Information Requirements of Turnaround Managers at the Beginning of Engagements

WILLIAM B. FREDENBERGER, ASTRID LIPP,
AND HUGH J. WATSON

WILLIAM B. FREDENBERGER is an Associate Professor of MIS at Valdosta State University, Valdosta, Georgia. He received his Ph.D. at the University of Georgia. His primary area of research involves determining the information required to turn around failing businesses. In his consulting, he specializes in the development of customized production control and quality control information systems for manufacturing processes with one thousand or fewer employees, where off-the-shelf software is not appropriate.

ASTRID LIPP is an Assistant Professor of MIS at Clemson University, Clemson, South Carolina. After working as a freelance translator and interpreter as well as providing computer support, she earned a Ph.D. from the University of Georgia. Her research has dealt with organizational support for DSS, GSS support for knowledge acquisition from multiple experts, and expert system verification and validation.

HUGH J. WATSON is a Professor of MIS and holds a C. Herman and Mary Virginia Terry Chair of Business Administration at the University of Georgia. He is the author of twenty-one books and over a hundred journal articles. His research, consulting, and speaking focus on executive information systems, decision support, and data warehousing. He is a Fellow of the Data Warehousing Institute and Senior Editor of the *Journal of Data Warehousing*.

ABSTRACT: Managers who specialize in reviving failing businesses were surveyed to determine the information, the characteristics of the information, and the availability of the information they require during the first stage of a turnaround assignment, when the financial crisis must be addressed. One hundred turnaround managers rated the importance and availability of seven types of reports (financial, working capital, cost, expense, personnel, asset, and market analyses) at the onset of their engagements. For each type of report, the turnaround managers also specified which levels of reporting, time horizons, reporting intervals, and sources of the information they consider important. Finally, they specified how each type of report is used during financial crises.

Results indicate that not all information considered important by turnaround managers in financial crises is available when it is needed. The second major finding was that, for all seven types of analyses, turnaround managers prefer current information that is either by cost/profit centers or detailed, and for all but asset reports, a monthly reporting interval is preferred. Although they consider financial and working capital analyses most important, all seven types of reports are either directly or indirectly used to improve cash flows while a company is in a financial crisis. Because these analyses are not available, it appears that the former CEOs did not use the information that turnaround managers require.

Journal of Management Information Systems / Spring 1997, Vol. 13, No. 4, pp. 167–192

1061–0405 / 1997 $9.50 + 0.00.

KEY WORDS AND PHRASES: financial crises, information attributes, information characteristics, management information needs, turnaround, turnaround managers.

BUSINESSES IN THE 1990S FACE INCREASING GLOBAL COMPETITION, limited resources, escalating costs, and a turbulent environment. Many blue-chip firms that were profitable in the past have recently faced serious financial difficulties. At any given point in time, some firms are foundering. Although reorganizations, bankruptcies, and liquidations are not new phenomena, a profession that specializes in saving distressed firms has recently emerged.[1] Turnaround managers, as the members of this profession are called, are consultants who specialize in saving distressed firms from failure. They are management specialists who resolve financial crises and rehabilitate failing firms, regardless of the industry in which the firm is involved.

The owners or directors of a company that is experiencing a financial crisis hire a turnaround manager as either CEO or a consultant during a financial crisis. If there is a profitable core business, the turnaround manager initiates corrective measures and guides the firm through the crisis. Otherwise, the company is liquidated. After the crisis has passed, the turnaround manager first stabilizes operations and then develops a strategy that will allow the firm to become profitable and grow. Finally, a turnaround manager helps the owners hire a professional manager to run the company. At this point, a turnaround manager typically leaves to help another distressed firm [4, 36].

Crisis management during corporate turnarounds is different from managing a thriving business. Because the company is losing money, a turnaround manager does not have the luxury of dealing with benevolent suppliers, stockholders, creditors, and bankers. In addition, stakeholders are now giving turnaround managers less time to achieve positive results than they did in the past [25]. While most managers are trained to manage a profitable operation, different planning and control processes are needed to manage a losing operation. As the business environment becomes more competitive and more managers are confronted with the task of trying to revive failing businesses, they will need to understand how experienced turnaround managers use information for crisis management during a turnaround. Turnaround managers' use of information also reveals the mistakes that managers made that resulted in financial crises. According to Altman, "The overwhelming cause of individual firm failures is some type of managerial incompetence" [1, p. 17].

Davenport [8] contends that information systems (IS) researchers should focus attention on the information needed to manage and operate organizations. IS researchers have the background, skills, and interests to contribute in this important area, which is not covered by other academic disciplines. This study adds to the body of knowledge about the information needed to manage organizations as well as to the more specific situation of managing a firm that is in financial distress. As a result, an understanding of how turnaround managers use information can help managers avoid financial crises.

Previous Research

Turnarounds

A TURNAROUND HAS BEEN DEFINED AS "A SUBSTANTIAL and sustained positive change in the performance of a business" [4, p. 81], "a noticeable and durable improvement in performance" that turns "around the trend of results from down to up, from not good enough to clearly better, from underachieving to acceptable, from losing to winning" [16, p. 45], and as "a business firm that faces financial disaster or action taken to prevent the occurrence of that financial disaster" [33, p. 98]. The imprecision of these definitions can be attributed in part to the difficulty in detecting when a decline begins and when a full recovery has occurred.

Scherer [30, 31] reviewed about 600 articles, analyzed 300 case studies, and interviewed 80 turnaround managers. His research produced three important findings:

1. By not controlling the internal elements, management caused more than 80 percent of business failures.
2. The research identified the signals of early, midterm, and late decline, as well as signals that may appear in any stage. These involve both internal and external elements. The most common signals of early decline include a shortage of cash for meeting current obligations, increases in the aging of accounts payable and accounts receivable, a lack of sales growth, several quarters of losses, as well as late financial and management information. Increases in inventory and decreases in sales, eroding financial margins, increases in the dollar amount and frequency of advances from banks, and financial and management information that is unreliable and late are among the signals of midterm decline. Efforts to reduce operating costs that are not based on an analysis of the causes of the business problem, a cash crisis, and profit decreases that are ignored by management are some of the indicators of late decline. Signals that may occur during any stage of decline include sudden overdrafts, poor internal accounting, credit advances to customers who do not pay on time, and sales forecasts that predict that the company can sell its way out of difficulty.
3. Actions taken by turnaround managers to save firms from dissolution were classified as either strategic (involving a redefinition of the business), operational (changing how the company operates by cutting costs, generating new revenues, and reducing assets), or financial (changing the financial structure or management of the company).

There is consensus about the sequence of stages in a turnaround. Bibeault [4], Hofer [21], and Colino [7] identified six stages: (1) the decline, (2) management change, (3) evaluation, (4) emergency, (5) stabilization, and (6) return to normal profits and growth. Buccino's [6] four stages are different only in that the management change, situation diagnosis and strategy selection, and emergency action stages are combined in a single stage which Buccino calls the crisis stage. After a turnaround manager is

hired during the management change stage, he or she must simultaneously evaluate the condition of the company, formulate a strategy for recovering from the crisis, and deal with the financial emergency to address the crisis. For this reason, four stages in a turnaround were considered for this research: decline, crisis, stabilization, and recovery.

Fredenberger [12] summarized research on the decline phase of turnarounds. Although management could prevent or reverse the decline of an organization during all but the final stage by asking the appropriate questions [35], many companies fail to process information effectively to avoid or reverse the process of decline. As a result, those companies move from the decline to the crisis stage.

Turnaround managers' engagements extend over three stages: crisis, stabilization, and recovery [4, 6, 7, 21]. The types of actions they take can be classified as financial, operational, and strategic [2, 4, 19, 20, 21, 28, 29]. Both the objective of each stage and the type of action required by the turnaround manager vary in the three stages of a turnaround (see Table 1). The priorities in a turnaround are to manage first for cash flow, second for profits, and third for growth. Cash flow must receive the highest priority because it funds operations. Once cash flows are positive, profits become important because they fund growth. When operations are producing profits, growth receives priority because it counters attrition of customers and products.

This research focused on the information needs of turnaround managers during the crisis stage, in which cash outflows exceed cash inflows. According to Buccino, a company in this stage "has sustained heavy losses, is running out of cash and cannot cope with the situation any longer" [6, p. 23]. A business that is experiencing a crisis is either already insolvent or will become insolvent in the immediate future (a few days up to a few weeks) [4, 6]. Cash flow from operations is not enough to service debt and to pay expenses. If current management does not alter its practices quickly, the firm will face bankruptcy or liquidation. When cash flows are at least equal to or greater than cash outflows [6], the crisis is over, and the stabilization stage has begun.

Information Needed during Turnarounds

There are many published complaints by turnaround managers about the lack of information to diagnose problems and prescribe corrective actions for firms in financial crises. Table 2 summarizes problems associated with the information available during turnarounds.

Argenti [2] found that failing organizations neglect information systems. They also fail to respond well to long-term changes in the environment; systems for monitoring annual budgets, monthly variance reports, cash-flow forecasts, costing systems, and valuation of assets are either inadequate or missing. In addition, creative accounting decreases the value of financial ratios and increases reliance on nonfinancial information. (Although information systems technology has changed drastically since Argenti described these problems in 1976, all are included in Scherer's list of signals of decline [30, 31].) Goodman blames MIS design: "In turnaround companies the information format has often grown up piecemeal, different parts of it reflecting what different

Table 1. Management Priorities during the Stages of a Turnaround (from [4])

	Stages of a Turnaround		
Actions	Crisis	Stabilization	Recovery
Financial	Cash flow		
Operational		Profit	
Strategic			Growth

Table 2. Problems Associated with Information Available during Turnarounds

Source	Problems reported
Argenti [2]	• Neglected information systems • Inadequate or missing annual budgets, monthly variance reports, cash-flow forecasts, costing systems (marginal, opportunity, variable), and valuation of assets • Creative accounting
Goodman [16]	• Piecemeal information format
Bibeault [4]	• Lack of information • Useless accounting statements • Faulty presentations
Kibel [22]	• Reports too late for actions • Reports irrelevant to problems
Buccino [6]	• Lack of information
Whitney [36]	• Reports too late for action • Lack of segment analyses
Bahr [3]	• Reports mismatched to problems • Reports too late for action

executives along the way asked for" [16, p. 185]. Such a piecemeal MIS does not provide accurate, timely, and useful information. Bibeault describes three types of deficiency in information systems of companies experiencing financial crises: "out-and-out lack of information, over-reliance on accounting statements that do not resemble operating realities, and basic traps in presentation due to faulty conceptualizations" [4, p. 217].

Buccino observes that important information is not available: "very often the turnaround manager has to work with only 70 percent of the data [that are needed] on hand" [6, p. 68]. Whitney provides details about missing information: "The fact is that 9 out of 10 turnaround companies are starved for such basic information as timely reports on what is selling, to whom, and how much" [36, p. 115].

Bahr finds that the information that is available is not usable: "In troubled companies, we see a lot of numbers, but they are too complex, too simple, mismatched to the requirements or just ignored. And they are nearly always too late" [3, p. 686]. Kibel criticizes the currency of information: "The monthly and weekly reports you need to run your business are too late for meaningful actions, and it seems that the information they provide is not relevant to the problems that must be solved on a daily and sometimes hourly basis" [22, p. 48].

Table 3. Analyses Needed during a Turnaround

1. *Financial analyses* (Kibel [22])
Balance statements
Income statements
2. *Working-capital analyses* (Kibel [22])
Cash-flow statements—daily, weekly, monthly, quarterly
Accounts receivable sales/collection/aging analyses
Notes receivable aging analyses
Inventory turnover, on-hand, sales/day, ABC analyses
Accounts payable aging analyses
Notes payable aging analyses
Secured debt analyses
Lender availability
3. *Cost analyses* (Sloma [33])
Direct & indirect labor compensation $ & % sales
Product material cost % sales
Product material cost per supplier % sales
4. *Expense analyses* (Sloma)
Sales/marketing other expense % sales
Finance/administration other expense % sales
Engineering in-house/contract product-related expense % sales
Warranty expense % sales
5. *Personnel analyses* (Sloma)
Burden people-related variable & fixed expense % sales
Compensation $ per direct & indirect labor employee
Overtime premium $ per direct & indirect labor employee
Sales/marketing people-related expense % sales
Finance/administration people-related expense % sales
Engineering in-house/contract people-related expense % sales
6. *Asset analyses* (Sloma)
Burden plant-related variable & fixed expense % sales
Sales dollars per plant square foot
Capacity utilization % plant, equipment & machinery
7. *Market analyses* (Sloma)
Product line gross margin % profitability
Product, model, catalog number gross margin %
Cumulative margin $ by product, model, catalog number
Customer gross margin $ profitability & % profitability
Cumulative gross margin $ by customer/region/channel/rep
Product line margin/customer/region/channel/representative
Sales dollars per employee

Although lack of needed information and the unreliability of the information that is available are often mentioned, only two practicing turnaround managers provide insight into exactly what information they consider important. Kibel [22] and Sloma [33] describe in detail the information they consider important, but their judgments

Table 4. Conceptual Framework Showing the Analyses and Attributes of Information Needed during Turnarounds

Types of analysis (Kibel [22]; Sloma [33])	
Financial:	Expense:
1. balance sheet	1. sales expense/product
2. income statement	2. general expense/product
	3. administrative expense/product
Working capital:	Personnel:
1. cash flow	1. management
2. accounts receivable	2. employees
3. notes receivable	
4. inventory	
5. accounts payable	Asset:
6. notes payable	1. machines & equipment
7. secured debt due	2. land & buildings
Cost:	Market:
1. materials/product	1. sales/product
2. labor/product	2. sales/customer
3. overhead/product	3. competition
4. purchases/product	4. industry
Attributes of information (Gorry & Scott Morton [17])	
Source:	Currency:
1. largely internal	1. current
2. external	2. old
Scope:	Required accuracy:
1. very wide	1. high
2. well defined, narrow	2. low
Level of aggregation	Frequency of use:
1. detailed	1. very frequent
2. aggregate	2. infrequent
Time horizon:	
1. historical	
2. future	

about the relative importance of various kinds of information do not coincide. Kibel emphasizes the importance of financial and working-capital information, while Sloma stresses the importance of cost, expense, personnel, asset, and marketing information. The information that Kibel and Sloma feel is important is combined and organized into the following seven categories in Table 3: financial, working capital, cost, expense, personnel, asset, and market information. Although there is a lot of research about failing businesses, summarized by Pearce [27], there is no research about the information needs of top management during financial crises.

Characteristics of Information Needed during Turnarounds

The categories of information emphasized by Kibel [22] and Sloma [33], together with the Gorry and Scott Morton [17, 18] framework, suggest a conceptual model. All of the categories of information that Kibel and Sloma claim are needed during the crisis stage (financial, working capital, cost, expense, personnel, assets, and market analyses) have characteristics identified by Gorry and Scott Morton: Namely, each item of information has a source, scope, level of aggregation, time horizon, currency, required accuracy, and frequency of use. Kirs, Sanders, Cerveny, and Robey [23] found support for the framework when they asked 223 M.B.A. students to rate the importance of each of the information characteristics or attributes for managers faced with scenarios that represented operational control, management control, and strategic planning activities. The types of information and their characteristics are presented in Table 4. They represent the conceptual foundation for our research. Naumann [26] pointed out that the Gorry and Scott Morton framework [17] consists of many composite variables that have no clear operational definitions. In empirical research, such "summative" variables must be replaced with more narrowly defined variables.

Research Questions

TURNAROUND MANAGERS ARE HIRED TO DO WHAT THE PREVIOUS MANAGERS could not do—reverse their companies' decline. Since turnaround researchers attribute the decline of most companies to managers' failure to monitor critical information and react appropriately [1, 30, 31], this study explored how turnaround managers do what previous management was unable to do—use information effectively to achieve a turnaround.

The primary research question was: What are the information needs of turnaround managers in financial crises? More specifically, turnaround managers were asked to respond to the following questions:

1. How important is each type of information?
2. How likely is each type of information to be available at the beginning of a turnaround engagement?
3. What characteristics should important information have?
4. How is the important information used?

The research data obtained to answer the first two questions will be used to test the following hypothesis for each of seven types of reports (financial, working capital, cost, expense, personnel, asset, and market analyses):

> *H1–H7: There is no difference between the importance and the availability of this type of report.*

If the results indicate that there is no difference in the ratings of the importance and the availability of each type of report, then the information that turnaround managers need is typically available to them at the beginning of their engagements. On the other

hand, if the null hypothesis must be rejected for a type of report, then that information is not as readily available as turnaround managers feel it should be.

Research Method

The Sample

THE TURNAROUND MANAGEMENT ASSOCIATION, A NATIONAL NONPROFIT trade association, is the only organization that serves the needs of professional turnaround managers and maintains a database of active turnaround managers. At the time of this research, the executive director of the Turnaround Management Association estimated that approximately 150 of its members were actually turnaround managers. Other members included lawyers, bankers, and CPAs, who assist turnaround managers and turnaround consultants.

Fourteen turnaround managers, who were identified by the executive director of the Turnaround Management Association as among the most active and qualified in the profession, participated in the development of the survey instrument. Eight of these turnaround managers also appeared on Lombino's [24] honor roll of turnaround managers.

The Survey Instrument

A three-stage process was used to develop the survey instrument. In the first stage, the conceptual framework consisting of the various types of analyses and the characteristics of the information resulting from these analyses (Table 4) was presented to six pilot-study participants selected from the study population. The pretesters determined that the types of analysis in the framework were appropriate, but they suggested changes in the terms used to describe the characteristics of the resulting information. Table 5 shows the modifications made to the Gorry and Scott Morton framework to operationalize the constructs in their framework.

These turnaround managers felt that the continua Gorry and Scott Morton [17] used to describe the characteristics of information were too vague. Namely, they were unsure about (1) whether "external" sources of information included stockholders, creditors, suppliers, and customers, or only sources that were not constituencies of the firm, as well as whether all employees of a firm or just the employees of a strategic business unit were "internal" sources; (2) whether a "wide" scope meant global, national, or regional, whether it applied to the entire company, only to the industry of the company involved in the turnaround, or to all industries, as well as whether a "narrow" scope referred to strategic business units, functional areas, or departments; (3) whether "aggregate" information was information about the entire company or information segmented by strategic business units, and whether "detailed" information should include individual journal listings; (4) whether or not historical time horizons begin with the last operating period and future time horizons with the next operating

Table 5. Relationship between the Characteristics of Information in the Gorry and Scott Morton Framework [17] and the Information Characteristics Used in This Research

Gorry & Scott Morton information characteristics		Information characteristics for this research	
Source:	→	Sources of information:	
Largely internal		Employees	MIS
External		Customers	Suppliers
		Lenders	External databases
Level of aggregation	→	Level of reporting	
Detailed		Detailed	
Aggregate		Unit	
		Consolidated	
Time horizon:	→	Time horizon:	
Historical		Past	
Future		Current	
		Future	
Frequency of use:	→	Reporting interval	
Very frequent		Daily	Quarterly
Infrequent		Weekly	Annual
		Monthly	
Scope:		(implied in source and level of aggregation)	
Well defined, narrow			
Very wide			
Currency:		(implied in time horizon)	
Highly current			
Quite old			
Required accuracy:		(as high as possible)	
High			
Low			

period, as well as how the current operating period should be classified; (5) how much time must have elapsed for information to be classified as "old"; and (6) how a turnaround manager can reliably measure accuracy (as a matter of decimal places?) and frequency of use (by counting the number of times a report is reviewed?).

To eliminate these ambiguities, pretesters recommended that "level of aggregation" be rephrased as "level of reporting" and that "frequency of use" be changed to "reporting interval." They felt that "level of aggregation" was too ambiguous and that turnaround managers would have difficulty in remembering how frequently they used information. Instead, the pretesters suggested that the continua be replaced by cate-

gorical variables. Pretesters also felt that questions about the scope, currency, and required accuracy of information should be dropped. The scope and currency of information were deemed too abstract to be measured by categorical variables. These turnaround managers felt that the accuracy of information should always be as high as possible. Turnover researchers [4, 36] confirm that available information is never accurate enough.

Six additional turnaround managers from the study population were asked to review a draft of the survey instrument that incorporated changes suggested by the first pretesters. These managers recommended several formatting and editing changes, which were subsequently incorporated into the survey instrument. Two additional turnaround managers reviewed the survey instrument after the changes requested by the second group of pretesters had been made. They did not request any further changes. In the final version of the survey instrument, which is included in the appendix, respondents were asked to circle all attributes of reports that are at least "rarely" important to them. Restricting the respondent to a single most important choice was inappropriate for this research because several choices may be important for different reasons.

Administration of the Survey

The Turnaround Management Association mailed the final version of the survey instrument to all of its approximately 500 members. A cover letter from the researchers, a cover letter from the executive director of the Turnaround Management Association, and a questionnaire designed to obtain demographic information about the respondents were included with the information needs questionnaire described previously. The researchers' cover letter emphasized that only practicing turnaround managers should complete the questionnaire. A second mailing was sent several weeks later to approximately 250 nonrespondents (members whose questionnaires had not been returned as undeliverable and who had not replied that they were not practicing turnaround managers).

One hundred completed questionnaires were returned by practicing turnaround managers as a result of the two mailings (sixty-eight were returned after the first mailing; thirty-two after the second). Since an estimated 150 members were practicing turnaround managers, the response rate was approximately 67 percent. We believe that the high response rate was due to the support of the Turnaround Management Association, the manner in which the questionnaire was developed, and its compact format. Because of the high response rate, the authors did not believe that an investigation of nonresponse bias was warranted.

Results

Profile of Respondents

On average, respondents are 45 years old (range: 28–70), have about 23 years of work experience (range: 5–50), and have about 9 years of turnaround consulting experience

(range: 1–35). About 61 percent of the respondents have master's degrees, while most of the others have bachelor's degrees. They are associated with firms that have an average of seven consultants (range: 1–100) and $400,000 in assets (range: $10,000–$3,500,000). Turnaround firms headquartered in New York, Texas, California, and Illinois were most heavily represented in this survey.

About 40 percent of the respondents worked for five to fifteen firms engaged in turnarounds in the last three years. Another 34 percent worked for fewer than five firms during the previous three years. Almost 17 percent worked for 16 to 25 troubled firms, and 7 percent worked for more than 25 troubled companies. Almost all respondents (90 percent) had worked for companies engaged in manufacturing. In contrast, only 63 percent had worked for companies involved in service industries, 53 percent for wholesalers, 46 percent for retailers, and 45 percent for companies in the construction industry. Half of the respondents' clients (51 percent) were described as being in the late decline stage at the onset of turnaround engagements, while a third (34 percent) were in the middle of the decline stage, and a few (15 percent) were in the early decline stage. Client companies' average assets and revenues are about $60,000,000 (range: $10,000–$10,000,000,000). Over half of the respondents (56 percent) are usually hired as consultants, while approximately one-third of the respondents (33 percent) become interim CEOs. The remaining respondents (11 percent) are prepared to assume either role in their engagements.

Suggested Reports

The reports suggested by the turnaround managers who pretested the questionnaire appear to match those used by the respondents. Only 5 of the 100 respondents suggested specific reports (one per respondent) that were not included in the questionnaire. These five reports involve corporate and payroll tax returns, litigation, liquidation, viability, and breakeven points. Bibeault [4], Kibel [22], Sloma [33], and Whitney [36] suggest all of these except the corporate and payroll tax return analyses. These reports are important, but they are special reports used by turnaround managers one time in the first part of an engagement. They are not recurring reports within a firm's information system, and, therefore, turnaround managers do not expect to find these reports at the onset of an engagement. Since only one respondent rated the importance, availability, preferred characteristics, and use of each of these reports, they are not discussed further. Respondents' ratings for these reports appear in Fredenberger [12].

Importance versus Availability of Information

Table 6 shows the results of multiple paired t tests, which were used to compare the degree of difference between the mean ratings of the importance of information and the availability of information that turnaround managers need to perform various analyses. Types of analysis are listed in descending order, according to the mean rating for the importance of each type of analysis. As the t values and p values in Table 6 show, the mean score for the importance of the information was significantly greater

Table 6. Results of Paired *t* Tests of Means

Analyses	N	Paired *t*-tests of means* Important	Available	*t* value	*p* value
Financial	100	4.79	4.05	9.47	< 0.001
Working capital	100	4.57	3.65	9.76	< 0.001
Market	100	4.16	2.80	12.73	< 0.001
Cost	100	4.12	2.85	13.73	< 0.001
Personnel	100	4.07	2.73	12.05	< 0.001
Asset	100	3.87	2.94	8.43	< 0.001
Expense	100	3.76	2.49	11.61	< 0.001

* $(1 - a/n) = 1 - a = 99.29$, where $n = 7$ and $a = 0.05$.

than the mean score for the availability of the information needed to perform each type of analysis. These results reveal that turnaround managers are forced to make decisions based on incomplete information at the onset of their engagements.

Characteristics of Information Needed

Statistical tests could not be used to determine if differences in the mean ratings for information characteristics were significant because the respondents' choices were not mutually exclusive [14]. For example, the respondents could circle more than one of the three levels of information (detailed, by cost/profit centers, and consolidated) for each type of report.

In the place of significance tests, proportions were used to summarize the respondents' answers (Table 7). These proportions were calculated by summing the number of respondents who considered each alternative (for example, financial analyses by cost/profit centers) important. The resulting sum was then divided by the total possible responses for each choice (*N*), to arrive at the proportion of respondents who thought each alternative characteristic was important for a particular type of analysis. This calculation was performed for each combination of type of analysis and information characteristic (for example, financial analysis and reporting level). The conclusions that follow focus on describing each type of analysis performed during a turnaround, in terms of the most preferred characteristic for each type of analysis. Table 8 shows these relationships. Analyses for which respondents preferred the same information characteristics are grouped together.

Most of the respondents prefer monthly financial and expense reports consisting of current data reported by cost/profit centers. Further, they want these analyses to come from internal sources. Turnaround managers' preferences for cost and personnel reports are similar to those for financial and expense reports in that they prefer current information reported monthly. However, reporting by cost/profit center and in detail are both important; also, employees who do not work in MIS are considered far more important sources of personnel information than any other group, including MIS personnel. Finally, respondents' preferences for market, working capital, and asset

Table 7. Preferences for Various Types of Reports and Characteristics of Information (Expressed as the Proportion of the Respondents Who Feel that Information Having a Characteristic Is Important)

Reporting level:	Detailed	By cost/profit centers	Consolidated
Financial	0.35	0.53	0.43
Working capital	0.47	0.30	0.37
Market	0.36	0.44	0.24
Cost	0.46	0.47	0.21
Personnel	0.38	0.36	0.27
Asset	0.45	0.34	0.31
Expense	0.31	0.51	0.18

Time horizon:	Past	Current	Future
Financial	0.61	0.91	0.48
Working capital	0.29	0.86	0.42
Market	0.43	0.78	0.51
Cost	0.49	0.84	0.36
Personnel	0.24	0.83	0.26
Asset	0.21	0.82	0.31
Expense	0.44	0.81	0.35

Reporting interval:	Daily	Weekly	Monthly	Quarterly	Annual
Financial	0.01	0.10	0.81	0.18	0.11
Working capital	0.17	0.38	0.55	0.08	0.05
Market	0.01	0.08	0.43	0.27	0.36
Cost	0.05	0.22	0.64	0.09	0.17
Personnel	0.03	0.11	0.39	0.26	0.20
Asset	0.01	0.02	0.35	0.30	0.39
Expense	0.00	0.13	0.69	0.14	0.14

Source of information:	Employees	MIS	Customers	Suppliers	Lenders	Databases
Financial	0.56	0.59	0.06	0.07	0.10	0.10
Working capital	0.61	0.50	0.09	0.13	0.24	0.06
Market	0.60	0.34	0.39	0.27	0.06	0.42
Cost	0.62	0.63	0.01	0.14	0.01	0.11
Personnel	0.76	0.24	0.13	0.11	0.15	0.07
Asset	0.60	0.42	0.01	0.06	0.28	0.21
Expense	0.57	0.64	0.03	0.02	0.00	0.09

reports are similar to those for personnel analyses. Again, respondents rated non-MIS personnel as the most important sources of information. However, respondents prefer detailed working capital and asset information over information by cost/profit centers, and annual asset reports are considered slightly more important than monthly reports.

Respondents as a group favored one reporting level and one time horizon for each type of report, but their answers show that analyses involving all reporting levels and

Table 8. Characteristics of the Information Turnaround Managers Need for Each Type of Analysis

Reports	Reporting level	Time horizon	Reporting interval	Source of information
Financial	Cost/profit centers	Current	Monthly	MIS & non-MIS employees
Expense	Cost/profit centers	Current	Monthly	MIS & non-MIS employees
Cost	Cost/profit centers & Detailed	Current	Monthly	MIS & non-MIS employees
Personnel	Cost/profit centers & detailed	Current	Monthly	Non-MIS employees
Market	Cost/profit centers & detailed	Current	Monthly & Annual	Non-MIS employees
Working capital	Detailed	Current	Monthly	Non-MIS employees
Asset	Detailed	Current	Annual & monthly	Non-MIS employees

all time horizons have some importance. For example, while reporting by cost/profit centers received the highest proportion of points (0.53) and was therefore considered most important for financial analyses, consolidated (0.43) and detailed (0.35) reporting were close behind in respondents' assessments of the relative importance of the three levels of reporting. (Responses for individual reports show that consolidated information was considered most important for the balance sheet, as well as for reports of notes receivable and credit available; it was as important as detailed information about notes payable.) In contrast, some reporting intervals and some sources of information were rated as having no or minimal importance, while others were rated almost as high as the characteristics that are of primary and secondary importance. For example, although employees who are not members of the MIS group were rated as the most important sources of market reports, and databases were rated second, customers, MIS employees, and suppliers are only slightly less important than databases. Similarly, lenders and databases have some importance as sources of asset information; weekly reporting of working capital information, annual and quarterly reporting of market information, quarterly and annual reporting of personnel information, as well as monthly and quarterly reporting of asset information have some importance to turnaround managers at the beginning of a turnaround engagement.

Uses of Information

Respondents reported that they use financial analyses primarily to improve cash flow, and secondarily to defer debt, cut expenses, cut costs, and downsize operations (Table 9). While they also use working capital analyses primarily to improve cash flow, these

Table 9. Preferences for Using Information (Expressed as the Proportion of Respondents Who Feel That a Report Is Important for a Particular Use)

Types of reports	Use of information*						
	L	D	E	C	S	R	M
Financial	0.57	0.48	0.48	0.45	0.45	0.33	0.27
Working capital	0.73	0.45	0.23	0.23	0.22	0.18	0.19
Cost	0.57	0.10	0.39	0.71	0.25	0.21	0.25
Expense	0.56	0.08	0.69	0.34	0.28	0.24	0.33
Personnel	0.39	0.07	0.49	0.40	0.54	0.19	0.26
Asset	0.56	0.30	0.32	0.28	0.58	0.14	0.11
Market	0.34	0.05	0.15	0.16	0.32	0.49	0.73

* L = improve cash flows; S = downsize; D = defer debt; R = increase revenues; E = cut expenses; M = refocus marketing; C = cut costs.

have only one secondary function—to defer debt; all other uses of working capital analyses are far less important. As expected, respondents use both cost and expense analyses primarily to cut costs and expenses, respectively, and secondarily to improve cash flow. Both personnel analyses and asset analyses are used primarily to downsize operations; however, personnel analyses are also used to cut expenses, while asset analyses are used to improve cash flow. Market analyses are used primarily to refocus marketing and secondarily to increase revenues.

Discussion

Why Important Information Is Not Available

IT IS CLEAR FROM THE FINDINGS THAT TURNAROUND MANAGERS operate in an environment in which not all important information is available to them when they need it. Whitney provides one reason for this lack of information: "During the onset of the engagement there is a conspiracy of silence and an abundance of misinformation because the people are scared" [36, p. 6]. Employees and managers know there are going to be personnel reductions because of the crisis; they do not want to provide information that may lead to their dismissal.

There is another reason why important information is not available: CEOs of failing firms are blinded by their management style, which may have been successful under different business conditions [4]. As a result, they are not receptive to information that conflicts with their assumptions. One respondent commented that "it is unusual to find one [owner manager] in the early stages of decline willing to admit that he needs help. . . . I have found that almost always the information that a client has amassed on cost/profit/unit (if any) is inaccurate and, in part, has led to his problems." According to Scherer [30, 31], top managers either fail to monitor or ignore signals that their companies are in decline, or they respond inappropriately. The general lack of specific

goals and priorities throughout failing firms results in a low level of effectiveness in organizational reporting systems [11].

Preferences for Types of Reports

The respondents' preference for financial and working capital reports above all other types of reports is not surprising since turnaround managers' concerns about liquidity during financial crises have been emphasized in the turnaround literature [4, 36]. Respondents' ratings of the relative importance of the seven types of reports confirm that they consider information that helps them address the financial crisis most important; this coincides with Kibel's [22] emphasis on the importance of financial and working-capital information.

Important Characteristics of Each Type of Report

For all types of reports, respondents preferred that the reporting level be either at the cost/profit center level or detailed. One respondent wrote that "review of consolidated figures may require more detailed information to help explain the reasons for certain symptomatic problems." Since there was a significant difference between the mean ratings of the importance and the availability of all seven reports (Table 6), the preference of the respondents for detailed information or information arranged by cost/profit center is consistent with Bibeault's [4] finding that reports showing results for each cost/profit center are not available.

The respondents strongly preferred current information, as opposed to information about the past and future. A respondent explained: "Other than cash flow, which should be projected, I see little need for anything other than the most current information." This preference is consistent with the time horizon suggested by Sloma [33], who uses only the next three months for his monthly rolling forecasts in financial crises. Sloma also uses information that is no more than six to twelve months old in preparing the forecasts.

Respondents preferred to receive most types of reports at monthly intervals. However, for asset analyses, respondents felt that monthly reports about machines and equipment were only slightly more important than annual reports. In contrast, annual reports of land and buildings were more important than monthly reports. Quarterly asset reports were only slightly less important than monthly and annual reports (see Table 7). These preferences show that turnaround managers use most reports frequently enough that they need to be revised at least every month.

Bibeault [4], Kibel [22], Sloma [33], and Whitney [36] state that turnaround managers may need cash-flow reports at hourly and daily intervals if the shortage is severe. Under these circumstances, it is surprising that daily reports of working capital were judged to be of slight importance. However, a breakdown of respondents' preferences by individual report shows that weekly reports of cash flow, accounts receivable, and accounts payable are most important, and reporting cash flow on a daily basis is more important than monthly reporting.

Respondents' preference for current information reported on a monthly basis, for six types of reports, coincides with the emphasis that Bibeault [4], Finkin [11], Kibel [22], Sloma [33], and Whitney [36] all place on the resolution of the financial crisis at the beginning of a turnaround. All these researchers stress that turnaround managers usually have much less than ninety days to resolve the negative cash-flow problem. Creditors may have cut off supplies, and bankers may be calling loans. Turnaround managers must get immediate results within the firm by using their experience, judgment, and instincts. If they are not successful within days of their engagement, there will be no need for information about more distant time horizons.

Either MIS personnel, non-MIS employees, or both were considered the most important sources of information for all types of analyses. According to one respondent, turnaround managers seek information from internal sources because they "do not want to worry any outside parties," if they are not aware of the company's problems.

In four analyses (personnel, market, working capital, and asset analyses), non-MIS employees were the primary sources of information. Whitney explains that in financial crises,

> Face-to-face confrontations are necessary to sort out useful information from politically motivated information. The new leader cannot wait for reports to filter up through the organization, nor can he always depend on the information in such reports. By the time the reports get to him, they will have been so laundered that he may have difficulty in identifying the source or determining the gravity of the problems facing the enterprise. These face-to-face confrontations give the new leader firsthand information about his people because he will be dealing with them directly. Also, face-to-face confrontations in meetings reduces the political power of possessing information and helps to generate creative solutions to problems. [36, p. 105]

Bibeault provides another reason why turnaround managers go directly to non-MIS employees. Working capital, personnel, asset, and market analyses may not be available within the firm's information systems because there is "overrreliance on accounting numbers. Managerial accounting does not exist in most companies. Accountants still get all hung up in procedures, debits, credits, GAAP principles, and tax refinements, and often leave management holding the bag on the information it requires to manage" [4, p. 219]. Bibeault's comment helps explain why the MIS functional area is one of the two major sources of information for the remaining three types of analyses: financial, cost, and expense reports. If the sole purpose of MIS is to support the needs of accounting departments, then MIS will primarily generate financial, cost, and expense analyses to satisfy the needs of external constituencies (e.g., IRS, SEC). On the other hand, an MIS functional area that is satisfying the needs of internal constituencies will also be generating working capital, personnel, asset, and market analyses, which operating management needs to run the business. Results suggest that MIS groups in the companies where respondents have worked were only set up to satisfy external constituencies, and the respondents did not expect to receive useful working capital, personnel, asset, or market reports from the MIS group.

Whitney's [36] use of the word "report" above suggests that he does not consider

information that a turnaround manager receives in a face-to-face meeting a report. It is likely that respondents also assumed that financial and working-capital information obtained verbally were not reports. One turnaround manager wrote: "[W]e would also demand that elements of the income statement and balance sheet be available to the hour for account balances of cash and reported daily for such items as cash, backlog, sales, and accounts receivable." Such an interpretation of the word "report" would explain the discrepancy between findings that turnaround managers prefer monthly reports and the observations of Bibeault [4], Kibel [22], Sloma [33], and Whitney [36] that turnaround managers monitor financial and working-capital information on an hourly and daily basis. Even if the respondents do not see a need for a computer-generated "report" printed on an hourly or daily basis by MIS personnel, this does not mean that they are not monitoring hourly and daily changes in the status of the company.

Uses of Information

Respondents agreed with turnaround researchers [4, 15, 22, 36], when they reported that improving cash flow is always an important use of information during a financial crisis. Not only do respondents' reported uses of the seven types of reports support the conclusion that their primary focus during the beginning of a turnaround is on addressing the financial crisis, but their responses about how the reports are used also help reconcile what appears to be a discrepancy between Kibel's [22] emphasis on the importance of financial and working-capital analyses and Sloma's [33] emphasis on the importance of cost, expense, personnel, asset, and marketing information. While respondents felt that the most important use of financial analyses is to improve cash flow, they indicated that the use of financial analyses to defer debt, cut expenses, downsize, and cut costs is only slightly less important. These secondary uses of financial analyses coincide with the information that Sloma highlights. Conversely, the turnaround managers' responses about the importance of the analyses that Sloma stresses point to the information on which Kibel focuses: Namely, respondents indicated that improving cash flow, the primary use of financial and working-capital analysis, is an important use of cost, expense, personnel, asset, market, and revenue analyses. Kibel highlights the reports that show the results of cutting costs and expenses, downsizing, and refocusing marketing, while Sloma emphasizes the reports used to track the various strategies that are intended to ultimately result in improved financial and working-capital reports.

Comparison of Findings with the Gorry and Scott Morton Framework

As noted previously, the terms used to describe the characteristics of information in the Gorry and Scott Morton framework [17] had to be revised to accommodate the tasks, thinking, and practices of turnaround managers. In addition, many of the findings appear to be surprising in light of the Gorry and Scott Morton framework. For all information characteristics specified by the Gorry and Scott Morton frame-

For all information characteristics specified by the Gorry and Scott Morton framework, turnaround managers preferred those that Gorry and Scott Morton label as appropriate for lower-level managers engaged in operational control rather than top managers involved in strategic planning.

A review of the activities in which turnaround managers are involved simultaneously during a financial crisis may be helpful in understanding the results obtained and in reconciling them with the Gorry and Scott Morton framework. As previously noted, turnaround managers are involved in financial, operational, and strategic activities during a turnaround [2, 4, 19, 20, 21, 28, 29]. For example, the manager who supervised the turnaround of Scott Paper Co. "simultaneously cut costs, built a new management team, bolstered the balance sheet, sold assets and plotted strategy" [25, p. B1]. One explanation for the findings of this study is that turnaround managers are engaged primarily in operational and management control rather than strategic planning at the beginning of a turnaround engagement. Respondents were not asked to evaluate the importance, the availability, the characteristics, and the uses of information separately for the three different types of activities for which they are concurrently responsible. The fact that the characteristics associated with strategic management in the framework were given a lower proportion of points may reflect the fact that strategic actions become the top priority in the recovery stage of a turnaround (Table 1).

Respondents' strong preference for monthly reporting intervals for all but asset analyses suggests that they use most kinds of reports for strategic planning as well as management control, while they rely mostly on face-to-face contacts for information to support operational control. During a turnaround, a month may represent a long reporting interval (or infrequent use of information, according to the Gorry and Scott Morton framework), whereas personnel involved in strategic management at a profitable company with stable earnings patterns may be able to use information reported annually.

Our results show that turnaround managers must have information available to deal with operational control, management control, and strategic planning simultaneously. They suggest that managers who are running companies that are not obviously in decline or in a financial crisis may need to focus more on the information that Gorry and Scott Morton associate with operational control (that is, detailed as opposed to aggregate information), and not only on the information deemed appropriate for strategic planning, to avoid falling into decline and becoming embroiled in a financial crisis. Research by Fredrickson and Mitchell [13] and Eisenhardt [10] supports such an interpretation of the findings.[2]

Our findings, as well as those of Fredrickson and Mitchell [13] and Eisenhardt [10], suggest that the Gorry and Scott Morton framework may no longer accurately describe the information required to support strategic planning in many companies. Intuitively, these findings make sense. It would be naive to conduct strategic planning sessions infrequently, using several years of historical data to project forward for a few years, when the environment is characterized by unpredictable changes in the market, competition, and so on [5].

Implications for Managers and MIS Personnel

Our findings suggest that turnaround managers do not expect MIS to provide hourly or daily updates. This is understandable in organizations whose information systems are in disarray and thus collect the wrong information or present information inappropriately. An information systems group may not be able to update information systems quickly enough to meet the requirements of a newly hired turnaround manager who has only a few weeks or months to resolve a financial crisis. However, although turnaround managers do not seem to expect information systems to serve an internal constituency, this does not mean that such a role for information systems is not possible or appropriate. The findings of this research can be used as a basis for assuring that new and existing systems provide managers with the information that turnaround managers consider important, and that the information made available have the characteristics that turnaround managers consider important. Managers who ask the questions they should be asking [35] and have accurate information available to them through information systems to answer these questions may have a better chance of recognizing when their companies fall into a decline; such managers may be able reverse the decline early and prevent a financial crisis.

Comments by the respondents as well as by turnaround researchers indicate that both groups use an operational definition of "report" that does not consider the possibility that MIS groups could provide real-time data to managers through executive information systems. It is unlikely that the turnaround managers who participated in the study had experience with EISs at the time of the study. However, real-time information is becoming more readily available to managers when companies have executive information systems (EIS). Many managers who run profitable businesses insist on having the ability to "drill down" to real-time, detailed data in order to better understand what is going on in the business. Watson, Rainer, and Koh found that "[t]he increasingly competitive environment and the need for timely information are the main external and internal pressures that lead to the development of an EIS" [34, pp. 27–28].

This research did not investigate what kind of information systems and information systems personnel were available to managers who could not reverse the decline of their companies. Followup research could explore what information systems, advanced databases, and fourth-generation information retrieval and report generation tools were available in companies that require the services of a turnaround manager. It would also be useful to know whether and how turnaround managers use advanced information tools, if these are available.

There will always be legitimate reasons for turnaround managers to seek information via face-to-face encounters for the reasons given by Whitney [36]. One respondent noted the need for soft information: "Financials . . . will not disclose who can do what, when, and how, how fast, and how well." Another respondent wrote that "the validity of existing reports of poorly managed companies is *never* to be trusted." Nevertheless, it is possible that top managers can no longer afford to be as removed from operational details as Gorry and Scott Morton suggested was appropriate in 1971. Under these

circumstances, EIS that make the right information available and present it in a form that is required by turnaround managers may give managers the information needed to avoid turnarounds.

Conclusion

MAJOR INSIGHTS OBTAINED FROM THIS RESEARCH INCLUDE the following:

- Of seven major types of reports, turnaround managers consider financial and working-capital reports most important to them at the beginning of a turnaround engagement.
- Important information needed to perform all seven kinds of analysis is not available at the beginning of a turnaround engagement.
- Turnaround managers consider information that is arranged by cost/profit center or detailed more important than consolidated information.
- Current information is far more important than information about the past or future for all seven types of analyses.
- Turnaround mangers strongly prefer a monthly reporting interval for all types of reports except those for assets; then annual reports are preferred slightly over monthly reports.
- Both MIS group members, employees who are not part of the MIS group, or both, are the primary sources of information for all types of analyses.
- All seven types of reports are either directly or indirectly used to improve cash flows during a financial crisis.

This study revealed that real-time information—not planning information—is the most important information for supporting the activities of turnaround managers at the onset of their engagements in financial crises. Although this study did not ask turnaround managers to consider their information needs when they are engaged in financial, operational, and strategic management separately, our results nevertheless raise questions about the applicability of the Gorry and Scott Morton framework in describing the information needed to support turnaround managers and possibly even managers who need to prevent or reverse a company's decline.

At the beginning of engagements, turnaround managers most urgently need current financial and working-capital analyses segmented by cost/profit centers that are reported at monthly intervals or even more often. Because they have difficulty in obtaining this information, it can be inferred that the CEOs of failing firms did not ask for it. If the CEOs had been consistently using this type of information, then company personnel would also be able to provide it to newly hired turnaround managers. These results suggest that CEOs of failing firms also did not have access to this information.

The study found that there is a gap between the information managers of firms in financial distress need and the information available to them. The literature further suggests that inadequate information systems contribute to these firms' problems. It seems logical to suggest that firms with information systems that provide the kinds of information used by turnaround managers are less likely to experience financial

distress than those that do not. This also suggests that the study findings can be used by information systems designers to better understand the information requirements for the reporting systems that they develop.

These findings suggest an opportunity for future research to investigate the information needs of firms that are in different stages of the business life-cycle (i.e., birth, growth, stabilization, decline, crisis, and turnaround). Information needs may vary with the stages in the cycle. Firms that are more successful and profitable may have less of a gap between the information needed and the information actually available. Research in these areas would provide better insights into the information needs of CEOs and the value of information.

NOTES

Acknowledgments: The authors would like to thank David Post, the executive director of the Turnaround Management Association, and the members of the Turnaround Management Association for their support of this research.

1. Although some individuals have specialized in managing turnarounds for years, the Turnaround Management Association was not founded until 1988 [31].

2. Fredrickson and Mitchell [13] examined the information used in strategic planning by a sample of firms. They found that the information used by successful firms was more current, it came primarily from internal sources, and fewer reports were generated. Eisenhardt studied microcomputer manufacturers in Silicon Valley. She determined that real-time information—that is, "information about a firm's operations or environment for which there is little or no time lag between occurrence and reporting" [10, p. 549]—not planning information, was actually being used to support successful strategic planning.

Eisenhardt [10] points out that the use of real-time information speeds issue identification. This allows managers to spot problems and opportunities sooner [9]. Researchers in artificial intelligence have found that intuition relies on patterns developed through continual exposure to actual situations [32]. Eisenhardt suggests that executives who attend to real-time information are actually developing their intuition. Aided by intuition, they can react quickly and accurately to changing stimuli in the firm and its environment. Eisenhardt concludes that real-time information gives managers intimate knowledge of their business and speeds decision making, while the use of planning information to support attempts to predict the future slows decision making and does not provide managers with first-hand knowledge about the business.

REFERENCES

1. Altman, E.I. *Corporate Financial Distress and Bankruptcy: A Complete Guide to Predicting & Avoiding Distress and Profiting from Bankruptcy*, 2d ed. New York: Wiley, 1993.

2. Argenti, J. *Corporate Collapse: The Causes and the Symptoms*. London: McGraw-Hill, 1976.

3. Bahr, C.C. Sick companies don't have to die. *Vital Speeches of the day, 54*, 22 (September 1, 1988), 685–688.

4. Bibeault, D.B. *Corporate Turnaround: How Managers Turn Losers into Winners*. New York: McGraw-Hill, 1982.

5. Bourgeois, L.J., III. Strategic goals, perceived uncertainty, and economic performance in volatile environments. *Academy of Management Journal, 28*, 3 (1985), 548–573.

6. Buccino, G.P. Crisis management, as tricky as 1, 2, 3. *Secured Lender, 42*, 6 (November–December 1986), 67–70.

7. Colino, R.R. Turnaround strategies for an international organization. *Journal of Business Strategy, 7*, 2 (Fall 1986), 52–61.

8. Davenport, T. Are more glory days ahead? *Information Week, 506* (December 19, 1994), 87.

9. Dutton, J.E., and Jackson, S.E. Discerning threats and opportunities. *Administrative Science Quarterly, 33*, 3 (1988), 370–387.

10. Eisenhardt, K.M. Making fast strategic decisions in high-velocity environments. *Academy of Management Journal, 32*, 3 (1989), 543–576.

11. Finkin, E. F. *Successful Corporate Turnarounds*. New York: Praeger, 1988.

12. Fredenberger, W.B. Information needs of turnaround managers in financial crises. Ph.D. dissertation, University of Georgia, 1990.

13. Fredrickson, J.W., and Mitchell, T. R. Strategic decision processes: comprehensiveness and performance in an industry with an unstable environment. *Academy of Management Journal, 27*, 2 (1984), 399–423.

14. Gibbons, J.D. *Nonparametric Methods for Quantitative Analysis*. New York: Holt, Rinehart and Winston, 1976.

15. Goldstein, A.S. *Handbook of Business Turnaround Strategies*. Wilmington, DE: Enterprise Publishing, 1985.

16. Goodman, S.J. *How to Manage a Turnaround: A Senior Manager's Blueprint for Turning an Ailing Business into a Winner*. New York: Free Press, 1982.

17. Gorry, G.A., and Scott Morton, M.S. A framework for management information systems. *Sloan Management Review, 13*, 1 (Fall 1971), 55–70.

18. Gorry, G.A., and Scott Morton, M.S. A framework for management information systems. *Sloan Management Review, 30*, 3 (Spring 1989), 49–61.

19. Hambrick, D.C., and Schecter, S. Turnaround strategies for mature industrial product business units. *Academy of Management Journal, 26*, 2, (June 1983), 231–248.

20. Hofer, C.W. Turnaround strategies. *Journal of Business Strategy, 1*, 1 (Summer 1980), 19–31.

21. Hofer, C.W. Strategies for business turnarounds. *Strategic Planning Management* (July–August 1983), 1–5.

22. Kibel, H.R. *How to Turn Around a Financially Troubled Company*. New York: McGraw-Hill, 1982.

23. Kirs, P.J.; Sanders, G.L.; Cerveny, R.P.; and Robey, D. An experimental validation of the Gorry and Scott Morton framework. *MIS Quarterly, 13*, 2 (June 1989), 183–197.

24. Lombino, P. Soldiers of misfortune. *CFO* (April 1988), 34–40.

25. Lublin, J.S., and Markels, A. How three CEOs achieved fast turnarounds. *Wall Street Journal, 226*, 14 (July 21, 1995), B1, B5.

26. Naumann, J.D. The role of frameworks in MIS research. *Proceedings of the Eighteenth Annual Meeting of the Decision Sciences Institute*, Honolulu, November 23–25, 1986, 569–571.

27. Pearce, J.A., II. Toward improved theory and research on business turnaround. *Journal of Management, 19*, 3 (1993), 613–636.

28. Schendel, D.E., and Patton, G.R. Corporate stagnation and turnaround. *Journal of Economics and Business, 28*, 3 (Spring 1976), 236–241.

29. Schendel, D.E.; Patton, G.R.; and Riggs, J. Corporate turnaround strategies: a study of profit, decline and recovery. *Journal of General Management, 3*, 3 (Spring 1976), 3–11.

30. Scherer, P.S. From warning to crises: a turnaround primer. *Management Review, 77*, 9 (September 1988), 30–36.

31. Scherer, P.S. The turnaround consultant steers corporate renewal. *Journal of Management Consulting, 5*, 1 (1989), 17–24.

32. Simon, H.A. Making management decisions: the role of intuition and emotion. *Academy of Management Executive, 1*, 1 (1987), 57–64.

33. Sloma, R.S. *The Turnaround Manager's Handbook*. New York: Free Press, 1985.

34. Watson, H.J.; Rainer, R.K., Jr., and Koh, C.E. Executive information systems: a framework for development and a survey of current practices. *MIS Quarterly, 15*, 1 (1991), 13–30.

35. Weitzel, W., and Jonsson, E. Decline in organizations: a literature integration and extension. *Administrative Science Quarterly, 34*, 1 (1989), 91–109.

36. Whitney, J.O. *Taking Charge: Management Guide to Troubled Companies and Turnarounds*. Homewood, IL: Dow Jones–Irwin, 1987.

REPORT TYPES	IMPORTANT	AVAILABLE	LEVEL OF REPORTING	TIME HORIZON	REPORTING INTERVAL	SOURCES OF INFORMATION	USE OF INFORMATION
Indicate what you need by its level of importance?	How important is it? never / rarely / sometimes / often / always	How available is it? never / rarely / sometimes / often / always	How, from whom & why do you need it? detailed / by cost/profit unit / consolidated	past / current / future	daily / weekly / monthly / quarterly / annual	employees / MIS / customers / suppliers / lenders / external databases	improve cash flow / defer debt / cut expenses / cut costs / down-size / increase revenues / refocus marketing
3. COST ANALYSES							
materials/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
labor/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
overhead/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
purchases/supplier	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
4. EXPENSE ANALYSES							
sales exp/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
general exp/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
admin exp/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
5. PERSONNEL ANALYSES							
management	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
employee	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
6. ASSET ANALYSES							
machines & equipment	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
land & buildings	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
7. MARKET ANALYSES							
sales/product	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
sales/customer	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
competition	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
industry	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
8. OTHER ANALYSES							
________	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
________	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
________	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
________	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M

APPENDIX: Information Needs Questionnaire

This questionnaire employs a matrix format. Row labels are types of reports. Column headings are attributes of information. You describe types of reports using these attributes: importance availability, level of reporting, time horizon, reporting interval, source, and use.

If a report type is at least "rarely" IMPORTANT to you, then circle all attributes in each category that most describe the nature of the report you need. If a report type is "never" IMPORTANT, then don't circle any of the attributes.

You can add and describe types of reports that have been useful in your practice but are not included below. Your suggestions may be placed under the OTHER category on the second page. Your suggestions imply the reports are at least "rarely" IMPORTANT. Therefore, "never" is omitted as a description in the OTHER category.

LEVEL OF REPORTING - for report periods & cost/profit units:
1. "D" reports each transaction;
2. "U" is formatted summaries of the transactions (i.e., income statement) for a cost/profit unit; and,
3. "C" is formatted summaries of transactions across multiple cost/profit units including their subordinate units.

SOURCES OF INFORMATION - where should accurate, useful information for a report type come from in financial crises.

USE OF INFORMATION:
1. "L" - improve liquidity by improving cash flow;
2. "D" - restructure debt to defer cash outflows;
3. "E" - cut sales, general, and administrative expenses;
4. "C" - cut direct/indirect materials, labor and overhead;
5. "S" - liquidate/divest assets;
6. "R" - increase revenues of current product/services;
7. "M" - introduce different products or marketing strategy;

REPORT TYPES	IMPORTANT	AVAILABLE	LEVEL OF REPORTING	TIME HORIZON	REPORTING INTERVAL	SOURCES OF INFORMATION	USE OF INFORMATION
Indicate what you need by its level of importance?	How important is it? never / rarely / sometimes / often / always	How available is it? never / rarely / sometimes / often / always	How, from whom & why do you need it? detailed / by cost/profit unit / consolidated	past / current / future	daily / weekly / monthly / quarterly / annual	employees / MIS / customers / suppliers / lenders / external databases	improve cash flow / defer debt / cut expenses / cut costs / down-size / increase revenues / refocus marketing
1. FINANCIAL ANALYSES							
balance statement	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
income statement	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
2. WORKING CAPITAL ANALYSES							
cash flow	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
accounts receivable	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
notes receivable	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
inventory	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
accounts payable	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
notes payable	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
secured debt due	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M
credit available	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	D — U — C	P — C — F	D - W - M - Q - A	E - M - C - S - L - D	L - D - E - C - S - R - M