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A Content Analysis of Sell-Side Financial Analyst Company Reports

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SYNOPSIS: This study assesses the information needs of sell-side financial analysts. It departs from the technical earnings-per-share (EPS) and analyst survey methods employed in previous studies and directly examines the content of a sample of 479 sell-side analyst company reports comprising over 3,500 pages of text. This sample of reports is stratified by exchange, industry, and size, across three recent time periods, and includes reports from over 40 brokerage firms. Our principal findings are that analysts: (1) base their recommendations primarily on an evaluation of company income, relative to balance sheet or cash flow evaluations; (2) disaggregate company performance into a greater number of operating units (segments) than required under Generally Accepted Accounting Principles (GAAP); (3) emphasize company core earnings, including earnings per share, and earnings variability; (4) prefer conservative earnings management that establishes or adjusts discretionary reserves, allowances, and off-balance-sheet assets; (5) give attention to earnings momentum; (6) commonly evaluate assets and liabilities on a cost, not market-value, basis; (7) develop non-GAAP cash flow schedules, including per-share calculations; and (8) extensively consider nonfinancial information, including company risks and concerns, anticipated changes, competitive position, management, and strategy. These findings have direct implications for accounting and financial reporting policy, and for future research on user information needs.

Data Availability: A list identifying the analyst reports used is available from the authors. The reports themselves are publicly available from Investext.

INTRODUCTION

Since enactment of the federal securities legislation in the 1930s, financial reporting in the United States has evolved in a regulated environment to provide greater and broader company information to sophisticated and unsophisticated equity investors and other stakeholders. While such parties obtain infor-

mation from a variety of sources, traditional financial reporting provides analysts and other users with a significant part of the information platform for forecasting companies' future performance. This implies an importance for sound accounting and financial reporting policies, particularly when it is not well-established that there are sufficient mar-

This paper is derived from a project that studied sell-side financial analysts' information needs. We acknowledge the sponsorship and comments provided through the AICPA's Special Committee on Financial Reporting, its Users' Needs Subcommittee, and the firm of Ernst & Young, and the helpful comments of an associate editor and two anonymous reviewers and the use of "Investext" by the Thomson Financial Group.

ket mechanisms or incentives for management to voluntarily disclose "proprietary" information to users. Such policies can increase social welfare by improving investor resource-allocation decisions, and by reducing duplicative information production costs by information intermediaries.

In 1991, concerns about financial reporting led to the formation of the American Institute of Certified Public Accountants (AICPA) Special Committee on Financial Reporting. The committee's activities included sponsorship of research to explore, categorize, and quantify the types of information found in equity analysts' reports, through its Users' Needs Subcommittee (AICPA 1992). This paper summarizes the results of one such study, which assessed sell-side financial analyst information use by applying content analysis to a sample of full-text sell-side analyst company reports. A more detailed discussion and analysis of our study's results as related to core earnings and earnings quality can be found in Bricker et al. (forthcoming).

Our findings were considered by the Special Committee in the formulation of a preliminary set of recommendations (AICPA 1993). Discussions of the Special Committee's preliminary recommendations have appeared in the *Wall Street Journal* (Berton 1993a, 1993b), the Financial Executives Institute's *Briefings* (FEI 1993) and *Financial Executive* (FEI 1994), *Management Accounting* (Barlas 1993), and elsewhere.

The remainder of this paper is organized as follows. The next section reviews prior studies of user needs of company financial information. Our data and method are described next, followed by a discussion of findings, which are generally arranged by reference to the current financial reporting format: income statement, balance sheet, cash flows, other financial, nonfinancial, and supplemental information. Note that the presentation order of our findings is unrelated to their importance. The final section of the paper summarizes our results, describes limitations, and discusses implications for policy and future research.

PRIOR RESEARCH ON USER INFORMATION NEEDS

A traditional concern about accounting and financial reporting policy is that accounting reports do not fully address the information needs of investors and other corporate stakeholders (Lee and Tweedie 1977, 1981, 1990; Rimerman 1990).¹ Since the 1970s, a variety of studies of the usefulness of traditional reporting practices to the investment community have been undertaken, as reviewed by Chang and Most (1985) and Hawkins and Hawkins (1986). Schipper (1991) summarizes research on analysts' forecasts and notes that "it makes sense to study analyst decision processes because analysts are among the primary users of financial accounting information." Similarly, Zmijewski (1993) queried "What information do financial analysts use in selecting stocks?"

While Lang and Lundholm (1993) examined Financial Analyst Federation reports to assess analyst evaluation of the adequacy of company disclosure, a more common method of studying analyst's use of financial reports and other information has been to survey them. Some studies, such as the Financial Executives Research Foundation's (FERF) (SRI 1987, 34), have selected large samples of analysts and used general survey instruments, while other studies (such as Lee and Tweedie 1977, 1981) have conducted more detailed interviews of smaller samples of investment professionals.

These studies frequently analyze the use and importance of particular types and sources of information. Hill and Knowlton (1984), for instance, reported that financial reports were ranked second in importance only to direct discussions with management. The FERG study reported that the five "most-used" sources of information were, in descending order: (1) the company annual report, (2) SEC Form 10-K, (3) the company quarterly report, (4) other analysts or professionals, and (5)

¹Other recent works, including Knutson (1992), Elliott (1991), and Williams (1991), have explored the adequacy of financial reporting for contemporary stakeholders.

company management. Professionals ranked company management as the “most important” *source* of information (p. 38). The annual report, which ranked first in frequency of use, ranked fifth in importance as a source of information. The five *types* of information reported to be of most interest to analysts were recent developments and outlook for the company’s industry, annual company earnings, company’s position in the marketplace, risks to which the company is exposed, and recent events affecting the company (p. 31).

Some of these studies surveyed analysts about improvements to financial reports. Several have found professional investor agreement that financial reports needed to better present management goals and strategies and the competitive position of its operating units. The FERF study, for instance, related analysts’ opinions that financial reports could be improved by providing information on the company’s market and competitive position, business segment financial statements, intra-industry comparisons, management goals and objectives, and company performance statistics and ratios. The Hill and Knowlton study included recommendations by investment professionals to:

1. “present the business in a segment-by-segment format” and
2. “disclose as many details and numbers as possible.”

Evident among the findings and recommendations of these studies is the desire of analysts for information with greater detail, not surprising given that: (1) analysts make earnings-per-share (EPS) forecasts by first disaggregating a company into its operating units, and (2) analysts do not bear the cost of preparing disaggregated reports. This preference is corroborated by the recent study sponsored by the Canadian Institute of Chartered Accountants, which stated “Sell-side analysts ... placed higher than average importance on ... more detailed segment reporting ...” (Boersema and Van Weelden 1992).

In other areas, many surveys have found only a limited desire for added information by investors and investment professionals. There

is little reported demand, for instance, to restate balance sheet or income statement values to market. McCaslin and Stanga (1986) note that analysts assigned more importance to such items presented at historical cost than in constant dollars or current costs.

These and other studies provide evidence about the capacity of traditional forms and practices of reporting to meet the demands of the contemporary investment community. Implicit in some is the belief that there must be a “fresh start” or “new model” (Elliott 1992), while others seek more evolutionary and supplemental approaches to “re-engineer” traditional reporting. In either case, they confirm an importance to better understanding the needs of constituencies that comprise the generic term “investor” (and other financial report users).

DATA AND METHOD

To assess analyst information use, we departed from the technical approach to using financial analyst-based databases, as described by Philbrick and Ricks (1991) or as used in Lang and Lundholm (1993), or surveys as described above, and employed content analysis (Weber 1990). Content analysis has been previously applied to financial analysts’ reports by Govindarajan (1980), who conducted a limited content analysis of 976 analyst reports,² and in other accounting research (Tinker and Neimark 1987; Warnock 1992). While content analysis data does not lend itself to statistical analysis, its use as a method is eminently suited for applications in which the data are textual in nature, rich in substance, and strongly context specific.³

Our data were a sample of full-text sell-side financial analyst company reports. Analyst reports are commonly structured to in-

²Govindarajan examined the relative use of cash flow versus earnings information by coding each of the reports on a scale of one (cash flow-oriented) to six (earnings-oriented).

³Content analysis involves both quantitative and qualitative analysis of text. As described by Weber (1990, 49), content analysis “is a research method that uses a set of procedures to make valid inferences from text.”

clude basic information about a company and the analyst's evaluation of that information. However, analysts also report assessing a larger set of information than that included in their reports, as observed by Schipper (1991).⁴

We obtained sell-side analyst company report data from a commercial database, Investext. Investext describes itself as containing "over 320,000 full-text company and industry research reports authored by analysts at more than 270 of the world's leading investment banks, brokerage firms, and consulting companies."

We initially sampled 327 New York Stock Exchange (NYSE), American Stock Exchange (ASE), Over-the-Counter (OTC), and "Small Cap" companies. These companies were ran-

domly selected from Compustat, except for the "Small Cap" companies, which were randomly selected from the *Wall Street Journal's* Small Cap listing. Our sample, described in table 1, was stratified on exchange—NYSE, ASE, OTC, WSJ Small Capitalization, two digit SIC code (i.e., industry), and company size (revenue).

We studied three recent one-year periods in order to better capture differences in information use that might accompany differing business conditions. The first period, July 1, 1987, to June 30, 1988, covered the year prior to and surrounding the 1987 stock market crash. The second period, January 1, 1990, to

⁴Schipper specifically notes that company information contained in the analyst's report represents a "lower bound on the information items analyzed."

TABLE 1
Description of Sample

Panel A: Exchange Listings of Sample Firms

<u>Exchange</u>	<u>Firms</u>	<u>Percent</u>
New York Stock Exchange	115	35.17%
American Stock Exchange	48	14.68%
NASDAQ *	119	36.39%
Over-the-Counter	44	13.46%
Toronto Stock Exchange	1	0.31%
TOTALS	327	100.00%

* Including Small Cap issues.

Panel B: Industry Distribution of Sample Firms and Analyst Reports by One Digit SIC Code

<u>Industry</u>	<u>Number of Companies</u>	<u>Percent</u>	<u>Number of Reports</u>	<u>Percent</u>
Agricultural, Forestry, and Fishing	1	0.31%	0	0.00%
Mining	14	4.28%	26	5.43%
Construction	2	0.61%	3	0.63%
Manufacturing	151	46.18%	238	49.69%
Transportation and Public Utilities	36	11.01%	59	12.32%
Wholesale Trade	10	3.06%	14	2.92%
Retail Trade	17	5.20%	31	6.47%
Finance, Insurance, and Real Estate	43	13.15%	66	13.78%
Services	34	10.40%	41	8.56%
No SIC Code Obtained	19	5.81%	1	0.21%
	327	100.00%	479	100.00%

December 31, 1990, covered the period during which the U.S. entered a recession. The third period, July 1, 1991, to June 30, 1992, covered the year of a modest economic recovery and bull market.

Using the Investext database, we selected one analyst report for each company in each of the three time periods, per panel B of table 2. The brokerage firm was varied in order to representatively include the fourteen largest brokers (Institutional Investor 1990, 1991, 1992) as well as smaller brokers,⁵ as listed in table 2, panel A. There were no analyst reports for 113 companies. The remaining 214 companies had reports in one, two, or all three time periods under study. In total, our final sample consisted of 479 individual full-text reports for the 214 companies, totaling about 3,500 pages of single-spaced text, tables, schedules, and reproduced financial statements, as given in table 1.

The analysis of our sample was preceded by a pilot phase. In the pilot phase, a set of ten company reports was selected. Word and phrase frequencies were determined using content analysis software.⁶ The reports were also read by each of the four authors. Then, again using content analysis software, we evaluated the context and use of frequently occurring words and phrases in the reports. From this analysis, a standardized coding instrument was developed, which described the reports in terms of qualitative and quantitative information. Following completion of the coding instrument, each of the four team members reviewed a common set of reports and the completed coding forms. These forms were then reviewed by the team to assist in consistent coding.

The data set was analyzed in two ways. First, the 479 reports were divided among the team members. Each report was read in full, and a coding form was completed. Second, the full data sample was indexed and analyzed using the content analysis software.

The printed reports, completed coding forms, and electronic database formed the basis for further, iterative analysis. Our general procedure was as follows:

1. Research team meetings to review coding forms, discuss 2. and 3. below, evaluate word phrases, and assess results to date,
2. Analysis of previously selected word phrases and themes and their contextual characteristics, related to 3., and
3. Identification and preliminary analysis of new word phrases and themes related to previously selected word phrases using coding forms, analyst reports, and the database.

The referencing feature of the content analysis software was used to compare reports in the electronic database on common features. For example, the software facilitated simultaneous in-context study of "cash flow per share" across all the reports. We also computed word, phrase, and word-grouping frequencies in order to guide our analysis of report features, and examined the word and phrase occurrence within the context of their full report.

ASSESSMENT OF ANALYST REPORTS

Income Statement Related Findings

Overview

We found that income statement and performance-related discussions dominated analysts' reports. This is consistent with prior findings and supports the fundamental link between earnings and security prices demonstrated in a long line of "valuation studies," most recently by Lev and Thiagarajan (1993), and as argued by Easton (1985) and others. Income-statement-related terms or phrases

⁵The only large broker not contributing to Investext is Goldman Sachs. Therefore, a supplementary sample of full-text Goldman Sachs reports were obtained and reviewed. These reports did not appear to differ from those of other analysts in general. We did not include the GS companies or reports in our sample or in our word or phrase databases.

⁶The content analysis software used was "WordCruncher," developed by Brigham Young University. It provides a frequency analysis of word and phrase use and enables searches and retrieval of terms in context of the full text.

TABLE 2
Brokerage Firms and Analyst Reports

Panel A: Brokerage Firms Sampled

<u>Firm</u>	<u>Reports</u>	<u>Percent</u>
Prudential-Bache Securities, Inc.	54	11.27%
Merrill Lynch, Pierce, Fenner & Smith, Inc.	35	7.31%
Donaldson, Lufkin & Jenrette Securities Corp.	34	7.10%
Shearson Lehman Hutton, Inc.	33	6.89%
First Boston Corp.	33	6.89%
Kidder, Peabody & Co., Inc.	28	5.85%
Smith Barney, Harris Upham & Company, Inc.	27	5.64%
Oppenheimer & Company, Inc.	20	4.18%
Dean Witter Reynolds, Inc.	19	3.97%
Morgan Stanley & Co., Inc.	17	3.55%
Paine Webber Group, Inc.	17	3.55%
Alex. Brown & Sons, Inc.	14	2.92%
The Bear Stearns Companies, Inc.	12	2.51%
AG Edwards	11	2.30%
Drexel Burnham Lambert, Inc.	11	2.30%
Piper, Jaffray & Hopwood, Inc.	10	2.09%
Salomon Brothers	10	2.09%
Kemper Financial Services, Inc.	9	1.88%
Fox-Pitt Kelton, Inc.	7	1.46%
J.C. Bradford & Co.	6	1.25%
Ladenburg, Thalmann & Co.	6	1.25%
Robert W. Baird & Company, Inc.	5	1.04%
Dain Bosworth	5	1.04%
Ragen MacKenzie	4	0.84%
Wheat First Butcher & Singer, Inc.	4	0.84%
Dillon Read & Co., Inc.	4	0.84%
McDonald & Company Securities, Inc.	4	0.84%
Wertheim Schroder & Co., Inc.	4	0.84%
The Robinson-Humphrey Company, Inc.	3	0.63%
Rauscher Pierce Refnes, Inc.	3	0.63%
Johnson, Rice & Co.	3	0.63%
Sutro	3	0.63%
Scott & Stringfellow, Inc.	3	0.63%
Stephens, Inc.	3	0.63%
Raffensperger, Hughes & Company, Inc.	2	0.42%
Hambrecht & Quist, Inc.	2	0.42%
Tucker Anthony & R.L. Day	2	0.42%
First Analysis Corporation	1	0.21%
Janney Montgomery Scott, Inc.	1	0.21%
Barclay's De Zoete Wedd	1	0.21%
Midland Walwyn Capital	1	0.21%
Cruttenden & Company	1	0.21%
William Blair & Company	1	0.21%
Interstate/Johnson Lane Corporation	1	0.21%
Gerard Klauer Mattison & Co.	1	0.21%
E.F. Hutton	1	0.21%
The Ohio Company	1	0.21%
Nonbrokerage firms included	2	0.42%
TOTALS	<u>479</u>	<u>100.00%</u>

(Continued on next page)

TABLE 2 (Continued)

Panel B: Frequency of Reports Downloaded

<u>Time Periods Covered</u>	<u>Reports Downloaded by Company</u>	<u>Percent</u>	<u>Total Reports Downloaded</u>
Zero	113	34.56%	0
One	50	15.29%	50
Two	63	19.27%	126
Three	<u>101</u>	<u>30.89%</u>	<u>303</u>
TOTALS	<u>327</u>	<u>100.00%</u>	<u>479</u>

appear nearly 60,000 times, on average over 123 times per report, far more frequently than combined references to balance sheet and cash flow terms, circa 19,000 times overall or 34 times per report. About 70 percent of the reports contain annual income statements, and about 40 percent contain both annual and quarterly income statements.⁷ Earnings, earnings-per-share (EPS), profit(ability), revenue(s) and income are the most frequent income statement terms. Earnings-based ratios, such as price-to-earnings (circa 1,700 occurrences) are common. Analysts also consider information that is predictive of future earnings, such as order, backorder, and shipment data, not reflected in the most recent income statement.

Revenue change is discussed, particularly as a result of product pricing, volume, demand, and product mix. Production and sales volume information is analyzed. Expenses are only analyzed at a general level. "Expenses" occurs about 8.4 times per report, and "margins" occurs about 8.7 times per report. Less frequently used phrases are "operating costs" and "SG&A expenses." Relative cost levels are compared across companies, and management efforts to reduce costs are evaluated. More detailed observance of noncapital expenditures occurs on research and development expenditures, depreciation, materials and labor. "Tax rate(s)" occur 2.9 times per report and is most commonly discussed when rates change significantly across periods.

Segment Reporting

Analysts often estimate future EPS by disaggregating the company into its constituent operating units and/or geographic regions, developing forecasts of the performance of individual units, and reaggregating segment forecasts to form a company EPS estimate.⁸ On average, segment-related phrases appeared 47.6 times per report. This frequency was larger than any other grouping of related words and phrases except for income-statement-related phrases. Analysts use a variety of phrases to refer to the operating units of corporations, including "lines," "areas," "businesses," "divisions," "units," "segments," and "subsidiaries."

Analysts often disaggregate company performance into a finer set of operating units (segments) than specified by GAAP. For example, one analyst commented that a company "reports two lines, but there are actually three." Analysts regularly discuss the above matters with respect to each operating unit; one waste removal company was analyzed by individual landfills and a gaming company by individual casinos. In the same

⁷Quarterly income statements virtually never were presented without an annual income statement.

⁸Previous research on segmental disclosures includes Balakrishnan et al. (1990), Baldwin (1984), Emmanuel and Garrod (1987), Mohr (1983), Rennie and Emmanuel (1992), Senteney and Bazaz (1992), and Skousen (1970), among many.

way, operating revenues and expenses are often assessed for individual segments of a company. Performance analysis by significant product or individual location is common. For example, analysts may evaluate the performance of hotel companies in terms of specific U.S. or international geographic regions, or even specific hotels. Similarly, consumer goods manufacturers often are evaluated in terms of individual product lines or products. Some analysts consider the effect on the entire company, industry, and economy, as well as revenues and costs in forecasting the results for each reporting unit.

Core Earnings

Analysts frequently adjust reported earnings to determine company core or adjusted earnings, consistent with Ali et al. (1992), who found that analysts distinguish between permanent and temporary earnings components. On average, core-earnings-related phrases occur once per report. However, this number is deceptively low for the following reasons:

1. Much of the analysts' discussion of revenue and expense-related items involves identifying their recurring component, and
2. Discussions of earnings are often implicitly discussions of core earnings.

Phrases related to core earnings include "adjusted earnings/revenues," "base earnings/revenues," "core business(es)/earnings," "operating earnings/revenue(s)," and "earnings/revenue streams."

Analysts are stricter than GAAP in distinguishing between recurring and nonrecurring income items. Analysts employ a literal definition of nonrecurring income statement items, which are usually referred to as "one time" items. They assess nonrecurring items listed in continuing operations following operating income, and also note the earnings effect of new accounting rules. One report, for example, contained a section entitled "Nonoperating Earnings—A Source of Confusion in the Past."

The interest in core earnings is also reflected in per-share calculations made by ana-

lysts, which are adjusted for noncore earnings items. Analysts identify "potential" nonrecurring items contained in continuing operations, and often report EPS net of these items, as in the case of the analyst who noted "several unusual items" included in continuing operations. Correspondingly, a number of analysts reported operating earnings per share, not required under GAAP, or an "adjusted earnings" number which includes all items judged to be nonrecurring, and correspondingly recalculate EPS.

Restructuring charges are an example of an item often removed from EPS calculations in analysts' EPS reports. Analysts occasionally identify a nonrecurring cost but are unable to estimate its amount. In one case an analyst was unable to determine the amount of corporate relocation expense included in continuing operations. In another report the relocation charge of the company was identified in continuing operations and removed from EPS.

Earnings Quality

Analysts define economic and accounting interpretations of "earnings quality" in a manner that differs from representationally faithful accounting (Bricker et al. forthcoming). First, analysts are sensitive to *earnings variability*, which is their basis for an "economic" meaning of earnings quality.⁹ While EPS forecasts are usually scalar valued, a potential range of values is sometimes identified: for instance, one analyst stated "Readers should note that, although the \$1.11 looks like a precise estimate ... a confidence interval for 1989 might be \$0.95 to \$1.25." Yet Beta (the relative volatility of the particular stock to the market in general) is reported only 49 times in 479 reports, and analysts seldom discuss it, consistent with Fama and French (1992). Stock price variability is also less frequently discussed than earnings variability.

Although it is unclear whether analysts discern subtle earnings management, analysts

⁹Analysts generally consider earnings variability and earnings quality to be inversely related.

show awareness of obvious earnings management through accounting methods. Analysts most frequently refer to accounting earnings quality in terms of a company's ability to manage earnings through the establishment and adjustment of conservative, discretionary reserves, allowances, and off-balance-sheet assets (OBSAs), which provide analysts a *low-risk earnings platform* for making stock price forecasts and buy/sell/hold recommendations, etc. One analyst, for instance, reported earnings quality as high when a firm had an "aggressive" policy towards establishing reserves. Another supported its assertion of high quality earnings by noting that "the opportunity to 'manage down' earnings exists." This suggests a possible analyst preference for "secret reserves," in direct contrast to niche analysts such as O'Glove (1987) who equate earnings quality with the absence of earnings management.

Earnings Momentum

Analysts exhibit interest in earnings momentum, or "earnings power," which is generally defined in terms of *earnings growth trends*. One report, for example, commented on a firm's "strong accelerating growth." This differs from the earnings growth rate reported, which is linear, and suggests a nonlinear growth component. The idea of earnings momentum resembles Ijiri's notions as found in his triple-entry bookkeeping treatise (1986). That is, earnings momentum reflects a belief that a company's earnings growth can be curvilinear (either upwards or downwards). Analysts also frequently note potential *earnings surprises*. One report stated that "[the company's new product] is a potential source of upside earnings surprises" and another stated that "[the company's] high operating leverage can provide upside earnings surprises"

Balance Sheet Related Findings

Balance sheet references occur 34.1 times per report, including references to cash. The most common references (excluding cash, discussed later) are to "asset(s)," "capi-

tal(ization)," "debt," and "equity," these phrases each occurring on average five to six times per report. Balance sheets are presented far less frequently than income statements, and often only in summary form.

Company balance sheets are usually evaluated on a cost basis. Exceptions are (1) companies with significant off-balance-sheet assets, (2) thinly traded companies, (3) "poorly understood" companies, (4) industries with "asset quality" problems (e.g., banking), and (5) takeover targets. Long-term productive asset values on the balance sheet are commonly evaluated at cost. The effect of inflation on such assets is rarely explicitly considered. However, as noted above, a supplemental analysis of assets' market value may be conducted for companies that analysts consider to be poorly understood by other analysts and investors, particularly where latent significant off-balance-sheet or hidden assets may exist, or where asset quality is an issue. For example, analysts asserted that a cable television company had substantial off-balance-sheet assets in the form of residual payments to be received in the future. They calculated the value of the company using several methods, one being the present value of the anticipated cash flows from these residuals. One analyst observed that "balance sheet recognition of ... hidden asset values ... will occur in future years." Other examples include inventory and reserve valuations of extractive industry companies. For instance, in gold mining companies, a market value appraisal of the reserve values is included by ore type.

Liabilities are usually addressed in a summary fashion, often in a simple analysis of the capitalization of the corporation. Extensive attention to liabilities usually occurs only for companies that are highly leveraged and typically in conjunction with a cash flow analysis. However, analysts identify company *risks and concerns*, which appear 2.1 times per report, and which are broader and less quantifiable potential future reductions of stockholders' equity than are liabilities, obligations, or contingencies. Analysts often organize their reports so as to provide information that sup-

ports their EPS forecasts but also provide a list of "risks" or "concerns" that could negatively affect a company's performance. Corporate auditors are identified or commented upon infrequently; however, in one instance, a change in auditors was listed as a "risk factor."

Cash Flow Related Findings

Cash flow analysis displays considerable variety in format and content. Many reports present and/or discuss cash flow extensively. Cash flow information sometimes is presented by segment or operating unit. Yet other reports make no mention of cash flow at all. On average, cash flow phrases occur about 7.5 times per report. Over one-quarter of the reports contained cash flow statements.

Many analysts produce *Non-GAAP cash flow schedules*, including discretionary or free cash flow. Among the nontraditional cash flow formats were the following:

- | | |
|------------------------|--------------------------------|
| 1. Net income | 2. Direct operating cash flows |
| +/- all effects except | - priority outflows |
| cash interest | |
| = cash flow available | - discretionary outflows |
| to common | |
| - cash interest | + financial inflows |
| = net cash flow | = change in cash |

Although cash flow per share calculations are not permitted in filings under SEC rules nor by SFAS 95, cash flow per share or operating cash flow per share are presented in almost one-third of the reports. Other per share calculations include "fully diluted cash flow per share," "distributable cash flow per share," "excess cash flow per share," "discretionary cash flow per share," or "free cash flow per share."

Some analysts compute a price-to-cash-flow-ratio, and present a comparison of this ratio with other companies in that industry. Others assess the relationship between cash flows and earnings. For example, one report stated that the value of a company was "compelling" because "operating cash flows are 4.3 times 1990 earnings." Another analyst encouraged purchase of a major tobacco company's stock because of its "tremendous surplus cash flow."

Cash flows appear to be more important to analysts in evaluating smaller companies,

and less so in evaluating larger companies, with the exception of highly leveraged larger companies or ones in which a dividend reduction is likely. One report stated that "the important figure ... for evaluation of smaller petroleum ... companies is operating cash flow per share." Another stated that in comparison with cash flow, "historical financial results of [the company] are irrelevant."

Other Financial Statement Related Findings

Common Size Reports

Financial statements are not infrequently converted to common size reports. Elements of the balance sheet or income statement are restated for comparative periods as a proportion or percent terms of a key number of the statement, such as total assets or net revenues. About one-quarter of all reports containing an income statement also contained a common size income statement. This proportion is much larger when the many income statements that contain selected common size information are included.

Company Valuation

We found that analysts distinguish between valuations based upon the company's continued existence in its present form, so-called fundamental value, and valuations based upon acquisition or breakup of the company. Analysts use several approaches to valuing companies based on fundamentals, most typically in terms of the present value of the company's cash flows, its earnings, or balance sheet valuations. In these approaches analysts also distinguish between a company's "public market value" and "private market value." One analyst valued companies in terms of revenue, cash flow multiples, and net income. Another valued a cable TV company with purported off-balance-sheet assets on three bases:

- 1) present value of cash flows,
- 2) appraised value of assets, and
- 3) the company's liquidation value.

A different analyst evaluated the same cable TV company by analyzing each of the many

limited partnerships with which the company was related in order to estimate the long-range cash flows of each to the company. Analysts label valuations of a company based upon its acquisition or breakup as its “buyout value,” “breakup value,” “takeover value,” or “theoretical breakup value.”

Nonfinancial Information Findings

In this study, we found substantial nonfinancial information assessment, including market share, competitive position, industry and economic conditions, competitors' capabilities and products. The nature and recent history of the company, its products, product pricing (particular pricing changes or promotions), customers, suppliers, industry, the national and international economy, and the company's competitive position (especially market share) are also considered. Market-related phrases such as “customer(s),” “market(s),” “demand,” “economy,” and “competitive” occur approximately 9,500 times. A company's production capabilities, technologies, and marketing and distribution systems are often evaluated. This includes new information systems for inventory management, order processing, product design, marketing and sales, etc. Superior production technologies usually are given extensive coverage. Expenditures for research and development, including basic research, are evaluated. Analysts frequently appraise a company's competitors, and rank an individual company with its competitors on the themes above. Similarly, the potential effects of new, competing products or technologies are discussed, as well as the potential entrance of other companies as competitors.

The *quality of management* is addressed. More attention is given to management when major changes in management have occurred, and in such cases there are considerations of anticipated changes that the new management will bring. It is common to see references to specific key personnel. Some reports discuss the organizational structure of the company. However, management compensation or bonus provisions are not commonly discussed. We

noted that there was little “pay for performance” analysis, in contrast to the findings of Kim and Schroeder (1990). Exceptions include descriptions of stock option plans, the percentage of total compensation represented by incentives, or incentive plan descriptions. One report, a transcript of an analyst meeting with management, quoted a manager as follows:

... I have what we call management preferred, and it pays a dividend solely based on the performance of [the company's] common stock. Whether earnings go up or down, unless the shareholders make money based on the stock price, I receive nothing. My incentive is tied 100 percent to whether or not our shareholders make money.

Analysts also extensively disclose and evaluate corporate and *management strategy* (revenue growth, cost management, marketing strategy, competitive positioning, etc.). Analysts appear to signal high management quality through phrases such as “we believe that management is focused on shareholder value.”

Analysts consider the effect of a company's *anticipated changes* on future earnings, including those related to products, projects, and restructurings, particularly related to identifying company trends. Directional phrases such as “change(s),” “increase,” “decrease,” “decline,” and “new,” occur thousands of times in the report data. The effect of product changes or new products, even when not yet marketed, are regularly assessed, particularly as to the company's ability to compete, and upon competing products, projected demand, revenue, and costs. *Major projects*, including modernization, acquisition, expansion, divestiture, and restructuring plans are evaluated, and their estimated effects are used in forecasting future performance. Major expenditures on plant, property, and equipment are evaluated, particularly in terms of product costing and capacity expansion. Downsizing plans are also addressed by the analysts. In addition, analysts report on the effect of share repurchase plans and planned issuances of new securities.

Phrases that focus on "acquisition" occur about 1,500 times in the equity reports studied. Acquisitions are studied in several pro forma dimensions, including earnings and cash flow effects of financing the acquisition, the strategic fit, scale economies, and earnings contribution.

Supplemental Findings

Investor Economic Rationality

Some analysts do not believe that investors are fully rational in an economic sense. For example, some analysts do not believe that investors have lengthy horizons in assessing company performance. One analyst stated: "We continue to rate these shares as neutral ... in the belief that investors are not yet ready to discount earnings growth 24 months in the future."

Analyst Reliance on Management

Financial analysts rely heavily on management for information about their companies. Some analyst reports are largely transcriptions or summaries of a management presentation. Analysts report on "conference calls" to discuss earnings with management and other analysts, or on presentations and discussions at a company's annual meeting or at other meetings with analysts. The dependence by managements on financial analysts' recommendations for their companies provides an incentive for truthful disclosure of anticipated results. Analysts disappointed with negative earnings surprises regard future management earnings forecasts as less credible. At the same time, such disclosure to analysts raises questions about the unlawful "tipping" of information, and about the company's legal obligation to disseminate such information to the broader market (Coffee 1993).

Analyst Coverage of Companies

Analyst coverage of large and small companies differs markedly. Larger companies receive better sell-side analyst coverage than smaller companies. For instance, we found no analyst reports for many of the "Small Cap"

companies in our study. Analysts are aware of this, referring frequently to "poorly followed," "poorly understood," or "undiscovered" companies. This is consistent with previous research, such as Brennan and Hughes (1991), who reported findings that analyst following of corporations is directly related to firm size and inversely related to common stock price.¹⁰

SUMMARY, LIMITATIONS, AND IMPLICATIONS

The contributions of this study include (1) its extended application of content analysis to financial analysts' reports, (2) its assessment of such reports as related to accounting and financial reporting policy, as described earlier, and (3) its pioneering use of a data source of analyst reports, Investext. Our content analysis of sell-side financial analysts' company reports suggests that contemporary financial reporting provides an important but incomplete basis for sell-side analyst forecasts of company performance. The reports we studied show that the information needs of analysts exceed traditional transaction-based reports. Sell-side analysts provide softer, more frequent, and more comprehensive details using subjective interpretations from a collection of micro and macro information so as to construct scenarios of likely alternative prospects of the company. Some of the interesting findings include analysts' attentiveness to determining company core earnings; general assessment of assets at cost, and the circumstances in which market valuations of assets are used; diverse approaches to assessing company cash flows, including per-share calculations; identification of risks and concerns about companies; definition of earnings quality, which is apparently different than definitions commonly assumed by accountants; and interest in earning momentum, echoing Ijiri.

Several features of our study should be kept in mind when considering its results. Analysts do not include all information con-

¹⁰See also Bhushan (1989) and O'Brien and Bhushan (1990).

sidered in their reports. We do not know what information analysts used but did not report. We also do not know what sorts of information *might* be useful to analysts that were not available.¹¹

Analyst quality issues must also be considered. We operated from the view that over time, competition will tend to reduce the occurrence of low quality analysts, making our population appropriate for study.¹² However, we recognize that the richness of the forecasting environment makes specific comparable performance measurement standards for analysts problematic: it is difficult to distinguish between luck (good and bad) and level of expertise. Even analysts who are highly regarded make poor recommendations on occasion (Leefeldt et al. 1992).

There are some who assert that user-needs-based research is an incomplete basis for appraising accounting and financial reporting policy, as it can only provide "evolutionary," not "breakthrough," advances in financial reporting. For instance, it has been argued that prior to the invention of the electric light, assessment of "user needs" might have identified "brighter flame" or "smokeless wick" as needed improvements. However, the validity of such "Edison" analogies rests with perspectives on the identity of the inventor(s) of useful company information. If financial analysts are deemed to be such inventors, then it is important for accountants to study their information-use experiments and discoveries (Horngren 1978).

Sell-side equity analysts also confront potentially serious and limiting conflict-of-interest questions (Lin and McNichols 1992). While most of the reports we examined contained a "disclosure" statement describing the positions held or the relationship with the reported-upon company, it is difficult to determine to what extent such conflicts affect the analysis. Future studies of sell-side analysts are needed to assist in understanding concerns about such potential objectivity issues and conflicts (Siconolfi 1992).

Another concern emerging from this study is the lack of sell-side reports for small capitalization publicly traded companies, which comprise an important part of capital market information demand. The parties who have an interest in such firms appear to be left to their own resources and to general purpose financial statements to ascertain information since analysts do not provide a ready source of guidance. This suggests that, in the small-cap market, sell-side analysis of company information cannot be relied upon as a source of price protection for unsophisticated equity investors.

The study also brought to our attention an important need for additional research of buy-side analysts' behavior. In what ways do buy-side and sell-side financial analysts differ in their evaluation of companies?

A concluding comment about the qualitative limitations of this study also seems in order. Attempting to infer the information needs of analysts and investors from this initial research effort would be heroic, particularly because our study was limited to investigating sell-side financial analysts. We acknowledge that there are constraints on our ability to rationalize the pattern of analysts' behavior for purposes of evaluating information content needs. Nevertheless, we hope that the research community's intellectual curiosity is stimulated by this study. Continued attempts to increase our understanding of the information needs of users will add to our knowledge and, potentially, to the value of the accounting product in a capital market environment comprised of many different types of investors.

¹¹To a great extent, this latter issue is addressed by the many studies that have surveyed analysts on their information needs.

¹²The quality of financial analyst forecasts is the subject of numerous studies, including Brown et al. (1987), Downen (1989), Givoly and Lakonishok (1980), Grof et al. (1979), and Ruland (1978), among many.

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