficiency: The Case of Nonprofits. *Nonprofit and Voluntary Sector Quarterly*

- Callen, J., Klein, A. , & Tinkelman, D. (2010). The Contextual Impact of Nonprofit Board Composition and Structure on Organizational Performance: Agency and Resource Dependence Perspectives. *Voluntas*.

### Do Nonprofits Fudge to Make Numbers Better? SOMETIMES

- Bhattacharya, R. & Tinkelman, D. (2009). How Tough are Better Business Bureau / Wise Giving Alliance Financial Standards? *Nonprofit and Voluntary Sector Quarterly*

- Tinkelman, D. (2009). Unintended Consequences of Expense Ratio Guidelines: The Avon Breast Cancer Walks. *Journal of Accounting and Public Policy*.

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