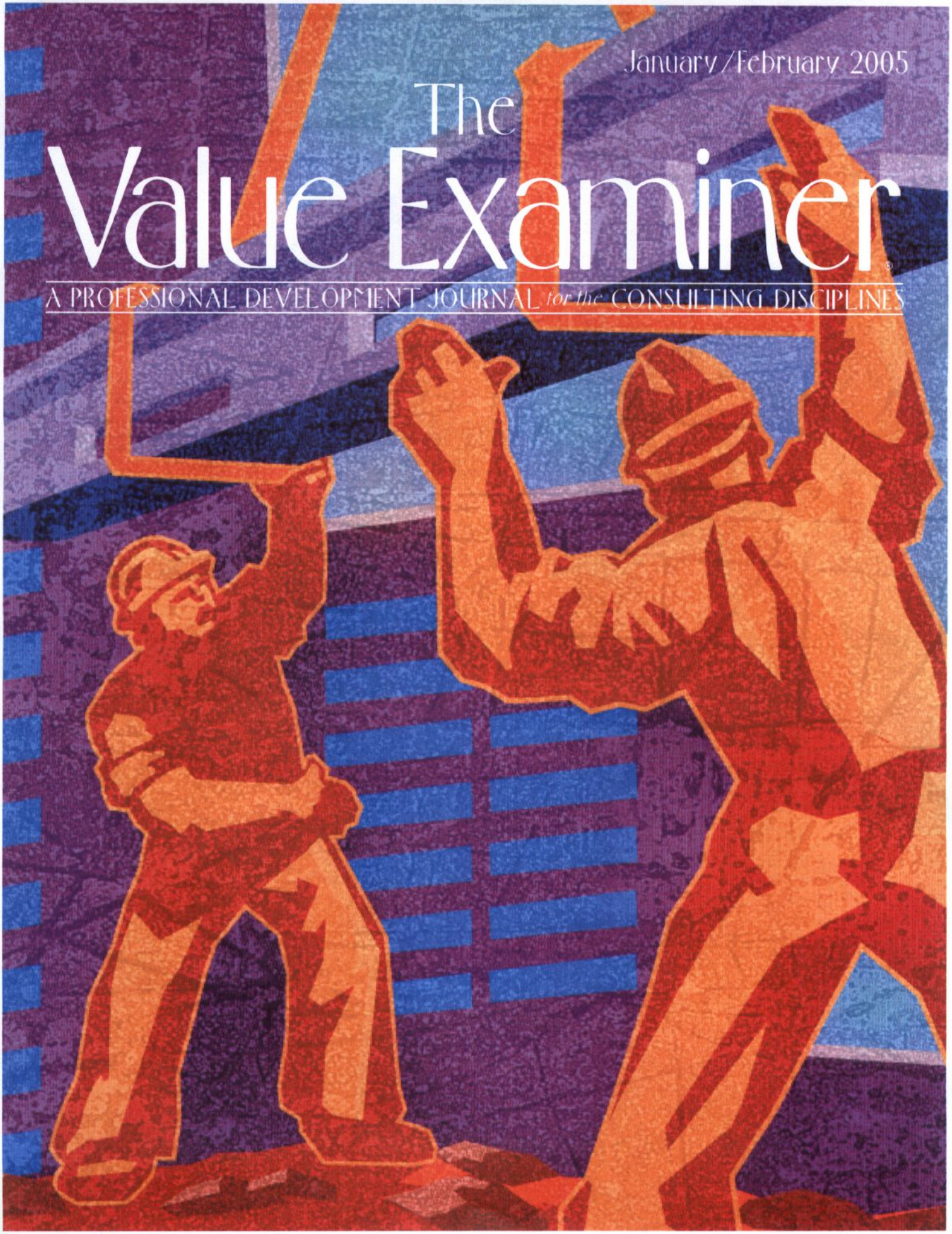
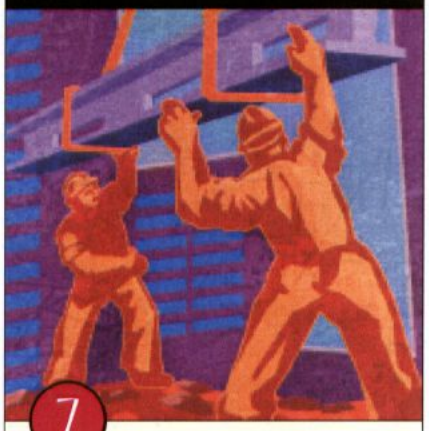
January/February 2005

The Value Examiner®

A PROFESSIONAL DEVELOPMENT JOURNAL *for the* CONSULTING DISCIPLINES



On The Cover



7

Dark and Stormy Night... Determining Lost Net Income During Construction
by Mark G. Filler, CPA/ABV, CBA, AM, CVA

The length of economic damages time periods, unlike those of business valuation, are usually measured in months rather than years. Calculating those damages always begins with a forecast of expected sales during the period of interruption. As the defense expert, how do you respond when the plaintiff claims "sales were expected to increase 10.9 percent next year because that's what happened last year?" How do you determine if, in fact, there is a trend that continues throughout the year? What impact does seasonality have on the forecast, and how do you account for it? What's a good technique to reduce randomness in the monthly data, and thereby increase your forecast's validity and reliability? What's the only circumstance in which a simple average of past performance is a good proxy for future performance? This article answers these questions and more while demonstrating and utilizing an econometric methodology.

In This Issue...

Continued on page 2

Dark and Stormy Night...

Determining Lost Net Income During Construction

by Mark G. Filler, CPA/ABV, CBA, AM, CVA

May 31, 1996, was a dark and stormy night, as the 18-wheeler turned off the interstate and roared down the sloping off-ramp, heading for the Town of Brunswick on Route 1. At the base of the off-ramp, at the point where it curves into Route 1, sets the XYZ Motel, eagerly awaiting guests for Memorial Day weekend and the start of the tourist season. Just before midnight, it got the biggest guest it ever had, as the tractor-trailer combo failed to negotiate the curve and plowed right into the office manager's quarters, totaling the building. Fortunately, there was no loss of life or any personal injuries, nor were any rental units damaged, as the office is a stand-alone building. But the claimant insisted that there was lost income as a result of the manager losing her on-site living space, and the replacement of the office with an unsightly temporary trailer.

Mark G. Filler, CPA/ABV, CBA, AM, CVA is the founder and president of Filler and Associates, P.A., a CPA firm in Portland, Maine. His personal practice focuses on providing business valuations, measurement of damages for lost profits, and assistance in adjusting business interruption losses. Contact: mfiller@filler.com

The complete text of the claim submitted by the XYZ Motel follows: "In December 1991, negotiations with the franchiser were finalized. This resulted in approximately $60,000 in capital outlay to acquire the franchise, the equipment updates and changes required by the franchiser to meet their standards for operation.

Generally, it takes four to five years to realize the results of a large capital outlay like this. All indications were that 1996 was going to be one of their best years. Subsequent to 1991, through 1995, revenues had increased an average of 12.8 percent per year. 1995 revenues increased 10.9 percent over 1994.

"In order to determine lost revenues due to the accident, we have assumed that 1996 would have increased 10.9 percent over 1995 revenues. We then compared anticipated 1996 revenues to actual 1996 receipts (subsequent to the accident) to calculate the shortfall that is due to the accident." The claimant submitted the figures in Figure 1.

Figure 1

Months	1995 Actual Receipts	1996 Anticipated Receipts	1996 Actual Receipts	Lost Revenues
June	34,112	37,830	27,120	10,710
July	61,058	67,713	46,222	21,491
August	63,966	70,938	58,963	11,975
September	50,243	55,720	44,008	11,712
Totals	209,379	232,201	176,313	55,888

The trucker's insurance company had hired an independent adjuster who needed help in responding to and adjusting the claim. It was at this point that I was engaged to measure the lost net income during the four-month period it would take to rebuild the office facility. I obtained the monthly sales journals from the claimant for the period June 1993 through September 1996, from which I extracted and tabulated each month's gross sales. Unlike the claimant, I used gross sales alone, and did not include the 7 percent sales tax in any of my fig-

Exhibit A: XYZ Motel—Historical Sales

	1993–1994			1994–1995			1995–1996			1996–1997	3 YEAR AVERAGE	
			CUM %			CUM %			CUM %	$	MONTH	CUM %
JUNE	$ 27,241	9.5%	9.5%	$ 31,249	9.9%	9.9%	$ 32,038	10.5%	10.5%	25,346	9.96%	9.96%
JULY	55,473	19.3%	28.8%	57,299	18.2%	28.1%	57,112	18.7%	29.2%	43,217	18.73%	28.70%
AUGUST	58,073	20.2%	49.0%	56,579	17.9%	46.0%	59,838	19.6%	48.8%	55,136	19.26%	47.95%
SEPTEMBER	45,159	15.7%	64.8%	43,827	13.9%	59.9%	46,981	15.4%	64.2%	**41,151**	15.01%	62.96%
OCTOBER	37,917	13.2%		35,490	11.3%		41,902	13.7%		164,850	-15.88%	
NOVEMBER	11,902	4.1%		13,967	4.4%		15,232	5.0%				
DECEMBER	5,268	1.8%		10,362	3.3%		7,642	2.5%				
JANUARY	4,995	1.7%		6,788	2.2%		5,015	1.6%				
FEBRUARY	6,816	2.4%		14,940	4.7%		5,378	1.8%				
MARCH	6,073	2.1%		14,490	4.6%		7,332	2.4%				
APRIL	9,152	3.2%		11,951	3.8%		9,540	3.1%				
MAY	**18,966**	**6.6%**		**18,409**	**5.8%**		**17,338**	**5.7%**				
	$ 287,035	100.0%		$ 315,352	100.0%		$ 305,347	100.0%				
% CHANGE FROM PRIOR YEAR					9.9%			-3.2%				
OCT-NOV %	53.4%	52.5%			53.0%			54.9%				
TOTAL JUNE–SEPTEMBER	185,945				188,954			195,968				
% CHANGE FROM PRIOR YEAR					1.6%			3.7%				
THREE YEAR AVERAGE	$190,289											
TOTAL OCT–MAY	101,090				126,398			109,379				
% CHANGE FROM PRIOR YEAR					25.0%			-13.5%				
TOTAL DEC–MAY	51,271				76,941			52,244				
% CHANGE FROM PRIOR YEAR					50.1%			-32.1%				

CHANGE FROM PRIOR YEAR

SALES DURING PERIOD OF INTERRUPTION

Exhibit A: Brunswick Economic Summary Area—Historical Sales

	1993–1994			1994–1995			1995–1996			1996–1997	3-YEAR AVERAGE	
			CUM %			CUM %			CUM %		MONTH	CUM %
JUNE	$ 1,073,000	9.3%	9.3%	$ 1,147,000	10.4%	10.4%	$ 1,302,000	11.4%	11.4%	$ 1,428,000	10.37%	10.37%
JULY	2,278,000	19.8%	29.1%	1,844,000	16.7%	27.1%	2,426,000	21.2%	32.6%	2,601,000	19.24%	29.61%
AUGUST	2,959,000	25.7%	54.8%	2,381,000	21.6%	48.6%	2,306,000	20.2%	52.8%	2,424,000	22.49%	52.10%
SEPTEMBER	1,354,000	11.8%	66.6%	1,374,000	12.4%	61.1%	1,253,000	11.0%	63.8%	1,191,000	11.73%	63.83%
OCTOBER	811,000	7.0%		916,000	8.3%		941,000	8.2%		7,644,000	4.90%	
NOVEMBER	488,000	4.2%		542,000	4.9%		578,000	5.1%				
DECEMBER	380,000	3.3%		352,000	3.2%		433,000	3.8%				
JANUARY	289,000	2.5%		368,000	3.3%		244,000	2.1%				
FEBRUARY	242,000	2.1%		537,000	4.9%		432,000	3.8%				
MARCH	364,000	3.2%		489,000	4.4%		289,000	2.5%				
APRIL	662,000	5.8%		489,000	4.4%		600,000	5.3%				
MAY	**608,000**	**5.3%**		**605,000**	**5.5%**		**618,000**	**5.4%**				
	$ 11,508,000	**100.0%**		**$ 11,044,000**	**100.0%**		**$ 11,422,000**	**100.0%**				
% CHANGE FROM PRIOR YEAR					-4.0%			3.4%				
TOTAL JUNE–SEPTEMBER			**7,664,000**			**6,746,000**			**7,287,000**			
% CHANGE FROM PRIOR YEAR					-12.0%			8.0%				
TOTAL OCT–MAY			**3,844,000**			**4,298,000**			**4,135,000**			
% CHANGE FROM PRIOR YEAR					11.8%			-3.8%				
TOTAL DEC–MAY			**2,545,000**			**2,840,000**			**2,616,000**			
% CHANGE FROM PRIOR YEAR					11.6%			-7.9%				

CHANGE FROM PRIOR YEAR

ESA SALES DURING PERIOD OF INTERRUPTION

ures. Looking for an independent variable that would correlate closely with the motel's sales, I downloaded the gross sales for lodging places for the Brunswick Economic Summary Area (ESA) from the State Planning Office. I combined this with the motel's monthly sales into Exhibit A, and began to analyze the data. I initially estimated the lost sales by utilizing two methods. First, I averaged the XYZ Motel's three prior years' sales for the period June–September, ($185,985 + $188,954 + $195,968)/3 = $190,289, and subtracted the actual sales for the same period in 1996 of $164,850, for a sales reduction of $25,439. Second, I took the same period sales for 1995 of $195,968 and multiplied it by the Brunswick ESA sales percentage increase over the prior year of 4.9 percent. This projected same period sales for 1996 to be $205,570, which implies a sales reduction of $40,720. Both of these amounts are much less than the claimant's $55,888 as calculated above. However, as these two approaches are minimal and cursory at best, I felt the need for a more profound analysis before accepting the expedient answer.

Comparing the monthly percentage of total sales and the cumulative monthly percentage of sales for the motel versus the Brunswick ESA during the subject four months indicates a high degree of correlation. I thought this might carry over into the whole year. I graphed the 36 months of comparative sales on a log scale so that the same visual weight would be given to comparable percentage changes in both sets of numbers. The result is Exhibit B, which on a visual basis indicates a high degree of correlation. Knowing that quarterly data is often easier to forecast than monthly data, because

Exhibit B: Comparative Sales By Month, June 1993–May 1996

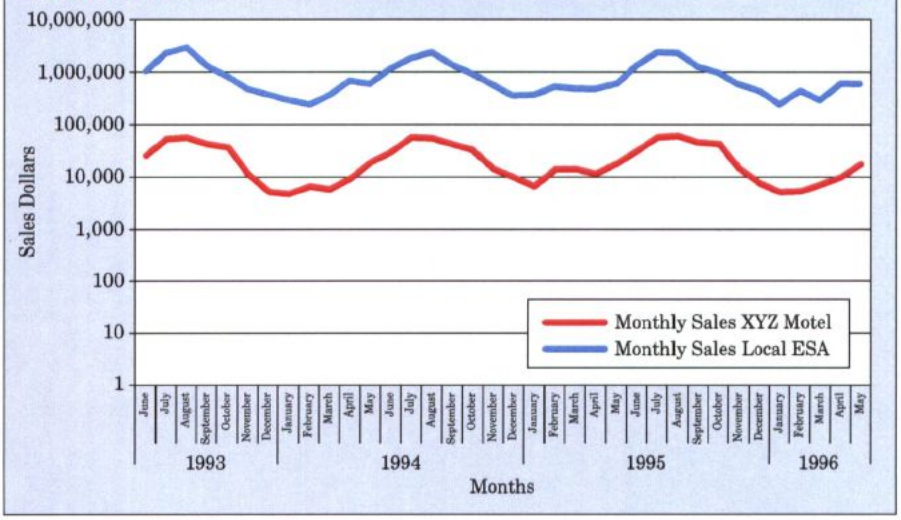
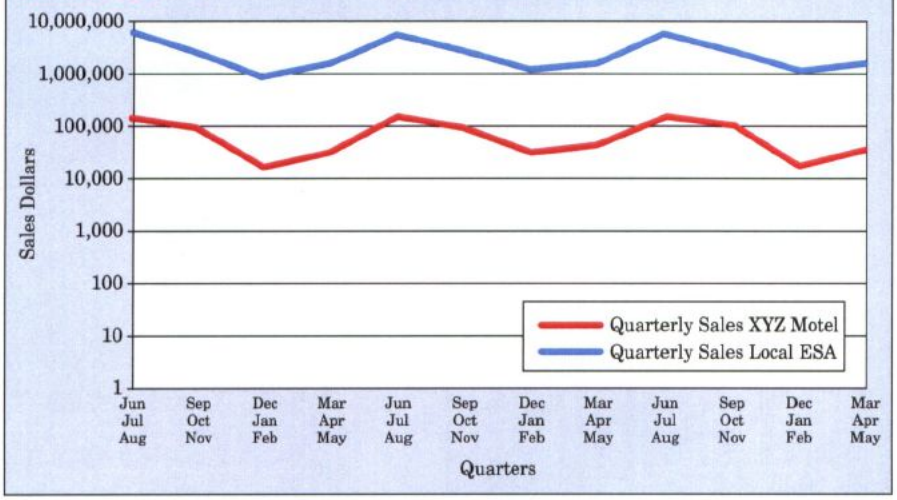


Exhibit C: Comparative Sales By Quarter, June 1993–May 1996

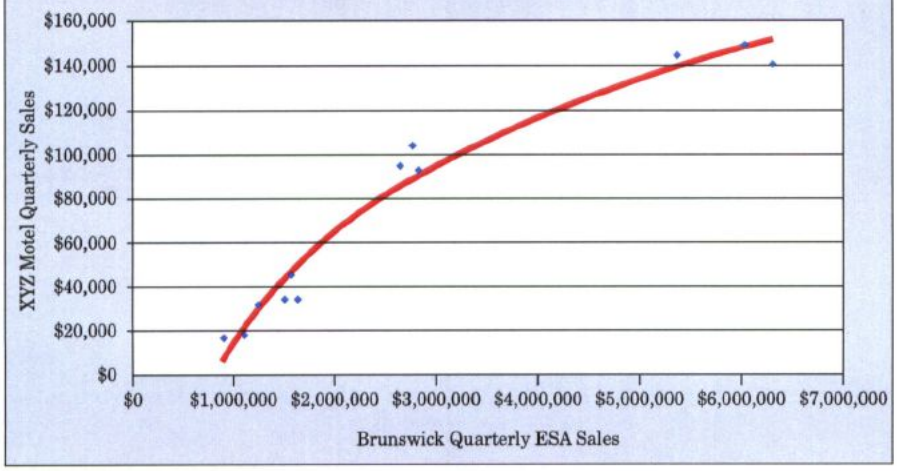


aggregating the data into quarters usually eliminates a great deal of noise or randomness, I did the conversion from months to quarters.

The resulting log scale graph is shown on Exhibit C. Visually, except for the last two quarters, the lines are almost identical, further indicating a very high degree of correlation between the XYZ Motel sales and the Brunswick ESA sales. The scatter plot with a logarithmic trendline on Exhibit D is another visual tool that demonstrates the correlative nature of the relationship.

To prove this mathematically, the next step was to create a linear relationship between the data by transforming the ESA sales using their natural logarithm, and by running a regression analysis of the transformed quarterly data. The results are shown on Exhibit E. (Note: Equally appropriate results could have been obtained using another regression model, time-series analysis that includes a seasonal factor.) A coefficient of correlation of .9841 and a coefficient of determination of .9684 indicates an extremely high degree of strength in the linear relationship between ESA sales and motel sales. It also explains that 96.84 percent of the changes in XYZ Motel sales are accounted for, or explained by, changes in ESA sales. The *beta* coefficient of $75,238 is interpreted as follows: for every 1 percent increase in ESA sales, XYZ Motel sales increase $748.64 (LN(1.01) X $75,238). As our data points do not encompass ESA sales of zero, the *alpha* coefficient, or constant of –$1,026,226 has no explanatory power and is simply the height of the fitted line. Applying the *alpha* and *beta* coefficients of the regression output to the LN of ESA sales for the quarters June, July, August, September, October and November 1996 produces an expected sales volume for those four months of $194,703, as shown on Exhibit E. October and November 1996 sales were removed by subtracting the historical average proportion of 53.4 percent that those two months represent of that quarter's sales.

Exhibit D: Scatterplot, XYZ Sales vs. ESA Sales



Before moving to a refutation of the claimant's assertion that 1996 sales would increase by 10.9 percent over the same period in 1995, I wanted to ensure that my projected sales for the period of interruption were not made from data that was grossly distorted by recent unusual events. Therefore, I needed to determine if the data should be scrubbed to remove the effects of any discernible unusual events. Data points affected by such events are called outliers because they usually stand out from the rest of the data in a graph or table. I looked for these outliers by constructing a table showing the differences between actual and forecasted values, as shown in Exhibit F, and graphed the results in Exhibit G. The table and graph show that the quarter March, April and May of 1994 is an outlier with an unknown cause, but is only 5.4 percent greater than three standard deviations from the normal forecast error. Adjusting this data point for this small a difference, in order to bring the forecast error within three standard deviations, would have no material effect on the forecast. Also, the average absolute forecast error is only 17.0 percent in total, which is just fine for this application. Further, the quarter in question is two years prior to the

Figure E: XZY Motel, Regression of Sales Against Log of Area Sales

YEAR	QUARTER	ESA SALES	(X) LN OF ESA SALES	(Y) XYZ MOTEL SALES	FORECASTED SALES	PREDICTED SALES
1993	JUN, JUL, AUG	$ 6,310,000	$ 15.6576462	$ 140,787	$ 151,818	
	SEP, OCT, NOV	2,653,000	14.7912016	94,978	86,628	
1994	DEC, JAN, FEB	911,000	13.7222982	17,080	6,207	
	MAR, APR, MAY	1,634,000	14.3065416	34,191	50,164	
	JUN, JUL, AUG	5,372,000	15.4967108	145,127	139,709	
	SEP, OCT, NOV	2,832,000	14.8564937	93,284	91,541	
1995	DEC, JAN, FEB	1,257,000	14.0442385	32,090	30,429	
	MAR, APR, MAY	1,583,000	14.2748323	44,850	47,778	
	JUN, JUL, AUG	6,034,000	15.6129207	148,988	148,453	
	SEP, OCT, NOV	2,772,000	14.8350796	104,115	89,930	
1996	DEC, JAN, FEB	1,109,000	13.9189693	18,034	21,004	
	MAR, APR, MAY	1,507,000	14.2256315	34,211	44,076	
	JUN, JUL, AUG	6,453,000	15.6800557			$ 153,504
	SEP, OCT, NOV	2,720,000	14.8161424			88,505
	LESS: OCT & NOV @ 53.4% OF THAT QUARTER'S SALES					(47,305)

SUMMARY:	
JUNE, JULY, AUGUST	153,504
SEPTEMBER	**41,200**
TOTAL	**$ 194,703**

SUMMARY OUTPUT–QUARTERLY DATA

Regression Statistics	
Multiple R	0.9841
R Square	0.9684
Adjusted R Square	0.9652
Standard Error	9,571.55
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2.81E+10	2.81E+10	306.27	7.88114E-09
Residual	10	9.16E+08	9.16E+07		
Total	11	2.90E+10			

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Constant	(1,026,226)	63,022.25	-16.284	1.58454E-08
LN ESA Sales	75,238	4,299.13	17.501	7.88114E-09

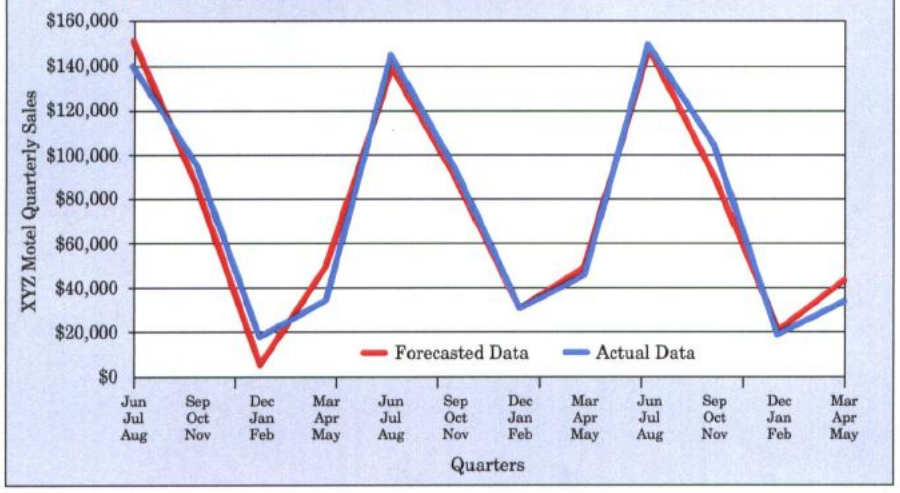
accident; since then the forecast error percentage is exceedingly small, which means we can have greater confidence in the later data points, including the predicted period of interruption.

Now let's turn to the claimant's assertion that sales would have increased by 10.9 percent in 1996 over the same period for 1995. First, whether the computation is made with or without sales tax, the actual increase for '94–'95 over '93–'94 for the trailing twelve months (TTM) ended May 31 is only 9.9 percent, not 10.9 percent. For TTM '95–'96 versus TTM '94–'95, there is a -3.2 percent decrease from the prior year (see Exhibit A). But the whole year is not the period of interruption—June through September is, and the percentage increase for '94–95 over '93–'94 is 1.6 percent (see Exhibit A), and for '95–'96 over '94–'95 the percentage increase is 3.7 percent (see Exhibit A). Second, a look at the run-up months to the period in question for all years shows that the periods October 1994 though May 1995 and December 1994 through May 1995 have increases over the same periods of the prior year of 25.0 percent and 50.1 percent, respectively. But the same periods for the next year show decreases of -13.5 percent and -32.1 percent, respectively (see Exhibit A). Hardly good omens for a 10.9 percent increase in the succeeding summer months.

Exhibit F: XYZ Motel, Determination of Magnitude of Forecast Error

A	B	C	D	E	F	G	H	I
	QUARTER	FORECASTED DATA	ACTUAL DATA	FORECAST ERROR	FORECAST ERROR %	STD DEV TIMES 3	COLUMN E > THAN COLUMN G	COLUMN E AS % OF COLUMN G
1993	JUN, JUL, AUG	151,818	140,787	11,031	7.8%	15,161		72.8%
	SEP, OCT, NOV	86,628	94,978	8,349	8.8%	15,161		55.1%
1994	DEC, JAN, FEB	6,207	17,080	10,873	63.7%	15,161		71.7%
	MAR, APR, MAY	50,164	34,191	15,973	46.7%	15,161	ALARM	105.4%
	JUN, JUL, AUG	139,709	145,127	5,418	3.7%	15,161		35.7%
	SEP, OCT, NOV	91,541	93,284	1,743	1.9%	15,161		11.5%
1995	DEC, JAN, FEB	30,429	32,090	1,662	5.2%	15,161		11.0%
	MAR, APR, MAY	47,778	44,850	2,928	6.5%	15,161		19.3%
	JUN, JUL, AUG	148,453	148,988	535	0.4%	15,161		3.5%
	SEP, OCT, NOV	89,930	104,115	14,186	13.6%	15,161		93.6%
1996	DEC, JAN, FEB	21,004	18,034	2,970	16.5%	15,161		19.6%
	MAR, APR, MAY	44,076	34,211	9,866	28.8%	15,161		65.1%
	AVERAGE ERROR				17.0%			
	STANDARD DEVIATION			5,054				

Exhibit G: Scatterplot, XYZ Sales Vs. ESA Sales



While abstracting the sales journals, I took off the data necessary to calculate occupancy percentages for the 36 month period, which is shown on Exhibit H. This table shows increases for '94–'95 over '93–'94 and decreases for '95–'96 over '94–'95 in total rooms sold, average annual occupancy percentage, and average room rate. What is critical here, and is graphically evident on Exhibit I, is that for the period of June–September 1995, total rooms sold decreased but total dollars received increased when compared to the prior year, indicating that room rates were raised to offset declining occupancy rates. Since room rates, due to competitive forces in the marketplace, are only elastic within a limited range, this represents a Band-Aid solution to the problem. Considering that the run-up period(s) to the 1996 summer season shows such dramatic decreases in occupancy percentages from the year before (-27.0 percent and -44.0 percent), it could be expected that the 1996 summer season would, at worse, also show a similar decrease and, at best, stay the same (See Exhibit J). It is hard to believe that any expected decrease in occupancy percentage could have been offset by another price increase. In fact, room rates were dropped 1.9 percent to $60.74 for the 1996 summer season. This accounts for the majority of the .6 percent decrease in total sales shown by comparing the regression analysis for the period June–September 1996 ($194,703) over the same period in 1995 ($195,968), and it accounts for $3,148 of the $31,118 actual difference between the two years ($195,968–$164,850).

The essence of the claim is that there is an upward and continuing trend to the claimant's sales over the immediate past few years. From what we have seen of the graphed data, there is an obvious seasonal cycle to the XYZ Motel's business. The variation in this seasonality can distort the overall trend of a set of data. Therefore, I performed some tests that helped me determine the strength of the trend, if any, and the degree of seasonality in the data set.

If a seasonal cycle exists, the variance of the differences between the same quarter in each year (95,216,080) is smaller than the variance of the actual data (2,414,605,940), as indicated on

Figure H: XZY Motel, Occupancy Percentages

TOTAL ROOMS AVAILABLE PER NIGHT	29
TOTAL ROOMS AVAILABLE PER 30 DAY MONTH	870
TOTAL ROOMS AVAILABLE PER 31 DAY MONTH	899

	1993-1994 ROOMS OCCUPIED		1994-1995 ROOMS OCCUPIED		1995-1996 ROOMS OCCUPIED		1996-1997 ROOMS OCCUPIED	
	NO.	%	NO.	%	NO.	%	NO.	%
JUNE	593	68.16%	655	75.29%	606	69.66%	518	59.54%
JULY	850	94.55%	890	99.00%	851	94.66%	670	74.53%
AUGUST	889	98.89%	886	98.55%	874	97.22%	783	87.10%
SEPTEMBER	841	96.67%	866	99.54%	835	95.98%	743	85.40%
OCTOBER	750	83.43%	704	78.31%	778	86.54%		
NOVEMBER	303	34.83%	358	41.15%	383	44.02%		
DECEMBER	125	13.90%	334	37.15%	197	21.91%		
JANUARY	125	13.90%	207	23.03%	134	14.91%		
FEBRUARY	175	21.55%	487	59.98%	152	18.72%		
MARCH	157	17.46%	514	57.17%	185	20.58%		
APRIL	239	27.47%	347	39.89%	238	27.36%		
MAY	**433**	48.16%	**392**	43.60%	**372**	41.38%		
TOTALS	**5,480**	51.58%	**6,640**	62.72%	**5,605**	52.74%		
AVG ROOM RATE		**$52.38**		**$47.49**		**$54.48**		
TOTAL JUNE–SEPT.		**3,173**		**3,297**		**3,166**		**2,714**
% CHANGE		3.9%		-4.0%				
AVG ROOM RATE		**$58.60**		**$57.31**		**$61.90**		**$60.74**
TOTAL OCT–MAY		**2,307**		**3,343**		**2,439**		
% CHANGE				44.9%		-27.0%		
TOTAL DEC–MAY		**1,254**		**2,281**		**1,278**		
% CHANGE				81.9%		-44.0%		

Exhibit K. When differences are computed, one eliminates the fluctuation caused by the seasonal cycle and thereby reduces the variance. The graph on Exhibit L indicates that the deviations from the average are much smaller for the differences than for the actual data.

Since there is no seasonality in differences between quarters, those differences can be analyzed to see if a trend exists. First the differences between the quarterly differences were computed. As this first set of differences between differences has a higher variance (146,887,145) than the differences between quarters (95,216,080), as shown on Exhibit K, there is no trend in addition to the seasonal cycle.

Next, I computed a second set of differences between differences, which has an even higher variance (492,869,170) than the first set as shown on Exhibit K, indicating the impossibility of any trend in addition to the seasonal cycle. (To avoid crowding the graph, the first and second differences between differences are not plotted on Exhibit L.)

A second graph shown on Exhibit M shows the degree of trend, seasonality and noise in a more summary fashion. Here is a quick summary of the calculations. First, I computed the grand mean, the mean of all the data points. Then I computed the squared difference between each data point and the grand mean—this is defined as total variance. Next, I computed the trend variance: the sum of squared differences between the average value for each year and the grand mean. The ratio (trend variance/total variance) is then defined as the proportion of variance due to trend. The next step is to compute the seasonal variance: the sum of squared differences between the average value for each quarter and the grand mean. The ratio (seasonal variance/total variance) is defined as the proportion of variance due to seasonality. Since the proportion must add up to 1.0, the proportion of noise is taken to be

Exhibit I: Trend Ratios Chart, June-September Activity

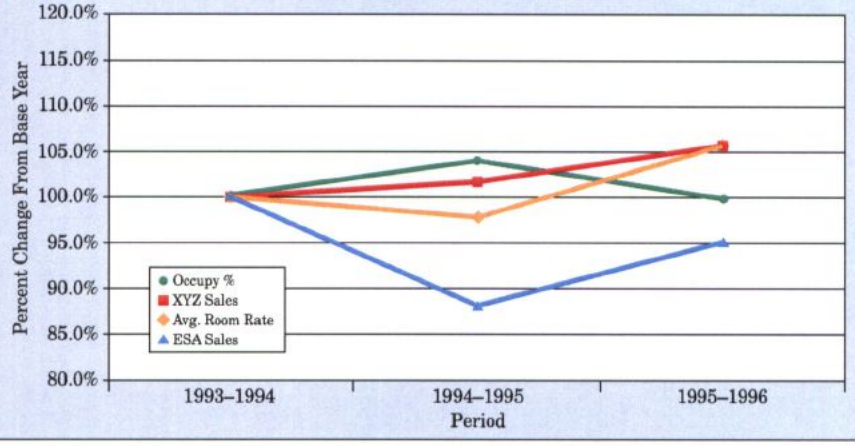


Exhibit J: Trend Ratios Chart, Trailing Twelve Months Activity

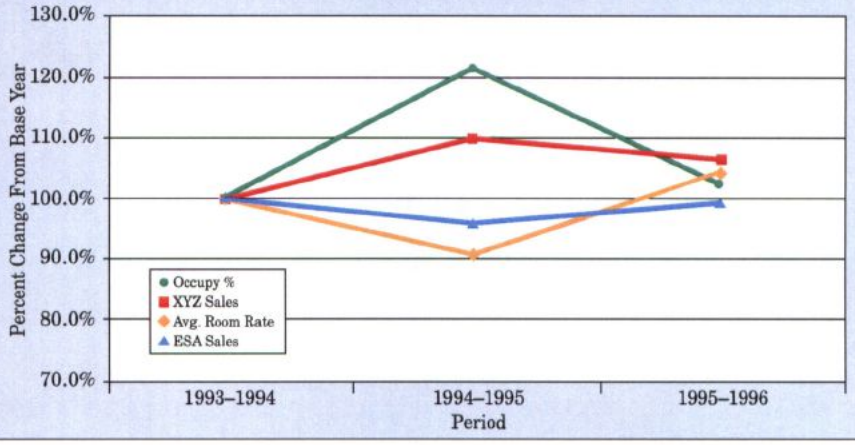


Figure K: XZY Motel, Trend and Seasonal Analysis

	ACTUAL	DBQ	DBD–1	DBD–2
VARIANCE	2,414,605,940	95,216,080	146,887,145	492,869,170
INDEX	100%	4%	6%	20%
TREND	None	None	Moderate	Strong
SEASONAL?	No	Yes	Yes	Yes
		++++++		
QUARTER	ACTUAL DATA	DIFFS BETWEEN SAME QTR EACH YEAR	FIRST DIFFS BETWEEN DIFFS	SECOND DIFFS BETWEEN DIFFS
JUN, JUL,AUG	140,787			
SEP, OCT, NOV	94,978			
DEC, JAN, FEB	17,080			
MAR, APR, MAY	34,191			
JUN, JUL,AUG	145,127	4,341		
SEP, OCT, NOV	93,284	(1,694)	(6,034)	
DEC, JAN, FEB	32,090	15,010	16,704	22,738
MAR, APR, MAY	44,850	10,659	(4,351)	(21,055)
JUN, JUL,AUG	148,988	3,860	(6,799)	(2,448)
SEP, OCT, NOV	104,115	10,831	6,971	13,770
DEC, JAN, FEB	18,034	(14,056)	(24,888)	(31,859)
MAR, APR, MAY	34,211	(10,640)	3,417	28,304

Exhibit L: XYZ Motel, Trend and Seasonal Analysis

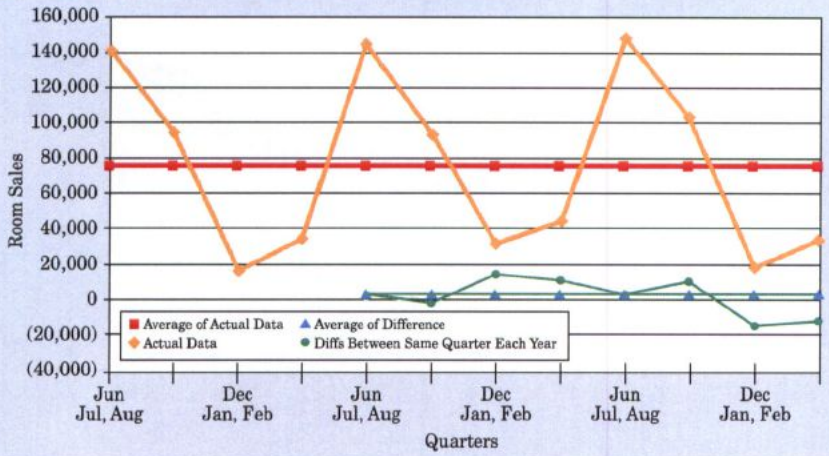
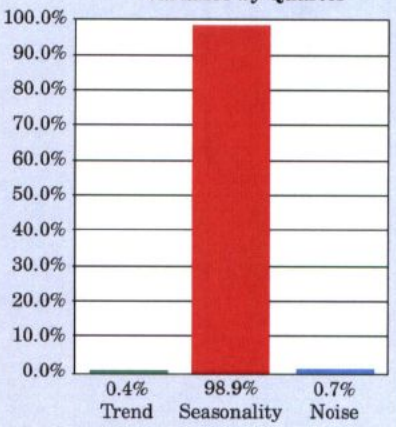


Exhibit M: XYZ Motel, Sales Analysis Variance by Quarter



1.0—(proportion due to trend + proportion due to seasonality).

In conclusion, there is no annual trend discernible for gross sales or number of rooms rented. While gross sales were trending upward in the past for the four months concerned, this is only due to a change in room rates over the past two years, a change that was not continued into the 1996 summer season.

My last step was to compute the saved expenses that would not have continued during the damage period. The two variable expenses were franchise royalties and operating supplies. I obtained the prior three years' tax returns and determined an average percentage of gross sales for each expense. All other operating costs, except rent and real estate taxes, were determined to be fixed for the summer season as no rental units were destroyed in the accident. Since the office manager's quarters were destroyed, no rent was payable during the damage period. (There may be a claim from the property owner for an equivalent amount of lost rent minus saved debt service payments, if any.) The justification for the reduction in property tax is because an abatement can be obtained from the Town of Brunswick.

The final adjusted claim amount is summarized on Exhibit N.

The claim was settled for $21,231. It represents a 62.0 percent savings to the insurance company in the amount of $34,657. VE

Figure N: XZY Motel, Computation of Lost Business Income
For the Months of June, July, August and September, 1996

		AMOUNT
REGRESSION ANALYSIS BY QUARTERS, LN OF X		$194,703
XYZ MOTEL ACTUAL SALES		164,850
ACTUAL LOST REVENUE, FOUR MONTHS		**29,853**
LESS SAVED EXPENSES:		
ROYALTIES @	7.9%	(2,358)
OPERATING SUPPLIES @	3.3%	(985)
RENT ON OFFICE BUILDING-4 MONTHS		(4,674)
REAL ESTATE TAXES ON OFFICE BUILDING		(605)
		$21,231

Additional Resources

NACVA and the Center for Economic and Industry Research (CEIR) can give you access to a selection of supplementary sources to support your analysis. The following sampling can be obtained in greater detail by contacting us at nacva1@nacva.com and ceiranalyst1@C-E-I-R.com, respectively.

Books and Databases:

- *Financial Valuation: Applications and Models** by James Hitchner
- *The Dark Side of Valuation** by Aswath Damodaran, Ph.D.
- *Business Valuation Discounts and Premiums** by Shannon Pratt
- *Cost of Capital: Estimation and Applications** by Shannon Pratt
- *Quantifying Marketability Discounts* by Z. Christopher Mercer
- *Restricted Stock Studies* (compendium and archive through 2002) NACVA http://www.nacva.com
- *Restricted Stock Studies* (through 2002) FMV Opinions http://www.fmv.com
- Marketability Discount Study (through 2001) Valuation Advisors, LLC http://www.valuationpros.com/ipo.html

*NACVA price discounted

NACVA Educational Courses:

- NACVA's Twelfth Annual Consultants' Conference Philadelphia, PA—June 1–4, 2005

CEIR Services:

- Articles supporting/challenging DLOM and QMDM
- White papers and PowerPoint® presentations