

REGIONAL BUSINESS REVIEW

Booth College of Business and Professional Studies



CONTENTS

ARTICLES:

Consumer Credit Scoring: What Consumers Don't Know
Could Cost Them Thousands

Coye Crenshaw-Kleve, Gary Baker

Disclosure of Internal Control Weaknesses and
Long-Term Stock Returns

James Martin, Gary Baker

Driver Retention: A Framework for Restructuring
Carrier Management Practices

Sandra Mitchell, Elizabeth J. Rozell

An Accounting Contribution to Regional Development:
Multiple Dimensions of the Triple Bottom Line

Stephen V. Senge

Housing Economics: The Condominium Market in Transition

Roger P. Sindt

An Analysis of State Income Tax Instruction
Readability for the Midwest Region

Frank R. Urbancic, Ko Hsu

Loss-Aversion and Break-Even Effects
Across Gender Groups

Alan Wong, Jay White

BOOK REVIEWS:

The White Man's Burden, by William Easterly

REVIEWED BY

Ben Collier

The Bully from Bentonville, by Anthony Bianco

Monica Fine

The Cheating Culture, by David Callahan

Amanda Francis

Think, by Michael LeGault

Steven B. Gilbert

The Mystery of Capital, by Hernando De Soto

Brenda Jones

Discovering the Soul of Service, by Leonard L. Berry

Jim Walker

Available online at www.nwmissouri.edu

Regional Business Review

Volume 26 May 2007

ISSN 8755-1977

*Northwest Missouri State University
Booth College of Business and Professional Studies
(660) 562-1277*

Thomas Billesbach, Dean
Booth College of Business and Professional Studies

Patrick McLaughlin, Chairman
Department of Accounting/Economics/Finance

Arley Larson, Chairman
Department of Agriculture

Phillip Heeler, Chairman
Department of Computer Science/Information Systems

James Walker, Chairman
Department of Marketing/Management

Jody Strauch, Chairman
Department of Mass Communication

Janet Marta, Editor
Hana You, Editorial Assistant

The editor gratefully acknowledges assistance from the following reviewers,
from Northwest Missouri State University and other institutions:

NORTHWEST FACULTY REFEREES

John Baker	Mark Jelavich	Jim Walker
Terry Coalter	Al Kelly	Tekle Wanorie
Ben Collier	Chi Lo Lim	Jason White
Ernie Ferguson	Steve Ludwig	Mike Wilson
Greg Haddock	David Oehler	Rahnl Wood

OTHER REFEREES

Nabil Alghalith, Truman State University
Stephen Allen, Truman State University
Roger Best, Central Missouri State University
John Bowdidge, Missouri State University
Karen Brown, Missouri State University
Bruce Domazlicky, Southeast Missouri State University
Larry Garrison, University of Missouri–Kansas City
Konrad Gunderson, Missouri Western State University
Christina Heiss, University of Missouri–Kansas City
Dave Kunz, Southeast Missouri State University
Jim Martin, Washburn University
Patrick McMurry, Missouri Western State University
Todd Mick, Missouri Western State University
Ralph Mullin, Central Missouri State University
Eric Munshower, University of Dubuque
Edgar Norton, Illinois State University
Pete Richardson, Missouri State University
Elizabeth Rozell, Missouri State University
Jitendra Tewari, Missouri Western State University
C.W. VonBergen, Southeastern Oklahoma State University

CONTENTS

ARTICLES:

- Consumer Credit Scoring: What Consumers Don't Know
Could Cost Them Thousands1
Coye Crenshaw-Kleve, Gary Baker
- Disclosure of Internal Control Weaknesses and
Long-Term Stock Returns12
James Martin, Gary Baker
- Driver Retention: A Framework for Restructuring
Carrier Management Practices25
Sandra Mitchell, Elizabeth J. Rozell
- An Accounting Contribution to Regional Development:
Multiple Dimensions of the Triple Bottom Line44
Stephen V. Senge
- Housing Economics: The Condominium Market in Transition59
Roger P. Sindt
- An Analysis of State Income Tax Instruction
Readability for the Midwest Region72
Frank R. Urbancic, Ko Hsu
- Loss-Aversion and Break-Even Effects Across Gender Groups85
Alan Wong, Jay White

BOOK REVIEWS:

- The White Man's Burden, by William Easterly99
Ben Collier
- The Bully from Bentonville, by Anthony Bianco101
Monica Fine
- The Cheating Culture, by David Callahan103
Amanda Francis
- Think, by Michael LeGault105
Steven B. Gilbert
- The Mystery of Capital, by Hernando De Soto107
Brenda Jones
- Discovering the Soul of Service, by Leonard L. Berry109
Jim Walker

Consumer Credit Scoring: What Consumers Don't Know Could Cost Them Thousands

Coye Crenshaw-Kleve
Heritage Bank

Gary Baker
Washburn University

INTRODUCTION

Credit scores range from a low of 300 to a high of 850. How the score affects a person's ability to borrow money involves more than knowing if the score is high or low. A credit score is "a statistical (or quantitative) method used to predict the probability a loan applicant or existing borrower will default or become delinquent" (Chye et al. 2004).

But what exactly does the credit score mean? For a person seeking to borrow money, or qualify for a credit card, the credit score will determine the conditions of the loan, including the interest rate. The lower the credit score, the harder it is to borrow and the higher the interest rate. Even a few points can make a difference.

Historically, the decision to extend credit to a customer was based on the subjective judgment of a loan officer. If the officer felt the applicant was of "good character," and "unlikely to default on the loan," credit was granted. But with an ever-increasing demand for credit, and concern that "like applicants be treated alike," a more objective method of assessing default risk was needed.

Statistically based credit decision-making systems were pioneered during the late 1950s (Collins 2002). During the 1960s, credit card companies and banks began using credit-scoring models to assess the default risk associated with granting credit cards and bank loans. The scoring systems were intended to

“help credit providers quantify and manage the financial risk involved in providing credit so that they can make lending decisions quickly and more objectively” (Chye et al. 2004)

By the 1980s, the scoring system had been so successful that banks began using scoring methods to assess default risk of consumers applying for personal loans. Credit scoring was used to evaluate credit lines, home loans, home equity loans, small business loans, insurance applications and even employment applications (Chye et al. 2004).

Scoring “has been changing in recent years towards choosing the customers of highest profit” (Stepanova 2002, 1). The goal now includes assessing the probability of default and estimating the timing of the default. If default is likely, will it occur early or late in the life of the loan.

If a loan is granted and the customer defaults, the time of the default can affect the profitability of the loan. The closer the loan is to maturity when the default occurs the greater the probability the lending institution will make a profit. On the other hand, if the loan is paid off prior to maturity, the lender will forgo interest income and not obtain expected profits (Stepanova 2002). Thus, borrowers with high credit scores are given low enough interest rates to discourage them from paying the loan off early.

HOW A CREDIT SCORE IS DETERMINED

A consumer’s credit score is determined by scores in various categories of the credit report. The Debt Consolidation Care website (2006) lists the following components found in a standard credit report:

- Applicant’s information: full name, alias, current and previous addresses, social security number, birth date, plus current and past employers.
- Fraud indicators: any information given by the consumer that does not match actual information.
- Profile summary: total installment loan balance, total real estate loan balance, total monthly payments, past due amounts, and any other balances the consumer may have.
- Credit score: assigned by the credit bureaus (Equifax, Experian, and

Transunion), this is the core component of the credit report, indicating the current financial position of the borrower.

- Tradelines: all creditors, account types, date accounts opened, credit limit or loan amount, co-signers, and payment pattern on all accounts.
- Collection record: the number of accounts, if any, sent to collection agencies, the number of paid collection accounts, and a rating of how serious the debtor is about repaying credit accounts.
- Recent inquiries: names of those agencies that have inquired about a person's credit score within the last year (for credit) or two years (for employment).
- Public record information: any state or county court records including bankruptcy, tax liens, and monetary and non-monetary judgments.

Before granting credit, lenders want to know potential borrowers' past histories. Has the consumer defaulted on a loan or filed for bankruptcy? How many accounts are delinquent? Have accounts been referred to a collection agency? What is the average balance on an account, compared to the overall credit limit? With this information, and the credit score calculated by credit bureaus, lenders are better equipped to predict the future actions of borrowers.

One credit bureau, Fair, Isaac & Company (FICO) has developed categories for assessing a potential borrower's credit risk. The FICO assessment has become known as the "credit score" or "FICO score" (Melia 2006). Credit scores range from 620 to 850, with a median of 723 (Tolkoff 2005). A score above 620 is "considered respectable" (Melia 2006). The FICO categories are:

- 780–850: low risk
- 740–780: medium to low risk
- 690–740: medium risk
- 620–690: medium to high risk
- Below 620: high risk (sub-prime)

Tolkoff gives the following example of how different credit scores can affect the ability to borrow and the interest rate charged.

“With a score of 615, your interest rate on a \$250,000, 30-year fixed rate mortgage would have been 8.53 percent recently, with a \$1,928 monthly payment. If that score were 720, how-

ever, you could have gotten a 5.94 percent interest rate and seen your monthly payments drop to \$1,430. Over the life of the loan, you would have saved \$157,699 in interest.”

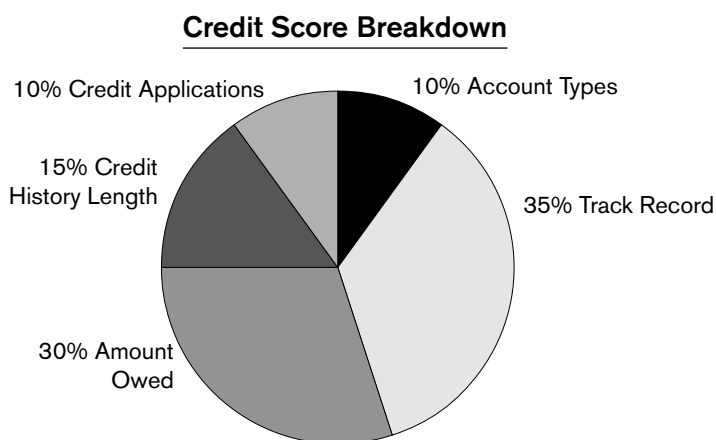
Although this may seem like an extreme example, with the credit scores being over 100 points apart, it is still a good indicator of what a difference good credit can make for a borrower’s interest rate, and thus the total interest paid over the life of the loan.

FACTORS AFFECTING A PERSON’S CREDIT SCORE

There are five factors that affect consumer credit scores, and thus the ability to borrow money (Kahan 2005). These factors are:

- A borrower’s track record (past payment history)
- The amount currently owed on accounts
- The length of credit history
- Applying for multiple credit accounts in a short time period
- The types of credit accounts currently open

This breakdown, including weighting, can be seen graphically in the chart below.



Knowing how these factors affect credit scores helps borrowers understand how many dollars they can borrow and the interest rate they will be charged.

Payment History (35%)

Payment history has the largest influence on the credit score. Creditors want to know that prompt payments have been made throughout the applicant's credit life. However, creditors want to see more than one credit account in an applicant's history. "Having fewer credit accounts isn't necessarily better for boosting a credit score, because a thin credit profile doesn't suggest that a borrower can handle paying on multiple debts" (Sahadi 2005). Lenders want to see that a borrower can handle on-time payments for numerous accounts. "No matter how good a person's past performance, one late payment can affect a credit score dramatically" (Sahadi 2005). Tolkoff supports this by saying "one late mortgage payment could make your score plunge 100 points", causing you to move to a different risk class (Tolkoff 2005). "Having more than one credit account open with perfect on-time payments will help to lessen the impact of one late payment" (Tolkoff 2005). Thus, having more than one open credit account can help a borrower.

Account Balances (30%)

The second largest influence on a credit score is the total amount owed on all credit accounts, compared to the maximum credit line. This is referred to as the balance-to-limit ratio. The balance-to-limit ratio is the ratio of the amount borrowed on a credit line to the maximum line of credit extended. This balance-to-limit should not exceed 50% (Tolkoff 2005).

Consider a consumer with two credit cards, one with a \$3,000 limit, the other a \$5,000 limit. The credit balance should not exceed \$1,500 and \$2,500 respectively, though lenders prefer a low balance to no balance. This demonstrates that borrowers are able to manage more than one monthly payment. Having a few accounts with low balances is better than having one account with a high balance, because it shows the ability to manage credit responsibly (Kahan 2005).

Credit History (15%)

Lenders prefer a long credit history. The lender wants to be assured a potential borrower can manage multiple accounts over a long period (Tolkoff 2005).

Credit Applications (10%)

Applying for, and opening, several new credit accounts in a short period of time make lenders very uneasy about a consumer's credit habits. Opening numerous accounts makes the applicant seem "low on cash or on a spending spree" (Tolkoff 2005). Although having multiple credit accounts is a good way to lower

the balance-to-limit ratio, opening multiple new accounts in a short period may increase that person's default risk in the eye of the lender.

Types of Accounts (10%)

The final factor, the types of credit accounts, indicates to lenders the responsibility the borrower has taken with credit options. A good mix of accounts—credit cards, installment loans, real estate loans, and credit lines—will help to show financial responsibility. It also demonstrates the consumer has experience with different types of credit. The more credit accounts a consumer is familiar with, and capable of managing, the less the likelihood of default (Tolkoff 2005).

Ginny Ferguson, the former president of the California Association of Mortgage Brokers states ten factors that are guaranteed to lower a person's credit score (Fogarty 2005). They are:

- Serious delinquency
- Serious delinquency plus public record or collection filed
- Derogatory public record or collection filed
- Time since delinquency is too recent or unknown
- Level of delinquency on accounts
- Number of accounts with delinquency
- Amount owed on accounts
- Proportion of balances to credit limits on revolving accounts is too high
- Length of time accounts have been established
- Too many accounts with balances

EFFECTS OF A PERSON'S CREDIT SCORE

A person's credit score (report) may be the best indicator of the default risk to the lender. But what exactly does a score affect? How much of a difference can 100 points make? The credit score affects the type of credit available to the borrower, the amount of money the lender will make available and the interest rate charged on the loan. The credit score can also affect insurance premiums, eligibility for utilities, rentals, and the cost of cell phones. Higher credit scores can assist borrowers in receiving better loan rates, less expensive insurance and better jobs (Hazard 2005). Credit scores also affect the size of the down payment required on home mortgages. Borrowers with sub-prime scores can qualify

for low-interest real estate loans if they are willing to commit to larger down payments, though such borrowers are often not as able to make the larger down payment. Having a low credit score can also affect a borrower’s lifestyle. A lower credit score results in a higher interest rate, reducing discretionary income over the life of the loan.

Consider the 30-year mortgage for \$250,000 cited earlier. The difference between a score of 615 and 720 could result in a person saving \$157,699 in interest over the life of the loan. Taken one step further, the impact of high interest rates is even greater. “Say you refinance your mortgage for the lower rate, then take the \$438 a month saved and invest it at a 10 percent annual return. After 30 years, you’ll have \$990,094!” (Tolkoff 2005).

A more extensive example of how credit scores can affect interest rates and in turn, payments, is shown in the table below. The only difference in the table is the FICO score (Gutner 2005).

\$200,000 Mortgage, Monthly Payments, 30-Year Fixed Rate

FICO Score	Percentage Rate	Monthly Payment	Total Interest Paid
720-850	6.24	\$1,230	\$242,848
700-719	6.37	1,247	248,951
675-699	6.90	1,317	274,192
620-674	8.05	1,475	330,822
560-619	8.53	1,542	355,149

A borrower with the highest FICO score could borrow at 6.24%, having a monthly payment of \$1,230 for 360 consecutive months. The total amount repaid would be \$442,800. Of this amount, \$200,000 is principal and \$242,848 is interest. A borrower with the lowest FICO score would borrow at 8.53%, having a monthly payment of \$1,542 for 360 consecutive months. The total amount repaid would be \$555,120. Of this amount, \$200,000 is principal and \$355,120 is interest. The lower FICO results in paying an additional \$112,320.

Why does someone with a score of 710 pay a higher interest rate on an equivalent credit account, compared to someone with a score of 725? Credit scores are a way for creditors to enumerate the activities and daily financial habits of borrowers. The credit score more accurately indicates which consumers are more

likely to repay credit accounts in a timely manner. Credit scoring models are designed to give more financially responsible consumers the higher credit limits at lower interest rates, and less financially responsible consumers lower credit limits at higher interest rates. The following table, published by Housing and Credit Counseling, Inc., (Burk 2006) shows the probability of delinquency on a loan for a given FICO score.

FICO Score	Delinquency Rate in %
800 +	1
750–799	2
700–749	5
650–699	15
600–649	31
550–599	51
500–549	71
Below 499	87

For a borrower with a FICO score 800 and above there is a 1% chance the borrower will be delinquent on the loan during the life of the loan. At the other extreme, if the borrower has a FICO score below 500, there is an 87% chance the borrower will be delinquent during the life of the loan.

Activities That Can Improve a Credit Score

Borrowers with less-than-stellar credit scores/credit histories can do several things to improve their records. A credit score can be improved almost immediately by paying down high-balance credit cards and getting delinquent accounts (less than one year old) up-to-date. Some other actions (Gutner 2005) include:

- Pay all bills on time: bills that are consistently over 30 days late can affect a FICO score by as much as 100 points. How much this affects the credit score depends on how long the credit account has been open.
- Don't be so quick to close old accounts: Although identity theft is a concern for old accounts, the accounts are rarely, if ever, used. Lenders like to see long credit histories in good standing. Keep old accounts open and monitor them frequently.
- Minimize credit-card applications: don't give in to sales pitches for savings on items by opening a store credit card. Although this may sound great at the time of the purchase, each time a customer applies for a credit card, even with a store, the customer's credit score is checked. These checks build up over

time and continually lower a score.

- Keep low balances: the balance-to-limit ratio, or credit utilization, needs to stay at or below 30% to show financial responsibility. Even though paying off credit accounts every month is good, spending needs to be spread out throughout the month, so that the ratio does not get too high right before the statement balance is reported to the credit bureaus.

THE DEBATE ABOUT CREDIT SCORES AS GOOD REPRESENTATIONS OF RISK

Many financial institutions agree credit scores are very good predictors of the likelihood of being repaid by borrowers. The score is representative of both good and bad indicators in the borrower's credit behavior. Lenders feel confident that the history found in a credit report can accurately predict how a consumer will act in the future. Credit scores also indicate consumers' current habits. Applying for multiple credit accounts and multiple credit inquiries in a short period of time (both of which affect a credit score negatively) send up a red flag to lenders. Current habit indicators also make lenders feel confident in the representation a credit score gives of a potential borrower.

Although lenders use credit scoring as a way to determine whether to grant consumer credit, there are some pitfalls to the FICO credit-scoring model. One of these is that just one late payment (mortgage, utility, credit card, etc.) has a huge impact on a credit score. As cited earlier, one late mortgage payment can drop a score as much as 100 points and two late payments have an even greater influence. The one or two late payments will more than offset consistent on-time payments, at least in the short run. Consumers who miss a credit card payment have more trouble receiving a real estate loan if that application is within a few months of the late credit card payment. The late payment stigma is of great importance.

CONCLUSION

This information should help consumers better understand their credit scores and how their actions affect movement up and down the FICO scale. In review, the breakdown of the FICO credit scores (those most commonly used by creditors) is: 780–850: low risk, 740–780: medium-to-low risk, 690–740: medium risk, 620–690: medium-to-high risk, and below 620: high risk (sub-prime). It is possible to move up and down the scale by changing financial habits. The habits that affect a consumer's credit score include: the borrower's track record (past

payments), the amount owed on accounts, the length of the credit history, applying for multiple credit accounts in a short time period, and the types of credit accounts currently open.

Credit scores affect more than just the amount a consumer is able to borrow. Scores affect the type of credit account that will be offered to the consumer, interest rate, insurance premiums, utilities, rentals, cell phones, and the down payment required on a new mortgage loan. Outside of credit accounts, credit scores and the information found in credit reports can affect a person's ability to get a job.

For consumers who need to bring up their score, there are four primary ways to do so quickly and effectively. These include: pay all bills on time; don't close old accounts just to consolidate paperwork; minimize credit card applications, especially department-store credit cards; and keep balances low, preferably at 30–50% of the credit limit. Following these guidelines can help consumers improve their credit score.

Although creditors follow the information provided fairly closely, there are still possible problems with the system. Consumers constantly plagued with the inability to borrow at a preferential rate because of a few points on their credit score may begin to feel hopeless about borrowing money. Some restrictions imposed due to differences in credit scores because of one or two payments that were just a day late may have more of an impact than is warranted. But credit scores also help facilitate objective credit decisions. Without credit-scoring models, creditors would still be operating by making subjective decisions that may not be accurate, and may reflect personal social, racial, and gender bias.

REFERENCES

- Burk, Chris. 2006. More than one way out. Housing and Credit Counseling, Inc. Topeka, KS.
- Chye, K.H., T.W. Chin, and G.C. Peng. 2004. Credit scoring using data mining techniques. *Singapore Management Review* 2, no. 26:25.
- Collins, M. C, K. D. Harvey, and P. J. Nigro. 2003. The influence of bureau scores, customized scores and judgmental review on the bank underwriting decision-making process. *The Journal of Real Estate Research* 24, no. 2:129–152.
- Components of a credit report. <http://www.debtconsolidationcare.com/report-analysis.html>.
- Credit for the underserved. *Industry and Market Reports*. http://goliath.ecnext.com/coms2/gi_0198-251167/Credit-for-the-Underserved.html (accessed September 1, 2005).
- Gutner, Toddi. 2005. Anatomy of a credit score. *Business Week*, November 28. http://www.businessweek.com/magazine/content/05_48/b3961124.htm.
- Fogarty, M. 2005. “The score on credit scores: Knowing when not to have the applicant try to improve their credit score is just as important as knowing when to.” *Broker Magazine*, 54.
- Hazard, Carol. 2005. Your credit report is crucial—and you can get it free. *Richmond Times-Dispatch*, August 28.
- Kahan, Stuart. 2005. Rating risky borrowers: Determining credit scores. *Accounting Today*, August 22. <http://www.webcpa.com/article.cfm?articleid=14456&pg=cpaw>.
- Melia, Marilyn. 2001. The rating game: A look at credit scores and how they affect your mortgage. *Chicago Tribune*. January 5. <http://www.chicagotribune.com/classified/realestate/financing/chi-010105credit.0,0181910>
- Sahadi, Jeanne. 2005. Why being good can be bad for your credit. *CNNMoney*, November 1. http://money.cnn.com/magazines/moneymag/moneymag_archive/2005/11/01/8358897/index.htm.
- Stepanova, M., and L. Thomas. 2002. Survival analysis methods for personal loan data. *Operations Research* 20, no. 2 (March):277–289.
- Tolkoff, Marcy. 2005. The lowdown on credit scores: The impact your credit score has on your life can be tremendous. *Medical Economics*, November 4. <http://www.memag.com/memag/article/articleDetail.jsp?id=190110>

Disclosure of Internal Control Weaknesses and Long-Term Stock Returns

James Martin
Washburn University

Gary Baker
Washburn University

INTRODUCTION

American investors have garnered Sarbanes-Oxley (SOX)-related benefits from unexpected places since the passage of the landmark legislation in July 2002. Wagner and Dittmar (2006) outlined extensive SOX benefits related to improvements in internal control, such as reduced human error and improved documentation. Rittenberg and Miller (2005) saw improvements in areas such as anti-fraud processes and information technology controls. This paper, likewise, examines potential benefits from investment opportunities arising from SOX. Specifically, we examine investment opportunities arising from pursuing a strategy of investing in “SOX Dogs.”

SOX Dogs are those publicly traded companies that have reported a material weakness in internal control (in the previous year) pursuant to Section 404 of SOX. The term SOX Dogs is derived from the Dogs of the Dow (Reifman 2006), an investment strategy, originating in the 1990s, that called for investment in the 10 Dow Jones Industrial companies with the highest yields. The advocates of Dogs of the Dow investing believe these Dogs are good companies that are temporarily out of favor, so they expect them to outperform the market in the succeeding year. Likewise, investing in SOX Dogs is based on a belief that the SOX-Dog companies are sound investments and will outperform the market during the period following their SOX problem disclosure.

This paper also addresses issues related to stock price reversals, that is, the ability of a firm's stock to rebound following disclosure of bad news. Prior research by De Bondt and Thaler (1985) found that the stock market tends to overreact to bad news. For periods following this bad news, they found these "bad stocks" tend to outperform their peers for several years. Cox and Peterson (1994) found that there was indeed a recovery in a firm's stock price for a very short period following announced bad news. This recovery was short-lived, however, as the "bad stocks" tend to underperform their peers in years to come. The stocks identified in our portfolio have indeed reported bad news: the disclosure of a weakness in internal control, pursuant to SOX. Our conclusions, therefore, extend this established body of knowledge on stock reversals.

SOX BACKGROUND

In an era when the names of companies like WorldCom and Adelphia became household words because of their fraudulent activities, Enron was the straw that broke the ethical camel's back. Enron's fraudulent accounting practices cost American investors billions of dollars, devastated retirement holdings for thousands of retirees, and cost thousands of employees of Enron (and its auditor, Arthur Andersen) their jobs. In response to Enron-inspired investor outrage, Congress passed SOX "to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes." (U.S. House of Representatives 2002) The act sought to restore investor faith through multiple changes in corporate governance procedures, such as:

- 1) The act reshaped the audit committee of a company's board of directors, requiring financial expertise of members and required that the committee report directly to the board (and not management).
- 2) The act set up The Public Company Accounting Oversight Board or PCAOB, which serves to audit the auditors.
- 3) The act provides additional penalties for fraud and places responsibility for financial statement accuracy squarely on the company CEO and CFO.
- 4) The act provided additional funding for SEC enforcement and limited officer loans and special purpose entities (two financial vehicles exploited by Enron).
- 5) The act required extensive review, documentation, and testing of internal controls, in order to improve the accuracy of financial reports.

An examination of benefits and opportunities arising from SOX would be incomplete without mention of costs and burdens arising from its passage. Early estimates of annual costs related to SOX compliance ranged from \$5.8 billion (Bellman 2005) to \$6.1 billion (Rahn 2005). Nonfinancial costs, including fear of personal liability and unwillingness to take innovative risks, were also identified (Nyberg 2003). Additionally, in a review of the fallout from SOX, completed two years after its enactment, Romano found that the provisions of SOX “were seriously misconceived as they are not likely to improve audit quality or otherwise enhance firm performance and benefit investors as Congress intended” (Romano 2004, 216).

LITERATURE REVIEW FOR STOCK MARKET REACTION TO SOX

Following passage and implementation of SOX, several studies have been completed that seek to identify the impact of SOX on the stock market. Ribstein concludes, in his review of various event studies, that market reaction has been mixed but negative overall (Ribstein 2005). Leone found that stock prices of companies reporting material weaknesses suffered losses in value for periods of 1, 7, 30, and 60 days after reporting (Leone 2005). Ockree and Martin (2006) conclude there is a slight short-term negative stock-price reaction to companies reporting SOX problems, and identified a profound increase in the Beta coefficients, for those same companies, that was observable years in advance of the reported SOX problem. Li, Pincus, and Rego (2006) examined market reactions surrounding passage of SOX legislation and found positive abnormal stock returns associated with SOX events such as the issuance of the House/Senate Conference report on the SOX legislation. Similarly, Jain and Rezaee (2005) found that benefits of SOX outweighed compliance costs, as measured by stock prices. Finally, Chhaochharia and Grinstein (2005) found that overall, SOX has had a positive effect on shareholder value.

STOCK MARKET PERFORMANCE OF SOX DOGS

To date, research on capital market reaction to SOX has focused on periods of time before actual SOX enactment or the period immediately thereafter. Ockree and Martin (2006) constructed a portfolio of 114 of the earliest companies to report material weaknesses in internal control under SOX, between January 1 and June 1, 2005. During this period, the material weakness portfolio lost approximately 2.74% of its value. During the same period, the Russell 3000 lost 1.41% of its value. An analysis of the Beta coefficient for the material weakness portfolio indicated that average Beta had climbed from 1.343 at January 1, 2005 to 1.360 at May 31, 2005.

Ockree and Martin (2006) also evaluated stock price performance and Beta for the material weakness portfolio for a 55-month period prior to SOX (June 1, 2000 – December 31, 2004) and the firms’ announcements of material weaknesses. During this period of time, the material weakness portfolio gained 13.29% while the Russell 3000 lost 10.40%. An analysis of the average Beta coefficients for the material weakness portfolio during this period found that Beta went from 1.086 at June 1, 2000 to 1.343 at December 31, 2004 (The Russell 3000 Beta would have remained 1.00 during the period, given Beta was calculated using the Russell 3000, and not the S&P 500). They found the increasing Beta and abnormal positive returns to be consistent with the concept of risk and reward for this period. Because the portfolio included only companies that would report material weaknesses in the future, however, there was evidence that, consistent with the semi-strong efficient market hypothesis, the market may have already identified these companies as being risky long before SOX was conceived. We have, therefore, selected these 114 companies for an analysis of market reaction for a one-year period after their initial report of material weakness. They are the first generation of SOX Dogs.

THE FIRST SOX DOGS: WHERE ARE THEY NOW?

An analysis of each of the 114 SOX Dogs on the first anniversary of their material weakness reporting dates resulted in the following, obtained from publicly available stock data.

<u>Status of Company</u>	<u>Number of Companies</u>
Delisted	1
Merged into another company. No longer publicly traded	10
Publicly traded on major exchange	103

An analysis of the status of each company follows.

Delisted SOX Dogs

With the passage of SOX came a fear that companies, facing high compliance costs, would deregister with the SEC and delist from their stock exchange (Marosi and Massoud 2005). Such firms are said to “go dark”. Leuz, Triantis, and Wang (2006) studied firms going dark and found a large negative abnormal return at the announcement and filing of deregistration. These abnormal negative returns were more pronounced for firms that deregistered after the passage of the Sarbanes-Oxley Act. Their findings were also consistent with the premise that deregistrations could be triggered by negative changes in firms’ prospects, lend-

ing credence to concerns that deregistrations could have less benign motivations when governance structures are weak and agency problems are present.

The population of SOX Dogs included only one company that delisted. That company, DHB Industries, did not actually “go dark”. DHB delisted from the AMEX on July 5, 2006, but did not deregister with the SEC (DHB 2006). Regarding its delisting, DHB did not list costs related to SOX as a reason. Rather, DHB received notice from the AMEX that it was out of compliance with AMEX listing standards. To date, DHB is still registered with the SEC and its stock is traded in the Pink Sheets at approximately half its price before reporting a material weakness in internal control and becoming a SOX Dog.

Merged SOX Dogs

Little research has been done on linkages between material weaknesses in internal control and mergers and acquisitions. Ashbaugh-Skaife, Collins, and Kinney (2006) found that firms with internal control deficiencies were more likely to be involved in mergers and acquisitions. In general, however, reasons for mergers are nearly as varied as the mergers themselves and usually do not mention SOX. Merger architects cite reasons such as taking advantage of opportunities to increase market power, acquiring know-how, and entering new markets quickly (Sanchez and Goldberg 2006). Also cited as reasons to merge are: creating market value, building financial stability, improving strategic position and brand, and enhancing organizational strength (Bruner 2004). Specific instances of merging in response to a weakness in internal control have not been documented.

The population of 114 SOX Dogs includes 10 companies whose stocks are no longer publicly traded, because the companies merged with or were acquired by other companies during the year following the reporting of material weakness in internal control (Appendix 1). This reflects 8.8% of the population and is significant, because only 261 of all publicly traded firms were acquired via merger or acquisition in 2005 (SDC Platinum 2006). The reasons behind this apparent increase in merger activity amongst the SOX Dogs require further research, but are beyond the scope of this paper.

CAPITAL MARKET REACTION TO SOX DOGS

Ockree and Martin (2006) analyzed the SOX Dogs, calculating the increase in price per share between January 1 and June 1, 2005. They also calculated average Beta coefficient for the portfolio. We have modified their analysis to exclude

the delisted SOX Dog and the 10 companies that disappeared through merger or acquisition (current stock price data are no longer available for the merger participants). For this paper the change in stock price for each of these remaining 103 companies (list is available from the authors, upon request) was calculated for the one-year period beginning the day after each company reported its material weakness. The average stock price change was compared to a Russell 3000 benchmark for the same time period. Similarly, the average Beta coefficient was calculated at month end for the 103 companies in the portfolio beginning with the period in which the first material weakness was reported and ending one year after the last company in the portfolio reported its material weakness.

STOCK PRICE CHANGE

Daily closing stock price data was obtained for companies beginning on February 28, 2005. One business day before that, the H. B. Fuller Company became the first company in our portfolio to report a material weakness in internal control. The closing stock price for the company was also obtained one year later, on February 28, 2006. The change in stock price was then calculated for the company for this period. This same process was repeated for all 103 companies in the portfolio. The last company in the portfolio to report a weakness was NL Industries, on June 1, 2005. NL Industries' change in stock price was calculated for the year ending June 1, 2006 (BigCharts 2006).

After adjusting return data for stock splits, the average annual return for stocks in the SOX Dog portfolio was 18.03% for the twelve-month period after a material weakness was reported. The Russell 3000 was chosen as a benchmark to compare with the SOX Dogs. Ockree and Martin (2006) determined the Russell was appropriate since the make-up of the SOX Dog portfolio contained both large- and small-cap companies (like the Russell) and both had comparable average market capitalizations. Ockree and Martin's material weakness portfolio included companies with market capitalization ranging from \$40 million to over \$300 billion. The average market capitalization for the Russell 3000 was approximately \$4.8 billion, with a median market capitalization of approximately \$944.7 million on May 31, 2005. The portfolio's average market capitalization was \$4.852 billion and the median market capitalization was \$733 million.

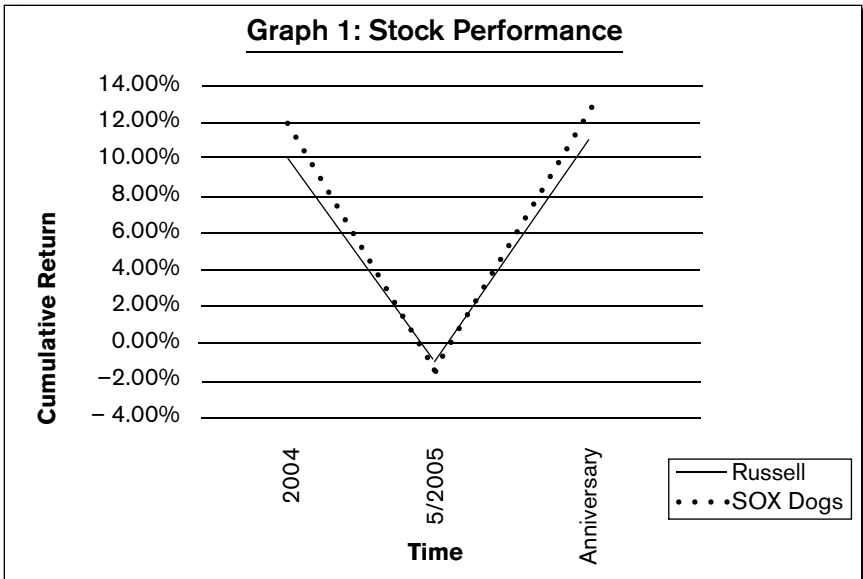
For this study, a benchmark Russell 3000 return was calculated by mirroring the same time periods used in the SOX Dog portfolio return computation followed by a calculation of the average annual Russell returns. Using this methodology, the average Russell 3000 return was 12.77%. During this one-year period, fol-

lowing the material weakness announcements, the SOX Dogs outperformed the Russell 3000 by 5.26%.

Historical returns were also analyzed for both the Russell 3000 and the SOX Dogs portfolio. Table 1 depicts the cumulative returns by year from January 1, 2004, the last complete year prior to announcement of a material weakness in internal control. The period ending May 31, 2005 is included because that period coincides with disclosure of material weaknesses by the SOX Dogs. It is the only period in which the SOX Dogs underperformed the Russell 3000. The anniversary data points below correspond to stock returns for the SOX Dogs for the period ending one year after announcement of the material weakness. The anniversary data point for the Russell 3000 corresponds to the comparable average return for the Russell 3000.

	<u>Russell 3000</u>	<u>SOX Dogs</u>
December 31, 2004	10.08%	11.72%
May 31, 2005	-1.41%	2.69%
Anniversary	11.02%	12.80%

Graph 1 below depicts the returns.



CHANGES IN RISK

Ockree and Martin (2006) observed increases in the Beta coefficient of stocks of companies reporting material weaknesses in internal control. This increase in Beta was observable several years before the actual weakness was formally disclosed pursuant to SOX, suggesting that this information was present in the market before the formal disclosure.

The use of the Beta coefficient as a measure of risk is not the only means to measure risk. Research has found that other factors have at least a contributing effect. Fama and French (1992) succinctly summarized several of these factors on the relationship of risk and return. Other factors noted were the size of a firm's market equity and the firm's use of leverage. The ratio of book equity to market equity and the ratio of earnings to price are also infused in the relationship of a firm's risk and its return to shareholders. Conversely, Lintner (1965), in research that remains a cornerstone in the explanation of the relationship of risk and return on stocks, found Beta to be the dominant factor.

It was our expectation that, following the announcement of the material weaknesses by the companies, the Beta coefficients of the companies would not drop dramatically. The semi-strong efficient market hypothesis suggests that this type of information was already known to the market and factored into Beta and stock price. In fact, upon observation of the recovering stock price data for SOX Dog companies for the year after disclosure of the weakness, we anticipated that the average Beta coefficient in the portfolio would actually increase moderately. Higher Betas exhibited by a portfolio are associated with higher expected returns. Our expectations were in fact correct, as depicted below. It also should be noted that since Beta was calculated using 60 months of data, Beta was anticipated to increase over time, due to the inclusion of additional post-SOX reporting months and exclusion of pre-SOX months of data as time passed. Table 2 depicts the average SOX Dog Beta coefficients for the portfolio at specific relevant dates in our study period (Compustat Research Insight 2006).

December 31, 2004	1.306
May 31, 2005	1.357
Anniversary	1.411

Although the returns on the SOX Dogs dramatically exceeded the Russell, the level of risk also increased. Given this additional risk observed in the SOX Dogs portfolio, we performed additional analysis of the companies in the SOX Dog portfolio. Sixty-seven of the 103 portfolio companies experienced stock price gains during the one-year period following announcement of a material weakness in internal control; 36 companies incurred stock price decreases. If an investment decision was made between the Russell 3000 and the SOX Dogs on the basis of realized return, the SOX Dogs would be preferred. To get a sense of the risk associated with these returns, the standard deviation of the returns on the stocks was computed for both the Russell 3000 and the SOX Dog portfolio. The standard deviations were 2.16 and 49.44, respectively. Therefore, if the investment was chosen on the basis of the standard deviation, the Russell 3000 would be preferred. The coefficient of variation allows investors to determine how much volatility (risk) is being assumed, in comparison to the amount of return expected from the investment: the lower the ratio of standard deviation to mean return, the better the risk/return tradeoff. The coefficient of variation was calculated for the portfolio; results are summarized below, indicating that the Russell has considerably less risk for the return.

Table 3
Comparison of SOX Dogs with Russell 3000

	Standard Deviation	Realized Return (%)	Coefficient of Variation
SOX Dogs	49.44	20.88	2.37
Russell	2.16	12.79	.17

CONCLUSIONS AND LIMITATIONS

Our analysis of the stock markets' reaction (during the one-year period following announcement) to companies that report weaknesses in internal control yielded noteworthy results. First, there was no significant rush to "go dark" or delist, by the SOX Dogs. Evidence did not show companies who had material weaknesses seeking to delist or go private. Only one company in the portfolio delisted, but that company did not deregister with the SEC. The delisted company also stated a desire to relist with a stock exchange in the future. Second, companies that disclosed material weaknesses were more likely than their peers to be acquired or involved in a merger. Causes of this increase in merger and acquisition activity were not investigated and require additional study. And finally, stock market

returns for the material weakness portfolio were greater than their peers for the year after the SOX-required announcement. The average Beta coefficient for these companies also increased during this period, indicating higher risk.

It is our conclusion that, like the Dogs of the Dow, there is an investment opportunity for investors in SOX Dogs that balance the additional return opportunity with the potential additional risk. Our analysis shows above-market returns for these companies, coupled with an increased opportunity for a buyout of a SOX Dog stock by a prospective merger/acquisition partner. Because M&A transactions are commonly associated with the payment of a control premium by the buyer, we find this opportunity attractive (though prudent investors should also consider that troubled companies may be acquired in a merger transaction at a distressed price).

There are limitations inherent in this study. The study omitted one delisted company and 10 companies whose stocks no longer trade because they were involved in a merger. As such, the study is subject to survivorship bias. Additionally, the one observation of a company delisting from the stock exchange is commonly considered a negative development for investors. This too must be considered before an investment decision is made.

ADDITIONAL STUDY

This study of stock market reaction to the disclosure of material weakness in internal control, although robust, is not complete. We have identified four areas of research that require additional study.

- Of the 114 companies in our original population, 10 companies were involved in merger transactions during the first year after announcement. This is an elevated level of merger activity. Further study could be done to analyze the reasons for the increase in merger activity to better understand the increase and determine if it is related to SOX compliance or other business objectives.
- One of the companies in the original population delisted from its stock exchange during the year after the material weakness announcement. Further study could be done on a larger population of recently delisted companies, to determine if there is causal relationship between SOX and delisting.
- Our analysis of the stock market reaction to SOX Dogs covered the first year following the announced weakness. Research into the market reaction to these firms over a longer period of time could be warranted when such market data becomes available.

- The portfolio analysis completed in this study extended the analysis completed by Ockree and Martin (2006), using a methodology similar to theirs. Its consistent application adds to the existing body of knowledge on market reaction to negative events. More in-depth analysis of market reaction is a logical next step. An analysis involving the construction of a reference portfolio (matched pairs), as demonstrated by Lyon, Barber, and Tsai (1999), is appropriate. Such a methodology would extend the body of knowledge regarding the determination of whether the stocks of the SOX Dogs demonstrated excess returns.

EPILOGUE

Considerable discussion has taken place, since the passage of SOX, regarding its costs and benefits to the investing public. Groups such as The Committee on Capital Markets Regulation are evaluating reasons for revisiting the SOX requirements considered by many to be onerous (Murray 2006). Other authors have proposed more novel approaches to the burden of SOX, such as “optional SOX”, which would allow companies to comply voluntarily with SOX (Factor 2006). This approach would allow companies that comply with SOX to inform investors that they have met a “gold standard” and arguably will be rewarded in the market as its investors earn abnormally positive returns when compared to the non-SOX-compliant. A company’s choice to adhere to SOX, with its additional compliance costs, would thus be rewarded in the market. Our study of returns, Beta, and other stock market fallout for periods before and after SOX adds further fuel to the fire of this debate.

Appendix 1 **SOX Dogs Merger Companies**

AMERICA WEST HOLDINGS
IDX SYSTEMS CORP
PULITZER INC
PROVIDIAN FINANCIAL CORP
VERITAS SOFTWARE CORP
DAVE & BUSTER’S INC
DANIELSON HOLDING CORP
UNITED GLOBAL COMM
TOYS R US INC
UNIZAN FINANCIAL CORP

REFERENCES

- Ashbaugh-Skaife, H., D. Collins, and W. Kinney. 2006. The discovery and consequences of internal control deficiencies prior to SOX-mandated audits. Abstract in *McCombs Research Paper Series*. <http://ssrn.com/abstract=694681>
- Bellman, E. 2005. One more cost of Sarbanes-Oxley: Outsourcing to India. *Wall Street Journal*, July.
- BigCharts.com. Historical market quotes. <http://bigcharts.marketwatch.com/historical/>
- Bruner, R. 2004. *Applied mergers and acquisitions*. Hoboken, NJ: John Wiley and Sons.
- Chhaochharia, V., and Y. Grinstein. 2005. Corporate governance and firm value—The impact of the 2002 governance rules. Abstract in *Johnson School Research Paper Series*. <http://ssrn.com/abstract=556990>
- Compustat Research Insight*. New York: The McGraw-Hill Companies, Inc.
- Cox, D. R., and D. Peterson. 1994. Stock returns following large one-day declines: Evidence on short-term reversals and longer-term performance. *Journal of Finance* 48, no.1:255–67.
- De Bondt, W. and R. Thaler. 1985. Does the stock market overreact? *Journal of Finance* 40, no.3:793–805.
- DHB Industries Inc. receives delisting notice from the American stock exchange. 2006. Press release. <http://www.sec.gov/Archives/edgar/data/899166/000109230606000431/ex99-1.txt> (accessed October 27, 2006).
- Factor, Mallory. 2006. Optional SOX. *Forbes*, August 29. http://www.forbes.com/columnists/2006/08/29/make-sox-optional-cx_mf_0830sox.html
- Fama, E., and K. French. 1992. The cross-section of expected stock returns. *Journal of Finance* 47, no.2:427–65.
- Jain, P., and Z. Rezaee. 2005. The Sarbanes-Oxley Act of 2002 and security market behavior: Early evidence. Abstract in <http://ssrn.com/abstract=498083>
- Leone, Marie. 2005. “How Markets Punish Material Weaknesses.” *CFO*. http://www.cfo.com/article.cfm/4197475?f=home_featured
- Leuz, C., A. Triantis, and T. Wang. 2006. Why do firms go dark? Causes and economic consequences of voluntary SEC deregistrations. *AFA 2006 Boston Meetings Paper*. Abstract in <http://ssrn.com/abstract=592421>
- Li, H., M. Pincus, and S. Rego. 2006. Market reaction to events surrounding the Sarbanes-Oxley Act of 2002: Overall and as a function of earnings management. Abstract in <http://ssrn.com/abstract=475163>

- Lintner, J. 1965. The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *Review of Economics and Statistics* 47:13–37.
- Lyon, J., B. Barber, and C.-L. Tsai. 1999. Improved methods for test of long-run abnormal stock returns. *The Journal of Finance* 54, no.1
- Marosi, A., and N. Massoud. 2005. Why do firms go dark? Abstract in <http://ssrn.com/abstract=570421> (accessed October 27, 2006).
- Murray, A. 2006. Panel to seek changes to Sarbanes-Oxley. *Wall Street Journal* September 12.
- Nyberg, A. 2003. Sticker shock: The cost of Sarbanes-Oxley compliance. *CFO Magazine* 19, no. 11.
- Ockree, K., and J. Martin. Forthcoming. Section 404 of Sarbanes-Oxley Act: Did the stock market anticipate it? *The Journal of Accounting, Ethics, and Public Policy*.
- Rahn, Rahn. 2005. Destructive government. *Washington Times*, June 16.
- Reifman, Shlomo. 2006. Dogs of the Dow. *Forbes*. January 12. http://www.forbes.com/strategies/2006/01/12/stock-focus-dow_cz_sr_0113sf.html
- Ribstein, Larry. 2005. Sarbanes Oxley after three years. *Illinois Law and Economics Working Paper Series*. Abstract in <http://ssrn.com/abstract=746884>
- Rittenberg, L., and P. Miller. 2005. The good news about compliance. *Internal Auditor* 62, no. 3.
- Romano, Romano. 2004. The Sarbanes Oxley Act and the making of quack corporate governance. Abstract in <http://ssrn.com/abstract=596101>
- Sanchez, C., and S. Goldberg. 2006. M&A update: Will the rebound stumble? *The Journal of Accounting and Finance* 17, no.2:3–7.
- SDC Platinum Database*. Stamford, CT.: The Thomson Corporation.
- U.S. Congress. House of Representatives. 2002. *Sarbanes-Oxley Act of 2002: Public Law 107-204*. Washington D.C.
- Wagner, S., and L. Ditmar. 2006. The unexpected benefits of Sarbanes Oxley. *Harvard Business Review* 84, no. 4:133–140.

Driver Retention: A Framework for Restructuring Carrier Management Practices

Sandra Mitchell

Missouri State University

Elizabeth J. Rozell

Missouri State University

INTRODUCTION

Irregular route truckload carriers face the inevitable and sometimes insurmountable task of balancing both human resource management and fiscal performance with the demands of customer expectations. This task is made even harder when factors such as driver home-time, equipment utilization, dispatcher management, and corporate growth are thrown into the mix. When you add customer service demands, JIT freight, and the new hours-of-service regulations, executive managers are left with a quagmire of what to prioritize and how to best handle those who get the “leftovers.”

Much of academia’s research in the area of turnover has focused on driver retention (Keller 2002; Keller and Ozment 1999), driver shortage (Hokey and Lambert 2002; Stephenson and Fox 1996; Southern, Rakowski, and Godwin 1989; Beilock and Capelle 1990), “churn,” or the leaving of one company for another (Richard and LeMay 1995; Shaw et al. 1998), and recruitment practices (LeMay and Taylor 1988; Dobie et al. 1998). Suggestions about how best to handle the immense problem of turnover have previously been targeted more towards recruitment policy (Dobie et al. 1998; Southern et al. 1989; LeMay and Taylor 1988) than management practice (Hokey and Lambert 2002; Keller and Ozment 1999; Keller 2002). Nonetheless, little has been written on recruitment and retention from an outside, and often overlooked, external forces view.

Why would a driver leave one company for another, especially for the same pay, same benefits... same everything? What possesses a person to choose a style of life far-removed from the “norm” of society, where one will often fall asleep in a different place every night while leaving loved ones to keep the home fires burning? What happens to drivers emotionally when a serious negative occurrence arises at home and they are unable, because of distance and/or carrier performance demands, to be there to provide assistance? Why would a person faced with such an occurrence willingly walk away from a seemingly secure job for another they know nothing about, usually without a second thought, giving little or no notice?

Because of questions such as these, executives need to take a closer look at the relationship between driver retention and the multitude of influences on it (McElroy and Rodriguez 1993), how they interact, and how seemingly unrelated elements can affect turnover. Additionally, by understanding the many forces, and their level of controllability, management can proactively seek to create policies aimed at altering the current “it’s a part of business” attitude (Richard and LeMay 1995) so prevalent in today’s trucking administrative mindset.

As trucking companies grow, those in management who were the motivating force behind that growth, usually the ones who value drivers for the sacrifices they make, often become even farther removed from everyday interactions involving those coveted drivers. Moreover, as such leaders become increasingly immersed in the day-to-day aspects of dealing with an emergent company, they tend to lose track of those management practices responsible for drivers’ welfare.

This paper seeks to address these issues and the uncontrollable forces that are an important part of the retention equation for trucking carriers. Once internal and external influences are understood by management, recruitment and retention policies designed to compensate for the driver’s *lifestyle* should be easier to create and administer. Without this complete knowledge of the myriad facets involved, companies have been unsuccessful in lowering turnover rates, even when revamping important benefits (Southern et al. 1989).

Hence, the purpose of this paper is to present a more comprehensive framework for carrier management practices designed to identify influential forces, beyond those identified in previous research (Stephenson and Fox 1996; Keller and Ozment 1999; Keller 2002). Included in this identification are known issues af-

fecting driver retention, including improper managerial interaction with drivers and shipper/receiver policies, and uncontrollable influences such as traffic congestion and actions taken by special interest groups. Suggestions for applying the Hyper-Forces Retention Framework when assessing turnover indicators for truckload carriers are presented. Additionally, suggestions are offered regarding how management can address customer service needs and corporate structure in order to increase all employees' understanding of why a better perception of, and tolerance for, driver attitudes, needs, lives, and requirements will lead to a more stable workforce.

By presenting a more comprehensive framework, one that addresses even seemingly remote influences, research can better identify and articulate methods for solving the truck-driver turnover crisis. Choosing to drive a truck is not only a career choice (Cleaves and Tackes 2000), it is a lifestyle choice. Therefore, to address the issue, one must look at all the influences on the life, not just the professional career of the driver. This paper holds to the belief that the intimate knowledge and understanding of all the issues is truly where the solutions lie when trying to alleviate the retention problem.

THE FINANCIAL COST OF TURNOVER

Industry standards classify a large truckload carrier as one grossing \$30 million or more in revenue per fiscal year; small carriers are those grossing less than \$30 million yearly. In the fourth quarter of 2004, turnover in the large truckload segment reached an all-time high of 136%, with 102% for small carriers (American Trucking Association, 2005). Conservative estimates place turnover rates at 10–15% of the available driver pool every year, estimating between three and four million drivers (1999 estimates were 3.1 million [Hokey and Lambert 2002]). These numbers should not be taken lightly, as they are a seriously alarming indication of where the industry is headed, should the trend continue.

Current academic research places the average cost of turnover between \$4,000 and \$10,000 per driver per incident (Gilroy 2004; Keller and Ozment 1999; Stephenson and Fox 1996; Hokey and Lambert 2002), while a recent study performed by the Upper Great Plains Transportation Institute (UGPTI) at North Dakota State University found the average truckload carrier spends \$8,234 to replace one driver (Cleaves and Tackes 2000).

Additionally, consideration needs to be given to “incidental” cost increases due to retention problems. Items such as higher insurance premiums and opera-

tional inefficiencies are dependent costs and can account for substantial carrier expenditures. Other outlays appear as opportunity costs: “companies must spend a great deal of their management capacity replacing, training, and indoctrinating new drivers (Cleaves and Tackes 2002, 4).” Conservative, mid-point suggestions place the aggregate expense as high as several billion dollars per year for the irregular route truckload segment (Keller and Ozment 1999; Stephenson and Fox 1996; Hokey and Lambert 2002).

As a result, driver turnover has become a serious factor in carrier profitability scenarios and responsible for more than one incident of company failure (Hokey and Lambert 2002). In addition, turnover can be linked to multiple occurrences of lost freight contracts. Financially, the turnover problem affects both carriers, via lost revenues and increased expenses (Hokey and Lambert 2002; Stephenson and Fox 1996; Larsen 2004), and shippers and receivers, through inventory carrying costs resulting from unreliable freight transfer (Keller and Ozment 1999).

Larsen (2004) cites “churn” as accounting for nearly 80% of total turnover for irregular route truckload carriers. At a minimum, this means 320,000 of the 400,000 drivers per year changing companies as a direct result of carrier driver-management practices. Since truckload transportation is a product of derived demand, it follows that as freight volume increases, the demand for transportation increases, and consequently, the need for qualified drivers increases. Therefore, without workable recruitment and retention policies turnover is perpetuated, as companies grow ever more aggressive in pursuing the coveted driver to whom they owe their business. Without this driver, these service-based companies would cease to function.

“The key to substantial productivity gains in trucking is a stable workforce” (Hokey and Lambert 2002, 1); but unfortunately, and all too often, corporate executives in both transportation, and transportation-dependent businesses, tend to forget: a company can have all the production, sales, or equipment in the world at its disposal, but without a driver in the truck *that freight doesn't move*.

DRIVER SHORTAGE AND CARRIER SAFETY

Rising demand, coupled with changes in supply chain management practices, has led to an increase in the types and use of services provided by irregular-route carriers. These additional services run the gamut from traditional truckload-based transportation to internet-based, on-demand, commodity-movement location capabilities, to sophisticated supply chain systems management. This

increased demand has, as can be expected, increased the need for both truck drivers and related office support personnel. The ongoing driver shortage is not a “byproduct of a booming economy, but a symptom of poor driver management” (Hokey and Lambert 2002, 14). The position of “driver” has evolved into one of customer contact person, service deliverer, and troubleshooter (Dobie et al. 1998).

Hokey and Lambert (2002) also suggest that, because of the interconnectedness of the relationship between trucking and logistics, high driver turnover and the continuing driver shortage could effectively cripple the U.S. economy. The American Trucking Association (ATA) suggests, by 2016, trucking will top \$1.14 trillion in freight revenue receipts (Costello 2005).

Larsen (2004) references a Federal Motor Carrier Safety Administration (FMCSA) report highlighting safety as a major point of impact, along with substantial increases in recruitment and training costs, associated with high driver turnover. The FMCSA report found correlation between driver attitude, experience, longevity, and safety, with a significant correlation between job change rate and crash rate (Larsen 2004). These statistics should be respected even in light of data showing yearly reductions in annual large-truck crash rates (FMCSA Crash Profiles Online 10/2004).

Data collected by the FMCSA found drivers with two or more jobs in the last two years had a higher risk of being involved in crash-related incidents than those with more stable employment histories. The FMCSA theorizes that increased risk is gradual at first but accelerates as a driver’s job change rate increases (Larsen 2004). Todd Spencer states “the most important person in trucking is the driver” (Larsen 2004, 1). Spencer also says “carriers that go through drivers, like oats go through a horse, will never be any safer than trial lawyers force them to be through lawsuits and the FMCSA through enforcement” (Larsen 2004, 1). The FMCSA report listed several areas where carriers need to focus energy on improvement to assist in reducing driver turnover rates. Areas of concern included selection, training, dispatch operations, working conditions, safety, and perceptions of the truck driving profession (Larsen 2004).

DRIVER IMAGE AND EXTERNAL ISSUES

Overall public perceptions of truck drivers today appear closer to ambivalence than positive or negative. The recent FMCSA report found 80% of the general public possessed a positive or indifferent attitude towards the profession (Larsen

2004). Although these numbers may appear to be good news, the industry image has slowly declined during the last decade and, as a result, plays its own small role in the turnover problem. Unfortunately, as turnover and driver shortage problems exacerbate, bad recruitment decisions become more prevalent (Shaw et al. 1998), thereby ensuring continued image decline.

Previous research suggests the existence of additional forces influencing driver retention. Hokey and Lambert (2002) list several factors affecting turnover, including: driver pay, irregular working hours, and a shortage of qualified drivers (as defined by state and federal safety regulations). Stephenson and Fox (1996) call driver shortage a personnel problem, controllable through supervisory practices, recruiting practices, compensation policies, and training programs; they go on to reference an unidentified study in which drivers stated they were dissatisfied with the way supervisors handled them, a lack of praise, and poor compensation. LeMay and Taylor (1988) also call retention a personnel problem and one of the most important issues facing carriers.

External uncontrollable environmental factors are increasingly becoming issues in regard to driver retention; however, review of available research indicates a substantial lack of consideration for them in suggested models and conceptual theories (Keller and Ozment 1999; Keller 2002). This paper will discuss the influences and implications of these forces as they affect driver turnover, retention, and recruitment policies; by doing so, a more complete picture of all associated factors needing consideration when assessing relationships between turnover and management policy will emerge.

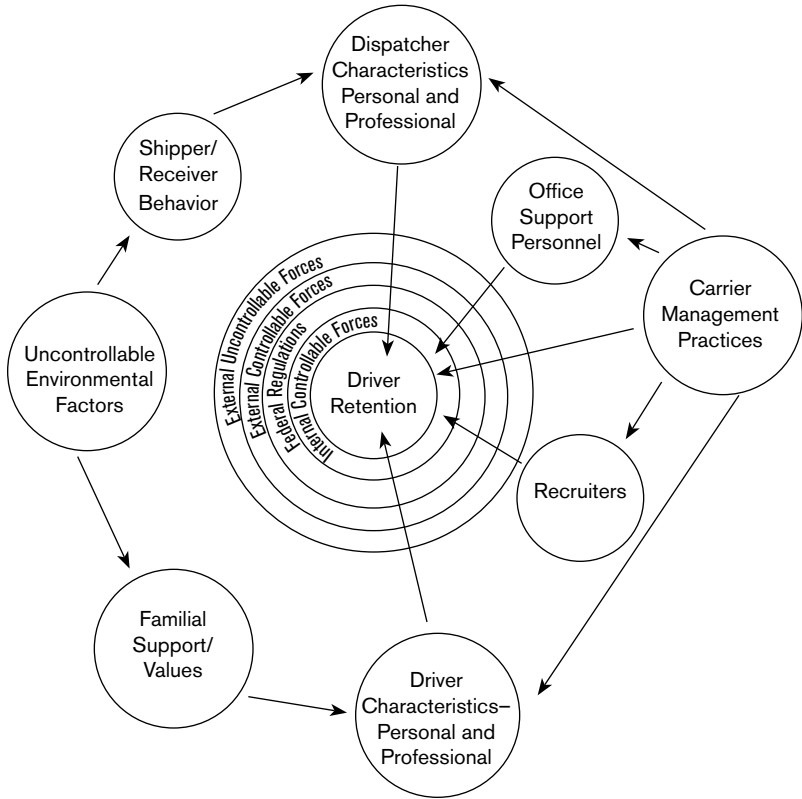
HYPER-FORCES RETENTION FRAMEWORK

Hyper-forces, for the purpose of this paper, are those influences that affect driver retention, but not necessarily with the same intensity or level of controllability. As shown in Figure 1, this framework proposes there are eight individual, yet interconnected, influences affecting four primary forces surrounding the driver retention issue.

The Four Primary Forces

The four primary forces include the following factors: External Uncontrollable, External Controllable, Federal Regulations, and Internal Controllable. External Uncontrollable Forces are those forces having the least direct, nonetheless important, impact on retention. They are the factors that are most often overlooked when creating recruitment and retention solutions. These uncontrollable

Hyper-Forces Retention Model



forces affect retention and present themselves via different means: traffic volume and congestion, availability of parking, on-the-road living expenses, truck stop availability, weather problems, enforcement procedures, special interest group activity, and other items over which neither the driver nor the company has any control. These are the influences most closely related to lifestyle rather than career choice.

External Controllable Forces are those conditions over which the carrier, and possibly the driver, has some form of power; they reside in the next circle of the framework. Carriers are considered to possess control over these forces in that they have the ability to negotiate terms and conditions related to their equipment and driver usage. Customers who routinely mistreat drivers should be assessed for *actual* profitability—carriers may find patrons such as these are, in reality, *costing* them money.

Federal Regulations are those promulgated by enforcement agencies, the rules and regulations to which every carrier and driver must adhere. Carriers have little control over the application of the regulations, although they can influence construction the same as special interest groups. Federal Regulations inhabit the second closest circle to the retention issue, because of their influence over drivers' daily lives. Many drivers leave the occupation as a result of enforcement activities. In addition, due to varying state regulations, drivers are increasingly being expected to know every regulation in every state, ultimately causing some to find it easier to depart than to keep up with continuous changes.

Drivers are increasingly becoming the subjects of more stringent regulations and are expected to submit to the wills of others without complaint; most in this country would find this situation oppressive, if not invasive, of personal privacy and freedom of movement. Drivers are not immune to these feelings of violation, although the inherent requirements of the occupation to comply with governmental regulation suggests otherwise. Miller (2004, 30) made this statement in reference to a recent survey concerning the mandating of on-board recorders, or black boxes, for trucks: "Truck drivers have gone from something like American cowboys to America's most closely watched workers—at least in some cases and potentially across the board." Often, outside studies, commissioned by a special interest group and challenged by industry representative organizations, become small indications of how outside forces can influence driver turnover.

Internal Controllable forces are those innermost factors the carrier can control. These include such things as employee human relations, dispatcher/driver load, recruitment policies, overall corporate philosophy, office support, open-door accessibility, and any other item of influence the carrier determines through the creation, application, and management of policies and procedures. These forces are hypothesized to have the greatest impact on turnover and therefore occupy the first circle around driver retention in the framework.

The Eight Influential Segments

There are six primary and two sub-segments that influence the four hyper-forces. The six primaries are: Dispatcher Characteristics—Personal and Professional, Driver Characteristics—Personal and Professional, Familial Support/Values, General Management, Shipper/Receiver Behavior and Uncontrollable Environmental Factors. The two sub-segments are directly influenced by general management: Office Support Personnel and Recruiters. Each piece possesses

individual characteristics responsible for the creation, application, use, or management of one or more of the four hyper-forces.

The two strongest influences on retention are Driver Characteristics and Dispatcher Characteristics; they are significant in the framework due to their interdependent working relationship. As a result, they pierce all levels of forces to affect driver retention directly. One must inherently work with the other and the individual characteristics of each significantly correlate to retention rates.

Research suggests drivers want honesty, communication, leadership, recognition, and, above all, respect: “To retain drivers, carriers must make them feel more respected and appreciated” (Stephenson and Fox 1996, 9). Goodson (2003) suggests it is common knowledge that small carriers have an advantage over large because of the universal belief big carriers are not driver-friendly. Furthermore, “competence—speed and accuracy in dispatch, payroll, emergency assistance and other areas important to drivers—is more important than friendliness in retaining drivers” (Goodson 2003, 1).

Another perplexing issue involves respect for drivers where family crises are concerned. Research has been lax in addressing carrier response to personal emergencies. Dispatchers must effectively put themselves in the “driver’s shoes” in the event of a crisis; wouldn’t they drop everything to return home, no delay, should the need arise? “Dispatchers must exercise responsiveness to the concerns of drivers in an effort to increase driver retention” (Keller and Ozment 1999, 5).

Research by Hirschman (1970) indicates that long-term relationships develop where supervisors are sensitive to employee concerns. Keller and Ozment (1999) also found dispatchers with more time in their positions and who respond more effectively to driver concerns have lower levels of turnover. In addition to this, dispatch should be moved from entry-level to upper-level, promoting the concept of manager as opposed to assistant, with recruits being formally trained prior to assuming dispatcher duties; “dispatch should be a position to aspire to rather than from which to step” (Keller and Ozment 1999, 10).

Communication is an area of contention for most drivers, although current research focuses mostly on pay and benefits. Truck driving could be a far more attractive profession if “carriers and the industry would be willing to listen to them (drivers) and rethink just about every aspect of the truck driving job” (Stephenson and Fox 1996, 9). Furthermore, reductions in driver shortage and turnover

rates are a natural byproduct of increasing the attractiveness of the occupation (Stephenson and Fox 1996).

The availability of management, both driver and general, are additional areas of importance. Research has found many issues could be addressed and alleviated before they become irreconcilable if management would listen to driver concerns (Stephenson and Fox 1996). In the area of home time, management should monitor driver “due home” dates as if they were customer-required delivery dates. Indeed, they become just that if general management utilizes the internal customer construct where drivers are concerned (Keller and Ozment 1999; Keller 2002).

The UGPTI research cited career path as an issue factoring into shortage and driver exodus from the profession (Cleaves and Tackes 2000). Research revealed 61% of drivers did *not* want to leave their area of specialization, although nearly 90% indicated a desire to learn something new; 92% of drivers felt a sense of worthwhile achievement but desired the ability to exercise independent thought and action; 89% liked stimulating or challenging work; 83% preferred opportunities for personal growth; and 62% would like to be involved with other types of work in addition to their driving duties (Cleaves and Tackes 2000). Furthermore, Cleaves and Tackes (2002, 3) report “drivers would react positively towards development of a career path” with 70% of drivers reporting it would increase job satisfaction.

General Management occupies the space between Driver and Dispatcher Characteristics with Office Support Personnel and Recruiters as sub-segment influences. General management policies and practices determine who, what, when, where, and how the company will run. Therefore, General Management is shown to influence Dispatcher Characteristics, Driver Characteristics, Office Support Personnel, and Recruiters; all of which affect Internal Controllable Forces. General management policies shape the entire driver retention and recruitment process. Carriers with oppressive, “it’s part of the industry” attitudes (Taylor 1991; Dobie et al. 1998) will undoubtedly have higher turnover rates than those who choose to treat drivers as internal customers (Keller and Ozment 1999) and utilize continuous improvement processes designed to evaluate policies and procedures, gauging satisfaction much the same as if drivers were equivalent to their external customers. Dobie et al. (1998) suggest carrier management needs to create a climate fostering dedication to excellence and long-term commitment, both driver towards carrier and carrier towards driver.

Unfortunately, recent carrier management practices have failed to treat drivers as anything other than expendable commodities, holding to the concept “we’ll just hire another.” This attitude carries immense responsibility for turnover within the truckload segment. If general management is to influence turnover rates in a positive way, driver perceptions of corporate philosophy and company policies must be altered.

Recruiter actions have long been a bone of contention for drivers. Corporate policies intended to maximize equipment usage often conflict with responsible recruitment activities, many even force recruiters to create “pie in the sky” images of the company and what it can offer to a driver. Lemay and Taylor (1988) suggest that due to the existence of more jobs than drivers, recruiters often over-sell or exaggerate the high points and play down, or outright ignore, the shortcomings of a carrier. Regrettably, this can create unrealistically high expectations for the new hire, who, once he or she figures out the company is unable or unwilling to fulfill recruiter promises, will often “churn” again (Lemay and Taylor 1988). Drivers find it “a breach of confidence” when companies and dispatchers do not meet their expectations (Keller and Ozment 1999).

Southern et al. (1989) reported pay, company reputation, condition of equipment, and time not on the road (or home time) as the top items stressed by recruiters. Human resources personnel mentioned freedom from supervision, advancement opportunities, and sick leave but did not consider them important (Southern et al. 1989). Interestingly, and contrary to Hokey and Lambert (2002), Southern et al. (1989) found extra training was not considered important by personnel directors when recruiting drivers.

Familial Support/Values affect driver retention by influencing a driver’s personal characteristics. Family values and familial influence can leave a driver with many feelings ranging anywhere from supported to abandoned, depending on the situation and the support structure. These feelings, and the influence they have on driver attitude, have the potential to greatly affect turnover rates. Each driver is an individual with different familial needs. This, if unrecognized or disrespected, can have a negative impact on retention rates.

The framework suggests drivers with positive, supportive, and fulfilled family lives will be less likely to turn over than ones with unsupportive, unfulfilled, or unhappy home lives. Since familial satisfaction can be affected by uncontrollable forces, this influence is noted, and respected, and factors into the framework

owing to the potential for emergency or unsuspected incidents when a driver may need to get home, leaving the carrier to either comply or have the driver quit. Furthermore, where carrier management policies support strong familial satisfaction, drivers will exhibit lower turnover ratios.

Uncontrollable Environmental Factors are evident when assessing lifestyle choices. Drivers are faced with many situational stimuli each day. How a driver reacts to these uncontrollable events, and what the company does to assist that driver in coping, can mean the difference between turnover and retention. Special interest groups, both anti-industry and industry-supportive, receive attention in the framework due to their ability to influence local, state, and federal regulations. Special interest groups are also, often vicariously, able to affect shipper and receiver practices via public policy pressure brought about by negative or positive consumer advertising.

Shippers and receivers are another area where external influence plays a large part in turnover rates. Previous to corporate restructuring, extreme cost controls, supply-chain-optimization strategies, and poor recruitment practices, shippers and receivers tended to treat drivers with respect and dignity. Nowadays, one has only to step onto a dock to realize drivers are routinely refused access to restrooms, food, refreshments, and often, a controlled climate. (The latter is a result of the increasingly popular anti-idling laws being passed, banning drivers from leaving their trucks running, regardless of temperature or duration of time.) As can be expected, drivers routinely subjected to freezing cold or unbearably hot temperatures and inhumane conditions will not be long in finding a new situation.

Additional shipper and receiver influence can be found in loading and unloading policies. Until the late 1980s, drivers who were forced to hire lumpers to have their freight unloaded, or who spent countless hours on docks waiting, were few and far between. Today, drivers are subjected to just such scenarios. Shippers and receivers are becoming increasingly adept at using carrier equipment as portable warehouses. These external sources impact carrier equipment utilization, ultimately affecting the driver. Furthermore, general management will often complain about poor driver performance while failing to discuss, or plainly ignoring, the all-too-critical area of customer performance (Magner 2003).

Magner (2003, 1) suggests fleet executives tend to categorize “expensive, exhausting waiting time on the docks” as one of those “unfortunate costs of doing business.” This attitude directly influences driver retention, because drivers are

commonly paid by the mile. Every hour spent waiting on a shipper or receiver and every load missed, or delayed, because of poor utilization creates additional unhappy drivers, increasing the potential for turnover.

In all, every segment has an interconnected influence on turnover, through its ability to manipulate the individual hyper-forces surrounding the retention issue.

IMPLICATIONS AND FUTURE RESEARCH

Previous research has apparently been lax in examining any but the most common of causes related to driver recruitment and retention. Models like Keller and Ozment's (1999) show the relationships between several key factors and how they relate to driver retention while failing to address other, equally important, facets. In doing so, Keller and Ozment (1999) address only basic influences affecting the career component, leaving out lifestyle factors. A later model by Keller (2002) again addresses the influences on retention, but only on a basic level.

Once all influences upon the forces are analyzed for content and level of accountability, companies should have a clearer picture of how these factors influence driver needs and concerns. This revised and renewed focus on retention should afford carriers a greater ability to create policies aimed at addressing a driver's lifestyle, not just his or her career choice and in doing so they should realize a reduction in turnover.

Future research should be targeted towards validation of the Hyper-Forces Retention Framework. Assessment of each factor's influence on the respective individual forces should be quantified, to allow for determination of controllability and level of consideration. The individual forces should also be quantified, thus allowing for statistical evaluation of importance. Once completed, research should that reveal driver characteristics and dispatcher characteristics are highly correlated to retention. Uncontrollable environmental factors should show the lowest level of association. Additional evaluations should reveal the interconnectivity of all influences and how they are individually, and collectively, responsible for the effect of each of the forces on actual retention.

CONCLUSIONS AND RECOMMENDATIONS

To attack the driver recruitment and retention problem, carriers must begin with a comprehensive analysis of the attitude towards, and treatment of, drivers within their individual organizations. To assist in solution creation, carriers should

adopt the concept of internal customers and treat drivers as such. In utilizing this construct, new and innovative policies should evolve, originating from a truly “new” view of who drivers are and what they mean to an organization.

In the recent FMCSA study (Larsen 2004), there were several key areas listed as needing special attention to reduce turnover rates: Selection and Training, Training Procedures, Dispatch Operations, Working Conditions for Long-Haul Operators, Safety-Related Rewards and Incentives, and Improving Perceptions of the Truck Driving Profession. While these areas are indeed facets needing attention in most organizations, the list is not exhaustive.

In the area of Selection and Training, the FMCSA suggests drivers want the satisfaction equated with recognition of a job well done (Larsen 2004). This concept should not come as a surprise, as it is what any working individual desires—appreciation. Additionally, the creation of driver recruitment materials that are accurate, not inflated, and designed to highlight a carrier’s core strengths, should assist in alleviating unrealistic-expectations-related turnover. Furthermore, company policies need to be targeted towards maintaining steadiness of work, creation of sustainable pay and benefits programs, monitoring driver home time (Larsen 2004) and quality of life issues.

Carriers need to develop internal human relations training programs targeted towards managers, dispatchers, and other office support personnel, designed to assist with increasing communications, support, understanding, and respect for the driver. Such training programs need to be ongoing and should be done in conjunction with the strategic reorganization of a company’s dispatch policies to better attain the crucial balance between customer service, equipment utilization, and drivers’ lives.

Since dispatchers and drivers have very interdependent working relationships, this area should be closely scrutinized on a continuous basis. Dispatchers should be trained in human relations, managerial procedures, company policies, and conflict resolution methods. Companies should raise the level of dispatcher in the organization to decrease turnover. Previous studies indicate dispatchers with lower tenure in their positions and high driver-to-dispatcher ratios have higher levels of turnover than those with lower ratios and more time in their respective position. This may be a result of the inability of overworked dispatchers to become familiar with drivers on an individual basis, something the FMCSA highly recommends both for decreasing turnover and increasing safety (Larsen 2004).

Furthermore, dispatchers with high turnover ratios need to be closely monitored by management for behavioral or managerial issues that may be causing poor communications or aggressiveness, between the dispatcher and driver. Companies should benefit from the creation of driver-related dispatcher assessment forms, to be completed by current and newly terminated drivers. These types of evaluations should allow general management to assess the effectiveness of dispatchers and company policies first-hand, since their behavior and application directly affects the driver/dispatcher relationship. Furthermore, any related monetary incentive programs should include driver turnover rates in the equation.

Driver retention rates can also be controlled through monitoring the external business environment. Carriers should keep an eye on such things as interest-group activity, shipper/receiver policies, driver familial settings, and uncontrollable items. Although these matters may seem trivial, in any comprehensive corporate-level SWOT analysis, *all* environmental factors, regardless of degree of effect, are assessed, if that factor has the potential to influence business. Seemingly unrelated special-interest-group activity can influence federal regulations through aggressive campaigning for reform. Therefore, the happenings in this sector should be monitored continuously since it plays an important role in the lifestyle of drivers and affects turnover.

Shipper/receiver loading/unloading policies play a notable role in driver retention and should be scrutinized for productivity, both on the equipment and driver levels. This paper holds to the theory that drivers who are routinely subjected to sub-human treatment are more apt to churn, as they look for a desirable level of treatment and productivity. As a result of today's tight capacity market, carriers have more control over this portion of external influence than they did even two years ago. To combat unproductive shippers or receivers, carriers need to constantly monitor the environments drivers are subjected to. Dispatchers should be responsible for noting driver comments, both negative and positive, on a continuous basis. Knowing what types of environments drivers face gives dispatchers the ability to create better time management plans.

Management should seriously consider dropping shippers or receivers who routinely delay drivers or subject them to dehumanizing behavior. Such action may seem extreme, but if driver turnover rates are to be controlled, those who bear responsibility need to be made aware that carriers mean business where driver retention is concerned. Once shippers/receivers understand their role in

the retention issue, carriers can work with them to create better loading/unloading policies designed with driver and equipment utilization in mind.

Driver familial influence is an area where most companies pay attention, but fail to act, when developing retention policies. Recruitment practices should be tailored towards matching drivers' lifestyles with company objectives. Common sense would tell one that hiring a driver who wants to be home every weekend for a run where home time would come only every couple of weeks, begs for turnover. Most recruitment policies fail to address anything but the basics where employment screening is concerned. Once carriers develop comprehensive recruitment strategies designed with the driver's choice of lifestyle in mind, retention rates should increase.

Carriers also need to be more understanding where driver family responsibility is concerned, especially in the area of uncontrollable circumstances and special events. Most drivers want to be there for their families, just as others do. Unfortunately, those responsible for freight coordination and driver policies tend to ignore or forget this. And, while they often become trivial or unimportant when a "hot load" is called in, special circumstances can weigh heavily in the arena of retention. Carriers who choose to approach the subject of turnover seriously must construct policies designed to address these issues; without consideration for them, retention policies will not achieve a desirable level of performance.

Furthermore, the issue of accountability for driver treatment must be addressed. Primary responsibility seems to be an area where carriers have been lax in creating policies. Recruiters are highly responsible for a driver's initial image of the company. As a result, recruitment practices are growing in importance with regard to turnover rates. If management is to be serious about retention, recruiters and dispatchers need to be held liable for driver turnover on *every* level.

Recruiters should be trained in human relations and given responsibility for monitoring the progress and successful employment of *all* drivers hired by them. This includes primary responsibility for each driver through the first 120 days of employment. This paper contends the highest turnover rates for poorly-hired drivers will be seen during this period. Once a driver reaches the 120-day mark, dispatchers should become the primary individuals responsible for retention; however, recruiters should be required to track and monitor all drivers hired by them on a continuous basis.

In creating an accountability program such as this, recruiters become the secondary set of “eyes” where treatment of drivers is concerned. Giving individuals primary responsibility for turnover should assist in reducing poor recruitment practices and help eliminate undesirable dispatcher behavior towards drivers.

In conclusion, for carriers to be successful in reducing turnover rates they must take a new *integrated* approach to the issue. By addressing drivers as human beings, and acknowledging the occupation as a *lifestyle* choice, recruitment and retention policies can be designed to more closely reflect what “drives” drivers and how to keep them where they belong...driving, not churning. Carriers must accept the concept of lifestyle, before any truly effective retention policies can be created or administered.

REFERENCES

- Beilock, R., and R. B. Capelle, Jr. 1990. Occupational loyalties among truck drivers. *Transportation Journal* 29, no. 3:20–29.
- Cleaves, E., and G. Tackes. 2000. Show me the money and keep my career options open. *Commercial Carrier Journal* 157, no. 5:89–93.
- Dobie, K., J. P. Rakowski, and R. N. Southern. 1998. Motor carrier road driver recruitment in a time of shortages: What are we doing now? *Transportation Journal* 37, no. 3:5–13.
- Federal Motor Carrier Safety Administration. *Crash Statistics*. <http://ai.fmcsa.dot.gov/CrashProfile/CrashProfileMainNew.asp>
- Goodson, D. 2003. Do choosy drivers choose you? *Commercial Carrier Journal* 160, no 3:62–65.
- Gilroy, R. 2004. TL driver turnover rate is close to all-time high. *Transport Topics* 3:33.
- Hirschman, A. 1970. *Exit, voice, and loyalty*. Cambridge, MA: Harvard University Press.
- Hokey, M., and T. Lambert. 2002. Truck driver shortage revisited. *Transportation Journal* 42, no 2:5–17.
- Keller, S. B., and J. Ozment. 1999. Exploring dispatcher characteristics and their effect on driver retention. *Transportation Journal* 39, no. 1:20–34.
- Keller, S. B. 2002. Driver relationships with customers and driver turnover: Key mediating variables affecting driver performance on the field. *Journal of Business Logistics* 23, no.1:39–65.
- Larsen, Dick. 2004. Special report: FMCSA links high driver turnover rate to crash incidents. *Land Line Magazine*, July 4. http://www.landlinemag.com/Special_Reports/2004/July04/07-02-04%20FMCSA%20special%20report.htm
- Lemay, S. A., and G. S. Taylor. 1988. Truck driver recruitment: Some workable strategies. *Transportation Journal* 28, no. 1:15–22.
- Magner, C. 2003. Do your customers serve you? *Commercial Carrier Journal* 160, no. 7:6–10.
- McElroy, J. C., J. M. Rodriguez, G. C. Griffin, P. C. Morrow, and M. G. Wilson. 1993. Career stage, time spent on the road, and truckload driver attitudes. *Transportation Journal* 33, no. 1:5–15.

- Miller, S. B. 2004. The great black box debate. *Land Line Magazine* 29, no. 8:28–31.
- Richard, M. D., and S. A. LeMay. 1995. A factor-analytic Logit approach to truck driver turnover. *Journal of Business Logistics* 16, no. 1:281–299.
- Shaw, J. D., J. E. Delery, G. D. Jenkins Jr., and N. Gupta. 1998. An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal* 41, no. 5:511–526.
- Southern, R. N., J. P. Rakowski, and L. R. Godwin. 1989. Motor carrier road driver recruitment in a time of shortage. *Transportation Journal* 28, no. 4:42–49.
- Stephenson, F. J., and R. J. Fox. 1996. Driver retention solutions: Strategies for the for-hire truckload (TL) employee drivers. *Transportation Journal* 35, no. 4:12–26.
- Taylor, S. G. 1991. Using performance appraisals of dispatchers to reduce driver turnover. *Transportation Journal* 30, no. 4:49–56.
- TTNews*. Driver turnover reached record in 4Q, ATA says. <http://www.ttnews.com/members/topNews/0012732.html>

An Accounting Contribution to Regional Development: Multiple Dimensions of the Triple Bottom Line

Stephen V. Senge
Simmons College

Stakeholders in a variety of circumstances repeatedly face the economic, environmental, and social challenges of regional development. Though often overlooked, accounting can assist these decision makers as they develop appropriate and effective policies and programs. In particular, an expanded application of the triple bottom line concept can enable participants to recognize, measure, and disclose important aspects of regional development efforts. This expansion of the triple bottom line provides a multidimensional perspective that enhances interrelationships among basic development goals and presents a composite view of development activities for all constituents. This paper provides some contemporary examples of regional development issues, describes accounting's potential contribution to programs and policies focused on improvement, proposes a multidimensional accounting model based on the triple bottom line concept, and analyzes the benefits and challenges of applying this model.

FROM GREENBURG TO GREENVILLE

Although the need for effective regional development spans both time and geography, contemporary examples highlight the general interest in improved economic, environmental, and social conditions. During the spring and early summer of 2006, citizens in regions as varied as Decatur County, Indiana, and the Moosehead Lake region of Maine faced questions regarding these three components of regional development.

Development proponents in Decatur County, Indiana, worked to convince Honda that the town of Greenburg (population 10,500) would be an ideal loca-

tion for a new automobile assembly plant. In what the national press described as a feverish scramble, Greenburg successfully competed against regions from Illinois, Michigan, Ohio, and Wisconsin (Maynard 2006, Brat 2006). The plant will employ 2,000 workers, and construction between 2006 and 2008 will bring over \$550 million to southeastern Indiana. In addition, the expansion of infrastructure together with the pace of development will impact both environmental and social conditions.

In and around Greenville, Maine, citizens sought predictable development as timber-related jobs declined and Plum Creek Timber requested permission to develop resorts in the Moosehead Lake area (Living on Earth). The initial Plum Creek plan proposed resort development near existing towns and reserved outlying portions of the firm's 900,000 acres for permanent conservation.

In other regions, residents faced the adjustments necessary when a company leaves a "company town." In Rochester, New York, regional development managers adjusted to the decline in Kodak's home office employment from 60,000 to less than 15,000 (The Chronicle of Higher Education). In Scotia, California, regional officials faced the need to find new providers of city and commercial services when Pacific Timber, literally the town's owner, decided to sell all the property in town to private interests (McKinley 2006).

Responding to such challenges, business, civic, and nonprofit leaders often join together to form regional development associations or consortia. For example, the St. Louis Regional Chamber and Growth Association (SLRCGA) works "to unite the region's business community and to engage dynamic business and civic leadership to develop and sustain a world-class economy and community" (SLRCGA). To further this goal, the SLRCGA supports a variety of private sector programs, public/private partnerships, and legislative initiatives.

Although the settings and specific challenges often differ, common issues do emerge from a review of many contemporary regional development efforts. Whether these public/private partnerships focus on a tiny lumber town in Northern California or a major Midwestern urban center spanning 16 counties, common regional development goals emphasize enhanced economic conditions, improved quality of life, and effective social policy. These diverse regional actors share another common characteristic—the need to organize information and report results.

ACCOUNTING'S POTENTIAL CONTRIBUTION TO REGIONAL DEVELOPMENT

As stakeholder groups within a region explore various development options, accounting can provide an important, though often overlooked, contribution. Broadly considered, the accounting process recognizes, measures, and discloses actions and events. In recognizing regional development efforts, measuring their impact, and disclosing their results, accounting can provide significant assistance to public and private sector managers charged with advancing a regional development agenda. Appropriate accounting can weave together an existing patchwork of activities, make invisible actions visible, link strategy and reporting, and promote overall stakeholder awareness.

Organizing the Patchwork of “Good Stuff”

Virtually every community and region has many programs that contribute in whole or in part to development. A town budget may include resources for a summer day-camp program, a technology firm may donate equipment and time to improve local math and science education, state transportation upgrades may ease traffic congestion, or a chamber of commerce may sponsor a “buy local” program that links businesses that may be each others’ suppliers or customers. When asked to describe regional development efforts, participants can certainly cite some examples, but since decision-making is dispersed, few may see the whole effort. Yet, from a regional development perspective, all these separate entities and decisions are interconnected (Gray and Bebbington 2001). All these efforts represent squares of cloth that have the potential to become a quilt. Appropriate accounting for all these can transform anecdotal information into a comprehensive view—creating a quilt by stitching together all the squares of “good stuff.”

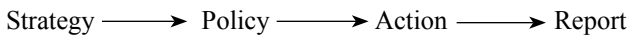
Making the Invisible Visible

Accounting can be more than a legally-mandated recordkeeping process. The reporting phase of the accounting process enhances visibility (Gray and Bebbington 2001), which becomes important in many regional development efforts because of the diverse group of contributors. Organizations and individuals have a variety of reasons for undertaking and maintaining regional development activities. These reasons include civic-mindedness, strategic focus, and personal interests. With varied motivation, timetables, and budgets, managers who are trying to help may innocently overlap or neglect community needs their organization could meet. Some important activities may not be undertaken at all, because the need is not evident to the right audience at the right moment. The

right accounting structure can assist a confederation of regional development actors by providing more comprehensive visibility.

Forging the Link Between Strategy and Reporting

For many managers, a familiar link exists among strategies, policies, actions, and reports. Managers formulate a strategy, develop policies based on that strategy, and act on those policies. Reports then summarize the impact of those managerial actions and the effectiveness of the strategies and policies. Thus, for many managers the relationship has the following linkage:



Another significant line of reasoning, however, reverses the entire process. If a manager must report on the status or progress of a specific item, he or she maintains an awareness of that item in acting as well as formulating policy and strategy. Thus, the relationship could be represented as:



In other words, a report—in this case, an accounting record—can influence the actions taken, policies adopted, and, ultimately, the overall development strategy.

This reasoning lies behind the popular managerial phrase from the 1990s: “What gets measured, gets managed!” More recently, Andrew Savitz, President of Sustainable Business Strategies and former Partner at PricewaterhouseCoopers has commented that decision makers are still influenced by “[t]he classic question from high school, ‘Is this going to be on the exam?’” (Savitz 2006, 209). From this perspective, regional development strategies, policies, and actions can be influenced by appropriate disclosure requirements.

Advocating for Awareness

Rather than support any specific path, the appropriate accounting for regional development activities supports stakeholder awareness. With multiple layers, sectors, and agendas in the process, the right accounting approach provides all constituents with a composite picture of development efforts and progress.

Traditional accounting based on current Generally Accepted Accounting Principles (GAAP) will likely not capture many aspects of regional development. The key to the effective advocacy of awareness, therefore, may be the adoption

of an accounting perspective popularized in Europe within the last decade—the Triple Bottom Line (3BL). John Elkington first used this phrase in the following comment: “Today, we think in terms of a triple bottom line focusing on economic prosperity, environmental quality, and . . . social justice” (Elkington 1998, 70). Although initially developed as a reporting framework for individual organizations, the 3BL’s categories closely resemble the goals of regional development—enhanced economic conditions, improved quality of life, and effective public policy. In fact, Jonathon Porritt, co-founder of the Forum for the Future, recently described 3BL as “the easiest way of grounding the often stratospheric debate surrounding sustainable development” (Porritt 2005, 30–31).

In proposing the 3BL concept and suggesting its applicability to development, Elkington and Porritt have provided a basic theme and general direction, but not a framework for implementation. The following explanation presents a possible implementation model built on the basic 3BL theme. This expanded 3BL approach helps development constituents move beyond overly-generalized goals and embrace specific measures of progress.

APPLYING THE TRIPLE BOTTOM LINE MODEL TO REGIONAL DEVELOPMENT

Although proponents usually describe the 3BL concept as a reporting tool for individual private- and public-sector organizations, the 3BL can support and enhance collective regional development efforts as well. As managers of one regional governmental unit have stated, disclosure “means going beyond traditional financial reporting to measure and report at least the environmental, social, and economic dimensions of performance” (Victoria 2004, 17). Because the basic 3BL model has some limitations in this application, a multidimensional perspective of the 3BL better fits the needs of regional development stakeholders.

The Basic 3BL Model and Its Limitations

The essential categories in 3BL reporting are economic prosperity, environmental quality and social justice. Although no mandatory 3BL reporting requirements currently exist, numerous individual organizations release 3BL reports voluntarily. These reports attempt, through a wide variety of disclosures, to provide information on an organization’s activities and their impact in the economic, environmental, and social arenas.

Although the 3BL concept provides the impetus for recognition, measurement, and disclosure in these three areas, the basic model presents some limitations when viewed from a regional development perspective. First, economic prosperity, environmental quality, and social justice represent broad goals rather than specific objectives. Constituents can interpret these goals in a variety of ways, so achievement of these goals may often be in dispute. When various groups meet to discuss regional development, their vocabulary may appear similar, but this apparent similarity may mask significant differences in perspective. These goals must be translated by stakeholders into specific objectives and measures. Second, consideration of these three separate goals suggests a juggling act, where resources must be divided among the discrete goals with limited spill-over benefits. Managerial conversations with this basic 3BL model in mind can focus on one goal to the exclusion of the others. These conversations can easily become confrontations between polarized groups labeled “pro-business” or “pro-environment.” Debates of this sort often lead to delicate coalitions and uneasy stalemates. These limitations can be addressed by developing a multidimensional view of the 3BL.

Enhancing the 3BL Model with a Multidimensional Perspective

Making the 3BL model more applicable to a regional development context begins with the separation of the categories of economic, environmental, and social from the goals of prosperity, quality, and justice. Table 1 presents this expanded view.

Categories/Goals	Prosperity	Quality	Justice
Economic			
Environmental			
Social			

Each of the goals can apply to each of the categories. For example, social and environmental prosperity may be important for a region along with economic prosperity. Economic and social quality may be as important as environmental quality. Finally, environmental and economic justice may be as important as social justice.

This expanded view of 3BL goals can lead managers to important regional development characteristics within individual cells of the model. Each cell characteristic is based on the intersection of a category (row) and goal (column). As Table 2 displays, three key regional development characteristics—balance, regeneration, and equity—form a central diagonal within the model.

Table 2
A Multidimensional View of the Triple Bottom Line

<u>Categories/Goals</u>	<u>Prosperity</u>	<u>Quality</u>	<u>Justice</u>
Economic	Balance		
Environmental		Regeneration	
Social			Equity

Economic prosperity for a region may often mean achieving a balance of two distinct outcomes—economic growth and economic stability. Social justice may imply a fundamental standard of equity or fairness. In addition, although constituents may see environmental regeneration as quite ambitious, this characteristic is an essential condition for the often articulated “improved quality of life.” While balance, regeneration, and equity represent key characteristics of regional development, other attributes complete the multidimensional view of the 3BL, as shown in Table 3.

Table 3
A Multidimensional View of the Triple Bottom Line

<u>Categories/Goals</u>	<u>Prosperity</u>	<u>Quality</u>	<u>Justice</u>
Economic	Balance	Production	Distribution
Environmental	Efficiency	Regeneration	Availability
Social	Opportunity	Education	Equity

Each new attribute occupies a specific cell to describe a specific dimension of regional development. For example, environmental prosperity requires efficiency in using resources, and opportunity represents a key element of social prosperity. Economic quality depends on the production of goods and services that continue to meet customer expectations, while education for regional citizens can enhance

social quality. Concluding the example, the distribution of income and wealth is a key attribute of economic justice, while the availability or access to healthy and inspiring surroundings for all constituents characterizes environmental justice.

3BL Refinements and Extensions

By refining and extending the 3BL model, managers can address some important, although overlooked, aspects of successful regional development activities. Emphasis at the level of characteristics and attributes can dissolve the separate appearance of the goals, emphasize public/private partnerships, and provide a series of snapshots that can measure progress.

Interlocking Characteristics and Attributes Address Multiple Goals.

As previously described, working toward the three broad goals of economic prosperity, environmental quality, and social justice can look like a juggling act. Popular views often pit economic prosperity against environmental quality and social justice. The resulting view creates a “this or that” perspective, while regional development goals often require “this and that.” Tables 4–6 demonstrate that by working towards clusters of specific characteristics and attributes, managers address multiple goals at the same time.

Table 4 emphasizes the cluster of attributes that contribute to economic prosperity (shown in italics). The economic success a region seeks implies a balance among and within the attributes of production, distribution, efficiency, and opportunity.

Categories/Goals	Prosperity	Quality	Justice
Economic	Balance	<i>Production</i>	<i>Distribution</i>
Environmental	<i>Efficiency</i>	Regeneration	Availability
Social	<i>Opportunity</i>	Education	Equity

Local production of a variety of goods and services, synergies leading to enhanced efficiencies, along with broad income distribution and opportunities characterize the balanced economic prosperity that regions seek.

Table 5 emphasizes the cluster of attributes that contribute to environmental quality broadly construed (shown in italics). Both the efficient use of resources in the production of goods and services, along with education on environmental matters and the availability of safe and healthy environments of many types for regional residents, enhance environmental regeneration and ultimately environmental quality.

<u>Categories/Goals</u>	<u>Prosperity</u>	<u>Quality</u>	<u>Justice</u>
Economic	Balance	<i>Production</i>	Distribution
Environmental	<i>Efficiency</i>	Regeneration	<i>Availability</i>
Social	Opportunity	<i>Education</i>	Equity

Table 6 focuses on the cluster of attributes that contribute to the goal of social justice (shown in italics). Attributes such as appropriate resource distribution and availability along with opportunity and education represent important aspects of equity or fundamental fairness for a regional population.

<u>Categories/Goals</u>	<u>Prosperity</u>	<u>Quality</u>	<u>Justice</u>
Economic	Balance	Production	<i>Distribution</i>
Environmental	Efficiency	Regeneration	<i>Availability</i>
Social	<i>Opportunity</i>	<i>Education</i>	Equity

Regional development stewards reach a key conclusion when they realize that the goals are interlocking rather than separate. For example, work on efficiency assists both economic prosperity and environmental quality. An emphasis on resource distribution assists both economic prosperity and social justice. Increased opportunity and education for a regional population improve the overall economic, environmental, and social outlooks. Looking at the challenges from the attribute level blends regional development efforts and goals.

The Public/Private Partnership. Since regional development efforts often involve a wide variety of organizations with differing missions, the partnership nature of the overall effort may give way to partisanship at some challenging

moment. Private-sector groups may feel that their public-sector counterparts are overly concerned with process and inclusiveness and thus move too slowly. Public-sector representatives may feel that private-sector colleagues have a narrow focus and move without due deliberation. One group may contend that the other favors economic goals over environmental or vice versa. Once again, evaluating these efforts at the attribute level emphasizes the public/private development partnership.

As an example of the public/private partnership, Table 7 presents some attributes as primarily private-sector responsibilities (shown with solid underlines) and others as primarily public-sector responsibilities (shown with dotted underlines)

Table 7
A Multidimensional View of the Triple Bottom Line

<u>Categories/Goals</u>	<u>Prosperity</u>	<u>Quality</u>	<u>Justice</u>
Economic	<u>Balance</u>	<u>Production</u>	<u>Distribution</u>
Environmental	<u>Efficiency</u>	<u>Regeneration</u>	<u>Availability</u>
Social	<u>Opportunity</u>	<u>Education</u>	<u>Equity</u>

While both private and public groups have roles to play in developing each of the attributes, a specific region may look to private interests to enhance production, efficiency, and opportunity while the public sector is charged with education, distribution, and availability. Since enhancing the attributes leads to achieving the broad development goals, the overall effort becomes a true partnership of interests. Table 8 highlights this partnership in achieving the major development goals.

Table 8
A Private Sector/Public Sector Partnership

<u>Categories/Goals</u>	<u>Private Sector</u>	<u>Public Sector</u>
Economic	Production, Efficiency, Opportunity	Distribution
Environmental	Production, Efficiency	Distribution Availability
Social	Opportunity	Distribution, Availability, Education

Although diverse regions may organize this collaboration differently, Table 8 highlights one possible arrangement.

Developing the Snapshots. Using the attributes perspective provided by the expanded 3BL model, managers acquire a view of regional development that reaches deeper than changes in per capita income or water quality. The model provides a framework for monitoring balance, regeneration and equity by measuring levels of production, distribution, efficiency, availability, opportunity, and education. Periodic snapshots of the status of these attributes provide indicators of the possible success of regional development activities. To attain the benefit of disclosure, however, regional development decision makers must overcome the challenge of measurement.

CHALLENGE AND BENEFIT

In order to receive the potential benefits of enhanced 3BL reporting, stakeholders must conquer the challenge of measurement. Depending upon a participant's outlook, the measurement challenge appears either hopeless or merely overwhelming. In either case, addressing this measurement challenge requires innovative approaches that lie outside the traditional accounting model, an effective process, and the careful selection of metrics.

Beyond Traditional Accounting Measures

Traditionally, accounting has recognized, measured, and reported the financial results of organizational entities. Activities that cannot be captured within an entity or expressed in financial terms are usually excluded. From this perspective, the measurement questions associated with regional development and the expanded 3BL appear to lie beyond the bounds of accounting.

Over the last decade, however, many organizations in both the private and public sectors have experimented with various measures of 3BL activity, and many new measurement approaches have been proposed. Adapting these measures to regional development activities requires a step outside the traditional accounting model familiar to many executives. Specifically, managers must think beyond quantitative, financial, and entity boundaries. 3BL reports often contain both descriptive and quantitative information, and this quantitative information expands beyond strict financial reporting. In addition, 3BL reporting often includes information from multiple entities within a value chain.

Although some executives may assert that these measures do not represent “real accounting,” this view has many shortcomings in a modern consortium of diverse organizations. By sticking with the separate entity and financial impact criteria, key linkages among contributors and complementary programs can disappear, important context provided by descriptive information can be lost, and an awareness of the overall breadth and depth of activity can be limited.

Focus on the Process

For regional development disclosures, both the reporting systems and the reports themselves will likely differ from one region to the next. Some stakeholders may be tempted to import the entire reporting approach and format from another region. Adopting another region’s reporting approach, however, may also mean inadvertently adopting that region’s goals. To achieve effective reporting of regional development activities, managers might begin by emphasizing three common reporting dimensions—alignment, comparability, and transparency. A commitment to focusing on the link between development objectives and reporting, designing periodic reports to promote comparisons, and disclosing activities completely to stakeholders establishes a firm foundation for regional development reporting.

With this foundation in place, managers may then follow a process that begins with the specific definition of regional development goals (such as enhanced economic conditions, improved quality of life, and effective public policy). These goals lead to characteristics and attributes (such as balance, regeneration, and equity). These characteristics then lead to decisions about metrics or specific measurement elements.

Example Metrics

Managers will find numerous potential metrics by reviewing both public- and private-sector 3BL reports. These reports may be found on individual organization websites or through a clearinghouse for such reports at www.corporateregister.com (Next Steps Consulting). Many such reports use the metrics established by the Global Reporting Initiative as a basis. These measures, with their underlying rationale, are available at www.globalreporting.org. Other measurement approaches include the SustainAbility Business Case Matrix at www.sustainability.com and the Sustainable Measures Indicator Database at www.sustainablemeasures.com. Table 9 presents some examples of potential measures to report 3BL performance in a regional development setting. These metrics often have both

quantitative and descriptive dimensions. They can also be evaluated against benchmarks and improvement targets. Many of these measures may already be reported separately by one or more organizations within the overall regional development effort.

Table 9
Measurement Examples

<u>Attributes and Characteristics</u>	<u>Sample Measures</u>
Production	
Economic balance	Output in economic sectors within the region
Environmental regeneration	Regional greenhouse gas and other pollution emissions
Distribution	
Economic balance	Private donations to regional public organizations
Social equity	Income distribution to regional population groups
Efficiency	
Environmental regeneration	Energy and water used throughout the region
Economic balance	Amount of regional resources that become waste
Availability	
Environmental regeneration	Expenditures on regional environmental improvements
Social Equity	Programs and policies to improve community and regional safety
Opportunity	
Social equity	Distribution of regional training opportunities
Economic balance	Regional employment creation and turnover rates
Education	
Social equity	Regional access to primary, secondary and higher education
Environmental regeneration	Citizen participation in regional environmental programs

Table 9 follows a pattern based on the multidimensional 3BL model. Each attribute contributes to two different characteristics and goals, while each characteristic or goal has four contributing attributes. These metrics only represent examples. As previously discussed, regional stakeholders must develop the right mix of metrics for their local circumstances.

Overall Measurement and Reporting Observations

Establishing both the right measures and measurement process requires vision and energy, but offers the rewards of enhanced regional development. A commitment to a bounded process with a few measures and simple reports represents a key conceptual starting point in the advocacy of awareness. Constituents may recommend an overly broad opening process, with many detailed measures. Opening with complexity and the associated burdens of cost and understanding may quickly lead to failure of the entire effort. A simple beginning with gradual improvements in both the measures and the reports allows stakeholders to grow in their understanding of the benefits of transparency and accountability.

After a regional development group establishes a basic report, managers and other stakeholders can ask some significant questions to determine the quality of their reporting (Savitz 2006, 255). Examples of these questions include:

- Is the report balanced, including both positive and negative aspects?
- Is the report based on objective and comprehensive data?
- Does the report disclose targets and discuss progress?
- Does the report incorporate stakeholder feedback?

Discussing these issues can lead stakeholders to make important improvements to the overall reporting process.

Stepping out on this accounting frontier can be a significant leap of faith, but it is one worth taking. Economic prosperity, environmental quality, and social justice represent familiar goals that guide numerous economic development efforts. The emerging concept of 3BL accounting can assist these efforts through the application of an expanded reporting model and appropriate metrics.

REFERENCES

- After Kodak. *The Chronicle of Higher Education*. July 14, 2006.
<http://www.chronicle.com>.
- Brat, Ilan. 2006. Indiana town woos Honda. *Wall Street Journal*, June 22.
- Elkington, John. 1998. *Cannibals with forks*. Gabriola Island, Canada: New Society Publishers.
- Global reporting initiative. *Sustainability reporting guidelines*.
<http://www.globalreporting.org>.
- Gray, Rob, and Jan Bebbington. 2001. *Accounting for the environment*. London, U.K.: Sage Publications.
- Maynard, Micheline. 2006. Indiana wins the bidding for new Honda assembly plant. *New York Times*, Online Edition, www.nytimes.com, June 29.
- McKinley, Jesse. Company town, losing a landlord, seeks a mate. *New York Times*.
<http://www.nytimes.com>.
- Next Steps Consulting. *Corporate nonfinancial report database*.
<http://corporateregister.com>.
- Porritt, Jonathon. 2005. *Capitalism as if the world matters*. London, U.K.: Earthscan Publications Ltd.
- Redefining a region. *Living on Earth*. <http://www.loe.org/shows/segments.htm?programID=06-P13-00013&segmentID=1>.
- Savitz, Andrew, and Karl Weber. 2006. *The triple bottom line*. San Francisco: Jossey-Bass.
- St. Louis Regional Chamber and Growth Association (SLRCGA).
<http://www.gotostlouis.org> and <http://www.stlouisbusiness.net>.
- Sustainable Measures. *Indicator database*. <http://www.sustainablemeasures.com>.
- Sustainability. *Business case matrix*. <http://www.sustainability.com/matrix>.
- Victoria Auditor General's Office. 2004. *Beyond the triple bottom line: Measuring sustainability*. State of Victoria, Australia. <http://www.audit.vic.gov.au>.

Housing Economics: The Condominium Market in Transition

Roger P. Sindt
University of Nebraska at Omaha

INTRODUCTION

The housing market ended 2006 with the third-highest number of existing units sold on record. As shown by Table 1, the total sales of existing homes increased steadily from 2000, setting new records in 2003, 2004 and 2005, reaching a high of 7,075,000 units in 2005. In 2006, however, sales began to decline and by the end of that year the pace of overall sales had dropped from record-setting levels to that of the third-best year. The drop in the pace of existing home sales bottomed out at the end of 2006 and 2007 is poised to be the fourth-best sales year on record.

Table 1
Total New and Existing Homes Sold
or For Sale in the U.S., 2000–2006*

Year	New Homes		Existing Homes	
	Sold	For Sale	Sold	For Sale
2000	877,000	301,000	5,171,000	2,048,000
2001	909,000	310,000	5,332,000	2,068,000
2002	972,000	344,000	5,631,000	2,108,000
2003	1,088,000	345,000	6,175,000	2,270,000
2004	1,203,000	431,000	6,779,000	2,224,000
2005	1,283,000	515,000	7,075,000	2,846,000
2006p**	1,061,000	537,000	6,480,000	3,508,000

*Source: Extracted from the National Association of Homebuilders Table “New and Existing Home Sales, U.S. located at http://nahb.org/fileUpload_details.aspx?contentID=55761 and the National Association of Realtor’s Table “Existing Home Sales” located at <http://www.realtor.org/> at menu → Research → Housing Statistics → Existing Home Sales.

**The data for 2006 is preliminary.

The housing stock has been increasing at a record pace, as shown by Table 2. Housing starts increased each year from 2000 through 2005, then dropped about 17% by the end of 2006, with single-family units as the bulk of the new starts. Construction of new apartments has remained relatively constant during that time period, having changed very little, especially in the 2003–2006 period, during which time apartment vacancies remained high due in part to low interest rates and easy credit favoring home purchases over apartment rentals.

Noticeable changes in the housing composition have occurred as developers exploit consumer demand by offering a variety of housing choices. These alternatives include assisted living units, life-care retirement facilities, time shares and apartments, among others. A rapidly growing niche is the co-ownership market comprised of the townhouse, new- and conversion-condominium and cooperative segments of the market. Condominium ownership represents an increasingly viable alternative to both apartment rental and single-family detached housing ownership. This market has not only expanded in the traditional resort and recreational areas, but also in the mature suburbs and central business districts of larger cities across the United States.

OBJECTIVES OF THE PAPER

This paper has the following objectives:

- Analyze nationwide market forces to help understand the fundamentals that have both driven and slowed the recent momentum for condominium development
- Identify characteristics of the condominium market that contribute to changes in the supply of and demand for the condominium form of ownership

THE CONDOMINIUM MARKET NICHE

The new- and conversion-condominium segment of the market has become increasingly important across the United States and highly visible on both coasts. Converters of apartments into condominiums spent about \$30 billion on 191,000 units in 2005, about one-third of all multifamily property sales (Real Estate Forum 2006). Table 3 shows that condominium sales increased by 58%, from 567,000 units in 2000 to 896,000 units by the end of 2005, and then dropped substantially through the end of 2006 to 803,000 units or about 10% below the 2005 pace. The increased development and conversion of condominiums resulted in about a 20% increase in inventories by the end of 2006 over the previous year (National Association of Realtors 2006). The increased for-sale inventory

extended the available month's supply from 4.8 months at the end of 2005 to 7.8 months by the end of 2006.

Table 2
Total U. S. Annual Housing Starts, Selected Year, 1980–2006*

Year	Single-Family	Multifamily	Total
1980	852,100	440,100	1,292,200
1985	1,072,300	669,400	1,741,700
1990	894,900	297,700	1,192,600
1995	1,076,300	277,900	1,354,200
2000	1,230,900	337,800	1,568,700
2001	1,273,300	329,400	1,602,700
2002	1,358,900	346,900	1,705,800
2003	1,499,000	348,700	1,847,700
2004	1,610,500	345,300	1,955,800
2005	1,715,800	352,500	2,068,300
2006**	1,463,700	336,900	1,800,700

*Source: Extracted from Annual Housing Starts (1978-2006) (Based upon the U.S. Bureau of the Census data) at <http://www.nahb.org/generic.aspx?sectionID=130&genericContentID=554> on the National Association of Home Builders website.

**The data for 2006 is preliminary.

Table 3
Total Existing Condominium Sales, Inventory and Month's Supply, United States, 2000-2006*

Year	Sales	Inventory	Month's Supply
2000	567,000	208,000	4.4
2001	599,000	228,000	4.5
2002	657,000	228,000	4.1
2003	732,000	230,000	3.8
2004	820,000	274,000	4.0
2005	896,000	456,000	6.1
2006**	803,000	548,000	7.8

*Source: Extracted from the National Association of Realtors data table located at <http://www.realtor.org/> at menu → Research → Housing Statistics → Existing Home Sales → Condo and Co-op Sales and Prices. Month's Supply for 2000 and 2001 is estimated.

**The data for 2006 is preliminary.

Condominiums as a distinct market class have only been in existence in the United States since 1960. The real condominium development expansion began about 1970, and by the early 1980s had run its course. The resurgence of the condominium market did not occur to any great extent until about 10 years ago and the real momentum, in terms of numbers, has been realized only in the last five years. Even today, with renewed interest in condominium development and conversion, only about 5.2% of the existing occupied housing supply is in the form of condominium or cooperative ownership, as shown in Table 4. On a regional basis, the highest concentration of condominiums and cooperatives as a percentage of total occupied housing is in the Northeast (6.9%), with the lowest concentration in the Midwest (4.1%).

Table 4
Distribution of Occupied Housing Units,
Condominiums Units and Cooperative Housing Units
by the United States and Regions*

2005 Data	U.S.	Northeast	Midwest	South	West
Total Occupied Housing Units	108,871,000	20,337,000	24,955,000	39,722,000	23,858,000
Total Condominium and Coop Units	5,633,000	1,403,000	1,021,000	1,698,000	1,511,000
% Condo and Coop of Total Units	5.2%	6.9%	4.1%	4.3%	6.3%
Cooperative Numbers	614,000	448,000	43,000	55,000	68,000
% of Total Units	0.6%	2.1%	0.2%	0.1%	0.3%
Condominium Numbers	5,019,000	955,000	978,000	1,643,000	1,443,000
% of Total Units	4.6%	4.7%	3.9%	4.2%	6.0%

*Source: Author’s calculations and data extracted from Table 2.1 Introductory Characteristics (of) Occupied Units, U. S. Bureau of the Census, Current Housing Reports, Series H150/05, American Housing Survey for the U. S., 2005.

On the demand side, the condominium market has been fueled by a variety of buyer characteristics including speculative purchases by investors. On the supply side, condominium development and sales have continued strong in many locations recording a slight decline in average sale price across the U. S. with a modest price advance in the Midwest region through the end of 2006, as shown by Table 5.

Condominium markets have cooled recently in some major cities, resulting in price declines. For example, prices for existing condominiums in downtown Boston dropped 30% in 2005, with smaller price declines in San Diego, Atlanta and Sarasota, Florida. The February 10, 2006 issue of *The Wall Street Journal* surveyed a cross-section of five major cities and found significant price declines occurring in all but the Minneapolis market, which was characterized as a market in which prices were expected to remain flat for the foreseeable future (“Clouds over condos” 2006). A variety of reasons have been offered for this downward price trend—overdevelopment of both new units and conversions together with increasing inventories of resale units, and the supply increased by speculators who, in some markets have been the driving force behind price increases, and are now exacerbating market conditions by selling into a declining market in hopes of capturing speculative profits (“Buyers scarce...” 2007).

Table 5
U. S. and Midwest Region Median and Average
Existing Condominium and Cooperative Sale Prices, 2002-2006*

Year	Median Condominium/ Cooperative Price		Mean Condominium/ Cooperative Price	
	U.S.	Midwest	U.S.	Midwest
2002	\$142,200	**	\$180,900	**
2003	168,500	\$162,600	201,100	195,000
2004	197,100	181,000	234,100	213,900
2005	223,900	189,100	260,800	226,500
2006	221,800	191,300	259,300	226,900

*Source: Extracted from the National Association of Realtors data table located at <http://www.realtor.org/> at menu → Research → Housing Statistics → Existing Home Sales → Condo and Co-op Sales and Prices. The data for 2006 is preliminary.

**The data series began in 2003 for the Midwest.

CONDOMINIUM DEFINED

The term condominium refers to a legal ownership entity defined by state statute. A condominium regime is established according to state statute as a legal document among owners, which sets operating procedures and requirements for such things as the Home Ownership Association (HOA), monthly association dues, dealing with common-area maintenance and repair and election of a board of directors. This paper also includes cooperative ownership of multifamily units in the analysis, because data generally does not distinguish between

the two types of ownership structures. Cooperative ownership involves a legal entity, usually a corporation, holding legal title to the real estate, with claims on individual units provided by a share of stock in the corporation together with a proprietary lease, which gives the shareholder the right to occupy (and responsibility for) a given unit.

The Condominium Regime

Ownership of a condominium unit means a fee-simple ownership of a specific unit and an undivided ownership interest in all common elements of the condominium regime. A condominium regime can be applied to any form of land and improvements. It has been applied, for example, to property like recreational ranch land in which the buyer receives a small piece of land on the ranch in fee simple with an undivided ownership interest in the common elements, which turns out to be most of the ranch proper. More recent applications of condominium ownership include the sale of rooms in “condo-hotels” and the sale of luxury units on “residential cruise ships.” An article in *The Wall Street Journal* (“Clouds over condos” 2006) reported that selling rooms in condo hotels has become increasingly popular with developers, although the concept is not new. For example, well-known real estate investor and developer Donald Trump developed one about 14 years ago. It was estimated that at the end of 2005 about 12,000 of the more than 113,000 hotel rooms under construction were condo-hotel units. The February 1, 2006 online edition of *Realtor Magazine* (Hoffman 2006) reported that ship-based condominium “The Four Seasons” will sell units ranging in size from 800 square feet to penthouses, with prices ranging from \$2.5 million to \$25 million. Annual maintenance charges range from \$100,000 to \$500,000, based upon the size of the unit.

Monthly Ownership Costs

Condominium ownership results in out-of-pocket costs that are similar to those in other forms of homeownership. These include principal and interest payments on a mortgage, property taxes and hazard insurance premiums. Maintenance and repair expenses will also be incurred on the owned unit. Additionally, a major expense that buyers of condominiums become liable for is the monthly homeownership assessments collected to defray obligations of the HOA—recurring expenses such as common area maintenance and repair, utilities, property taxes, liability and hazard insurance, license fees, management fees, and any other obligations legally incurred in providing the required level of services to maintain the common areas. These expenses are budgeted annually by the HOA and change depending upon needs to cover current expenses and to build reserves to

defray capital expenditures such as roof replacement or parking lot resurfacing. Table 6 shows a breakdown of condominium and cooperative fees reported in the most recent American Housing Survey.

Table 6.
Distribution of Monthly Fees Paid by Owners of Condominiums and Cooperatives Across the United States, 2005*

\$ Per Month	# of Owners	% of Total
< \$25	56,000	1.3
\$25 – 49	44,000	1.1
\$50 – 74	99,000	2.4
\$75 – 99	131,000	3.1
\$100– 149	692,000	16.6
\$150 – 199	704,000	16.9
> \$200	1,609,000	38.7
Not Reported	827,000	19.9
\$ Median	\$196	

*Source: Extracted from Table 1A-7, Financial Characteristics—
All Housing Units, Current Housing Reports, Series H150/05, American
Housing Survey for the United States, 2005, U.S. Bureau of the Census.

Monthly fees ranged from less than \$25 to more than \$200 with a median of \$196. More than 55% of those reporting paid fees in excess of \$150 per month.

In addition, unanticipated expenses may be defrayed by the HOA collecting a special assessment. Purchasers of resale units may be at financial risk if they do not ascertain all assessments, either ongoing or those that might have been approved by the HOA but not yet collected. Purchase contracts should address these assessments before purchase and indicate the responsible party.

CONDOMINIUM MARKET SUPPLY AND DEMAND INDICATORS

An early study of the then-emerging condominium market in Houston found that the supply and demand for condominiums resulted from a variety of factors (Sindt and Wilborn 1979). These included intensive use of high-cost land, which could not support single-family detached residential construction, and the ability to increase population density nearer to places of employment without adding significantly to travel time and already overused transportation systems. This study found that congested areas near places of employment tended to also sup-

port the most condominium conversion activity. In addition, the current condominium market is influenced by a variety of other considerations, described below.

The Empty-Nester Market: Pre- and Post-Retirement

Table 7 shows overall rates of homeownership across the nation by age category. Although this table groups all forms of homeownership together, the largest group of current condominium owners and potential purchasers is 55 or older. While only about 40% of all single-family detached homes are owned by households age 55 and above, about one-half of all condominiums are owned by this group, of which a majority are retirees.

This group dominates the condominium ownership segment for a variety of reasons. Many households in this group are changing their housing choice due to lifestyle change. Some members of this group are downsizing to reduce housing expenses and cash-out built-up equity.

Table 7
National Rates of Homeownership
by Age Categories, 2000-2005*

Age	2000	2001	2002	2003	2004	2005
< 25	21.7%	22.5%	22.9%	22.8%	25.2%	25.7%
25 – 29	38.1	38.9	38.8	39.8	40.2	40.9
30 – 34	54.6	54.8	54.9	56.5	57.4	56.8
35 – 39	65.0	65.5	65.2	65.1	66.2	66.6
40 – 44	70.6	70.8	71.7	71.3	71.9	71.7
45 – 49	74.7	75.4	74.8	75.4	76.3	75.0
50 – 54	78.5	78.2	77.9	77.9	78.2	78.3
55 – 59	80.4	81.0	80.8	80.9	81.2	80.6
60 – 64	80.3	81.8	81.6	81.9	82.4	81.9
65 – 69	83.0	82.4	82.9	82.5	83.2	82.8
70 – 74	82.6	82.5	82.5	82.0	83.4	82.9
75 – Up	77.7	78.1	78.4	78.7	78.8	78.4
Total	67.4	67.8	67.9	68.3	69.0	68.9

*Source: Extracted from Table 15, Homeownership Rates for the United States, by Age of Householder and by Family Status, 1982-2005, U. S. Bureau of the Census, Housing and Household Economics Statistics Division.

For some, this may mean purchasing a condominium in the area where they are currently residing. Others may be moving to a retirement location. Still others may be both downsizing their permanent residence and simultaneously entering the recreational housing market through acquisition of a recreational or second home. All of these choices include the opportunity to continue to build equity through ownership rather than renting.

Young Adult Demand

Many young adults age 24–29 have opted to capture benefits of homeownership without some of the attendant responsibilities, such as exterior and lawn maintenance. This may be especially true for those who view moving from an apartment to a condominium (or merely buying the unit they have been renting in a condominium conversion) as an extension of their previous lifestyle. Condominium developments near work and recreational activities have become increasingly popular with these first-time entry-level buyers. In many areas of the U.S., rising single-family housing prices have made a condominium purchase the only affordable opportunity for the entry-level homebuyer.

Influence of Public Housing Policy and Financing Incentives

Public housing policy may enhance or retard development of housing options. In some regions of the country, restrictive development policies by urban planners have severely limited the availability of land for development and caused developers to redevelop areas for more intensive use. These policies favor multiunit developments, due to the high cost and time constraints of bringing new developments to the market.

Enhancing ownership opportunities has been emphasized by governmental units at all levels, to promote homeownership. By providing incentives such as interest rate subsidies, low- or no-down-payment options and equity grants in a historically low interest rate environment, coupled with the wide availability of mortgage funds, the demand for ownership has accelerated, with homeownership rates exceeding two-thirds of all households. Homeownership rates in the Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin) climbed from 67.5% in 1990 to 72.6% in 2000 (Sindt et al. 2004). The predictable and ongoing high vacancy rates in many apartment markets have led to alternative (conversion) uses by investors and developers.

Developers have also been aided by public sector partnerships eager to promote gentrification and other adaptive re-use of targeted city areas. These partner-

ships have used tax incentives to promote this redevelopment. A favorite tool is tax increment financing (TIF), which allows developers to borrow funds up to a certain amount specified in the TIF agreement. The public sector then agrees to limit taxable value on the project to the predevelopment value, until the loan is paid off, usually in a 12- to 15-year period. The *Omaha World Herald* reported (“Tax incentives...” 2006) that developers had applied for tax increment financing in excess of \$13 million on a proposed condominium conversion project in the Omaha downtown riverfront area. Developers reported that the development would not succeed without TIF assistance on the estimated \$87 million dollar project.

The maturity of the niche condominium financing market has also facilitated the willingness of Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation) to approve financing for condominium projects in advance, allowing more flexibility for lenders in that market and also assuring buyers that financing will be available for a subsequent purchaser of their unit in the resale market.

SUPPLYING CONDOMINIUM IN A DYNAMIC MARKET

As noted earlier, the condominium market has had a brief and checkered history. The initial development surge in the early 1970s was stymied by the recession of 1973–74, which dried up demand. In the 1980s, the market was affected by high interest rates and an abrupt change in federal tax law in 1986, which reduced tax shelter benefits in the investment real estate sector, with an attendant drop in investment values. The favorable economic climate at the end of the 1990s and continuing into the mid-2000s resulted in a convergence of highly competitive financing terms with low interest rates, and investors fled from low and unstable stock market returns by deploying capital into real estate, as returns there continued to outperform other investment opportunities. In this environment, where capital can be overcommitted, but also withdrawn rapidly as alternative investments become more profitable, developers must constantly monitor market conditions to remain profitable and avoid building into oversupplied markets. That is to say, increasing supply requires planning in the longer run and may be difficult to match up with anticipated demand. Demand in the condominium market can change dramatically, because of the elective nature of the market—whether it is the buyer who is downsizing from existing ownership (but unable to sell a current residence) or those in the market for a recreational home. Similarly, the first-time entry-level buyer who is evaluating the buy-or-continue-to-rent decision can opt out of the market as comparative cost considerations

change. In anticipation of the possibility of rapidly changing market conditions, experienced developers of multifamily units position their developments so the units can be marketed, as conditions merit, either as condominiums or as standard rental apartment projects. For example, although more than 350,000 new multifamily units were started in 2005 (as shown in Table 2), only a small net increase of apartment units was recorded, because many of these units were marketed as condominiums or existing apartment complexes were converted to condominiums.

EXPANDING MARKETS: DEVELOPING OPPORTUNITIES

Condominium development and conversion is a phenomenon that has transcended markets in cities of all sizes—top-tier to secondary and tertiary locations. Based on past demand trends, successful markets continue to be located in areas with household formation in the 25–29 age group who are looking for alternatives to renting. Similarly, the retiring baby-boomer generation will be increasingly demanding retirement- and second homes. Moreover, densely populated urban areas with continued population, income and job growth should sustain and grow the condominium market.

Other economic and financial factors also influence market demand. The ability to market condominiums on a national scale has been greatly facilitated by the Internet. Websites such as *AffordableCondos.com* provide national exposure with little added marketing expense (Gonzalez 2007). Another major factor is the ability to maintain a price spread between single-family detached housing and comparable condominium units. Except for units in recreational areas, average condominium prices usually fall below average prices for single-family detached housing. The total cost of condominium ownership may be higher than generally understood when the added mandatory expense of the monthly homeowner association fee is considered. The mandatory monthly HOA fee represents a fixed cost that is a legally binding obligation, subject to being increased as cost considerations change, and foreclosed upon via lien status on the individual unit, if not paid when due. For example, a HOA obligation of \$3,000 per year is the equivalent of paying \$50,000 more (in perpetuity) for the unit at a capitalization rate of 6%.

SUMMARY AND CONCLUDING ANALYSIS

From an inauspicious beginning in the early 1960s, the condominium market has matured as a solid component of the single-family housing market. Condominium development continues to serve and expand in a variety of markets. Cit-

ies that are revitalizing older areas near employment provide opportunities for establishment of high-density condominiums, allowing for cession and adaptive reuse of areas where land must be utilized intensively (as opposed to extensively in the suburban areas), due to limited availability and high cost considerations.

In mature suburban areas, condominium development opportunities will be available due to demographic changes as households age and elect to downsize their housing needs, while simultaneously reducing some of the demands of maintenance and repair. In these lower density areas the condominium form of ownership should continue to be applied to townhouse and villa developments.

The overall housing market and the condominium segment in particular are not without risk, however, to planners, financiers, developers and unit purchasers. The market risks of potentially escalating interest rates and credit tightening is ever present in an era that has benefited from near term historically low interest rates for an extended period of time.

Secondly, developers tend to respond to favorable anticipated housing demand by increasing supply, which often results in overbuilding and excessive inventories. For example, the Omaha Metropolitan Area has had a heightened interest in, followed by development of, numerous condominium projects in the downtown riverfront area. Projects currently under construction and those proposed for development in the near term in the downtown area would create in excess of a five-year supply at recent annual sales rates (“Home Sales Wane...” 2006; “West Omaha...” 2006; Sindt and Shultz 2006). The excess supply problem is solved in the short run by delaying conversion of existing apartments to condominiums, converting potential new condominium development projects into apartment projects and delaying the development of recently permitted new projects.

The condominium market is a market in transition. According to the U.S. Bureau of the Census, the population of the United States exceeds 300 million and will grow to over 400 million in the next 20 years. Increasingly, the population tends to gravitate toward large cities to gain the benefit of jobs and other opportunities. This continued shift and growth in population who will need affordable housing may accelerate the importance of condominium development, and take this segment from niche status to mainstream market.

REFERENCES

- Bajaj, Vikas. 2007. Buyers scarce, many condos are for rent. *New York Times*, January 16.
- Gonzalez, Hemley. Realtors and buyers of condominiums priced under \$1,000,000. <http://www.affordblecondos.com>.
- Hoffman, Michelle. 2006. Niche marketing: Finding success in the condo craze. *Realtor Magazine Online*. <http://www.realtor.org/rmomag.NSF/pages/Feat2200602?OpenDocument>.
- Molony, Walter. 2006. Home sales in 2006 to be slower but sustainable. *National Association of Realtors*, under “Current News Releases.” <http://www.realtor.org/publicaffairsweb.nsf/>.
- National Association of Home Builders. 2005. *Housing facts, figures and trends*. Washington, DC.
- Omaha World Herald*. 2006. Tax incentives OK’d for condos. March 8.
- . 2006. Home sales wane in most of market. October 17.
- Real Estate Forum*. 2006. Will the condo conversion market stay afloat? March.
- September existing-home sales ease, setting stage for stable market. 2006. *National Association of Realtors*, under “News Release.” <http://realtor.org>.
- Sindt, R., D. Nielsen, and C. Decker. 2004. Affordable lending policies and other factors affecting homeownership in the Midwest. *Regional Business Review* 23:40–51.
- Sindt, R., and S. Shultz. 2006. Market segmentation: the Omaha condominium market. *Nebraska economics and business association* 11.
- Sindt, R., and P. Wilborn. 1979. Factors affecting condominium construction and conversion: The Houston experience. *The mid-year meetings of the American Real Estate and Urban Economics Association*: 34.
- U.S. Bureau of the Census. *American Housing Survey for the United States: 2003*. Table 2.1, “Introductory characteristics—Occupied Units.” Washington, DC.
- Wall Street Journal*. 2006. Clouds over condos. February 10.
- West Omaha 2005–2006 trend analysis. 2006. Mitchell and Associates. August.

An Analysis of State Income Tax Instruction Readability for the Midwest Region

Frank R. Urbancic

University of South Alabama

Ko Hsu

University of South Alabama

One of the most important sources of tax revenue for many state governments is the tax on individual income. Prior to 1920 state income taxation existed in only 12 states (Penniman 1980), but by 1958, 28 states had established an individual income tax. Today, 41 states impose an individual income tax. The increase in the number of states that have individual income tax laws highlights the significance of this revenue source for government budgets, and accordingly underscores the importance of taxpayer compliance with the laws.

The laws for state income taxation are based on a self-assessment tax reporting system, and it is on this system that the fiscal health of state governments is largely dependent. Revenue in a self-assessed tax system is determined from the information declared by the taxpayer on an annual return. State taxation agencies facilitate taxpayer compliance by furnishing individuals with the necessary forms and instruction booklets needed to prepare the self-assessed tax return. The degree of taxpayer compliance with the self-assessment process, however, is in part a function of whether the tax instructions are readable. The purpose of this study is to measure the readability of income tax instructions for states in the Midwest. The study presents individual comparisons of the readability levels between states within the Midwest, and an aggregate comparison of the Midwestern region to other regions of the U.S., based on the readability of tax instructions for 2005, along with a longitudinal comparison of the readability for state tax instructions in 1990 and 2005.

The remainder of this paper is organized in four sections, as follows: related research, methodology, results, and concluding comments. For this study the delineation of regions (Midwest, Northeast, South, and West) corresponds to the classifications of the U.S. Census Bureau. Therefore, the Midwest region includes Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. South Dakota is not included in the study, however, because the state does not tax individual income.

RELATED RESEARCH

Readability is a prerequisite for understandability. Assessments of readability are often accomplished through the use of formulas. A formula consists of factors that influence the ease of comprehending written communication, and as such, it provides a quantitative approach to the measurement of reading difficulty. Readability has been extensively studied in a number of different disciplines, including accounting. An accounting literature review of readability research by Jones and Shoemaker (1994) identified and compared 32 studies, and included an observation that computer software had been incorporated to facilitate the analysis of data in only four of the studies. In years since that study, accounting readability research continues but has made increasingly greater use of specialized software, and, in particular, according to Montondon and Marsh (2005) and Reinstein and Houston (2004), the studies rely on the Readability Calculations Plus program developed by Micro Power & Light. Readability Calculations Plus is a Windows/Macintosh-based reading assessment program that can be applied to analyze text and indicate the reading level of material, using up to nine different readability formulas.

Several of the formulas provided by Readability Calculations Plus are appropriate for an assessment of elementary or secondary school materials, but these formulas would not be suitable for an analysis of tax instruction readability. Therefore, in Readability Calculations Plus the two most relevant formulas for determining the readability of income tax material intended for adults are the Fog Index and the Flesch Reading Ease Score. The Fog Index is suited for assessments of business publications and is widely used in the health care and insurance industries. The Fog Index number represents a grade level for reading. For example, a Fog of 16 indicates that a reader would need a baccalaureate college degree to comprehend the material (see Appendix 1). When preparing adult text material on the basis of Fog, it is generally recommended that a technical publication should not score higher than 14, nor should a general business publication score higher than 12. An alternative approach, the Flesch Reading

Ease formula, is designed for an assessment of adult materials and shows scores on a scale between 100 and 0 as representation for very easy to very difficult to read (see Appendix 1). A Flesch score of 65 is generally held to correspond with a 'Plain English' style of writing.

Although an abundance of previously published studies have applied readability assessments to various areas of accounting, rarely has the research concerned the readability of state tax instruction materials. A study by Urbancic (1994) reports the results of an analysis of state tax instruction readability for individual income taxes based on a comparison of the 1990 instruction booklets used by states in the Midwest. The study incorporates a manual application of the Fog Index and Flesch Reading Ease formulas. Results showed that the readability of individual tax instruction materials ranged from difficult to very difficult, and that this reading difficulty had the potential to affect compliance with state tax laws in the Midwest unfavorably. More than a decade has passed since that analysis of 1990, and changes in state income tax laws have likely occurred since then. The corresponding revisions to the instruction booklets would render previously reported assessments of readability out of date. Therefore, the purpose of the current study is to expand upon the work of Urbancic (1994) by providing an assessment measure for the readability of tax instructions used by states in the Midwest for 2005. The current study presents individual comparisons of the readability levels between states within the Midwest, and an aggregate comparison of the Midwest region to other regions of the U.S., based on the readability of tax instructions for 2005. The study also provides a longitudinal comparison of the readability measurements for state income tax instructions used in 1990 and 2005.

METHODOLOGY

Readability assessments made in this study are based on the Fog Index and Flesch Reading Ease formula. Both of these measurement methods are suited to an assessment of text materials that are intended for adults, such as income tax instruction booklets. The Fog Index is based on average sentence length and the percentage of polysyllabic words (i.e., words having three or more syllables) as follows: $\text{Fog Index} = .40 \times \text{sentence length} + \text{percentage of polysyllabic words}$. The Fog Index, so determined, represents the approximate educational level required for comprehension of the material tested. The educational level corresponds to material about which people at that level can give nine out of ten correct answers on questions from the tested material. The Flesch formula is based on a combination of average sentence length and word length (i.e., the

average number of syllables per word). These factors are used to determine readability as follows: Reading Ease = $206.835 - .846 \text{ word length} - 1.015 \text{ sentence length}$. Scales for interpreting the readability scores for the study are presented in Appendix 1.

Data for the study consists of the 2005 individual income tax instructions, which are available online. Three test samples of instructions (excluding forms, schedules, charts and tables) were analyzed for each state and reported results are based on averages of the samples. All of the readability measurements were made by processing the data with Readability Calculations Plus software, to determine the Fog Index and the Flesch Reading Ease scores by state.

RESULTS

Assessments of the readability of income tax instructions based on the Fog Index are presented in Appendix 2. As discussed in the section on methodology, the Fog Index represents the educational level required for comprehension of the material tested. Therefore, to provide a framework for comparison of the Fog scores, Appendix 2 includes information about the actual education attainment levels for adults in the U.S., as reported by the Census Bureau (2003). As shown, Illinois has the most readable income tax instructions among states in the Midwest, and its Fog grade level of 12.4 compares favorably to the education attainment level of the adult population in Illinois (81.4 percent of those aged 25 years and over have a high school diploma or higher). Most adults residing in Illinois should be capable of reading income tax booklets with a reasonable understanding of the instructions. After Illinois, the most readable tax instructions are provided by Wisconsin, Michigan, and Iowa, with Fog readability scores of 13.4, 14.1 and 14.2 respectively. By contrast, the instructions for Nebraska are the least readable and its high Fog grade level of 17.1 does not compare favorably to the education attainment level of the adult population in Nebraska—only 7.3 percent of those aged 25 years have a graduate degree. In addition to Nebraska, other states with difficult-to-read tax instructions include Kansas (16.9), Ohio (16.7), Minnesota (16.6) and Missouri (16.6). Particularly in the states of Ohio and Missouri, the necessary reading levels compare unfavorably to the educational attainment levels, since more than half of adults in these states, 53.1 and 51.4 percent respectively, have not gone beyond a high school education. As discussed earlier, adult technical publications should not have a Fog score higher than 14. However, all Midwest states except Illinois and Wisconsin have scores in excess of 14, whereas the Census Bureau reports that 48.9 percent of adults in the Midwest have never attended a college.

Readability assessments of income tax instructions based on the Flesch Reading Ease Formula are presented in Appendix 3. Similar to the Fog results, the appendix indicates that the instructions for Illinois are rated the most readable among states in the Midwest (Flesch score of 58.3). By contrast, the least readable instructions are those of Minnesota (39.7), Nebraska (42.0) and Missouri (42.7). Based on the interpretation scales applicable for Flesch Reading Ease, tax instructions for five states are rated fairly difficult and instructions for six states are rated difficult. In the earlier study, Urbancic (1994) reported that no state was rated fairly difficult, whereas seven states were difficult and four states were very difficult. Despite the apparent improvement, the Flesch readability score interpretations reported in Appendix 3 taken jointly indicate that all of the state income tax instruction booklets are challenging to read. In other words, the finding is not a matter of whether or not the instructions are difficult to read, but rather a matter of the level or degree of difficulty encountered by a reader of the instructions.

The preceding results acknowledge that state income tax instructions are difficult to read, but has there been progress in reducing the degree of difficulty? Appendix 4 provides a longitudinal comparison of the readability scores for 2005 and 1990 for states in the Midwest. The Fog and Flesch scores for 1990 are from the earlier study (Urbancic 1994). The results for the Midwest indicate almost no difference for the Fog Index from 15.1 in 1990 to 15.3 in 2005, but a noticeable improvement for Flesch from 39.0 in 1990 to 49.6 in 2005. On the basis of individual state results for the Fog Index reported in Panel 4a of Appendix 4, Iowa (17.44%) and North Dakota (13.66%) have achieved the greatest improvements in the readability of tax instructions between 1990 and 2005, whereas smaller improvements were achieved by Wisconsin (11.84%), Ohio (9.73%), and Illinois (.80%). By contrast, readability decreased among the other states of the Midwest, with the greatest decreases in Indiana (33.33%), Nebraska (26.67%) and Kansas (24.26%). However, though the 2005 tax instructions for Indiana decreased from the previous readability grade of 11.1 in 1990, at a reading grade of 14.1 the 2005 instructions for Indiana are better than the average of 15.3 for the Midwest region.

Indications of readability improvement, presented in Panel 4b of Appendix 4 for the Flesch Reading Ease formula, are observed for all states in the Midwest except Minnesota and Nebraska, which declined by only 9.98 and 4.98 percent, respectively. Nevertheless, the instructions for both of these states are classified as difficult to read for 1990 and 2005. Among the nine states that show read-

ability improvements from 1990 to 2005, Iowa (111.11%) and North Dakota (70.07%) demonstrate the greatest improvement. The results presented in Panel 4b show that an additional four states, Illinois, Indiana, Michigan and Wisconsin, also exhibit improvements in the readability of instructions, from difficult in 1990 to fairly difficult in 2005.

The aforementioned readability improvements have been accomplished through the efforts of state tax agencies to revise the instructions annually. Although many revisions are written to reflect new tax laws, other revisions are implemented for the purpose of improved readability and reflect the general legislative movement toward “Plain English” at both the state and federal levels of government in the United States. According to Giles and Still (2005) government agencies as diverse as those responsible for the nation’s defense and those responsible for the nation’s health require that their materials adhere to a measure of readability, according to a scale that assigns a reading grade level.

Appendix 5 provides a comparison of the readability scores of income tax instructions for states in the Midwest with the averages in each of the other three U.S. regions, as defined by the Census Bureau. According to the results presented in Appendix 5, the readability scores of the Midwest region (15.3 Fog and 49.6 Flesch) are inferior to scores for the states in the West (13.9 and 53.5), Northeast (14.3 and 52.4) and for Fog Index (15.0) the South. Thus, despite the Census Bureau report that the Midwest region has more adults completing high school (83.5%) than any of the other three regions of the U.S., nearly half the adult population in the Midwest has never attended a college and would be more likely to encounter difficulties in understanding the tax instructions for states in the region.

Further research should continue to explore the utility of state income tax instructions. It would be useful to determine the actual extent to which taxpayers of different educational attainment levels and of various income levels prefer to rely on tax preparation service providers as opposed to reading the instructions themselves. Perhaps such research may find that income level, much more so than education level, is a major factor. For example, both low and high income individuals may, for different reasons, tend to rely on a service provider, whereas middle income individuals might be more inclined to prepare their own tax return. Another area for further research might consider alternative methods for studying tax instruction readability and comprehension. In the case of readability, as an alternative to the application of formulas, a taxpayer experiment could

be designed based on the Cloze Procedure (an objective technique for measuring communication effectiveness, based on ability to complete text by filling in missing items). Finally, a more direct approach for examining the understandability of tax instructions may consist of the development and administration of a test for assessing taxpayer comprehension with respect to a set of common tax issues.

CONCLUDING COMMENTS

This study reports on a readability assessment for individual income tax instructions among states in the Midwest. The results find that, to various degrees, improvements in the readability of instruction booklets have been achieved by several states. The results also indicate an improvement in the readability of instructions between 1990 and 2005 for the Midwest as a region. The instructions for states in the Midwest region are more difficult to read, however, than those of states in other regions. The 2005 tax instructions have a readability grade level of 15.3, whereas the Census Bureau (2003) reports that 48.9 percent of the adult population in the Midwest has never attended college. This remains a significant problem, because tax instruction materials are primarily intended for use by the general population that earns income under each state's jurisdiction. The difficulty encountered in attempting to understand tax instructions places many taxpayers at risk of penalties for making errors in their self-assessed returns, or may compel them to incur a fee and obtain professional assistance in preparing the return. This fee in effect becomes a further cost added to the tax burden itself, and unfairly targets a segment of the adult population based on education.

Providing the taxpayer with the necessary information to determine individual income tax correctly is the responsibility of state tax agencies. Since the instructions bear in part on issues of enforcement and taxpayer compliance, tax agencies have an incentive to develop instructions that are appropriate to the reading skills of the taxpayer. Toward meeting this responsibility, tax agencies should minimize the use of technical words, specialized terms and lengthy sentences. This can be done by replacing long, unfamiliar words with equivalent terms that are more conventional. Also, when technical terms are necessary, they should be accompanied by adequate explanations. State income taxation laws are based on a self-assessment reporting process. For this reason, it is the responsibility of state tax agencies to make concerted efforts toward writing instructions that are more readable. Such efforts can improve tax return accuracy and thereby enhance the amount of revenue generated for states by income taxes. Also, the amount of state resource expenditures necessitated for agency follow-up procedures on taxpayer errors can be reduced.

REFERENCES

- Giles, T. D., and B. Still. 2005. A syntactic approach to readability. *Journal of Technical Writing and Communication* 35, no. 1:47–70.
- Jones, M. J., and P. A. Shoemaker. 1994. Accounting narratives: A review of empirical studies of content and readability. *Journal of Accounting Literature* 13, no. 1:142–184.
- Montondon, L. G., and T. L. Marsh. 2005. How readable are those financial reports? *Journal of Government Financial Management* 54, no. 1:52–56.
- Penniman, C. 1980. *State income taxation*. Baltimore: John Hopkins University Press.
- Reinstein, A., and M. Houston. 2004. Using the securities exchange commission's plain English guidelines to improve accounting students' writing skills. *Journal of Accounting Education* 22, no. 1:53–67.
- Urbancic, F. R. 1994. A readability analysis of the taxation instructions provided by Midwestern states. *Midwestern Journal of Business and Economics* 8, no. 3:63–72.
- U.S. Department of Commerce. *Educational attainment: 2000*. Washington D.C.

Appendix 1

Scales for the Interpretation of Readability Scores

Fog Index

<u>Readability Scores</u>	<u>Equivalent Education Level</u>
17	College, graduate
16	College senior
15	College junior
14	College sophomore
13	College freshman
12	12 th grade
11	11 th grade
10	10 th grade
9	9 th grade
8	8 th grade
7	7 th grade
6	6 th grade

Flesch

<u>Readability Scores</u>	<u>Description of Readability</u>
0 to 30	Very difficult
30 to 50	Difficult
50 to 60	Fairly difficult
60 to 70	Standard
70 to 80	Fairly easy
80 to 90	Easy
90 to 100	Very easy

Appendix 2

A Comparison of Educational Attainment and the Readability of Income Tax Instructions for States in the Midwest

Percentage of the Population Aged 25 Years and Over Per U.S. Census

State	Fog Readability Score	Graduate Degree	Bachelor's Degree	Some College	High School Diploma	Less Than High School Diploma
Illinois	12.4	9.5	16.6	27.6	27.7	18.6
Indiana	14.8	7.2	12.2	25.5	37.2	17.9
Iowa	14.2	6.5	14.7	28.8	36.1	13.9
Kansas	16.9	8.7	17.1	30.4	29.8	14.0
Michigan	14.1	8.1	13.7	30.3	31.3	16.6
Minnesota	16.6	8.3	19.1	31.7	28.8	12.1
Missouri	16.6	7.6	14.0	27.0	32.7	18.7
Nebraska	17.1	7.3	16.4	31.6	31.3	13.4
North Dakota	15.8	5.5	16.5	34.0	27.9	16.1
Ohio	16.7	7.4	13.7	25.8	36.1	17.0
Wisconsin	13.4	7.2	15.2	28.1	34.6	14.9

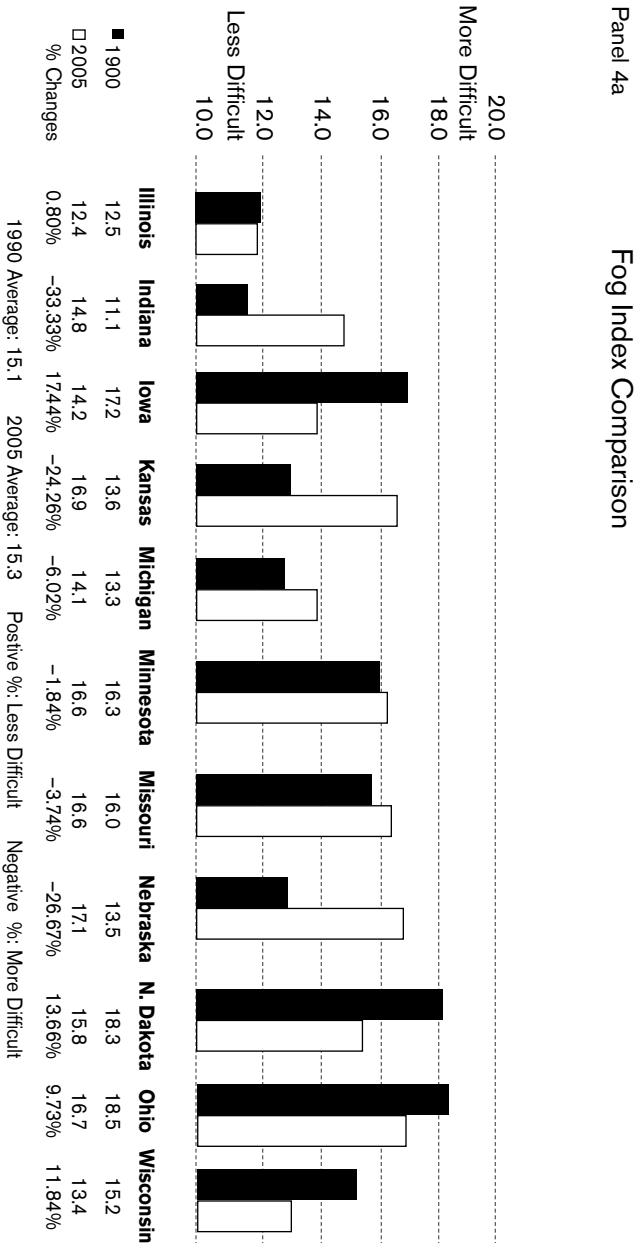
Appendix 3

Readability Assessments of Income Tax Instructions for States in the Midwest

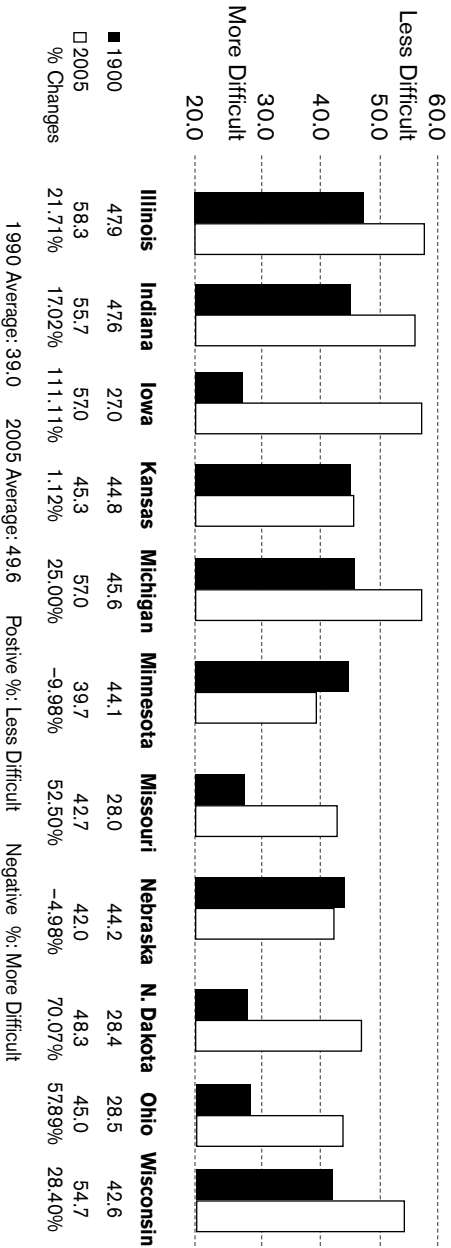
State	Flesch	Description of Readability
Illinois	58.3	Fairly Difficult
Indiana	55.7	Fairly Difficult
Iowa	57.0	Fairly Difficult
Kansas	45.3	Difficult
Michigan	57.0	Fairly Difficult
Minnesota	39.7	Difficult
Missouri	42.7	Difficult
Nebraska	42.0	Difficult
North Dakota	48.3	Difficult
Ohio	45.0	Difficult
Wisconsin	54.7	Fairly Difficult

Appendix 4

A Longitudinal Comparison of the Readability of Income Tax Instructions for States in the Midwest



Panel 4b Flesch Reading Ease Score Comparison



Appendix 5
A Comparison of the Readability of
State Income Tax Instructions by Regions

Region	Fog	Flesch
Midwest	15.3	49.6
Northeast	14.3	52.4
South	15.0	46.9
West	13.9	53.5

Loss-Aversion and Break-Even Effects Across Gender Groups

Alan Wong

Indiana University Southeast

Jay White

Indiana University Southeast

INTRODUCTION AND LITERATURE REVIEW

A risk dimension, referred to as sentiment-based risk, can have profound and persistent effects on security valuations, and can lead to erroneous investment decisions by individual investors. Therefore, a better understanding of the psychology of economic decisions would benefit all groups involved, by allowing them to avoid, or at least recognize, the sentiment-based risk component of a decision. This research attempts to build upon our understanding of this area by examining two phenomena: loss aversion and break-even, which are discussed in detail in the next section. The regret concept is also discussed, because it is used to explain the break-even behavior observed in this study.

Loss Aversion

Loss aversion refers to a phenomenon where a person feels a loss more strongly than a similar amount of gain. The disutility (or decline of utility) of a loss exceeds the utility of a similar amount of gain. Paul Samuelson (1963) demonstrated the phenomenon well when he made an offer to one of his colleagues: “Flip a coin. Heads—I pay you \$200. Tails—you pay \$100.” Samuelson’s colleague turned down this wager. Samuelson’s colleague reasoned “he would feel the \$100 loss more than the \$200 gain.” Was Samuelson’s colleague acting irrationally? According to the standard expected utility theory, a rational individual should take the bet because the expected utility of the bet is \$50. The expected utility theory assumes, however, that economic decisions are purely

based on cold logic, and sentiment plays no role in the decision-making process. Empirical studies have estimated that people generally weigh losses about twice as strongly as gains (Tversky and Kahneman 1992). Prior losses also increase the influence of loss aversion associated with subsequent gambles (Thaler and Johnson 1990).

The loss-aversion effect may also affect the corporate world. The majority of studies indicate that acquiring firms pay too much for targets, for fear of losing to other bidders. In capital budgeting, it is also known that unit or departmental heads tend to overestimate their revenue forecasts to increase the chances of their “pet” projects receiving funding, for fear of losing to other proposals. If companies overpay for mergers and overestimate revenue forecasts for pet projects, it is quite possible that loss aversion may also play a role in other corporate financial decisions. However, it is not clear to what extent such inefficiencies might be due to the agency problem, as opposed to loss aversion.

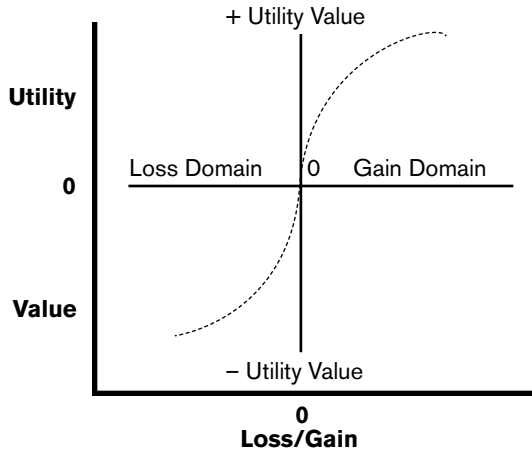
Break-Even Effect

The degree of loss aversion can also be affected by the location of an investor’s mental reference point used in making investment decisions. Consider the following example from Tversky and Kahneman (1981):

A person has lost \$140 at the race track and is considering betting \$10 on a 15:1 long shot in the last race of the day. The person’s decision can be framed as viewing the present state as a loss of \$140 and betting for the last time to return to the original reference point or to increase the loss to \$150. The person’s decision can also be framed as viewing the present state as a new reference point with a value of zero. With a shift from the original reference point to the new reference point, the bet can be framed as a gain of \$140 or a loss of \$10. The former reference point can lead a person to take more risk in an attempt to break-even on the last bet. If people do not adjust their reference point as they lose, they might take risks on the final attempt that they would normally not take.

Prospect theory, developed by Tversky and Kahneman (1981), can be used to explain the impact of reference-point location on loss aversion. The theory states that the possible outcomes of a decision can be expressed in terms of losses and gains, rather than in terms of ending wealth.

Figure 1
Prospect Theory



The utility value function in the prospect theory is generally S-shaped, as shown in Fig. 1. The value function is concave above the reference point (value of 0) but it is convex below it. Since the value function has a shape of S, a mental shift in the reference point of a decision-maker can change the utility value difference between possible outcomes. In turn, this can lead an individual to take on more or less risk than is their usual habit.

Both reference points in the above example provide an opportunity of a \$140 gain, but a gain to break even from the present state of \$140 loss would generate more utility, due to the decreasing convexity of the value function (becoming more steep) in the loss domain. A similar gain from the new reference point (framing the present state as zero value), however, would generate less utility, due to the shape of the function as it starts to become more concave from the point of zero on the value function. The bet might also lead to an additional loss of \$10, but the additional \$10 loss from the present state of \$140 loss (located further down the function in the loss domain) would generate less disutility, because of the greater convexity of the value function (becoming more flat). However, the disutility of a \$10 loss from the new reference point is greater. Individuals using the original reference point (framing the current state as \$140 loss) in the example would tend to take more risk. It tends to lead to a behavior phenomenon known as the break-even effect.

The break-even effect leads people to take unusually greater risk in the domain of losses where an outcome might offer the opportunity to break even (Thaler and Johnson 1990; Bateman and Zeithaml 1989; Fishburn and Kochenberger 1979). The break-even effect suggests that people may be hesitant to close a loss account mentally (Thaler and Johnson 1990) and shift to a new reference point. It may explain the tendency for investors to hold on to losers.

The break-even effect is also related to the concept of regret effect. Many studies have focused on actions that can lead to regret. However, inactions can also elicit regret that can affect later actions. Shefrin (2002) reports that regret associated with taking an action is usually a short-term phenomenon. In the long term, inaction is likely to produce the most regret. A deviation from a customary behavioral pattern can also elicit significant regret, which has the potential to influence later decisions, especially in a loss situation.

This paper uses a classroom experiment to investigate loss aversion and break-even effects, which have not received significant attention in the financial and economic literature. Furthermore, the literature has not looked for possible differences in those effects across various groups. Therefore, this study attempts to look for differences in loss aversion and break-even effects across gender groups. Part 2 describes the in-class experiment design and process. Part 3 presents the results, followed by a summary and conclusion in Part 4.

METHODOLOGY/EXPERIMENTAL DESIGN

The subjects for this study were 140 Indiana University Southeast students taking finance classes. The experiment was conducted near the end of the semester, so all of the students had at least some familiarity with financial markets and concepts. The experiment was not administered to all 140 students at the same time, but on a class-by-class basis. The experiment was completed in one class period.

In administering the experiment, the subjects were presented with a set of three historical returns and provided with \$100 initial wealth. There was no real money used in this experiment. The initial (imaginary) \$100 and the wealth resulting from the subjects' investment choices were used to measure investment outcomes and determine the real reward. The real reward was a number of bonus points that could be earned for a participant's particular class. A small number of bonus points could be earned by simply maintaining their wealth at \$100. More bonus points (up to three percent of the final grade) could be earned for supe-

rior investment performance. Bonus points were lost for inferior performance. No market projections or related financial and economic information, affecting return expectations or probabilities relating to the likelihood of a positive or negative return, were provided. It was intended that no external information be allowed to influence participants' investment decisions, causing possible bias in the loss-aversion and break-even results. Therefore, any investment decision would be based on the participants' own internal trading heuristics, influenced by past losses and gains. The experiment was not stretched over several class periods, so the experimenters could limit any unexpected external impact on the experiment. Doing so might introduce factors, or noises, that could complicate the measurement of participants' loss aversion and break-even effects on their trading decisions.

Table 1
Description of Simulated Markets

Period	Market 1	Market 2	
-3	7%	7%	} "Historical" returns provided prior to experiment.
-2	9%	9%	
-1	14%	14%	
1	-13%	15%	} Actual returns during experiment. Participants made an investment decision at the beginning of the period and were then provided with the period's return and their resulting ending wealth.
2	10%	14%	
3	-12%	16%	
4	20%	-17%	
5	20%	10%	
6	-8%	-14%	
7	17%	8%	
8	15%	2%	
9	-7%	-12%	
10	20%	20%	
Mean	4.2%	4.2%	

Periods in bold are trading periods relevant to the experiment.

The experiment was designed to simulate investment choices over time in two different markets. As shown in Table 1, participants were provided with identical historical streams of positive returns in both markets. The historical positive returns were meant to encourage participants in Market 1 to make a substantial investment at the beginning of Period 1, so participants would "experience" a significant initial loss. At the beginning of the experiment, Market 1 experienced three consecutive losses, followed by a turnaround in Period 4. Market 2 experienced three consecutive gains, followed by a turnaround in Period 4. All partici-

pants in a particular class invested in the same market (Market 1 or Market 2), so there was no interaction effect between Market 1 and Market 2 participants in the same class.

The participants were restricted to investing a minimum of \$1 or a maximum of their beginning wealth for any period. There were 10 investment periods and the participants were notified that the tenth investment would be their last. Participants would make an investment at the beginning of a period, after which the return would be revealed and ending wealth for that period would be computed. The participants could then make their investment decisions for the next period. The time between investment periods was a matter of minutes and participants did not know the amounts invested by their peers at the end of each period.

Although there were 10 trading periods, the focus of the experiment was on the investment amounts made by respondents in Periods 1, 2, 3, 4, 9, and 10. Because those periods were essential to the experiment, hereafter they are labeled as relevant trading periods. The non-relevant intermediate periods of 5, 6, 7, and 8 were meant to add realism to the trading simulation and also provided an arbitrary “time barrier” between testing the loss-aversion effect and the break-even effect. The returns in the intermediate periods for both markets were structured in such a way as not to create an impression of a trend. If participants in the experiment were to perceive one, the trend perceived in Market 1 should not differ from that perceived in Market 2, because the pattern of returns in those intermediate periods was similar in both markets. The pattern similarity should not contribute to any difference in results between the two markets.

RESULTS

The participants’ investment choices were examined in a number of ways. The data were examined to determine whether there were investment differences across markets between genders. Finally, we tested for break-even effects within each market.

Loss Aversion

Table 2 shows that both males and females reduced their investment amounts consecutively from Periods 2–4 in Market 1. The table also shows that males and females generally increased their investment amounts during the same trading periods in Market 2. It is not surprising to see declining investments in a declining market and increasing investments in a strengthening market. It is the extent of investment decline versus the extent of investment increase that is of interest to this experiment.

Table 2
Investment Level Differences by Gender Across Markets

		Market 1 ^a		Market 2 ^b	
		Female n = 28	Male n = 45	Female n = 34	Male n = 33
Invest1	Mean (Std Dev)	\$42.50 (27.37)	\$48.56 (26.32)	\$44.62 (20.62)	\$37.52 (31.86)
Invest2	Mean (Std Dev)	27.68* (19.15)	36.54 (23.08)	47.09* (21.47)	36.27 (31.60)
Invest3	Mean (Std Dev)	24.94* (18.01)	35.92 (25.52)	43.19* (24.94)	45.47 (36.41)
Invest4	Mean (Std Dev)	20.07* (16.34)	31.83* (23.38)	50.92* (31.80)	46.68* (41.24)
Invest5	Mean	35.77	47.67	34.38	37.15
Invest6	Mean	33.51	41.28	45.35	57.97
Invest7	Mean	28.11	44.95	44.04	52.65
Invest8	Mean	32.54	52.36	51.34	55.28
Invest9	Mean (Std Dev)	24.41 (18.58)	38.91 (36.43)	50.19 (31.35)	52.80 (36.42)
Invest10	Mean (Std Dev)	39.52 (31.27)	64.40 (40.96)	59.40 (37.72)	64.33 (40.72)
ΔINV 1 – 4		-22.43**	-16.73**	6.30	9.17
ΔINV 9, 10		15.11**	25.49**	9.21**	11.53**

^aMarket 1 began with 3 consecutive negative returns and ^bMarket 2 began with 3 consecutive positive returns. Except for mean, no statistics are provided for non-relevant trading periods (in italics) that act as time barriers. Significant differences in average investment by gender across markets across markets are represented by *. Significant differences in average investment across indicated periods are represented by (. All significance indicators are at the 0.05 level or better.

Table 2 shows that females reduced their investment by an average of \$22.43 (53%), while males reduced their investment by \$16.73 (34%) over those three trading periods in Market 1. The reductions over the Period 1 investment

amounts were found to be statistically significant. For females, the average percentage decrease in investment during the first four periods in Market 1 was about 3.8 times the corresponding increase in investment by females in Market 2. For males, the percentage decrease in investment in Market 1 was about 1.4 times the magnitude of the increase in Market 2 for the same periods, although the difference between the investments made by males in both markets was not found to be statistically significant at the .05 level in Periods 2 and 3. Participants reacted more to losses than they reacted (or did not react) to gains. The investment behavior indicates the presence of loss aversion. Past research has indicated that the pain associated with a loss is about twice the benefit felt from a gain. Although the findings indicate that loss aversion was felt across gender groups, the loss-aversion effect was stronger for females (3.8 times).

Break-Even Effect and Regret of Inaction

People tend to be risk seeking in the domain of losses where an outcome might offer the opportunity to break even (Thaler and Johnson 1990; Bateman and Zeithaml 1989; Fishburn and Kochenberger 1979). A gamble that offers a chance to break even is attractive, even if the very same gamble is deemed unattractive in situations where there are no losses to recover.

For Market 1, Table 2 shows a statistically significant increase in investment amounts across both gender groups in Period 10 (the last period). The larger increase in investment for the participants in Market 1 implies that they had “more ground to cover” with losses experienced at the beginning of the trading simulation, and hence took a larger bet. The break-even effect is evident in Market 1 across genders.

Unexpectedly for Market 2, there was also a statistically significant increase in investment in Period 10 for the participants as a whole. This is an interesting result and can likely be attributed to the break-even effect also. We would expect to see the break-even effect in the group that experienced large losses at the beginning of the experiment, but not the group that experienced gains. A regret or missed-opportunity explanation may account for this observed result. The wealth they had accumulated by the end of the ninth investment period was much less than it would have been, had they been more adventurous in earlier investments. It appears this group in Market 2 might have severely regretted their earlier inactions. This regret was apparently strong enough to entice these participants to engage in an end-game strategy similar to Market 1 participants, although not in the same magnitude.

SUMMARY AND CONCLUSIONS

This paper extends the research on loss aversion and break-even effect. We conducted an experiment on university students that required them to make a series of investment decisions under conditions of uncertainty. Evidence for the loss-aversion effect was found, with pronounced differences in the level of loss aversion between genders. Females were much more likely to display the loss-aversion effect than males.

The analysis of the final investment period indicates the presence of a break-even effect. All participants in Market 1 significantly increased their investment in Period 10. This effect was much more pronounced among females. The implication of this result is that the regret of inaction and the pain associated with missed opportunity (because of that inaction) can be as intense as the pain associated with a loss.

Implication for Long-Term Investing

Traditional economic theory assumes that we make rational and logical investment decisions; however, we are not robots. Many times, our decisions are colored by our unique sentimental structure and bias. To make better decisions, we need to understand some of the psychological factors that influence our decision-making process. For example, loss aversion can affect our investment behavior to the detriment of our long-term goals. A person who is extremely loss averse (unhealthy fear of loss) can affect his or her investment prospect in an adverse manner. The person may become too loss averse and may pull all funds out of stock in a bear market, when he or she should be doing cost-averaging investing or maintaining an asset allocation strategy. Short-term losses may be minimized, but it is done at the expense of long-term investment needs. It is easy to see investors with an unreasonable degree of loss aversion reacting to short-term market fluctuations and ending up buying high and selling low. Hopefully, this paper has provided some insights into some of the factors that help us to understand why we may behave irrationally when making investment decisions. That understanding can help us to make decisions more in tune with our long-term investment goals.

Suggestions for Future Research

In future research, it will be interesting to extend the study of loss aversion and break-even effects to groups differentiated by other factors, such as income and investment experience. Another area that could be explored is the extent of the presence of loss aversion in corporate financial decisions. Further research

could also be done using real trading data, which could minimize some possible limitations of this study, such as the short trading time for participants and the use of non-relevant periods as time barriers. It could also be interesting to stretch this experiment over several class periods, to enable the comparison between one class period and multiple class periods. A multiple-class-period experiment allows participants to discuss and strategize, possibly leading to “herding” behavior. Although each participant was initially given an imaginary amount of \$100, it is possible that the break-even effect exhibited in this experiment was caused more by speculation than the desire to break even, because no real money was involved. Moreover, grade-enhancing bonus points might have provided different degrees of incentive to different participants when they made their investment decisions. A participant with better grade might behave differently than a person with a borderline grade. An experiment involving real money should address this concern.

REFERENCES

- Bateman, T., and C. Zeithaml. 1989. The psychological context of strategic decisions: A model and convergent experimental findings. *Strategic Management Journal* 10, no. 1:59–74.
- Fishburn, P., and G. Kochenberger. 1979. Two-piece von Neumann-Morgenstern utility functions. *Decision Science* 10:503–518.
- Samuelson, P. 1963. Risk and uncertainty: A fallacy of large numbers. *Scientia* 98:108–113.
- Shefrin, Hersh. 2002. *Beyond greed and fear*. Oxford: Oxford University Press.
- Thaler, R., and E. Johnson. 1990. Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice. *Management Science* 36 (June): 643–660.
- Tversky, A., and D. Kahneman. 1981. The framing of decisions and the psychology of choice. *Science* 211, no. 4481:453–458.
- . 1992. Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty* 5, no. 4:297–323.

Book Reviews

The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good

by William Easterly

Reviewed by Ben Collier

What will 2.3 trillion dollars buy you? If it's spent on foreign aid to poor countries, the answer is, unfortunately, not much. William Easterly in his book, *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*, explores the depressing results of over five decades of "help" the West has given to poor countries. With his experience as a World Bank economist, supported by sound economic reasoning, Easterly makes the case that the traditional policies, since World War II, have simply not worked.

It is in this manner that Easterly departs from the customary approach for this type of book whereby the author outlines the miserable, oftentimes desperate, state of the less developed country while including very personal tales of squalor and poverty. Having duly impressed the reader on gravity of the situation, the writer then outlines a plan that will, once and for all, end poverty and bring these poor countries to the level of western nations. Invariably this grand development plan calls for massive aid provided by way of a top-down, highly centralized command and control process funded by the West. This is, of course, ironic since these rich western countries became rich by relying on bottom-up decentralized free markets.

Easterly calls the advocates of this traditional approach "Planners." These are individuals who, despite little knowledge of local conditions, are supremely confident that they have a universal grandiose plan to conquer all of the poor country problems. Since western nations are economically and technologically

superior it must be obvious that only a solution funded, organized and implemented by the West can cure the poor countries.

“Searchers,” on the other hand are those who believe that there can be no grand scheme to cure poverty and all of its associated problems. The best one can hope to do is to rely on local knowledge to implement narrow homegrown solutions to very specific problems. Searchers do not ask “how can we end poverty” but rather “how can we best help the poor?”

It is clear that Easterly believes too many advocates of Western aid to poor countries, even those who have advanced training in economics, forget some of the fundamental lessons of economics, among them (1) specialization promotes efficiency, (2) there should be clear lines of responsibility, (3) no one can know your preferences better than you, (4) the principal-agent problem is very much alive, (5) competition is essential, and (6) people respond to incentives.

Any quibbles I would have with this book are very minor. As an academic I would prefer that the case studies be more developed, but for the intended audience they are sufficiently complete. This is an important, well-written contribution and I would highly recommend it to anyone interested in poverty, international relations or economics. One can only hope that Western countries learn from William Easterly, Muhammad Yunus (the 2006 Nobel Peace Prize winner for pioneering microcredit), and others as to what really works in helping the poor.

Dr. Collier teaches economics classes at Northwest

The Bully of Bentonville: How the High Cost of Wal-Mart's Everyday Low Prices is Hurting America

by Anthony Bianco

Reviewed by Monica Fine

The Bully of Bentonville, by Anthony Bianco, describes both the positive and negative practices of America's largest retail operation, Wal-Mart. This company of gargantuan size continues to expand throughout America and globally with their low-price guarantee. Wal-Mart, an American tradition that began in the Ozarks, poses numerous threats to competitors and suppliers. Continuously a subject for magazines and newspaper headlines, the organization has been criticized in the past for low employee wages, failing to promote females and minorities, going to extreme measures to resist unions, and poor working conditions of overseas factories.

Bianco gives a historical view of Wal-Mart and its CEOs, from Sam Walton to Lee Scott. Even posthumously, Walton is still deeply engraved in the company culture, with contributions including his self-penned Wal-Mart cheer (which can still be heard at the beginning of each shift at your local store) and his unending search for the best practices in the industry.

American industrialists such as Huffy, the bike manufacturer, and Newell Rubbermaid, the small consumer products manufacturer, are struggling because Wal-Mart demands lower prices year after year. With their future threatened by the prospect of losing their biggest customer, Huffy, Rubbermaid, and many other suppliers have been forced to move plants overseas. Many manufacturers can't compete without taking advantage of the cost of labor in China (25 cents an hour compared to the \$13 an hour average in America). While Wal-Mart has added many jobs to the American economy (albeit low-paying jobs), it has also

outsourced many to China. This Asian powerhouse is home to 80 percent of Wal-Mart's suppliers, though not too long ago Wal-Mart heavily promoted their "Buy America" program.

Wal-Mart's tactics to resist union involvement might be the most surprising charges in Bianco's analysis. Closing profitable stores because a union vote prevailed is not uncommon for Wal-Mart. The retail giant is obsessed with delivering the lowest possible price to the customer and feels that the negotiating with a union would ruin their 'labor cost' competitive advantage.

Employee wages and benefits at Wal-Mart are also under close watch. A large class-action lawsuit is underway against Wal-Mart, charging unfair pay and near-refusal to promote women in the company. The wage gap between males and females is significant, and statistics show that male workers are promoted at a much greater rate. Another human resource concern is the large number of employees and employees' families that do not have health insurance.

To quote the book, "[Wal-Mart] tramples small business, underpays and overworks its employees, discriminates against blacks and women, fights dirty against unions, and rapes the environment." With the fast growth of Wal-Mart, many Americans have failed to slow down and look at the underlying business practices of the company. After Bianco unfolds Wal-Mart's policies and treatment of employees to the public, many customers may feel the company is going too far to achieve those "everyday low prices."

Ms. Fine teaches management classes at Northwest

The Cheating Culture: Why More Americans Are Doing Wrong to Get Ahead

by David Callahan

Reviewed by Amanda Francis

“ . . . Available evidence strongly suggests that Americans are not only cheating more in many areas but are also feeling less guilty about it (Callahan, 12-13).”

In his book, *The Cheating Culture: Why More Americans Are Doing Wrong to Get Ahead*, author David Callahan not only lays out all of the evidence but also gives big-picture solutions to the ethical dilemma. While looking at the ethical dilemmas of society as a whole, in areas from specific business professions to government, legal to political and social/cultural to academia and sports he explains how Americans have gotten so far off track. *The Cheating Culture* is a well-researched book full of examples in culture and business that demonstrate that the state of ethics is deteriorating in America. At first it seemed redundant, as Callahan proved his points over and over with one case study after another. It made the book feel longer than it should have been, but after giving it more thought, this may have been an intentional act by the author, to emphasize the gravity and frequency of cheating.

The factors Callahan determines have led to a cheating culture are the decline in civic life and increasing economic inequalities. He pinpoints four key reasons why there is more cheating: new pressures to cheat, bigger rewards for winning, increased temptation and trickle down corruption. His very broad approach of looking at ethics in America focuses the problems on economic (a strong market-focused society) and political situations.

The monumental diagnosis of the ethical state of America was followed by not-so-easy-to-implement antidotes based again on reform, primarily in poli-

tics. First, he expressed the need to have a new social contract that provides a financial safety net for Americans. Some examples include: “make work pay,” give more access to higher education, help people build wealth, and boost job security. Many of these, he states, could be solved through giving government agencies more money and power in society.

Next, in the area of creating more civic bonds, he recommends giving Americans something they can derive meaning from, creating closer societies by drawing people together, getting rid of excessive consumerism, and fostering shared moral purpose. Again he turns to politics and society to solve these issues through taxes, public policy and media. He also says there needs to be a new bottom line. Ethics programs need to be truly put in place and enforced without looking at it as a way to save or make money. Finally, he writes that integrity and ethics need to be taught not only as character development in younger grades while children’s morals are still being formed, but also in business and professional schools, to help reiterate the point to future leaders.

A lot of these solutions sound easier said than done, and some seem like recommendations of socialism, but Americans should not take offense to this book; instead they should take a good hard look at what is proven about cheating in society. The book’s intentions are not to bash the social, political and economic state of the country but to reveal how far America has stepped from good ethics and solve the problem through politics. The recommendations are not the best part of the book, but the revealed state of ethics is an amazing contribution.

Ms. Francis is an MBA student at Northwest

Think: Why Crucial Decisions Can't Be Made in the Blink of an Eye

By Michael LeGault

Reviewed by Steven B. Gilbert

In last year's centennial edition of the *Regional Business Review*, Carla Edwards penned a review on a book called *Blink: The Power of Thinking Without Thinking* by Malcolm Gladwell. In the review, Dr. Edwards correctly states that the author "adopts a precarious position" on the notion of thinking without thinking. The perfect antidote to such an ill-conceived notion is Michael LeGault's *Think: Why Crucial Decisions Can't Be Made in the Blink of an Eye*.

Following his own critical rendition of the Gladwell publication, LeGault's book garners instantaneous appeal by referring to political philosopher Allan Bloom's position on the decline of thinking in our country, in his book *The Closing of the American Mind*—called one of the ten most important books in the last fifty years by *National Review*. Although the Bloom treatise is more profound, the LeGault book is easier to read and digest. Both believe that we have hit the skids on the notion of critical thinking, although for profoundly different reasons. Bloom focuses on academia and LeGault expands the dilemma to the whole of American society.

LeGault leaves no component of our society unscathed in his assessment as to why we have taken rational thought out of our repertoire of cerebral application. There are, to be sure, political, technological, economic, and cultural explanations for deterioration in this country. One is left believing we are in this state simply because we are Americans. It is "the insidious hand of advertising that is making TV shows increasingly moronic." He also throws blame directly at our economically driven quests. Listening to bad music, the public's unwillingness to read the newspaper, and the notion that we are overloaded with too much

information contribute to our current failure to think critically. Coupled with that is our ever-increasing reliance on and indulgence in all forms of technology. He echoes James Naisbett's conclusion, in *High Tech, High Touch*, that technology is forcing us to tune out reality. Clinging to one's political ideology without examining any other perspectives, not dealing with stress realistically, focusing on fear and avoiding risks, inadequate parenting, faulty teaching and substandard textbooks also make the cut as articles of accountability for inferior critical thinking skills today.

LeGault invests a chapter illustrating, as an inspirational reminder, some of the great thinkers of the past—Newton, Einstein, Copernicus, Shakespeare, and Edison among them. Although none of the propositions of his claims for our cerebral downfall are subsidized with research methodology, he reminds us of the historical importance of basic scientific inquiry—empiricism, the scientific method, and logical reasoning.

Subjected to a favorable amount of thoughtful immersion throughout most of the book, one eagerly begs for proposed rectification of the dilemma. A return to basic standards and discipline, embracing objectivity, and healthy doses of skepticism are required to relieve this intellectual quagmire. Our concern, according to LeGault, is not that we have problems. We should, says he, be engaged in “fixing the thinking that causes problems.” Blinking is not the route to take. This elemental book should be examined by academics and practitioner alike.

Mr. Gilbert teaches management classes at Northwest

The Mystery of Capital— Why Capitalism Triumphs in the West and Fails Everywhere Else

by Hernando DeSoto

Reviewed by Brenda Jones

On November 9, 1989 the Berlin Wall fell and, as similar communist walls fell all over the world, it seemed as if the capitalist revolution was in full swing. In his book, *The Mystery of Capital*, Hernando De Soto describes why, in his view, the expected revolution has stalled. In fact, capitalism has made little progress in many former communist and developing countries and, as De Soto states in the opening line of his book, “The hour of capitalism’s greatest triumph is its hour of crisis” (1). He is convinced that the main problem is the lack of well-defined property rights in poor countries.

In an attempt to explain the impact of property rights for the success of capitalism, De Soto makes the point that capital does not equal assets. Capital is actually the potential value hidden in assets, which only becomes visible when property is well defined. He notes that the wealth in many of the underdeveloped countries is enormous, but it is held in such a way that it can’t be used to take advantage of the potential: the capital is dead. Defining assets legally on paper makes them less risky, and agents are able to build in economies of scale. Property representations can create credit and generate investment, because they are governed by rules that are enforceable nationwide.

The problem, in many of these countries, is that the process to obtain legal documentation for ownership is formidable. In De Soto’s home country of Peru, for example, the procedure to obtain legal authorization to build a house on state-owned property took six years and 11 months, requiring 207 steps in 52 government offices. Legal title for the house and land required 728 steps. De

Soto estimates that, “the extralegal sectors in the developing world account for 50 percent to 75 percent of all working people and are responsible for one-fifth to more than two-thirds of the total economic output of the Third World” (85). The obvious way to bring life back to this enormous amount of dead capital is to legalize it. For lessons on how this can be done, De Soto turns to U.S. history and the fact that squatters led American politicians and judges down the path to a system that changed American property rights into a powerful tool for creating capital. The big lesson from the American experience is that the extralegal arrangements of the citizens must be turned into formal law, so it becomes cheaper to do business legally. This has to be a bottom-up process; local arrangements of ownership and social contracts must be recognized, then integrated into a national system. There is no way to breathe life back into all the dead capital in poor countries, with systems that work from the top down.

The Mystery of Capital is worthwhile for anyone interested in the reasons that five-sixths of humanity still lives in poverty and why the capitalism revolution has not reversed this ratio. The answer is in poor countries themselves, specifically in their property, if only it can be leveraged. The hour of capitalism’s greatest triumph is going to depend on its ability to include the extralegal systems of former communist and developing countries.

Ms. Jones teaches marketing classes at Northwest

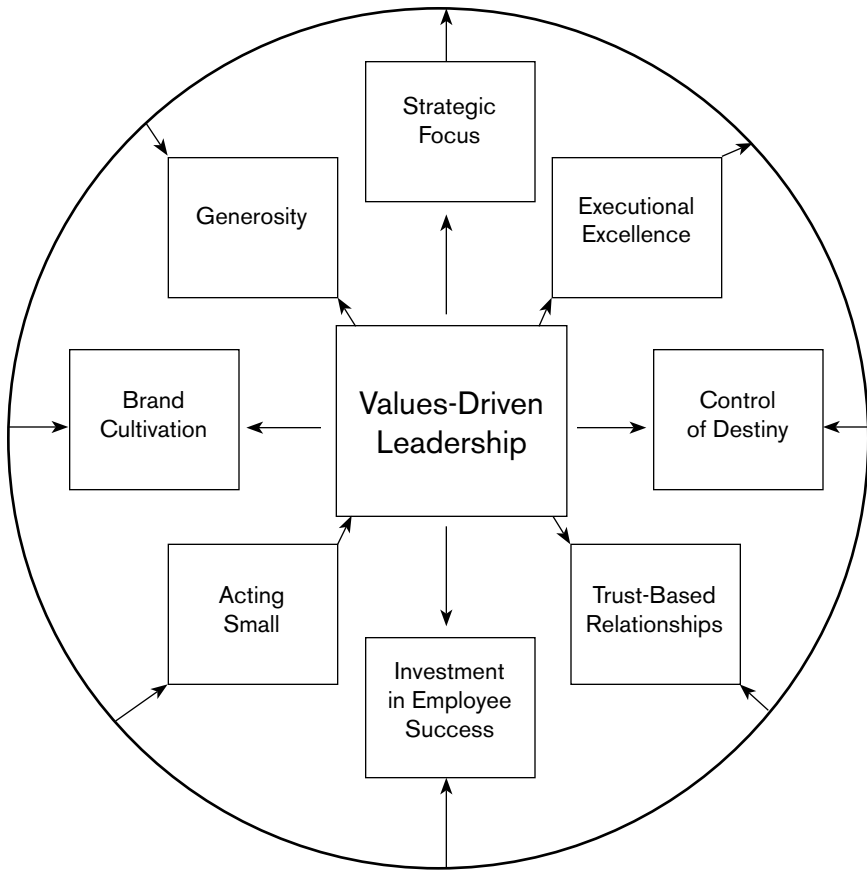
Discovering the Soul of Service

by **Leonard L. Berry**

Reviewed by Jim Walker

Discovering the Soul of Service: The Nine Drivers of Sustainable Business Success illustrates what outstanding academics do best: apply scientific thinking to business practice. Dr. Berry applies over four decades of experience in higher education to studying fourteen successful service organizations (averaging 31 years in business). His extensive work found that these disparate organizations, ranging from hotels to insurance to marketing research firms, both public and private, with revenues ranging from \$5 million to over \$7 billion, were extremely similar on the inside—on those principles that drove success. Exhibit 1 illustrates these common, underlying, sustainable success principles that are the basis of this remarkably easy-to-read book.

At the heart, or as Berry calls it “the organization’s soul”, is a values-driven leadership consisting of seven core values (excellence, joy, integrity, respect, teamwork, innovation, and social profit). Leaders express these values through their daily behavior. Leaders nurture teamwork by recruiting team players, by modeling teamwork, and by avoiding a “star” system where individuals succeed at the expense of others. From such a values-driven leadership the other eight drivers emerge. For example, both “investment in employee success” and “generosity” were common among the fourteen firms. Employee turnover, a significant problem in many service organizations, often leads firms to avoid investing in employees because they are likely to leave. Yet these successful organizations approached the situation differently: as investing in employees who will stay rather than saving on those who will leave. These organizations participate in continual learning for both personal and professional growth. The organizations were also sincerely interested in making their communities better; while many organizations donate to their communities, the focus and depth of



this desire made these leading firms stand out. “These companies are more than civic-minded, more than charitable, more than responsible. The term generosity describes them best” (216).

While all nine sustainable success drivers are detailed in the book, noteworthy for its absence is a “focus on profitability.” While these highly successful service firms (profitable 402 out of a possible 407 years in the aggregate) understand the importance of being profitable, that focus did not drive their success, but were the result. Berry puts it this way: “Hard work is not what defeats most people on the job. What defeats them is work without personal growth, without teammates, without kindness, without meaning. Service companies that care only about making money are destined for mediocrity, if not outright failure, because sustaining service performance requires encouraging employees’ hearts; a goal of making money in and of itself is not heartening” (51).

Discovering the Soul of Service offers much for today's practitioner. The overriding lesson of the book is that great service companies are humane; everyone benefits from their existence. The "soul" of a service business is not the business itself but "the human factor" and resulting work effort. "One of the principal differences between outstanding and mediocre service companies is that the former receive far more discretionary effort from employees" (13–14). Outstanding service companies are able to sustain success by having employees willing and able to give such effort. Dr. Berry's work, culminating in this award-winning book, brings uncommon insight to a business world all too often eager to settle for something much more common.

Dr. Walker teaches marketing classes at Northwest