THE END OF ACCOUNTING AND WHAT'S NEXT?

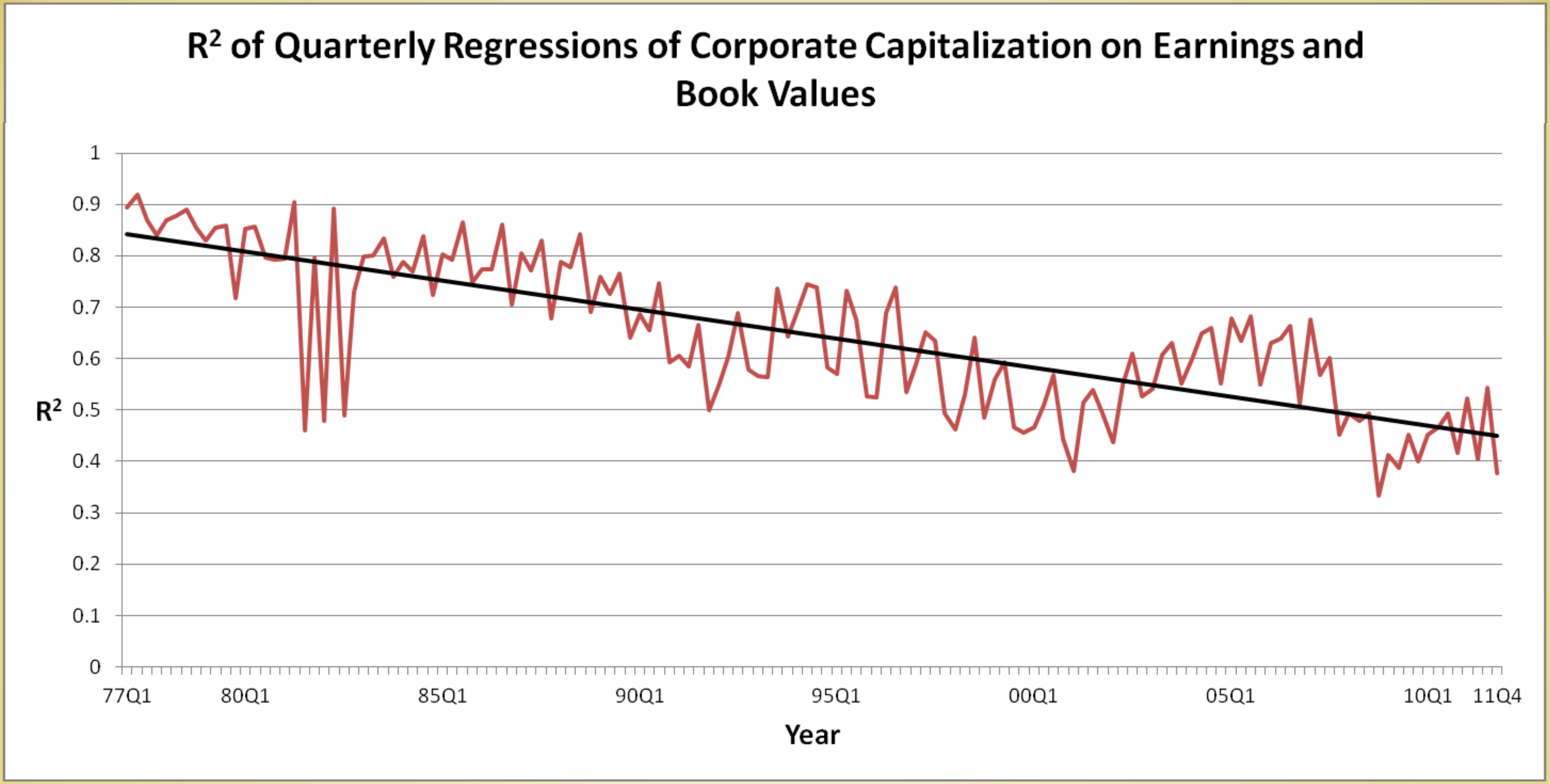
By
Baruch Lev, NYU
blev@stern.nyu.edu

July 2013

At a Glance

- The relevance of accounting (GAAP or IFRS) information is fast shrinking
- Reasons for the relevance lost
- What's to be done?
  - Increase reliability of accounting measurements
  - Disclose non-GAAP fundamentals

I. What's This Fast-Shrinking Thing?



Whereas in the 1970s and early 1980s, earnings and book values—the major accounting information items—accounted for 80-90% of differences in companies' values, today they account for less than 40%. A 50% fall from grace.

Source: Baruch Lev

A Different Methodology Leads to an Even Grimmer Conclusion

- Accounting researchers quantified statistically the **relative contribution** of the various information sources investors use to value securities:*
  - Three identified sources (specified below) contributed 28.4% of investors' aggregate information, whereas 71.6% of the information came from multiple, unidentified sources (media reports, government statistics, etc.).
  - The identified sources and their information contributions are:
    - Management forcasts/ guidance: 18.8%
    - Analysts' forecasts: 6.2%
    - GAAP earnings announcements and SEC filings: 3.4%

Only 3.4% of the total information investors use in their decisions comes from financial reports

Source: Beyer et al., 2010, "The financial reporting environment: Review of the recent literature, "*Journal of Accounting and Economics*. See also Ball and Shivakumar, 2008, "How much new information is there in earnings?" *Journal of Accounting Research*.

Corporate Earnings Were Useful as Operational Benchmark

- FASB official: “We lost the timing contest, but accounting information is useful as a benchmark for estimates and forecasts.”
- But, in recent years, even this benchmark has eroded: the stock uptick due to **meeting or beating** analysts’ consensus estimate by a penny disappeared.* Missing the consensus gets a small, mostly temporary stock price hit.

*Keung et al., 2010, “Does the stock market see a zero…,” *Journal of Accounting Research*, p.105- .

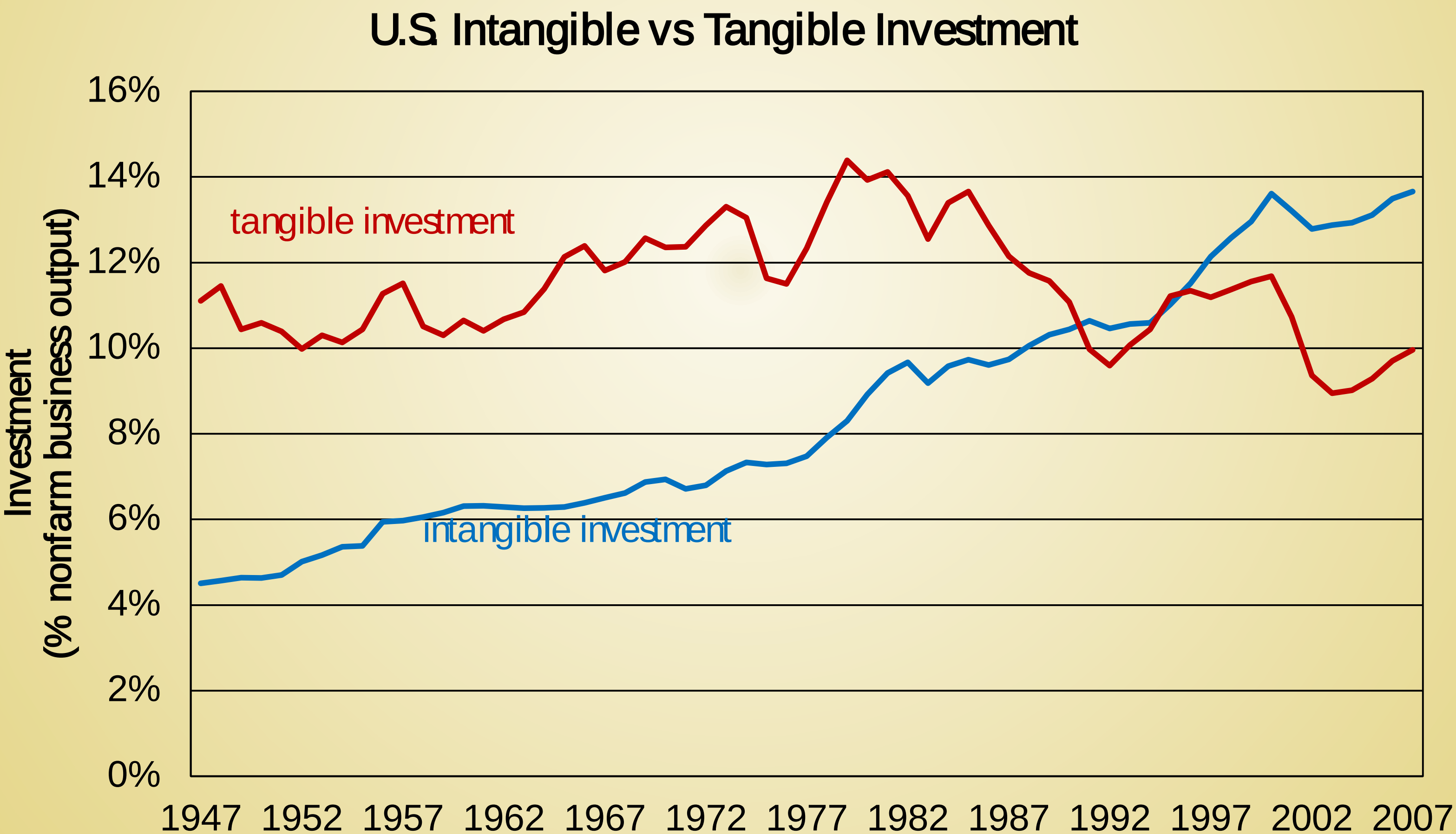
Paraphrasing Winston Churchill's Famous Declaration

It is not the end…

but it's close to it.

II. Three Reasons for the Information Collapse
A. The dominance of intangibles

- Look back at the first exhibit, and compare:



Source: Corrado and Hulten, "How do you measure technological revolution?" 2010

Accounting Stuck in the Industrial Age

Emphasis on:

- Fixed, tangible assets (depreciation, impairment),
- Inventory (FIFO-LIFO, LCM)
- Work-in-Process, raw materials—manufacturing
- Accounts receivable – bad debts, financial instruments
- Cash and securities
- Leases

All these resources are now "commodities"—
they don't create value.

A. Accounting Mistreatment of Intangibles

- The strategic (competitive advantage conferring) assets of companies now are: patents, brands, IT, customers, unique business processes (e.g. risk management). None of these assets is adequately treated in accounting.
  - All internally-generated intangibles are immediately expensed; they depress earnings and their value is missing from the balance sheet.
  - Acquired intangibles are capitalized, creating an inconsistency between internally-generated and acquired intangibles.
  - No disclosure or footnote information is provided on the patent portfolio, R&D breakdowns, brands benefits, IT investments or other attributes of intangibles.

Investors in the dark regarding the most important assets; consequently, values of intangibles-rich companies are depressed.

Not Just High Tech

Coca Cola's net assets (book value) at end of 2012 was $33B and its market value (capitalization) was $167B, yielding a market-to-book ratio of 5.06.

Where have all Coke's assets gone?

Profitability Distorted: Google's Real Profitability

	R&D Expense ($M)	2011 R&D Amortization	2010 R&D Amortization
2011	$5,162	—	—
2010	3,762	752	—
2009	2,843	569	569
2008	2,793	559	559
2007	2,120	424	424
2006	1,230	246	246
2005	600	—	120
	TOTAL	**$2,550**	**$1,918**
	R&D Capital	**$11,419**	**$8,806**

Google's Growth Misstated

Income	2011	2010	Growth
Reported income	\$9,737	\$8,505	14.5%
+ R&D expense	5,162	3,762	
– R&D amortization	2,550	1,918	
Adjusted income	12,349	10,349	19.3%

Conclusion:

Google's accounting information distorts reality.

B. Accounting Based on Estimates/Forecasts, Not Facts

- Most **balance sheet** and **income statement** items are based on managers' subjective **estimates** and **projections**. Examples:
  - Fixed assets—depreciation, impairment
  - Accounts receivable—bad debt reserve
  - Inventory—lower of cost or market
  - Nontraded financial assets—mark to model
  - Pension liability
  - Stock options expense
  - Warranty expense

"To know the past, one must know the future."
(Raymond Smullyan)

But Sales are Surely Facts…

“ We recognize revenue on agreements for sales of goods and services under power generation units; nuclear fuel assemblies; larger oil drilling equipment projects; military development products…using long-term construction and production contract accounting. We **estimate** total long-term contract revenue…We measure long-term contract revenues by applying our contract-specific **estimated** margin rates…We measure sales of our commercial aircraft engines by applying our contract-specific **estimated** margin rates…(GE, 2011 financial report).

The “only” thing GE doesn’t tell you: how much of its $107B revenues are based on estimates.

Two Problems with Managerial Estimates/Projections

- In a world of increased uncertainty and fast technological innovations, making projections is increasingly challenging and subject to larger and larger errors.
  - The pension expense requires projecting 5-7 years' investment returns.
  - Asset and goodwill impairments require projecting long-term asset cash flows.
- Estimates can be manipulated with impunity. Hard to prove intentional misestimates.
- Indeed, most reporting manipulations are done by "massaging" estimates.

Research shows a constant increase in the variability-uncertainty of earnings, and a decrease in earnings persistence. Cash flows predict future corporate performance better than earnings.

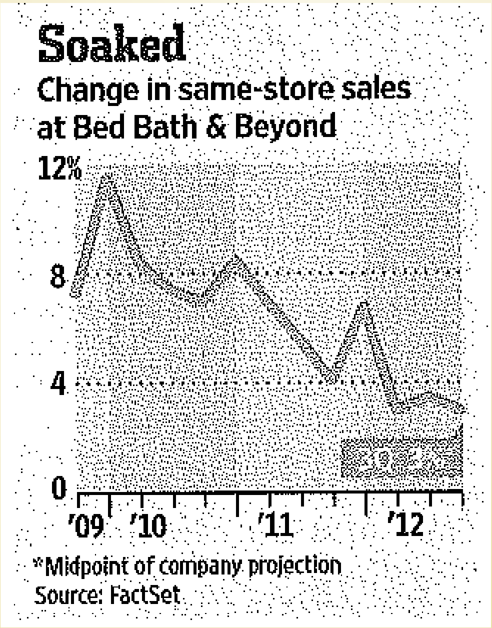
C. Both Transactions and Events Create Value, But Accounting Reflects Only the Former

- Value-changing events:
  - Merck announced 12/20/12 that its highly touted cholesterol drug Tredaptive failed tests to reduce heart disease risk. Stock fell 3.4%.
  - Union Bank of California cancelled early July 2011 a multi-million dollar with Infosys. Infosys stock fell 6.5%.

Summarizing, serious accounting deficiencies—mistreatment of intangibles, heavy reliance on estimates/projections, and bypassing important business events, create an urgent need for changes in information disclosure.

It's All in the Fundamentals
Bed Bath & Beyond

- Revenues up 22% last two quarters (11/23/12);
  Earnings up 13% these quarters.
- But the stock price is down 25% from mid-2012, and the P/E ratio lags competitors Pier 1 and Williams-Sonoma. What gives?
- Look at the non-GAAP "same-store sales."



III. So, What's to be Done?

Given the deterioration in the informativeness of financial reports, complementary communications channels should be enhanced:

- Increase accounting reliability
- Disclose non-GAAP information

A. Decrease the Adverse Impact of Unreliable Estimates

- Shift particularly unreliable estimates to an equity section (like comprehensive income):
  - Level 3 fair value gains/losses
  - Stock option expense
  - Goodwill impairment
- Enhance managers' incentives to provide reliable and unbiased estimates:
  - Require managers to explain annually the reasons for the differences between estimates and realizations of the 5-10 most influential estimates.
    - Insurance companies' changes in estimates (done now)
    - Banks' bad debt reserve
    - Expected gains on pension assets

B. Back to Fundamentals: What is Corporate Strategy?

- Corporate strategy is about **decisions** (innovation, products/ services, marketing, production) and **execution** (supply channels, sales, earnings, cash flows).
- Accounting provides certain information about decision **consequences** (sales, earnings), no information about **critical events** (customer growth, market penetration, product development), and no information linking decisions to consequences (M&A)

No information about the **business model**

Netflix's (Movie Rental) Business Model Information

Period	Acquisition cost per customer	Net subscriber increase	Monthly churn	Revenue from new subscribers	Customer lifetime value*
Third quarter 2011	$15.25	(288,000)	6.3%	-----	
First quarter 2008	$29.50	764,000	3.9%	$32.3 million (9.9%)	$730 million
Fourth quarter 2007	$34.60	451,000	4.1%	$19.2 million (6.3%)	$683 million
First quarter 2007	$47.46	481,000	4.4%	$22.9 million (7.5%)	$696 million

*Bonacchi, et al., "The analysis and valuation of subscription-based enterprises," 2013.

A General Value Creation Template

- **Innovative companies**

R&D breakdowns and acquired technology → Patent attributes , trademarks, product pipeline → Innovation revenues, cost savings

- **Brands-intensive companies**

Investment in brand-creation and enhancement → Trademarks, repeat customers, customer life-time value → Brand revenues, market share

- **Connected companies**

Investment in alliances and joint ventures → Consequent patents, trademarks, new products → Related revenues and cost savings

Concluding Remarks

- The fast deterioration in the relevance of accounting information should be of serious concern to managers, investors, accountants and policymakers.
  - Managerial decisions based on this information (e.g., close "unprofitable" divisions) are often misguided.
  - Investors' decisions based on accounting information (e.g., use earnings to predict future performance) are suboptimal.
  - Policymakers should be concerned with the integrity of the information reported by managers to owners.