

Time Series Analysis: Establishing a Platform for Change

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In approaching the distressed enterprise, the turnaround professional's first efforts (after measuring and handling any immediate cash crisis concerns) are typically to gain an understanding of the enterprise. It is difficult to fix what you do not understand.

Frequently, many of the constituencies of a distressed firm can opine on, "How did we get into this fix?" Lenders, investors and unions almost always have a point of view. Professionals advising the company have likely also formed a point of view. We deliberately interview at least the top echelon of management to learn their perspective on the company's situation. What collectively emerges is a somewhat blurred, conflicting picture of the company. Most frequently we find that no one, individually or collectively, fully understands the origins of (much less remedies for) the distress.

Distress is ultimately quantifiable. Generating less cash than required to support the capital structure is "underperforming." Lack of cash or credit availability is "distress." Being out of cash and unable to meet payroll is "crisis." The degree of distress mandates both the timetable and pace of change.

Time Series: A Useful Tool

An understanding of the path to the present, without belaboring past errors in judgment, is helpful in establishing a framework for change. In that regard, we have found that time series analysis of key financial and operating statistics is a useful tool in (1) reaching a shared view of the problem, (2) exposing significant strengths and weaknesses, (3) developing a sense of appreciation in managers and owners for the lender's perspective, (4) etching a contrast between better and worse segments [products, branches, divisions, customers etc.] of the enterprise, (5) highlighting trends and (6) defining the extent of distress.

Denial is the handmaiden to distress. Time series results are presented graphically, where trends are more easily recognized. As the Chinese proverb intones, "A picture's meaning can express 10,000 words." To the extent graphical performance review lays bare irrefutable problems, denial is overcome and the healing process accelerated.

The Monthly Series Worksheet

The methodology to generate the time series analysis is quick and efficient, rapidly commands positive involvement from client personnel and, interestingly, rapidly exposes the strength and currency of the company's data, systems and controls. In the first days of an engagement, the Chief Financial Officer receives our spreadsheet form to fill out. Its rows are the preceding 36 to 48 months (offering eventual carry-through into future months), its columns are a variety of financial and performance statistics. Usually these data are not all readily obtainable; they're dispersed across corporate databases, extracted from paper documentation and/or require customized computer runs—all of which makes their recapture in one place at one time all the more illuminating. Our most basic subset of common data is shown in Exhibit 1.

These are nearly always enriched by a handful of company-specific operational and balance sheet accounts, e.g., (1) basic

revenue or revenue-reduction (returned goods, etc.) breakdowns pertinent to the enterprise, (2) specific major elements of cost or cost of goods sold and (3) company-specific accounts of importance (e.g., warranty reserve, warranty claims, scrap, major liability accruals, etc.).

Segmented account data are either added to the initial data burden or deferred out a bit. Typical segment data are divisional or branch accounts, including all the basic revenue and cost accounts previously discussed, but partitioned out for each division, each branch, each region, etc. Revenue data series may be requested for each major product line or major customer. Underlying cost information for each product line or customer is usually not available. We often model and build this information, vital to sorting profitable from unprofitable business elements, as an important part of the restructuring process.

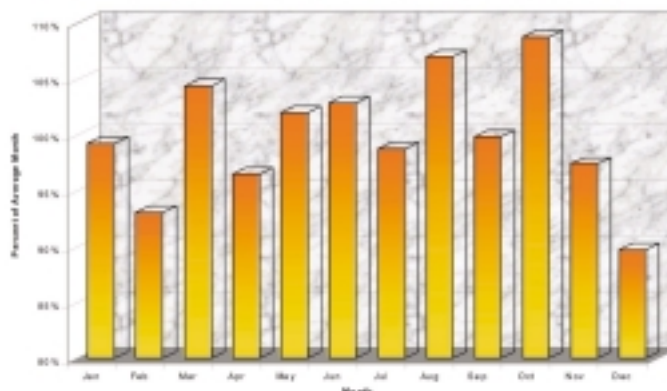
Finally, we may add industry-specific time series to the data request. For a manufacturer, this might include equipment utilization rates, scrap rates, direct labor percentage, monthly unit production and labor/material variance. For a trucking firm, this might include empty mile percentage, revenue per mile, unseated tractor history, revenue per tractor and driver payroll

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Exhibit 1: Commonly Requested Time Series Data

- Net Sales
- Cost of Goods Sold
- Cost of Materials
- Outside Purchases
- Supplies & Maintenance
- Salaries, Wages & Benefits
- Depreciation & Amortization
- Gross Profit Margin
- Selling Expense
- Administrative Expense
- Operating Profit
- Interest Expense
- Income before Taxes
- Accounts Receivable
- Inventory
- Line of Credit
- Accounts Payable
- Plant Property & Equip. (net)
- Bank Debt (Short & Long)
- Notes Payable
- Lease Obligations (Short & Long)
- Shareholders' Equity

Exhibit 2: Seasonality of Sales



Financial Statements

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percent of revenue. As with segment data, these data may not be tracked and/or available, which itself speaks to the company's process control; they are often developed in the course of the restructuring process.

Just One Element of the Initial Information Request

This part of our initial information request in the opening days of an engagement is daunting, we know—particularly in view of the demand that the completed worksheet be returned to us within 1-2 weeks. The way in which the CFO and the company respond is in itself revealing as to how they “do business.” The burden is frequently partitioned and quickly involves an expanding web of company personnel, healthy in softening the terrain for change. This is not business as usual. After lobbing this considerable ball to the company side of the court, we move on to other facets of our Phase I turnaround process directed toward understanding the business, the depth of the cash crisis, the degree of trust and support of key constituencies, and the underlying viability of the enterprise.

Data Analyses

Upon return of the detailed monthly worksheet, full analytic firepower is concentrated on extracting maximum value and understanding of the trends contained in the data. Certain analyses are done frequently enough to qualify as standard fare, including (1) revenue history, (2) revenue history built up from divisions, products and segments, (3) seasonal adjustment factors (Exhibit 2; see p. 22), sometimes refined to adjust for the number of work days in a month into average daily revenue from which even more precise seasonal correction can be developed for daily sales rates, (4) tracking of gross margin, (5) unusual cost change (Exhibit 3), (6) bottom-line operating profit, net profit, cash flow (Exhibit 4), (7) receivables and days of receivables (Exhibit 5, illustrating conspicuous improvement), (8) inventory and days of inventory (Exhibit 6, illustrating a common effect of sales and inventory slowdown—slowing turns due to the increasing proportion of slow-moving inventory), (9) payables and days of payables, (10) debt load and (11)

Exhibit 3: Sigma Service Salaries, Wages & Benefits as % of Total Revenue

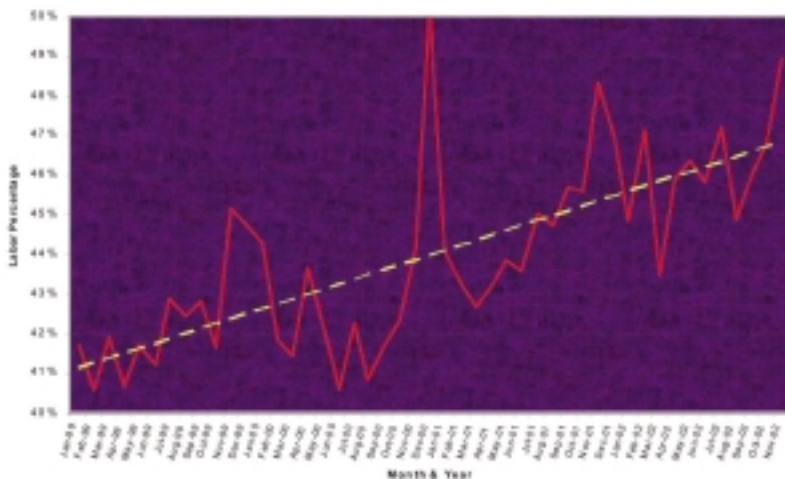


Exhibit 4: Service Profitability 1997-October 2002

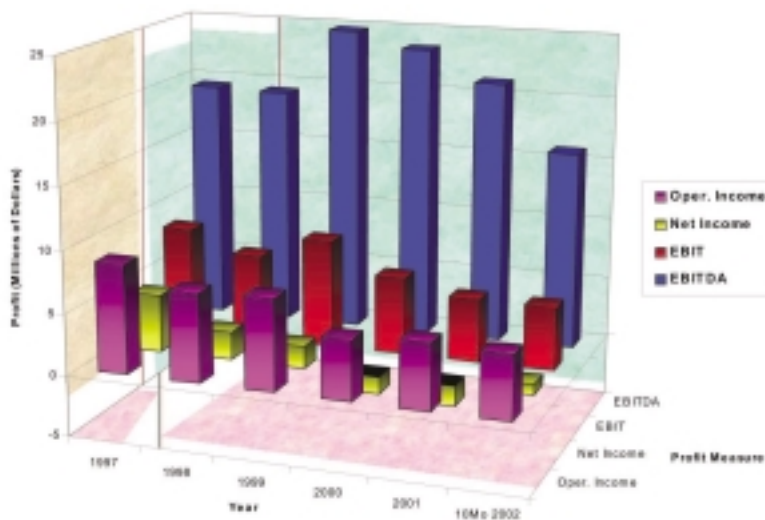
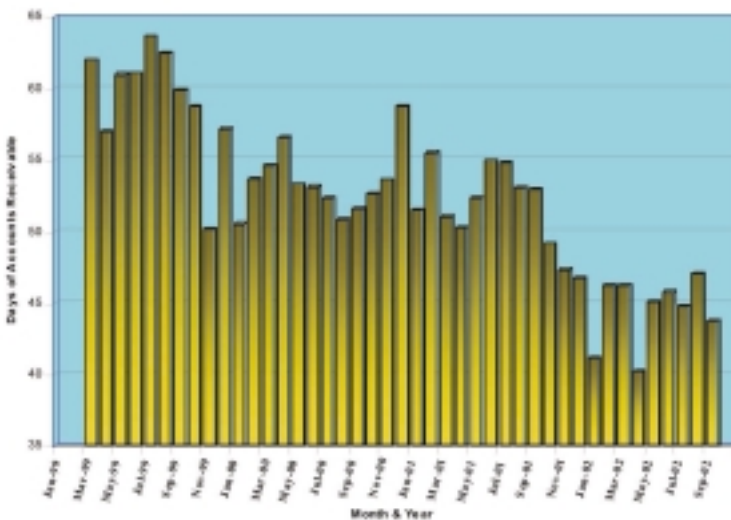


Exhibit 5: End-of-month Days of Accounts Receivable: Alpha Manufacturing



outstanding credit and credit line availability. Often we add smoothing constants and other tools to enhance time-series analysis. These data are supplemented by other time series that enhance understanding, as well as industry-specific and company-specific indicators.

Value to the Turnaround Process

While the data-gathering process may be arduous and the analysis techniques sometimes esoteric, the ultimate product—a time-series graph that is simple to grasp and interpret—provides a snapshot of years of past performance. For the large proportion of the audiences we address who are not particularly accounting-oriented or even number-oriented, the cumulative impact of often dozens of easily-visualized time series snapshots of key indicators provides irrefutable, objective evidence of the deterioration in company performance, highlights the trouble spots and sounds the depths of the cash crisis.

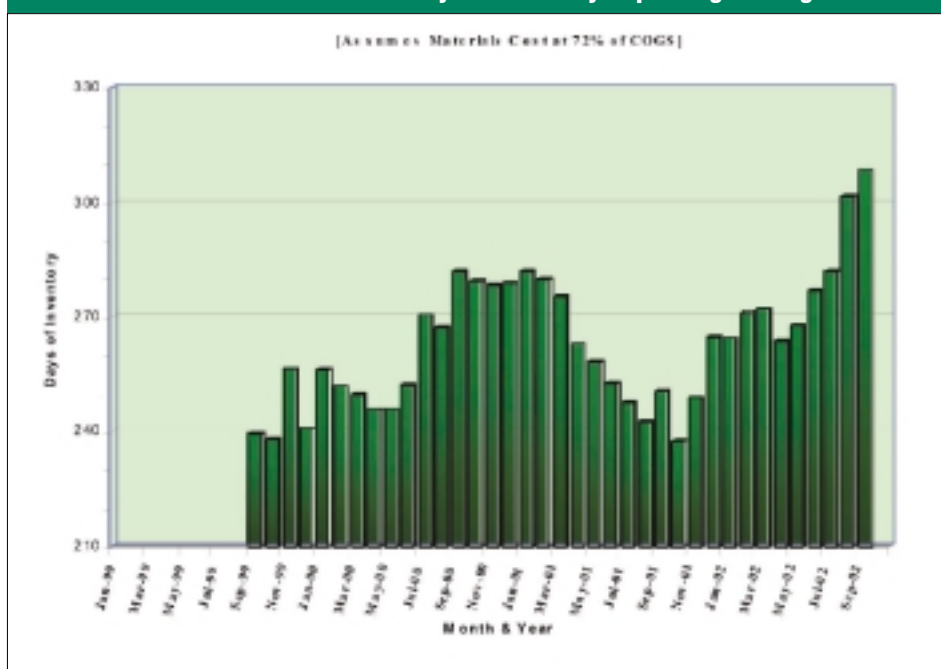
These charts, along with other charts and slides describing and outlining the state of the enterprise, eloquently and blamelessly answer the question “where are we?,” drawing the constituencies into a

common understanding of the company’s dilemma.

This is often a critical turning point in the turnaround process. The company’s plight is recognized and acknowledged, the need for positive change made self-evident, and the

dreams of providential rescue (sale, investment, sales windfall, etc.) all but abandoned. The gates to salvation (rehabilitation, restructuring, change, painful decisions) are open. The turnaround process commences.

Exhibit 6: End-of-month Days of Inventory: Alpha Engineering



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