

Econometer

**A Newsletter of Economic Indicators in Southwest Colorado
from the Fort Lewis College School of Business Administration
Volume 16, Number 1 - WINTER 2006**

THIRD QUARTER OF 2005 STILL STRONG IN MOST SECTORS OF THE LOCAL ECONOMY

According to the Econometer Index, in the third quarter of 2005 La Plata County's economy declined by 13.7% from the third quarter of 2004. However, if one indicator, the value of construction permits issued, is not included, the index increased by 3.2% from year to year. The building permit for the new Mercy Medical Center building was issued in the third quarter of 2004, inflating the index for that short time period. Therefore, by looking at the local economy in the absence of that one indicator, the index shows a more realistic picture. As usual, there was a seasonal increase in growth of 11.6 percent from the second quarter of 2005 to the third quarter of 2005.

The National Economy

Real Gross Domestic Product (GDP), the output of goods and services produced by labor and property located in the United States, increased at an annual rate of 4.3 percent in the third quarter of 2005, according to preliminary estimates released by the Bureau of Economic Analysis. This compares to a rate of growth of 3.3 percent in the second quarter of 2005, and of 3.8 percent in the first quarter of 2005. The major contributors to the increase in real GDP in the second quarter were personal consumption expenditures, equipment and software, residential fixed investment, and federal government spending. Imports, which are not produced in the United States and therefore subtracted when calculating GDP, increased.

The preliminary unemployment rate of the nation's labor force was 54.9 percent in December 2005 (the most recent statistic available from the Bureau of Labor Statistics). The average unemployment rate in the nation for the first six months of 2005 was 5.18 percent. The annual average unemployment rate in 2004 was 5.5 percent. An unemployment rate of between 4.9 - 5.0 percent is widely believed to be desirable and attainable. In December, 18.2 percent of the unemployed had been without a job for 27 weeks or longer, compared with 20.4 percent a year earlier.

There are signs that the rate of inflation in the United States is starting to decline. The Federal Reserve (FED) recently increased interest rates to the highest level in 4 1/2 years. Many economists think the FED will increase rates at least one more time to keep

inflation under control. During the first eleven months of 2005, the consumer price index for all urban consumers (CPI-U) rose at a 3.8 percent seasonally adjusted annual rate (SAAR), according to the Bureau of Labor Statistics. This compares with an increase of 3.3 percent for all of 2004. Excluding food and energy, the CPI-U increased at a 2.1 percent SAAR in the first eleven months of 2005, after increasing 2.2 percent in all of 2004.

Colorado's Economy

According to the Colorado Department of Labor and Unemployment, four of the eleven major industries in the state posted gains in November, three showed losses, and four had little or no change. The gainers were led by trade, transportation, and utilities. These industry groups added 7,000 jobs to payrolls with its retail trade sector driving the change. Education and health services added 1,000 jobs, with its health care and social assistance component having the greater share of the gains. The state's preliminary unemployment rate for December 2005 was 4.6 percent, the most recent number available.

National, State, and Local Comparisons

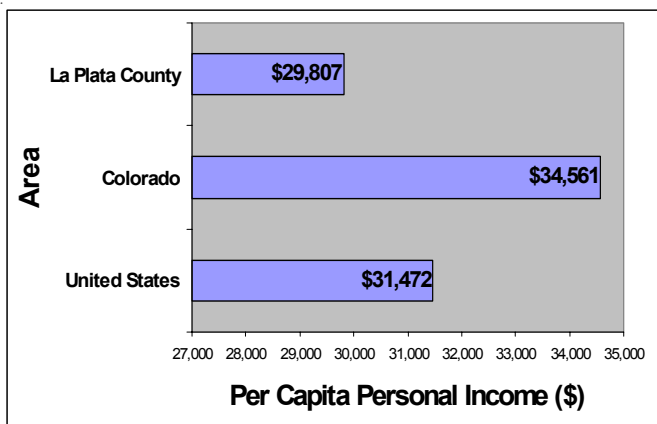
When comparing La Plata County with the national and Colorado economies with respect to unemployment and personal income, the local economy fares very well. La Plata County's unemployment rate continues to remain below both the national and the state's rates (see Table 1).

TABLE 1 – Comparison of Unemployment Rates – National, State, Local

Area	December 2004 Unemployment Rate	December 2005 Unemployment Rate (Preliminary)
United States	5.4%	4.9%
Colorado	5.2%	4.6%
La Plata County	4.2%	3.6%

Sources: U.S. Department of Labor, Bureau of Labor Statistics and Colorado Department of Labor and Employment, Labor Market Information

Along with employment and unemployment numbers, per capita personal income is also used as a standard measure of economic well-being. Preliminary 2004 per capita personal income in Colorado is \$36,063, which is the seventh highest in the nation (following Connecticut, Massachusetts, New Jersey, Maryland, New York and New Hampshire). Although remaining below both the national and state averages, per capita income in La Plata County has improved over the last few years, both absolutely and relative to national per capita personal income. See Graph 1.



GRAPH 1 – Comparison of Per Capita Personal Income – La Plata County, Colorado and United States (2003)

Source: U.S. Department of Commerce, Bureau of Economic Analysis, National and Regional Economic Information System

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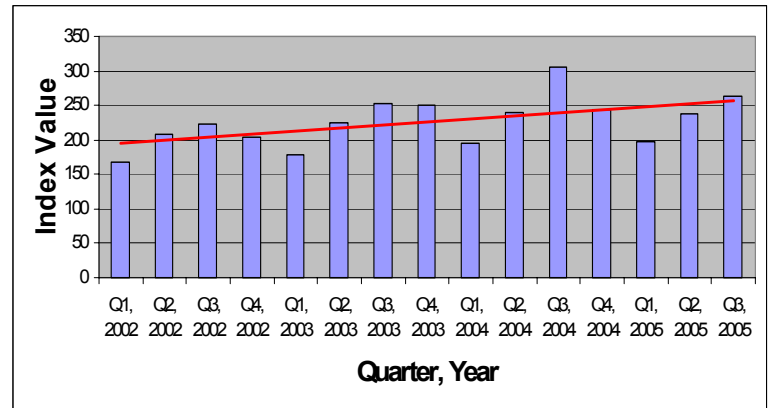
The Econometer is a newsletter on economic indicators of Southwest Colorado published by the Office of Economic Analysis and Business Research in the Fort Lewis College School of Business Administration. For information, contact:

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THE ECONOMETER INDEX

Graph 2 illustrates the changes in the quarterly Econometer Index from quarter one of 2002 to quarter three of 2005. The graph clearly illustrates the seasonal change of the local economy from quarter to quarter. The linear trend line also shows a stable climb in the local economy from Quarter 2 of 2004 to Quarter 3 of 2005.

GRAPH 2 – Quarterly Econometer Index, Quarter 1, 2002 – Quarter 3, 2005



The Econometer Index uses 1990 as its base year, meaning that the index equals 100 for that year. Changes in the statistics used then are compared to the statistics of 1990 in determining the index. All dollar values are put in 1990 dollars, adjusting for overall price changes.

Quarter Three 2005 Index

On a year-to-year basis (compared to the third quarter of 2004), nine of the twelve economic indicators for La Plata County increased during the third quarter of 2005. Indicators that increased from quarter three 2004 to quarter three 2005 include tourism, retail sales, employment, alfalfa hay prices, kilowatt hours used (industrial activity), residential electric meters installed (population), the median real estate price, bank deposits, and energy prices. College enrollment, calf prices, and the value of building permits issued (construction) decreased on an annual basis.

The La Plata County economy is very seasonal, so that some economic indicators fluctuate significantly during the course of the year. This is especially true of tourism and college enrollment. Seven of the indicators seasonally increased from the second to the third quarter of 2005. Those that increased include tourism, retail sales, employment, kilowatt hours used (industrial activity), residential electric meters installed (population), bank deposits, and energy prices. Decreasing from quarter to quarter were calf prices, alfalfa hay prices, the median real estate price, college enrollment, and the value of building permits issued (construction).

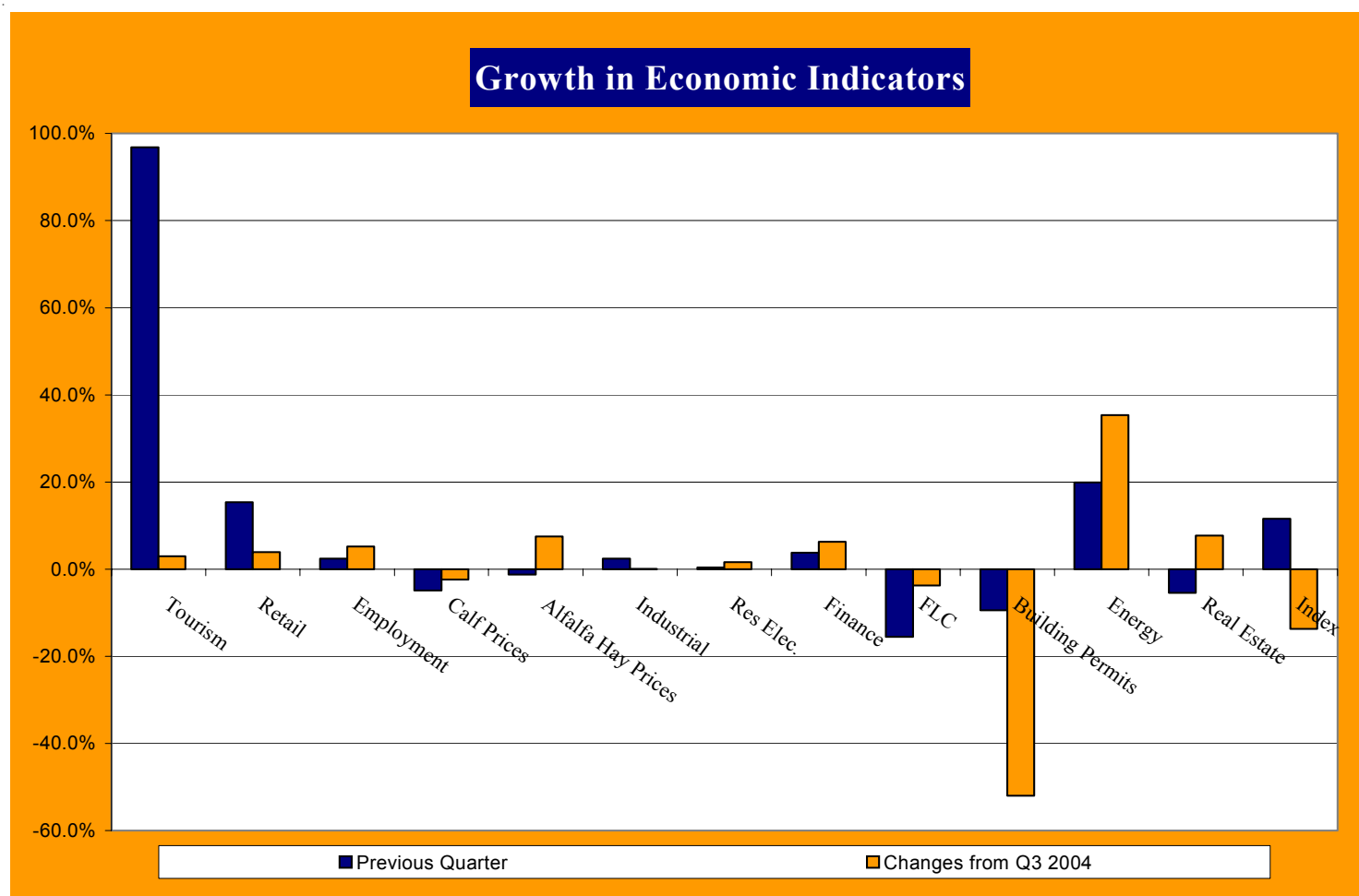
Methodology

The base period for the Econometer Index is 1990. Data is developed on a quarterly basis, usually from monthly sources. Monetary data are adjusted to the 1990 price level so that analysis may be done in real terms. Weights used in the Index are: Tourism(.275), Retail Sales(.25), Employment(.05), Agriculture(.05), Industrial Kilowatt Hours(.05), FLC Enrollment(.10), Building Permits(.10), Energy Prices(.025), Residential Real Estate Prices(.025), Residential Electric meters(.025), Bank Deposits(.05).

Tourism includes train ridership, Mesa Verde visitors, airport passenger activity and lodger's tax revenue. Agriculture includes calf and alfalfa hay prices.

The index is revised periodically to ensure that it accurately reflects the developing economy of La Plata County.

Growth in Economic Indicators		
Indicator	Previous Quarter	Change from Q3 2004
Tourism	96.8%	3.0%
Retail	15.4%	3.9%
Employment	2.4%	5.2%
Calf Prices	-4.9%	-2.4%
Alfalfa Hay Prices	-1.2%	7.5%
Industrial	2.4%	0.1%
Res Electric Meter	0.4%	1.6%
Finance	3.8%	6.3%
Fort Lewis College	-15.5%	-3.7%
Building Permits	-9.4%	-52.0%
Energy Prices	19.9%	35.4%
Real Estate	-5.4%	7.7%
Index	11.6%	-13.7%



Visit the Econometer on the web at
[Http://soba.fortlewis.edu/soba/pub/econo.htm](http://soba.fortlewis.edu/soba/pub/econo.htm)

ECONOMIC INDICATORS

Tourism

Quarter to Quarter - Tourism measures increased on a seasonal basis from the second quarter to the third quarter of 2005 by 96.8%. All four sectors of the tourist industry increased on a quarter to quarter basis. Ridership on the Durango & Silverton Narrow Gauge Railroad increased by 98.9%, visitors to Mesa Verde increased by 75.9%, enplanements at the Durango-La Plata County Airport increased by 37.5% and lodger's tax revenue (adjusted for inflation) increased by 163.5%.

Year to Year - On a year-to-year basis, the tourism index increased by 3%. Visits to Mesa Verde National Park increased by 7.7% over the third quarter of 2004, ridership on the Railroad increased 0.5%, enplanements increased 4.6%, and lodger's tax revenue (adjusted for inflation) decreased on an annual basis by 1.1%.

Tourism Indicators Third Quarter 2005		
Indicator	Number	% Change from Previous Year's Third Quarter
Mesa Verde Nat'l Park	260,017	7.7%
Durango & Silverton Narrow Gauge Railroad	93,145	0.50%
Durango - La Plata County Airport	30,586	4.6%
Lodger's Tax Revenue In 1990 Dollars	\$233,873.00	-1.1%

Retailing

Quarter to Quarter - Retail sales, after adjustment for inflation, increased from the second quarter to the third quarter of 2005 by 15.4%.

Year to Year - Comparing the third quarter of 2004 to the third quarter of 2005, retail sales, after adjustment for inflation, increased by 3.9%.

Employment

Quarter to Quarter - Employment in La Plata County is estimated by the Colorado Department of Labor and Employment. These estimates are subject to significant revisions. According to state estimates, employment in La Plata County in the third quarter of 2005 increased by 2.4% from the second quarter of 2005.

Year to Year - Employment increased by 5.2% from year to year. As noted earlier, the preliminary unemployment rate of the labor force in La Plata County was estimated to be 3.6% in December, 2005. This rate is below the state's estimated rate of 4.6%. The unemployment rate represents the number of unemployed as a percent of the total labor force.

Agriculture

Quarter to Quarter - Calf prices, after adjustment for inflation, decreased 4.9% from the second to the third quarter of 2005, while alfalfa hay prices also decreased 1.2% during the same time frame.

Year to Year - On an annual basis, calf prices (adjusted for inflation) decreased 2.4%, while alfalfa hay prices increased 7.5%.

Industrial Activity

Quarter to Quarter - Industrial kilowatt-hours used increased by 2.4% from the second to the third quarter of 2005.

Year to Year - On an annual basis, industrial kilowatt-hours used increased by 0.1%. Most industrial usage of electricity in La Plata County is to compress natural gas for transmission through gas pipelines.

Population

Quarter to Quarter - The number of new residential electric meters in La Plata County increased by 0.4% from the second to the third quarter of 2005.

Year to Year - On an annual basis the number of new residential electric meters increased by 1.6%. The annual increase in the number of residential electric meters suggests that the population of La Plata County is continuing to grow. However, this rate has been increasing at a decreasing rate since the third quarter of 2004 (when each quarter change is compared to the same quarter a year earlier). It will be interesting to see if this trend continues. From December of 2004 through November of 2005, the percentage increase in new meters installed is about 2.2%. This is compared to an increase of 2.6% over the year 2003 and an increase of 3.0% over the year 2004. The population of La Plata County was estimated to be 46,229 in 2003 (the most recent number available from the Census Bureau).

Finance

Quarter to Quarter - After adjustment for inflation, bank deposits in La Plata County increased by 3.8% from the second to the third quarter of 2005.

Year to Year - On an annual basis, bank deposits increased by 6.3% from the third quarter of 2004 to the third quarter of 2005. Bank deposits are an important indicator of the economic health of the community as well as an indicator of the ability of local banks to make loans to consumers and business borrowers. Two new banks opened new branches in La Plata County in 2005, Alpine Bank and Community Banks of the Rockies.

Fort Lewis College

Quarter to Quarter - Enrollment at Fort Lewis College decreased from the second to the third quarter of 2005 (from the first and second summer terms to the third summer term and the first month of the fall term) by 15.5%.

Year to Year - Enrollment on an annual basis decreased by 3.7%. The college stabilizes the local economy on a seasonal basis because most spending by students occurs during the September through April time frame while tourism activity peaks during the summer months.

ECONOMIC INDICATORS (cont)

Construction

Quarter to Quarter - After adjustment for inflation, construction decreased from the second to the third quarter of 2005 by 9.4%. Construction activity in La Plata County can show volatility on a quarter to quarter basis due to permits being issued to very large projects in one month that actually contribute to the local economy over a long period of time.

Year to Year - On an annual basis construction activity decreased by 52%. This can be explained by the fact that the permit for the new Mercy Medical Center was issued in September of 2004, inflating the number for this indicator for the third quarter of 2004. If the value of the Mercy Medical Center permit is subtracted from the third quarter of 2004, this indicator would have decreased by only 9.7%. Although the value of the building permits issued has declined recently, the construction industry still remains strong compared to earlier years. Comparing the first three quarters (January – September) of 2005 with 2004, there is a 28% decrease in the value of permits issued (using inflation adjusted numbers). The same comparison, the first three quarters of 2005 with the first three quarters of 2003, shows a decline in permit values issued of 3%; while the same comparison with the first three quarters of 2002 shows a 17.7% increase for 2005.

Energy Prices

Quarter to Quarter - The federal government's energy price index (adjusted for inflation) increased by 19.9% from quarter to quarter.

Year to Year - On an annual basis the energy price index increased by 35.4%. Energy prices can be highly volatile from one quarter to the next. However, there has been an overall increase in energy prices since the beginning of 2002. Energy prices are very important to La Plata County because the county is a major producer of natural gas. Rents and royalties, as well as property tax revenues associated with natural gas production, are significant sources of income to La Plata County.

Real Estate

Quarter to Quarter - The median price of residential real estate in La Plata County, after adjustment for inflation, decreased by 5.4% from the second to the third quarter of 2005.

Year to Year - The annual increase in the median residential real estate price (adjusted for inflation – in 1990 dollars) in La Plata County was 7.7%, from \$186,070.00 in the third quarter of 2004 to \$200,400.00 in the third quarter of 2005. In the absence of adjusting these prices to 1990 dollars, the median residential real estate price in La Plata County in the third quarter of 2004 was \$268,500.00; and in the third quarter of 2005 it was estimated to be \$300,000.00.

What is the Fair Market Value of Your Business? Additional Items to Consider...

by Luke T. Miller, Ph.D.

In the previous issue of the Econometer, I discussed valuing your business. In this issue, I will briefly discuss additional items to consider when performing any valuation. As you are aware, valuing a business requires estimation of future activities. Unfortunately, no one is an all-knowing sage when it comes to forecasting future events. To aid in the 'fortune-telling' nature of the valuation process, sensitivity, scenario, and simulation analyses may be performed.

A sensitivity analysis reveals how much the estimated value of a business will change in response to changes in input variables. For example, returning to the restaurant valuation example from the previous issue, what if gross sales are 15% less than initially forecasted? Or, what if labor costs are 10% more than initially forecasted? Recall from the previous issue that the asking price of the restaurant was \$800,000 and the fair market value using the initial estimates was \$910,000. Consider the sensitivity analysis performed on the restaurant example plotted in Figure 1. Assume you are confident gross sales will be at worst 10% less than initially estimated. This assumption corresponds to a value equal to \$770,000 or just \$30,000 less than the asking price of \$800,000.

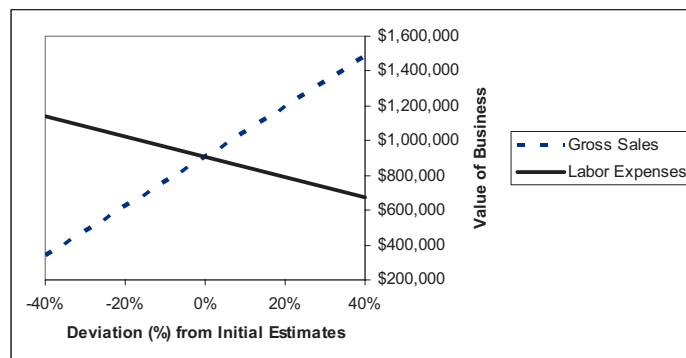


Figure 1. Sensitivity Analysis for Restaurant Example

Similar to a sensitivity analysis, a scenario analysis reveals how much the estimated value of a business will change in response to simultaneous changes in several input variables. Usually, three scenario analyses are performed: worst-case, most-likely, and best-case. Assume the following for the worst-case scenario: gross sales 10% less than initially estimated and labor expenses 20% more than initially estimated. This corresponds to a worst-case scenario restaurant value of \$650,000. Additionally, assume the following for the best-case scenario: gross sales 20% more than initially estimated and labor expenses 10% less than initially estimated. This corresponds to a best-case scenario restaurant value of \$1.25 million. The most-likely value is based on your initial estimates and equal to \$910,000. Thus, you could say that the restaurant is worth somewhere between \$650,000 and \$1.25 million, with a most likely value of \$910,000.

What is the Fair Market Value of Your Business? (cont)

Similar to a scenario analysis, a simulation analysis assigns the chance (or probability) of a particular value for a business. In other words, in a hypothetical context, it answers the following question: if I were to buy 10 identical restaurants, how many would end up being worth more than the asking price of \$800,000? If the answer is all ten of them, then you can be very confident in your purchase. However, if the answer is only two of them, then you should probably not purchase the restaurant. The simulation analysis for the restaurant example is plotted in Figure 2. For example, there is a 20% chance the restaurant will be worth less than \$800,000 and a 10% chance the restaurant will be worth more than \$1.2 million. In other words, if you were to buy 10 restaurants, two of them would be end up being worth less than the asking price of \$800,000 and one would be worth more than \$1.2 million.

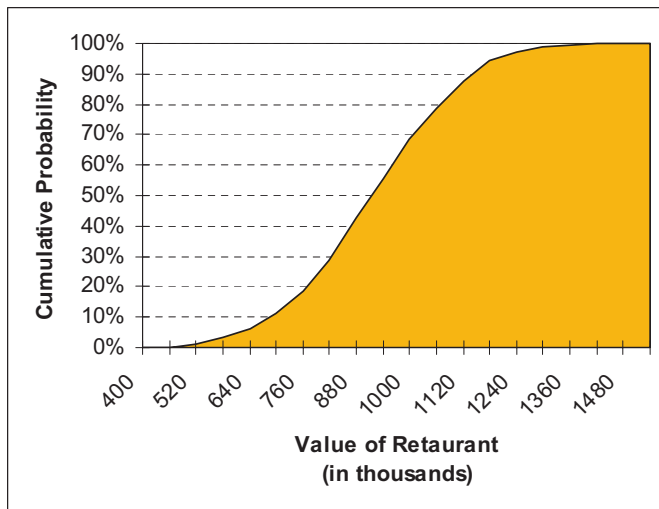


Figure 2. Simulation Analysis for Restaurant Example

Real Options Framework

Under the real options framework, any decision to invest or divest in assets is simply viewed as an option. Firms have the right but not the obligation to invest, analogous to financial call or put options on a traded security. Applications of real options can be found in numerous areas to include manufacturing, inventory, natural resources, research & development, strategic decisions, technology, and stock valuation. In a recent survey of 4,400 firms ranging in size and business practice, Graham and Harvey found that 27% of survey participants have implemented a real options framework to address their investment decisions.

Consider any layered investment decision such as a license or research & development. When a firm purchases the license to drill for oil, it in essence receives the option to drill. The firm will only exercise its option to drill if the market price of oil ensures revenue exceeds drilling expenses. When a pharmaceutical company invests in research & development, it provides them the option to manufacture and distribute their product. If projected revenues exceed manufacturing expenses the firm will exercise its option. Note in these two examples, the firm receives the opportunity to profit only after investing up-front in either a license or research & development. The question then becomes: how much should the firm invest in a license or research & development given the downstream

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profit opportunities? The purpose of an options analysis is to estimate the maximum amount the firms should expend today to acquire these downstream options.

Returning to the restaurant example, consider the option to franchise a second restaurant on the opposite end of town. In a real options context, the initial restaurant provides its owners the option to begin franchising. Obviously, the restaurant is worth a premium if it can be franchised. The size of the premium would depend upon the uncertainty, timing of the expansion, cost to franchise, estimated revenues of the franchise, and opportunity cost of setting aside investment funds. For our example, assuming the restaurant has the option to open a second location, the value of the restaurant increases from \$910,000 to \$1.2 million.

Concluding Remarks

Behind every major investment decision should lie some calculation of what that move is worth. Whether the decision involves launching a new product or service, developing a partnership, initiating marketing efforts, or building additional capacity, how a business estimates value is a key determinant of its resource allocation. The purpose of these Econometer articles was to shed light on the importance of the valuation process and present contemporary valuation techniques.

About the Author

Dr. Miller received his PhD in Financial Engineering from Auburn University and is a new faculty member in the School of Business Administration at Fort Lewis College. Prior to joining Fort Lewis College, he was a faculty member in the School of Business Administration at the University of San Diego where he taught quantitative, financial valuation, and personal finance courses. His consulting, teaching, and research interests span all areas of business valuation to include, but not limited to: financial planning (both personal and firm), capital budgeting, replacement analysis, capital rationing, security analysis, and risk management. He is also an adjunct research professor for the Culverhouse College of Business at University of Alabama, and he is an investment advisor for several stock funds and investment groups. Phone: 970-247-7060, Email: miller_l@fortlewis.edu, Website: http://soba.fortlewis.edu/miller_l

Dean's Corner

By Tom Harrington
Dean, School of
Business
Administration

The Winter Semester got off to a great start with another record setting attendance at the Southwest Business Forum. This is the 14th year we were honored to host this popular event sponsored by the Wells Fargo Bank. I want to especially recognize Patty Burkholder, Durango

and Ignacio Wells Fargo Bank President, as the driving force to ensure the annual continuation of this "Focus on the Future Business and Economics" event. Next year we will be moving the Forum to the Concert Hall in order to accommodate the standing room only crowd!

We were privileged to have Dr. Scott Anderson, Senior Economist Wells Fargo & Company, return for the fourth year to present the national state of the economy and annual forecast. His presentation, "Fasten Your Seat Belt," includes comments on the change in economic leadership and forecasts such as the Fed winning the war on inflation at the expense of slightly lower but more balanced and sustainable growth in 2006, an inventory building and trade balance improvement offsetting weaker consumer growth, and a flattening of the yield curve. For those of you who were unable to attend this year's forum, Dr. Anderson's presentation is available online (www.wellsfargo.com; click on About Wells Fargo, then go to Economic Research, then under Economic Indicators click on Read More).

We were also privileged to have Dr. Rich Wobbekind, Associate Dean of External Relations and Director of the Business Research Division, Leeds School of Business, University of Colorado at Boulder, return for the 14th year to present the Colorado Business Economic Outlook! His presentation included optimism on the employment growth rate for the state, especially in the professional and business services sector. Other forecasts such as 4% growth in the export beef market and overall pick-up in exports, a decline in "off-shoring," high volatility in energy prices, historically low interest rates, an increase in state tax revenues, and higher education need to rely on greater external funding, may be viewed on line (www.leeds.edu/brd, then click Colorado Business Economic Outlook under Current and Ongoing Projects.)

Dr. Deb Walker, Director of our Office of Economic Analysis and Business Research in the School of Business Administration, presented the regional economy, with many of her sector observations included in this issue of the Econometer. Deb added a new feature this year by including information from one of her recent economic impact studies, The Impact of the Natural Gas Industry in La Plata County, 2003-2004, with co-author and new economic faculty member Dr. Tino Sonora. Please contact us if you would like a copy of this study that highlights direct spending by the natural gas industry of over \$215 million, direct employment

of over 300 jobs with another 620 plus related jobs, and the favorable impact of substantial oil and gas tax revenues on residential and commercial property taxes.

Another exciting initiative that was unwrapped at the annual forum this year is a regional economic quarterly to substantially expand the scope and market of the Econometer. New faculty members Dr. Tino Sonora and financial economist Dr. Luke Miller joined Deb to present a tentative table of contents for the new quarterly: key contributors to the region's economy, report of the key contributors' impact and percentage change on the regional economy, forecasting for relevant contributors, a comparison of a regional composite index with Region 9 five-county indices and relevant U.S. and state economic indicators, a consumer price index to monitor regional prices changes and cost of living, special reports on key economic contributors, and discussion articles on contemporary business practices. We have just begun talking with potential funding and publication partners and will keep you informed as we progress on this project this year.

The Winter 2006 Semester is certainly off to a great start!

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