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EDITORIAL NOTES

The fall 2008 edition of the *Journal of the Northeastern Association of Business, Economics and Technology* (*JNABET*) is the culmination of the efforts of many individuals who volunteered their time and energy to create a quality, general-interest business and economics journal that is both useful and enjoyable to read.

All manuscripts accepted for publication in this edition underwent both a double-blind review for content and a review of grammar, formatting and style. Furthermore, many manuscripts were sent back for major revisions before they were finally accepted for publication. We thank all authors for their patience with this process; it can get lengthy at times. However, we believe it is worth the extra time and effort to help produce a quality, well-written journal. The acceptance rate for this issue is 35%. This is a reflection of our reviewers' effort to increase standards, while still providing useful feedback to authors.

In the past, *JNABET* has disseminated manuscripts to referees through review board members who, in turn, located suitable referees for each manuscript. This year, the *Journal*'s co-editors have also gone directly to referees to place papers. This has helped to expedite the review process.

The *JNABET* will be listed in the next edition of Cabell's. Dr. John Walker has coordinated the review process for this edition. Dr. Kevin Roth continues with final editing, production, and distribution of the *Journal*.

After publication of the 2007 edition of *JNABET*, Dr. Leon Markowicz, of Lebanon Valley College, stepped down as Co-Editor of the *Journal*. We thank Leon for his many years of volunteer work for the *Journal*. Those involved in the *Journal* marveled at his attention to detail and dedication to producing a high-quality publication.

Finally, we thank all those individuals who submitted manuscripts for possible inclusion in this edition. We encourage all our colleagues to consider the *JNABET* as an outlet for their work.

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THE SHAREHOLDER WEALTH IMPLICATIONS OF STRIKE SIZE AND DURATION

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The authors thank William Kline for his helpful comments.

ABSTRACT

Previous studies have found that strikes, on average, have a negative impact on shareholder wealth. This study confirms those findings, and extends them by using data from individual strikes to measure the relationship between strike size and duration, and changes in the market value of the struck firm. The authors find that, while statistics on strike size and duration are widely disseminated, they have little informational value with respect to gauging the shareholder wealth effects of a strike. This finding weakens the case of those who argue in favor of outside intervention in very large and/or lengthy strikes.

INTRODUCTION

The Bureau of Labor Statistics (BLS) reports strike occurrences monthly in *Compensation and Working Conditions*. In addition to the name of the struck company and the union(s) involved, they also report the number of workers and the duration of the strike. When we look at these statistics and find very large strikes (e.g., AT&T in 1986—155,000 workers), and very long ones (e.g., General Motors in 1998—54 days), it seems obvious that these events would significantly impact the fundamentals of the struck company and thus its market value. However, can these two statistics, by themselves, tell us much about the shareholder wealth implications of the strike? We answer this question by measuring the relationship between strike duration and size and changes in shareholder wealth.

LITERATURE REVIEW

The Hicks (1966) model of strike activity suggests that there are only two parties to the negotiation, the union and the employer. According to this model, with perfect information, the two parties would agree to the Pareto optimal outcome and there would be no strike. However, in practice, strikes do occur as the result of imperfect information, bargaining errors, and misperceptions about bargaining goals. According to the Hicks model, the duration of the resulting strike is a function of the relative size of the union's demands versus the employer's willingness (and ability) to meet those demands. Thus, the duration of the strike can only be estimated using subjective judgments regarding union and employer resistance rates.

Ashenfelter and Johnson (1969) stress the "three-party nature of collective bargaining" (p. 47). They assume that there are three participants in the bargaining process (union members, union leaders, and the employer) and that divergent interests may lead to a strike. When a strike does occur, its duration is a function of union resistance and the employer's tradeoff with respect to strike costs versus the possibility of lower wage rates. Fundamentally, management is attempting to maximize the wealth of their company's shareholders.

Becker and Olson (1986) are among the first to measure the impact of strikes on shareholder wealth. Using event study methodology, they measure strike costs for a sample of firms that incurred strikes between the years 1962 and 1982. They report that the average strike during that period had a negative impact on the market value of the struck firm. In their analysis, they assume that strikes are somewhat foreseeable, and thus begin to affect shareholder wealth even before they are actually announced. In addition, they assume that the impact of a strike on the market value of a firm does not stop the moment a settlement is announced but continues while the implications of the settlement are determined. In order to account for the total impact of a strike, they sum the costs incurred during the pre-strike period (defined as 30 days prior to the announcement), during the strike, and the post-strike period (defined as 30 days after the settlement) to measure the total strike cost. They conclude that the average strike during that period had a negative impact on firm market value, costing between $72 million and $80 million in 1980 dollars.

Using the same methodology, DeFusco and Fuess (1991) measure the impact of strikes on shareholder wealth in the airline industry. They too find that strikes have a negative effect on shareholder wealth but that the percentage return is not statistically significant. Kramer and Vasconcellos (1996) find results similar to those of DeFusco and Fuess for a sample of manufacturing firms. In this paper, we calculate the change in shareholder wealth for a sample of very large strikes drawn from the period 1984-2007.

We then extend this line of research by testing whether the duration and/or size of a strike are significant indicators of the effect of the strike on shareholder wealth. While numerous empirical studies examine the influences of variables like the size of the bargaining unit (Campolieti, Hebdon, and Hyatt, 2005), age of the strike (Kennan, 1980), business conditions (Harrison and Stewart, 1989; McConnell, 1990), strike size (Harrison and Stewart 1993), and media attention (Flynn, 2000) on strike duration, we examine the effect of strike duration and size on shareholder wealth.

We find that, while statistics on duration and size are widely disseminated by the BLS and the media, they have little informational value with respect to gauging the shareholder wealth effect of a strike.

THE SAMPLE

We draw our sample from strikes chronicled by the Bureau of Labor Statistics in *Current Wage Developments* (re-titled *Compensation and Working Conditions (CWC)* in 1991). Our preliminary sample includes 104 strikes and is drawn from CWC issues from 1984 (the first year the BLS started reporting such data) through the summer of 2007.[i] The preliminary sample includes only strikes involving 5,000 or more workers.

We limit the sample to very large strikes for several reasons. First, since we are using event study methodology, it is important that the event be noteworthy enough to be a significant news event. As a result, many of the strikes in our sample were against very large companies (e.g., General Motors, General Electric, and Boeing). Second, in order for event studies to accurately measure the impact of an event, it is important that no other significant events impact the company at the same time (e.g., stock splits, mergers, and bankruptcy). While larger companies are more likely to have such events, they are also the only ones to have publicly-available news accounts to check for overlapping events.

We use *The Wall Street Journal* and *Barron's* to check for overlapping events. If we find overlapping events, the company is removed from the sample. Firms must also be publicly-traded to remain in the sample. Of the original 104 strikes in our sample, 42 are eliminated because of simultaneous events or insufficient publicly-available financial information. The remaining 62 strikes occur in 19 different years and vary in size and duration as shown in Table 1. See page 6.

METHODOLOGY

Ball and Brown (1968) and Fama, Fisher, Jensen and Roll (1969)[ii] originated event study methodology. In this paper, we use it to measure the excess return (positive or negative) attributable to a strike. The excess return equals the realized return less the expected return, given the return on the market and no release of new firm-specific information. We calculate the expected return on stock i during period t using the market model shown as Equation (1).

We estimate the market model parameters for each company over a period of 80 to 180 trading days prior to the announcement date of the strike.[iii]

$$R_{it} = a_i + b_i R_{mt} + e_{it} \quad (1)$$

where $i = 1,\ldots, n$ (company index); $t = t_a - 180,\ldots, t_a - 81$ (t_a = strike announcement date); R_{it} = return on stock i in period t; R_{mt} = return on the market (S&P 500) in period t; e_{it} = random disturbance term; and b_i = beta of stock i.

Equation (1) captures the impact of market forces on stock price changes. The estimates for parameters a and b, along with a measure of R_{mt} (e.g., the S&P 500 index), allow us to calculate the expected return for stock i, in period t, given a level of market performance and the absence of any new firm-specific information:

$$E\{(R_{it}/\text{No new firm-specific information})\} = a + bR_{mt} \quad (2)$$

Changes in R_{it} beyond those measured by this equation represent the "excess" returns (e in Equation (3) resulting from firm-specific events that are unanticipated by the market.

To measure interval effects, we calculate the cumulative excess return of each strike:

$$CER_i = \Sigma\,(e_{it}) = \sum\,(R_{it} - (a_i + b_i R_{mt})) \quad (3)$$

Using the same methodology, DeFusco and Fuess (1991) measure the impact of strikes on shareholder wealth in the airline industry. They too find that strikes have a negative effect on shareholder wealth but that the percentage return is not statistically significant. Kramer and Vasconcellos (1996) find results similar to those of DeFusco and Fuess for a sample of manufacturing firms. In this paper, we calculate the change in shareholder wealth for a sample of very large strikes drawn from the period 1984-2007.

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To measure interval effects, we calculate the cumulative excess return of each strike:

$$CER_i = \Sigma\,(e_{it}) = \sum (R_{it} - (a_i + b_i R_{mt})) \quad (3)$$

where $i = 1,\ldots, n$ (firm index) and t = an interval surrounding the announcement of the strike. Thus the cumulative excess return (*CER*) represents the cumulative cost (or benefit) accruing to the struck company solely as a result of the strike. Consistent with Becker and Olson (1986), we use the interval from thirty days prior to the strike announcement through thirty days post settlement as our measure of total strike impact.

Next, we regress the cumulative excess return of each individual strike against the number of workers involved, and the duration and size of the strike:

$$CER_i = a + b\,w_i + c\,d_i + d\,MV_{i,\,(2006)} + e \quad (4)$$

where w_i and d_i are the number of workers (in 000s) and duration (in days) of strike i, respectively. We control for firm size using the firm's market value (*MV*) on day $t-31$ and standardizing it into year 2006 dollars (in billions). The results are shown in Table 2.

Additionally, we calculate the weighted and unweighted average dollar cost of a strike as follows:

$$\frac{\sum_{i=1}^{n}(CER_i \times Value_i)}{n} \quad (5)$$

and

$$\frac{\sum_{i=1}^{n} CER_i}{n} \times \frac{\sum_{i=1}^{n} Value_i}{n} \quad (6)$$

where $Value_i$ equals the market value of firm i 31 days prior to the announcement of the strike.

RESULTS AND DISCUSSION

The cumulative average excess return (*CAR*) of our sample is −1.38%. That means that, without adjusting for inflation, the average dollar cost of a strike in our sample, for the period 1984-2007, is between $274 million (unweighted) and $465 million (weighted) for a sample of companies with an average market value of $19.8 billion. That equates to $154 million (unweighted) and $218 million (weighted) in 1980 dollars. This is consistent with the findings of Becker and Olson (1986) that strikes are, on average, costly to companies. Although our estimates are greater than Becker and Olson's, we attribute that to the fact that our sample includes only strikes involving 5,000 or more workers, whereas their sample includes strikes with as few as 1,000 workers.

We find that neither the size nor the duration of a strike is a statistically significant indicator of the shareholder wealth effects of the strike (see Table 2). Although it is not statistically significant, we find the positive sign on the coefficient for the number of workers to be of interest because it seems to contradict the commonly held belief that there is "strength in numbers." We encourage follow-up research in this area for the following reasons. First, when we examine the highest quartile of our sample in terms of size, the average *benefit* to shareholders in this quartile is 2.3% (*CER* = +2.3%) compared to an average *cost* of 2.56% (*CER* = −2.56%) for the other 47 strikes.

Table 2: Regression Results for Strike Size and Duration

Dependent Variable = CER_i (in %)	
Intercept	−0.322
Number of Workers (in 000s)	0.085 (1.25)
Duration (in days)	−0.067 (−1.53)
Market Value (2006 $s) (in billions)	−0.038 (−0.667)
Adjusted R^2	0.014
n	62

* Significant at the 0.10 level.
** Significant at the 0.05 level.
*** Significant at the 0.01 level.

Second, reviewing news accounts of the strikes in the highest size quartile reveals that in many cases the companies were the perceived winners. For example, the largest strike in the sample was against AT&T in 1986. *The Wall Street Journal* reports that "analysts generally agreed that under terms of the proposed accord, AT&T achieved its major objectives" (6/18/1986). Similarly, the third largest strike was against General Motors in 1996. *The Wall Street Journal* headline reads "GM, UAW Tentatively Settle Walkout: Firm Appears Winner on Supplier Issue." In others, management was able to exact concessions from unions in order to become more competitive. For example, the fourth largest strike in the sample was against General Motors in 1984. *The Wall Street Journal* reports that "The union is, in effect, giving up some jobs to keep the rest" (9/24/1984). In these cases, the market perceives the strike as a signal that management is serious about addressing problems with labor expenses and work rules. Management was rewarded for their actions with an increased market valuation. If we define a positive excess return as a company

victory, then for the entire sample, the company would be categorized as the winner 50% (31/62) of the time. However, the company "wins" 60% of the time (9/15) in the quartile containing the largest strikes, while the company only wins 47% (22/47) of the time across the other quartiles.

The average duration of a strike in our sample is 33.31 days. We find no statistically significant relationship between strike duration and changes in shareholder wealth (see Table 2). Even though the coefficient is not statistically significant, it is worth noting that the sign on the coefficient is negative. This indicates that long strikes may be less favorable to the company. Or, in terms of the Ashenfelter and Johnson (1969) model, as strikes drag on, it becomes more likely that the cost of the strike will exceed the benefits. This is consistent with the findings of Dinardo and Hallock (2002) that examine market reactions to strikes during the years 1925-1937 and find that longer strikes are "associated with larger negative share price reactions." Nevertheless, we caution against extrapolating too strongly from these results because of the lack of statistical significance.

CONCLUSION

We find, consistent with previous studies examining earlier periods that strikes, on average, continue to be costly to shareholders. We estimate the average cost per strike for the period 1984-2007 to be between $274 million and $465 million for a sample of very large strikes. We also find that, although widely disseminated, and oft quoted in the press, statistics regarding strike size and duration do not provide a clear picture of a strike's impact on shareholder wealth. Therefore, decision makers should not generalize regarding the duration and size of a strike and the resulting impact on shareholder wealth. This finding weakens the case of those who argue in favor of outside intervention in very large and/or lengthy strikes.

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Table 1: Sample Characteristics

Year:	Number of Strikes	Year	Number of Strikes
1984	3	1994	3
1985	9	1995	4
1986	9	1996	4
1987	2	1997	3
1988	2	1998	3
1989	6	2000	2
1990	2	2003	1
1991	1	2005	1
1992	2	2007	1
1993	4	Total	62
Industry	**Number of Strikes**		**Percent of Sample**
Auto & Truck Manufacturers	18		29%
Telecommunications	7		11%
Aircraft Manufacturing	8		13%
Airlines	6		10%
Heavy Equipment	3		5%
Shipbuilding	4		6%
Aircraft Engines & Parts	3		5%
Other	13		21%
Total	62		100%
Strike Size:			
Number of Workers (Mean)	22,650		
Number of Workers (Median)	8,200		
Strike Duration:			
Number of Days (Mean)	33.31		
Number of Days (Median)	14		

[i]We chose 1984 because that is the first year that the Bureau of Labor Statistics reports work stoppages in *Current Wage Developments*, renamed *Compensation and Working Conditions* (CWC) in 1991.

[ii]For a thorough discussion of event study methodology see chapter four of *The Econometrics of Financial Markets* by Campbell, Lo and MacKinley (1997).

[iii] The period chosen for estimation are the same as those used in Becker and Olson (1986), DeFusco and Fuess (1991), Kramer and Vasconcellos (1996), and Kramer and Hyclak (2002). We use these dates because they are well-specified and facilitate comparison of our results with theirs.

[iv]The Bureau of Labor Statistics reports the number of workers involved as "all workers made idle for one shift or longer in establishments directly involved in a stoppage. They do not account for secondary idleness as a result of material or service shortages. The number of workers idled in any stoppage represents the maximum number of workers idled during the referenced period for the work stoppage."

SERVICE LEARNING: THEORY AND APPLICATION TO MARKETING AND MANAGEMENT

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Karen L. Stewart, The Richard Stockton College of New Jersey
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ABSTRACT

As business faculty become more aware of service learning's benefits, it is hoped that more service learning will be incorporated into the curriculum. This article provides an overview of the service learning process, its ability to enhance "deep learning," and its capacity to invigorate teaching and learning. A discussion of how service learning was used to enhance the efforts of two nonprofit organizations is provided. Marketing students assisted an agency responsible for helping to improve Atlantic City's historic downtown area. Management students helped a local Girl Scout organization develop an after-school program designed to foster appreciation of Hispanic cultures.

INTRODUCTION

Over the last decade, colleges and universities have renewed their historic commitment to service. The growth of service learning on college campuses during the 1990s is a strong indicator of the emphasis colleges are now placing on civic engagement, good citizenship, and fostering campus-community partnerships (Bringle and Hatcher, 2002; Schroeder, 2003; Jacoby and Associates, 1996). On many campuses, curriculum-based service, or service learning as it is most frequently referred to, represents a growth area (Fisher, 1998).

Often this commitment to service is seen within the mission of colleges and universities where it is stated that the purpose of the institution is to educate students intellectually, morally, and for good citizenship. As part of fulfilling that aspect of the college's mission, there has been a focus on incorporating community service, often through service learning, in the coursework of many programs.

Service learning, a pedagogical technique combining academic learning with community service, offers many benefits to students, faculty, educational institutions, and the community (Klink and Athaide, 2004). One of the definitions of service learning appeared in a 1996 article by Bringle and Hatcher:

> We view service learning as a credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility. Unlike extracurricular voluntary service, service learning is a course-based service experience that produces the best outcomes when meaningful service activities are related to course material through reflection activities such as directed writings, small group discussions, and class presentations...(p. 222).

This definition makes a distinction between service learning and volunteerism and traditional practicum or internships. This distinction is important in order to understand service learning's potential to shape a positive academic/civic partnership. Students who participate in service learning provide direct community service as part of an academic course, and are expected to learn about and reflect upon the community context in which service is provided, and to understand the relationship between their service and the academic coursework.

Service learning is significant because it demonstrates reciprocity between the campus and the community, and it represents an opportunity to provide students with specific academic learning experiences. This important collaborative relationship between the college and community organizations provides each partner with mutual benefits. These benefits range from active participation in projects designed by faculty in cooperation with the community organization, designing projects which help to address community needs, involving students in civic responsibilities, and "deep-learning" in which students can apply concepts studied in the classroom to real-life situations. Almost all service learning

programs that seek to have a significant institutional as well as community impact also seek to promote faculty involvement and to establish a reliable curricular base (Schroeder, 2003; Zlotkowski, 1996, January 1).

In addition, colleges find that these collaborative relationships, developed through service learning, provide avenues for regular feedback with the community and offer opportunities to incorporate community perspectives into course or curriculum revision (Gelmon, 2000; Freeman, 2000). According to Steven Papamarcos (2002), service learning represents the most effective teaching tool available to the contemporary business professor.

Learning through Application

In the book *The Learning Paradigm College* (2003), Tagg addresses the importance of students' learning with understanding—not just having students participate in surface learning of facts without application or understanding. Learning with understanding is considered "deep learning" and a college that fosters this environment is considered a "learning-college." A learning-college encourages this deep learning experience for students by promoting intrinsically rewarding goals for students rather than focusing on extrinsic rewards such as grades; shifting the educational process from rote memory and exercises to provide continual, connected, and authentic performances for student learning; and encouraging educational activities that have students oriented to long time horizons for learning rather than focusing just on the present short-term goals of completing a course. All of these elements are part of the service learning experience for students and focus on the benefits for incorporating service learning into the curriculum.

There is a need in higher education to continue the dialogue regarding pedagogical approaches, other than traditional lectures, that may be used to engage students in learning (Schroeder, 2003). In the past thirty or forty years, traditional classroom learning has focused mostly on writing skills, computational abilities, and subject matter competence with some educators seeing student learning in those areas as the memorization of facts and the ability to restate or recall facts on standardized testing instruments. However, there are those in higher education who believe that memorization of facts, without application, is not as effective as learning that takes place when students can select the appropriate model from those they studied and modify it to fit actual situations (Papamarcos, 2002). This application of what is learned in the classroom to real-life settings is one aspect of experiential education.

David A. Kolb, along with Roger Fry, created an experiential learning model comprised of four elements: concrete experience, observation and reflection, the formation of abstract concepts, and testing in new situations. Kolb and Fry (1975) state that the learning cycle can begin at any one of the four points and that the learning process often begins with a student carrying out a particular action and then seeing the effect of the action in the situation. Through this type of experiential learning, students gain a concrete, "here-and-now" experience to test ideas and to receive feedback on their use of practice and theory that they applied (Kolb, Osland and Rubin, 1995). Service learning, the combination of service and education, is a form of experiential education.

Through experiential education students investigate possible strategic factors of a problem, identify meaningful patterns in their findings, and integrate those results into recommendations for solutions. This application of fact and theory through experiential learning provides students with opportunities where they can bring novel structure to unstructured situations, and solve problems (Papamarcos, 2002). Pedagogically, business programs often use case studies as a technique for students to apply theory and develop strategic solutions for real-world problems. Consequently, business education lends itself to incorporating experiential learning within the coursework. Instead of case studies, students would utilize service learning for the application of theory and for developing strategic solutions to real community issues and problems. This provides a beneficial partnership for the student, the college, and the community by helping to solve real-life problems.

The integration of experiential education within business curricula can be done in many courses since the activities in experiential learning blend well with, complement, and enhance academic theories and practices taught within the classroom setting. Often such pedagogical applications are provided to business students through internships and fieldwork. What differentiates the service learning experience is that it provides another advantage—it adds the element of student reflection on personal, educational, and citizenship growth—important aspects of student learning (Papamarcos, 2002).

Service Learning and Business Education

Often business educators hear criticisms about the broad tenets of business education. Some critics state that business programs produce functional specialists---experts in the area of finance, marketing or accounting, for example—instead of professionals who have a multidisciplinary background that will help them look for collaborative solutions and then implement them in socially complex environments (Cabrera, 2003; Porter and McKibbin, 1988).

Various national reports indicate that American students lag behind their counterparts globally and are not acquiring the skills and knowledge expected of them by businesses (State Higher Education Executive Officers and the Education Commission of the States, 1995; Wingspread Group on Higher Education, 1993; Secretary's Commission on Achieving Necessary Skills, 1991). Solutions to this problem include providing students with experiences that involve active learning, increasing students' involvement and engagement in learning, and increasing students' motivation and mastery of educational concepts. Service learning is effective as an active learning strategy and it is well suited to the inclusion of collaborative learning and interdisciplinary education (Gray, Ondaatje, and Zakaras, 1999).

Other critics state that business education fails to foster business students' educational breadth, especially with regard to external environmental factors. Critics also question the adequacy of business school students' preparation in the areas of ethics and social responsibility (Zlotkowski, 1996). To address these concerns, according to Porter and McKibbin (1988) in a report sponsored by the Association to Advance Collegiate Schools of Business (AACSB), business schools must deal more effectively and directly with the external social environment of business and there should be greater educational engagement with the external environment to help promote academic awareness and to increase accountability.

As part of the response to these critics' statements regarding the growing loss of business education's role in partnering with the community to help with societal needs, the service learning movement gained new stature within academic coursework. In an article by Zlotkowski (1996), it was stated that until recently the connection between the service learning movement and business education had been minimal. Likewise, Gujarathi and McQuade (2000) stated that only recently has business education begun to embrace service learning. As more colleges and universities began to recognize the strong connection between enhancing the academic experience of their students by offering students opportunities to apply their knowledge in helping to address community needs, service learning took on greater importance. This is noted by the fact that service learning is recognized as a legitimate part of business education in institutions such as the University of Michigan, the Wharton School of Business at the University of Pennsylvania, the University of Wisconsin-Madison, and Bentley College (Wittmer, 2004).

Service learning can play an important role in the business curriculum. Most noteworthy may be a response to public pressure to broaden the educational experience of business students beyond the usual corporate internships and to apply more business-like methods and solutions to social problems (Easterling and Rudell, 1997). Eyler et al. (2001) provide a comprehensive review of research linking service learning with a number of positive student outcomes: academic development that reflects mastery of discipline-based material, the ability to relate discipline-based material to the "real world," and development in the areas of problem solving, critical thinking, and cognition. In addition, students benefit by personal growth in the areas of leadership, communication, personal efficacy, and moral development. Students also develop socially. This is reflected in a reduction of stereotypical viewpoints and an increased commitment to service and social responsibility. Lastly, students gain through career development. Consequently, students enrolled in business classes benefit from having a service learning component in their coursework.

Porter and McKibbin (1988) interviewed senior managers in a variety of corporations and professional organizations. They discovered that any move by business schools toward broadening the academic experience of their students beyond the technical and functional areas would be enthusiastically endorsed by many employers.

The following sections provide background information on The Richard Stockton College of New Jersey and how service learning has been successfully implemented in two different business courses at that institution.

Experiential and Service Learning at The Richard Stockton College of New Jersey

Richard Stockton College of New Jersey is a public, liberal arts and professional studies college located in Pomona, New Jersey offering baccalaureate and masters degrees. Pomona is located 12 miles northwest of Atlantic City. According to the 2008-2010 catalog, Richard Stockton College was founded in 1969 as a 4-year college within the New Jersey system of higher education. The College's fall 2007 enrollment numbered 6,766 undergraduate, which includes freshmen, sophomores, juniors, seniors and non-matriculated students.

The College's academic community consists of the following schools: Arts and Humanities, Business, Natural Sciences and Mathematics, Professional Studies, Social and Behavioral Sciences and General Studies. In the School of Business, studies are offered in hospitality and tourism management, computer science and information systems, and in business studies with tracks in accounting, finance, management, marketing, and international business (*Richard Stockton College of New Jersey Catalog*, 2008).

Many of Stockton's degree programs offer experiential learning opportunities through internships, field study, service learning, or independent research projects. This provides students with valuable opportunities to apply the knowledge gained through their formal classroom studies. The Service Learning Office helps coordinate efforts whereby students perform needed community service at a local agency as part of the requirements for a course. In these experiences, students not only apply what is learned in class to community work, but also use what is learned in the volunteer experience to enhance understanding of course material (*Richard Stockton College of New Jersey Catalog*, 2008).

Marketing Project: A Service Learning Experience Aiding Main Street Atlantic City

In the spring 2005 semester, marketing students enrolled in the capstone course completed a preliminary marketing needs assessment for Main Street Atlantic City (MSAC). MSAC is a small division of the Main Street New Jersey Organization which is a nonprofit organization that operates under the auspices of the Department of Community Affairs to improve New Jersey's historical downtown areas through local partnerships and other available resources.

The 28 students enrolled in Strategic Marketing were divided into eight teams each consisting of three or four members. Throughout the term, students and their professor met with various members of the MSAC project in order to acquire the background information necessary to develop the needs assessment.

One team was responsible for developing a SWOT analysis and for identifying the challenges faced by MSAC. Significant challenges identified included the need for the city to provide more police protection and cleaning crews; choosing the right mix of retail stores and restaurants that would not directly compete with a nearby outlet shopping center; creating greater awareness in the Atlantic City community of MSAC's efforts in order to generate more volunteers and donors; eliminating undesirable businesses (e.g., "massage" parlors); educating store owners about the desirability of modifying the visual appearance of their stores; and the overall challenge of making the downtown Atlantic City area a desirable place to live, work, and visit.

Another team worked on target market identification. Market segmentation profiles were developed for members of the local community, nearby college students, out of towners, and families. The profiles revolved around demographic, geographic, and psychographic characteristics, as well as benefits sought and usage patterns.

Marketing objectives and strategies were developed by a third group. Short-term goals included creating buzz of what is to come, recruiting more volunteers, raising funds, creating excitement about the downtown area, physical enhancements, and bringing the community and small businesses together. Long-term objectives focused on attracting a variety of retail operations to the area, developing a bridge with other community projects in the area, creating a downtown area that would be inviting for both locals and tourists, and broadening the income and functional base of the downtown area. Strategies developed around the 4 P's of marketing (product, price, place, and promotion) provided additional guidance for members of MSAC.

A fourth team worked on developing a positioning strategy. Their approach involved interviewing customers and store owners in the area. The primary conclusion was that Atlantic City needs to reposition itself. Current perceptions are that the area is not attractive and inviting. Renovations must be undertaken to improve the overall appearance, lights must be added to provide a sense of safety, and

the area must be kept clean and look attractive. Clearly, this will take some time to accomplish.

Others worked on outlining a market research plan. The objective of this plan was to create awareness of MSAC and to find out how locals, visitors, and storeowners felt about revitalization of that part of Atlantic City. To this end recommendations were made that phone surveys, pencil and paper surveys, and focus group interviews be conducted. The students developed the questions to be asked for each respondent group and outlined how and when the research should be conducted.

An interesting suggestion made by the team working on the retailing strategy was that MSAC should be culturally themed. The three sub-cultures identified were Asian, Hispanic, and African-Americans. The recommendation was for each section to have restaurants and specialty shops in various price ranges that would reflect the ethnicity of that particular group.

MSAC is currently using the slogan, "Unlock the Possibilities." The team that was responsible for developing a promotions plan thought that this was a good slogan. Their plan to "Unlock the Possibilities" included hosting a fundraising dinner to help generate revenue for future events and to generate publicity about the activities of MSAC. They also recommended that banners or flags be hung from street poles and that stickers be placed in the windows of store shops to further generate awareness. They also suggested a car raffle giveaway event. Five names would be randomly selected from among the raffle ticket buyers. Each of those five people would then be given a key. One key would unlock the car. This promotion idea fits in nicely with the slogan currently used by MSAC.

The eighth team was charged with the task of image development and fund-raising. One concern that became apparent early on was that many merchants and local community members were not aware of the efforts currently underway by MSAC. Greater awareness is critical to the success of this organization in order for them to garner more support. Recommendations included hosting a dinner for potential investors and businesses, a block party to bring merchants and community members together, consistent use of the "Unlock the Possibilities" theme, and development of a tagline such as "Rebuilding our Past to Create a Better Future."

This service learning project was an overwhelming success. Students felt that they greatly benefited from this real-world experience. MSAC received marketing expertise that otherwise would be difficult for them to obtain. Since there was still much more work to be done, this project carried over to new groups of students in subsequent semesters.

Management Project: Festival of Hispanic Cultures—Service Learning in Urban Elementary Schools

One of the courses offered in the management track is Management Skills. Students who are juniors and seniors typically take this course as part of the requirements for their concentration in Management. The service learning experience is offered to Management Skills students as one of their options for an end-of-term project due as a requirement in the class.

During the spring semester of 2003, students enrolled in Management Skills volunteered to work on a service learning project with the Girl Scouts of the South Jersey Pines which needed assistance in developing an after school program on the appreciation of Hispanic cultures for two elementary schools: one in Atlantic City and the other in Pleasantville, both urban school districts. The purpose of the project was to increase elementary students' awareness of the significance of other cultures in our region and to help develop children's appreciation of diversity by learning more about different cultures.

As part of their work with Girl Scouts, the Management Skills students researched and developed information that could be included in the diversity component of the program, established the budget, created a strategic timeline for operating the program, and assisted with program implementation. The after-school program was developed and the team of service learning students, from the Management Skills class and the Spanish language class, presented ten sessions on Hispanic cultural awareness. A total of 60 students from both the Atlantic City and Pleasantville schools participated in the six-week program. In the program, the elementary students learned about the cultures of Colombia, S.A., Central America and Puerto Rico.

The success of this program was evident when the United Way of Atlantic County, the College, Girl Scouts, and the two school districts were lauded for their partnership in providing this after-school program for the community. The program was

mentioned by United Way as a strong example of community partnerships that make a difference in the Atlantic County community.

From this service learning experience, the Management Skills students gained experience planning and running meetings, working with community partners, working within a budget, and being responsible to deliver a program within the timeframe allocated by the schools. Above all, in the reflection paper written by the students, they indicated that they had gained a greater appreciation of community needs, of participating in a project that had a visible result in the community, and of being able to meaningfully apply the skills they learned in business classes on budgeting, strategic planning, and diversity. Through hands-on experience, students were able to apply the management theory they had learned in the classroom and were more engaged in the learning process.

SUMMARY

As stated by Easterling and Rudell (1997), service learning offers a pedagogical approach in business coursework that can invigorate the teaching/learning process while offering students an opportunity to develop problem-solving skills and integrate business theories with the practical concerns of people in need and the organizations trying to serve them. Students gain the opportunity to improve self-confidence and cultivate leadership potential, and to become engaged in an issue of social concern that may result in the beginning of lifelong involvement.

The service learning projects completed by Richard Stockton College marketing students with MSAC and by Richard Stockton College management students with Girl Scouts of the South Jersey Pines and the two urban schools are examples of campus/community partnerships that made an impact in the community and made a difference in the lives of the students. The features of these partnerships highlight the values of sharing and reciprocity, building collaborative work relationships among individuals, and building relationships with partnering organizations as well as sustaining those partnerships.

As business faculty become aware of service learning's benefits to students, to institutions and the community, more service learning experiences will be incorporated into the coursework of business programs.

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ON THE STRUCTURE OF WAGE ADJUSTMENT IN THE UNITED STATES AND PENNSYLVANIA: A PHILLIPS-TYPE WAGE MODEL ANALYSIS

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ABSTRACT

The Phillips-type model does a good job of explaining wage adjustments at both the national (U.S.) and Pennsylvania state levels. In both cases, wages exhibit the typical positive adjustment to inflationary expectations and negative adjustment to labor market forces. The *U.S. business wage* adjusts to long-run labor market forces. The *PA manufacturing wage* adjusts to short-run changes in labor market forces while the *U.S. manufacturing* wage adjusts to both effects simultaneously. The magnitude of adjustment to inflationary expectations appears to be stronger at the PA state level. When alternative demographic variables are included in the model, the effect of the unemployment rate and long-run market forces are completely captured by one of the variables in the national model, but have no effect in the PA model. This indicates that the aggregate unemployment rate might not be a very effective measure of labor market tightness, particularly for the post-1990 era.

INTRODUCTION

The history of the U.S. economy reveals that both price and wage inflation have followed a fairly predictable pattern in relation to the business cycle. They tend to increase during economic expansions, peaking slightly after the beginning of a recession, and then continue to decrease through the early stage (first or second year) of a recovery, which shows a typical negative effect of the unemployment rate on inflation suggested by the Phillips-curve model. It has been reported, however, that U.S. inflation during the post-1991 period showed a noticeably different pattern. The rates of price and wage inflation have been surprisingly low during the post-1991 period, and failed to accelerate despite strong real growth and a falling unemployment rate until the late 1990s. Lown and Rich (1997) show that the traditional Phillips curve model over predicts price inflation for the 1990s. This is partially explained by unusually low wage (compensation) growth, but the reason why growth was so low is left unanswered.

Duca (1996) also finds that wage inflation is over predicted by the basic Phillips curve model. He shows that the unusually high duration of unemployment adds more information to help explain the unexplained portion of wage inflation for the post 1991 period. Hyclak and Ohn (2001), using an adjusted-wage Phillips curve model, confirm the finding of Lown and Rich regarding the over prediction of the traditional Phillips curve model. They also confirm Duca's (1996) finding on the negative effect of unemployment duration in forecasting wage inflation during the 1990s recovery. In addition, they show that, while unemployment duration moved in tandem with the lagged unemployment rate until about the end of the 1991 recession, the post-1991 duration has been surprisingly higher and remained close to peak value until the mid-1990s. Finally, Hyclak and Ohn (2001) also demonstrate the significant role of demographic variables in explaining the unusually high unemployment duration during the post-1991 recovery. They conclude that recent changes in the labor market, such as technological change and corporate restructuring, might be expected to result in a high fraction of older workers and a longer duration of unemployment for those groups, which should have a significant negative effect on wage inflation. Blanchard and Diamond (1994) and Valletta (1997, 1998) are among those who examined the relationship between unemployment duration and wages.

While most of the studies on wage adjustment have examined national data, usually from the *Current Population Survey*, relatively little attention has been paid to wage study in regional or local labor markets in the U.S. even though many labor markets are distinctly local in character. Topel (1994) and Karoly and Klerman (1994) examine changes in earnings distribution at the regional and state level. Borjas and Ramney (1995) examine the impact of trade sensitivity on changes in the college earnings premium in a sample of metropolitan areas. In this paper, we perform a comparative analysis on the structure of wage adjustment in the U.S. and Pennsylvania. We focus on the relationship between wage inflation and price inflation expectations and

unemployment variables, using basic and adjusted Phillips-type wage models. We check if the over-prediction pattern mentioned above still exists in wage adjustment during the 2000s, and examine the structure of wage adjustment at the national non-farm business and manufacturing, and the PA state level. We also examine, quantitatively and graphically, how effectively the adjusted wage model explains and predicts actual wage adjustment.

TEST MODEL AND DATA DESCRIPTION

We examine the quarterly wage adjustment from 1975 through 2005 using a relatively simple Phillips-type wage model that follows the specification of Alogoskoufis and Smith (1991) and Hyclak and Ohn (1997, 2001). These models originated from early studies by Phillips (1954, 1958) and represent labor market forces by the lagged level and current change of the unemployment rate. They control for inflationary expectations first by the lagged price inflation and then by the expected rate of price inflation. The basic test model is:

$$\Delta w_t = \beta_0 + \beta_1 E(\Delta p_t) + \beta_2 u_{t-1} + \beta_3 \Delta u_t + e_t \quad (1)$$

where Δw_t is quarter-to-quarter wage inflation, u_{t-1} is the lagged level of unemployment, Δu_t is the current change of unemployment, and $E(\Delta p_t)$ is the price inflation expectation. In the basic model (I in table 1), the lag of actual price inflation, Δp_{t-1}, proxies for price inflation expectation, while in the adjusted models (II, III, and IV in table 1), the expected rate of GDP price inflation projected at the end of the previous period, $E(\Delta p_t)$, (from the *Survey of Professional Forecasters* at the Federal Reserve Bank of Philadelphia), is used to control for price inflation expectation. The lagged level of the unemployment rate represents *long-run* labor market forces, while the current change of the unemployment rate captures *short-run* change in labor market forces. Three alternative variables (as suggested by Duca (1996) and Hyclak and Ohn (2001)) are included to reflect recent labor market forces that may not have been fully represented by the aggregate unemployment rate—the duration of unemployment, *DUR*, the percent of adult unemployment of age 25 and older, *R25*, and the fraction of unemployed due to permanent job loss, *JOBL*. The adjusted model is:

$$\Delta w_t = \beta_0 + \beta_1 E(\Delta p_t) + \beta_2 u_{t-1} + \beta_3 \Delta u_t + \beta_4 DUR_{t-1} + \beta_5 R25_{t-1} + \beta_5 JOBL_{t-1} + e_t \quad (2)$$

The duration of unemployment is included because the longer a worker is unemployed the lower the wage the worker is willing to accept, thus lowering the reservation wage of the worker (Valetta 1997, 1998). This is particularly true for those who become unemployed as the result of skill-biased technology change and the resulting structural unemployment that this creates. The percent of adult unemployed is included because skill-biased technology change and corporate downsizing have a more serious impact on adult workers. Therefore, the higher the percent of adult unemployed, the lower the wage the workers are willing to accept. We thus expect a significant negative effect of the two alternative variables on the wage model. Including the percent of unemployed due to permanent job loss is based on the hypothesis that the higher the percent of permanent job-loss, the lower the wage that the workers are willing to accept. Again, we expect a significant negative effect for this variable.

The average of the percent of adult unemployment, *R25*, is about 64%, while it is 36% for younger unemployed workers (below age 25). On the other hand, the average of the percent of unemployed of age 55 and over is just 7.5%. While both the aggregate unemployment rate and the demographic variables are related to cyclical factors, any technology-biased change in labor market, if it is not well represented by the unemployment rate, will be likely to be captured by the three demographic variables—*R25*, *DUR*, and *JOBL*.

The wage and the unemployment data for the nation and PA used in this paper are available from the Bureau of Labor Statistics (BLS). The wage data that we use include total hourly earnings (salary and wages) for the national non-farm business and manufacturing sector, and the PA manufacturing sector. The duration of unemployment, the percent of adult unemployed of age 25 and older, and the unemployed due to permanent job loss data are available from the *Current Population Survey*. Expected price inflation is the rate of GDP price inflation reported in the *Survey of Professional Forecasters* published by the Federal Reserve Bank of Philadelphia.

ESTIMATION RESULTS

Table 1 summarizes the estimation results for the four different versions of the Phillips-type wage model. First, price inflation expectation is shown to be a very important factor in wage adjustment across all of the models and sectors. However, the effect of price inflation expectation has a stronger influence on the PA wage, suggesting that the PA wage adjusts promptly and strongly to price inflation expectations.

An important finding is that wage adjustment to price inflation expectation is explained better by directly including expected price inflation in the model, as specified in models II, III and IV rather than including lagged actual inflation like in model I. Moreover, model I does not show a typical negative adjustment to the unemployment rate. When lagged inflation is replaced with expected price inflation, the models generally show a typical negative effect of the unemployment rate, its current change, and other demographic variable(s) in the models.

The results of model II show a typical negative wage adjustment to labor market forces for all of the U.S. business, U.S. manufacturing, and PA manufacturing wages. Interestingly, however, the U.S. wage shows a significant adjustment only to the lagged unemployment rate (*long-run* market force), while the PA wage shows a strong negative adjustment only to current changes in the unemployment rate (*short-run* market force). On the other hand, the U.S. manufacturing wage shows both effects—a significant adjustment to both *long-run* market forces as shown in the national model and *short-run* market forces shown in the manufacturing sector.

Given the suggestion that the aggregate unemployment rate may not be an effective measure of labor market tightness, we test if the duration of unemployment—an alternative demographic variable—can better explain wage adjustment to *long-run* market forces in model III. The U.S. model shows that the role of the unemployment rate is completely captured by the effect of unemployment duration, while the PA wage shows no significant effect from unemployment duration, exhibiting a strong adjustment only to *short-run market forces*. Interestingly, the U.S. manufacturing sector confirms the above finding in the U.S. non-farm business sector, while showing a significant adjustment to *short-run* market forces. It appears that the effect of the unemployment rate in wage adjustment is completely captured by the effect of unemployment duration in the national models.

When three demographic variables—unemployment duration (*DUR*), the fraction of unemployed of age 25 and older (*R25*), and the percent of unemployed due to job loss (*JOBL*)—are included simultaneously in model IV, we find some interesting results. First, the effect of unemployment duration shown in model III has been captured by *R25* in the U.S. non-farm business sector and by *JOBL* in the U.S. manufacturing sector. On the other hand, the PA manufacturing sector, which did not show any significant adjustment to *long-run* market force in models I-III, shows a significant effect of *R25* in model IV. This implies that the adjustment of the PA wage to *long-run* market forces is reflected in the form of a significant adjustment to *R25*.[i]

Figure 1 illustrates the actual and fitted (predicted) wage inflation based on model I (left) and model IV (right). In summary, the over prediction pattern during the mid-1990s in the national models and during the mid-2000s in the manufacturing sectors as shown on the left figures (model I) has largely disappeared in the right figures (model IV). This indicates that the adjusted model (model IV) has significantly improved the explanatory power for both the U.S. and PA wage adjustment. However, the seasonal variations in wage inflation have been smoothed out by the adjusted model—right figures (model IV). In summary, first, it appears that the adjusted wage model with a direct measure of expected price inflation in the model fits actual wage inflation the best. Second, alternative demographic variables add to the explanatory or predictive power in the wage model, capturing the role of the aggregate unemployment rate in wage adjustment. Finally, the adjustment of the PA wage to long-run labor market forces is only revealed in the adjusted-wage model with alternative demographic variables (IV).

CONCLUSION

In this paper, we perform a comparative examination of wage adjustment to price inflation and labor market variables—the unemployment rate and three demographic variables of unemployment—for the U.S. non-farm business, U.S. manufacturing, and PA manufacturing sector, using Phillips-type models. We find that the Phillips-type models do a good job of explaining wage adjustment at both the U.S. and PA state levels. We also find a typical strong positive adjustment to price inflation expectation, with a stronger adjustment for the PA state, and a significant negative adjustment to labor market forces in all of the adjusted models. The national non-farm business sector shows a significant adjustment to *long-run* market forces and the PA manufacturing wage shows a prompt adjustment to *short-run* market forces. The U.S. manufacturing wage shows an adjustment to both the long-run and short-run market forces. When we include an alternative variable—duration of unemployment, *DUR*—in the model, the role of the aggregate unemployment rate is completely captured by that variable in the national models, while the PA state model shows no effect from it. When three

alternative labor market variables, *DUR*, *R25*, and *JOBL*, are included, we find that the role of unemployment duration is absorbed by the effect of the percent of unemployed of age 25 and over (*R*25) in the national non-farm business model, and by the effect of the fraction of unemployed due to permanent job loss (*JOBL*) in the national manufacturing model. On the other hand, the PA wage adjustment to long-run market forces, which was not found in models I-III, is now revealed in the form of a significant adjustment to the percent of unemployed of age 25 and older (*R*25). The manufacturing wage, at the national and PA state level, uniformly show significant adjustment to short-run market forces.

The comparison of actual and fitted (predicted) wage inflation shows that the over-prediction pattern during the mid-1990s in the national models and during the mid-2000s in the manufacturing sectors as shown on model I have largely disappeared in model IV. This implies that the adjusted model (model IV) has significantly improved the explanatory power at both the U.S. and PA state levels. However, the seasonal variations in wage inflation have been smoothed out and are not very well captured by the adjusted model (model IV). Expected price inflation, a direct measure of price inflation expectation, and alternative demographic variables appear to have added to the predictive power in the wage model, capturing the role of the aggregate unemployment rate in wage adjustment.

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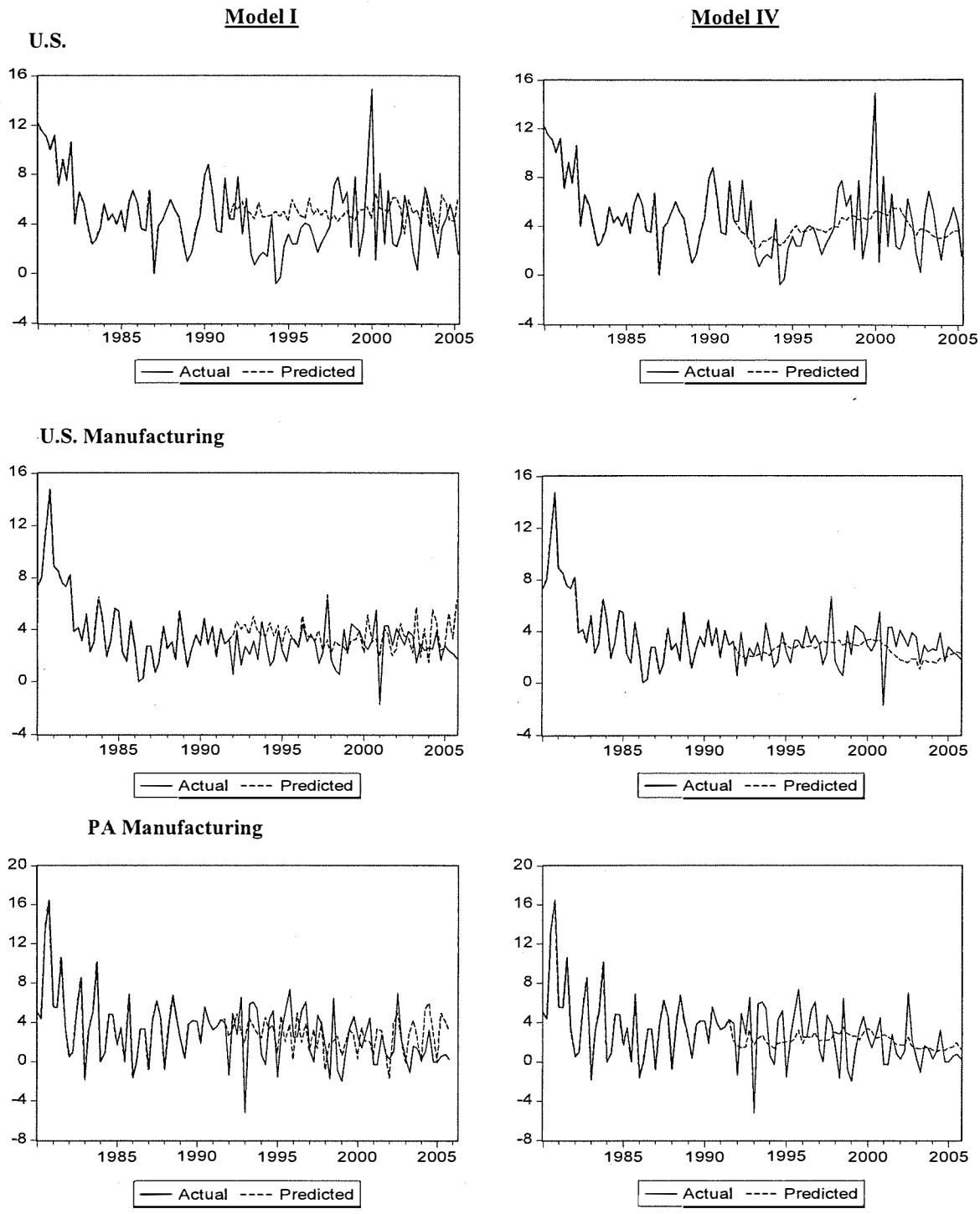
Table 1. Estimation Results on the Phillips-Type Earnings Model for the U.S. and PA, 1975-2005

	United States				U.S. Manufacturing				PA Manufacturing			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Constant	3.16**	4.27**	7.55**	1.234	0.65	2.17	5.19**	11.92*	−0.82	0.62	2.34	17.57*
	(1.03)	(1.10)	(1.51)	(3.46)	(1.00)	(0.78)	(4.59)	(4.69)	(1.10)	(1.05)	(2.47)	(7.77)
Δw_{t-1}		0.19*	0.18*	0.23*		0.38**	0.34*	0.27*		0.03	0.03	0.00
		(0.09)	(0.08)	(0.11)		(0.08)	(0.09)	(0.10)		(0.10)	(0.10)	(0.10)
$E(\Delta p_t)$[a]	0.43**	0.92**	0.76**	0.47**	0.47**	0.81**	0.57**	0.55**	0.53**	1.29**	1.16*	0.68*
	(0.06)	(0.16)	(0.17)	(0.18)	(0.06)	(0.15)	(0.20)	(0.21)	(0.08)	(0.22)	(0.28)	(0.31)
u_{t-1}	−0.08	−0.59**	−0.36	−0.24	0.29^{+}	−0.41*	−0.01	0.35	0.33^{+}	−0.32	−0.18	−0.47
	(0.16)	(0.20)	(0.23)	(0.30)	(0.16)	(0.16)	(0.18)	(0.27)	(0.20)	(0.20)	(0.26)	(0.37)
Δu_t	2.37	0.15	−0.39	−0.25	−0.46	−1.14*	−1.79**	−1.23*	−1.02	−2.12**	−2.37*	−2.06^{+}
	(0.66)	(0.80)	(0.68)	(0.74)	(0.68)	(0.57)	(0.58)	(0.61)	(0.94)	(0.96)	(1.01)	(1.17)
DUR_{t-1}			−0.26**	−0.17			−0.30**	−0.08			−0.14	0.00
			(0.10)	(0.14)			(0.10)	(0.12)			(0.18)	(0.19)
$R25_{t-1}$				−0.15*				−0.09				−0.36*
				(0.07)				(0.08)				(0.16)
$JOBL_{t-1}$				−0.22				−1.42**				0.14
				(0.60)				(0.52)				(0.14)
$Adj\text{-}R^2$	0.33	0.44	0.48	0.58	0.33	0.54	0.58	0.70	0.32	0.38	0.39	0.41

[a] $E(\Delta p_t)$ is expected price inflation based on the GDP price inflation, which is reported by the Federal Reserve Bank of Philadelphia. In Model I, however, it is the lag of actual price inflation, Δp_{t-1}, from the Bureau of Labor Statistics.

In the regression results, standard errors of the coefficients are in (parentheses). ** significant at the 1%, * significant at the 5%, $^{+}$ significant at 10%.

Figure 1. Actual[i] vs. Forecasted Wage Inflation Based on Model 1 and Model IV, 1992:Q1 – 2005:Q4



[i] The pair-wise correlation between the unemployment rate and DUR is 0.35, while it is −0.41 between unemployment and R25, which are not high enough to cause the multicollinearity issue. Also, when we apply the same model for two subsamples (pre-1992 and post-1992), it does not change the estimation results significantly.

ACADEMIC PERFORMANCE AND PUPILS' PROFILE: DOES EFFORT TRULY MATTER?

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ABSTRACT

Using a sample of students from macroeconomics and statistics classes, the findings of this paper indicate that EFFORT is the most relevant and statistically significant factor in determining student performance, whether when assessing performance by using overall grade or final test scores. EFFORT is a cumulative measure of students' dedication and involvement to the learning process throughout the semester. Predetermined performance in the form of GPA and ex-ante abilities in the form of SAT scores are relevant determinants of contemporaneous performance, but only second to effort. Policy recommendations towards an improved learning/teaching environment suggest that students that consistently commit and dedicate themselves to learning during the course indeed perform better as they develop a positive spillover effect.

INTRODUCTION

Assessing student learning through performance measures is an intricate process involving observable and non-observable elements. Determining the core components of this learning aims to identify those elements that maximize student performance from the instructor perspective. Instructors establish performance scales based on a range of observable criteria to which they assign values, ranging from exams, assignments, class participation, homework, attendance and others. In the process of assessing performance, instructors may or may not have ex-ante information about student performance history (GPA and/or SAT scores), may or may not know about specific learning styles, class standing, family background, student interests, and the like. All these factors can potentially have a significant impact on the learning outcome and in the way the instructor decides to assess it.

For instructors interested in assessing student performance, it is of particular importance to determine if current overall course learning is a direct function of contemporaneous elements, or if performance is correlated, and to what extent, to past exogenous conditions. Is learning (performance) mostly determined by what happens in the classroom and outside the classroom during this period or do students have a predetermined probability of learning (high performance) that depends on their learning history more than current class-related events? Does high GPA and high SAT scores increase the chances of receiving a higher grade, *ceteris paribus*? These are some of the questions that confront instructors when attempting to determine how to best present, deliver and evaluate material with the objective of maximizing student learning and performance.

For students, performance evaluations are exogenously given as they reflect the instructor's scale-value on what she/he believes is the core mix of concepts and skills that students must master throughout the term. Thus, it is pertinent to say that the selection of different grade scaling may result in different performance evaluations for the same student. It is also feasible to assume that if performance is to be mostly determined on preexistent conditions (GPA and/or SAT for instance), above and beyond class specific elements (EFFORT, exams, etc), then student performance would be consistently less invariant to the instructor's selection and design of the grading scale.

This study determines the relative contributions of course and student specific characteristics, both ex-ante and contemporaneous on alternative performance measures to assess learning. In particular, this study uses two different measures of performance: the final grade and the final cumulative exam. To address the relative contributions of ex-ante and contemporaneous elements of learning in each of the two performance measures, this study hypothesizes a) that student learning is affected by the predisposition to learning reflected in the cumulative GPA prior to taking the current class and the SAT scores; and b) by contemporaneous elements and in-class factors, both observables and non-observables as measured by effort, attendance, learning styles relative to reading, outside classroom elements such as work experience, and student specific characteristics, determined by learning style, class seating, and major.

The study is organized with a review of the literature, specification of the simple learning model function, data analysis and methodology. Empirical estimates are conducted under alternative scenarios and the findings are discussed. We conclude with some recommendations.

ASSESSING PERFORMANCE IN THE CLASSROOM

Student academic performance receives significant attention in the economics literature as it reflects a core issue in the teaching of economics. How do students learn economics, and how can we accurately assess students' performance? We identify two approaches addressing the issue of performance. The first approach uses final course grade as the overall measure of performance (Walstad, 2001; Natriello and McDill, 1986; Pascarella, Terezini and Hibel, 1978; Romer, 1993; Durden and Ellis, 1995; Spector and Mazzeo, 1980; Yang and Raehsler, 2005; and Borg and Shapiro, 1996; among others). Final grade is a cumulative measure of performance as it includes several grade components that are accumulated during the entire term. These components are weighted and represent different evaluations of learning at different points during the term. In the second approach, we find those that use value added measures (Siegfried and Strand, 1977) in which students are pre-tested and post-tested on an equal 25 item multiple-choice exam. These value added measures rely on the use of preconceived questions with the goal to determine the degree of preconceived knowledge entering the class, and then evaluate the additional value that the course gives to the students. This is to say that value added measures attempt to isolate the observable ex-ante knowledge from the contemporaneously acquired learning in the class. For a complete analysis on the value added measure approach see Whitney (1960).

Based on the first approach, Romer (1993) emphasizes the use of both ex-ante and contemporaneous observable elements. These include the relevance of attendance as a determinant of student learning, and the inclusion of the student's prior GPA as a measure of ability and motivation. Furthermore, Romer brings forth the hypothesis that there is a much stronger relationship between attendance and performance than there is between performance and doing assigned problem sets. Romer addresses the relationship between student performance according to grades in three tests and the fraction of lectures attended. However, Maxwell and Lopus (1994) found that the student's self-reported GPA was often higher than the official records. The authors explain that since a higher GPA may be associated to higher attendance, including GPA may "understate the true impact of attendance on performance" (p. 172).

To account for endogenous elements in the learning process, Pascarella, Terezini and Hibel (1978) discuss the relationship of student-faculty interaction settings and academic performance. In this study, frequency and quality of the student interaction with faculty is seen as a factor that contributes to student achievement. Ziegert (2000) extends this analysis to consider personality type when explaining student understanding of economics that builds on the work of Borg and Shapiro (1996). The author finds that temperament types do affect student performance in economics and acknowledges that "smaller class size and slightly higher aptitudes may allow students to adapt better to personality-based differences in teaching styles that are different from their own personality preferences" (Ziegert, p. 8).

As a measure of effort in learning, Durden and Ellis (1995) indicate that "attendance does matter for academic achievement" (p. 345). Their evidence suggests that the "effect is nonlinear, becoming more important only after a student has more than four absences during the semester." Hence, they find GPA and SAT scores to be the most important determinants of student performance in college economics courses. This is to say that ex-ante preconditions are more relevant than in-class activities. To learn economics, a minimum threshold level of aptitude is a necessary condition. Yang and Raehsler (2005) find support for Durden and Ellis's hypothesis, as they indicate that either SAT scores or GPA can explain the expected performance in intermediate microeconomics classes, along with the choice of academic major. In other words, SAT scores when used appropriately in the selection of major, should reflect the student preference and abilities to learning in alternative subjects. Romer (1993), however, finds a significant direct relationship to class size and attendance (observable contemporaneous factors) for a sample of undergraduate economics courses in three different schools, i.e., the smaller the class size the less absenteeism and the more learning.

Jensen and Owen (2003) use a measure of relative performance to determine "good students" by calculating the ratio of each student's self-reported GPA to the average GPA of all students in the class. In this regard, if the i^{th} ratio for the i^{th} student is greater than 1, then the student is a good student, and

not so otherwise. The authors recognize a drawback for such a measure based on the fact that students have succeeded under current teaching practices. This is to say that contemporaneous elements are also important in the learning process. Furthermore, relative GPA to peers may suffer from selectivity bias as it depends on the class selection for each term. Thus, the same student may be a "good student" in one class in a given term, yet not a "good student" in another class in the same term. This could make interpretation of empirical estimates difficult. Jensen and Owen, nevertheless, argue that their findings may tell, "that students who have done well in the past will continue to do well if we perpetuate current practice" (p. 301). In an effort to incorporate student specific and observable characteristics, Didia and Hasnat (1998) find a weak positive relationship between age and grade received in an introductory finance course.

Another stream of research focusing on the role of contemporaneous variables on performance includes Natriello and McDill (1986). The authors find a positive relationship between homework and performance. Homework is a proxy for the amount of effort that students need to put into the class, and even though it may be partially correlated to non-contemporaneous measures of performance, the amount and difficulty of homework is course specific. Homework provides an adequate measure of student dedication and commitment to the course. Natriello and McDill argue that "high standards set by teachers, parents and peers also generate greater effort on homework" (p. 29). This argument may support the idea that instructors with high expectations and standards may attract students who would show greater effort and, hence, higher performance. This in turn supports the inclusion of instructor-specific effects.

To summarize, the current literature emphasizes the link between performance and either ex-ante elements or in-class contemporaneous elements such as effort, but not on both interacting at the same time. Is contemporaneous learning predetermined by ex-ante elements such as reading and math skills, or is it determined by the level of scholarship demonstrated in the current course, or is it a combination of both?

MODEL, METHODOLOGY AND DATA

The Model

Our model is specified with the use of a simple educational production function. In this model student achieved knowledge—either at the end of the course in the form of a cumulative grade or by the performance measure in the final test—is modeled as a function of both ex-ante (course independent variables) and contemporaneous factors (class observable and non-observables). The model specification is as follows:

Academic Performance = f(ability, effort, demographics, course attributes)

The dependent variable, *Academic Performance*, is measured as overall course grade or, alternatively, as final test grade to account for a student's learning of economics and statistics. This is under the assumption that the different assessment tools assess learning and understanding of economics differently. In general terms, the functional relationship outlined above takes the form of:

$$Y_i = \alpha_0 + \beta_i X_i + \delta_i D_i + \varepsilon_i \quad (1)$$

where Y_i is the dependent variable, β_i is a vector of parameters for a series of continuous variables and δ_i is a vector of parameters for a series of dummy variables representing discrete characteristics. X_i contains both ex-ante and contemporaneous variables such as GPA, SAT, and Effort. On the other hand, D_i contains class observable and non-observable variables classified as dummy variables. These variables are in-class seating position, major, class standing, and reading as a main learning technique. We conduct empirical estimations using ordinary least squares, given that the dependent variable is a non-discrete, continuous variable.[i] To account for the presence of heteroskedasticity, a heteroskedasticity consistent covariance matrix by White is used.

Two general scenarios are constructed from equation (1). In the first scenario, the OVERALLGRADE is the dependent variable. In the alternative scenario the FINALTESTGRADE is the dependent variable. Each of these variables measures similar yet different definitions of performance. In the former case, OVERALLGRADE collects information about student performance throughout the academic term. Alternatively, FINALTESTGRADE measures performance at one point in time at the end of the academic term. In as much as FINALTESTGRADE is a cumulative test, it may be a better measure to assess the amount students have actually learned by the end of the course. Therefore, given the inherently different characteristics of each variable, we decided to run alternative models to capture the full effect of the explanatory variables on the two measures of

knowledge. Each of the dependent variables is regressed using the same identical model specifications for comparison purposes.

Data and Methodology

Our data is composed of 206 observations. The data comes from a survey administered to students from both Principles of Macroeconomics (ECON 211) and Economic and Business Statistics (ECON 221) at Clarion University of Pennsylvania for the spring and fall 2005 semesters. Descriptive statistics for each variable used in the analysis are shown in Table 1.

The dependent continuous variable OVERALLGRADE is expressed in percentage points and defined as the ratio of number of total points earned by the students to the total possible points for the course. As observed in Table 1, the average grade is 77.50% corresponding to a high C grade. The alternative dependent variable FINALTESTGRADE, also continuous, measures the amount of learning accomplished at the end of the term. The average final test is 115.8 points out of 150 maximum points. This average corresponds to 77.2%. Despite the apparent similarities of both measures and that by definition the final grade is computed into the overall grade, the two variables are conceptually different. The former is a cumulative measure of learning assessment throughout the semester, while the latter measures learning levels achieved at the end of the semester uncorrelated to previous scores on other assignments.

The first vector of parameters X_i with related coefficients β_i corresponds to the continuous explanatory variables. These variables are GPA, EFFORT, GRADEEXPECTED and SAT scores. Following the emphasis that previous studies have placed on grade point average (GPA), this measure is used to approximate student cognitive ability. Alternatively we use the Standardized Aptitude Test (SAT) scores as a measure of student verbal and mathematical skills. GPA and SAT scores measure ex-ante performance and learning aptitude levels entering the course. These data were obtained from university data sources. Furthermore, Laband and Piette (1995) found supporting evidence indicating that both verbal and math SAT scores had a low explanatory power when determining students' performance for upper-level economics courses.

The sum of the homework score, the index cards score and the online discussion forums score will be used as a measure of motivation and effort (EFFORT). Romer (1993) includes a measure of effort when accounting for students who submit the nine problem sets assigned. Romer finds this variable to have low explanatory power. In our study, homework is an individual assignment that represents 150 points out of 550 points total. Homework consists of problems and questions due a week after they are assigned. The index cards component represents 10 points out of the total 550 points for the course. Students are expected to hand in five index cards in five different weeks of their choice and each card is worth two points. Index cards should have comments, questions, suggestions that pertain to the course in any respect. For instance, index cards could be questions or comments on lecture material, textbook exercises, homework, teaching style of professors, news clips and others. Students receive credits for the index cards when turned in at the beginning of the class as part of their active attendance score. Finally, GRADEEXPECTED is the numerical grade expected in the course as reported by the students in the survey.

The second vector of discrete variables D_i with related estimating coefficients δ_i corresponds to a series of dummy variables including a series of personal and class specific characteristics affecting the learning process for which we control for in our analysis. The discrete variables this study uses are: a course specific dummy to separate Econ 211=1 from Econ 221; a Work=1 dummy to separate those students that work from the rest, a Class Standing dummy with Freshmen=1 and nontraditional students=5; and a Business Major=1 dummy.

Lastly, two distinctive innovative variables are included. First a set of discrete variables accounts for seating preferences in the classroom. The classroom was divided following vertical spatial specifications. Therefore the dummy classification considers Front, Middle and Back. Lastly this study includes learning style differences by creating the classification of audio, visual, hands-on, reading and other. The codification is 1, 2, 3, 4 and 5, respectively. The focus of this classification is to determine the relationship between academic performance and learning-related method as defined by student preferences. Thus, a dummy is used that accounts for reading (READING) as part of the student learning style. Students might choose reading only or reading along with one or more learning methods. There is need to acknowledge that the learning style and the instructor's teaching style complement each other to maximize performance. In some cases, the learning style is perfectly supported by the instructor's

teaching method and, thus, learning increases (Barboza and Trejos, 2007).

High correlation between homework and effort is explained by the fact that homework is part of the effort measure. Final test is highly correlated with the overall grade given that the final test is worth 150 points out of the total 550 points for the course. Grade expected seems to be correlated to the overall grade. This result is not surprising since student expectations are based on their performance in the class throughout the semester. Grade point average as a measure of a student's ability results in high correlation with the overall grade. This is not the case when compared to the final test grade. Interestingly, grade point average does not prove to be highly correlated to the standardized aptitude scores, both verbal and mathematical. These SAT scores are better associated to the final test grade than to the overall grade.

EMPIRICAL RESULTS

Tables 3, 4, 5 and 6 report ordinary least squares estimations with both overall course grade (Tables 3 and 4) and final test grade (Tables 5 and 6) as dependent variables. Our first estimating model includes GPA and EFFORT as the only right hand-side variables. We then substitute SAT for GPA and re-estimate the baseline model. The baseline model assumes that both ability and effort are the main explanatory variables for student academic performance. Empirical estimates provide statistical support to our initial set of hypotheses. The baseline model specification is then extended to control for the remaining factors as listed in "The Model" section above.

The first result that we want to highlight is the consistent explanatory power that EFFORT has in all estimated models. EFFORT is statistically significant at the 1% level and it is the most significant variable of all. The significance of EFFORT is robust to all alternative model specification, presenting only marginal changes as additional explanatory variables are added to the model. This result has major implications and provides a strong argument when addressing the issue of how student performance is determined. An important consideration to keep in mind is that EFFORT accounts for 30.91%[ii] of the overall grade, and it is, in principle, not correlated with the FINALTESTGRADE. EFFORT's significance is considerably large as it accounts on average from 0.40 to 0.56 of the difference in OVERALLGRADE, while EFFORT accounts for 0.22 to 0.33 on average of the difference when used as a determinant of FINALTESTGRADE variability, respectively, across models. This is to say that a 1% increase in EFFORT improves overall grade and/or final test score more than any other variable used (see Figure 2). From a practical point of view, the consistency effect of EFFORT on FINALTESTGRADE and OVERALLGRADE implies that students that monitor their performance, follow up on assignments, and participate with in-class and outside class discussions will see their effort rewarded in higher grades. Additionally, given that EFFORT is a contemporaneous variable with FINALTESTGRADE and OVERALLGRADE, it is more likely to observe changes on either dependent variable as a result of more EFFORT.

Several implications can be derived from this result. First, even though ex-ante abilities such as high SATs and GPAs definitely set up the ground for positive performance, marginal improvements in learning remains mainly an endogenous process that takes place in relation to course specific elements embodied in EFFORT. Secondly, significant efficiencies develop through marginal improvements in EFFORT. In simple terms, thinking at the margin matters. Students aiming to increase performance need to think at the margin. In other words, consistent effort throughout the semester results in a higher grade in comparison to concentrating on a few significant weighted components during the semester. Everything else constant, students that put in more effort throughout the semester are more likely to do well. Finally, there exists a high correlation between EFFORT and GRADEEXPECTED as anticipated. When both EFFORT and GRADEEXPECTED are simultaneously included, the significance of EFFORT is reduced, yet it remains highly statistically significant. Students that have consistently put in effort throughout the semester rightly have formed strong expectations about receiving a corresponding high grade. This is not just because they put in the effort, but because the effort pays off in terms of better mastering of the material.

We also find evidence supporting the results from previous studies (Yang and Raehsler 2005, Durden and Ellis 1995, among others) that GPA affects performance positively throughout the models. On average a 1% increase in GPA results in an increase of 0.07% on OVERALLGRADE and an increase of about 0.08% on FINALTESTGRADE, respectively. While at first glance the economic significance of the estimates appears to be small, a closer look at the data indicates otherwise. This is due to the fact that GPA ranges from 1 to 4. For instance, a sensitivity analysis would indicate that a

student that has a one standard deviation GPA higher than the mean is highly likely to receive both an OVERALLGRADE and a FINALTESTGRADE significantly higher than the average student. This indeed is what we observe in the raw data. In other words, academic performance in the current term is explained in a large part by historical performance in previous courses. This result confirms what was expected: high-achievers are more likely to score high in consequent courses. In a general sense, this result provides strong evidence to the argument that learning and academic performance are cumulative processes, where efficiencies develop as the student increases her/his human capital and overall abilities to learn.

While the explanatory power of GPA on our performance measures is high, GPA remains as an ex-ante variable to the current semester performance and therefore marginal changes are only observable in the longer run. Barboza, Yang and Johns (2007) find evidence of an existent reverse causation between GPA and EFFORT, where students holding a higher GPA are more likely to put extra effort in the classroom. In other words, a pre-existent condition for a positive effect of EFFORT on performance is a precondition that favors those students that have a higher GPA.

When student grade expectations (GRADEEXPECTED) are included, both the efficiency and the statistical significance of the estimates remain. A positive and statistically significant coefficient for GRADEEXPECTED suggests that the higher the grade expectations students have, the better they will do in the course. However, this variable has a drawback given that students expressed grade expectations close to the end of the semester and their expectations may be accounting for performance throughout the semester. Given this situation, GRADEEXPECTED will not be used in the remaining extended models.

In-class seating position variables are determined by FRONT and MIDDLE, with BACK being the reference point. We believe that the use of the seating variable is an innovative approach to better understanding the determinants of student performance. As such, we have no preconceived benchmarks to use for comparison. We bring forth the hypothesis that seating decisions are a reflection of student preferences and therefore proxy student behavior that otherwise is not observable directly.

Seating selection by students is not a random process. Students make a clear selection which we assume is based on consistent preferences on where to sit in the classroom. This selection in turn is the response to their perspective on how to maximize the outcome from coming to class. In addition, given the obvious space limitations of a classroom, students may end up sitting in their second or third best option. As a student moves away from her first best option, we expect to observe a decline in the learning outcome associated to seating with other elements constant. It is in this regard that our first attempt at using seating dummy variables indicates the existence of a negative performance relationship when students sit at the FRONT in comparison to the BACK. This negative relationship is statistically significant when GPA is used as an explanatory variable, but not when used along with SAT scores. However, when substituting SAT for GPA, FRONT and MIDDLE are statistically insignificant, differing from BACK in all but one case (see Table 5—model 3) where FRONT is statistically significant and positive. While the seating evidence is not 100% conclusive, the seating coefficients reveal some interesting dynamics pertaining to the non-random seat selection that occurred. In our case, the classroom fills up from the back to the front. First students to arrive sit at the back, and the last student to get to class must sit on the available remaining seats, which happen to be at the front of the classroom. More committed students arrive to class early, whereas less committed ones arrive late.[ii]

HOURSWORK is a time constraint measure of the level of dedication that a student has to scholarly work in relation to income generating activities outside of the classroom. Our estimates indicate that HOURSWORK is negatively associated to academic performance, as expected, in models 5 through 10. However, the coefficient is only marginally statistically significant at the 15% level for models 5-8, when the dependent variable is OVERALLGRADE. In the rest of the models, HOURSWORK is not statistically significant and, therefore, not enough evidence exists to support our null hypothesis. Class standing, work, major and course dummies are also not statistically significant at conventional percentage levels. These results are robust to the selection of dependent variable between OVERALLGRADE and FINALTESTGRADE, with no significant differences in the coefficients' magnitude and/or sign. Furthermore, the economic and statistical significance of all previous variables remains stable despite the inclusion of these discrete variables. After the introduction of our control variables, we observe that the main determinant of OVERALLGRADE and FINALTESTGRADE are EFFORT and GPA, respectively.

As indicated earlier, all models were re-estimated using SAT scores as a measure of student ability. The SAT score coefficients are positive and statistically significant. While overall coefficient values are smaller in direct comparison to the GPA coefficient, this is mostly the result of different scales used for GPA and SAT scores. In the estimations reported in Tables 5-6 the economic significance of EFFORT increases, i.e., higher t-ratios and higher coefficients. This may be explained by the fact that EFFORT may be embodied in the GPA measure, whereas SAT scores are less about effort and more about intellectual capability. One important difference when using SAT scores is that the sign of the FRONT coefficient becomes positive although still statistically insignificant when OVERALLGRADE is the dependent variable. The remaining model estimations hold similar results to those with GPA as an independent variable. The course dummy, however, is now statistically significant at a 2.5 percent level. This result provides evidence that students who take Economic and Business Statistics (ECON 221) receive, in general, lower grades than students who take Principles of Macroeconomics (ECON 211), after controlling for all the other factors. See model 8 in Table 5.

CONCLUSIONS

Alternative specifications of student performance are positively and robustly explained by the level of effort and GPA and/or SAT scores. Based on a sample of students from a course on macroeconomics and a sample of students from a course on economics and statistics, findings indicate that EFFORT is the most significant factor in determining student performance. Furthermore, learning as measured by overall grade and/or final test score is highly determined by the amount of effort occurring during the semester. Preconceived performance in the form of GPA and ex-ante abilities in the form of SAT scores are relevant determinants of contemporaneous performance, but second to effort. Also, while the empirical estimates tend to indicate that those sitting at the back tend to outperform those sitting in the front, the evidence is not conclusive and further research is needed in this area. Furthermore, the differentiation between those who work and do not work seems not to have an impact on overall performance. Moreover, we do not find significant performance differences among those that have reading as their preferred learning style. This research is a first step toward a more inclusive perspective on explaining overall student performance. Caution is needed in inferring causality. Further research is pending.

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TABLE 1
Specifications and Descriptive Statistics of Variables

Label	Specification	Mean	SD	Min	Max
Dependent variables					
OVERALLGRADE	Final grade for the course	0.775	0.116	0.410	1.0073
FINALTESTGRADE	Grade for a cumulative final exam	115.18	19.477	52.5	150
Independent variables					
GPA	Grade Point Average	2.8736	0.6053	1.0710	4.0000
EFFORT	Sum of total score from homework, index cards submitted and participation in online discussion forums	0.772	0.153	0.081	1.029
E211	1 = Student is in Principles of Macroeconomics; 0 = otherwise (if E221 Statistics)	0.5766	0.4952	0	1
WORK	1 = Student works 0 = otherwise	0.471	0.500	0	1
HOURSWORK	Total number of work hours weekly for the student	8.539	12.615	0	42
READ	1 = Student includes reading as part of his/her learning methods; 0 otherwise.	0.4685	0.5001	0	1
REQUIRED	1 = Course is required; 0 otherwise	0.8874	0.3168	0	1
BUSTUDENT	1 = Student pursuing a major within the College of Business; 0 otherwise.	0.4032	0.4919	0	1
GRADEEXPECTED	Grade expected by student	0.813	0.109	0.55	0.95
FRONT	Student sits in the front	0.334	0.473	0	1
MIDDLE	Student sits in the middle	0.393	0.490	0	1
CLASSSTANDING	Student's class standing	2.539	0.824	1	5
NONBUSSTUDENT	Students who are not business majors	0.616	0.487	0	1
SATMATH	Students math score	467.22	81.14	240	690
SATVERBAL	Students verbal SAT score	459.55	81.29	200	720

Number of observations= 206

Figure 1. Final Test Grade and Overall Grade

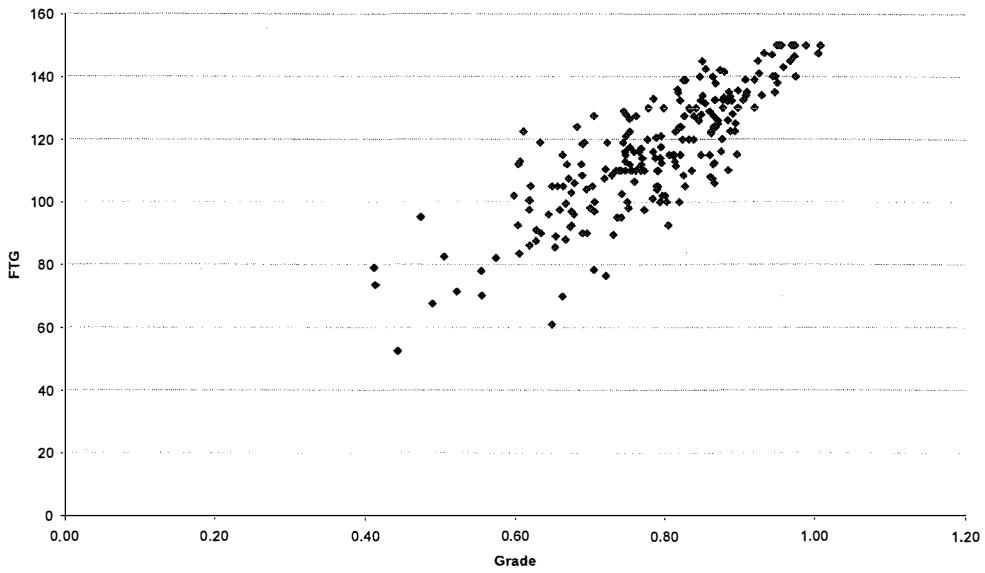

Figure 2. Overall Grade and Effort Level

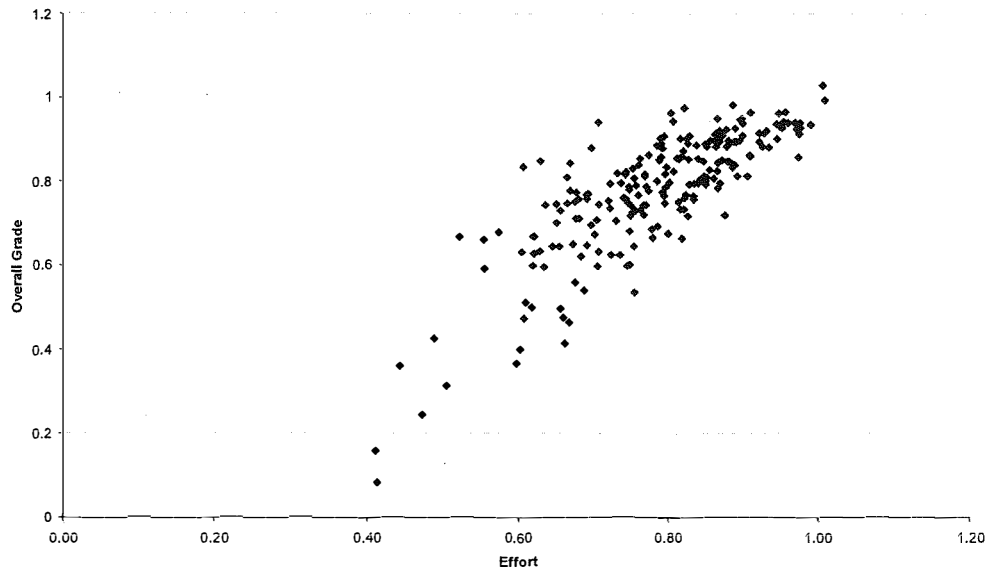

Table 2: Pair-Wise Correlation Matrix

	EFFORT	FINALTEST	GRADEEXPECTED	GPA	HW	OVERALLGRADE	SATM	SATV
EFFORT	1.000							
FINALTEST	0.483	1.000						
GRADEEXPECTED	0.589	0.585	1.000					
GPA	0.612	0.512	0.589	1.000				
HOMEWORK	0.977	0.484	0.577	0.612	1.000			
OVERALLGRADE	0.814	0.822	0.736	0.717	0.802	1.000		
SATM	0.233	0.514	0.412	0.439	0.277	0.469	1.000	
SATV	0.240	0.406	0.316	0.497	0.302	0.418	0.597	1.000

Table 3: Estimates of the OLS Model Dependent Variable OVERALLGRADE

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Constant	0.223	0.106	0.231	0.231	0.235	0.242	0.239	0.240	0.240	0.227
p-value	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GPA	0.072	0.058	0.075	0.075	0.077	0.078	0.077	0.077	0.077	0.082
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EFFORT	0.441	0.407	0.444	0.444	0.435	0.435	0.438	0.438	0.438	0.437
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GRADEEXPECTED		0.234								
p-value		0.000								
FRONT			-0.021	-0.021	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019
p-value			0.055	0.122	0.079	0.087	0.093	0.094	0.094	0.097
MIDDLE			-0.012	-0.012	-0.010	-0.010	-0.009	-0.009	-0.009	-0.009
p-value			0.238	0.252	0.324	0.343	0.372	0.372	0.371	0.390
READING				-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001
p-value				0.881	0.851	0.856	0.887	0.875	0.882	0.902
HOURSWORK					0.0005	0.0004	0.0005	0.0004	0.0005	0.0004
p-value					0.122	0.148	0.146	0.156	0.296	0.319
CLASSSTANDING						-0.004	-0.004	-0.004	-0.004	-0.005
p-value						0.443	0.384	0.385	0.386	0.348
NONBUSSTUDENT							0.005	0.004	0.005	0.006
p-value							0.547	0.604	0.604	0.551
ECON221								-0.001	-0.001	0.0005
p-value								0.932	0.931	0.959
Work									0.001	0.029
p-value									0.945	0.526
GPA*W										-0.010
p-value										0.483
Observations	205	205	205	205	205	205	205	205	205	205
Adjusted R-square	0.734	0.770	0.736	0.735	0.737	0.736	0.735	0.734	0.732	0.732

Table 4: Estimates of the OLS Model
Dependent Variable FINALTESTGRADE

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Constant	0.371	0.205	0.375	0.375	0.379	0.407	0.403	0.395	0.395	0.377
p-value	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GPA	0.079	0.059	0.086	0.085	0.088	0.089	0.089	0.090	0.090	0.097
p-value	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EFFORT	0.224	0.179	0.225	0.225	0.215	0.215	0.218	0.214	0.216	0.215
p-value	0.004	0.012	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004
GRADEEXPECTED		0.315								
p-value		0.000								
FRONT			-0.051	-0.051	-0.048	-0.047	-0.046	-0.046	-0.046	-0.045
p-value			0.013	0.013	0.016	0.019	0.020	0.020	0.023	0.024
MIDDLE			-0.020	-0.020	-0.018	-0.017	-0.016	-0.016	-0.016	-0.015
p-value			0.259	0.255	0.300	0.349	0.374	0.362	0.372	0.388
READING				-0.003	-0.003	-0.003	-0.004	-0.006	0.005	0.005
p-value				0.879	0.894	0.889	0.864	0.791	0.823	0.810
HOURSWORK					-0.0006	-0.0004	-0.0004	-0.0005	-0.0002	-0.0001
p-value					0.331	0.487	0.487	0.442	0.831	0.865
CLASSSTANDING						-0.013	-0.014	-0.014	-0.014	-0.014
p-value						0.131	0.124	0.131	0.136	0.123
NONBUSSTUDENT							0.007	0.011	0.011	0.012
p-value							0.660	0.530	0.531	0.498
ECON221								-0.010	0.010	0.012
p-value								0.552	0.544	0.481
Work									-0.010	0.030
p-value									0.638	0.699
GPA*W										-0.014
p-value										0.571
Observations	205	205	205	205	205	205	205	205	205	205
Adjusted R-square	0.311	0.360	0.327	0.324	0.323	0.327	0.324	0.322	0.319	0.317

Table 5: Estimates of the OLS Model Dependent Variable OVERALLGRADE

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Constant	0.125	0.021	0.124	0.123	0.123	0.130	0.125	0.135	0.134	0.184
p-value	0.0001	0.552	0.0001	0.0001	0.0001	0.0001	0.0003	0.0002	0.0002	0.000
SAT	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EFFORT	0.557	0.499	0.561	0.560	0.560	0.562	0.566	0.567	0.565	0.538
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GRADEEXPECTED		0.226								
p-value		0.000								
FRONT			0.0004	0.0007	0.001	0.002	0.002	0.002	0.001	-0.002
p-value			0.000	0.951	0.923	0.871	0.870	0.888	0.920	0.887
MIDDLE			-0.007	-0.008	-0.008	-0.007	-0.006	-0.006	-0.006	-0.007
p-value			0.516	0.464	0.475	0.497	0.579	0.609	0.601	0.536
READING				0.015	0.015	0.015	0.014	0.011	0.011	0.007
p-value				0.306	0.309	0.311	0.333	0.456	0.451	0.620
HOURSWORK					0.0001	0.0001	0.0001	0.00002	0.0002	0.0003
p-value					0.802	0.860	0.829	0.939	0.680	0.454
CLASSSTANDING						-0.003	-0.005	-0.005	-0.006	-0.005
p-value						0.597	0.459	0.388	0.382	0.388
NONBUSSTUDENT							0.010	0.004	0.004	0.002
p-value							0.293	0.669	0.666	0.818
ECON221								-0.015	-0.016	-0.018
p-value								0.124	0.121	0.078
Work									0.006	-0.084
p-value									0.619	0.042
GPA*W										0.032
p-value										0.014
Observations	180	180	180	180	180	180	180	180	180	180
Adjusted R-square	0.727	0.765	0.725	0.726	0.724	0.723	0.723	0.725	0.724	0.733

Table 6: Estimates of the OLS Mode Dependent Variable FINALTESTGRADE

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Constant	0.196	-0.080	0.199	0.198	0.198	0.232	0.229	0.235	0.235	0.287
p-value	0.0001	0.182	0.000	0.0001	0.0001	0.001	0.001	0.001	0.000	0.000
SAT	0.0004	0.0003	0.0003	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EFFORT	0.320	0.1886	0.330	0.328	0.328	0.335	0.338	0.338	0.338	0.310
p-value	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GRADEEXPECTED		0.252								
p-value		0.001								
FRONT			-0.016	-0.015	-0.015	-0.011	-0.011	-0.011	-0.012	-0.015
p-value			0.432	0.448	0.447	0.561	0.561	0.558	0.557	0.459
MIDDLE			-0.013	-0.015	-0.015	-0.013	-0.012	-0.011	-0.012	-0.013
p-value			0.463	0.402	0.400	0.465	0.505	0.516	0.516	0.483
READING				0.027	0.027	0.027	0.027	0.025	0.025	0.021
p-value				0.205	0.208	0.210	0.221	0.265	0.265	0.349
HOURSWORK					-0.0000	0.0001	0.0001	0.0002	0.0001	0.00003
p-value					0.997	0.801	0.813	0.773	0.888	0.963
CLASSSTANDING						-0.015	-0.016	-0.017	-0.017	-0.017
p-value						0.115	0.107	0.098	0.099	0.101
NONBUSSTUDENT							0.008	0.004	0.004	0.002
p-value							0.635	0.809	0.808	0.909
ECON221								-0.010	-0.010	-0.012
p-value								0.554	0.553	0.469
Work									0.002	-0.091
p-value									0.931	0.131
GPA*W										0.033
p-value										0.077
Observations	180	180	180	180	180	180	180	180	180	180
Adjusted R-square	0.388	0.424	0.384	0.385	0.382	0.388	0.385	0.554	0.379	0.385

[i] See Spector and Mazzeo (1980) for an extended discussion on alternatives for when the dependent variable is discrete.
[ii] We want to thank a participant at the Midwest Economic Association 2006 for this insightful comment.

GAY RIGHTS: THE IMPACT AND INTERACTION OF POPULAR CULTURE, BUSINESS PRACTICES AND LAW

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ABSTRACT

During the last two decades, integration of gays and lesbians into the mainstream has been driven by changes in public opinion and cultural norms, the media, corporate policies and diversity initiatives, marketing activities and the law. This article examines how the confluence of societal attitudinal changes, gay and lesbian economic power, modifications in business practices, and a reversal of constitutional law have contributed toward greater acceptance by the public of the GLBT community and the advancement of its civil rights.

INTRODUCTION

Many factors have contributed to a change in the cultural mindset surrounding the gay, lesbian, bisexual, and transgender (hereinafter GLBT or gay) community in the United States. Although the change has been slow and evolutionary, media observers, producers of goods and services, advertisers, and others see the social change involving the GLBT community "as ripples from a trend that's been building for years, if not decades" (Mendoza, 2003, p. 1). As one advertising executive observed, "We're seeing a nexus of popular culture, our legal system and, quite frankly, the American capitalist system all coming together" (Mendoza, 2003, p. 1).

Clearly, meaningful and lasting social change for GLBT equality has been and must continue to be fueled by numerous and varied participants. As Kaplan (2000) suggests, businesses and employers, the courts, state legislatures, neighborhoods, schools, the entertainment industry, and families are among the important participants effecting social change for the GLBT community. In the following sections the authors will examine how key changes in many of these areas have contributed to greater public acceptance of the GLBT community and the concomitant advancement of its civil rights.

PUBLIC ATTITUDES TOWARD HOMOSEXUALITY

Public attitudes toward homosexuality changed markedly during the 1990s and have continued to evolve. According to longitudinal data from the *General Social Survey* (1973-2000) analyzed by Brewer (2003), sexual relations between persons of the same gender were judged as being "almost always" wrong from 1973-1988. However, this negative viewpoint decreased rapidly from 1992 on. One dramatic indicator of a shift in public attitudes is reflected in the following statements by two conservative GOP politicians almost a decade apart. At the 1992 Republican National Convention, Pat Buchanan spoke out against the "amoral idea" of gay rights. However, in 2000, vice-presidential nominee Dick Cheney was quoted as saying in a nationally televised debate that, "I think we ought to do everything we can to tolerate and accommodate whatever kind of relationships people want to enter into" (Brewer, 2003, p. 1211).

More supportive public attitudes toward gay rights are also shown in an analysis conducted by Brewer (2003) on three pooled cross-sectional surveys (from 1992, 1996, and 2000) conducted by National Election Studies. Results from two questions were analyzed. The first question asked, "Do you favor or oppose laws to protect homosexuals against job discrimination?" From 1992 to 2000 the percentage of respondents strongly favoring anti-discrimination laws rose by 8%, while the percentage strongly opposed fell by 11%. Likewise, when asked "Do you think homosexuals should be allowed to serve in the United States Armed Forces, or don't you think so?," the percentage who strongly support service increased by 20%, while those strongly opposed decreased by 27% over the eight year period of study. Brewer states these changes cut across a broad spectrum of the American public.

Another factor appearing to contribute to greater acceptance of homosexuality by the public relates to the increasing dissemination of the belief that homosexuality is fixed at birth. Wilcox and Norrander (2002) report that Gallup polls reveal that in 1977 only 13% of survey participants believed that

to be the case. However, by 2001 the corresponding figure had risen to 40%.

More recently, in the spring 2006 issue of *Equality*, the Human Rights Campaign's magazine of news about the GLBT community, the results of a new study from the Pew Research Center for the People and the Press suggest that Americans are increasingly becoming tolerant and accepting of the gay community, even with regard to those subject areas and those populations traditionally deemed among the most resistant to acceptance. The Pew study reported, for example, that 55% of American Catholics believe gays and lesbians should be able to adopt children; that Americans believe by a 2-to-1 margin that gays and lesbians should be allowed to serve openly in the U.S. military; and that only 33% of American senior citizens strongly oppose marriage equality today, compared to 58% just two years ago. Furthermore, according to a new UCLA Law School study, as reported in *Newsweek* (Bennett, 2007), Alabama and Utah, conservative states not considered to be gay-friendly, are nonetheless places where the gay population is booming.

The significant change in attitude regarding the GLBT community in the past decade has also been evident in other arenas. *Healthy People 2010*, a document generated by the U.S. Department of Health and Human Services (2000), included gay, lesbian, and bisexual individuals as a recognized demographic for the first time. Likewise, The Institute of Medicine of the National Academy of Sciences published a major report on lesbian health (Solarz, 1999), and the National Institutes of Health sponsored a health conference in 2000 to establish research initiatives for lesbians and bisexual women (Rothblum, Balsam, and Mickey, 2004).

THE ROLE OF THE MEDIA

The media have also gravitated toward greater openness and acceptance of gays. Signs of this trend abound. A number of TV programs have featured openly gay and lesbian performers, characters and/or themes. Commonly known examples include "Ellen," "Will & Grace," "Survivor," "Six Feet Under," "Queer Eye for the Straight Guy," "Queer as Folk," and "The L Word." Also, Viacom recently launched a new cable channel, Logo, aimed at gay audiences (Flint, 2005).

Many newspapers have also become gay-friendlier. This is reflected in their willingness to accept announcements for same-sex commitment ceremonies and marriages, to recognize same-sex survivors in obituaries, and to run regular columns for and about the gay community (Rothaus, 2002). Similar acceptance has been evidenced in other formats. For example, in recent years a subsidiary of Def Jam Recordings released *Shock and Awe*, an album by Causheen, an openly gay hairdresser to the stars (DeLuca, 2003). And the *Rawhide Kid*, a monthly Marvel Comic which originated in 1955 about a straight-arrow good guy, was re-launched as *Rawhide*, the first gay title character of a mainstream comic. Also, in 2003 former Los Angeles Dodger outfielder, Billy Bean, released a book chronicling his experiences as a gay man playing major league baseball.

CORPORATE POLICIES AND PRACTICES

Businesses have also recognized the importance of attracting talented gay and lesbian employees. Consequently, firms have implemented policies and programs to make the work environment gay-friendlier. For example, firms such as S. C. Johnson, Eastman Kodak, Lucent Technologies, Microsoft, and many others offer sensitivity training for their employees (Edwards and Hempel, 2003). Similarly, defense contractors such as Raytheon and Lockheed Martin sponsor gay support groups. In addition, Wal-Mart, known for its conservative culture, has adopted a policy to protect gay and lesbian employees from discrimination. In fact, among the nation's top 500 companies, 95% have policies prohibiting discrimination based on sexual orientation, and 70% offer domestic partner benefits for same-sex couples (Edwards and Hempel, 2003). Just a few years earlier the figures were 51% and 25%, respectively. Indeed, the website of the Human Rights Campaign, the nation's largest political group supporting gay rights, lists over 7,000 employers that offer domestic partner benefits (Cloud, 2004). Moreover, in cities with high concentrations of GLBT residents, the percentage of companies offering domestic partner benefits is even higher than the national norm. For example, in 2005, 80% of the *Fortune 500* companies headquartered in New York City offered partners of gay and lesbian employees the option to subscribe for benefits. Comparatively, only 50% of the same companies offered such benefits five years earlier (Marshall, 2005).

Concomitantly, a proliferation of GLBT employee resource groups in many *Fortune 500* companies has brought welcome visibility to the plight of gays and lesbians in seeking inclusive and equitable corporate policies and practices regarding sexual orientation (Kaplan, 2000). In addition, a groundswell of support has been provided to gay and lesbian employees by their heterosexual coworkers (Kaplan, 2000). Joe Solomonese, president of the Human Rights Campaign, stated "The greatest potential for us is among our straight allies, not only those who know someone who is gay or have a gay family member, but who know that the civil rights

struggle is our fight..." (Burson, 2006, p. 1). It has been suggested that more gay men and lesbians have been coming out of the closet, due, in large part, to the fact that more Americans today know someone who is gay—a friend, family member or coworker. Empirical research studies in sociology have confirmed that individuals who know GLBT people have more positive attitudes toward them and believe they are entitled to more rights and privileges (Kaplan, 2000). According to a *USA Today/CNN/Gallup* poll, 88% of respondents supported equal rights for gays and lesbians in the workplace, 62% approved health and Social Security benefits for same-sex partners, 54% accepted the "alternate lifestyle," and 49% approved of same-sex marriage (Mendoza, 2003).

Although businesses have been more attentive to the needs of the GLBT community in recent years, it should be noted that problems still exist. Harassment of gays in the workplace has not disappeared. A recent study conducted by Harris Interactive, Inc. and marketer Witeck Combs Communications, Inc. found that 41% of gay employees said they had been harassed, pressured to quit, or denied a promotion based on their sexual orientation (Edwards and Hempel, 2003). Plus, some gay activists argue that gays have not become more accepted or liberated but rather have merely become the newest commodity darlings in the world of business (Walters, 2001).

ECONOMIC POWER: MARKETING TO THE GAY COMMUNITY

Businesses looking for additional sales and profitability have cautiously eyed the GLBT market segment. One overriding concern has centered on how this group could be targeted without offending more mainstream customers. Consequently, growth tended to occur as outlined by Buford (2000). Buford notes that initial targeting efforts were undertaken by firms with the most to gain and, also, the least to lose. Since gay and lesbian culture has often centered in bars catering to them, firms producing alcoholic beverages and/or cigarettes saw the gay community as a good marketing opportunity. Also, because cigarettes and alcohol already had a suspect image in the minds of the general public, the risk associated with targeting the gay and lesbian market was not seen as great. Buford notes that the next stage of marketing involved firms that recognized they offer goods and services that could be tailored to meet the special needs of the gay and lesbian community. An example would be financial institutions. Although this industry is typically known for its conservatism, it nonetheless recognized that gays and lesbians wanted help in establishing and managing joint ownership of assets for unmarried couples. Buford also notes the role competitive pressures played. More specifically, firms not wanting to miss out on a good marketing opportunity followed rivals into the gay and lesbian market segment. Moreover, Buford notes the importance that the growth of the Internet eventually played. The privacy and anonymity of the web has proved beneficial for buyers and sellers alike. For example, businesses can easily target members of the GLBT community via appropriate websites. Furthermore, the Internet can bring together people with a similar mindset, some of whom might otherwise be socially or geographically isolated. And because gay and lesbian consumers have a propensity to embrace new technology early on, Buford posits that it is entirely understandable that there are a large number of ad pages for websites targeting this group.

The basic approaches used to advertise to the GLBT community were summarized in an article that appeared in the *San Francisco Business Times*. In that article, Levine (1995) cites three basic approaches: mainstream ads that simply run in gay publications; ads that run in other publications and that have been modified slightly to target gay readers; and ads that are specifically about and for gay people.

A variation on those approaches entails using coded messages or "gay vague" ads which have hidden messages which speak to the gay audience but that are not likely decoded as gay themes by non-gays (Walters, 2001). The "gay vague" approach was validated through an empirical study (Borgerson, Schroeder, Blomberg, and Thorssen, 2006) that explored how consumers interpret the portrayal of homosexual families in advertisements. A significant theme emerged; specifically, gay images were "straightened up" by respondents who viewed such ads as heterosexual or straight. The authors posited that this important interpretive phenomenon impedes the processing of apparently gay imagery. Such an approach is often used by businesses that want to reach out to gay audiences without running the risk of alienating mainstream customers (Walters, 2001).

The gay and lesbian demographic segment is estimated at 14 million, with average household income of $61,300, and spending power between $400-475 billion annually (Flint, 2004). A 1997 study by Simmons Market Research Study of readers of the National Gay Newspaper Guild's 12 publications, as cited by Koss-Feder (1998), found that gay respondents, when compared to straights, were 11.7 times more likely to be in professional jobs, were almost twice as likely to own vacation homes, were eight times more likely to own a computer notebook and were twice as likely to own individual stocks. However, it should be noted that numbers like those cited in the studies above may not be entirely accurate since social stigma regarding homosexuality

still exists. Thus, respondents might not be forthcoming.

In particular, reports of gay affluence have been questioned (Buford, 2000; Penaloza, 1996; Walters, 2001). Buford (2000) states that people who enjoy financial security and independence are more likely to live openly gay lives and confide in a survey taker. Also, self-reporting gay males apparently outnumber lesbians. Households with two male wage earners are more likely to have higher combined incomes than households with two female wage earners since women on average tend to earn only about 75% of what men make. These factors, when taken together, may contribute to overstatements of reported gay affluence.

However, as Buford (2000) and Walters (2001) correctly note, income is not the key factor in making this segment attractive to marketers. What is significant is that due to the absence of children in most gay and lesbian households, there is higher discretionary income and more disposable time.

DeLozier and Rodrigue (1996) identify a psychographic profile of the gay community that has emerged as a result of a number of studies that have been conducted. The gay community is believed to travel extensively; spend considerable money on clothing; be dedicated to the arts; be aware of current social issues; often be politically active (especially with regard to gay issues); place a high priority on long-term relationships and the importance of friendships; and, among gays living in suburban areas, be strongly orientated toward career building and home ownership. Gay consumers have also been characterized as being brand loyal (Rodkin, 1990). Despite the problems associated with gathering accurate data on the GLBT community, it is clear that the gay market offers the promise of sales growth and profitability to those businesses that can identify and implement appropriate marketing strategies.

Industries that have been actively marketing to the gay and lesbian community for some time include financial services, insurance, pharmaceuticals, fashion, telecommunications, and alcoholic beverages (Koss-Feder, 1998). And the companies not shying away include Fox Network, Absolute Vodka, American Airlines, Levi Strauss, The Gap, Banana Republic, Benetton, Calvin Klein, American Express, IBM, SAAB, Anheuser-Busch, Miller, Volkswagen, and Subaru (Buford, 2000; DeLozier and Rodrigue, 1996; Oakenfull and Greenlee, 2005; Rothaus, 2002). Moreover, even sports teams such as the Chicago Cubs and the Miami Sol have reached out to the GLBT community by purchasing ads in gay-oriented publications (Rothaus, 2002). And that is just a partial list of mainstream businesses and organizations actively courting gay consumers.

In fact, the travel industry has been among the most significant players in marketing to the GLBT community. According to the International Gay & Lesbian Travel Association, gay travel alone accounts for more than $55 billion annually (Rothaus, 2002). Holcomb and Luongo (1996) report that gay couples average 4.5 trips a year as compared to 1 trip per year for straight couples, and that travel by gays is almost recession proof. In fact, both the travel industry and travel destinations are today actively engaged in promoting gay travel. For instance, one of the more creative marketing campaigns targeting the gay community involved Philadelphia's 2003 print ads featuring Betsy Ross sewing a rainbow flag and television ads urging viewers to, "Come to Philadelphia. Get your history straight and your nightlife gay" (Hill, 2004). The GLBT community is also attractive to travel marketers because it is less seasonal (Pritchard, Morgan, Sedgely, and Jenkins, 1998).

However, as noted earlier, some businesses still remain concerned about the risks involved in marketing activities that are specifically geared to gays and lesbians. Some marketers, for example, are concerned that the stigma attached to homosexuality will be linked to their products and turn off mainstream customers (DeLozier and Rodrigue, 1996; Penaloza, 1996). Also, some organizations are reluctant to target the GLBT market because they fear they will be charged with immorality. Members of the religious right oppose extending civil rights to the gay community and have occasionally threatened to boycott firms actively marketing to them. To illustrate, Walters (2001) states in her book, *All the Rage,* that a print ad for Bud Light aroused no small amount of right-wing ire. The ad depicted two men holding hands, and the slogan, "Be yourself and make it a Bud Light" was curled around a rainbowed Bud Light logo. She further notes that,

> While marketing to gays is seemingly a sound financial decision, companies find that it can still have its drawbacks. Thus contrary to the perception of an all-gay world of images, the corporate moves are still largely in the closet, related to the gay press, direct mailing, and other sources at least partially cordoned off to peeping heterosexual eyes (Walters, 2001, p. 269).

In general, however, businesses that have marketed to the GLBT community have been the recipients of significant benefits. But the gains have not merely accrued to the business community. Indeed, the GLBT community itself has greatly

benefited. As Boyd (1998) points out, large multinational corporations marketing to gays and lesbians afford visible affirmation that GLBT dollars count, and that gays and lesbians are an important market segment. Furthermore, Boyd posits that the visibility displayed and economic power suggested in advertisements directed to the GLBT community associate their dollars with the legitimacy of gay and lesbian lives, thus promising expanded civic recognition for them. In fact, he notes that many gay and lesbian activists "see corporate recognition of gay/lesbian spending power as a key to the struggle for civil rights" (p. 1362).

THE SUPREME COURT AND GLBT CIVIL RIGHTS

Although the business community's various efforts to target the GLBT market have greatly increased the segment's visibility, perception of economic power and, ultimately, standing in popular culture, it is not readily apparent how much this elevated profile has meant with regard to effecting public policy initiatives benefiting the gay community. As noted, popular culture has largely grown to accept gays and lesbians. However, since the number of people making up the GLBT community itself is not typically sufficient to effect a change in public policy through the legislative process, the GLBT community has often had to rely heavily on the courts to protect, secure and advance its civil rights.

A review of the case law since the business community began to recognize the significant potential of the GLBT market suggests that this group has made significant advances in securing its civil rights through the courts. However, most of the successful outcomes have been in the areas of securing freedom from sexual orientation discrimination in housing and jobs, obtaining domestic partnership benefits from state and local public employers, and gaining parity with heterosexuals in matters related to the adoption of children. Most of these court victories have been secured in large cities with significant GLBT populations, or in states that have traditionally been at the vanguard of protecting civil liberties. Furthermore, virtually all such victories have been premised on local laws or state constitutions. Clearly, these victories have been influenced by the GLBT community's greater, more positive profile in popular culture. But until 2003, there remained little evidence to suggest that the GLBT community's enhanced popular culture profile may have had an influence on its quest for civil rights on a national level.

The most important and encompassing source of civil rights protection for any minority group in America is to be found in the United States Constitution. For example, the battle over a constitutional amendment banning same-sex marriage is a reflection of the fact that securing the constitutional right to marry is the functional equivalent of obtaining legal equality in American society. Those who actively support the right of same-sex couples to marry are very aware that with equality to marry comes legal equality with heterosexuals in all other areas of society. Similarly, those who ardently support a constitutional amendment banning the right of same-sex couples to marry are fully aware of the implications of a judicial decision upholding the constitutional right to same-sex marriage. If the Supreme Court were to rule that states could not deny same-sex marriage without violating the Constitution, gays and lesbians would essentially be entitled to all the rights afforded heterosexual couples. Moreover, all other legally sanctioned forms of discrimination premised on the sexual orientation of the individual would fall.

The Constitution, as the supreme law of our land, renders any laws, whether federal, state or local, that conflict with it unconstitutional, hence unenforceable. Consequently, any case in which the Supreme Court's interpretation of the Constitution benefits the GLBT community is truly an advance of its civil rights on a national level. Therefore, it was with great anticipation that interested parties on both sides of the gay and lesbian civil rights issue awaited a 2003 Supreme Court decision in a case that would address gay and lesbian personal privacy rights.

The U.S. Supreme Court has decided very few cases involving the GLBT community. Until 1986 there was no significant case that addressed a civil rights issue involving the gay community (*Bowers v. Hardwick*, 1986). After 1986 and before 2003, the Supreme Court decided only three other cases having significant GLBT involvement (*Hurley v. Irish-American Gay, Lesbian and Bisexual Group of Boston*, 1995; *Romer v. Evans*, 1996; *Boy Scouts of America v. Dale*, 2000). Two of these cases involved the issue of a private group's right to exclude homosexuals from participating in activities sponsored by the group. In those cases, the private group successfully premised its exclusion of homosexuals on its First Amendment freedom of association (*Hurley v. Irish-American Gay, Lesbian and Bisexual Group of Boston*, 1995; *Boy Scouts of America v. Dale*, 2000).

In the third case, the Supreme Court struck down an amendment to Colorado's state constitution that had been approved by Colorado voters. Known as Amendment 2, it essentially prevented any Colorado governmental body at the state or local level, including Colorado state courts, from taking any

action that would result in protecting homosexuals from discrimination in housing, employment, and public accommodations, among other things. The Supreme Court ruled that Amendment 2 violated the U.S. Constitution's Equal Protection Clause in that Colorado was attempting to treat one group of citizens, namely gays and lesbians, differently from other citizens without a legitimate basis for doing so. The Court, suggesting that Amendment 2 was premised solely on animosity toward homosexuals, noted, "We must conclude that Amendment 2 classifies homosexuals not to further a proper legislative end but to make them unequal to everyone else. This Colorado cannot do" (*Romer v. Evans,* 1996, p. 627). Although this case was an important victory for the GLBT community, the decision cannot be deemed a watershed for the gay civil rights movement. Amendment 2, in disadvantaging only gays and lesbians from legal protection from discrimination, clearly violated the Constitution's mandate that state governments cannot favor, or disfavor, some classes of people over others when there is no legitimate justification for disparate treatment.

In 2003, however, the Supreme Court decided a case that is a watershed in the GLBT civil rights movement (*Lawrence v. Texas*, 2003). The significance of the case is not only to be found in its holding in favor of the gay male litigants. It is also highly significant for the fact that it overturned a 1986 Supreme Court decision that presented virtually the same facts and constitutional issue (*Bowers v. Hardwick*, 1986).

In both the 1986 and 2003 cases, gay men were arrested for violating state sodomy laws while taking part in private consensual sexual activity in their homes. In the 1986 case, a Georgia statute outlawed all acts considered sodomy for both heterosexuals and homosexuals. There had been no enforcement of the statute against heterosexuals for decades. Nonetheless, the Supreme Court found that there was no constitutional right of privacy to engage in homosexual conduct and that majority public sentiment about the morality of homosexuality was a sufficient basis for upholding Georgia's sodomy law enforcement against the gay men. In 2003, however, the Supreme Court, with three of the original nine justices from the 1986 case still on the Court, overruled the 1986 case. In an opinion that was notably considerate, indeed sensitive in its tone with regard to the lives of gay people, the Court wrote:

> The case does involve two adults who, with full and mutual consent from each other, engaged in sexual practices common to a homosexual lifestyle. The petitioners are entitled to respect for their private lives. The State cannot demean their existence or control their destiny by making their private sexual conduct a crime. Their right to liberty under the Due Process Clause gives them the full right to engage in their conduct without intervention of the government. The Texas statute furthers no legitimate state interest which can justify its intrusion into the personal and private life of the individual. Had those who drew and ratified the Due Process Clauses of the Fifth Amendment and the Fourteenth Amendment known the components of liberty in its manifold possibilities, they might have been more specific. They did not presume to have this insight. They knew times can bind us to certain truths and later generations can see that laws once thought necessary and proper in fact serve only to oppress. As the Constitution endures, persons in every generation can invoke its principles in their own search for greater freedom (*Lawrence v. Texas*, 2003, pp. 578-579).

THE SUPREME COURT AND PRECEDENT

In the span of only 17 years, the Supreme Court went from holding that majority moral judgments about homosexuality were a sufficient constitutional basis to criminalize consensual homosexual conduct between adults, to finding that gay people are entitled to respect for their private sex lives. The extraordinary reversal in the Court's thinking on this issue is particularly significant in that it implicates the important role of precedent in American jurisprudence.

American courts are guided by the principle that precedent generally should be followed by courts in subsequent cases on the same issue. Known as the doctrine of *stare decisis*, the rule suggests that courts should abide by precedent in order that court judgments will be accorded public respect and that there will be stability in the law. Although not an inexorable command, the doctrine of *stare decisis* is a firmly established aspect of American judicial decision making.

In 2003, however, a majority of the Supreme Court justices were unwilling to let a 1986 precedent stand in the way of finding for the personal privacy rights of gays and lesbians. The Court did not simply distinguish the 1986 case from the 2003 case in reaching an opposite decision. Rather, the Court unequivocally and forcefully overruled it. So noteworthy was the Court's decision to overrule in this instance that one dissenting justice was prompted to write, "I begin with the Court's surprising

readiness to reconsider a decision rendered a mere 17 years ago" (*Lawrence v. Texas*, 2003, p. 586).

With regard to the issue of abiding by precedent, Supreme Court Chief Justice John Roberts has stated that *stare decisis* is more a command when the Court is faced with its earlier interpretation of a statute. Justice Roberts reasoned that Congress can always change the statute if it deems the Court's interpretation was incorrect. With regard to interpretation of the Constitution, however, Justice Roberts has suggested that *stare decisis* is not as compelling a principle since, short of amending the Constitution, only the Court can correct a prior interpretation of the Constitution (Liptak, 2005).

Notwithstanding the Court's apparent greater comfort in overruling precedents that interpret the Constitution, it is by no means a common practice for the Court to do so. Moreover, it is particularly rare for the Court to overrule its interpretation of the Constitution after only 17 years.

THE SUPREME COURT AND POPULAR CULTURE

There are essentially two different schools of thought when it comes to interpretation of the Constitution. One school is made up of those who are known as originalists. The other school is comprised of those who believe in the living Constitution. Henderson (2005) notes that originalists see the Constitution through the "prism of the founders' specific words and intent" (p. A10). Those who subscribe to the Constitution as a living document hold that it must be interpreted pursuant to modern legal thinking and contemporary cultural standards.

Notwithstanding which school of interpretation a justice favors, all Supreme Court justices support the doctrine of *stare decisis*. However, as previously noted, the doctrine is not deemed an inexorable command. The courts are free to avoid adherence to precedent, and are more likely to do so when interpreting the Constitution.

One of the principal differences between originalists and living Constitution proponents relates to the degree to which adherence to precedent is recommended and the basis for adherence. Originalists are not likely to support a precedent if they believe the earlier decision was an incorrect interpretation of the Constitution's specific words in the context of the founders' intent. Absent such a finding, originalists seem far less likely to overrule precedent since earlier decisions have been decided, if nothing more, closer in time to the founders' era. On the other hand, living Constitution proponents are much more likely to overrule precedent if they believe the constitutional interpretation in the earlier case no longer comports with contemporary legal and cultural standards.

In any event, it is rare for the Court to overrule a precedent interpreting the Constitution that is less than a generation old. No matter what a justice's approach to constitutional interpretation may be, Supreme Court justices are well aware that Court decisions must not appear to the public to be a function of what is popular or trendy.

Therefore, in light of the importance adherence to precedent holds in judicial decision-making, it is remarkable that the Court in 2003 unequivocally overruled the 1986 case. Clearly, in the seventeen years between 1986 and 2003 the public profile of the GLBT community increased dramatically. The Court, however, has always eschewed suggestions that it is bowing to public pressure when formulating its decisions. Indeed, the lifetime appointment of Supreme Court justices is thought to free them from direct public pressure to rule in a manner consistent with popular sentiment. Katsh and Rose (2004) suggest, however, that judges do not consciously ask what the public desires when interpreting laws and the Constitution. Rather, Katsh and Rose posit that "as members of society and as individuals who read newspapers and magazines and form opinions on political issues, there are subtle forces at work on judges that may not be obvious in any particular opinion but that can be discerned in a line of cases over a period of time" (p. XIV).

The influence that the business community's marketing efforts to the GLBT community has had on the GLBT community's standing in popular culture during the last two decades is self-evident. However, whether or not the increase in the GLBT community's popular culture profile during this period played a significant role in the Supreme Court's reversal of its position on the GLBT community's personal privacy rights can only be hypothesized.

The Supreme Court's 2003 decision never directly suggests the influence of popular culture. Yet, as noted earlier, the Court's majority opinion in 2003 is stunningly more sensitive to the lives of GLBT community members than the harsh, dismissive tone of the 1986 decision. For example, in 1986 the Supreme Court majority decision stated, "Plainly enough, otherwise illegal activity is not always immunized whenever it occurs in the home" and "Victimless crimes do not escape the law when they are committed at home" (*Bowers v. Hardwick*, 1986, p. 195). In 2003, however, the Court's majority opinion proclaimed:

> It suffices for us to acknowledge that adults may choose to enter upon this relationship in the confines of their homes and their own private lives and still retain their dignity as free persons. When sexuality finds overt expression in intimate conduct with another person, the conduct can be but one element in a personal bond that is more enduring. The liberty protected by the Constitution allows homosexual persons to make this choice (*Lawrence v. Texas*, 2003, p. 567).

Indeed, the Supreme Court's 2003 decision reflects the image of gays and lesbians often represented in the varied and extensive marketing campaigns directed toward members of the GLBT community after 1986. Such campaigns frequently presented gays and lesbians as valuable members of society who are in long-term committed relationships, and who have the same concerns for security and the good life as do other productive members of American society. Whereas the 1986 Supreme Court decision addresses the legal issues involved in terms of sexual conduct, morality and crime, the 2003 decision addresses the same issues in terms of dignity, freedom, expression in intimate conduct, enduring personal bonds, and the home. In fact, one dissenting justice in the 2003 case accused the majority of taking sides in the "culture war" and signing on to the "homosexual agenda" that seeks to eliminate "the moral opprobrium that has traditionally attached to homosexual conduct" (*Lawrence v. Texas*, 2003, p. 602).

Because Supreme Court justices do not reveal the totality of their thought processes and influences in any form or venue, the words the Court uses in its written opinion must serve as the primary vehicle for determining how and why the justices ruled as they did. Therefore, it is impossible to know for certain whether or not the GLBT community's popular cultural profile played a significant role in shaping the justices' thinking in the 2003 Supreme Court decision. To be sure, in its 2003 opinion the Court did not specifically attribute its broadened interpretation of the Constitution's privacy rights with respect to gays and lesbians to changes in societal attitudes or to the GLBT community's greater public profile in contemporary America. However, it seems fair to say that from the dramatic change in the Court's position on the personal privacy rights of the GLBT community, and from the tone and wording of the 2003 decision itself, the majority of the Court in 2003 saw the gay and lesbian community very differently than it did in 1986. The only thing that has really changed in the 17 years since the Court first decided that there was no privacy right to consensual homosexual sex is the profile of the GLBT community in American culture.

THE PURSUIT OF FULL EQUALITY: OBSTACLES AND OUTLOOK

Notwithstanding the significance of the Supreme Court's 2003 ruling, and the strides made in business and popular culture, the GLBT community continues to face daunting challenges in its quest for full equality in America. Many political conservatives and adherents to fundamentalist interpretations of religious dogma oppose equality for gays in matters ranging from the right to marry to openly serving in the military (Thomas, 1996; Haider-Markel, 1999). And many mainstream religions are currently engaged in serious debates and bitter internal struggles with regard to how GLBT members "fit" into their Judeo-Christian teachings, and what rights gays should be afforded (Banerjee, 2007; Ostling, 2000).

In the early 1990s, however, the primary battle for GLBT civil rights concerned the issue of gays serving openly in the military. In one of his first major policy initiatives, President Bill Clinton attempted to lift the ban on gays serving in the military. His efforts sparked a bitter battle with Congress; the result was the compromise "Don't Ask, Don't Tell" policy that allowed gays to serve so long as the soldier's homosexuality was kept in the closet (Toner, 2007; Haeberle, 1999; Haider-Markel, 1999). Although the policy was originally cast as a limited victory for the GLBT community, it was not long before many commentators began to criticize the policy as bad and not working as intended (Sollisch, 1999; Raum, 1999). And while the policy still remains in effect, all the candidates for the 2008 Democratic presidential nomination have expressed willingness to repeal it and allow gays to serve openly (Toner, 2007). Nonetheless, Republican and military opposition to changing the policy remains strong, even in light of the fact that openly gay soldiers serve without detriment to military cohesiveness and national security in most European countries, Canada, and Australia (Bacon, 2007; Toner, 2007; Sullivan, 2001; Merin, 2002).

It was not until the early- to mid-1990s that the focus of opposition to gay rights shifted from gays in the military to the issue of same-sex marriage. In a landmark 1993 decision, the Supreme Court of Hawaii became the first court in the United States to accept the argument that denying a marriage license to same-sex couples is sex discrimination (*Baehr v. Lewin*, 1993). In categorizing the denial as sex discrimination, the court triggered the requirement that the state show that its exclusion of gays from marriage was necessary to achieve a compelling state interest. When the state was unable to meet that burden, the state legislature, in an apparent move to bypass the potential for a new Supreme Court ruling

mandating gay couples be afforded the right to marry, adopted legislation that provided same-sex couples with domestic partner benefits (Merin, 2002). Ultimately, in 1998 Hawaii's voters approved a constitutional amendment granting the legislature the power to restrict marriage to a man and a woman (Merin, 2002).

Although the case in Hawaii did not result in a successful conclusion for the proponents of same-sex marriage, it clearly was the catalyst for changing the focus of the debate on gay civil rights. The fact that the highest court in a state was willing to find that a state's constitution implicitly prohibited sexual orientation discrimination as a form of sex discrimination provided the impetus for proponents and opponents of GLBT civil rights to mobilize (Merin, 2002).

Alaska became the next battleground for same-sex marriage. When an Alaska court ruled that the right to choose one's life partner was a fundamental right, it essentially held the state to the same high level of proof in opposition to gay marriage as was required by the court in Hawaii. The quest for same-sex marriage ended rather abruptly, however, when voters decided to amend Alaska's constitution to define marriage as a union between a man and a woman (Merin, 2002).

Around the same time as the case in Alaska, three same-sex couples initiated a challenge to Vermont's denial of their applications for marriage licenses. In another groundbreaking decision, Vermont's Supreme Court, utilizing a "balancing approach," found that the state's proffered justification for excluding same-sex couples from the legal benefits of marriage did not outweigh the burdens placed on such couples, particularly such couples who have children. The court required that the state extend to same-sex couples the same rights, benefits, and protections that are afforded only to married heterosexual couples in Vermont. The court did not, however, order that marriage be open to same-sex couples. Ultimately, the legislature enacted a civil union law to meet the court-ordered mandate (Merin, 2002).

Obviously heartened by what happened in Vermont, seven same-sex couples filed a lawsuit challenging their inability to obtain marriage licenses in Massachusetts. Many commentators believed that Massachusetts, of all the states, afforded the best chance for recognition of same-sex marriage. Not only did Massachusetts have a significant track record of leadership on civil rights issues in general. It also had assumed a leadership role on GLBT civil rights matters involving nondiscrimination laws, comprehensive hate crimes laws, and adoption laws (Merin, 2002). Consequently, in 2003 when Massachusetts became the first state to legalize same-sex marriage, it was not entirely unexpected (Healy, 2006). It was, nonetheless, a watershed event in the quest for GLBT civil rights.

Not surprisingly, the advances made with regard to legal recognition of same-sex partnerships produced major and virtually immediate backlash. Following the Hawaii decision, the majority of states passed laws to disallow same-sex marriage and prevent the possibility that such states might have to recognize same-sex marriages permitted in other states. Furthermore, many of these laws were enacted prior to legalization of same-sex marriage in Massachusetts (Merin, 2002). Moreover, in 1996 Congress passed and President Clinton signed into law the Defense of Marriage Act (DOMA). The statute relieves states from any obligation under the United States Constitution to recognize same-sex marriages authorized in other jurisdictions. And the statute provides that the federal government will recognize only opposite-sex marriages for all purposes of federal law (Merin, 2002).

Today, the most prominent battleground in the quest for GLBT civil rights remains the same-sex marriage issue. Presently, only Massachusetts recognizes the right of same-sex couples to marry. Vermont, Connecticut, and New Jersey, however, permit civil unions for same-sex couples. Although civil unions are not generally deemed the equivalent of marriage, pragmatically speaking, same-sex couples joined in civil union are essentially afforded all the state-provided rights and responsibilities conferred by marriage. The most obvious distinction between marriage and civil union is one of nomenclature. Many in the GLBT community, however, consider this distinction to be significant (Stone, 2007). It suggests the "separate but equal" treatment found objectionable by the Supreme Court with regard to disparate treatment premised on race (*Brown v. Board of Education*, 1954).

Although same-sex marriage or civil union is now available in at least four states, and a number of states offer some array of rights to gay couples under a domestic partnership title, the quest for equality with regard to marriage rights has not been without major setbacks for the GLBT community (Stone, 2007). Most notably, in the 2000 and 2004 presidential campaigns, conservative Republicans made opposition to gay marriage a rallying point to encourage strong Republican voter turnout in support of President Bush and other Republican candidates. And during his campaigns, President Bush made a pledge to nominate to the federal judiciary only those who subscribe to strict construction of the Constitution, suggesting that those judges who found

state or federal constitutional grounds for supporting GLBT civil rights were "judicial activists" who made law rather than interpreted law (Curl, 2006).

The opposition to same-sex marriage remains so strong today that none of the leading Democratic candidates for the 2008 presidential nomination publicly supports it. Most, however, support some form of civil unions for gays (Bacon, 2007). Republican candidates, on the other hand, essentially remain opposed to any form of government recognition of same-sex couples. The candidates' failure to publicly support same-sex marriage is clearly tied to the polls that show many Americans remain opposed to it (Healy, 2006). Furthermore, the poll results are reinforced by the voters who, in 2004 and 2006, approved bans on same-sex marriage in 21 states (Bacon, 2007). Moreover, a significant blow to the quest for same-sex marriage occurred recently when New York's influential high court ruled in 2006 that the state constitution did not grant a right to same-sex marriage (Fausset and Barry, 2006).

Recent court decisions banning gay marriage, in addition to successful efforts to ban gay marriage by amending state constitutions, have had a negative impact on corollary issues involving gay rights. Several states, for example, are considering bans on gay adoption (Paulson, 2006). And in 32 states, it is still legal to fire an employee for being gay (Moulton and Reed, 2007). Moreover, a recent vote by the U.S. House of Representatives to extend the nation's employment discrimination laws to include protection for gay workers, a first for either chamber of Congress, is not expected to survive the Bush administration's veto threat even if it passes a Senate vote (Neuman, 2007). Similarly, a bill to expand the federal hate crime law to cover violent acts based on a victim's gender, sexual orientation, gender identity or disability faces an almost certain Bush administration veto (Simon, 2007).

Although the challenges still facing the GLBT community's quest for equal rights remain daunting, they are not insurmountable. Social change involving civil rights struggles does not follow a linear path. Success must be measured by examining the overall progress made over time, not by focusing on individual setbacks. In the 50 years since the Supreme Court decided that the concept of "separate but equal" was not constitutional with regard to state-sanctioned segregation premised on race, African-Americans continue to face areas of discrimination and judicial setbacks with regard to laws enacted to advance the cause of their civil rights. However, it is unlikely that the majority of African-Americans would seriously challenge the proposition that the state of America today is markedly better for them than it was in the early 1950s. The GLBT community can also say without hesitation that its position in America today is markedly improved over what it was merely 20 years ago. Although much remains to be accomplished in the GLBT community's civil rights struggle, it cannot be denied that many of the gains made by the gay community were merely the stuff of daydreams just two decades ago.

CONCLUSION

The business community's marketing efforts targeting the GLBT community have clearly come out of the closet. From the 1980s efforts of alcohol beverage makers and cigarette manufacturers to reach the GLBT community in gay establishments, to today's corporate sponsors of prime time network television programs showcasing gay and lesbian characters, the day of the gay target audience has arrived. Human resource policies and practices with regard to gays and lesbians have also dramatically changed. In general, the business community no longer appears to fear the backlash of the conservative market. Perhaps the contemporary business approach to the GLBT market is simply a reflection of the GLBT community's greater acceptance in popular culture, or the fact that there is just too much money to be made. Notwithstanding the reason, it is apparent that today the gay market is well recognized by business and is here to stay. And with each new effort by the business community to reach gay and lesbian consumers, the GLBT community's recognition and standing in popular culture will be enhanced.

Although two conservative justices have taken their seats on the Supreme Court since the 2003 decision, the privacy rights secured by the GLBT community are not likely to be in jeopardy. The doctrine of *stare decisis* makes any change in the 2003 decision virtually unthinkable. Moreover, as the GLBT community's public profile and public acceptance continue to increase, it is likely that future court decisions will, at least incrementally, build on the precedent established in 2003. And clearly the GLBT community will be eager to see what policies and protections the Democrats will be willing to support and enact should they win back the White House in 2008.

Whether willing participants or mere incidental players, the business community's contribution to the GLBT community's quest for full equality in American society is likely to continue. The GLBT community's viability as an attractive marketing segment will not diminish, and the benefits accrued to it as a target of businesses' attention cannot be overestimated.

Although gathering accurate information on the gay community has typically been difficult due to its "closeted" nature, as acceptance of the GLBT community continues to increase, this problem will likely decrease. In the interim, however, it would be helpful for researchers to collect additional information from U.S. firms that have been at the forefront of marketing to members of the GLBT community, as well as from those firms that have been pioneers in the development of policies and practices that have contributed to a more "gay friendly" work environment. It would also be useful to examine what measures have been undertaken by foreign businesses in nations that are more progressive than the United States in terms of their attitudes toward equality for members of the GLBT community. Information from such sources might help to shed greater light on issues such as the manner and mode of the most successful marketing techniques employed, the extent of corporate benefits realized from marketing to the gay community, and the correlation that may exist, if any, between businesses' attitude to the gay market and gay civil rights.

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DOES YEAREND PORTFOLIO RESTRUCTURING BY COMMUNITY BANKS BOOST SHAREHOLDER RETURNS?

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ABSTRACT

Despite decades of deregulation and rampant merger and consolidation activity, a significant portion of our economy's banking services is provided by community banks. Like all banks, community banks have faced increasing pressure on their ability to operate profitably. A common practice among banks to increase net interest income is increasing the duration of their investment portfolio, a practice referred to as "riding the yield curve."

However, from mid-2004 to mid-2007, the U.S. Treasury yield curve became remarkably flat, thus providing no additional yield for the increase in maturity risk borne by the bondholder. Nevertheless, in 2004-2006 some banks announced yearend restructurings of their investment portfolios in an attempt to increase profits or reduce risk.

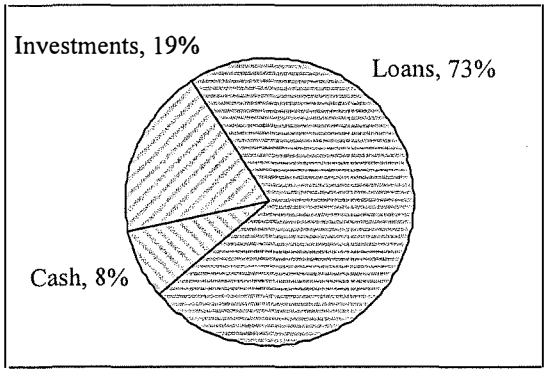
This paper examines a sample of community banks that announced such restructurings during the 2004-2006 time frame to see if these restructurings had an ascertainable effect on shareholder returns. The sample of restructuring banks is compared to the NASDAQ Bank Index, the America's Community Bankers' Index, and two control samples.

The conclusion reached is that the restructurings appear to be beneficial to the stockholders of the community banks, despite the flat yield curve. However, the benefit could not be statistically validated. Thus, the implication for financial managers is that it remains uncertain whether or not restructuring makes sense from the shareholder's standpoint.

INTRODUCTION

Figure 1 shows the broad asset allocation between loans, investments and cash for community banks with less than $5 billion in total assets. In this study we define community banks as those with total assets of less than $5 billion. The interest income that a bank earns from its loan and investment portfolios is vital to its profitability as an ongoing concern. Generally, in the event that management is dissatisfied with performance, a bank's investment portfolio can be restructured far more easily than its loan portfolio, as investments are relatively liquid and can be sold in the secondary market within a short time frame. Banks can also sell loans, but the securitization process is slow and many loans are nonconforming and not very liquid. If a bank's loan portfolio is performing below expectations, desired changes to structure and rates take months if not years to fully achieve. In contrast, a bank's investment portfolio can be restructured expeditiously if necessary.

Figure 1
Asset Allocation for Community Banks (2006)



Source: SNL Financial

Banks will sometimes elect to restructure their investment portfolios at yearend in order to lay the groundwork for stronger earnings in the upcoming year. Usually, this decision is made because the portfolio contains a block of investments that are below market yields. When these securities are sold, the bank reports the losses in the current year. Often the funds are reinvested into higher-yielding securities that serve to increase interest income and

earnings. There is an identifiable cost and benefit to portfolio restructuring, so is there a net benefit? Our research looks at whether these restructurings are effective at improving shareholder returns.

LITERATURE REVIEW

As this appears to be a new area of research, we conducted a very thorough literature review. Further, we felt it important to differentiate between the literature targeted at bank managers and that written primarily for academic researchers.

Practitioners Literature

Pickering and Kalishek (1993) discuss the securities transaction documentation needed in order to avoid regulatory scrutiny. This should include: 1) a rationale for the transaction; 2) a description of the securities involved; and 3) an analysis of the transaction's consequences. They believe that portfolio restructuring can be justified when it serves to reduce interest-rate risk, to improve yields, or to liquidate nonperforming securities. Pickering is a securities broker who typically publishes his articles in trade publications. Therefore, he cannot be considered an objective observer of the securities market. Nevertheless, his writings give us a glimpse into the information sent to bankers that could influence their decisions.

In our research, we are looking at banks that restructure in order to improve yields or to strengthen their margin by eliminating assets and liabilities that are generating a negative spread. It is also possible that these restructuring transactions reduce a bank's interest-rate risk. On the surface, reducing risk sounds like a constructive measure to take. Yet, banks are in the business to take risk; thus, it would only make sense to reduce risk if the bank was not receiving sufficient compensation from the risk or had exceeded its risk limit, as outlined in policy.

Frieder and Hedges (1994) discuss portfolio restructuring in a holistic context, from a strategic planner's perspective. They give a list of "seven key areas" [of capabilities] that management teams need in order to build value for their banks, such as expertise in executing value-enhancing mergers and acquisitions. One specific piece of advice offered for bank management is that in order to "increase market approval, they should view portfolio restructuring as possibly the quickest and most substantive way to strengthen profitability." In practice, the securities portfolio can be restructured much more quickly than the loan portfolio. One of the banks that announced a 4Q06 restructuring, Yardville National Bank, later announced in the 2Q07 its acquisition by PNC. This is an example of a bank that might have used portfolio restructuring as one tactic for positioning itself for acquisition.

De Meo (1995) recounts the restructuring done by Barnett Bank in the mid-1990s to lower its interest-rate risk. When *Statement of Financial Accounting Standards No. 115* (SFAS 115) was implemented, banks began to carefully monitor the duration of the available-for-sale (AFS) investment portfolio because changes in portfolio value were marked to market and recorded on their balance sheets. By limiting the duration of the AFS portfolio, this constrained the potential volatility of the banks' equity account. In the case of Barnett Bank, not only did the bank reduce its portfolio duration, but it also shrank the portfolio as it used the cash flow to supplement its shortfall in deposit funding. Since the implementation of SFAS 115, banks have become more comfortable with using the AFS classification. In fact, the allocation between AFS and held-to-maturity (HTM) accounts tends to be heavily tilted toward AFS, with infrequent shifts of any significance. There is no indication that the restructurings that we analyzed in our research were motivated by SFAS 115 considerations.

Pickering (2001) explains that banks tend to take "bond swap losses" at yearend "if the year promises to be exceptionally profitable or exceptionally unprofitable." The title of the article is "Cleaning house: Year-end 2001 is a great time to restructure your bank's portfolio." This article, which is published in his organization's trade magazine *Independent Banker*, provides insight into the tactics used by investment professionals to generate activity (i.e., commissions) with their bank clients. Mr. Pickering manages ICBA Securities, a broker/dealer that targets community banks. This article was published in October of 2001, so the intent was to alert bankers to the opportunity to restructure before yearend.

One recommendation Pickering makes is to restructure the portfolio when the bank's year is shaping up to be "exceptionally profitable." This implies that the bank is exceeding budget. The logic is that the restructuring enables a bank to take losses in the current year and to reinvest into higher-yielding securities to improve earnings for the following year and beyond. If a bank is ahead of budget, it can use the surplus to offset the securities losses, enabling the bank to still meet budget, which

management often treats as the main objective for the year.

There are at least two possible fallacies to this logic. First, it assumes that exceeding budget does not benefit shareholders without taking action to capture the surplus and that bond swaps are one of the best ways to lock in the benefit. A second potential fallacy is that the bank's value will be enhanced by this restructuring. If this is true, then this should be reflected in improved returns to shareholders. In our research methodology, we examine shareholder returns before and after restructuring in search of evidence that restructuring does indeed produce a material improvement to shareholder returns.

The second scenario that Pickering believes is conducive to restructuring is when the bank is having a poor year, in this case termed "exceptionally unprofitable." The losses incurred from restructuring are seen as "piling on" to the other bad news. In this scenario, the logic is that the bank is already having a poor year, which is likely reflected in the stock price and investor sentiment. By taking losses prior to yearend to increase the portfolio yield, this shifts additional income to future years. The stock market is valuing companies based on current and future earnings prospects. Therefore, there is some appeal to this argument of taking your lumps today for improved earnings in the future. However, it ignores the responsibility to the shareholders who might need to liquidate their shares in the short term. Shifting short-term performance to the future implicitly assumes that current shareholders will remain invested in the bank long enough to benefit from a higher valuation sometime in the future.

DeMasi (2006) writes about the interest-rate and operating environment that characterizes the period during which the restructuring activity that this research examines has occurred. For example, he reports that between December 2002 and June 2006 the net interest margin for all insured banks (data from the Federal Deposit Insurance Corporation) fell by 51 basis points. As with Pickering, DeMasi is an investment professional who serves the community bank sector and is likely compensated from commission-based business. He gives several basic guidelines that a bank should adhere to when they restructure the portfolio, such as setting a loss constraint. He defines a well-structured strategy as one that has a break-even period that is shorter than the average life of the bonds being sold. He states that if this is accomplished, "the restructuring should provide a clear economic advantage to the bank versus continuing to hold the current positions until they roll off of the portfolio." One aspect of fixed-income investing that seems to be ignored in DeMasi's article is that bonds that are underwater will trend toward par value as time till maturity diminishes. Thus, the paper losses that appear at a point in time will not be realized if the bonds are held to maturity, barring the unlikely occurrence of a default.

Academic Literature

Banz (1981) finds that the capital asset pricing model is misspecified because there is a "size effect." This effect, which is not linear, is seen with very small firms, but much less so with average to large firms. In our research, we are dealing with small firms, as the data set includes all community banks with assets less than $5 billion. Banz found that smaller firms have higher risk-adjusted returns than larger firms, although he did not give a breakdown on asset size. Our guess is that our dataset falls well within the small firm category. Banks are continually expanding their asset base, as they collect new deposits and write new loans. However, the time period used in our research is so brief that it is unlikely that any of the banks changes size by a sufficient amount to affect returns because of a size effect. Our research methodology did not incorporate any adjustment for size, although we did test for a size effect. If our analysis had looked at post returns over a much longer time frame, then perhaps we would have needed to control for size.

Banz and Breen (1986) study the "look-ahead bias" and an "ex-post-selection bias" that can occur when using the COMPUSTAT database or some other price/dividends/earnings (PDE) database. For example, they found that portfolios and portfolio returns were different depending on whether they assembled portfolios using current or historical data from COMPUSTAT. Our research utilizes SNL Financial's bank and thrift database. While this, obviously, is not COMPUSTAT, it falls into the broader category of a PDE database. Each database is subject to its own set of potential biases. One possibility of a bias in our research is that we analyzed those banks that showed a fourth quarter realized loss in their securities portfolios that also had a restructuring announcement that was captured by SNL. We are assuming that SNL is even-handed when it captures all announcements and that they are not introducing a potential bias pertaining to which restructuring announcements are in their archives.

Neuberger (1992) examines how the composition of bank asset portfolios can alter the risk of a bank and, thus, the returns. This is relevant to our research because restructuring will change the asset portfolio, specifically the composition of the investment portfolio. It can also change the liability portfolio, because the funds from the sale of securities can be used to prepay borrowings. He observes that the asset and liability characteristics of financial intermediaries would seem to make them likely candidates for significant sensitivity to interest rate changes. Neuberger reports that the evidence on the interest-rate sensitivity of financial intermediaries is mixed. He cites two studies, one by Chance and Lane and another by Sweeney and Warga, that have found that financial institutions tended not to have consistent or significant sensitivity to changes in interest rates.

In contrast, Neuberger also reports that other researchers, citing Martin and Keown, Lloyd and Schick, Lynge and Zumwalt, Beebe, Flannery and James, Booth and Officer, Kane and Unal, and Neuberger, have found significant interest-rate sensitivity at banks and thrifts. Researchers have looked at bank operations, portfolio composition, and other market conditions to help explain the link between the market and interest-rate sensitivity and bank stock returns. Specifically, Dietrich (also cited in Neuberger, 1992) uses a two-index approach to explain the risk sensitivity of bank stocks as a function of bank balance sheet composition. Studies find some evidence that individual bank characteristics affect the risk of bank stock returns.

Neuberger states that, "Each asset in banks' portfolios may be considered to have its own associated market beta value. Thus, there may exist a 'beta' for making residential mortgage loans or a similar measure for holding government securities." As we know from portfolio theory, the aggregate beta that a bank exhibits will depend on the institution's overall beta, which is a weighted average of the individual betas associated with the different assets in its portfolio. As the asset mix changes, so will the bank's market risk. Under a restructuring scenario, it is possible that a bank's weighted average beta rises, falls or remains steady, depending on the betas of the assets and liabilities bought and sold during the restructuring. In our analysis, we do not look at the banks' betas before and after restructuring nor do we know whether the restructured balance sheets for the banks studied are riskier or less risky than the pre-restructured balance sheets.

Allen and Saunders (1992) found evidence of a systematic upward window dressing adjustment on the last day of each quarter. They examined data between 1978 and 1986 and 75 percent of banks were found to be "upward" window dressing. Banks were also found to be "downward" window dressing, but a percentage of how many are engaged in that action was not reported. One incentive for bank management to overstate bank asset size (upward window dressing) is to "increase their consumption of size related perquisites." From a shareholder's perspective, there can be incentives to shrink the balance sheet at quarter's end (downward window dressing) in order to reduce regulatory taxes.

In our research, we asked ourselves the question: Is portfolio restructuring a form of window dressing? The definition of window dressing includes the words "deceptive practice of using accounting tricks to make a company's balance sheet and income statement appear better than they really are" (see Investorwords.com). The banks that were used in our study publicly announced that they were restructuring their portfolios, so in that regard they were not deceptive. However, many other banks have taken large securities losses without always announcing their actions; so perhaps some can be viewed as window dressing.

Allen and Saunders looked at the degree of reversibility, because window dressing by definition implies reversibility after a certain date. Indeed, there was a high degree of negative reversibility, in that actions that were taken were undone after quarter's end. While portfolio restructuring does not meet the classic definition of window dressing—i.e., deceptive and reversed after a certain date—it does seem that one has to question whether it's done "for show." From a present value standpoint, the losses taken on securities represent the difference between the yields on the securities sold and market yields. As a bank moves forward with a new set of higher-yielding securities, the loss that was realized seems to be forgotten. Our research looks at the resulting stockholder returns to see if the market rewards them for management's actions.

Beaver et al. (1992) believe that dysfunctional behavior "such as gains trading [by banks] appears to be a by-product of the information asymmetry problem." The announcements that we found through our research that were released to shareholders and market observers reflect the asymmetry in information that exists. For example, consider the 11/22/2006 release from Ameriana Bancorp that details its restructuring:

> The Company took this step in an effort to improve its interest-rate risk position, using the proceeds from the sale of the fixed-rate securities to repay certain short-term, variable-rate advances. In addition to de-leveraging the Company's balance sheet, this action is expected to improve net interest margin and increase net interest income in future periods, enabling the Company to recover the loss on sale through increased earnings over the next two years.

A shareholder is left with more questions than answers by this announcement. The bank wants to improve its interest-rate risk position, yet it doesn't explain why it needs to be improved. It states that it will "repay certain short-term variable-rate advances," but what prepayment penalty will be incurred? Whenever a bank de-leverages its balance sheet, capital, as a percentage of assets, rises. What are the bank's intentions for the extra capital...will it pay a special dividend? Suffice it to say that there are plenty of "asymmetric" information problems that exist when management takes actions such as portfolio restructuring. Thus, a statistical analysis to measure impact to shareholder returns is appropriate.

Prior to the recent portfolio restructuring that we've seen in the banking industry, there was potential for significant restructuring in the mid-1990s as a result of SFAS 115. Papiernik (1997) examined whether the adoption of the SFAS 115 led banks to restructure their portfolios. Using a portfolio restructuring model and employing logit regression analysis, she concluded that "portfolio restructuring did not occur or was minimal upon SFAS 115 adoption. SFAS 115 was issued by the Financial Accounting Standards Board (FASB) in May 1993. There has been no event in banking since then that would have potentially triggered widespread restructuring, other than the recent restructuring considered in our research.

Initially, it was thought that banks adopting SFAS 115 would realize security gains and losses for several reasons, including capital maintenance, income smoothing and tax related incentives. The restructuring that has occurred over the last few years has, of course, been well after the adoption of SFAS 115. That is not to say, however, that SFAS 115 considerations are not influencing bank management's decisions. Banks engaged in recent, yearend restructuring are probably looking to boost stock performance. Because stock valuations are tied to earnings performance, we can infer that the restructuring falls under the heading of income management, if not income smoothing.

Papiernik et al. (2005) report that early adopters [of SFAS 115] shifted the balance of investments between AFS and HTM to reduce interest-rate risk and increase financial flexibility. Moreover, it was those banks that characteristically maintained portfolios that exposed the bank to higher interest-rate risk that shifted the portfolio to a somewhat lower-risk position. These same researchers cite Beatty as having examined bank holding companies and suggesting that those banks that maintained portfolios with longer maturities were more likely to shift the maturity structure of the portfolio upon SFAS 115 adoption. Although we did not look at the portfolio structure of the banks in our study, it would follow that the investments sold were longer-term securities with fixed interest rates.

In earlier research, Papiernik et al. (2003) looked at the effects on bank capital, securities classification and portfolio spreads from SFAS 115. They report that economic effects of SFAS 115 adoption appeared to have resulted in significantly lower portfolio spreads and portfolio yields for all banks. They explain that while this may reduce interest-rate risk, decreased portfolio spreads and yields represent an economic cost to the bank. In our study, we believe that banks were searching for higher yields to mitigate the earnings impact from the flat yield curve. Thus, if this assumption is correct, then there would have been a trend from lower- to higher-yielding securities during recent restructuring, opposite from the general trend observed during the adoption of SFAS 115 during the mid-1990s.

In the next section, we discuss a bank's sources of revenue and the importance of interest income from the investment portfolio. Ostensibly, one reason for restructuring is to help a bank's future interest income. Barth et al. (1995) segregated the interest revenue component from other bank earnings and found a strong link to a bank's yearend share price. Our research not only considered returns at yearend, but also monthly returns following the restructuring.

UNDERSTANDING A COMMUNITY BANK'S SOURCE OF REVENUES

As a frame-of-reference, the revenue stream for a typical business selling one or more products is a summation of the revenue generated for all products sold. Each product's revenue is simply the retail price of the product (P_i) times the quantity sold (Q_i), and the total revenue can be annotated as:

$$\text{Total revenue} = \sum_{i=1}^{n} P_i Q_i$$

where i = ith product, n = total number of products sold by the firm.

However, in the case of a bank, the revenue equation is distinctly different; it is comprised of two primary terms: net interest income and noninterest income. For banks with assets of $5 billion or less, the median split between net interest income and noninterest income for 2006 was 84 percent/16 percent.

Although net interest income is the dominant revenue source, there has been much attention on community banks' ability to grow noninterest income over the last 10 years, such as by offering securities and insurance services. In 1999, Congress passed the Financial Services Modernization Act; this served to catalyze the pursuit of fee income. This act, also known as the Gramm-Leach-Bliley Act, enabled banks to merge with one another and to purchase financial service firms, with less likelihood that particular businesses would have to be divested.

Madura (2008) compares the growth in banks' noninterest income from 1984 to 2003 for small, medium, large and money center banks. There is an obvious degree of volatility in the trend lines, but in all cases the general trend is upward sloping. For example, the trend for small banks (defined as banks with total assets less than $300 million) shows noninterest income (as a percentage of total assets) rising from approximately 0.7 percent in 1984 to over 1.2 percent in 2003. Note that income from loan sales is one component of noninterest income that can be sensitive to the interest-rate environment and can produce volatility. Nevertheless, one reason that banks pursue noninterest income is that these sources of income are usually less sensitive to changes in interest rates compared to net interest income. Recently, banks have been challenged by a flat yield curve that tends to squeeze their margins. This has put added pressure on noninterest income growth.

Despite the growth in noninterest income in the banking industry, net interest income is still by far the dominant source of revenue. While some might see bank mergers as a way to extend a bank's product and service offering, they also are occurring because some banks are struggling with growing net interest income organically. Net interest income is sensitive to changes in interest rates, growth or decline of bank assets, credit deterioration and other factors. While the margin from a bank's loan portfolio is typically the largest component of net interest income, the margin on investments is also usually significant. It is likely that competitive forces will push banks to work hard at squeezing as many profits from the investment portfolio as possible. It is this quest of incremental returns that has prompted portfolio restructurings.

Function of the Investment Portfolio

After the loan portfolio, the investment portfolio is the second largest earning asset class on the balance sheets of community banks. While banks manage their loan portfolios with profit maximization in mind, this is not always the case for the investment portfolio. This does not mean that a bank would manage its portfolio to be unprofitable; rather, there are competing roles for the portfolio. Walker (2004) lists the roles and objectives for a community bank's portfolio:

1. Generate interest income;
2. Assist in the management of liquidity;
3. Help manage interest-rate and credit risk;
4. Satisfy pledging requirements for certain liabilities; and
5. Assist with management of tax liabilities.

The priority of the above goals and objectives depends on other aspects of the bank's operation, such as the loan portfolio. For example, when a bank has a large allocation to commercial loans, it might decide to limit credit risk in the investment portfolio to balance the risk in the loan portfolio. Even more limiting, potentially, a need for liquidity can curtail both the credit premium and duration permitted for investments, which reduces yield and expected return. Ultimately, the portfolio objectives pursued correlate to expected return on the portfolio.

Bank regulators require institutions to create an investment policy that outlines the practices and procedures that will be followed by management. Policy contains guidelines and constraints, such as the permissible asset classes and allocation targets. As Strong (2006) states, investment policy is "a long-term concept." In contrast, investment strategy "deals with short-term activities that are consistent with established policy and that will contribute positively toward obtaining the objective of the portfolio."

Given the competing goals and objectives listed above, it should come as no surprise that some banks are more focused on producing income from their portfolios than others. It is those banks that are more

likely to restructure their portfolios in order to increase the return from their investments. This is not to say that banks with less emphasis on income won't restructure. In fact, some banks might use restructuring as a way to reduce interest-rate risk if greater interest-rate volatility is expected or to increase liquidity when loan demand increases. Our research examines whether restructuring improves shareholder returns, as a result of increased earnings or reduced risk. However, it is not always evident from public statements as to why the portfolio has been restructured and/or losses taken.

Using the NPV Framework to Analyze the Restructuring Decision

It might be helpful to analyze the restructuring of a portfolio like a traditional net present value (NPV) investment decision where a company makes a capital outlay today for a project that is expected to boost cash flow in the future and produce a positive NPV. In the case of a portfolio restructuring decision, a bank might decide to incur a loss on its investment portfolio to attempt to improve its future cash flow by selling securities with below market yields and purchasing higher-yielding investments. The bank has at least two choices. It can simply reinvest the proceeds from the sale of securities, or it can decide to reinvest the proceeds plus an amount that makes up for the total capital loss. This decision has cash flow implications. From a cash flow standpoint, the loss itself is not a negative cash flow. If a bank simply turns around and reinvests the proceeds from the sold securities into higher-yielding securities, the bank might attempt to increase its future cash flow without a net cash outlay. This differs from the scenario where a company makes an investment, such as purchasing a piece of equipment or building a plant, to improve cash flow. However, if the bank wants to increase the level of investment to the initial amount to offset the loss, then the bank would incur a cash outlay that equals the capital loss, net of the tax break on the capital loss.

For example, suppose a bank is going to restructure a block of securities that originally cost $20 million. Further, suppose it expects to sell the investments for, let's say, $19.75 million. This would generate a positive cash flow of $19.75 million, plus a tax benefit from the loss. The loss would be recorded on the income statement. For accounting reasons, banks are not supposed to sell securities with held-to-maturity designation; thus, our example assumes that the securities are categorized in the available-for-sale category and can be sold with minimal or no regulatory scrutiny. Ignoring the tax impact to the reinvestment, the bank would have a subsequent outflow of $19.75 million when it purchases new securities for the portfolio, for a net upfront cash flow of $0. If, however, the bank wanted to reestablish the full $20 million initial investment, then it would need to add another $250,000 to the cash outlay to offset the loss on the sale. The resulting income stream from the new investments would, of course, reflect the bank's decision to reinvest the $19.75 million or to make up the difference and invest the full $20 million.

A bank that elects to reinvest only the $19.75 million needs to compare the new cash flow resulting from the new securities to the cash flow prior to the sale. The "bought income," as bankers sometimes term it, will be the new yield on the $19.75 million investment, while the "sold income" will be the old yield on the sold securities in the amount of $20 million. Although the prior market value on the investments had dropped to $19.75 million, the principal and coupon income before the sale was based on the original $20 million investment. The upfront cash flows cancel out, as the $19.75 million received from the sale is fully reinvested. In contrast, if the bank decides to reestablish the original $20 million investment, there will be a $250,000 cash outflow at the time of restructuring. That incremental investment will produce incremental yield income. Obviously, a total investment of $20 million can be expected to generate a higher yield income than a reinvestment of $19.75 million.

From an NPV standpoint, it appears that if the bank simply reinvests the $19.75 million from the proceeds of the sold securities, there is no net outflow. If the resultant cash inflow from the new securities exceeds the foregone inflow from the sold securities, then the decision made sense, right? What cannot be forgotten is that the "underwater" block of securities that was sold would have approached par value as it trended toward maturity. Thus, there would be a smaller cash flow at maturity that would occur after a $19.75 million reinvestment than if the original $20 million had been allowed to reach full maturity. A rigorous cash flow analysis would need to account for the entire impact that restructuring would have on the cash flows. However, that would be difficult to assess, as securities would be maturing at different times and coupon payments would differ between securities. Nevertheless, a thorough NPV analysis—something that community banks rarely do—would need to account for all changes to interest and principal cash flow payments in order to justify restructuring from an NPV standpoint.

Decisions Which Have Negative NPVs

We do not believe that a negative NPV would necessarily deter a bank from restructuring, despite what finance theory predicts. Our experience with small- to medium-sized banks shows that many of these institutions manage their net interest income as a "spread business." What this means is that they work to maximize the spread and margin between the yield on assets and the rate paid on liabilities (deposits and borrowings). So if they need to incur some "negative NPV" to help them widen their spread, this would not be a concern to them. During the many years that we have consulted with banks, we have never once heard a CFO or CEO concern himself with NPV or internal rate of return (IRR). This is not to say that larger banks, such as Bank of America, don't use traditional methods to select projects. Our experience is primarily with banks less than $2 billion in assets.

Aside from the behavior we have seen in banking, there are other instances discussed in the literature when a firm would consider a negative NPV. Black and Scholes (1973), who are best known for their work on option pricing, draw a parallel between a levered firm and a European call option. There are six variables that affect a European option's value, including the strike price, time to expiration and the volatility of the underlying stock. Gavish and Kalay (1983) state that "stockholders can choose projects with negative net present value just because of their high risk." The risk, of course, is measured by the variance of future outcomes.

Stulz (1990) did research looking at firms with atomistic shareholders that are not able to observe the firm's cash flow and investment decisions. Under a scenario where management's perquisites increase as investment increases, it is possible to see the selection of negative NPV projects. This will depend on whether there is "free cash flow" available. Stulz references work done by Jensen (1986) four years earlier where he defines free cash flow as the cash flow that is left over after all positive NPV projects have been exhausted. In Jensen's research he argues that free cash flow "creates an incentive to over-invest." Thus, while selecting negative NPV projects is not consistent with the maximization of shareholder wealth, there are instances when it occurs.

Pressure on Profits and the Incentive to Restructure

To fund asset growth, banks borrow money through the retail market from depositors and the wholesale market from other financial institutions. Many depositors in the retail market are less rate-sensitive, which enables banks to accumulate blocks of low-cost funding. In contrast, the wholesale market is extremely competitive and typically charges more for funds than the retail market. Banks that are able to obtain most of their funding from the retail market have a distinct cost advantage and tend to see higher buyout premiums if the bank is sold. There can be a wide range of rates paid within the block of deposit funding; demand deposits are least expensive, while longer-term CDs offer rates that are similar to the rates found in the wholesale market.

Banks primarily use these borrowed funds to underwrite loans—typically, real estate, consumer and commercial loans. Again, like the wholesale funding market, the pricing on loans is usually very competitive. In addition to loans, a bank normally has a significant investment portfolio that can represent as much as 50 percent or more of the bank's assets. Loans and investments generate the lion's share of the bank's interest income; the cash-equivalents and nonearning assets on the balance sheet provide very little to the bank's bottom line.

Net interest income, before provisioning for loan losses, is typically the largest component of the bank's revenue, as mentioned in an earlier section of this article. Net interest income is measured in units of dollars, yet there are two ratios that are commonly used to measure a bank's net interest income performance: net interest margin and net interest spread. These ratios track the difference between the average yield on earning assets and cost of funds. All else equal, profits increase as a bank's spread and margin widen.

Assets and liabilities are priced off the Treasury yield curve and the London Interbank Offer Rate (LIBOR) swap curve, two standard interest-rate benchmarks. Banks tend to use shorter duration funding and longer duration assets in order to maximize their margins and spreads at any point in time. Therefore, the slope of the yield curve reflects banks' incremental margins and spreads at any point in time. Fabozzi (2007) reports that some market participants use the difference between the 2-year and 30-year Treasury yields to measure slope, while others use the 3-month yield instead of the 2-year yield as the short rate. If there is a steep slope, then

there is a lot of spread. If the yield curve is flat, there is no spread. There can be quite a variation in the steepness of the yield curve, which means that there can be a lot of variation in banks' incremental spreads over time. For example, Fabozzi reports that the difference between the 2-year and 30-year Treasury was 348 basis points in September and October 1992. Eight years later, in 2000, the yield curve slope was minus 65 basis points.

The impetus for restructuring a bank's investment portfolio ties back to what happened to the yield curve starting around April 2004 when the slope started to decline. Table 1 shows the slope in the yield curve at the end of 2003, 2004, 2005 and 2006. By the end of 2006 the slope was less than one basis point, down from a generous 325.4 basis points just three years earlier.

Table 1
U.S. Treasury Yield Curve Data

End of:	30-Year Yield (%)	2-Year Yield (%)	Yield Curve Slope (bp)	Basis Point Change
2003	5.073	1.819	325.4	N/A
2004	4.826	3.065	176.1	-149.3
2005	4.535	4.400	13.5	-162.6
2006	4.810	4.808	0.2	-13.3

In order to generate a spread, a bank tries to position its liabilities at the short end of the yield curve (1-5 years) and its assets in the intermediate (5-10 years) and long end (greater than 10 years) of the yield curve. This mismatch in maturities usually produces a positive spread and is the reward for assuming interest-rate risk. The data in Table 1 show that the reward for assuming interest-rate risk evaporated in three years, after having been very generous.

When the yield curve is flat, a bank can still make a spread, but it is harder. First, banks are able to obtain "core" deposits—DDAs, savings, MMDAs, and CDs with small denominations. Banks have historically paid rates that are lower than true money market rates, although consumers are becoming wiser as they "shop" for high rates, sometimes using the Internet in their search. This has forced banks to be more competitive with their rates. Nevertheless, there continues to be money sitting in DDAs and savings accounts with very low interest rates, helping banks make a spread. The second way to make a spread is to take credit risk on the asset side. The more credit risk, the greater the spread relative to the risk-free rates depicted by the Treasury curve. Again, though, credit spreads have narrowed concurrently with yield curve spreads, compounding the difficulty of turning a profit from net interest income.

Many banks have struggled to grow earnings in line with budgets over the last couple of years. Recently, there was an April 12, 2007 press release through SNL Financial by Jonathan Flax where he reported that "AG Edwards expects small and mid-cap banks to report year-over-year EPS growth of only 1.3 percent, owing largely to margin pressure and decreasing loan and deposit volume." These sorts of news stories are ubiquitous. These economic conditions have forced bank management to cut costs and to do anything possible to eke out another basis point or two in their spreads. If the bank holds investments in the available-for-sale account that are producing a below market yield, the temptation has been to "restructure" the portfolio by selling securities that are "underwater" and replacing them with higher-yielding securities. From a forward looking perspective, this will enhance a bank's spread.

When banks elect to restructure, an asset swap is not always the course of action taken. Sometimes a bank decides to "deleverage" the balance sheet. The justification is to use the proceeds from the sale of securities to prepay the funding that is costing them a rate of interest that exceeds the yield on the securities sold. From a pure spread standpoint, this makes sense. For example, a bank can sell securities that yield 4 percent and eliminate borrowings that are costing 5 percent. The incremental spread is minus 1 percent in this example, a losing asset/liability combination. What is often ignored is the loss on the securities and the prepayment penalty levied on the borrowings. The press release below from First Mariner Bancorp is representative of the announcements made by some banks when they restructured:

Press Release

First Mariner Announces Balance Sheet Restructuring, Provides Additional Quarterly Updates

Company Release - 12/22/2006 16:30

BALTIMORE, Dec. 22 /PRNewswire-FirstCall/ -- First Mariner Bancorp (Nasdaq: FMAR), parent company of First Mariner Bank and Finance Maryland, announced today that it has completed a balance sheet restructuring through the sale of investment

securities and the repayment of borrowings. The restructuring will significantly enhance future financial performance by reducing the level of lower yielding securities and decreasing the level of higher cost wholesale funding.

METHODOLOGY AND RESULTS

Sources of Data

The data used for this research was obtained from SNL Financial. The SNL database was screened for banks with assets less than $5 billion in order to focus on community banks and thrifts. There is no clear definition of a "community bank." Christine Walika, Director of American Bankers Association's Community Bank Council, is quoted as saying, "We don't even have a definition" (Giegerich, 2005). The key fields of data obtained were bank name and location, gain/loss, and the size of the securities portfolio. In addition, we decided to create a ratio that shows the relative size of the loss, found by dividing the gain/loss on sales of securities by total investment securities.

We decided that it was more relevant to rank each bank by the relative size of the loss rather than the absolute size. This changes the ranking. For example, in the 4Q06, the bank with the largest loss from the sales of securities was Oriental Financial Group, with a loss of $19.8 million. As a percentage of investments, this loss was 0.66 percent. The second largest loss was realized by Yardville National Bancorp at $6.5 million. As a percentage of investments, this loss was 1.31 percent, nearly double the percentage loss recorded by Oriental Financial Group.

SNL Financial also has a repository of press releases for financial institutions listed on an exchange or pink sheet. However, accurate information about pink sheet stocks can be difficult to obtain because many do not file financial reports with the SEC. We searched for and reviewed press releases for banks that took sizable losses to see if we could uncover an explicit restructuring announcement. Often, firms will alert the market to actions that will significantly impact earnings. Indeed, in some instances where large losses were taken, a press release was found. In other cases, there was no mention of the loss.

The methodology was to identify banks that restructured their portfolios by (1) finding a significant loss taken in the fourth quarter of the year and (2) confirming the restructuring by a press release. Then, we analyzed the bank's stock performance by comparing its prior and post performance relative to the announcement. We considered the stock performance from the end of the quarter in which the restructuring occurred. Ideally, we felt that a two-year look-back versus a two-year look-forward comparison should be used. However, most of the restructuring has occurred within the last two years in 4Q05 and 4Q06, so our look-forward data is limited.

The Restructuring Sample

We searched through the SNL database and found 21 banks which had announced investment portfolio restructurings in the last three years. The banks, their ticker symbols, and restructuring quarter can be found in Table A in the Appendix.

We obtained monthly stock prices for the restructuring sample banks for the period from January 2000 through June 2007 from *Yahoo! Finance* and calculated the monthly total returns (dividends reinvested) for each bank. We then calculated the average monthly returns before the restructuring and the average monthly returns after the restructuring. These data can be found in Table A in the Appendix.

Since our stock price data comes from the Internet source *Yahoo! Finance*, we were heartened by recent research presented by Clayton, Jahera, and Schmidt at the Southern Finance Association annual meeting in 2006, showing that such on-line sources are as reliable as data from the traditional source the Center for Research on Security Prices (CRSP). (This research is forthcoming in *Advances in Investment Analysis & Portfolio Management*.)

To determine if the mean change in the monthly stock returns was statistically negative, we conducted a dependent sample test of mean differences as described below.

Hypotheses:

$$H_0 : \mu_D \geq 0 \qquad H_a : \mu_D < 0$$

Test Statistic:

$$t = \frac{\bar{x}_D - \mu_D}{s_D / \sqrt{n_D}} \qquad \bar{x}_D = \frac{\sum x_{iD}}{n_D}$$

$$s_D = \sqrt{\frac{\sum (x_{iD} - \bar{x}_D)^2}{n_D - 1}}$$

where:

μ_D is the hypothesized population mean difference in returns, for this study this is zero,

x_{iD} is the difference in returns for the *i*th bank,

$\bar{x}_D$ is the mean of the sample differences,

s_D is the standard deviation of the sample differences, and

n_D is the sample size.

The results of the hypothesis test are shown in the restructuring sample column of Table 2 below. The restructuring sample banks suffered a mean loss in stock returns of 1.80 percent or 180 basis points per month.

Table 2
Hypothesis Test Results for Sample Means

	Restructuring Sample	Control Sample One	Control Sample Two
Sample Mean	-1.80%	-2.55%	-2.61%
Standard Error	0.48%	0.77%	0.50%
t-Statistic	-3.7881	-3.3101	-5.2630
p-Value	0.0006	0.0017	0.0000

However, the period 2004 to 2007 has not been kind in general to the holders of bank stocks. We obtained two indices of bank stock performance, a NASDAQ bank index and the America's Community Bankers' index covering the January 2000 to June 2007 time frame from the NASDAQ.com website, and calculated average monthly total returns for the same time intervals observed in our restructuring sample. These data are also shown in Table A. It can be observed that both indices are down for the relevant periods.

The Control Samples

For comparison to the restructuring sample, we randomly selected a control sample. This was done using the same SNL database of banks in which the restructuring sample banks were found and using a table of random numbers to select banks based upon their key identifier numbers in the database. The banks were selected from reporting years in the same proportion as the announcement years of the restructuring banks. We then followed the same process as before: calculate monthly stock prices, monthly total returns, mean returns before and after "restructuring," and hypothesis tests of the mean differences. The somewhat surprising results are presented above in Table 2: the *control sample banks had larger stock return losses than the restructuring banks.*

For thoroughness, a second control sample was selected using a slightly different random-selection technique and the above process was repeated a third time. Those results, again contained in Table 2 above, are consistent with the first control sample.

Testing the Samples for Significance

Having found that the restructuring sample outperformed the two control samples by 75 basis points per month and 81 basis points per month, respectively, we tested to determine if the differences were statistically significant.

Hypotheses:

$$H_0 : \mu_1 - \mu_2 = 0 \qquad H_a : \mu_1 - \mu_2 \neq 0$$

Test Statistic:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

where: $\mu_1 - \mu_2$ is the hypothesized difference in populations' mean returns, and $\bar{x}_i$, s_i, and n_i are the sample mean returns, the standard deviations of the sample mean returns, and the sample sizes for the restructuring and control samples, respectively.

The results of these hypothesis tests are shown in Table 3 below.

Table 3
Hypothesis Test Results for Difference of Means

	Restructuring Sample versus Control Sample One	Restructuring Sample versus Control Sample Two
Difference of Means	0.75%	0.81%
Standard Error	0.90%	0.69%
t-Statistic	0.8290	1.1780
p-Value	0.4169	0.2526

While the negative mean returns were all statistically significant (Table 2) the *differences* in monthly returns are not statistically significant, and it cannot be claimed that the benefits of the restructurings were not merely due to chance.

A Possible Size Effect

There are suggestions in the practitioner literature that investment portfolio returns might be directly related to bank size. For example, using the loan loss provision as the proxy, Papiernik (1997) drew the conclusion that "earnings management was a concern more so for the small size banks." If this effect is adequately large in our samples, a two-way analysis of variance might detect the size effect and show that the return differences are statistically significant when corrected for size.

For our two-way ANOVA the *block* variable is each bank's total assets, and the *treatment* variable is whether or not the portfolio was restructured. Total assets for each bank were obtained from the SNL database and the differences in returns were sorted by increasing total assets for each sample. Thus, banks of similar size are paired in the two-way ANOVA. This technique tests two pairs of hypotheses simultaneously:

Hypothesis tests for two-way ANOVA

Test for differences in size

H_0 : the block means (size) are equal

H_a : the block means (size) are unequal

$$Test\ statistic: F = \frac{Mean\ square\ (size)}{Mean\ square\ (error)}$$

Test for differences in returns

H_0 : the treatment means (restructuring) are equal

H_a : the treatment means (restructuring) are unequal

$$Test\ statistic: F = \frac{Mean\ square\ (return)}{Mean\ square\ (error)}$$

We used Excel's two-factor ANOVA function to perform the analysis and the ANOVA results are presented in Table 4 below. As can be seen in the table, neither the size nor the restructuring effect is statistically significant.

Table 4
Analysis of Variance: Control One Sample

Restructured versus Control One Sample Banks					
Source of Variation	**SS**	**df**	**MS**	**F**	**p-Value**
Difference in Total Assets	0.0182	20	0.0009	1.1218	0.3998
Difference in Pre- and Post-Returns	0.0006	1	0.0006	0.7236	0.4050
Error	0.0162	20	0.0008		
Total	0.0350	41			

Table 5
Analysis of Variance: Control Two Sample

Restructured versus Control Two Sample Banks					
Source of Variation	**SS**	**df**	**MS**	**F**	**p-Value**
Difference in Total Assets	0.0080	20	0.0004	0.9834	0.5147
Difference in Pre- and Post-Returns	0.0000	1	0.0000	0.0000	0.9982
Error	0.0081	20	0.0004		
Total	0.0161	41			

CONCLUSIONS AND IDEAS FOR FUTURE RESEARCH

This research originated when we learned that bankers were being advised to restructure investment portfolios that were returning below-market yields. Superficially it would be difficult to justify this practice on the basis of a rapid improvement in the bank's stock. One might be easily convinced that locking in unrealized losses would further depress the bank's stock.

However, our results do not indicate that such a restructuring lowers stockholder returns relative to bank industry returns as a whole, and our research hints that shareholders may in fact benefit from such restructurings.

We looked at 21 instances where community banks restructured their investment portfolios during the fourth quarter of 2004, 2005 or 2006. We identified those banks by screening for banks showing a portfolio loss in the fourth quarter and then finding a public announcement from management

that restructuring in fact did occur. We found many banks that took securities losses, but few of these banks made a public announcement that they had restructured.

The flattening of the yield curve that began during 2004 has created a difficult interest-rate environment for banks to operate. Traditionally, banks mismatch their assets and liabilities to earn a spread. With the flattening yield curve, this has made it tougher for banks to maintain their spreads. It appears that banks restructured their portfolios in a vain attempt to increase profits and the value of their stock. Others were looking to reduce interest-rate risk; but that, too, could be an attempt to increase stock value.

Our research looked at whether or not restructuring benefited those banks. We found that there was an economic gain from restructuring, as monthly bank returns were 75 basis points to 81 basis points higher for those banks that restructured relative to two control samples that we tested. However, we could not show that the gain was statistically significant, so our results are inconclusive. Our sample size of 21 banks is small; thus, further research could look at a larger sample size. We selected banks that had a separate restructuring announcement. It is conceivable that banks discuss their restructuring in their annual reports, without making a formal announcement to the markets.

There is research that suggests that larger banks behave differently than smaller banks in regards to financial management decisions. In order to test for a size effect, we conducted a two-way analysis of variance that used size as the block variable and whether or not a bank restructured as the treatment variable. Neither the size nor the restructuring effect was found to be statistically significant.

As this paper is being written, the U.S. Treasury yield curve is assuming the more standard positive slope. We plan to revisit these issues in a year or two with the expectation that riding the yield curve under those circumstances can indeed be shown to be beneficial.

The data is limited post restructuring, particularly for those banks that did their restructuring in the fourth quarter of 2006. Future research can attempt to identify and analyze more banks that restructured and to analyze results over a longer time frame. Based on our study, we cannot provide statistical evidence that restructuring is beneficial to shareholders in terms of monthly stock returns. Although the economic benefit appears compelling.

Given our findings, the implication for financial managers of banks is to not restructure the portfolio even when a significant portion of the investments are below market value. Of course, if the undervaluation is due to credit deterioration, then it might be prudent to take action in order to enhance the credit quality of the portfolio. However, this research focused on situations where the undervaluation was likely due to interest-rate differentials between the yields on a bank's securities versus current market yields. (Our analysis considers decisions that were made well before the subprime debt debacle started to unfold.) Unless future research can verify the economic benefit to restructuring, a bank manager would likely be making a good decision by simply allowing bonds with capital losses to reach maturity, at which time their values would return to par, unless there were a default.

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Table A
Restructuring Sample and Comparison Indices

Bank	Ticker Symbol	Restructuring Quarter	Stock Return		NASDAQ Bank Index Return		ACB Index Return	
			Before	After	Before	After	Before	After
Ameriana Bancorp	ASBI	4Q 2006	0.65%	-2.95%	0.92%	-0.23%	0.65%	-0.77%
CoBiz Inc.	COBZ	4Q 2006	1.99%	-2.78%	0.92%	-0.23%	0.65%	-0.77%
First Ipswich Bancorp	FIWC	4Q 2006	-1.74%	2.00%	0.92%	-0.23%	0.65%	-0.77%
First Litchfield Financial Corporation	FLFL	4Q 2006	0.92%	-1.62%	0.92%	-0.23%	0.65%	-0.77%
First Mariner Bancorp	FMAR	4Q 2006	1.71%	-4.75%	0.92%	-0.23%	0.65%	-0.77%
Lakeland Bancorp, Inc.	LBAI	4Q 2006	1.31%	-0.80%	0.92%	-0.23%	0.65%	-0.77%
Legacy Bancorp, Inc.	LEGC	4Q 2006	1.27%	-0.79%	0.92%	-0.23%	0.65%	-0.77%
Oriental Financial Group Inc.	OFG	4Q 2006	0.93%	-0.70%	0.92%	-0.23%	0.65%	-0.77%
Rurban Financial Corp.	RBNF	4Q 2006	0.08%	2.76%	0.92%	-0.23%	0.65%	-0.77%
Security Bank Corporation	SBKC	4Q 2006	1.70%	-1.59%	0.92%	-0.23%	0.65%	-0.77%
Yardville National Bancorp	YANB	4Q 2006	2.01%	-0.78%	0.92%	-0.23%	0.65%	-0.77%
Banner Corporation	BANR	4Q 2005	1.95%	1.10%	1.01%	0.18%	0.82%	0.03%
ESB Financial Corporation	ESBF	4Q 2005	1.36%	0.25%	1.01%	0.18%	0.82%	0.03%
First Charter Corporation	FCTR	4Q 2005	1.31%	-0.09%	1.01%	0.18%	0.82%	0.03%
First Financial Bancorp.	FFBC	4Q 2005	0.41%	-0.48%	1.01%	0.18%	0.82%	0.03%
MainSource Financial Group, Inc.	MSFG	4Q 2005	1.40%	0.39%	1.01%	0.18%	0.82%	0.03%
Northway Financial, Inc.	NWFI	4Q 2005	0.96%	0.42%	1.01%	0.18%	0.82%	0.03%
Peoples Community Bancorp, Inc.	PCBI	4Q 2005	1.33%	-1.01%	1.01%	0.18%	0.82%	0.03%
Capitol Bancorp Ltd.	CBC	4Q 2004	2.60%	-0.17%	1.25%	0.03%	4.16%*	0.01%
Hilltop Community Bancorp, Inc.	HTBC	4Q 2004	0.87%	-0.61%	1.25%	0.03%	4.16%*	0.01%
Midwest Banc Holdings, Inc.	MBHI	4Q 2004	1.92%	-0.67%	1.25%	0.03%	4.16%*	0.01%

* The America's Community Bankers' index originates in December 2003 but is only publicly available beginning in August 2004. Thus, these returns are for four months from August 2004 through December 2004.

Table B
Control Sample One

Bank	Ticker Symbol	"Restructuring Quarter"	Stock Return	
			Before	After
Bridge Bancorp, Inc.	BDGE	4Q 2006	1.11%	0.44%
Crazy Woman Creek Bancorp Incorporated	CRZY	4Q 2006	1.37%	0.12%
Dearborn Bancorp, Inc.	DEAR	4Q 2006	-3.69%	2.06%
Ephrata National Bank	EPNB	4Q 2006	0.61%	2.09%
First Financial Bancorp.	FFBC	4Q 2006	0.39%	-1.71%
First National Lincoln Corporation	FNLC	4Q 2006	1.80%	-0.39%
Main Street Trust, Inc.	MSTI	4Q 2006	0.91%	-1.89%
Preferred Bank	PFBC	4Q 2006	2.47%	-0.14%
Premier Valley Bank	PVLY	4Q 2006	2.85%	-0.24%
S.Y. Bancorp, Inc.	SYBT	4Q 2006	1.51%	-2.09%
Security Bank of California	SBOC	4Q 2006	0.62%	-3.17%
Arrow Financial Corporation	AROW	4Q 2005	1.53%	-0.37%
County Bank Corp	CBNC	4Q 2005	0.62%	-1.42%
Diablo Valley Bank	DBVB	4Q 2005	2.95%	-0.19%
HF Financial Corp.	HFFC	4Q 2005	1.44%	0.38%
Highlands Bankshares, Inc.	HBKA	4Q 2005	1.30%	-0.01%
Sonoma Valley Bancorp	SBNK	4Q 2005	1.26%	1.85%
Team Financial, Inc.	TFIN	4Q 2005	1.03%	0.48%
Cascade Bancorp	CACB	4Q 2004	3.14%	1.52%
Center Bancorp, Inc.	CNBC	4Q 2004	2.39%	0.97%
Northeast Bancorp	NBN	4Q 2004	16.06%	-0.70%

Table C
Control Sample Two

Bank	Ticker Symbol	"Restructuring Quarter"	Stock Return	
			Before	After
Bay National Corporation	BAYN	4Q 2006	1.73%	-2.42%
Cadence Financial Corporation	CADE	4Q 2006	0.67%	-1.37%
Capitol Bancorp Ltd.	CBC	4Q 2006	2.11%	-7.35%
Central Pacific Financial Corp.	CPF	4Q 2006	1.85%	-1.63%
First Busey Corporation	BUSE	4Q 2006	0.77%	-1.57%
First Franklin Corporation	FFHS	4Q 2006	0.83%	0.93%
Home Financial Bancorp	HWEN	4Q 2006	1.55%	-1.63%
Independent Bank Corp.	INDB	4Q 2006	1.91%	-2.21%
Renasant Corporation	RNST	4Q 2006	1.59%	-3.01%
SCBT Financial Corporation	SCBT	4Q 2006	1.44%	-1.25%
Sterling Banks, Inc.	STBK	4Q 2006	1.53%	-4.22%
American River Bankshares	AMRB	4Q 2005	1.93%	1.04%
Delhi Bank Corp.	DWNX	4Q 2005	-1.14%	-0.59%
First Community Bancshares, Inc.	FCBC	4Q 2005	1.59%	0.36%
German American Bancorp, Inc.	GABC	4Q 2005	0.51%	0.61%
Glacier Bancorp, Inc.	GBCI	4Q 2005	2.45%	0.70%
Lexington B&L Financial Corp.	LXMO	4Q 2005	1.34%	0.45%
River Valley Bancorp	RIVR	4Q 2005	2.10%	0.06%
Alaska Pacific Bancshares, Inc.	AKPB	4Q 2004	1.67%	0.65%
CBT Financial Corporation	CBTC	4Q 2004	1.59%	-1.00%
Texas Capital Bancshares, Inc.	TCBI	4Q 2004	3.91%	0.47%

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