

Making a Difference at Conrail

By Howard Keen*

The business economics group at Conrail attempts to add value to the work of Service Groups, the Leadership Team and the board of directors by means of education on data series, analysis and forecasts. Emphasis is placed on user-friendly tools, diplomacy, understandable output and trustworthiness. The purpose is to provide ingredients for informed decisionmaking. In spite of various downsizings, success is measured by a continued active role in the company's forecasting and planning, requests for advice and help, and explicit feedback.

CONRAIL'S business economics group is known as Forecasting & Economic Analysis (FEA) and is part of the company's Finance department. The group is headed by the Chief Economist, who reports directly to Conrail's CFO. FEA is charged with supplying data, analysis and forecasting services both as input to other decisionmakers and to provide an independent point of view.

POINTS OF CONTACT

FEA's contact with internal customers occurs throughout all levels of the organization structure at Conrail. Top-level decisionmaking at the company takes place within its "Leadership Team," which consists of the chairman and those who report directly to him, including senior vice-presidents who head each of Conrail's Service Groups. These Service Groups were created a few years ago when the company flattened its organizational structure, eliminated its Marketing & Sales department and established business units that embody commercial, service and opera-

tional functions. FEA deals on an ongoing basis with internal clients that range from entry-level business analysts to senior vice-presidents in the Service Groups, and also makes direct presentations to the Leadership Team and the board of directors. In addition, FEA provides support on an as-needed basis to Conrail's Legal, Public Affairs, Training, and Strategic Planning departments.

HOW WE TRY TO MAKE A DIFFERENCE

The business economics group's attempts to add value to the decisionmaking process at Conrail rests on the following:

Education. We serve as educators on all aspects of data series, on actual and projected company performance, and on cause and effect relationships that impact Conrail's earnings. Explanations of the change to a chain-weighted GDP measure, guidance as to the timing of statistical releases for use in contracts, and decomposition of revenue changes into that due to volume, price, and mix of business are examples of this service.

Analysis. We produce various analyses designed to answer clients' questions or illuminate key relationships. Such analysis serves as key input into long-range strategic planning, annual budget planning, and ongoing monthly updates of shorter-term planning assumptions. Examples include an historical comparison of how various popular price indexes track rail industry costs, an assessment of how vehicle production plans by manufacturing plant line up with Conrail's automotive service territory, and the construction of company-specific industrial production indexes.

Forecasts. We produce forecasts derived from multiple methodologies for use of our clients and as a basis for FEA's independent projections. Alternative projections are derived from detailed seasonal analysis, econometric rail traffic models, time series analysis, and the integration of plant-specific production forecasts. Results of FEA's forecasting efforts are provided to the Service Groups as input for their traffic and revenue projections and are also presented to Conrail's Leadership Team as an independent view-

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point for use as a sanity test to the Service Groups' outlooks.

User-Friendly Tools. We produce these to enable our clients to incorporate their input better into the development of corporate planning assumptions in a systematic and consistent manner. A prime example of this consists of a spreadsheet model that enables our commercial clients in the Service Groups to enter unit sales or prices for any month and to generate projections based upon FEA's calendar model that embodies estimates of working days and typical seasonal changes. This allows clients who have more intimate knowledge of their business than we do to adjust either current month's or past months' values, e.g., to remove the influence of "unusual" factors and be able to see the calendar-model implications within seconds.

Diplomacy. This is a critical ingredient that permits FEA to criticize implicitly our clients' positions while maintaining good relations with them and keeping channels of productive communication open. We make a focused effort to exercise diplomacy in all of our dealings with our clients. One important way that we do this is by making our clients aware of any contradictory views before we present them to senior management. This avoids unpleasant surprises on the part of our clients and allows them to prepare for any questions that may follow. Additionally, we try to avoid the issue of "whose view is correct" by purposely and explicitly presenting alternative outlooks for management's consideration. One successful way in which we did this was by initiating a "Devil's Advocate" presentation for our Leadership Team that is designed to take a counter position to that embodied in the company's official planning assumptions. This approach has the effect of formalizing challenges to official assumptions and tends to encourage free-flowing discussions of the issues behind those assumptions.

Understandable Output. We place a heavy emphasis on this because it keeps us engaged with our clients and encourages a receptive hearing for our views. We expend extra effort to make sure our clients know how we derive results of our analyses, what the weaknesses are of the methodologies we use, and instruction in how our clients can replicate our results or calculate the impact of varying key inputs. This helps our clients to feel a greater sense of partnership with our group.

Trustworthiness. This is a key characteristic that is absolutely essential for effective functioning of FEA. In the process of dealing with clients throughout the corporation, many "off-the-record" comments and criticisms are shared with our group. In such an environment, it is of the utmost importance for us to maintain an exemplary degree of professionalism, in order not to violate the implicit trust shown in us by our clients. Our ability to perform in this manner has

consistently earned us high marks for trustworthiness in formal performance reviews, and, more importantly, has engendered a very open and productive working relationship with our clients.

HOW THIS MAKES A DIFFERENCE

The service package just described enables FEA to make a difference in Conrail's decisionmaking by serving to:

Hold a mirror up to planning assumptions. This can effectively highlight assumptions that embody anomalies, low-probability elements, or other questionable factors, and in the process helps decisionmakers to think consciously about the basis for their decisions.

Provide ingredients for informed decisionmaking. Through ongoing analysis and presentations, we make sure that relevant information is constantly available to assist decisionmakers. This helps counter arguments that rest upon unsupported "conventional wisdom" and other received misconceptions and can help guard against decisions based upon false premises.

Provide a broader perspective in the form of either a more global view of an issue or of a longer time span. This helps guard against decisions based on too limited a time frame or a myopic view of the factors that contributed to a given result.

Constantly stress the link between Conrail's business activity and national and regional economic environments. Our business is influenced importantly by the state of the external economic environment, and decisionmakers need to be reminded of this on an ongoing basis. FEA provides this important reminder through our continuous monitoring of national and regional business conditions and prospects, and continuous updating of the implications of changing external conditions for company performance.

SOME EXAMPLES

Perspective on Traffic Outlook

In Conrail's preliminary planning for 1997, one Service Group projected its year-over-year traffic growth to be 5 percentage points faster than year-over-year growth in a closely related production index. To put this forecast in perspective, FEA presented graphical evidence that showed that since 1987, the average difference between these two measures was a *negative* 1.0 percentage points with a standard deviation of about 3 percentage points. More importantly, one glance at the graph immediately told you that the Group's preliminary outlook would represent extremely unusual performance, because a positive difference this big occurred only once in any four-quarter period since 1987. While FEA's analysis did not necessarily argue that such a result was impossible, it clearly pointed out to senior management the risks involved in adopting this outlook as part of the planning assump-

tions for 1997. Management subsequently decided to plan on less robust relative growth in traffic for this Service Group, which in retrospect proved to be a wise decision because actual growth came in 2.3 percentage points slower than its related production index.

Economic and Traffic Monitor

Conrail's annual budgeting process typically begins in late summer of the preceding year and is finalized sometime in December. During this time period, actual performance for the current year as well as the outlook for the next year can sometimes change significantly. A projected traffic level for next year that represents year-over-year growth of 5 percent may climb to 10 percent merely because this year's traffic turns out to be much weaker than assumed at the time that the preliminary budget is put together.

In order not to lose track of the implications of such changes, FEA devised the *Economic & Traffic Monitor* report. This report supports the decisionmaking process by providing rolling updates of measures that describe general economic conditions, indicators that are more closely aligned with segments of Conrail's business, and projected traffic growth by Service Group. This tool keeps senior management up to date on changing conditions that have important implications for planning and better enables them to fine tune planning assumptions as the budget year approaches.

The Issue of Performance in 1994

In the process of discussing short- and intermediate-term planning in 1996, many references were made to Conrail's performance in 1994. In the latter year, company sales grew quite rapidly, both in an absolute sense and in relation to the economy as measured by nominal GDP. In fact, company sales in 1994 expanded at a faster pace than nominal GDP for only the second time in Conrail's publicly traded history.

With clear evidence that 1994's performance was on the minds of many of our clients, FEA undertook an analysis of that year's sales performance. Our analysis consisted of examining key external drivers for both the period that helped determine 1994 sales and the outlook in the years ahead for these same key drivers. We pointed out, for example, that company sales in 1994 were influenced significantly by a sharp rebound from recession in domestic demand and accelerating growth abroad; an environment of declining oil prices and bond yields; record growth in company-related production; and limited trucking capacity. As we looked ahead, mainstream forecasts at that time suggested that such a combination of favorable factors was not expected anytime soon. FEA's analysis in this case discouraged the notion that external conditions would propel company sales upward and encouraged a more internally focused look at what the company itself

could do to achieve desired results.

Evaluation of Forecasting Accuracy

Forecasting accuracy is something that decisionmakers would always like to be better. At Conrail, ultimate responsibility for forecasting traffic and revenue lies with the Service Groups, and FEA plays a major supporting role in this effort. Much time and effort goes into this activity, yet senior management frequently sends the implicit message that either such effort is without any payoff or that, whatever the degree of accuracy, it should be better.

In an effort to address this issue, in the spring of 1997 FEA conducted an analysis of the forecasting accuracy of the Service Groups' projections and the implications for value added in the decisionmaking process. Our study consisted of examining the monthly traffic forecasts of the Service Groups for 1996 (made in the third week of the preceding month) and comparing their accuracy with that of two alternative models. One alternative model projected that traffic in a given month would be the same as the year-over-year ratio of traffic two months earlier, while the other alternative model projected sales to be the same as traffic-per-working day two months ago multiplied by this month's working days. The alternative models required very little effort compared to the Service Groups' projections, and if they were to yield comparably accurate forecasts, this would suggest that perhaps the Service Groups' efforts devoted to forecasting traffic are indeed a waste of time. The analysis also addressed the fact that management had dictated a corporate accuracy standard in 1996 of plus or minus 2 percent.

Results of our work indicated that the Service Groups' forecasting accuracy was a "failure" in 1996 in that the mean absolute error for monthly forecasts of traffic exceeded the 2 percent standard. Without exception, however, Service Group's forecasting accuracy was much better than alternative model #1 and even superior to the performance of alternative model #2. This analysis helped to remind decisionmakers that, while we all would like greater forecasting accuracy in an absolute sense, the only appropriate measure of such accuracy is a relative one. In this case, our analysis supported the continuation of Service Groups forecasting efforts and painted the accuracy of those forecasts in a much more favorable light.

Easy-to-Understand Planning Tool

In developing annual budget traffic projections, decisionmakers are interested in knowing how much of any anticipated change in traffic is due to things such as the economy, additional equipment, market-share changes, etc. In helping the Service Groups decompose projected traffic changes, FEA devised a spreadsheet tool for use of our clients that derives changes

identified as being “due to the economy.” With this tool, projected traffic growth due to the economy is equal to the product of year-over-year growth in a macro driver, a “traffic response factor,” and year-ago traffic levels. The macro drivers consist of production indexes, housing starts, imports of consumer goods, exchange rates and trucking capacity. The “traffic response factor” represents estimated elasticities from our econometric traffic model. To the results from these elements, the Service Groups can add and subtract their estimates of the impact of “micro” factors, such as equipment supply, plant closings and marketing initiatives. This model has served our clients well in enabling them to generate traffic changes “due to the economy” quickly and clearly, and with their own adjustments, retain flexibility over the final result. Moreover, all of this is done with a tool that is highly understandable, readily accommodates client input, and is easy to track and update throughout the year.

Regional Economic/Railroad Performance

One issue of interest in the planning process at Conrail is the relative economic performance in our operating region and how that might relate to relative railroad performance.

To assess this question better, our Manager of Economic and Competitive Analysis, Beatrice DeAngelis, lined up measures such as North American light vehicle production by plant, real retail sales, and manufacturing employment by state with the major railroads that operate in those areas.

She then compared annual growth in these measure by railroad for both historic and forecast periods. Her analysis clearly illustrated that Conrail has been hampered by relatively weaker regional economic conditions compared to other major railroads and, moreover, that this relative disadvantage was likely to continue. Results of this analysis reinforced the view that Conrail would need to expand its geographic marketing area if it were to realize desired sales growth. These results were included in presentations to the board of directors, who shortly thereafter made the decision to seek a merger partner.

DOES ANY OF THIS REALLY MAKE A DIFFERENCE?

While we feel strongly that our efforts bring real value to the decisionmaking process at Conrail, just how might we judge our success in this regard? With no direct responsibility for costs or revenues, tangible measures of effectiveness are not always readily available. At Conrail we view the success of our efforts in various ways:

1. Through various downsizings over the years and through a major reorganization, our group still plays an active role in the company’s forecasting and planning activities and in the process has managed to retain its independence.
2. FEA’s advice and help continues to be sought from all levels of the company. (The real test, of course, lies in how much those seeking help would be willing to pay directly, but Conrail has no such mechanism in place).
3. In certain cases, such as forecasting accuracy, results of our efforts can be quantified in comparisons against alternative forecasting models.
4. Our group’s output is used in deliberations that lead to high-visibility decisions. The analysis described above on regional economic/railroad performance is a prime example of this.
5. We also receive explicit feedback in the form of performance reviews and recognition by internal customers. An example of the latter occurred when Conrail’s Investor Relations group invited FEA to a dinner held for those whose support helped them win a Wall Street award.

CHALLENGES

Bringing business economics to bear on decisionmaking can be a rewarding experience. It is not without its challenges, however, and these are largely systemic to the process. Perhaps the biggest challenge business economists face is the feeling that their analysis – even if it is of the highest quality and has something relevant to contribute – is ignored in the decisionmaking process. For one thing, planning targets are driven many times by factors other than business economic analysis, such as expectations of investors, directors or managers themselves. Business economics analysis that portrays such targets as “unreasonable” may not be greeted with much apparent appreciation. Second, in the forecasting and planning area there is often a conflict between projections supported by business economics analysis and the desire to put some “reach” or “stretch” into the planning assumptions. This can result in performance targets that appear to have little connection to business economics analysis. Finally, because many business managers don’t like uncertainty, business economists, whose work deals head-on with the issue of uncertainty, become unpleasant reminders of something decisionmakers would like to forget.

Acknowledging challenges such as these is in no way meant to denigrate the impact that business economics can have in the decisionmaking process. Rather, it is fair warning that demonstrating value added is a critical requirement for those who would successfully practice business economics.