



The **FATAL FLAW** in SFAS No. **157**

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The title of this article borrows from a step near the end of the process that results in a new Standard being released by the Financial Accounting Standards Board (FASB). After an Exposure Draft (ED) has generated comment letters and FASB decides what, if anything, to change in the ED, there is a “fatal flaw review.” This review isn’t aimed at more tweaking and minor word changes but at determining whether the pending Standard has any debilitating (i.e., fatal) flaws in it. If not, the Standard goes forward.

Unfortunately, the review process preceding the release of Statement of Financial Accounting Standards (SFAS) No. 157, “Fair Value Measurements,” overlooked a fatal flaw in the edict: 157’s linchpin—that market participants have a consensus about the value of assets, including long-lived and intangible ones—isn’t supported by nine articles published in top-tier journals. The research concludes that companies within industries tend to be more heterogeneous than the industries themselves.

This article summarizes the data on rates of return (ROR), summarizes the relevant research, reintroduces a concept vital to understanding competition in market segments, discusses the vital notion of switching costs and their impact on asset prices derived from an “exit value” perspective, and discusses why a company’s most important assets are nowhere to be found on its balance sheet. It ends with a call for a modification to SFAS No. 157 that will make fair value easier, more objective, more transparent, less susceptible to moral hazard, and less expensive for all involved.

The view taken here is that if SFAS No. 157 is implemented in its current form, nonfinancial businesses will be careening down the fair-value rails en route to a train wreck of epic proportions. CEOs, CFOs, controllers, and boards of directors had better fasten their seatbelts.

WHAT ARE “MARKET PARTICIPANTS”?

This ill-conceived phrase emerged in 2001 with the release of SFAS No. 141, “Business Combinations.” In essence, the market-participants’ perspective requires that asset values be determined by exit value, not entry value. Worse, FASB inferred that a consensus existed among market participants by defining them as follows:

10. Market participants are buyers and sellers in the principal (or most advantageous) market for the asset or liability that are:

a. Independent of the reporting entity; that is, they are not related parties

b. Knowledgeable, having a reasonable understanding about the asset or liability and the transaction[,] based on all available information, including information that might be obtained through due diligence efforts that are usual and customary

c. Able to transact for the asset or liability

d. Willing to transact for the asset or liability; that is, they are motivated, but not forced or otherwise compelled to do so.

11. The fair value of the asset or liability shall be determined based on the assumptions that market

participants would use in pricing the asset or liability. In developing those assumptions, the reporting entity need not identify specific market participants. Rather, the reporting entity should identify characteristics that distinguish market participants generally, considering factors specific to (a) the asset or liability, (b) the principal (or most advantageous) market for the asset or liability, and (c) market participants with whom the reporting entity would transact in that market.

The phrase “the assumptions that market participants would use in pricing the asset or liability” means there is a consensus among these “participants” about an asset’s ROR and, thereby, its price. That works for current assets and current liabilities, at least in most contexts. But this law-of-one-price train leaves the tracks when longer-term nonfinancial assets come into play.

RATES OF RETURN

We who value private equity appraise securities for which there is seldom an active market, just as there is almost no active market for most intangible assets; employee stock ownership plans are the primary exception. In the absence of such markets, estimating a cost of capital is challenging, so we turn to data archives from Morningstar, which dates to 1926, and from Duff & Phelps, which goes back to 1963. Both datasets separate publicly held companies into cohorts according to the size of an enterprise. Morningstar measures size solely by market capitalization of equity; Duff & Phelps adds seven other measures. Besides these differences, the Morningstar archive has 10 size cohorts, and Duff & Phelps has 25.

Nonetheless, both archives reach the same conclusion: Most small companies are far riskier than their mega-firm counterparts. RORs for smaller firms are much higher than for big ones. ROR measures risk, so higher ones mean greater risk. Higher risk is also reflected in the betas of smaller firms vs. huge ones.

It should make intuitive sense that the weighted average cost of capital (WACC) of a company’s sources of capital will at least equal the weighted average rates of return on individual assets. In other words, assets’ ROR should at least equal the cost of financing those assets (WACC). The further we go down *both sides* of the balance sheet, the riskier the assets and liabilities become. For instance, banks lend less against inventories than against accounts receivable and less still against fixed assets than against inventories. Only now are lenders beginning to make loans against intangible assets.

According to anecdotal data we gathered from a consultancy that helps companies raise debt by using their intangible assets as collateral, lending rates on intangibles are notably higher than on tangible fixed assets, and with good reason: They're riskier. They're harder to hypothecate, harder to resell, and harder to value. Each increases risk, which increases the rate of return that investors require in order to take that risk.

The same is true on the other side of the balance sheet. In the absence of an inverted yield curve, later-maturing debt costs more than short-term debt. Even so, long-term debt usually has a notably lower interest rate than the expected rate of return on the bottommost funding source, equity capital. So, long-lived intangibles on the left side and common equity on the right are the bottommost *and* the riskiest classifications on the balance sheet.

What does this have to do with fair value and SFAS No. 157? A lot, as it turns out. Let's look at the research.

HETEROGENEITY VS. HOMOGENEITY IN ECONOMICS

Despite its good intentions, FASB seems unaware of a stream of relevant research. Worse, in late October 2007, Ed Trott, who had stepped down in mid-2007 as a member of FASB, addressed the annual business valuation conference of the American Society of Appraisers. He admonished appraisers to quit fighting fair value and, I quote, "Just get over it."

Before we examine data that implores us *not* to "just get over it," let's explore ideas from disciplines outside accounting. The neoclassical economic model to which most of us were subjected in college and which most of us, at least at a gut level, immediately found wanting, has some other-world assumptions underpinning it:

- ◆ An economy of free markets is in equilibrium;
- ◆ Because it's in equilibrium, it can be examined using static analysis and differential calculus;
- ◆ Equilibrium means that the disruptive actions of entrepreneurs don't matter;
- ◆ Innovation doesn't matter;
- ◆ There are no barriers to entry;
- ◆ There are no taxes or transaction costs;
- ◆ The actions of one company don't affect the actions or profits of any other company;
- ◆ Within an industry, products are all alike and undifferentiated;

- ◆ Consumers have perfect and complete information; and
- ◆ Consumers always make rational choices.

Huh? My aim here isn't to take on the neoclassical paradigm, but these assumptions do carry implications. One is that because competitors within an industry sell commoditized products, price is all that matters. Therefore, successful companies must minimize cost.

Another is that everyone—companies as well as consumers—sees the same homogeneous economic world, just like FASB's "market participants." Theory from Austrian economics, evolutionary economics, and strategic management paints a different view.

Austrian Economics

A linchpin of this perspective is that entrepreneurs matter. They create disequilibrium and try to profit from it through the innovation that the neoclassical model ignores, even though innovation is a major driver of real increases in per-capita income. Where the neoclassical view sees efficient markets, Austrians see inefficient ones, inefficiency being the natural state of affairs in markets occupied by noncolluding individuals taking "purposeful human action" in their own self-interest. Where the neoclassicists see an economy that is static and can be analyzed with higher-order mathematics, Austrians see a "catallaxy" where math isn't helpful because that same purposeful human action doesn't lend itself to easy (or timely) quantification. In short, Austrians are about heterogeneity, not homogeneity.

Austrians make another contribution to the debate over consensus among market participants: Value is subjective. Different people perceive value differently. That goes in spades for different companies with different strategies, different routines, and different views of how things work, even within the same industry.

Evolutionary Economics

This subdiscipline came to the fore in 1982 with *An Evolutionary Theory of Economic Change* by Richard R. Nelson and Sidney G. Winter. Its thesis is that economic change occurs continuously because an underlying evolutionary process is at work. Similar to biology, economic mechanisms produce variation, orchestrate selection, and, through what Nelson and Winter call "routines," facilitate replication. Markets provide selection. Firms emit variation as their routines, products, and services are matched

Table 1: Empirical Research—Industry/Strategic-Group + Corporate/Firm Effects, 1991–2007

Date	Citation ¹ (pub/vol/pp)	Title of Paper (Author[s])	C o h o r t	Sources of Variation in Rates of Return (ROR) ²									
				Domain (DOM)					Company (CO)				
				IND	SG	Year	IND x Year	Total	Corporate	Firm	Firm x Year	Total	
1991	SMJ, 12, 167-185.	How Much Does Industry Matter? (Rumelt)	A	8.3%	NI	0.0%	7.8%	16.1%	0.8%	46.4%	36.7%	83.9%	
			B	4.0%	NI	0.0%	NI	4.0%	1.6%	44.2%	NI	45.8%	
1996	SMJ, 17, 653-664.	Markets vs. Management: What Drives Profitability? (Roquebert, et al.)		10.1%	NI	0.4%	2.3%	12.8%	17.9%	37.1%	NI	55.0%	
1997	SMJ, 18 (Summer Spec. Issue), 15-30.	How Much Does Industry Matter, Really? (McGahan & Porter)		8.1%	NI	NI	NI	8.1%	10.5%	35.0%	NI	45.5%	
				18.7%	NI	NI	NI	18.7%	4.3%	31.7%	NI	36.0%	
1999	JIE, 47, 373-398.	The Performance of U.S. Corporations: 1981-1994 (McGahan)		27.9%	NI	NI	NI	27.9%	-0.1%	37.1%	NI	37.0%	
				10.7%	NI	NI	NI	10.7%	-0.2%	23.7%	NI	23.5%	
				14.0%	NI	NI	NI	14.0%	-0.2%	27.0%	NI	26.8%	
2000	SMJ, 21, 739-752.	Corporate and Industry Effects on Business Unit Competitive Position (Chang & Singh)	A	19.4%	NI	0.9%	0.9%	21.2%	4.3%	52.7%	NI	57.0%	
			B	25.4%	NI	0.3%	1.8%	27.5%	8.5%	46.8%	NI	55.3%	
2002	MS, 48, 834-851.	What Do We Know About Variance in Acct'g Prof.? (McGahan & Porter)	Hi	16.3%	NI	1.1%	NI	17.4%	23.7%	59.1%	NI	82.8%	
			Lo	6.9%	NI	0.2%	NI	7.1%	8.8%	32.5%	NI	41.3%	
2003	SMJ, 24, 1-16.	Is Performance Driven by Industry- or Firm-Specific Factors? (Hawawini, et al.)		6.5%	NI	1.9%	4.2%	12.6%	NI	27.1%	NI	27.1%	
				11.4%	NI	1.3%	2.9%	15.6%	NI	32.5%	NI	32.5%	
				8.1%	NI	1.0%	3.1%	12.2%	NI	35.8%	NI	35.8%	
2003	SO, 1, 79-108.	The Emergence and Sustainability of Abnormal Profits (McGahan & Porter)		29.6%	NI	1.7%	NI	31.3%	30.0%	38.7%	NI	68.7%	
				22.5%	NI	0.4%	NI	22.9%	22.8%	54.3%	NI	77.1%	
2007	SMJ, 28, 147-167.	Firm, Strategic Group, and Industry Influences on Performance (Short, et al.)		14.7%	6.4%	NI	NI	21.0%	NI	79.0%	NI	79.0%	
				19.2%	15.0%	NI	NI	34.2%	NI	65.8%	NI	65.8%	
1_ JIE = Journal of Industrial Economics MS = Management Science SMJ = Strategic Management Journal SO = Strategic Organization				standard deviation					DOM 17.7%	← MEANS →		CO 51.4%	
									8.3%			20.0%	
2 -average R ² if in a narrow range; presented separately if range isn't narrow									Mean R ² of Company effects		51.4%	© 2008	
									Mean R ² of Domain effects		17.7%	BECKMILL HISE	
NI = Not Included in research									Company R ² ÷ Domain R ² =		2.9	www.beckmill.com	

against market forces. Some fail, but those that survive do so by replicating their routines; those get passed on through imitation and inheritance. Yet, to survive, firms must change and evolve.

Anyone who questions economic evolution need only look at the changes in the *Fortune* 50 firms in the last half-century. In fact, if we go back to 1907 and list the 51 biggest companies then, we will find fewer than a half-dozen of them still around today. No wonder Schumpeter called capitalism a system of creative destruction.

Strategic Management

In 1984, Birger Wernerfelt published a seminal article called “A Resource-Based View of the Firm” in *Strategic Management Journal*. This perspective, which is now called the RBV, holds that firms have unique resource endowments, that those endowments are nonportable, and that the job of top management is to bundle them into capabilities that routines can replicate and for which customers are willing to pay. Implicit in the RBV is that competitors are heterogeneous. The sources of competi-

tive advantage are nearly infinite.

Alignment within a company, however, must exist for advantage to be realized. A firm enjoys an advantage of unknown duration when a capability is valuable (customers pay up for it), rare (other firms don't have it), imperfectly imitable (competitors can't perfectly replicate it), and consistent with organizational incentives and mission.

The poster child for capabilities passing the first three tests but failing the fourth miserably was the Palo Alto Research Center inside Xerox Corporation. PARC invented the graphical user interface, distributed computing, the computer “mouse,” and the laser printer. For years, Xerox watched others capitalize on its innovations.

PUBLISHED RESEARCH

In 1985, Richard Schmalensee published “Do Markets Matter Much?” in the *American Economic Review*. Examining a single year (1975) of line-of-business data from the Federal Trade Commission, he concluded that market-share effects had a negligible impact on compa-

nies' ROR, that industry effects accounted for about 20% of the variance in companies' ROR, and that industry effects accounted for 75% of the variance in industry returns. Thus, he concluded: "the finding that industry effects are important supports the classical focus on industry-level analysis as against the revisionist tendency to downplay industry differences."

That "revisionist tendency," of course, was the RBV. Note, too, that Schmalensee is a renowned scholar in industrial organization (IO), a subdiscipline of economics. So is strategy guru Michael Porter.

In 1991, UCLA scholar Dick Rumelt published a stinging rejoinder to Schmalensee, "How Much Does Industry Matter?" He expanded Schmalensee's dataset from one year to three and reached very different results. A stream of articles published since then has reached conclusions similar to Rumelt's. Long story short: The research finds more within-industry heterogeneity and less homogeneity.

Each of these articles measures variation in ROR. They use different datasets, different time frames, and different statistical methodologies but reach similar conclusions. Most analytical methods have their roots in analysis of variance (ANOVA); multiple regression is a primary ANOVA method. ANOVA uses a dependent variable (rate of return) and several independent variables (both domain- and company-related) to infer how changes in the dependent variable are affected by changes in the independent ones. The greater the changes in the dependent variable as a result of changes in an independent one, the greater is the percentage of variance accounted for by that independent variable. A higher percentage means that variable has greater predictive power.

In Table 1, the 2.9 figure in the green box at the bottom tells us that, overall, variation in ROR caused by company-level factors (CO) is 2.9 times the variation in ROR arising from industry-level factors (DOM). In other words, variation in companies' rate of return is greater from *intraindustry* sources than it is from *interindustry* differences. Therefore, the dominant characteristic of markets is heterogeneity, not homogeneity.

The implications of this research for estimating fair value of long-lived tangible and, especially, intangible assets are:

- ◆ Competitors' different views and different performance suggest major disparities among them over how, and even which, long-lived assets should be deployed.
- ◆ Those disparities point up significant differences in companies' assumptions about the rates of return on those assets.

- ◆ Different ROR means divergent views among competitors about prices of long-lived assets in general and about the price "market participants" would pay for a given long-lived asset in particular.

- ◆ Therefore, the pricing consensus implied by FASB's construct of "market participants" doesn't stand up. It is refuted by research published in top-tier journals by different scholars using different methods, different datasets, and different time frames. Consensus is found in the literature, not among market participants.

STRATEGIC GROUPS

FASB did concede that there could be differences among groups of buyers, "strategic and/or financial." Note this excerpt from footnote 13 in Appendix A of SFAS No. 157:

While market participant buyers might be broadly classified as strategic and/or financial buyers, there often will be differences among the market participant buyers within each of those groups, reflecting, for example, different uses for an asset and different operating strategies.

In fact, this obscure footnote puts up in lights the sad fact of FASB's limited grasp of competitive heterogeneity. In most industries, there are not just two groups of buyers. There are many more.

Within strategic management is a construct for subsets of competitors within industries: *strategic groups*. These "mini-industries" are discrete cadres of rivals that compete along shared dimensions. In the global automobile industry, for instance, there are at least seven such groups along two continuums—product range (narrow and broad) and geographic market (worldwide and national):

- ◆ **Luxury:** e.g., Rolls-Royce, BMW, Jaguar
- ◆ **High-performance:** e.g., Maserati, Porsche, Lotus
- ◆ **Global broad-line:** e.g., Toyota, Ford, GM, Honda
- ◆ **Global narrow-line:** e.g., Saab, Suzuki, Subaru
- ◆ **National-specialist:** e.g., Morgan, Bristol, Classic Roadsters
- ◆ **National-intermediate line:** e.g., SAIC (China), Hindustan
- ◆ **Regional broad-line:** e.g., Fiat

Product range and geographic market aren't the only shared dimensions that can define strategic groups in the auto industry. Groups can also be constructed from specific models across makers' lines: luxury SUVs, mid-priced SUVs, low-priced SUVs, crossovers, etc.

A 1977 article by Dick Caves and Michael Porter enriched the concept further by introducing "mobility barriers," the strategic-group equivalent of entry barriers

to a full industry. Mobility barriers define and separate the groups within an industry. In his 1980 seminal book, Porter offered a lengthy discussion of strategic groups.

SWITCHING COSTS

The existence of strategic groups means that not all players in an industry see the world the same way, which raises the question of switching costs. Does the value perspective of market participants include the cost of switching and rearranging a firm's operations to use an intangible asset of another company? If so, isn't the price from market participants likely to be understated (due to higher ROR) when compared to its use in its current capacity? Would underpricing based on exit value lead to asset write-downs on a significant scale?

A FIRM'S MOST VALUABLE ASSETS. . .

. . . are not on its balance sheet. Where, for instance, is teamwork? Knowledge? Experience? Routines? "Dynamic Capabilities and Strategic Management" by David Teece, Gary Pisano, and Amy Sheun, a seminal article from the strategic management literature that appeared in *Strategic Management Journal*, puts this into the proper perspective:

[T]he properties of internal organization cannot be replicated by a portfolio of business units amalgamated just through formal contracts as many distinctive elements of internal organization simply cannot be replicated in the market. That is, entrepreneurial activity cannot lead to the immediate replication of unique organizational skills through simply entering a market and piecing the parts together overnight. Replication takes time, and the replication of best practice may be illusive. Indeed, firm capabilities need to be understood not in terms of balance sheet items, but mainly in terms of the organizational structures and managerial processes which support productive activity. By construction, the firm's balance sheet contains items that can be valued, at least at original market prices (cost). It is necessarily the case, therefore, that the balance sheet is a poor shadow of a firm's distinctive competences. That which is distinctive cannot be bought and sold short of buying the firm itself, or one or more of its subunits.

This insight is lost on some of fair value's rabid adherents. During a conversation with an accounting professional who works for a membership organization of stellar repute, I asked if she thought a public company's balance sheet should mirror that company's market cap as of the date of the balance sheet. She said that it should.

I responded by asking her how the "residual," goodwill, was going to get on the balance sheet in the absence of an acquisition. She was silent. I then asked if she had ever valued any intangible assets or performed a purchase price allocation under SFAS No. 141. Stony silence.

WHY WE ARE WHERE WE ARE

FASB set out to try to prevent a recurrence of Enron, where billions of dollars in derivatives were valued by the same people who created them and who then benefited directly from the valuations. But in blocking a rerun, FASB embraced the dubious notion of exit value. That greases the skids for increased earnings volatility, more widespread earnings management, and self-determined bonuses on a grand scale.

FASB's misguided view threatens to impose major costs on registrants without offsetting value to investors, even as those in my line of work reap an unnecessary and superfluous financial bonanza. So long as there is disclosure in the footnotes to financial statements, why must mark-to-model fair value be the basis for revaluing long-lived tangible and intangible assets on balance sheets with gains and losses then carried to income statements?

Even if there were a consensus among market participants about the price of a particular long-lived asset, *how* could anyone find out what that price is? In its attempt to compel balance sheets to reflect enterprise value, FASB has ignored the power of the Federal Reserve's Open Market Committee: To make balance sheets out of date, all the Committee has to do is raise or lower the Fed Funds rate. In short, FASB has chugalugged the Kool-Aid of neoclassical economics, it has created a myth of consensus, and it threatens to impose on unsuspecting investors and businesses an archaic and unrealistic one-size-fits-all/mark-to-model view of how values are determined.

A PROPOSAL

Few serious financial professionals would argue against using fair value for current assets and liabilities. There is consensus in most markets about the value of these short-lived instruments.

There is no such consensus, however, about the price of long-lived nonfinancial assets. The published research summarized earlier affirms that the absence of consensus about the fair value of such assets makes their value speculative. Even if their fair value could be determined reliably absent a transaction, doing so would be expensive, volatility in markets would escalate, and the potential for corporate scandal and moral hazard would shoot into the

RECOMMENDED READING

“From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition” by Richard E. Caves and Michael E. Porter, *Quarterly Journal of Economics*, Vol. 91, No. 2, pp. 241-262.

“Competing on Resources” by David J. Collis and Cynthia A. Montgomery, *Harvard Business Review*, July-August 2008, pp. 140-150.

“A Capability-Based View of Competitive Heterogeneity” by David G. Hoopes and Tammy L. Madsen, *Industrial and Corporate Change*, Vol. 17, No. 3, 2008, pp. 393-426.

“Competition in the Major Home Appliance Industry” by Michael S. Hunt, unpublished doctoral dissertation, Harvard University, 1972.

An Evolutionary Theory of Economic Change by Richard R. Nelson and Sidney G. Winter, Belknap Press, Boston, Mass., 1982.

Competitive Strategy: How to Analyze Industries and Competitors by Michael E. Porter, The Free Press, New York, N.Y., 1980.

“Dynamic Capabilities and Strategic Management” by David J. Teece, Gary Pisano, and Amy Shuen, *Strategic Management Journal*, Vol. 18, No. 7, 1997, pp. 509-533.

“A Resource-Based View of the Firm” by Birger Wernerfelt, *Strategic Management Journal*, Vol. 5, 1984, pp. 171-180.

stratosphere, all without any offsetting benefit for investors.

Moreover, I doubt that investors much care about the prices that long-lived nonfinancial assets would bring for a going concern. I believe they are far more interested in what management intends to do with those assets to generate rates of return that exceed their cost of capital. Otherwise, investors would be putting their money into trading companies, not operating enterprises.

American business isn't a bazaar. It's a marathon, and sensible U.S. managers run their businesses accordingly. Unfortunately, fair value, as defined by FASB, does *not* focus on the value and use of assets by their owners. If we have an arm's-length transaction and a purchase price, why not go with what we know rather than with what we hypothesize? Otherwise, we, too, will be guzzling the Kool-Aid.

Therefore, it seems that a sensible and much-needed step is for FASB to return to its roots in fair market value (FMV) by making FMV the standard of value for *long-lived nonfinancial assets and intangibles*. Here's the definition of FMV as it appeared in IRS Revenue Ruling 59-60, Sec. 2.02, nearly a half-century ago:

the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.

Adopting this definition would shift the valuation of long-lived nonfinancial assets away from exit value to entry value and avoid a staggering cost of annual compliance. Under FMV, value would derive from the original purchase transaction. In the case of long-lived amortizable and depreciable nonfinancial assets, carrying value would be subject to annual impairment testing under SFAS No. 144, “Accounting for the Impairment or Disposal of Long-Lived Assets”; SFAS No. 142, “Goodwill and Other Intangible Assets,” for nonamortizables would remain in place.

Best of all, if these assets' values became volatile, it would be because of the assets' performance in the hands of managers, not because of the ill-conceived imposition of regulatory fiat. Value wouldn't depend on hypothetical transactions that haven't happened and probably never will happen. Using FMV would reduce compliance costs, decrease volatility, reduce moral hazard, recognize the reality of competitive heterogeneity, and provide a framework for valuation that auditors, valuation professionals, registrants, and users of financial information already understand. Valuation is too important to be left to the accountants at the Financial Accounting Standards Board. ■

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