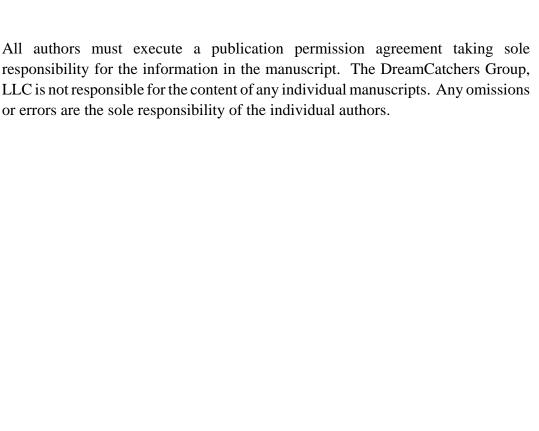# ACADEMY OF BANKING STUDIES JOURNAL

JoAnn and Jim Carland
Carland College
Co-Editors

Academy of Banking Studies Journal
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ACADEMY OF BANKING STUDIES JOURNAL

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LETTER FROM THE EDITORS

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The *ABSJ* was formerly known as the *Journal of Commercial Banking and Finance*. We have changed its name to more closely match its editorial mission, which is to publish theoretical and empirical manuscripts which further the disciplines of banking and institutional finance. The name change resulted in the issuance of a new ISSN, 1939-2230 effective with Volume 6. The former ISSN was 1544-0028. We have retained the numbering sequence for the issues, so this is Volume 7. The journal continues to follow its established policy of accepting no more than 25% of the manuscripts submitted for publication. All articles contained in this volume have been double blind refereed.

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JoAnn and Jim Carland
Carland College

**This is a combined edition
containing both
Volume 7, Number 1, and
Volume 7, Number 2**

Articles for Volume 7, Number 1

AN ANALYSIS OF REGIONAL BANKS' REPURCHASING BEHAVIOR

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ABSTRACT

Common stock repurchasing behavior of 78 publicly traded regional banks covering a three-year period (2003-2005) is examined in this study. Approximately 89% of banks in our sample repurchased stock during this period, and banks distributed 2.4 times more cash through repurchases than through dividends. The main objective of this study is to examine the impact dividends, stock valuation, debt, earnings and bank size have on the level of repurchases.

We first calculate the repurchase-to-total asset ratio and then rank firms by 1) dividend payout ratio, 2) price-to-book value ratio, 3) debt asset ratio, 4) return-on-asset ratio, and 5) total assets. The means of the first and fourth quartiles are compared, and we find that high ROA firms consistently have more active stock repurchasing programs.

A regression model is employed to examine the impact dividend distributions, stock valuation, debt, net income, and total assets have on the repurchase distribution. We find that net income (positive relationship) and total assets (negative relationship) help explain the variability of repurchases between banks. There is also some support for dividend distributions being positively associated with repurchases. This indicates dividends and repurchases complement each other. Banks tend to use both distribution methods and increase (decrease) them in tandem.

INTRODUCTION

U.S. companies began repurchasing shares of common stock in the mid-1980s, and this method of distributing cash to shareholders now rivals dividends. Grullon and Ikenberry (2000) report that 81% of firms initiating an equity cash distribution in 1998 chose to repurchase stock rather than pay a dividend. Also, more cash has been distributed to shareholders through repurchases than through dividends since 1998. Our sample of regional banks indicates that in the three-year period from 2003-2005 for each dollar paid out in dividends, $2.45 was distributed through share repurchases.

Banks cite various reasons for repurchasing stock. In July 2006, Sovereign Bancorp, Inc. announced plans to repurchase 20 million shares of common stock because of "financial strength," and it is the "best use of excess capital relative to other alternatives." In July 2005, Pacific Mercantile Bancorp announced plans to buy back 2% of outstanding shares because "the company's shares represent an attractive opportunity." In February 2005, the board of Banknorth Group, Inc. authorized the repurchase of 8% of outstanding shares primarily to "cover shares issued in the last six months upon the exercise of employee stock options." In each case above, several factors perhaps led to the decision to repurchase shares. For example, an unprofitable bank in all likelihood will have a difficult time finding the cash to repurchase shares no matter how attractive the stock price appears. An over-leveraged bank will lack the capacity to repurchase shares as it will lead to even higher leverage which may concern regulators.

Baker, Powell, and Veit (2003) survey top financial executives to learn their views concerning stock repurchases and find that stock valuation is a primary motive. Executives also believe that adjusting the firm's capital structure and avoiding dividend taxation are important factors.

Our paper seeks to determine why regional banks repurchase stock by examining financial characteristics. We focus on regional banks for several reasons. First, they regularly distribute cash to shareholders through repurchases and dividends. Second, certain measures, such as the price-to-book ratio and the debt-to-equity ratio, can vary significantly from one industry to the next due to industry specific factors. Thus, industry characteristics create lots of "noise" that would be difficult to filter out. By focusing on a cross section of regional banks we filter out this noise. Third, the banking industry has enough firms to generate a sample size large enough to run statistical tests and has been deemed "special." The industry has a unique and critical position in our economy and is under the watchful eye of examiners.

Regional banks' repurchases can also be considered a riskier proportion in the industry which is increasingly dominated by bigger banks. In addition, when a bank repurchases its stock, it has an impact on the bank's CAMELS ratings. Regulators use these ratings to identify the soundness of a bank and the ratings have a big impact on the bank's deposit insurance premiums. When a bank repurchases stock it directly impacts its capital adequacy. It could potentially impact its asset quality if a bank that is low on capital issues riskier loans in hopes of bolstering its capital.

Boudreaux, Payne and Rumore (1995) identify financial characteristics of banks that announce repurchase programs using multivariate analysis. They find that banks announcing a repurchase program tend to be more profitable, use less financial leverage, and have lower valuations than non-repurchasing banks. Howe and Jain (2005) find that banks announcing a repurchase program are often signaling better future performance as measured by ROA.

Our paper differs from these studies in several ways. First, we examine actual repurchases, not announced repurchases. Companies making an announcement are in no way obligated to buy a single share. Second, we look at the magnitude of the repurchase, not just whether the company

announced a repurchase program or simply was classified as a repurchasing firm. This allows us to determine which motivations have the greatest impact on repurchasing behavior. Third, we examine a more recent time period (2003-2005).

FACTORS AFFECTING SHARE REPURCHASES

Share repurchases have increased tremendously over the last three decades and much research seeks to explain repurchasing behavior. The primary determinants of repurchasing activity examined in this study include dividend distributions, stock valuation, financial leverage, profitability and bank size. Each of these is discussed below.

Dividend Distributions

Share repurchases have several advantages over dividends. First, share repurchases are more flexible than dividends because of few reputational penalties associated with the elimination of a repurchase program. Reducing dividends often leads to a significant reduction in the firm's share price (Denis, Denis, and Sarin, 1994). Second, repurchases are potentially more tax friendly than dividends. They are only immediately taxable to investors who sell shares, where dividends force taxes on all investors (except for those who hold shares in a tax deferred account).

Dividend distributions do have potential advantages over repurchases. Investors generally can count on the dividend distribution and view increases in the dividend as a credible long-term signal of bank health. Historically, banks have attracted a clientele that prefers dividends, and changing to a repurchasing program would likely upset this clientele and ultimately the stock price. Share repurchases and dividend distributions both deliver cash to stockholders. One might expect a tradeoff between the two. If dividends are set at a high level, repurchases will be lower holding all else equal. Alternatively, a more conservative approach would be to set dividends at a lower level and then distribute any excess cash through repurchases.

Stock Valuation

If information asymmetry exists, and management correctly believes the firm is undervalued, then repurchasing shares at prices below intrinsic value will benefit long-term shareholders. Bartov, Krinsky, and Lee (1998) find that equity undervaluation is an important determinant for a firm choosing an open market repurchase rather than a dividend increase. Also, Stephens and Weisbach (1998) find that share repurchases are inversely related to the previous quarter's stock return. The literature is fairly extensive in demonstrating that firms are motivated to repurchase shares due to perceived undervaluation (Dann, 1981; Vermaelen, 1981; Ikenberry and Vermaelen, 1996).

Banks with lower relative valuation measures may be more likely to perceive that they are undervalued and should be more likely to repurchase shares, holding all other things constant. Our proxy for perceived undervaluation is the price-to-book value ratio (PB). This is a commonly used valuation measure, however, it may also reflect growth opportunities. The idea is that investors have very low growth expectations from firms with low valuation measures. In either case one would expect the relationship between share repurchases and valuation to be negative.

PB is measured at the beginning of the period because a repurchase can send a positive signal to investors, who may respond by increasing the firm's market capitalization (Vermaelen, 1981; Dann, 1981). The repurchase can reduce or eliminate perceived undervaluation because of the signal it sends investors. Measuring the ratio at the beginning of the year eliminates the positive feedback effect that repurchases have on it.

PB is used instead of price to earnings (PE) for several reasons. First, if companies have negative earnings the PE ratio is useless. Second, earnings can be volatile and transitory which can cause the PE ratio to temporarily appear as an outlier.

Financial Leverage

Whether an optimal capital structure exists is debatable. However, theoretical analysis does suggest that bankruptcy costs, agency costs, and differences in personal and capital gains tax rates affect the choice of capital structure. Givoly, Hayn, Ofer and Sarig (1992) analyze capital structure changes following the Tax Reform Act of 1986 and conclude that changes in both personal and corporate tax rates impact financial leverage. Financial Leverage appears to matter to banks as they are all highly leveraged.

Regional banks can impact financial leverage through stock repurchases. Banks are among the most leveraged of all industries. By repurchasing shares banks return on equity (ROE) will increase further as compared with their return on assets (ROA). Banks also stand the risk of increased deposit insurance premiums and more regulator attention if their repurchases negatively impact their capital adequacy. Banks with an overabundance of financial leverage will face regulatory constraints and bear additional costs. A repurchase would be unlikely for an over-leveraged bank. As a proxy for financial leverage, we use a firm's debt-to-asset ratio (DA). We measure it at the beginning of the year in order to negate the effects the repurchase has on financial leverage, and expect it to be negatively related to repurchasing activity.

Free Cash Flow

Theory suggests that firms should follow a residual dividend model. Under this model companies first identify their optimal capital budget. Next, they determine the amount of equity needed to finance the identified capital projects. Equity requirements are met with retained earnings,

and any residual earnings are distributed to shareholders. Due to the permanent nature of a dividend, banks would ideally pay a conservative dividend. In good years banks will have surplus earnings (above the level needed to fund the equity portion of the capital budget and pay the dividend) and will be able to distribute the excess earnings to shareholders through share repurchases.

Size

Lakonishok and Vermaelen (1990) find that small firms have significantly higher average excess returns than large firms over a 22-month period following a tender offer announcement. This finding indicates that small firms can be significantly undervalued, management can recognize it, and long-term shareholders can benefit from a repurchase program. Lakonishok and Vermaelen (1990) attribute this market inefficiency to 1) less coverage by analyst relative to large firms and, 2) low liquidity, making it difficult for large investors to significantly benefit from undervaluation. Therefore, firm size may impact repurchasing behavior and smaller firms may rely more heavily on repurchases.

In an era where big banks have been acquiring their smaller brethren, control is an important issue. A dividend has no impact on the ownership structure. Alternatively, a repurchase consolidates control among those shareholders that do not sell shares. Smaller banks have more "predators" and control issues may be of greater importance. If this is the case we would expect to see a negative relationship between banks size and repurchases.

Other Factors

Ikenberry and Vermaelen (1996) predict that repurchase programs will appeal to firms having few growth opportunities. Firms with many investment opportunities need financing for asset acquisitions, and internally generated financing avoids flotation costs. Therefore, banks with excellent investment alternatives will find repurchasing shares less appealing. To some extent growth is imbedded in PB as noted earlier. Growth may also be reflected in the dividend distribution as firms with higher growth rates may pay lower dividends.

Repurchases may also be undertaken to remove a large block of stock that is "overhanging" in the market. The repurchase helps remove this block and thus frees the stock price so that it can rise.

Stock options held by company insiders also impact the repurchase decision. A cash dividend lowers the company's stock price when the stock goes ex-dividend. Alternatively, a repurchase raises (or at the very least does not lower) the company's stock price, assuming future earnings will not be impacted, as the number of shares outstanding decreases. Option value is negatively impacted by a dividend distribution. Company insiders who are acting in their own best

interest would prefer a stock repurchase to a cash dividend holding all else constant. This preference would be directly related to the magnitude of their options holdings.

DATA

The Dow Jones U.S. Regional Bank Index includes 91 companies. Each bank's 2003, 2004, and 2005 10-K reports were accessed on Edgar Online. The final sample includes 78 banks, as 13 banks were eliminated due to missing or incomplete reports.

Table 1 displays mean and median values for six variables for two groups: "Light Repurchasing Firms" and "Heavy Repurchasing Firms." Panel A examines the means and medians over the entire three-year period 2003-2005. The cutoff point between "light" and "heavy" is share repurchases exceeding 1% of total assets. Approximately 89% of the banks bought back some stock during this period. Overall, banks repurchased 1.37% of beginning assets during the entire period. Two of the means are significantly different. Light repurchasing banks had lower dividend payout ratios (10% level) and tended to be smaller (5% level).

Panels B, C and D of Table 1 show the means and medians for the variables for 2003, 2004 and 2005 respectively. The cutoff point between the groups is 0.33% of assets (1% divided by 3 years). Overall, banks bought back 0.42%, 0.39% and 0.44% of assets in 2003, 2004 and 2005. One constant is that Return on Assets is significantly higher for the heavy repurchasing banks in all years. Thus, repurchasing activity seems to be impacted by profitability. All other means are insignificantly different with the exception of the price-to-book value ratio in Panel B, which is higher for the heavy group.

Table 1: Descriptive Statistics for Light Repurchasing Banks (RTA ≤ 1%) and Heavy Repurchasing Banks (RTA > 1%)					
Panel A 2003-2005 (3-Year Period)					
Overall Mean RTA = 1.37%	Light Repurchasing Firms (≤1% of TA Repurchased) (37 Banks)		Heavy Repurchasing Firms (>1% of TA Repurchased) (41 Banks)		Difference in Means
	Mean	Median	Mean	Median	
Repurchase / Total Assets (%)	0.34	0.28	2.29	1.91	-1.95*
Dividend / Net Income (%)	34.90	37.48	44.08	42.39	-9.18***
Price / Book Value	2.45	2.28	2.61	2.29	-0.16
Debt / Total Asset (%)	91.16	91.42	90.87	91.20	0.29
Net Income / Total Assets (%)	4.23	4.24	4.58	4.33	-0.35
Log Total Assets (%)	9.23	9.18	9.77	9.63	-0.54**

Table 1: Descriptive Statistics for Light Repurchasing Banks (RTA ≤ 1%) and Heavy Repurchasing Banks (RTA > 1%)				

Panel B 2003

Overall Mean RTA = 0.42%	Light Repurchasing Firms (≤0.33% of TA Repurchased) (46 Firms)		Heavy Repurchasing Firms (>0.33% of TA Repurchased) (32 Firms)		Difference in Means
	Mean	Median	Mean	Median	
Repurchase / Total Assets (%)	0.09	0.03	0.89	0.74	-0.8*
Dividend / Net Income (%)	34.9	37.57	43.12	36.66	-8.22
Price / Book Value	2.34	2.24	2.80	2.50	-0.46**
Debt / Total Asset (%)	90.82	91.21	91.27	91.25	-0.45
Net Income / Total Assets (%)	1.23	1.21	1.38	1.43	-0.15***
Log Total Assets (%)	9.42	9.21	9.66	9.52	-0.24

Panel C 2004

Overall Mean RTA = 0.39%	Light Repurchasing Firms (≤0.33% of TA Repurchased) (47 Firms)		Heavy Repurchasing Firms (>0.33% of TA Repurchased) (31 Firms)		Difference in Means
	Mean	Median	Mean	Median	
Repurchase / Total Assets (%)	0.10	0.03	0.82	0.70	-0.72*
Dividend / Net Income (%)	37.79	38.46	45.52	42.42	-7.73
Price / Book Value	2.48	2.32	2.62	2.22	-0.14
Debt / Total Asset (%)	91.29	91.29	90.56	91.20	0.73
Net Income / Total Assets (%)	1.18	1.23	1.42	1.44	-0.24*
Log Total Assets (%)	9.67	9.53	9.62	9.21	0.05

Panel D 2005

Overall Mean RTA = 0.44%	Light Repurchasing Firms (≤0.33% of TA Repurchased) (40 Firms)		Heavy Repurchasing Firms (>0.33% of TA Repurchased) (38 Firms)		Difference in Means
	Mean	Median	Mean	Median	
Repurchase / Total Assets (%)	0.07	0.00	0.82	0.70	-0.75*
Dividend / Net Income (%)	42.14	37.75	42.28	44.83	-0.14
Price / Book Value	2.42	2.23	2.57	2.33	-0.15
Debt / Total Asset (%)	91.00	91.09	90.34	90.43	0.66
Net Income / Total Assets (%)	1.19	1.21	1.42	1.39	-0.23*
Log Total Assets (%)	9.71	9.50	9.76	9.33	-0.05

Notes: The table provides estimates of means and medians of six variables for light repurchasing banks and heavy repurchasing banks for the entire 3-year period 2003-2005 (Panel A), 2003 (Panel B), 2004 (Panel C) and 2005 (Panel D).

* significant at the 1% level
** significant at the 5% level
*** significant at the 10% level

UNIVARIATE ANALYSIS OF REPURCHASING DETERMINANTS

The relationship between open market repurchases and variables expected to influence the repurchase decision is first analyzed by ranking firms by a particular variable such as dividend payout ratio and then calculating the average Repurchase-to-Total Asset ratio (RTA) by quartile. Table 2 displays the results of this procedure.

Panel A indicates that firms in the lowest quartile according the price-to-book value ratio repurchased an average of 0.98% of their assets, while firms in the highest quartile repurchased an average of 1.94%. This difference is statistically significant at the 5% level. In Panel B the difference in the price-to-book value ratios is significant, but this difference in not evident in either Panel C or D. This is contrary to the undervaluation motive, but in this analysis the only factor held constant is firm size as the repurchase in divided by total assets.

Firms in the high ROA quartile have significantly higher repurchasing activity than the low quartile group in Panels A, C, and D. Thus the level of net income appears to be a factor in repurchasing activity. Dividend payout, financial leverage and firm size seem to be unrelated to repurchasing activity.

Table 2: The Mean Percentage Repurchase to Total Asset Ratio by Quartiles					
Panel A 2003-2005 (3-Year Period)					
Overall mean ratio: 1.37%	Quartiles				
	1	2	3	4	1-4
Dividend / Net Income (%)	0.87	1.82	1.48	1.29	*-0.43*
Price / Book Value	0.98	1.38	1.22	1.94	-0.96**
Debt / Total Asset (%)	1.45	1.24	1.55	1.22	0.23
Net Income / Total Assets (%)	0.71	1.50	1.59	1.70	-1.00*
Log Total Assets (%)	1.44	1.25	1.21	1.59	-0.15
Panel B 2003					
Overall mean ratio: 0.42%	Quartiles				
	1	2	3	4	1-4
Dividend / Net Income (%)	0.27	0.70	0.40	0.27	0.00
Price / Book Value	0.19	0.35	0.51	0.59	-0.40**
Debt / Total Asset (%)	0.37	0.35	0.54	0.43	-0.06
Net Income / Total Assets (%)	0.33	0.20	0.60	0.53	-0.20
Log Total Assets (%)	0.48	0.39	0.42	0.36	0.12

Table 2: The Mean Percentage Repurchase to Total Asset Ratio by Quartiles					
Panel C 2004					
Overall mean ratio: 0.39%	Quartiles				
	1	2	3	4	1-4
Dividend / Net Income (%)	0.30	0.51	0.40	0.32	-0.02
Price / Book Value	0.34	0.38	0.30	0.53	-0.19
Debt / Total Asset (%)	0.46	0.35	0.51	0.21	0.24**
Net Income / Total Assets (%)	0.18	0.29	0.43	0.68	-0.50*
Log Total Assets (%)	0.34	0.41	0.36	0.45	-0.11
Panel D 2005					
Overall mean ratio: 0.44%	Quartiles				
	1	2	3	4	1-4
Dividend / Net Income (%)	0.35	0.54	0.44	0.40	-0.05
Price / Book Value	0.36	0.47	0.39	0.52	-0.16
Debt / Total Asset (%)	0.42	0.49	0.53	0.28	0.14
Net Income / Total Assets (%)	0.26	0.36	0.40	0.74	-0.48*
Log Total Assets (%)	0.46	0.40	0.30	0.60	-0.14
Notes: This table displays the mean repurchase-to-total asset ratio by quartile. * significant at the 1% level ** significant at the 5% level *** significant at the 10% level					

MULTIVARIATE ANALYSIS OF REPURCHASING DETERMINANTS

A regression model is employed to examine the relationship between the dollars a bank distributes through the repurchase of common shares and five explanatory variables. Equation 1 displays these variables as dividend distribution, price-to-book value ratio, total debt, net income, and total assets. All variables except for the price-to-book value ratio are in millions of dollars.

$$(Repurchase) = a + b_1(Dividend) + b_2(P/BV) + b_3(Debt) + b_4(Net\ Income) + b_5(Total\ Assets) + e. \quad (1)$$

The results of the regression are shown in Table 3. The estimated coefficient for net income is positive and highly significant in 3 of the 4 time periods. The interpretation of the 2003-2005 coefficient estimate (column 2) is if net income increases by $1,000,000, repurchases would be

expected to increase by $340,000 holding the other factors constant. It makes sense that as this variable increases, repurchasing activity would also increase.

The other variable that is significant in 3 of the 4 periods is total assets. The relationship in all cases is negative and the interpretation for the 2003 coefficient is if total assets decrease by $1,000,000, repurchasing activity increases by $150,000. This suggests that smaller banks are more likely to find a repurchase advantageous. This could be explained by control issues. Smaller banks may be trying to consolidate control among fewer people/groups. Smaller banks may also have a tendency to believe their stock price is undervalued due to less coverage from analysts and institutional investors.

Table 3: Regression results				
Independent Variables:	Coefficient Estimates (2003-2005)	Coefficient Estimates (2003)	Coefficient Estimates (2004)	Coefficient Estimates (2005)
Constant	-83.25	-33.56	-0.88	-23.44
Dividend	0.41*	0.15	0.64*	0.12
Price to Book	19.05	5.43	-3.36	12.14
Debt	0.07	0.16*	0.01	0.04*
Net Income	0.34*	0.11	0.62*	0.48*
Total Assets	-0.07	-0.15*	-0.01*	-0.03*
R-squared	.858	.732	0.89	.746

Notes: This table displays estimates of the relation between share repurchases and variables likely to influence repurchasing activity. The dependent variable is total dollars distributed through the share repurchase over the entire period 2003-2005 and individually in 2003, 2004, and 2005. Coefficient estimates are in millions of dollars except for the price-to-book value ratio.
* significant at the 1% level

The coefficient estimate for dividend distributions is significant and positive in 2 of the 4 periods. In the 2003-2005 period, if we compare a bank that pays out $1,000,000 in dividends to one that pays nothing in dividends, the dividend payer is expected to repurchase $410,000 more in common stock. One thing the positive coefficient estimate indicates is that repurchases are not substitutes for dividends. If anything, a repurchasing program complements dividend policy.

Debt is positively related to repurchases in 2 of the 4 periods. In 2003, a $1,000,000 increase in a bank's debt would be associated with a $160,000 increase in stock repurchases. Thus, more debt in the capital structure would lead to less equity and more leverage. Theory would predict a negative relationship. If firms have too much financial leverage, repurchasing equity can only increase this problem. This is a conundrum.

The one variable that was insignificant in all periods is the price-to-book value ratio. This is a valuation measure and the relationship was expected to be negative. The theory is that firms perceiving undervaluation can benefit long-term shareholders by engaging in stock repurchasing activity. In essence they are hoping to repurchase shares below intrinsic value. No support for this theory is found here.

We tested for heteroskedasticity with visual inspection and it was present. This causes the OLS procedure to be inefficient and leads to incorrect standard errors. OLS estimates remain unbiased, consistent and asymptotically normal. The estimated coefficients are so significant that they can support much higher standard errors than OLS is providing, and thus we are confident that the model is strong.

Multicollinarity is not an issue. We calculated Variance Inflation Factors of around one for each of the independent variables. There was also no autocorrelation present due to the nature of the data (DW 2.3).

The regression model explains anywhere from 73% to 89% of the cross-sectional variation in repurchases. No other models were tested and maximizing R square was not the objective.

CONCLUSIONS

This paper examines the repurchasing activity of 78 regional banks during the period 2003-2005. Buying back common stock is a very important means of distributing cash to shareholders for regional banks. Approximately 89% of banks repurchased stock and 99% paid a dividend during this period. Also, for every dollar paid to shareholders through a dividend, $2.45 was paid through a repurchase. Banks distributed 1.27% of their total assets through repurchases during the three-year period.

Relationships between the repurchase-to-total asset ratio and dividend payout, stock valuation, financial leverage, profitability, and firm size were analyzed. The most significant and consistent result was that more profitable banks (as measured by ROA) have higher repurchasing ratios. This makes sense if one accepts that higher net income leads to excess cash. Under the residual dividend model if the excess cash is forecast, firms would pay it out as a dividend. However, if it is a surprise, or if the bank takes a conservative approach to dividend payouts, excess cash can be distributed through a repurchase.

A regression model was used to examine the impact dividend distributions, valuation, debt, net income and total assets have on the repurchase distribution. The results indicated that smaller banks with higher net incomes distribute more cash through a repurchase. Debt was negatively related and dividend distributions were positively related to repurchases in 2 of the 4 periods (statistically significant). The negative relationship between financial leverage and repurchases is somewhat of a conundrum. The positive relationship to dividends supports the idea that successful

banks tend to use both repurchases and dividends, and tend to increase the level of each of them in unison.

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MEASURING CREDIT RISK: DOES COMPLEXITY MATTER?

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ABSTRACT

This paper examines the issue of how to measure a company's ability to meet its external financing commitments. Success in this area is critical for businesses extending credit and is a topic of considerable interest yet with varied coverage in classrooms and business training rooms. A major component is finding an appropriate metric with which to evaluate the creditworthiness of borrowers. Given the level of importance placed on the topic in the world of credit and in academia, one finds a plethora of approaches with little consensus among them.

We review a variety of approaches to measure current and future liquidity and creditworthiness. Initial tests determine the relative strengths and weaknesses of the approaches with recommendations provided on how to best evaluate the topic, both in the classroom and in the practitioners' world. Of particular interest is the calculation of the various coverage ratios designed to measure the borrower's ability to meet its current and future financial obligations.

Results indicate that many of the key financial ratios used seem to follow very similar tracks. Extensive variations among the different formulations of the ratios appear to offer little additional insights. We are left with a call to solidify or refine the most straightforward approaches to evaluating credit as it appears that a simpler set of information to work with would allow for better analysis of the underlying reasons for any deviations or any volatility in said numbers.

INTRODUCTION

Measuring a company's ability to meet any external financing commitments is a topic that is critical to the success of businesses extending credit, such as commercial banks, and one of considerable interest in university classrooms and business training rooms. A major component of this topic is finding an appropriate metric with which to evaluate the creditworthiness of borrowers. Given the level of importance placed on the topic in the world of credit and in academia, one finds a plethora of approaches with little consensus among them.

This paper examines the variety of approaches used to measure a company's current and future liquidity and creditworthiness. Initial tests are performed to determine the relative strengths and weaknesses of some of the approaches with recommendations provided on how to best approach the topic, both in the classroom and in the "real-world." Of particular interest is the calculation of

the various coverage ratios designed to measure the borrower's ability to meet its current and future financial obligations.

OVERVIEW OF LIQUIDITY MEASUREMENT TOOLS

In lending and various other debt contracts, the providers of funds tend to place various conditions on the borrowers in order to protect their investment. Many of the conditions amount to debt covenants requiring the borrowers either to provide specific information or actions (positive covenants) or more likely restrict the borrowers' activities (negative covenants). Examples of positive covenants would include the requirement that a borrower provide timely, audited financial statements or ensure proper insurance of the assets being financed. Negative covenants may include restrictions on the payment of dividends or thresholds placed on particular financial ratios that the borrower may not exceed (or fall below). In fact, accounting-based covenants are quite common, although they are often instituted on a case-by-case basis. In one broad-based study, Dichev & Skinner (2002) examine the variety of lending terms most often found in the loan facilities. After their exhaustive study, they found the most common items found in debt covenants were debt-to-cash flow measures and both interest coverage and fixed charge coverage ratios

Unfortunately, there are difficulties in examining such measures in that they can be defined in a variety of ways. This variation of definitions is argued to be necessary given that lenders must often uniquely define financial statement variables as they customize loans to suit specific borrower characteristics (Leftwich, 1983). This does not preclude, however, the topic of addressing which approaches may be most meaningful. For example, many (most) finance and accounting textbooks include various credit ratios in their coverage of financial statement analysis with little consistency among the approaches. This is particularly the case for the fixed charge coverage ratio.

In most cases the fixed-charge coverage ratio is seen as an extension of the more standard interest coverage ratio (often referred to as times interest earned), a ratio itself defined along the lines of a comparison of a company's operating earnings to its interest expenses. Extending the ratio to the broader "fixed charge" measure often includes adding components such as the required principal payments on debt and capital leases (not just the interest) and other fixed finance charges such as the required payments (the implicit interest and/or principal payment) of off-balance sheet operating leases and of preferred stock dividends. A review of many of the differing approaches follows.

Many financial management textbooks, such as Block & Hirt (2005), define the fixed charge coverage ratio as the ratio of income before fixed charges and taxes to fixed charges, with fixed charges defined as the sum of interest expenses and operating lease payments (sometimes also referred to as rental expenses). We will generally use the operating lease terminology because it is the accounting conventions associated with operating leases that are the key factors in causing the expenses to be of such concern.

Brigham & Daves (2007) and others define fixed charge coverage as the ratio of earnings before interest, taxes, depreciation and amortization plus operating lease payments to the sum of payments for interest, debt principal, and leases. Similarly, Koller, Goedhart and Wessels (2005) and others define it as the ratio of earnings before interest, taxes, depreciation, amortization, and rental (lease) expenses to fixed charges, defined as the sum of interest and lease payments.

Another view shifts the focus from one that examines fixed financing charges to one that encompasses the entire debt servicing that a company faces. Gitman (2006) and others expand the basic fixed charge coverage definition to one measuring the ratio of earnings before interest and taxes plus lease payments to the sum of interest expense, lease payments, *as well as* debt principal and preferred stock payments, with both of the latter divided by one minus the tax rate because the payments are made with after-tax dollars.

The fixed charge coverage ratio can also be defined along the lines of the earnings to fixed charges ratio required by the Securities and Exchange Commission (SEC) in securities offerings (Regulation S-K §229.503). In this regard, Gibson (2007) and others define the fixed charge coverage ratio as the ratio of recurring operating earnings plus *one-third* of the total operating lease payments to the sum of interest expense (including capitalized interest) and one-third of operating lease payments. The one-third factor applied to the operating lease payments is a widely-used "rule-of-thumb" measure of estimating the finance charges implicit in the use of operating leases. This type of approach most impressively (depressingly?) materializes itself in to what is very likely the most complex fixed charge ratio (or any other financial ratio) found in any standard college textbook, in this case in Wild, Subramanyam, & Halsey (2007). The authors attempt to operationalize the SEC's earnings to fixed charges ratio (from Regulation S-K Paragraph 503d) as follows [and remember this is a *condensed* version]:

> *Pre-tax income before discontinued operations, extraordinary items, and cumulative effects of accounting changes plus interest incurred less interest capitalized, amortization of interest expense and discount or premium, interest portion of operating rental expenses, preferred stock payments (on a pre-tax basis) and the amortization of previously capitalized interest, all divided by the sum of total interest expense, the amortization of interest expense and discount or premium, the interest portion of operating rental expenses, and any preferred stock payments (on a pre-tax basis).*

Others, most notably Damodaran (2001), attempt to introduce a more "scientific" approach to estimating the finance charges associated with operating lease payments. Rather than blindly following the "one-third" rule, they argue for a more "economically-sound" argument in which the present value of future operating lease obligations are *capitalized* with the capitalized amount then multiplied by the company's cost of debt to determine the "true" cost of financing implicit in the operating leases.

Shifting from the academic to the practitioner's world of finance, we find just as wide a variety of approaches. For example, Worldscope (Thomson Financial, 2003) equates the fixed

charge coverage ratio to its definition of the interest coverage ratio, defining it as the ratio of earnings before interest and taxes to the sum of interest expense and preferred dividends divided by one minus the tax rate. Moody's defines it as the sum of net income, non-cash adjustments and changes in working capital, interest expense, and lease expense, all divided by the sum of interest and lease expense (Neuhaus, 2001). Standard & Poor's defines it as the ratio of earnings before interest and taxes and rent to total interest plus rents, taking into account any preferred stock dividends when material (Standard & Poor's, 2005). And if that is not confusing enough, Standard & Poor's, in its Compustat database, defines its close cousin, the debt service ratio, in at least two distinct ways. First, it is defined as the ratio of free cash flows (cash flow from operations less capital expenditures and common stock dividend payments) plus interest expense to the sum of interest expense and current maturities of long-term debt, Second, it is defined as the ratio of net income plus depreciation and amortization to the total amount of debt due within one year. Standard & Poor's also provides two other closely related measures – EBITDA interest coverage and pretax fixed coverage. These are specifically defined as the ratio of earnings before interest, taxes, depreciation and amortization to interest expense and as pretax income plus interest and rental expenses divided by the sum of interest and rental expenses.

Another major participant in the credit analysis game, the Risk Management Association (RMA), focuses on what it refers to as "debt service principal and interest coverage." It defines this ratio as net cash after operations divided by current debt obligations and is essentially the ratio of the company's cash flow from operating activities (referred to as cash income) to the sum of its cash interest obligations and current portion of its long-term debt and capital leases.

Last but not least, whenever examining the topic of a company's ability to meet financial obligations, discussions often flow toward the topic of bankruptcy, which may be seen as the ultimate in inability to meet such obligations. Measuring the risk of bankruptcy has its own variety of approaches, which tend to be broader in scope but not any less confusing that the topic of coverage ratios.

Led by relatively simple models proposed by Beaver (1966), Altman (1968), and Ohlson (1980) and later developed into significantly more complex offerings such as by Hillegeist, Keating, Cram, & Lundstedt (2004) and others, researchers have for many years looked for the holy grail of accounting ratios that could be most useful in predicting bankruptcy. The best known of these models is the Altman Z-score. Using multiple discriminant analysis on a variety of financial ratios, the final model is a simple weighted average of five accounting ratios (working capital, retained earnings, earnings before interest and taxes, and sales, each in relation to total assets plus the ratio of market value of equity to book value of liabilities). The result is compared with arbitrary cutoff points indicating either a high or low probability of bankruptcy.

Altman's model remains the standard against which all others are compared and tends to be the one most embraced by practitioners (IOMA, 2003), even though it is some 40 years old and has faced a constant barrage of criticism. Altman (Altman, Haldeman & Narayanan, 1977) and Beaver

(Beaver, McNichols & Rhie, 2005) themselves have looked to improve upon the more basic models proposed earlier in their careers (one important extension has been in dealing with the problems associated with operating leases). Yet despite the continued work in this area, simplicity may be the key. In a recent working paper examining the history of bankruptcy prediction models, Bellovary, Giacomino, & Akers (2006) conclude that given the already high predictive ability of even the simplest models (they cite Beaver's 92 percent accuracy with one ratio to a more recent model that considers 57 factors yet yields only an 86 percent accuracy rate!), efforts should be shifted from developing new and improved models to refining the existing ones and making them more understandable and useful for practitioners. Thus, more may be less as too many ratios or ratios with too much complexity can actually make a model less useful.

Against this broad and often conflicting set of approaches to assessing credit risk of borrowers, we focus on an empirical examination of the key tools proposed. Realizing that financial ratio calculations are complicated by the complexity of accounting and reporting standards and the differing needs of users of financial statements, we focus on two items.

First and foremost we examine whether the level of complexity really matters. That is, is there any additional information contained in the more-broadly defined ratios and more complex models that would lead one to prefer one over the others or should simplicity be the overriding concern? For example, there is the divergence in the fixed charge coverage ratio's handling of lease expenses. Many models include these charges, some do not. And for those that do incorporate the expenses, there are those who incorporate the entire amount of lease payments as a charge and those who only use the implied financing component of the leases. And for those incorporating only the financing component of the leases, there is the split between those who favor a practical approach of using the "rule of thumb" estimate (one-third of the total lease expense) and those who favor a more mathematically-sound present value approach.

And second, we examine how well the varied approaches correlate with the more grandiose concept of assessing overall default or credit risk. For example, how do the various measures relate to a company's given risk rating and how well do they correlate with broader bankruptcy metrics (e.g., Altman's Z-score) that tend to examine a wider array of factors than simply short-term liquidity? The results of these inquiries may lead us to make better judgments about how to approach this matter, both in the classroom and in applying it in "real-world" situations.

DATA AND METHODOLOGY

Data for this study was gathered from Compustat (Research Insight). We focus primarily on one set of companies, namely large companies (defined as those with revenues in excess of $1 billion in their most recent reporting year) that do not primarily operate in the financial services area. To be included in the study, the company also had to have financial data for each variable examined plus a credit rating assigned to them by Standard and Poor's for each of the past five years (for most

companies this includes data from 2001 through 2005, but for others with non-December year-ends, the time period may extend in to 2006). Given the strict criteria employed, only 259 companies remained in the primary sample group. A broader set of companies, in which the final requirement of having five consecutive years of data for *all* variables examined is relaxed, provided us with a much larger group of 1,320 companies. Extending our analysis to this more broadly-defined group of companies allows us to make broader generalizations of the results of the study.

Given the wide range of approaches to this topic, a virtually endless array of potential variables could be examined. However, for the purposes of this study, the following ones were selected:

(1)   the credit rating (SPDRC) assigned by Standard & Poor's as its opinion of an issuer's overall creditworthiness at each time period. Each letter rating has an associated numerical rating within Compustat (i.e., AAA = 2, A = 8, BBB- = 12, etc.). Although Standard & Poor's is by no means the only agency capable of providing credit ratings, the availability of their ratings within the Compustat database facilitated their use in the study;

(2)   the Z-score (ZSCORE) calculated by Compustat for each period (the sum of 1.2 times the working capital divided by total assets, 1.4 times the retained earnings divided by total assets, 3.3 times the earnings before interest and taxes divided by total assets, 0.6 times the difference between the market value of equity [year-end stock price times common shares outstanding plus the par value of any preferred stock] and the book value of the liabilities, and 0.999 times sales divided by total assets) for each period;

(3)   the interest coverage ratio (IntCov) calculated by Compustat (total of operating and non-operating income before taxes and minority interest plus interest expense, all divided by interest expense) for each period;

(4)   the EBITDA coverage ratio (EBITCov) calculated by Compustat (operating income before depreciation and amortization expenses divided by interest expense) for each period;

(5)   the debt service coverage ratio (DbtServ) as calculated by Compustat (net cash flow from operations less cash dividends and capital expenditures plus interest expense, all divided by the sum of interest expense and current portion of long-term debt due; and

(6)   three separate fixed charge coverage ratios. The first one (FxdChg) is defined as total pretax income plus interest expense and lease expenses, all divided by the sum of interest and lease expenses. The second (FxdFin) uses only the financing cost (estimated as one-third of the total lease expense) rather than the total lease expenses; and the third (FxdLeas) uses the present value approach to estimating the

financing cost of the lease expense. This is measured as the sum of the most recent year's lease payment plus the discounted values for each of the successive five years of obligations, all multiplied by the company's *effective* interest rate as estimated by dividing the company's interest expense for the year by its total amount of debt for the year.

The focal point of the study is the relationship among the various measures as tools used to analyze creditworthiness and liquidity. Initially, Pearson and Kendall-tau correlations were reviewed to look at the relative strength of association between alternative liquidity measures and the perceived creditworthiness of the company as estimated by Standard & Poor's credit ratings. Despite the large sample sizes, both parametric and non-parametric methods were used due to considerable concerns about the homogeneity of the variances within the data. Kendall-tau was chosen over the more often used Spearman-rank-correlation test because its correlations reflect the strength of the relationships between the variables and it copes with ties much better than the Spearman method. It is also superior as a test of independence because it is sensitive to some types of dependence which can not be detected using the Spearman method. A straightforward discussion on the preference for Kendall-tau can be found in Noether (2007).

These relationships among the variables were examined first for the narrow sample group and then extended to the more broadly-defined sample. In addition, an analysis was made on the relationships among the variables. Since many of them are based on similar criteria, it can be assumed that they are likely closely related to one another. However, it is the extent of that relationship that is of interest. If a particular conclusion or relationship can be found by using a more concise tool, the argument can be made to favor further refinements to the more efficient method to make it a more effective tool rather than trying to develop a better tool.

RESULTS

For the initial tests, a total of 259 companies met all of the criteria for inclusion in the sample. That is, there was sufficient data available such as size of company (over $1 billion in sales in the most recent annual period), five years of credit rating data, and five years of financial ratio data, to be included in the study. On the other hand, relaxing all but the size criterion increased the sample size to 1,320 companies, a larger sample in which greater generalizations about the results might be made when appropriate. Relaxing all of the criteria (except for the requirement of being a non-financial company) resulted in a sample of 5,802 companies. However, due to missing data, the "available" sample size would have been much smaller and given the large number of extreme and nonsensical data outliers, this larger sample was of very limited value and was therefore not examined further.

The two samples proved to be quite similar in terms of the breadth of credit ratings within each sample. The smaller sample of 259 companies was spread out among the 16 highest ratings, from AAA through B-, with 4.2 percent of the companies landing in the first group of four ratings, 30.7 percent in the next group, 45.7 percent in the third group, and 19.3 percent in the final group. The broader sample had 3.3 percent of the companies with one of the top four ratings, 20.1 percent in the second group of four, 43.7 percent in the third group, and 23.8 percent in the fourth. (An additional 1.6 percent had rankings lower than B-.)

Examining the relationships themselves, it is probably not too surprising to find that each of the key variables, from the Z-score to the myriad of coverage and debt service measures, proved to be significantly correlated (generally beyond the 99th percentile in significance) with the company's credit rating for each of the past five years. (See Table 1 below). In addition, we note that the levels of correlation with the credit rating also remained fairly consistent over the five years. Only the Kendall-Tau statistics are produced due to the concerns over normality of the data, although the Pearson correlations had many of the same results with the exception of some extremely unusual results attributed to the non-normal distributions.

Table 1: Kendall Tau b Correlation Coefficients Correlation with Credit Rating (Primary Sample of 259 Companies)					
	Year 0	Year -1	Year -2	Year -3	Year -4
Zscore	0.2736	0.3030	0.3078	0.2947	0.2728
IntCov	0.5075	0.4823	0.4902	0.4433	0.4398
EBITCov	0.4972	0.4790	0.4134	0.3870	0.3669
FxdChg	0.5362	0.5084	0.5333	0.4832	0.4469
FxdFin	0.5507	0.5183	0.5299	0.4837	0.4520
FxdLeas	0.5485	0.5303	0.5519	0.5111	0.4891
DbtServ	*0.1018	0.1506	0.1557	*0.1023	*0.1065

Note: All correlations significant beyond 99% with the exception of those cells marked * which are significant beyond 95%.

Also seen in the table, the three fixed charge coverage ratios typically had much higher levels of correlation with the credit ratings than the other ratios, much more so than even the more encompassing Z-score. On the other hand, the debt-service ratio is significantly less likely to be related to a company's current credit rating.

If we examine the more broadly defined sample (see Table 2 below), we find similar results across the board although there are some major differences in the levels of correlation between the

various variables. For example, the correlation coefficients are generally lower in each case, with the biggest drop-off in the Z-score correlation itself.

In addition, the debt service ratio, already significantly lower than the others within the narrow sample, essentially becomes a non-factor with the broader sample. Another noteworthy observation is that it appears that the more complex fixed charge ratio (the one explicitly dependent on the valuation of operating leases as debt-equivalents) is slightly better at evaluating credit ratings than the simpler one-third approach.

Table 2: Kendall Tau b Correlation Coefficients **Correlation with Credit Rating (Broader Sample of 1,320 Companies)**					
	Year 0	Year -1	Year -2	Year -3	Year -4
Zscore	0.1771	0.1949	0.2117	0.2234	0.2045
IntCov	0.3919	0.4004	0.4156	0.3939	0.3866
EBITCov	0.3983	0.3790	0.3646	0.3396	0.2976
FxdChg	0.4511	0.4610	0.4682	0.4531	0.3985
FxdFin	0.4422	0.4520	0.4562	0.4439	0.4021
FxdLeas	0.5215	0.5247	0.5038	0.4718	0.4282
DbtServ	*0.0481	0.0782	0.0851	**0.0424	**0.0297
Note: All correlations significant beyond 99% with the exception of those cells marked * which are significant beyond 95%, ** significance below 95%.					

Having found generally high levels of correlation among the variables, we next briefly examine the relationships *among* the variables. As they tend to measure very similar items, it is not surprising to find very close relationships among them. Although the tables are not reproduced here, the relationships tended to be in the 0.50 to 0.70 range among the majority of the variables, with a couple of notable exceptions. First, the debt service ratio has very low correlations with the other variables, at approximately 0.20 across the board. This is not totally unexpected given its lower level of relationship with the credit rating to begin with. On the other hand, the two competing fixed charge coverage ratios (one-third versus present value rules) are very closely related, with a relationship that has become more significant over time. Based on the earliest data, the correlation was 0.76 between the two measures for the smaller sample group with this figure steadily rising to 0.92 in the most recent period. The broader sample had similar results: a coefficient of 0.73 initially, rising to 0.91 in the most recent period.

Making sense of this close relationship can come from different directions. From the practitioner's viewpoint, there appears to be little to gain from adding complexity in evaluating the financing charges associated with operating leases beyond using the basic one-third rule favored in industry. From an academic viewpoint, we are left to ponder why this association has become

consistently stronger over the past few years. For example, interest rates generally increased between 2001 and 2005. Whether this positively (or negatively) impacted the use of operating leases or simply effected the present value calculations is left for a future study.

CONCLUSIONS AND DISCUSSION OF FUTURE RESEARCH

Although much more can certainly be examined regarding the various measures of assessing credit and liquidity risk, this first small step has provided some insights. For example, despite the overwhelming number of formulations, it appears that most of the key ratios seem to follow very similar tracks. Thus, rather than confusing potential users of financial information with so many variations, solidifying or refining the more straightforward approaches to evaluating credit may be called for. Notwithstanding any specific requirements associated with unusual or extraordinary credit situations, it would appear that focusing on a simpler set of ratios would allow for better focus (and hence better analysis) of the information contained in the ratios and underlying reasons for any deviations or any volatility in the said numbers.

There is much additional research waiting to be pursued in this area. For example, all of the data used, including the credit ratings, were from a single source, Standard and Poor's. If S&P largely uses its own data and formulations to make credit rating decisions, then there may be an undue amount of overlapping results. Evaluating other sources of credit ratings (e.g., Moody's or specific private lenders' evaluations), could provide different insights.

This analysis is rather static. A key reason for analyzing liquidity and credit risks is to look forward and predict where problems may arise. For example, can shifts in credit ratings be predicted or forecasted based on projecting specific financial variables into the future; that is, are there specific financial ratios that can be used as leading or lagging variables in determining trends in credit ratings?

Furthermore, one major criticism of many of the earlier bankruptcy studies was that their so-called results were specific to the time frame and/or types of companies evaluated. Extending this analysis to examine differences in results based on NAICS (North American Industry Classification System) codes or other industry designations or expanding it to cover other time periods could make the results stronger.

Our results are but a start in a process that needs to meet the challenge of overcoming the lack of connection between academic researchers, striving to build better mousetraps, and practitioners, looking for efficient mousetraps to improve their successes (and minimize their failures) in assessing credit risk. If academics can do a proper job of exposing users of financial information (managers, lenders, analysts, investors, etc) to the proper tools to conduct their analysis, then further studies in this area may prove to be quite useful.

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AN ANALYSIS AND COMPARISON OF BANKERS' PERCEPTIONS OF STOCK OPTIONS IN 1999 AND 2005

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ABSTRACT

Research to date on accounting for stock options has focused the analysis on a single group of corporate stakeholders, stockholders. This paper reports the results of a survey administered to another group of stakeholders, creditors. Commercial bankers were surveyed regarding the accounting treatment for stock options and the perceived impact of stock options on financial statements, firm valuation, and the loan decision. A unique aspect of our study is that we surveyed bankers during two distinct periods. We first surveyed bankers in 1999, well after the debate surrounding SFAS 123 (FASB, 1995), but before the resurgence of the debate leading up to SFAS 123(R) (FASB, 2004). We surveyed again in 2005, as companies were implementing SFAS 123(R). This allows us to comment on the impact of public debate preceding the rule revision on the perceptions of a group of well-informed financial statement users.

We find bankers in both periods view stock options as compensation. The method of accounting does not matter if relevant information is disclosed. More experienced loan officers from 1999, and those who deal with stock options frequently from 2005, are less negative than others about the impact of stock options on shareholder interest in company assets.

INTRODUCTION

Twenty years ago employee stock options accounted for approximately 7% of total shares outstanding; today this percentage is nearly double, and in high-tech industries option grants typically constitute a quarter of shares outstanding. Further, in 1982, *Directors & Board* conducted a roundtable of 20 top executives on whether a chief executive was worth $1 million in annual compensation (only a few CEOs had broken the barrier). Two decades later, the vast majority of chief executives receive at least $1 million, with some receiving much more. During the 1990's, the combination of generous options grants and a raging bull market created huge paydays for the nation's executives (Rock, 1998).

Most research to date on accounting for stock options has been capital markets-based. There are no research results focusing on other stakeholders' perceptions of the information content of GAAP disclosures. The objective of this paper is to report the results of a survey designed to elicit responses from commercial bankers regarding the accounting treatment for stock options and the perceived impact of stock options on the financial statements and firm valuation.

A unique aspect of our study is that we conducted the survey during two distinct time periods. The first survey was conducted in 1999, well after the debate surrounding SFAS 123 (FASB, 1995), but before the resurgence of the debate leading up to SFAS 123(R) (FASB, 2004). Our second survey was conducted in 2005, as companies were implementing SFAS 123(R). Survey participants in both groups are remarkably similar as to their years of lending experience, familiarity with employee stock options and the frequency in which they review financial statements of companies that issue stock options. This allows us to comment on the potential impact of the public debate leading to the rule revision on the perceptions of a group of reasonably well-informed financial statement users. We also employ two scenarios, one of a publicly traded company and one of a privately held company, in both surveys.

We find bankers in both periods believe that stock option distributions represent compensation to the recipients, in both scenarios, although fewer respondents believe that the stock options of a private company represent compensation. Participants in both surveys also report that the method of accounting does not matter if relevant information is disclosed. Overall, survey participants respond that shareholders' interest in the company's assets has decreased as a result of the distribution of stock options. More experienced loan officers from 1999, and those who deal with stock options frequently from 2005, are less negative than others about the impact of stock options on shareholder interest in company assets.

The paper is organized as follows. The second section presents the accounting rules for stock options. In the third section, prior research on the information content of stock options is presented. The research methodology is presented in the fourth section, followed by the results in the fifth section. Finally, the conclusions are provided.

ACCOUNTING RULES FOR STOCK OPTIONS

Before the issuance of SFAS No. 123, APB Opinion No. 25 dictated that the accounting for stock options use the intrinsic-value method. Under this method, value is measured as the difference between the stock price and the exercise price on the date of the grant. Hence, compensation expense is the excess of the market price of the stock over the option price on the measurement date. The measurement date is the date both the number of shares to be issued and the option price are known to the firm. This is normally the grant date (these types of plans are known as fixed stock options). If the option price equals or exceeds the market price on the measurement date, no compensation expense results. Frequently, the option's exercise price is set equal to the current

stock price, so the options are deemed to have a zero value, and no compensation expense is recorded (Williams, 1995).

Between 1985 and 1988, the FASB conducted research into the applicability of various stock option pricing models for employee stock option plans. However, in 1988, the FASB tabled the stock options project. In early 1991, the business press created a public controversy over excessive executive compensation. Senator Carl Levin introduced a bill calling for the SEC to require corporations to reduce their earnings by the estimated present value of all stock options granted to its executives. In response to public interest in executive compensation, the FASB, in 1992, voted to revive the stock option accounting project (Fraser, et al. 1998).

In 1993, the FASB issued an Exposure Draft, "Accounting for Stock-Based Compensation." The exposure draft proposed new requirements for measuring and reporting expenses related to employee stock option plans. The exposure draft required firms to determine compensation expense based on the fair value of the stock option plan at the date of grant. The impetus for the FASB's need to change the way in which stock options were accounted for was best expressed by FASB Vice-Chairman James J. Leisenring in hearings before the Senate Banking, Housing, and Urban Affairs Subcommittee on Securities. Leisenring told subcommittee members that, under APB No. 25, transactions with substantially the same economic effects often received drastically different accounting treatments. He said that a change in the way in which stock options are accounted for was necessary because existing standards were biased and lacked credibility. Thus, the exposure draft was designed to require companies to account for stock options in the same manner (Rouse and Barton, 1993).

The FASB experienced tremendous opposition from politicians, businesses and CPAs to the exposure draft because companies no longer could give important executive officers compensation without recording an expense. The greatest opposition to the standard focused on such issues as (1) its negative impact on net income, (2) the fact that net equity would be unaffected, (3) dilution already is reflected in earnings per share, (4) the costs of implementing the standard are greater than the benefits (Rouse and Barton, 1993), (5) the standard may impose competitive disadvantages on some firms (especially high technology and start up firms), (6) the inability of firms to measure the compensation well enough to include it as an expense in the income statement, and (7) new motives may emerge for executives to make sub-optimal decisions based on accounting rather than economic consideration (Fraser, et al. 1998).

Leisenring argued that with the exception of fixed employee stock options, all transactions in which equity instruments are issued are recognized in the financial statements. Moreover, all other forms of compensation, including salaries, pensions, restricted stock, and health care benefits are measured and recognized as costs in financial statements. Thus, the proposed standard would level the playing field. The FASB disputed the measurement argument on the grounds that companies already used several measurements in accounting that were much more difficult than the one called for in the accounting for stock options (Rouse and Barton, 1993).

In spite of the above arguments made by the FASB in support of its proposed accounting for stock options, it could not convince opponents to support the notion of requiring expense recognition. Thus, in mid-1994 the FASB announced it would not require 1994 financial statements to show a valuation for options granted that year. Further, on October 23, 1995, the FASB issued SFAS No.123, Accounting for Stock-Based Compensation. The standard encouraged firms to recognize the estimated cost of employee stock options as a charge to earnings but allowed the alternative of disclosing the estimated cost in the footnotes and leaving the expense off the income statement.

In 2002, following several major accounting scandals, many companies began to voluntarily switch from the intrinsic value method to the fair value method. In response to the concern of many companies of the "ramp up" effect of the transition method stipulated in SFAS 123, the FASB issued SFAS 148 *Accounting for Stock-Based Compensation – Transition and Disclosure.* Within the statement, the FASB allowed additional transition methods and attempted to make the presentation and disclosure of stock options more comparable across firms. At this point, however, the fair value method was "preferred," but not required.

In 2003, members of Congress developed the Stock Option Accounting Reform Act. It was a direct challenge to FASB and an attempt to mandate how companies should account for share-based compensation. In the midst of the debate over this act, the FASB issued Statement no. 123(R) in December, 2004. SFAS 123(R) eliminated the intrinsic value method with pro-forma data in a footnote as an acceptable disclosure method. While the standard did not address several controversial topics, such as acceptable valuation models, it required all companies to follow the fair value method and accrue compensation expense at the issue date of the options (Eaton and Prusyk, 2005). Our second survey was sent out shortly after the issuance of SFAS 123(R).

PRIOR RESEARCH

Dechow, et al., (1996) employed three research approaches to evaluate the nature and extent of the predicted economic consequences of accounting for stock-based compensation. First, they examined the attributes of firms lobbying against the 1993 exposure draft. Second, they examined the attributes of firms using employee stock options under the original financial reporting rules. Third, they examined stock price reactions to announcements concerning SFAS No. 123. They found that, controlling for size and industry, top executives of firms submitting comment letters opposing mandatory expensing receive a greater proportion of their compensation from options, receive higher levels of total compensation, and are at firms that use options relatively more intensively for top-executive compensation than for other employees. Further, they found no systematic support for the assertions that expensing stock options would increase firms' costs of capital, and no evidence was found that investors reacted to news concerning expensing of stock

options. That is, the stock market did not act as if expensing stock options would have negative economic consequences for high-growth firms making extensive use of employee stock options.

Aboody (1996) also reported that the FASB's method for recognizing compensation expense would not increase (and may even reduce) the informativeness of reported earnings. On the other hand, Fraser et al (1998) reported results inconsistent with Dechow, et al. (1996) when they found that the shareholder returns for large, well-established firms fell when the FASB stock option proposal was announced and recovered when the proposal was withdrawn. However, returns of small start-up firms and firms that offer employer options to non-executives were unaffected by the announcements. Botosan and Plumlee (2001) found that the compensation expense, if reported under the fair value method, would have a material impact on manager performance measures. They also predicted that stock option expense would increase over the next several years. Balsam, O'Keefe and Weidemer (2007) found that corporations were reducing their use of stock options in favor of alternative forms of compensation because of manager's concerns that the reporting requirements under SFAS 123(R) would adversely affect stock price and hinder raising capital.

To date, the impact of stock option accounting and the associated public debate has focused on implications to investors. A fundamental objective of accounting information, however, is to provide information useful to investors *and* creditors (SFAC No. 1, 1978). Accounting research studies on bankers' perceptions have been limited. For the most part they have focused on such issues as new audit reports (Geiger 1994), accountant involvement in forecasts (Strawser 1994), the effect of recognition versus disclosure of unfunded postretirement benefits on lenders' perceptions of debt (Harper, et al. 1991), the impact of pension disclosure rules on perceptions of debt (Harper, et al. 1987) and non-GAAP financial statements (Baker 1990).

RESEARCH METHODOLOGY

We study the perceptions of bankers to borrowers who issue stock options. Specifically, we are concerned with how bankers interpret the impact of stock options on the client and on their loan decision. We are also concerned with bankers' views of the importance of the disclosure method, as that has been a major part of the public debate on the accounting for stock options. Executive level loan officers make an excellent pool from which to draw our sample, as they see financial statements from several different types of companies and they are reasonably sophisticated financial statement users.

Data were collected from executive level loan officers using a scenario involving a company issuing a series of options where the exercise price is equal to the market value of the stock on the date of grant. The first data set was collected in 1999; the second data set was collected in 2005, following the passage of SFAS 123(R). These samples allow us to examine not only bankers' perceptions of stock options, but also how perceptions toward stock options were influenced by the public debate surrounding stock options and the subsequent issuance of SFAS 123(R).

Subjects were told of the acceptable disclosure methods in effect at the time of the survey. For the 1999 survey, this was based SFAS 123; for the 2005 survey, this was based on SFAS 123(R). They were also told the major differences between the fair value method and the intrinsic method of reporting. We explained that under the intrinsic value method, the company must still include a footnote disclosure of pro-forma net income and earnings per share data as if the fair value had been used.

We then asked the participant's perceptions of the following.

(Q1)   Has the company provided compensation through the distributions?

(Q2)   Have the shareholders' interests in the net assets of the company changed due to the distributions?

(Q3)   What is the effect of the distributions on the company value?

(Q4)   What is the importance of the stock option distributions on making bank lending decisions or evaluating compliance with loan covenants with respect to the company?

(Q5)   Does the method of accounting for stock options matter if all relevant information is disclosed in the footnotes?

The subjects were asked to answer the questions above assuming that a) the company is publicly traded and b) the company is privately held and is expected to eventually be taken public. Demographic questions were asked regarding:

(D1)   years of lending experience,

(D2)   familiarity with employee stock options,

(D3)   frequency in which a review is made of companies with employee stock option plans,

The participants for the 1999 sample were randomly selected from the population of loan officers included in *The Thompson/Polk Bank Directory* (also known as "The Bankers' Blue Book"). Every bank chartered in the US has an individual listing in the directory. In order for a subject to be included in the sample, the commercial lending officer must be employed by a US bank, and the bank must not be a branch bank. Holding companies and trust companies were also excluded. The

population after these deletions consisted of 8,843 chartered commercial banks. In 2005, participants were randomly selected from a list of 7,608 active commercial banks chartered in the US which we downloaded from FDIC website (http://www2.fdic.gov/idasp/main.asp). The 2005 list also excluded holding companies and trust companies.

An original mailing and two follow-up mailings were sent to each of the subjects. In order to determine whether response bias was potentially problematic, respondents were separated into early, middle and late categories in accordance with the three mailing dates. Analysis of demographics indicated no material differences across the three categories of respondents.

Table 1 reports data on the survey responses. After eliminating bad addresses, we had a net sample of 379 bankers in 1999 and 391 bankers in 2005. We gave the bankers the option of not participating in the survey, but requested information from them as to why. Approximately half of the 75 non-participants from the 1999 sample and approximately two-thirds of the non-participants in the 2005 sample stated that they were not familiar with stock options. This may have been the result of the nature of the borrowers in the bankers' portfolios. This also allowed us to collect information from only those bankers who believed they were familiar with the nature and purpose of stock options. Thus, the participants in the survey believe they are adequately informed concerning the impact executive stock options may have on one of their borrowers.

We feel we have a reasonable response rate and participation rate for our analysis. The survey response rate (total responses/the net sample) is 31 percent for the 1999 survey and 35 percent for the 2005 survey. Further, a little over one-third of the respondents believed they possessed the technical knowledge necessary to determine how the issuance of executive stock options affects their borrowers, how important that effect is to the loan decision, and how important is the method of disclosure. We had a participation rate (participant responses/total responses) of 36 percent in 1999 and 39 percent in 2005.

Table 1 : Survey Responses		
	1999	2005
Original sample	400	400
Undeliverable addresses	21	9
Net sample	379	391
Reasons given for Non-participation:		
Bank policy	7	15
No corporate accounts	0	1
Not familiar with stock options	36	54
No reason given	22	0
Other reasons	10	13

Table 1 : Survey Responses		
	1999	2005
Total non-participant responses	75	83
Participant responses	43	52
Total responses	118	135
Survey response rate		
(total responses/net sample)	31%	35%
Survey participation rate		
(participant responses/total responses)	36%	39%

Table 2 contains the demographics of the two samples. The most experienced respondent from each sample had 38 years of lending experience (D1); the least experienced in the 1999 sample had one year of experience, while the least experienced in the 2005 sample had 2 years of experience. The median years of experience from the 1999 sample is 15 years, and the median years of experience for the 2005 sample is 20 years. Thus, the respondents are fairly experienced loan officers, with the 2005 sample consisting of slightly more experienced subject than are in the 1999 sample. Most respondents consider themselves somewhat familiar with stock options (D2). The median self-assessment score is 3 on a scale of 10 for each sample (with 10 being highly familiar), however, as a group, the lenders do not view themselves as experts on the subject (the third quartile is 4 and the maximum self-assessment is 6 for both samples).   This may be explained by the fact that many of the subjects do not frequently review the financial statements of companies with employee stock options (D3).   The median score on a 10-point scale (10 being very frequently) is 3 for the 1999 sample and 2 for the 2005 sample. However, the maximum rating for both samples is 10, indicating that some bankers frequently deal with borrowers that issue stock options.

Table 2: Demographic Variables-Descriptive Statistics							
Panel A: 1999 Data							
Variable Name	Max	Q3	Med	Q1	Min	N	SD
D1 Years of lending experience	38	20	15	10	1	42	9.1560
D2 Familiarity with employee stock options (0 = no familiarity; 10 = highly familiar)	6	4	3	2	0	43	1.6971
D3 Frequency in which financial statements with employee stock options are reviewed (0 = rarely; 10 = very frequently)	10	4	3	1	0	43	2.4382

Panel B: 2005 Data							
Variable Name	Max	Q3	Med	Q1	Min	N	SD
D1 Years of lending experience	38	25	20	10	2	54	9.1090
D2 Familiarity with employee stock options (0 = no familiarity; 10 = highly familiar)	6	4	3	2	0	53	1.5400
D3 Frequency in which financial statements with employee stock options are reviewed (0 = rarely; 10 = very frequently)	10	3	2	1	0	54	2.3506

From table 2, we can safely state that there are no major differences between the subjects of the 1999 study and the subjects of the 2005 study in the three demographic characteristics evaluated. This is important because our subsequent analysis discusses how the debate leading up to the issuance of SFAS 123(R) may have influenced bankers' perceptions of stock options. While many of the subjects did not view themselves as being highly familiar with stock options, as bankers they clearly meet the description of reasonably sophisticated financial statement users. Consequently, their perceptions of the impact and reporting of stock options is of value to standard-setters.

RESULTS

Table 3 provides descriptive-level data on the responses of the 1999 and 2005 survey participants to both scenarios: a publicly traded company (panel A), and a privately held company (panel B).

Table 3: Descriptive Statistics								
Panel A: Responses for Publicly Traded Company								
Question	Year	Max	Q3	Med	Q1	Min	N	SD
Q1 Has the Company provided compensation through stock option distribution (Yes=1 No=-1)	1999	1	1	1	-1	-1	3	0.8830
	2005	1	1	1	1	-1	50	0.7010
Q2 Has the shareholders' interest in the assets of the Company changed as a result of the distribution of the stock options (Increase = 1 No change = 0 Decrease = -1	1999	1	0	-1	-1	-1	43	0.7336
	2005	1	0	-1	-1	-1	53	0.6968

Table 3: Descriptive Statistics								
Q3. What is the effect of the stock distributions on Company value (Highly unfavorable = -7 Highly favorable =7)	1999	5	1	0	-1	-5	43	2.4036
	2005	7	3	0	-2	-5	54	2.8927
Q4. How important would the stock option distributions be in making lending decisions or evaluating compliance with loan covenants (Very unimportant = 0 Very important = 12)	1999	12	9	6	3	0	43	3.6184
	2005	11	8	5	2	0	54	3.4935
Q5. Does the method of accounting for stock options matter when all relevant information is disclosed in footnotes (Yes = 1 No = -1)	1999	1	1	-1	-1	-1	43	0.9983
	2005	1	1	-1	-1	-1	51	0.9653
Panel B Responses for Privately Held Company								
Question	Year	Max	Q3	Med	Q1	Min	N	SD
Q1 Has the Company provided compensation through stock option distribution (Yes=1 No=-1)	1999	1	1	1	-1	-1	42	1.0017
	2005	1	1	1	0	-1	49	0.9476
Q2 Has the shareholders' interest in the assets of the Company changed as a result of the distribution of the stock options (Increase = 1 No change = 0 Decrease = -1)	1999	1	0	0	-1	-1	42	0.6922
	2005	1	0	-1	-1	-1	50	0.6776
Q3. What is the effect of the stock distributions on Company value (Highly unfavorable = -7 Highly favorable =7)	1999	5	0	0	0	-3	42	1.8106
	2005	9	2	0	-1	-5	51	2.7282
Q4. How important would the stock option distributions be in making lending decisions or evaluating compliance with loan covenants (Very unimportant = 0 Very important = 12)	1999	12	9	7	3	0	42	3.6308
	2005	12	8	5	2	0	50	3.2950
Q5. Does the method of accounting for stock options matter when all relevant information is disclosed in footnotes (Yes = 1 No = -1)	1999	1	1	-1	-1	-1	43	0.9213
	2005	1	1	-1	-1	-1	48	0.9528

Panel A shows that for a publicly traded company, on average, commercial loan officers from both samples believe that compensation is being provided through the distribution of stock options (Q1) and that its distribution has caused shareholders' interest in the assets of the company to decrease (Q2). On the other hand, respondents indicate that the distribution of the stock options has no impact on company value (Q3), on average.

The score for this question (Q3, regarding the impact on company value) for the third quartile of respondents, especially in 2005, indicates that a portion of the sample feel that the distribution of stock options has a positive impact on company value. It is possible that this group of respondents is thinking of the incentive effects on the employees receiving the stock options, or perhaps they feel that the company has been able to reduce cash outflows for compensation by substituting stock options, thus increasing company value.

Panel B shows that loan officers respond similarly to these questions when the scenario involves a privately held company. In both Panel A and B, there appears to be a more diverse range of opinion regarding the impact of stock options on company value (Q3) among the 2005 sample than in 1999.

The loan officers from both samples in both scenarios report that stock option distributions are of some importance in making bank lending decisions or in the evaluation of loan covenants compliance (Q4). (An alternative interpretation is that six represents the point of neutrality on a 12 point scale. No intermediate value labels were provided to participants, only the end-points of very unimportant = 0 and very important = 12.) Finally, they are of the opinion that the method of accounting for stock options does not matter if all relevant information is disclosed (Q5).

Table 4, panels A1 and B1, contain the correlations between the demographic variables and the 1999 sample of bankers' responses to questions for a publicly traded and privately held company, respectively. There is a significant negative relationship between lending experience (D1) and the commercial bankers' responses to questions regarding the impact of the stock option distributions on shareholders' interest in net assets (Q2) for both scenarios. There is also a significant negative relationship between experience and the response on company value (Q3) for publicly traded companies. Thus, the more experienced loan officers in the 1999 sample tend to find that the impact of stock options on shareholders' interest in net assets and on company value is negative to a greater
extent than do less experienced loan officers.

There is also a significant negative relationship between the frequency with which bankers review the financial statements of companies with employee stock options (D3) and the importance they place on stock option distributions in making bank lending decisions or evaluating compliance with loan covenants (Q4) under the privately held company scenario in panel B1. This indicates that the more frequently a banker reviews the financial statements of companies with employee stock options, the less importance is attached to them in terms of making a loan decision or evaluating loan compliance.

The correlations between the demographic variables and the questions for the 2005 sample of bankers, shown in panels A2 and B2 of Table 4, are quite different than those from the 1999 sample. The loan officers' experience (D1) is no longer a factor in their evaluation of the impact of stock option distributions on shareholder interest (Q2) or company value (Q3), for either scenario. This may indicate that the high level of publicity and controversy surrounding stock options in the intervening years may have "leveled the playing field" between more- and less-experienced loan officers. For the privately held company scenario only, panel B2, more experience (D1) correlates significantly with the loan officers attaching less importance to a stock option distribution when making the lending decision (Q4), while a less-experienced loan officer would attach more importance to stock option distribution.

We also find, in Panel A2 of Table 4, that frequency (D3) is positively correlated with the impact of option distributions on the shareholders' interest in assets (Q2). Recall from Table 3 that the average response among all loan officers was that stock option distribution decreases the shareholders' interests in the assets of the scenario company. We therefore interpret this correlation in Table 4 to indicate that increased frequency of dealing with companies that issue stock options is related to a less-negative view of the impact of option distributions on the shareholders' interest in assets.

The last correlation of note in Table 4 is between the experience of the loan officer (D1) and the importance of stock distribution in making lending decisions or evaluating compliance with loan covenants (Q4) in the privately held company scenario. We find that more experienced loan officers place significantly less importance on stock option distributions than the overall average when making such decisions or evaluations.

Table 4: Correlation between Demographic Variables and Questions*			
Question/Demographic Variable	D1	D2	D3
	Experience	Familiarity	Frequency
Panel A.1: Publicly Traded Company in 1999			
Q1 Compensation	0.0878	0.0901	-0.1155
	(0.58)	(0.57)	(0.46)
Q2 Shareholder interest	-0.5150	0.0001	0.1335
	(0.00)	(0.99)	(0.39)
Q3 Company value	-0.3243	0.0521	0.2157
	(0.04)	(0.74)	(0.16)
Q4 Importance	-0.1464	-0.1201	-0.1318
	(0.36)	(0.44)	(0.40)
Q5 Accounting method	0.2339	0.1730	-0.0096
	(0.14)	(0.27)	(0.95)

Table 4: Correlation between Demographic Variables and Questions*			
Question/Demographic Variable	D1	D2	D3
	Experience	Familiarity	Frequency
Panel A.2: Publicly Traded Company in 2005			
Q1 Compensation	0.0401	-0.1703	0.0388
	(0.78)	(0.24)	(0.79)
Q2 Shareholder interest	0.0188	0.1671	0.2833
	(0.89)	(0.24)	(0.04)
Q3 Company value	0.0357	0.2258	0.0980
	(0.80)	(0.11)	(0.49)
Q4 Importance	-0.2392	-0.1969	-0.0992
	(0.08)	(0.16)	(0.48)
Q5 Accounting method	-0.0696	0.0244	0.0901
	(0.63)	(0.87)	(0.53)
Panel B.1: Privately Held Company in 1999			
Q1 Compensation	0.1881	-0.1155	-0.2218
	(0.24)	(0.47)	(0.16)
Q2 Shareholder interest	-0.3066	0.1032	0.2609
	(0.05)	(0.52)	(0.10)
Q3 Company value	-0.2198	-0.0017	0.1993
	(0.17)	(0.99)	(0.21)
Q4 Importance	-0.2508	-0.0759	-0.2986
	(0.11)	(0.63)	(0.05)
Q5 Accounting method	0.2211	0.1088	-0.0759
	(0.17)	(0.50)	(0.64)
Panel B.2: Privately Held Company in 2005			
Q1 Compensation	-0.0973	-0.2009	0.1025
	(0.51)	(0.17)	(0.48)
Q2 Shareholder interest	0.1223	0.0429	-0.0648
	(0.40)	(0.77)	(0.66)
Q3 Company value	0.003	0.0184	0.0161
	(0.98)	(0.90)	(0.91)
Q4 Importance	-0.3452	-0.1811	-0.0357
	(0.01)	(0.21)	(0.81)
Q5 Accounting method	-0.1247	0.0220	0.0492
	(0.40)	(0.88)	(0.74)
*Spearman correlation coefficients are presented (with p-values in parentheses)			

Table 5 contains the paired test of mean responses to the questions for public versus private companies. The results of the 1999 sample of bankers indicate that there is no significant difference between the mean responses for a publicly traded company and a privately held company except for two cases. The loan officers respond more positively to the question of whether stock options represent compensation (Q1) for publicly traded companies than for privately held companies. Also, although overall they respond negatively to the question of whether the method of accounting matters (Q5), they are less negative for publicly traded companies. In other words, the method of accounting matters more for publicly traded companies.

Table 5: Paired Test of Means (Public – Private)				
1999 Survey				
Variable	Mean	Standard Error	t-statistic	p-value
Q1 Compensation	0.19048	0.0702	2.71	0.01
Q2 Shareholder interest	-0.0952	0.0747	-1.27	0.21
Q3 Company value	-0.1667	0.3372	-0.49	0.62
Q4 Importance	-0.0952	0.4115	-0.23	0.82
Q5 Accounting method	0.0976	0.0469	2.08	0.04
2005 Survey				
Variable	Mean	Standard Error	t-statistic	p-value
Q1 Compensation	0.33333	0.10870	3.07	0.00
Q2 Shareholder interest	-0.06000	0.07230	-0.83	0.41
Q3 Company value	-0.07843	0.32160	-0.24	0.81
Q4 Importance	-0.08000	0.34030	-0.24	0.82
Q5 Accounting method	0.00000	0.05950	0.01	0.99

A plausible reason as to why bankers respond differently to Q1 and Q5 across the two scenarios is that while all stock options represent only potential value which is realized on sale or exercise, stock options for privately held companies are also conditioned on the company actually becoming publicly traded at some point in the future. It is possible that the 1999 sample of loan officers are more interested in the method of accounting for stock options in the publicly traded company scenario because they find stock options for privately held companies to be too speculative and conditional on future events to be valued as compensation.

The 2005 sample of bankers respond differently to the publicly traded and privately held scenarios only for Q1, whether stock options represent compensation. Significantly more participants report that stock option distributions represent compensation in the publicly-held company scenario than for a privately held company. We see no difference across scenarios for the

importance of accounting methods (Q5) in the 2005 sample, unlike the responses from the 1999 sample.

We compare the average responses of the 1999 participants to those from 2005 in Table 6. There are no significant differences between the means from the two samples in a pooled test assuming equal variances in the two groups. We find similar results when we assume unequal variances. The question on which the difference between the two samples most closely approaches significance is whether the distribution of stock options represents compensation (Q1), where it appears possible that participants in 2005 would have answered slightly more positively that stock options represent compensation than participants in 1999 if we had a larger sample and thus, more power to find a significant difference. However, for our sample, the effect is either too slight to overcome the limitations in power due to sample size, or there is simply no statistical difference.

Table 6: Comparison of Survey Responses for Public Companies - t-test of Differences*				
Variable	Pooled t-statistic	p-value	Satterthwaite t-statistic	p-value
Q1 Compensation	1.41	(0.16)	1.39	(0.17)
Q2 Shareholder interest	-0.46	(0.65)	-0.46	(0.65)
Q3 Company value	0.37	(0.71)	0.38	(0.71)
Q4 Importance	-1.24	(0.22)	-1.23	(0.22)
Q5 Accounting method	-0.65	(0.52)	-0.65	(0.52)
*2005 responses – 1999 responses				

We think it worth noting that despite the substantial controversy surrounding stock options in both the public media and within accounting regulatory bodies during the years from 1999 to 2005, and the major revisions of accounting standards during that time, one group of financial statement users, loan officers, experienced very little change of opinion regarding the impact of stock options on the companies they evaluate.

CONCLUSION

We examine bankers' perceptions of stock options. On average, for a publicly traded company, the results indicate that commercial loan officers believe that stock options are compensation to those who receive them. They are paid for by shareholders via a reduction in their interest in company net assets. Further, the granting of stock options does not translate into a change

in company value, which implies that the compensation represented by the stock options is for past performance and is reflected in the company's value.

Respondents from both samples feel that the accounting method for stock options does not matter if all relevant information is disclosed in the footnotes. Perhaps there are several reasons why they feel this way. First, with adequate disclosure, bankers are provided with information necessary to determine the cash flow effect(s) of stock options. Second, given that disclosures in the footnotes should adequately present all pertinent information regarding the stock options, financial statement users can make their own determination of the impact of the stock options on their decision variables. On the other hand, those who are of the opinion that the method of accounting does matter are probably concerned with such issues as consistency across all firms in terms of determining compensation costs, and in the case of comparing companies, subjective and difficult recalculations of earnings and company performance.

With respect to the privately held company, although respondents from both years, overall, feel that compensation is being provided through the distribution of stock options, this belief is significantly weaker than in the publicly traded company scenario. This response can be interpreted as acknowledgement that a private company must go public before the stock options have value; an event which may or may not happen. According to both sets of participants, stock option distributions have no impact on the shareholders' interest in the assets of the company or company value; however, the bankers surveyed in 2005 feel that stock options, even for a privately-held company, are paid for by shareholders. Bankers feel that the accounting method employed to account for stock options for a privately held company does not matter if all relevant information is disclosed.

For both publicly traded and privately held companies, our findings are consistent with Dechow, et al. and Aboody with regard to finding no support for the assertions that expensing stock options increases the cost of capital, because bankers feel that stock option distributions have no impact on company value. Further, there appears to be no reaction to expensing compensation, so long as all relevant information is disclosed.

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ARE INTERNATIONAL STOCK MARKETS LINKED? EVIDENCE FROM PACIFIC RIM COUNTRIES AND THE UNITED STATES

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ABSTRACT

Throughout the history of stock markets, investors, both corporate and individual, have sought to identify an explanation for movements. Many research studies have identified the relationship between the movement of U.S economic variables (interest rates, consumer spending, etc.) and the movement of U.S stock markets. However, as major U.S investors seek global diversification, it is prudent to identify if possible relationships between international stock market indexes and the movement of the U.S stock market indexes. This study seeks to identify pair-wise relationships between the U.S stock markets and those of Asia and the Pacific markets.

REVIEW OF THE RELATED LITERATURE

Diversification has become more important as financial markets globalize. Diversifying internationally in markets with low correlation with domestic markets reduces the nonsystematic risk. Therefore, it is important for international investors to measure correlation between international stock markets.

Relationships between international stock markets have been studied using different methodologies. Eun and Shim (1989) studied the interdependence of major national stock markets via the vector autoregression (VAR) analysis. They analyzed the dynamic responses of each market to innovations in a particular market using the stimulated responses of the estimated VAR system. The results indicate the U. S. market is by far the most influential. Changes in the U.S. market are rapidly transmitted to other markets within days, whereas no single foreign market can significantly explain the U.S. market's movements.

Using spectral analysis, Fischer and Palasvirta (1990) investigated the behavior of twenty-three major stock market indices worldwide. The study found that the level of interdependence among theses stock markets had grown substantially from 1986 to 1988. The increasing interdependence is mainly due to a historical trend. The results confirm the dominance of the U.S market.

Chan, Gup, and Pan (1992) examined the relationship between the stock markets in Hong Kong, South Korea, Singapore, Taiwan, Japan, and the United States from February 1, 1983 to May 18, 1987 by means of unit root and cointegration tests. Stock prices were analyzed both individually

and collectively with cointegration tests in order to test for international market efficiency. No evidence of cointegration was found. Hence, neither the stock price of a single country nor that of a group of countries can be used to predict the future price of another country. This implies the markets are efficient, and international diversification is effective.

Urrutia (1995) used the variance-ratio test of Lo and Mackinlay to test for the random walk hypothesis in four Latin-American equity markets: Argentina, Brazil, Chile, and Mexico, from December 1975 to March 1991. The variance-ratio tests rejected the random walk hypothesis. The results suggest that the rejection of the random walk is due to autocorrelation. Furthermore, the runs tests were used to investigate for the weak-form market efficiency. However, the results from the runs tests suggest that the Latin American equity markets are weak-form efficient. Kashefi and Sohrabian (1998) used Engle-Granger cointegration and the Granger causality test to examine the pairwise relationship between the stock markets in Argentina, Brazil, Chile, Mexico, and United States from January 1992 to December 1997. The results showed no evidence of a causal relationship among these countries. These findings imply that the investors might not be able to earn excess returns based on the trends in past trading data.

Solnik, Boucrelle, and Le Fur (1996) studied the correlation of the major foreign markets with the U. S. market. The foreign markets included Germany, France, the United Kingdom, Switzerland, and Japan. They found the correlation of individual foreign stock markets with the U.S. stock market had increased slightly over the past thirty-seven years; however, no trend was discernible over the past decade. The low level of international correlation suggests that national factors still strongly affect local asset prices. The study also revealed that the international correlation fluctuates widely over time and increases in periods of high market volatility.

Defusco, Geppert, and Tsetsekos (1996) used the Johansen and Juselieus cointegration test to examine the long-run diversification of thirteen emerging capital markets from January 1989 to May 1993. The test was applied to three mutually exclusive groups of markets based on geographical region: Latin America, the Pacific Basin, and the Mediterranean. They could not find a cointegration relationship between pairs of countries within each region. The independence of markets suggests that international diversification across these countries is desirable and justified.

Wong (1995) examined whether the U.S. -type intra-monthly seasonal behavior in daily stock index returns exists in the major Asian markets. The study revealed that although similar day-of-the-week effects have been documented in the U.S. and the major Asian markets, the U.S.-type intra-month effect on stock returns was very weak and unstable over time for the Singapore, Malaysia, Hong Kong, Taiwan, and Thailand markets. Such findings are inconsistent with the idea of important world market factors. Instead, returns generated in these markets are fairly independent of the U. S. market. This suggests the benefit of international diversification.

The focus of the majority of these studies has been on the major equity markets. With increased globalization of capital markets, the Asian currency crisis and the Mexico peso crisis, a new study of these relationships is important.

DATA AND RESEARCH METHODOLOGY

The Data

This study is limited to the markets in Australia, China, Hong Kong, South Korea, Japan ,New Zealand, Singapore, Taiwan, and the United States. One market index from each of these countries has been selected to represent the equity markets in the country. The data is consist of limited to the weekly ending observations in each market for the period January 1995 to December 2005. It includes a total of 520 observations from each market. Finally, the study assumes that all markets were relatively stable and any fluctuation results from economic events rather than political or regulatory events.

The data was gathered through the use of the World Wide Web "Yahoo Finance".

1. The United States' markets will be represented by the Standard and Poor's 500 Index (SP_{500}).
2. Australia's markets will be represented by the All Ordinaries Index (AORD).
3. Japan's markets will be represented by the Nikkei 225 Index (N225).
4. People Republic of China will be represented by Shanghai Securities Exchange (SSE).
5. South Korea's markets will be represented by the Korea Stock Exchange (KSC:KS11)
6. Taiwan's markets will be represented by the Taiwan Stock Exchange (TWII).
7. Hong Kong's markets will be represented by the Hang Seng Index (HSI).
8. New Zealand's markets will be represented by the NZSE 40 (NZ40).
9. Singapore's markets will be represented by the Straits Times (STI).

The Research Methodology

Two methodologies are used to examine the pairwise interrelationship among stock returns. The first test is the Engle-Granger cointegration (1991), which is used to identify the long-run relationship between two variables. The second methodology is the Granger causality test, which is used to specify the dynamic relationship in the short-run.

Unit Root Tests

One of the requirements for the cointegration test and causality test is that time series variables must be stationary. A time series is stationary if it has a constant mean, a constant variance,

and a covariance which depends only on the time between lagged observation. Many economic time series are likely to be nonstationary or contain "unit root" because they have a linear or exponential time trend. Modeling with time series data that is not stationary can give rise to spurious correlation; thus, the results of cointegration tests may be misleading. However, it is possible to covert them to a stationary series through the process of differencing. Differencing is a process of finding the change in the value of a variable in successive time periods. If a time series, X_t, is stationary at level, it is said to be "integrated of order zero" or $I(0)$. If X_t has to be differenced d times to become stationary, then the original series, X_t is said to be integrated of order d or $I(d)$. For example, an $I(1)$ series must be differenced once in order to become stationary ,Watsham and Parramore (1997).

The Augmented Dickey-Fuller (ADF) test (1981) is used to test whether a time series variable contains unit root. The ADF test is based on the following regression:

$$(1-L)X_t = \alpha + \beta_0 X_{t-1} + \sum_{j=1}^{k} \beta_j (1-L) X_{t-j} + \mu_t \quad (1)$$

where X is the series being tested, L is the lag operator, u_t is an error term, and k is the number of lagged differences and is determined such that u_t is approximately white noise. A time series is said to be "white noise" if the variable has zero mean, a constant variance and zero correlation between successive observation, Watsham and Parramore (1997).

The testing hypothesis is stated as follow:

H_0: X_t is nonstationary or $\beta_0 = 0$
H_1: X_t is stationary or $\beta_0 \neq 0$

The null hypothesis is rejected if the absolute value of the calculated ADF test statistics is greater than the absolute value of the Mackinnon critical value[1]. In this case, X_t is said to be stationary. Otherwise, the series is nonstationary.

Cointegration Tests

Consider two $I(1)$ time series variables, X_t and Y_t. Both variables contain unit root and are not stationary. In general, this suggests a linear combination X_t and Y_t would also be nonstationary, $I(1)$. However, this is not always the case. A linear combination of X_t and Y_t may be stationary. If a linear combination of X_t and Y_t is stationary, $I(0)$, then X_t and Y_t are said to be cointegrated.

The following cointegration regression is estimated:

$$X_t = \phi_0 + \phi_1 Y_t + \varepsilon_t \quad (2)$$

where ϕ_1 is the cointegration factor, and ϵ_t is an error term. Next the error term is obtained:

$$\varepsilon_t = X_T - \phi_0 - \phi_1 Y_t \quad (3)$$

Two variables are said to be cointegrated if the estimated residual (ϵ_t) from the equation is stationary (i.e. $\epsilon_t \sim I(0)$). The ADF test is performed on the estimated residual (ϵ_t) to determine if it is stationary.

It is important to note that not all $I(1)$ variables are cointegrated. The cointegration hypothesis is stated as follow:

H_0:   There is no cointegration between X_t and Y_t.
H_1:   There is cointegration between X_t and Y_t.

The null hypothesis is rejected if the absolute value of the calculated ADF test statistics is higher than the absolute value of the Mackinnon critical value. In this situation, X_t and Y_t are said to be cointegrated. Either X_t or Y_t can be used as the dependent variable. Therefore, two cointegration equations are estimated for each pair of variables.

If both X_t and Y_t are $I(0)$, then any linear combination of these series is also $I(0)$. There is no need to perform the cointegration test.

Granger Causality Tests

The cointegration test does not necessary imply that changes in one variable induce changes in the another. Does X cause Y? Does Y cause X? The Granger causality tests are applied to examine the causal relationship between X and Y.

The tests are based on the following two equations:

$$(1-L)Y_t = C_0 + \sum_{i=1}^{p} \sigma_i (1-L) Y_{t-1} + \sum_{j=1}^{q} \tau_j X_{t-j} + \nu_t \quad (4)$$

$$(1-L)X_t = b_0 + \sum_{i=1}^{m} \delta_i (1-L) X_{t-1} + \sum_{j=1}^{n} \Gamma_j (1-L) Y_{t-j} + \mu_t \quad (5)$$

where μ_t and ν_t are serially independent random vectors with zero mean and finite covariance matrix. In the equations above, each variable (expressed in first difference) is regressed on its own past values and the past values of the other ("causal") variable. This is to see how much of the current value of the variable can be explained by the past value of the variable and then to check whether by adding the lagged values of another variable can improve the explanation.

Four possible causal relationship between X_t and Y_t are presented:

1.   Unidirectional causality from Y to X exists if (at least some) $\Gamma_j \neq 0$ (j = 1,..,n) and $\tau_j = 0$ (j = 1,..,q). X is said to be Granger-caused by Y.
2.   Unidirectional causality from X to Y exists if $\Gamma_j = 0$ (j = 1,..,n) and (at least some) $\tau_j \neq 0$ (j = 1,..,q). Y is said to be Granger-caused by X.
3.   Feedback or bi-directional causality between X and Y exists if (at least some) $\Gamma_j \neq 0$ (j = 1,..,n) and (at least some) $\tau_j \neq 0$ (j = 1,..,q).
4.   No causality exists if all $\Gamma_j = 0$ and $\tau_j = 0$. X and Y are said to be independent.

The hypothesis being tested is stated as follow:

H_0:   X does not Granger-cause Y or Y does not Granger-cause X
H_1:   X does Granger-cause Y or Y does Granger-cause X.

The hypotheses are tested using the standard F-tests. The null hypothesis is rejected if the calculated F-statistics are significant. In this case, one variable is influenced by the action of another variable.

RESULTS

This study consists of two test procedures mentioned above. However, the unit root tests are performed to examine whether each country's stock market index is stationary. The long-run relationship between markets is examined by using the cointegration test. Finally, causality tests are used to find evidence of a short –run relationship between two markets. A 4 week lag is used for this study, however, the author has used 8 and 12 weeks lags and find no difference from the results presented here.

Unit Root Test

The results of the unit root tests are summarized and tabulated in Table 1. All the absolute values of the calculated Augmented Dickey-Fuller (ADF) test statistics are above the absolute values of MacKinnon's critical value. The results suggest that the market indices in all countries are stationary. It could be stated that stock markets in the above countries are individually weak-form efficient. The results were consistent with 1st differences and 2nd differences when the indices were lagged 8 and 12 periods.

Table 1 Unit Root Tests of Weekly Stock Indices			
Countries	ADF Test Statistic	MacKinnon Critical Value	
New Zealand	-11.50116	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value	-1.616222
Australia	-12.16998	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value	-1.616222
Japan	-12.50843	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value	-1.616222
Peoples Republic of China	-5.865973	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value	-1.616222
Taiwan	-5.720717	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value	-1.616222
Hong Kong	-12.45042	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value*	-1.616222
South Korea	-4.541229	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value*	-1.616222
Singapore	-7.312772	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value*	-1.616222
USA	-8.81739	1% Critical Value*	-2.572654
		5% Critical Value*	-1.940668
		10% Critical Value*	-1.616222
* MacKinnon critical values for rejection of hypothesis of a unit root.			

Cointegration Tests

This result is also supported with cointegration test among the nine market series. The Likelihood Ratios indicate that pairwise long-run relationships do not exist among markets (not reported). The finding supports Chan, Gup, and Pan (19921) finding of no cointegration among the Pacific Rim countries.

Causality Tests

The results of the pairwise Granger causality tests are listed in Table 3. The results indicate equity markets in Pacific Rim countries are more related to the United States than each other. Observe that the hypothesis- U.S market changes do not cause changes in Pacific Rim markets, with exception of China, is rejected (Table 4), while the hypothesis that changes in Pacific Rim markets do not cause U.S market changes cannot be rejected (Table 3). It appears that Granger causality runs one-way from US markets to Pacific Rim markets and not the other way. This finding implies that the movement of the S&P 500 index does have an influence on the markets of Pacific Rim countries and as a result, investors might be able to develop trading strategies that would allow them to earn excess returns based on the changes in theses markets. The same finding is true between Australia and the rest of the Pacific Rim markets. The findings also suggest that the four Asian Economic tigers (Hong Kong, Korea, Japan, and Taiwan) do play a significant role in the explanation of market movement of each other and the rest of Pacific Rim countries (Tables 5 thru 8). The strongest relationship is between South Korea with Hong Kong and Japan than with the rest of the Pacific Rim countries. An interesting result is a bi-directional relationship between China and Taiwan, which is supposed to be absent due to the sovereignty claim of China over Taiwan. At the same time the hypothesis that China does not cause changes in Pacific Rim markets, with exception of Taiwan, cannot be rejected.

		Lags: 4		Lags: 8		Lags: 12	
	Independent Variable	F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Hong Kong	Australia	1.13779	.33889	1.38427	.20320	.94662	.50084
	South Korea	2.76232**	.02985	1.75613***	.09121	1.55686	.11327
	Japan	.26721	.89891	1.54935	.14025	1.15082	.31947
	USA	3.37247**	.01023	2.55955**	.01050	1.76909***	.05346
	China	2.69397**	.03325	1.50121	.16244	1.18947	.29806
	Singapore	.71747	.58058	1.32431	.23121	1.36183	.18442
	New Zealand	1.37263	.24352	.72809	.66666	.61527	.82870
	Taiwan	.82438	.51162	.71898	.67446	1.07056	.39076

Table 3 Pairwise Granger Causality Tests

Table 3 Pairwise Granger Causality Tests							
	Independent Variable	Lags: 4		Lags: 8		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
South Korea	Australia	4.43847*	.00205	2.57473**	.01204	2.06202**	.02429
	Hong Kong	6.48289*	.00057	3.81122*	.00046	2.52589*	.00526
	Japan	5.92856*	.00019	2.90645*	.00508	2.40170*	.00798
	USA	3.82796*	.00546	1.82392**	.07779	1.22507	.27357
	China	.77799	.54118	1.02845	.41780	.80135	.64844
	Singapore	6.66844*	.00059	4.13676*	.00019	2.93172*	.00132
	New Zealand	2.30152	.06140	1.33508	.23145	1.51125	.12885
	Taiwan	2.0914***	.08482	1.51081	.15897	.97687	.47463
Australia	South Korea	.63803	.63618	.64691	.73704	.51532	.90153
	Hong Kong	1.60401	.17337	1.29552	.24572	1.16981	.30504
	Japan	1.79026	.14800	1.1543	.32728	1.06564	.38963
	USA	4.86210*	.00083	3.61273*	.00052	2.43132*	.00521
	China	.89746	.46723	.78682	.61505	.77634	.67366
	Singapore	.12800	.97219	.66667	.72073	.73774	.71385
	New Zealand	1.21196	.30586	.59903	.77844	.44302	.94473
	Taiwan	.81667	.51647	.48580	.86461	.93974	.51012
New Zealand	South Korea	2.29656***	.06114	1.19857	.30453	.88630	.56274
	Hong Kong	4.17754**	.00265	3.03364*	.00278	2.55213	.00332
	Japan	.34547	.84708	.20987	.98213	.28914	.99072
	USA	5.23685*	.000044	3.16676*	.00190	3.02078*	.00055
	China	2.38033***	.05433	1.47527	.17190	1.88395	.04263
	Singapore	4.73521*	.00103	3.09991*	.00230	2.35156*	.00700
	Australia	2.93645**	.02103	1.56505	.13525	1.32380	.20474
	Taiwan	.45565	.76815	.31573	.95897	.57257	.86061
Japan	South Korea	2.30418***	.06114	1.90861***	.06359	1.77137***	.06023
	Hong Kong	1.02684	.39366	.58185	.79259	1.00813	.44167
	New Zealand	.74624	.56121	1.26931	.25954	1.47446	.13367
	USA	2.40647**	.04976	1.62793	.11674	1.40486	.16343
	China	.23818	.91638	1.08768	.37561	1.23506	.26698
	Singapore	1.45327	.21663	.85929	.55144	1.03115	.42042
	Australia	.53498	.71014	.51485	.84494	.91609	.53128
	Taiwan	.43237	.78507	.61069	.76768	.54945	.87795

Table 3 Pairwise Granger Causality Tests							
	Independent Variable	Lags: 4		Lags: 8		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
USA	South Korea	.64912	.62838	.67407	.71364	.72245	.72720
	Hong Kong	1.07869	.36726	.78106	.61974	.65772	.79107
	Japan	.41456	.79811	.28012	.97213	.36723	.97380
	New Zealand	.40863	.80239	.22922	.98533	.40916	.95940
	China	.80989	.52075	.99943	.43955	1.02846	.42739
	Singapore	.22946	.92173	.18018	.99345	.35589	.97701
	Australia	.43427	.78383	.45924	.88400	.66010	.78887
	Taiwan	.26819	.89804	.29913	.96515	.38978	.96505
Singapore	South Korea	3.96143*	.00441	2.74517*	.00774	2.33926*	.00982
	Hong Kong	2.77552**	.02738	1.82499***	.07245	1.99555**	.02496
	Japan	.94864	.43622	1.35778	.21521	1.21070	.27551
	USA	2.77785**	.02727	2.48957**	.01272	1.66625***	.07442
	China	2.15992***	.07640	1.14048	.34045	1.22962	.27056
	Singapore	.51887	.72193	.85530	.55487	1.51115	.11991
	Australia	1.74613	.13995	1.62426	.11775	1.60443***	.09030
	Taiwan	.49676	.73813	.81652	.58927	.88872	.56032
China	South Korea	.73016	.57273	.48248	.86695	.75747	.69260
	Hong Kong	1.25709	.28963	.81403	.59142	.85998	.58914
	Japan	1.5061	.20340	1.27127	.26366	1.02046	.43456
	USA	.63135	.64090	.87870	.53628	.84762	.60161
	New Zealand	.16321	.95666	.39817	.91994	.42568	.95072
	Singapore	.56515	.68832	.56905	.80177	.42391	.95150
	Australia	.19840	.93887	.23426	.98386	.35918	.97492
	Taiwan	2.827**	.02693	1.88803**	.06673	1.71957***	.07028
Taiwan	South Korea	1.62664	.17057	1.03676	.41169	.87978	.56923
	Hong Kong	4.57417*	.00165	2.30450**	.02398	2.82363*	.00191
	Japan	2.11733***	.08156	1.26825	.26527	1.55317	.11447
	USA	2.54750**	.04185	1.45138	.18101	1.19806	.29201
	China	4.88795*	.00099	2.91584*	.00494	2.66150*	.00330
	Singapore	3.62711*	.00754	2.10272**	.03966	1.66636***	.08246
	Australia	1.09563	.36102	1.12963	.34748	1.67835*	.07959
	New Zealand	2.29836***	.06170	1.15288	.33253	1.08365	.37975
* Significant at 1% ** Significant at 5% *** Significant at 10%							

Table 4 Pairwise Granger Causality Tests for US and Pacific Rim Markets							
	Independent Variable	Lags: 4		Lags: 8		Lags:12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Hong Kong	USA	3.37247**	.01023	2.55955**	.01050	1.76909***	.05346
South Korea	USA	3.82796*	.00546	1.82392**	.07779	1.22507	.27357
Australia	USA	4.86210*	.00083	3.61273*	.00052	2.43132*	.00521
New Zealand	USA	5.23685*	.000044	3.16676*	.00190	3.02078*	.00055
Japan	USA	2.40647**	.04976	1.62793	.11674	1.40486	.16343
Singapore	USA	2.77785**	.02727	2.48957**	.01272	1.66625***	.07442
China	USA	.63135	.64090	.87870	.53628	.84762	.60161
Taiwan	USA	2.54750**	.04185	1.45138	.18101	1.19806	.29201
* Significant at 1% ** Significant at 5% *** Significant at 10%							

Table 5 Pairwise Granger Causality Tests Between Japan and Pacific Rim Countries							
	Independent variable	Lags: 4		Lags: 8		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Hong Kong	Japan	0.26721	0.89891	1.54935	0.14025	1.15082	0.31947
South Korea	Japan	5.92856*	0.00019	2.90645*	0.00508	2.40170*	0.00798
Australia	Japan	1.79026	0.148	1.1543	0.32728	1.06564	0.38963
New Zealand	Japan	0.34547	0.84708	0.20987	0.98213	0.28914	0.99072
USA	Japan	0.41456	0.79811	0.28012	0.97213	0.36723	0.9738
Singapore	Japan	0.94864	0.43622	1.35778	0.21521	1.2107	0.27551
China	Japan	1.5061	0.2034	1.27127	0.26366	1.02046	0.43456
Taiwan	Japan	2.11733***	0.08156	1.26825	0.26527	1.55317	0.11447
* Significant at 1% ** Significant at 5% *** Significant at 10%							

Summary

The study used the cointegration and causality tests to find a pair-wise relationship between representative indexes of the US and Pacific Rim markets. The results indicate that the individual markets contain unit roots, showing that they are weak-form efficient. The cointegration tests were consistent with previous studies of no long run relationship between all markets. This implies the markets are efficient, and international diversification is still effective. The most useful information

revealed was in the Granger Causality tests. US markets did reveal a strong causal relationship with Pacific Rim markets that might be leveraged by the U.S investor.

	Independent variable	Lags: 4		Lags:8		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Australia	Hong Kong	1.60401	0.17337	1.29552	0.24572	1.16981	0.30504
New Zealand	Hong Kong	4.17754**	0.00265	3.03364*	0.00278	2.55213	0.00332
Japan	Hong Kong	1.02684	0.39366	0.58185	0.79259	1.00813	0.44167
USA	Hong Kong	1.07869	0.36726	0.78106	0.61974	0.65772	0.79107
Singapore	Hong Kong	2.77552**	0.02738	1.82499***	0.07245	1.99555**	0.02496
China	Hong Kong	1.25709	0.28963	0.81403	0.59142	0.85998	0.58914
Taiwan	Hong Kong	4.57417*	0.00165	2.30450**	0.02398	2.82363*	0.00191
South Korea	Hong Kong	6.48289*	0.00057	3.81122*	0.00046	2.52589*	0.00526

Table 6 Pairwise Granger Causality Tests between Hong Kong and Pacific Rim Countries

* Significant at 1%   ** Significant at 5%   *** Significant at 10%

	Independent variable	Lags: 4		Lags:84		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Hong Kong	South Korea	2.76232**	0.02985	1.75613***	0.09121	1.55686	0.11327
Australia	South Korea	0.63803	0.63618	0.64691	0.73704	0.51532	0.90153
New Zealand	South Korea	2.29656***	0.06114	1.19857	0.30453	0.8863	0.56274
Japan	South Korea	2.30418***	0.06114	1.90861***	0.06359	1.77137***	0.06023
USA	South Korea	0.64912	0.62838	0.67407	0.71364	0.72245	0.7272
Singapore	South Korea	3.96143*	0.00441	2.74517*	0.00774	2.33926*	0.00982
China	South Korea	0.73016	0.57273	0.48248	0.86695	0.75747	0.6926
Taiwan	South Korea	1.62664	0.17057	1.03676	0.41169	0.87978	0.56923

Table 7 Pairwise Granger Causality Tests Between South Korea and Pacific Rim Countries

* Significant at 1%   ** Significant at 5%   *** Significant at 10%

Table 8 Pairwise Granger Causality Tests							
	Independent variable	Lags: 4		Lags: 4		Lags: 12	
		F-Statistics	Probability	F-Statistics	Probability	F-Statistics	Probability
Hong Kong	Taiwan	0.82438	0.51162	0.71898	0.67446	1.07056	0.39076
South Korea	Taiwan	2.0914***	0.08482	1.51081	0.15897	0.97687	0.47463
Australia	Taiwan	0.81667	0.51647	0.4858	0.86461	0.93974	0.51012
New Zealand	Taiwan	0.45565	0.76815	0.31573	0.95897	0.57257	0.86061
Japan	Taiwan	0.43237	0.78507	0.61069	0.76768	0.54945	0.87795
USA	Taiwan	0.26819	0.89804	0.29913	0.96515	0.38978	0.96505
Singapore	Taiwan	0.49676	0.73813	0.81652	0.58927	0.88872	0.56032
China	Taiwan	2.827**	0.02693	1.88803**	0.06673	1.71957***	0.07028
* Significant at 1% ** Significant at 5% *** Significant at 10%							

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BEST BUSINESS PRACTICES IN THE SOUTH AFRICAN INDEPENDENT FINANCIAL ADVISOR'S PRACTICE: AN EXPLORATORY STUDY

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ABSTRACT

Determining the value of the independent financial advisor's (IFA) practice is subject to a range of uncertainties. The success of the most profitable international financial advisory practices has been ascribed to the implementation of best business practices (BBP). The contribution BBP render to enhancing the value of the practice can, therefore, not be negated.

BBP assist the IFA with key functions related to Finance and Reporting, Potential Clients, Client Relationship Management, Staff Management, Operational Efficiency, External Environment, Business Continuity and Business Entity and Client Access. Based on the findings of this research, the following two conclusions have been reached. The implementation of BBP contributes toward enhancing client experience, increasing profitability, improving the value of the IFA's practice and ensuring the continuity thereof. The extent to which BBP were implemented by IFAs; however, is low. This finding, combined with a demonstrated correlation between the implementation of BBP and the annual income and longevity of the IFA in an uncertain environment, confirmed the need for the implementation of BBP in the South African IFA's practice.

INTRODUCTION

It is estimated that 50 per cent of financial advisors consider their practices worth much more than their actual value, whilst the other half neglect to attach a value to their practices (Grau, 2003: 1). In either scenario, failing to determine a realistic value may preclude the financial advisor from eventually capitalising on the full value of the practice (Grau, 2003: 1). The difficulty of accurately determining the value of the practice leaves the financial advisor with the option of employing any means available to improve the practice, thereby increasing the potential value thereof. Best business practices have been proven to enhance the value of the financial advisor's practice. This

is based on research conducted in financial advisors' practices in America, the United Kingdom, Europe and Australia (Clark, Grable, Grau & Piacente, 2004: 19).

The implementation of qualitative value drivers affords financial advisors the opportunity to enhance the value of their practices (McCarthy, 1996: 52-56; Opiela, 2002: 1-5). It has been found (Clarke, n.d.: 1) that the success of the most profitable financial advisory practices may be ascribed to the implementation of those value drivers that, collectively, are known as best business practices, also referred to as qualitative value drivers. According to Peters (2005: 1), "best practice is a generally accepted best way of doing a thing" and is "formulated after the study of specific business or organizational case studies to determine the most broadly effective and efficient means of organizing a system or performing a function". The concept of best business practices is, therefore, based on finding the ideal manner in which to perform typical business practices.

Best business practices contain principles and suggested actions, specific to financial advisors and their practices, in terms of Finance and Reporting, Potential Clients, Client Relationship Management, Staff Management, Operational Efficiency, External Environment, Business Continuity, and Business Entity and Client Access. Briefly, in complying with best business practices the advisor should:

♦ *Analyse income and expenditure to determine productivity and profitability (Finance and Reporting).*

♦ *Develop a marketing plan and implement actions toward gaining new clients (Potential Clients).*

♦ *Segment the client base to deliver services appropriately according to the various client categories and to implement various client initiatives (Client Relationship Management).*

♦ *View staff as an investment upon which a return should be earned (Staff Management).*

♦ *Recognise the benefits of technology and the importance of standardised processes, record keeping and time management (Operational Efficiency).*

♦ *Anticipate and manage risks to the practice, develop the brand thereof and deliver a comprehensive service portfolio to clients (External Environment).*

♦ *Develop a business plan and provide for both planned and/or unplanned departure from the practice (Business Continuity).*

♦ *Consider the impact of the various legal business entities, as well as the location, premises and accessibility of the practice (Business Entity and Client Access).*

The objective of this paper is to report on the case for best business practices, which includes the economic, market and legislative challenges faced by South African independent financial

advisors; provide an overview of best business practices; and to present the empirical findings pertaining to the implementation of best business practices (specifically those related to Finance and Reporting, Potential Clients, Client Relationship Management, Staff Management, Operational Efficiency, External Environment, Business Continuity, and Business Entity and Client Access) in the South African independent financial advisor's practice. These reported findings form part of a comprehensive study on the implementation of best business practices as a means toward both increasing the value of a financial planning practice and managing the environment within which the financial advisor operates; those best business practices that may assist in increasing the value of a financial planning practice; and the degree to which South African independent financial advisors currently make use of best business practices.

Implementing best business practices is a relatively new concept to the South African financial advisor. The library of the Nelson Mandela Metropolitan University was used to conduct an international and national data search, via online databases, to establish the existence of any similar studies, as well as dissertations or theses on the extent to which South African financial advisors currently make use of best business practices. The online databases used included EBSCOhost, Emerald, INFOTRAC, MetaFind, NEXUS, OCLC, SABINET, various electronic journals and the Internet. Results obtained were limited to what constitutes best business practices in a number of fields other than that of financial planning services, such as information technology (Anderson, 2003; Robertson & Sribar, 2002; Starinsky, 2003; Wagner & Newell, 2005), education (Falkena, Fourie & Kok, 1996; Parisse & Richman, 2006; Sosnowski, 1971), manufacturing (Cunill, 2006; Kock, Roodt & Veldsman, 2002; Oosthuizen, 2005; Schuman, 2005), product development (Boyson, 1999; Cooper, 1998; McBride, 2002; Nelson, Moody & Stegner, 2001) and so on. The data search indicated that no similar research, specific to the South African independent financial advisor, exists. Given that best business practices have enhanced the value of financial advisor's practices in other countries, the contribution of this study is expected to be significant in the South African context.

THE CASE FOR BEST BUSINESS PRACTICES

Best business practices have been proven not only to increase the capital value of the financial advisor's practice, but also to improve the working experience of the advisor. A point in case is the advisor who embarked on a process of implementing best business practices and who, two and a half years later, had reduced his number of clients from 1 243 to an easily managed number of 91, reduced his number of employees from 11 to four and increased his annual recurring income from $388,382 to $1.6 million (Bachrach, 2005: 1). The environment within which the South African independent financial advisor operates, and the various factors impinging thereon, further increases the need for best business practices.

The South African insurance industry is a major employer, a considerable source of income and a significant contributor to the South African economy (INSETA, 2005: 3). Services offered by this industry range from insurance products (commercial, life, car and household) to products catering exclusively for pensions and savings needs, thereby providing support to numerous industries and individuals. Statistics (INSETA, 2005: 3) indicate that the South African insurance industry accounted for 93 per cent of all premiums collected on the African continent in 2003, thereby earning it a place as the largest insurance industry in Africa. Furthermore, the domestic industry has the highest penetration figure globally. Penetration is calculated at premiums as a percentage of Gross Domestic Product (GDP) and, at 18.8 per cent, this demonstrates the South African consumer's partiality toward insurance as a savings vehicle. Information obtained from the South African National Treasury department reveals that the insurance industry accounted for 2.8 per cent of national GDP in 2003 (INSETA, 2005: 4). The contribution of the industry as an employer, as well as the drivers of change impacting on the industry, such as economic factors, market forces and legislative requirements is discussed next.

Information released by the Department of Labour reveals that 4 870 active insurance sector employers were registered with the South African Revenue Services (SARS) for the period May 2003 to January 2004. These employers collectively employed 108 000 employees. Parent companies accounted for 98.5 per cent of this total number of active insurance sector employers (INSETA, 2005: 4-7). SARS acknowledges that a significant number of small and informal owner-managed or intermediary insurance practices are not formally recorded on its database (INSETA, 2005: 4-7). This indicates that the number of employers in the insurance sector exceeds that of 4 870 employers. The majority of active employers originate from the insurance and pension funding, short-term insurance and life insurance sectors. It should be noted that various employers may offer a portfolio of product services; however, such employers are only classified in the sector where the majority of their business is concluded.

Economic factors exert an influence on prevailing industry conditions, specifically in both the short-term and long-term insurance sectors. The impact of 9/11 in New York in 2001 resulted in a period of negative growth and a wide-ranging economic decline globally. It has taken the South African insurance industry the better part of three years to recover from this decline and the impact of 9/11 is no longer considered a factor in the domestic industry. Economic factors render an impact to both the short-term and long-term sectors (INSETA, 2005: 17). The short-term sector experienced progress due to both improved underwriting results and a growth in premiums for 2002 and 2003. This sector continues, however, to be impeded by poor investment returns; increasing reinsurance rates; increased competition between advisors and direct distribution channels; and increased costs resulting from legislative compliance (INSETA, 2005: 17). The long-term sector recorded a decrease in premiums in 2003 which continued into 2004, primarily due to increased competition for consumer disposable income; increased competition from banks; improved access

to new investment initiatives; poor returns on investment; and diminishing of the capital base due to investment losses (INFINANCIALS, 2005: 1; INSETA, 2005: 17-18).

Economic factors further affecting the South African insurance industry is that of the Financial Sector Charter and Black Economic Empowerment. The Financial Sector Charter (FSC) and Black Economic Empowerment (BEE) currently exert pressure on the insurance sector. The FSC expects the industry to implement required Black male and Black female representation, across all management levels, by 2008. Such required representation is in addition to existing targets for Board representation and ownership. The Charter further compels minimum spending on industry-specific learnership programmes and training and skills development initiatives (INSETA, 2005: 18-19). Research (INSETA, 2005: 18) has found that there are few Black independent advisors in South Africa. This may be ascribed to insurance products traditionally being developed for a White market. Black advisors find it equally difficult to sell such products to the Black market or to enter the White market. Moreover, legislative requirements imposed by the Financial Advisory and Intermediary Services (FAIS) Act causes the operational environment to be fraught with difficulty, especially for new entrants to the industry. The FSC, therefore, presents the insurance industry with a considerable challenge (INSETA, 2005: 18-19).

Market forces present an additional driver of change that renders an impact on industry conditions and comprise economic, social and technological aspects.

Economic market forces may have either a positive or negative impact on the insurance industry. Those forces identified as rendering a positive impact include low interest rates resulting in increased consumer disposable income; emerging markets that result in increased markets and product ranges; and the FAIS Act (INSETA, 2005: 19-20). Economic market forces viewed as rendering a negative impact comprise a time-consuming and costly legislative burden; increased competition for the same market from both local and global companies; poor investor confidence due to market volatility; a complicated operating environment and the potential for poor business performance due to rand volatility; and cost pressures due to increased costs and increased demands for lower premiums (INSETA, 2005: 19-20).

Social market forces, in the form of FSC requirements, pose an additional challenge to financial advisors. Ethnic groups in South Africa are divided into 10 Living Standard Measurement (LSM) groups according to income and social status. The FSC requires the insurance industry to provide LSM categories one to five with access to life assurance, collective investment products and short-term risk insurance products. LSM categories one to five are typically viewed as the emerging market since consumers from these categories generally do not have disposable income at their disposal. Additionally, the emerging market traditionally channels insurance contributions toward funeral products (INSETA, 2005: 20-22).

An added challenge to the insurance industry is that of HIV/Aids. The impact created by this socio-economic factor is evidenced in three areas; i.e., increased costs to the industry due to the number of affected insurance employees; the detrimental effect on the industry's financial

performance due to HIV/Aids-related claims; and an increase in insurance premiums due to an increase in HIV/Aids-related claims, thereby reducing levels of consumer disposable income (INSETA, 2005).

Emerging markets and changing consumer needs are deemed as positive influences on the industry. Negative social factors include client fraud, domestic unemployment and high levels of crime. These factors result in increased costs to the industry, increased premiums for consumers and a decrease in consumer disposable income. Skills shortages and the loss of skilled employees to the global employment market further complicate the financial advisor's environment (INSETA, 2005).

Technological market forces, and specifically the use of technology, afford the insurance industry a competitive advantage by means of providing electronic trading, on-line insurance services, virtual selling, call centres and on-line administrative functions. Research has, however, found that 49.4 per cent of domestic financial advisors do not make use of a computer, or benefit from the functionality that may be attained by the use thereof (INSETA, 2005: 22).

Legislative requirements is the final driver of change that has an impact on prevailing industry conditions. The Financial Advisory and Intermediary Services (FAIS) Act of 2002 (promulgated the 15th November 2002) was effected on the 30th September 2004 in an attempt to professionalise and legitimise the insurance industry and to regulate the rendering of insurance advice, thereby encouraging consumers' trust in an industry that has, to date, suffered from a poor reputation (Botha, 2003: 1-4; INSETA, 2005: 16; Sanlam, n.d.: 2). Financial advisors' compliance to FAIS ensures that clients are provided with quality solutions based on reliable and appropriate advice. The Act requires integrity, transparency and a culture of discipline from financial advisors and affords protection to both advisor and client in the form of the FAIS Ombud. The first step toward compliance comprises obtaining a financial advisor's licence from the Financial Services Board (FSB). This is subject to certain FSB considerations, such as the honesty and integrity, qualifications and experience, perational ability and financial soundness of the applicant (Botha, 2003: 1-4; INSETA, 2005: 15-16).

Financial advisors are expected to comply with certain minimum Fit and Proper requirements, as defined in the FAIS Act. Fit and Proper requirements stipulate tertiary qualifications or National Qualifications Framework (NQF) levels appropriate to each insurance sector and allows financial advisors three years, from date of first appointment, to obtain the necessary qualification, provided this is achieved no later than the 31st December 2009. However, it has been established that the majority of financial advisors (56 000) have not progressed beyond Grade 12 (INSETA, 2005: 47). A substantial number of financial advisors are expected to exit the industry, rather than embark on a course toward obtaining the necessary qualification. This may, in part, be ascribed to advisors requiring Adult Basic Education and Training (ABET) prior to progressing toward the necessary qualification (INSETA, 2005). Also, financial advisors may be close to retirement age and may, therefore, decide to exit the industry early rather than having to embark on a course of study late in life.

It is expected that compliance to FAIS regulations may result in increased costs to the financial advisor. The high costs (INSETA, 2005) associated with the initial implementation of compliance measures (operational systems, processes and recordkeeping), as well as the costs related to the maintenance thereof, may result in financial advisors leaving the industry (INSETA, 2005.] Old Mutual adopted a strategy of accrediting its cadre of financial advisors prior to the introduction of the FAIS Act. This resulted in an 18% decrease in sales for the first quarter of 2004 (INSETA, 2005).

It is evident that FAIS holds cost implications to both the financial advisor and the financial services market. Financial advisors may be compelled to leave the industry, enter into partnership agreements with other advisors, or join financial advisor networks. Advisors may further consider entering new markets or establishing new group or client models. This may result in a decrease in the number of financial advisors in the South African financial services environment or a loss of independence for those financial advisors remaining in the industry.

The cost implications of FAIS may further result in a financial services market diverged into two sectors; namely the high-income and lower-income sectors. High-income clients may be able to afford paying for financial services, thereby affording them access to a comprehensive range of services. Profitable clients may, furthermore, be afforded free access to such services due to the profitable nature of their relationship with the advisor. Low-income clients may be prevented from access to the same services afforded to high-income clients due to a less than profitable client-advisor relationship resulting from their inability to meet the associated costs.

The inability of financial advisors to comply with FAIS requirements may result in job losses. Moreover, financial advisors may be reluctant to employ new advisors due to Fit and Proper requirements and the need to rely on a prospective employee's credibility, as well as the inherent risk this may pose to the practice. The approach employed by established, larger companies toward FAIS compliance is to reduce the number of financial advisors through the restructuring of departments, introduce FAIS-related training programmes for advisors and implement strategies to retain advisors who hold the requisite Fit and Proper qualifications (INSETA, 2005].

It has been established that 75,000 South African financial advisors are expected to be affected by the FAIS Act(INSETA, 2005). This comprises a total of 22,950 financial advisors who, at that time, were employed by large companies and a further 52,050 who may be termed independent financial advisors. This raises the concern that 69.4% of financial advisors may have to contend with legislative requirements without the ready access to legal counsel provided to those advisors employed by the larger companies. This does not extend to include informally employed advisors (INSETA, 2005.

Compliance with legislative requirements is an onerous task; yet, failure to implement and maintain compliance measures exerts a negative impact on the value of the practice (Vessenes, 2005). This may ultimately lead to the decline of the advisor's practice. Best business practices comprise a collection of measures that may facilitate the financial advisor in managing risk to, and

improving the management of the practice, thereby supporting the advisor in attaining legislative compliance.

BEST BUSINESS PRACTICES

Clarke (n.d.: 1) has found evidence of the implementation of best business practices in the most successful and profitable financial advisory practices. This has led to the assertion that the implementation of best business practices contributes toward enhancing the practice and the value thereof and has further given rise to the concept of a 'model' practice. It has been determined that such a 'model' practice has one owner (advisor), three representatives and six administrative staff members. Such a practice is at least eight years old and earns in excess of $500,000 net profit per year. The advisor works a maximum of 1 500 hours per year and indulges in a six-week annual vacation.

Best business practices, which include Finance and Reporting, Potential Clients, Client Relationship Management, Staff Management, Operational Efficiency, External Environment, Business Continuity, and Business Entity and Client Access are closely interrelated with enhancing the value of the financial advisor's practice. A brief description of each of the afore-mentioned best business practices will next be provided.

Finance and Reporting

Finance and Reporting best business practices (Celestis, 2005b: 3) suggest that the advisor should analyse income regularly, know what comprises the top 10 expenses in the practice and how such expenses compare to industry norms, understand the effects of productivity on profitability, acknowledge that staff represent an investment upon which a return should be earned and appreciate that efficient time management will have an impact on practice profitability. All financial aspects which exert an influence on the practice, such as income and expense management and the profitability of the practice, should consequently also be considered by the financial advisor.

Income and expense management comprise the appropriate management of income to the practice and expenses incurred by the practice, as well as the effect thereof on the profitability of the practice. The financial advisor should identify where income to the practice originates from, the forms of income received, the reasons for income received, as well as the frequency of income due to the practice (Celestis, 2005b: 6). Furthermore, the various costs incurred by the practice needs to be differentiated in order to determine the effect thereof on profitability. Profitability, in its simplest form, may be defined as the difference between income to, and expenses incurred by the practice (Celestis, 2005b: 18) and is an important indicator of the financial health of the practice. Such financial health may be strengthened through sourcing new clients and new business.

Potential Clients

Potential Client best business practices (Celestis, 2005e: 2) propose that the financial advisor develops a marketing plan to coordinate and facilitate the marketing effort toward gaining new clients. The advisor should further determine whether either prospecting for clients or soliciting referrals from existing clients presents a means to successfully augment the client base of the practice.

The marketing plan provides the advisor with a tool essential to remaining competitive. Developing the marketing plan will assist the advisor in identifying those attributes unique to the practice, how to communicate this to the desired audience, as well as those channels most appropriate to deliver the message to such an audience (Celestis, 2005e). The marketing plan should clearly define the objectives of the practice, its target market, the message to deliver to the target market, the media used to deliver the message and the budget available. The advisor should realise that successful marketing comprises building a reputation over time by means of continuously creating awareness.

The advisor may employ prospecting as a means to source new clients. Prospecting presents the advisor with a complex route toward finding new clients. Family and friends do not always constitute good sources for prospecting and approaching strangers may result in disappointment, rather than success (Plummer, 2000: 1). Successful prospecting results from the ability to relate to prospective clients and their needs. It is important, therefore, that the advisor recognises those personal interests (such as golf) and personal areas of expertise (such as investments) that may serve as an advantage when prospecting for clients (Plummer, 2000: 2-3).

Referrals from existing clients may present the advisor with an easier means to augment the client base of the practice (Bachrach, 1999: 1-2; Bolka, 2006: 1-3; Lawrence, 2003: 1-2; Plummer, 2000: 1; Webb, 2000: 1). Referrals originate from quality client-advisor relationships and provide the advisor with an effective marketing system; however, lucrative referrals are not easily obtained. It has been proven that 94 per cent of advisors' clients are willing to refer their advisors; however, only 11 per cent of advisors request referrals from their clients. This represents considerable opportunity to the advisor. The advisor may, therefore, consider including a referral strategy into the marketing plan (Bachrach, 1999: 1-2; Bolka, 2006: 1-3; Lawrence, 2003: 1-2; Webb, 2000: 1). The acquisition of appropriate referrals is a lengthy process. This may be accelerated (Coulter, 2001a: 1-3) by the advisor entering into strategic alliance agreements. The advisor should carefully nurture such alliances, as well as relationships with new and existing clients.

Client Relationship Management

Client Relationship Management best business practices (Celestis, 2005a:) advocate that the advisor classify, or segment, the client base into appropriate categories, differentiate services

rendered according to such categories and identify those clients in the client base who do not conform to the profile of an ideal client. The advisor should also devise and implement appropriate measures toward improving client service, demonstrating client appreciation and improving communication with clients.

Client segmentation is based on Pareto's Principle (Celestis, 2005a: 4). This principle originates from Vilfredo Pareto, an Italian economist, who observed in 1906 that 80 per cent of Italy's wealth was owned by 20 per cent of that country's population. This same principle should be applied by the financial advisor to ensure that 80 per cent of the income to the practice originates from 20 per cent of its clients (Celestis, 2005a: 4). Financial advisors may implement client segmentation to group existing clients into predefined categories, according to those clients' value to the advisor's practice, and to deliver services appropriate to each segment. The financial services industry has developed from one of pursuing numbers to one comprising processes entailing sophisticated analysis and interpretation toward presenting clients with tailor-made solutions (Celestis, 2005a: 4). Improved services to the top echelon of clients increase the probability that income required will originate from that group. This relieves the advisor of the need to search continuously for new clients, an effort which is both time-consuming and expensive to the practice (Celestis, 2005a: 5). It further allows the advisor to focus increasingly on the quality of services rendered, as opposed to increasing the quantity of different services rendered. Segmenting the client base provides the financial advisor with a firm understanding of which clients represent the most opportunity for profit to the practice.

Segmentation in itself does not provide the advisor with a means to benefit from such opportunity; however, the combination of segmentation and services differentiated per segment provides the advisor with the opportunity to realise such potential (Stackpool, n.d.: 1). In essence, providing different services, in accordance with the various client segments, allows the advisor to provide services appropriate to the needs of the client and consistent with the income generated by the client. When embarking on the differentiated services exercise, the advisor should continuously bear in mind that all clients remain entitled to a minimum standard of service; however, top clients qualify for additional services and exceptional service standards. Differentiating services per client segment, therefore, starts by defining the minimum service offering that all clients are entitled to (Celestis, 2005a: 8). The advisor should proceed by incrementally augmenting the service offering for each segment (in accordance with the Pareto Principle), thereby ensuring that top clients have access to the best and most diverse portfolio of services.

A large client base presents the advisor with difficulties in terms of providing a consistent level of service to all clients. It is inevitable that a large client base may include unpleasant clients or clients who prove difficult to work with. Clients such as these wield a negative impact on the advisor and support staff and may represent litigation and compliance risk to the practice (Celestis, 2005a: 6; Nicklin, 2006: 1-3). The size of the client base, as well as the type of clients included therein, may lead the advisor to consider reducing the number of clients. The advisor has recourse

to various options for the transfer of undesired clients, such as transferring undesired clients by introducing such clients to other advisors, either in the same practice or a different practice, who may be in a better position to service these clients. The advisor may further employ a junior advisor and transfer such clients to the new advisor. Alternatively, the advisor may enter into a joint production agreement with an advisor who is trying to establish a client base or transfer the clients to the relevant product providers for direct servicing by consultants employed by such product providers (Celestis, 2005a: 9). Any option selected by the advisor must be in the best interests of the client.

Klink (2004: 1) and Modly (2006: 1) has found that clients primarily require two features from a financial advisor; namely excellent service and a long-term relationship, and that a successful closing ratio, or transaction rate, may be directly ascribed to happy, satisfied clients (Vessenes, K., 2005: 2). It is suggested that the advisor evaluate what clients expect from the client-advisor relationship versus their current experience thereof. This may be achieved by means of a client survey (Modly, 2006: 1-4; Vessenes, K., 2005: 1-3). The advisor may further develop a client appreciation strategy that includes communication and appreciation initiatives sans an attempt to gain business (Klink, 2004: 1-2). The importance of such efforts to the continued success of the advisor and the practice is obvious, as is that of the staff contribution. This makes the appropriate management and utilisation of staff resources an important part of the financial advisor's efforts.

Staff Management

Dennis Gibb, president of Sweetwater Investments (Coulter, 2005b), decided to record all the time he spent on non-income generating activities. He found that such activities accounted for 30 per cent of his working time, representing an annual loss (calculated at an hourly rate of $150) in income amounting to $100,000. Gibb (Coulter, 2005b) determined that employing a staff member to execute such non-income generating activities would cost considerably less than $100,000 and proceeded to employ an administrative assistant. Gibb (Coulter, 2005b) recovered the assistant's annual salary in less than a year, whilst considerably increasing income to the practice (Coulter, 2005b).

The decision to employ new staff members should be considered from a return on capital perspective. The costs associated with doing so should be offset against the increased time advisors will have at their disposal to earn additional income to the practice. The first step in doing so is to determine how much the advisor's time is worth to the practice (Coulter, 2005b: 2-3) and how this compares to the costs associated with employing additional staff members.

Various options are available to the advisor, once the advisor has decided to employ staff. The advisor may determine that employing an administrative staff member would sufficiently address the needs of the practice. The advisor may consider employing a family member, an intern (university or college student), or a part-time employee. These options present a cost-effective way

of obtaining assistance. Alternatively, a recent graduate, paraplanner or a junior planner could be employed (Coulter, 2005a: 1-5, 2005b: 2-3). Paraplanners possess technical and financial skills complementary to those of the financial planner. A paraplanner may assist the advisor with information gathering, research, client service and marketing and analysing and compiling clients' financial plans. A junior planner has skills similar to that of the paraplanner, but considerably more experience in financial analysis and client interaction. Junior planners require less training, are expected to fulfil a more active role in the practice and may already have clients or could be expected to manage smaller clients in the practice. Both solutions represent a more expensive option; however, the advisor ultimately reaps the benefits thereof (Coulter, 2005a: 1-5). Employing a paraplanner or junior planner may further present the advisor with a potential internal solution to succession and the continued existence of the practice. Employees should be considered an asset which contributes to the profitability, productivity and operational efficiency of the practice.

Operational Efficiency

Operational Efficiency best business practices (Celestis, 2005c: 3) advocate that technology can add value to the practice; key processes in the practice should be standarised, documented and reviewed regularly; and record keeping should both comply with legislative requirements and allow the practice to continue as usual in the event of staff absence.

The advisor should recognise that an appropriate, stable technological infrastructure may provide the practice with distinct advantages that may result in improved operational efficiency and increased profitability. These advantages are attained by means of electronic financial planning processes; client relationship management software systems; improved client service; database administration and management systems; Internet access; and workflow systems (Celestis, 2005c: 4). This, in isolation, is not sufficient to attain operational efficiency. The advisor should also consider how the management of processes may contribute toward operational efficiency.

Documenting procedures, policies and processes exert an influence on the profitability of the practice. It is proposed that the key processes in the practice should be standarised, documented and reviewed regularly (Celestis, 2005c). Standardisation enhances operational efficiency. This facilitates monitoring of staff and assists the advisor objectively to determine appropriate rewarding of staff. Documenting processes assists in identifying errors, irregularities or duplications inherent in such processes. Documentation of processes further facilitates business continuity in the event of staff absence. Moreover, standardising and documenting processes contribute to separating the identity of the practice from that of the owner, thereby promoting the continuity of the business (Celestis, 2005c].

Record keeping should be of such a nature that it complies with legislative requirements and that a third party may step into the practice and continue business as usual in the event of staff absence. The single most important asset to the advisor and the practice is the client base and the

information associated therewith. Availability of, and access to client information and important documents, such as articles of incorporation, partnership agreements, lease agreements, business plans, marketing plans and financial records, is key to the effective management of the practice (Celestis, 2005c: 2). The Financial Advisory and Intermediary Services (FAIS) Act further places the advisor under legal obligation to retain and maintain certain records to serve as protection to both the advisor and the client. The advisor should identify those records to be maintained and should further distinguish between those records that should be maintained for legislative purposes or to serve best business practices. Legislation prescribes the length of period each document must be retained for. The advisor should ensure that such requirements are adhered to (Celestis, 2005c: 2). The extent of administrative duties within the financial advisor's practice emphasises the importance of efficient time management.

Successful time management requires the advisor to remain focused on the task to be achieved and to measure progress in doing so continuously. Effective time management, in essence, comprises identifying goals, appropriately prioritising such goals and applying those techniques that may best serve the advisor in achieving said goals.

Other than addressing issues internal to the practice, such as finance, sourcing new clients and managing client relationships and staff, the advisor should further address those external issues that may impact on the practice.

External Environment

External Environment best business practices (Nicklin, 2006) advocate that the financial advisor anticipate and manage risks; develop the reputation of the practice into a competitive advantage; employ branding and advertising to differentiate the practice from its competitors and provide clients with a comprehensive service offering through the use of strategic alliances.

The financial advisor should cultivate the ability to identify and assess those elements that may pose a threat to the practice. Such threats include adverse market conditions, financial instability, staff turnover, litigation and rogue clients. Clients may represent the sole source of income to the advisor; however, it is important that each client-advisor relationship be evaluated to determine the potential for risk inherent in that relationship (Nicklin, 2006: 1-3).

The advisor's reputation may serve as either a facilitator or restraint. The advisor should recognise the effort entailed in developing the appropriate reputation and treat this effort with caution.   Developing an appropriate reputation should begin with identifying the purpose, vision and values of the advisor (Nicklin, 2004). This may assist the advisor in achieving consistency and integrity. The advisor should also objectively evaluate individual strengths and determine how to develop or promote such strengths. It is important to recognise that reputation differs from image and identity (Kahle, 2006; Nicklin, 2004). The advisor should further appreciate the contribution of reputation toward the success of the practice. Further, financial advisors need to regard reputation

as a competitive advantage – one that may be enhanced through the successful use of branding and advertising.

A brand is a claim of distinction that separates advisors and their practices from potential competitors and which further aims to provide clients with a clear, valid reason for making use of the services offered by the advisor and the practice (Celestis, 2005e: 7). Brand identity provides the advisor with several benefits. The professionalism of a comprehensive practice image, including branded marketing materials, may facilitate the advisor in gaining access to financing or new markets. The distinction associated with a brand may encourage clients to use the services of the advisor. This may, in turn, result in increased client loyalty and clients who are supportive of the brand. The brand may also serve to indicate how the practice differs from those of other advisors. A well-designed brand, together with a strong marketing programme, may further increase the prominence of the advisor and the practice (Celestis, 2005e: 7).

Advisors may consider embarking on an advertising campaign once they have defined how the practice differs from other practices and have developed an appropriate brand identity for their practice. The success of an advertising campaign may be measured by evaluating the average amount spent per successful prospect. Another consideration would be whether an investment in advertising reduces unit costs or results in an increase in revenue. An advertising campaign is an expensive exercise. It is suggested that the advisor view the advertising agency as a strategic partner toward reaching the objectives of the practice (Vessenes, 2006). The success of the financial advisor's practice may further be augmented through the development of mutually beneficial alliances and partnerships.

Providing clients with access to the best and most diverse portfolio of services significantly contributes to both the profitability and retention of the client base. The advisor may, however, lack the necessary skills and expertise to provide such an extensive service to clients. This presents the advisor with the decision either to turn away potential business or to outsource certain services (Coulter, 2001a: 1-3). Forming strategic alliances presents the advisor with a potential solution to this dilemma. Recourse to services complementary to those offered by the practice (such as estate planning, documenting wills, auditing, creating trusts and formalising power-of-attorney agreements) allows the advisor to provide an enhanced service offering to clients, whilst strategically developing the practice (Coulter, 2001a: 1-3). A strategic alliance is a collaborative effort that benefits all parties, especially the client. The knowledge that the advisor has access to specialised services, and a working relationship with providers thereof, serves to imbue clients with confidence that their financial needs are in capable hands. Clients further favour the knowledge that their financial needs are being met by a team of professionals, rather than one person only (Coulter, 2001a: 1-3, 2002a: 1-4). An example of such a need may be that of a client's uncertainty regarding the continued availability of both the financial advisor and the practice. This need is addressed through implementing those best business practices relating to business continuity.

Business Continuity

Business Continuity best business practices (Celestis, 2005d: 3) suggest that a documented business plan should be in place for the 12 months ahead and that advisors, in their capacity as business owners, should provide for both unplanned and planned departure from the practice. The continuity of the financial practice may further be served by acquiring the services of a business coach.

The financial advisor should develop and document a business plan, containing the practice's purpose, measurable business objectives and a detailed action plan thereto, for the 12 months ahead. The plan should be reviewed regularly; amended when necessary and communicated to key staff (Celestis, 2005d: 4). Successful advisors carefully plan their business activities to optimise resources available to them. Celestis (2005d: 4) has found that the most successful advisors, when compared to their less successful colleagues, are four times more likely to have developed and implemented a business plan, which serves to guide and focus the advisor on what s/he has set out to achieve. An important extension of business continuity is that of succession planning. It is imperative that advisors, in their capacity as business owners, provide for both unplanned (death, disability) and planned (retirement) departure from the practice.

Succession planning may be defined (Celestis, 2005d: 5) as the strategy employed to transfer an advisor's clients in the event of retirement, death, disability or voluntary sale of the practice. The objective of succession planning is to transfer both ownership and management of clients, thereby ensuring long-term client retention and the continuity of the practice. Participants to succession planning include the advisor, the employees, the client base and the potential buyer. The advisor should balance a concern for the well-being of clients and employees against that of concluding the most profitable transaction possible. Employees may require assurance of their continued service, especially those employees who regularly interact with clients. Clients to the practice should experience a smooth transition to the new owner to facilitate client retention (Celestis, 2005d: 5). Planning for the sale of the practice comprises finding an appropriate buyer; structuring the sales transaction; and considering the impact of selling the practice. Succession planning may necessitate a restructuring of the practice and the implementation thereof is a lengthy process. It is suggested that the advisor devise a plan in advance, thereby affording the advisor sufficient time to implement and monitor the plan or to amend the plan, should this be required (Celestis, 2005d: 5). Ensuring the continuity of the financial practice may further be served by acquiring the services of a business coach.

The advisor may reach a threshold where assistance is required to improve business and/or personal life and the quality thereof, or to reach the next level of professional proficiency (Coulter, 2001b: 1-2). The advisor may consider employing the services of a business coach to assist with this effort. A business coach may assist the advisor in various ways, such as developing a more effective system for referrals; bolstering client relationships; cultivating a team approach in the

office and achieving a balance between personal and professional life. The coach may further assist the advisor in changing inefficient habits and to redefine focus, thereby renewing the advisor's energies and guiding such energies appropriately (Coulter, 2001b: 1-2). The advisor should further consider the structure of the financial practice, as well as clients' access to the practice.

Business Entity and Client Access

Business Entity and Client Access best business practices (Celestis, 2005d: 4) advocate that the advisor consider the range of implications associated with the various available legal entities and that the advisor view the impact on the client of the location, premises and accessibility of the practice.

Legislation determines (Celestis, 2005d: 4) that a legal entity must be selected for the practice. Each form of legal entity has specific implications for the advisor and the practice in the event of the death or permanent disability of the advisor. The legal entity selected further has an impact on the advisor's FAIS licence, as well as on income due from product providers, in the event of the death or permanent disability of the advisor. Various options are available to the advisor when selecting a legal entity for the practice, such as sole proprietor, partnership, private company, close corporation and an Inter Vivos trust (Celestis, 2005d: 4).

It is further important that the advisor view the location, premises and accessibility of the practice from a client's perspective. The advisor should consider how these aspects may affect the client's service. Creating a professional image may require thoughtful planning, expenditure and a shift in attitude; however, the benefits derived from doing so will compensate the advisor and the practice for doing so (Coulter, 2002b: 1-3; Vessenes, K., 2005: 4-5). The advisor's office should reinforce that the client is transacting business with a professional advisor and practice. Exposing the client to a professional experience will inspire the client's trust in the advisor's abilities, thereby facilitating the successful conclusion of the business transaction. The advisor and practice staff should attempt, at all times, to provide the client with a memorable experience (Kahle, 2006: 2-3).

The business practices discussed do not exist in isolation; rather, these business practices collectively contribute toward increasing profitability, enhancing the client experience, improving the value of the financial advisor's practice and ensuring the continuity thereof.

RESEARCH DESIGN AND METHODOLOGY

The research paradigm deemed most appropriate to this study is that of positivistic research. This may be substantiated by the intentions of this study; namely to use exploratory and confirmatory data analysis to determine the extent to which South African financial advisors currently make use of best business practices; and to deduce the need for the implementation of best

business practices in the South African independent financial advisor's practice (Collis & Hussey, 2003: 121, 151, 155).

The unit of analysis in this research comprised an aggregate of South African independent financial advisors (N = 2209) who were registered members of a financial services distribution network during the year 2006. This provided the assurance that all selected financial advisors were appropriately licensed with the Financial Services Board (FSB), in terms of both the Financial Advisory and Intermediary Services (FAIS) Act of 2002 and the Financial Intelligence Centre Act (FICA) of 2001. Members of this financial services distribution network are further expected to remain compliant to legislation (FAIS and FICA) and to any requirements imposed by the FSB. Compliance assessments are conducted quarterly for each network member and an annual audit report is submitted to the FSB for each member. This provides the assurance that respondents have implemented, and are maintaining, those processes required to render adequate and appropriate financial advice to their clients, as required by legislation.

Both qualitative and quantitative variables were used in the process of collecting data by means of an electronic questionnaire. Qualitative variables were used to provide non-numerical data specific to the aggregate and included the race and gender of respondents, as well as the legal business entities employed by respondents. Quantitative variables were used to provide numeric data specific to the same aggregate (Collis & Hussey, 2003: 152). The questionnaire consisted of both discrete (annual income of the financial advisor's practice) and continuous (number of support staff employed, number of years practicing as a financial advisor and age of the financial advisor) quantitative variables.

The respondents were chosen based on a quota sampling technique. Quota sampling allows the random selection of respondents from sub-groups within a population and requires an advance indication of the required number of respondents within each sub-group (Pijnenburg, 2004: 38). The Random Number Generation function (Excel) was used to select the required quantity of random numbers per region. This function provided independent random numbers (Keller, 2005: 148) that were used to select regional respondents with matching numbers. Questionnaires were submitted to members (N = 442) from each of the six regions, as indicated in Table 1.

Collis and Hussey (2003) maintain that the size of the population determines the size of the respondent sample and the results from such a representative sample may be deemed valid for the entire population. To attain a representative quota sample for this study 20 per cent of members from each region, as shown in Table 1, were included in the research. It was expected that, based on personal experience, the findings of the empirical analysis would demonstrate a 40% incidence nationally of respondents having implemented best business practices. To ensure that the national figure would be within a five per cent variation of the 95% confidence level, a sample size of 369 was required. An 85% response rate was further expected from respondents. To arrive at both the required precision limit (confidence level of 95 per cent) and a sample size large enough to ensure the expected response rate of 85 per cent, a total of 442 questionnaires (Ferreira, 2006) was

submitted to randomly selected respondents. This constituted 20 per cent (rounded) of the number of network members.

Table 1: Regional apportionment of questionnaires		
Region	Number of members	Questionnaires submitted to 20 per cent of members
Eastern Cape	258	52
Free State	312	62
Gauteng	481	96
KwaZulu-Natal	324	65
Mpumalanga	416	83
Western Cape	418	84
Total	2209	442
Source: Researcher's own construction		

Two measures, namely validity and reliability, may be used to assess the credibility of the research findings. The design of the questionnaire was expected to contribute to achieving validity of findings. This was accomplished through the use of closed questions, supplemented by detailed descriptions, which restricted the potential for response variance. Confidence in the validity of the findings was reinforced through the delimitation of the research. It was further considered that the size of the sample, as well as the number of respondents per region, would prove sufficient to validate the reliability of the findings received across the respondent sample (Ferreira, 2006). It is anticipated that the findings will prove reliable in the foreseeable future due to the relative novelty of the implementation of best business practices in the South African independent financial advisor's practice.

EMPIRICAL FINDINGS – BEST BUSINESS PRACTICES

The empirical analysis and findings will be presented according to the two sections of the questionnaire, namely demographic findings and findings related to the implementation of best business practices; however, before the findings are presented, an overview of the sample response rate will be given.

The number of questionnaires required to achieve both the desired precision limit (95 per cent) and the expected response rate (85 per cent) was submitted to members selected randomly from the various geographic regions, according to the quota sampling technique. Table 2 demonstrates an overall response rate consistent with the response rate expected.

Table 2: Response rate per region			
Region	Questionnaires submitted	Questionnaires received	Percentage response
Eastern Cape	52	47	90
Free State	62	56	90
Gauteng	96	84	88
KwaZulu-Natal	65	53	82
Mpumalanga	83	62	75
Western Cape	84	75	89
Total	442	377	85
Source: Researcher's own construction			

Table 3 provides a summary of the demographic findings. The names of the various regions have been abbreviated to facilitate demonstration of the findings and the following serves as a key:

Eastern Cape	EC
Free State	FS
Gauteng	G
KwaZulu-Natal	KZN
Mpumalanga	M
Western Cape	WC

Table 3: Summary of demographic findings							
	National	EC	FS	G	KZN	M	WC
Number of respondents	377	47	56	84	53	62	75
Response rate (percentage)	85	90	90	88	82	75	89
Race distribution:							
Black	14	0	0	6	8	0	0
Coloured	32	1	3	4	1	2	21
Indian	10	0	1	1	3	1	4
White	321	46	52	73	41	59	50
Gender distribution:							
Male	334	43	50	75	47	54	65
Female	43	4	6	9	6	8	10
Age (mean)	48	49	46	49	48	48	47

Table 3: Summary of demographic findings							
	National	EC	FS	G	KZN	M	WC
Legal entity distribution:							
Close Corporation	213	21	31	51	27	37	46
Proprietary Limited	37	3	9	7	8	1	9
Sole Proprietor	122	22	15	26	18	21	20
Trust	5	1	1	0	0	3	0
Number of years practicing							
as advisor (mean):	17	17	15	17	16	18	17
Number of support staff:							
None	64	7	8	15	16	4	14
One	192	23	24	43	24	35	43
Two	79	11	16	19	8	11	14
Three	22	1	5	4	4	6	2
Four	13	3	2	2	1	4	1
Five	5	2	1	0	0	1	1
Seven	2	0	0	1	0	1	0
Staff members per							
advisor (mean)	1.3	1.4	1.5	1.3	1.3	1.7	1.1
Source: Researcher's own construction							

Table 4 provides a summary of demographic findings related to annual income earned by financial advisors.

Table 4: Summary of demographic findings related to income	
	Income per advisor (R mean)
National income	563,528
Eastern Cape	469,149
Free State	633,929
Gauteng	591,667
KwaZulu-Natal	395,283
Mpumalanga	588,710
Western Cape	636,667
Source: Researcher's own construction	

An analysis of the demographic data, as indicated in Tables 3 and 4, demonstrates that the typical respondent is a White male, aged 48, who has been practicing as a financial advisor for a period of 17 years. It was further indicated that this member operates as a close corporation, employs one staff member and earns between R500,000 and R600,000 per annum. Table 3 indicates that the majority of members are White, thereby corroborating findings from INSETA's (2005: 18) research regarding the small number of Black financial advisors in South Africa. It is evident from Table 3 that the majority of members are male, with female financial advisors comprising 11 per cent of the total number of respondents. Table 3 further demonstrates that the majority (51 per cent) of members employ one staff member, whilst 17 per cent of members have no employees and seven members each employ more than four staff members respectively. It is evident from Table 4 that disparity exists between the average annual income earned by members, especially between members in the Western Cape and members in KwaZulu-Natal. A detailed analysis of the demographic findings, according to each of the six regions, is available on request.

Empirical analysis of findings pertaining to the national implementation of best business practices is classified according to the following categories:

   ♦ *findings per best business practice, both national and regional;*
   ♦ *national findings per best business practice, per race;*
   ♦ *national findings per best business practice, per gender;*
   ♦ *national findings per best business practice, per legal business entity;*
   ♦ *national findings per best business practice, per number of support staff;*
   ♦ *national findings per best business practice, per income category; and*
   ♦ *national findings per best business practice, per number of years in business.*

A summary of these empirical findings are presented in Tables 5 and 6. An extensive empirical analysis of findings pertaining to the regional implementation of best business practices was completed for the purposes of this study and is available on request.

It was expected that the findings of the empirical analysis would demonstrate a 40 per cent incidence nationally of respondents having implemented best business practices. This view is corroborated by the overall mean percentage of 41 per cent obtained nationally for the implementation of best business practices, as provided in Table 5.

The empirical findings in Table 5 suggest that the typical member of the financial services distribution network achieved a high mean (61 per cent) for the implementation of best business practices associated with Business Entity and Client Access. The findings further suggest that best business practices associated with income to the practice, namely Potential Clients (37 per cent) and Client Relationship Management (32 per cent), have only been implemented amongst a minority of respondents and only to a lesser degree.

Table 5: Summary of empirical findings	
Category	Mean percentage
National, overall mean percentage	41
Mean implementation percentage per best business practice:	
Finance and Reporting	50
Potential Clients	37
Client Relationship Management	32
Staff Management	37
Operational Efficiency	50
External Environment	39
Business Continuity	22
Business Entity and Client Access	61
Source: Researcher's own construction	

As stated previously, the average age of respondents is 48 years. The low mean achieved for the implementation of best business practices associated with ensuring the continuity of the practice (22 per cent) and the client relationship (32 per cent) is a concern, as this poses a risk to the financial advisor, especially in terms of current legislation.

Table 6 provides a summary of the implementation of best business practices in the South African independent financial advisors' practice according to various demographic aspects.

Table 6 indicates a low implementation rate for best business practices amongst Black members; members operating as sole proprietors; and members without a staff complement. The findings further indicate a higher implementation rate amongst members in the higher income categories. It may be concluded from Table 6 that the highest mean for the implementation of best business practices was achieved by a White female respondent who operates as a proprietary limited entity; employs seven staff members; earns an income of R1,500,000 to R2,000,00 per annum; and has been practicing as a financial advisor for a period of 36 to 40 years.

Table 6: Summary of empirical findings according to demographic aspects	
Category	Mean percentage
Mean implementation percentage per race:	
Black	30
Coloured	40
Indian	32
White	42
Mean implementation percentage per gender:	
Male	41
Female	44
Mean implementation percentage per legal business entity:	
Close Corporation	43
Proprietary Limited	48
Sole Proprietor	35
Trust	45
Mean implementation percentage per number of support staff:	
None	29
One	40
Two	47
Three	51
Four	54
Five	48
Seven	56
Mean implementation percentage per income category (R'000):	
0 – 100	34
100 – 200	32
200 – 300	35
300 – 400	38
400 – 500	41
500 – 600	40
600 – 700	49
700 – 800	44
800 – 900	44
900 – 1,000	49
1,000 – 1,500	48
1,500 – 2,000	59
2,000 – 2,500	58
2,500 – 3,000	20

Table 6: Summary of empirical findings according to demographic aspects	
Category	Mean percentage
Mean implementation percentage per number of years practicing as advisor:	
0 – 5	42
6 – 10	34
11 – 15	34
16 – 20	37
21 – 25	34
26 – 30	30
31 – 35	40
36 – 40	48
46 – 50	33
Source: Researcher's own construction	

CONCLUSIONS

The primary objective of this paper was to report on the case for best business practices; provide an overview of best business practices; and to present the empirical findings pertaining to the implementation of best business practices (specifically those related to Finance and Reporting, Potential Clients, Client Relationship Management, Staff Management, Operational Efficiency, External Environment, Business Continuity, and Business Entity and Client Access) in the South African independent financial advisor's practice.

Based on the findings from the research into the extent to which South African independent financial advisors currently make use of best business practices, the following may be concluded:

♦ *South African independent financial advisors achieved a low national mean of 41 per cent for the implementation of best business practices.*

♦ *A correlation exists between a high mean percentage for implementation of best business practices and respondents who earn in excess of R600,000 per annum. This demonstrates the financial benefits associated with the implementation of best business practices.*

♦ *A correlation exists between a high mean percentage for implementation of best business practices and respondents who employ two or more staff members.*

♦ *A correlation exists between a high mean percentage for implementation of best business practices and respondents who have been in practice for longer than 30 years.*

♦ *A low mean percentage was achieved for the implementation of best business practices related to securing income to the practice (Potential Clients and Client Relationship Management) and ensuring the continuity of the practice (Business Continuity).*

The above conclusions confirm the importance of best business practices to improve the capital value of the practice; to contend with the industry environment; and to ensure the continuity of the financial advisory practice. The above-mentioned findings, together with the low national mean (41 per cent) achieved by respondents for the implementation of best business practices, conclusively indicate a need for the implementation of best business practices in the South African independent financial advisor's practice.

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EXAMINING THE EFFECT OF BOARD CHARACTERISTICS ON AGENCY COSTS AND SELECTED PERFORMANCE MEASURES IN BANKS

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ABSTRACT

To date the empirical research examining the association between measures of corporate governance and accounting performance measures has yielded inconsistent results. We believe that the mixed results are due in part to the inclusion of firm across various industries. This study continues the stream of research studying agency theory and the relationships between board of director characteristics and firm performance. We address these issues by developing a set of models in a single, regulated industry. Focusing on the banking industry over a five-year period allows us concentrate on the measures rather than potential variations across industries. Our findings contradict the hypotheses developed under the agency theory approach and lead us to believe the relationships should be studies under a different lens.

INTRODUCTION

The corporate form of ownership is an integral part of the US capital market structure. Under the corporate structure, shareholders (principals) entrust management (agents) with their investment. Because the utility functions of the principals and agents can differ, the separation of ownership and control allows for potentially self-serving or opportunistic behavior by management. These behaviors result in poor financial performance, excessive compensation, and other agency costs, such as those seen in the Tyco scandal. There is a need to oversee managers and to align the interest of managers with those of shareholders. In publicly traded US corporations, this role is delegated to the company's board of directors, and some of the blame for the problems in the executive suites has been put on board of directors for failing to exercise appropriate managerial oversight.

Corporate governance is described as "the set of mechanisms that influence the decisions made by managers when there is a separation of ownership and control" (Larcker et al, 2007:964). One of those monitoring mechanisms is the board of directors. At the most basic level, the board of directors is responsible for ensuring top management's actions are consistent with the interests of the shareholders (Fama and Jensen, 1983). In fact, board members not only have the legal

authority to monitor the actions of top executives, but also the fiduciary responsibility to look out for the interests of shareholders. "Unfortunately, experience has shown that some executives do not sincerely believe in or want good corporate governance. They view it as a constraint on their ability to make their preferred decisions" (DiPiazza and Eccles, 2002: 101). This attitude on the part of top executives may be what leads to the creation of an ineffective board.

Recently, however, shareholders, regulators, and large institutional investors have voiced growing criticism of boards, particularly with regard to the perceived failure to exercise effective managerial oversight, meaning managers are facing a new governance arena. DiPiazza and Eccles (2002: 98) state, "(k)een attention is being paid today to corporate governance because that is where a culture of accountability begins and where it can be effectively fostered. What once seemed little more than a rubber stamp for executive decisions is now recognized as a value driver that can make or break a company." The end result is the focus of more attention on the effectiveness of board of directors in monitoring executives' actions, and the underlying motivation for our looking at board characteristics and their relationship to common measures of financial performance and agency costs.

To date the empirical research examining the association between measures of corporate governance and accounting performance measures has yielded inconsistent results. We believe that the mixed results are due in part to the inclusion of firm across various industries. Economic and regulatory factors can impact various industries differently. Our selection of a single segment of the financial institutions industry, banking, is a contribution of this study. While it may be argued that industry level differences can be controlled for is a study like ours, a single industry study eliminates the need for such controls. Also, because banks are regulated, our findings may have public policy and regulatory implications.

Using both publicly available data and a commercial database, we test whether selected board characteristics are systematically related to accounting-based performance measures that capture agency costs and profitability. The various board characteristics serve as a proxy for a measure of monitoring of executives and the financial measures are assumed to measure the agents' divergent behavior.

The next section of the paper provides background information from the related literature and the development of our hypotheses. The third section focuses on sample selection and model development. Fourth, we show results from our analysis. Lastly, we include a discussion of the results and conclusions.

THEORETICAL BACKGROUND AND HYPOTHESES

Stohr (1975) states the law places directors in a fiduciary relationship with shareholders, while Subrahmanyam et al (1997: 25) state "(r)egulatory language also extends the fiduciary responsibility of the board beyond shareholders to the depositors and the FDIC." Even the TIAA-

CREF position statement on corporate Governance (2007: B-38) states "(t)he primary responsibility of the board of directors is to foster the long-term success of the corporation consistent with its fiduciary responsibility to the shareholders" This fiduciary relationship extends into the principles of agency (Miller, 1975; Waldo, 1985).

According to Mallette and Fowler (1992), boards are the agents of the shareholders and exist to monitor management performance and protect shareholders' interests. Agency theory supposes that an effective board of directors provides better monitoring and control of management, thus maximizing shareholders' wealth and minimizing agency costs (Fama and Jensen, 1983; Jensen and Meckling, 1976). Subrahmanyam et al. (1997: 23) echo this position by stating "…outside directors are expected to represent the interests of shareholders by mitigating agency problems between management and shareholders." Shareholder activism and regulatory reform seem to indicate boards may not be performing this expected fiduciary role, and both Jones (1986) and Kesner and Johnson (1990) studied boards sued for failing in their fiduciary role.

It is not clear which characteristics constitute a high quality board, but Baysinger and Hoskisson (1990) propose two primary lines for evaluating board quality: independence from management and competence. Mallette and Fowler (1992: 1013) echo this position when they stated "one of the critical determinants of a board's governing effectiveness is director independence," and Epstein (1992) points out that shareholders want an independent board to motivate managers to improve performance. DiPiazza and Eccles (2002: 5) state their position clearly, "(i)ndependent boards exist to see that this accountability is recognized and maintained by both management and the board itself." Looking at the large institutional investors, TIAA-CREF's position statement on corporate governance (2007), states a board composed of a substantial majority of independent directors would have a sharpened sense of accountability.

The growing activism of large stockholders, like that of TIAA-CREF, and regulation, such as the passage of the Sarbanes-Oxley Act, are just two of the indication of the increasing emphasis on the role of independent directors. Such activity seems to assume that a solution to some of the corporate governance problems lies in mechanisms that dictate governance structure, including elements of board design (Dunn, 1987; Mallette and Fowler, 1992). Lawler (2002) notes new governance initiatives are designed to balance the power of the CEO and the board and that one of the more promising ideas is a greater portion of outside directors. Wang and Coffey (1992: 771) point out "the outsider dominance perspective has received theoretical support from several disciplines such as finance, organizational theory, and strategic management." Rhoades et al. (2000: 76) state "… an alleged lack of independence is seen as the root cause of a board's failure to effectively monitor the actions of top management." Bacon and Brown (1975) and Williams and Shapiro (1979) espouse outside directors can strengthen a board's independence and enhance the effective functioning of the board.

Since insiders have a dual responsibility of reporting to the CEO and looking out for the best interests of the shareholders, there can be little doubt that outsiders have greater freedom in fulfilling

the fiduciary role. Both Jones (1986) and Kesner and Johnson (1990) found boards sued for failing in their fiduciary responsibilities tend to have a high proportion of inside directors, while Abrahamson and Park (1994) found a higher proportion of outsiders on the board led to the president revealing more negative information about the company in the annual letter to shareholders. Relatedly, Bertin et al. (1989: 97) found that "outsider participation on boards of directors serves as a managerial control device in terms of reducing excess consumption of perquisites."

A critical point is that the literature does not provide consensus about the effects of board composition. Patterson (1998) concluded that studies achieved only a scattered success in establishing a link between corporate governance and corporate performance, while Finkelstein and Hambrick (1995) and Hambrick (2001) note little surprise that researchers have found mixed results in the studies of the proportion of outsiders on boards and corporate performance. One reason for the lack of consensus may be the different ways board members are characterized.

There seems to be two classes of outside directors, affiliated-outside directors and independent-outside directors. Vafeas et al. (2003: 340) note "outside directors who may, because of their professional affiliation, earn money from the firm other than in their capacity as directors, are thought to be less than fully independent from management,...", and McKinsey defined good governance as have a board composed of a majority of truly independent outsiders (Burns, 2003). The affiliated-independent outsiders are sometimes called gray area directors. This distinction is addressed further in the next section of the paper, but board composition is should not be the only characteristic of interest.

The utility functions of the principals and agents can differ, and the agent does not always act in the best interests of the principals. Since boards are the agents of the shareholders, there is a risk of board members acting in a self-serving manner. Requiring a capital investment on the part of board members is one possible way to ensure that board members do not act in ways that benefit top management and themselves at the expense of other shareholders. In fact, Federal law dictates that bank directors must own stock in the bank they serve (United States Code, 1982, Title12, Chapter 2, Subchapter 111, Section 72). There is more than an implicit assumption that ownership is intended to have an effect on the directors. The interpretive notes in the code state the "(p)urpose of ownership requirement is to insure that director, when he serves, shall have sufficient individual financial interest in bank to induce him to be vigilant in protecting bank's interests." (Interpretive note #2 in the code section cited). While the federal regulations require stock ownership by all members of a bank's directors in order to help align their interests with the owner, the regulations do not prescribe a substantial ownership investment.

Regulators are not the only ones that support the idea of stock ownership by the board. Lawler (2002) notes that new governance initiatives are designed to balance the power of the CEO and the board, and one of the more promising ideas is increasing stock ownership by directors, and Mallette and Fowler (1992: 1012) note that "many have suggested that the low equity held by most directors exacerbates the problem of ineffective governance because they do not have a stake in the

success of the firms on whose board they sit" and note that increasing the equity positions of directors is a structural mechanism to align their interests with those of the shareholders.

There is, in fact, growing evidence that equity holding of directors may help align director and shareholder interests. In their study of tender offer bids, Byrd and Hickman (1992) found that shareholders benefit if independent outside directors own even a small fraction of the bidding firm's stock. Similarly, Mallette and Fowler (1992) found that low stock ownership by inside directors is a significant predictor of whether or not a poison pill is adopted. That same study, however, found no relationship between stock ownership by independent directors and the decision to adopt a poison pill.[1] The authors go on to state that the results may be due to the relatively little stock that independent directors generally hold in the companies on whose boards they sit. Subrahmanyam et al. (1997) found a positive relationship between the level of outside director ownership and abnormal returns. The positive impact of stock ownership levels is supported by Allen and Cebenoyan's (1991), Kren and Kerr (1997) Kosnik (1987), and Hambrick and Jackson (2000). Kosnik (1987) and Malatesta and Walking (1988) provide additional support for proposing that higher equity holding by inside directors lowers the probability that they will act in a manner detrimental to stockholders. Even Institutional investors have taken a stand. The TIAA-CREF position statement on corporate Governance (2007) states "(d)irectors should have a direct, personal, and material investment in common shares of the company so as to align their attitudes and interests with those of the public shareholders."

There is no silver bullet to improve corporate governance, but there is substantial evidence that stock ownership by company directors may reduce agency costs. Consistent with this evidence, we propose, through our later hypotheses, that the level of stock ownership as a percentage of total shares outstanding (OWNERSHIP_PERCENT) does affect financial performance.

Hermalin and Weisbach (1991) note that the idea that stock ownership can reduce underlying agency costs comes directly from agency theory: the greater the level of stock ownership, the greater the motivation to work to raise the value of the firm. However, they also point out that large ownership positions may mitigate the effects of other forces that reduce agency costs, such as the potential for takeover. In a similar vain, Daily, Certo and Dalton (1999: 47) call the trend of paying board members in stock questionable. While they agree that "…stock ownership seems, in fact, to present a mechanism for effectively aligning director and shareholder interests," they question the relationship between stock ownership and performance and go so far as to question that we should even expect to see a relationship.

Dalton et al. (1999: 674) state "(a)nother factor of interest to observers of corporate governance is the literal size of a board of directors." We look to resource dependency theory as the foundation for the belief that larger board size is associated with better firm performance. Provan (1980) showed that a larger board was associated with the ability attract resources from the environment, while Zahra and Pearce (1989) suggest that a larger board may offer a higher level of quality advice to a CEO. Bigger, however, may not always be better. A larger board may have

more difficulty initiating strategic action (Goodstein at al., 1994), and a larger board s likely to be more fragmented than a smaller board. Vafeas (2000) found that earnings of companies with smaller size boards were perceived as being more informative. The unanswered issue of board size leads to our inclusion of this variable in our models.

Up to this point we have presented the board characteristics that we think will impact performance measures and agency costs. We now define those measures and present hypothesized relationships between the selected characteristics and the performance measures.

Performance measures should provide feedback on how well the organization is meeting the goals and objectives set for an identified group of stakeholders, such as customers, employees, and stockholders. This study focuses on the capital providers (shareholders) that entrust management with their investment. Consistent with this focus, we studied financial performance measures and agency costs important to the stockholders. Joskow, Rose and Shepard (1993) suggest accounting-based measures are a convenient benchmark for evaluating firm performance. Also, accounting based measures are used in an overwhelming majority of these studies, as shown by the meta-analysis done by Subrahmanyam et al. (2005) and Dalton et al. (1999). Banking firms have some of the same performance measures as traditional firms (e.g. ROE & ROA), but some industry specific factors also lend themselves to other unique measures.

One industry specific measure is net interest margin. Net interest margin, calculated by dividing tax-equivalent net interest income by average earning assets, measures the difference between the yield on earning assets and the rate paid of funds. The measure is similar to the gross profit margin percentage. As with many businesses, gross margin is a function of the organization's sales mix. With banks, loan and deposit rates vary by categories, and overall loan and deposit rates may vary based on a product mix. Therefore, rather than directly comparing loan and deposit rates by institution, this study compares the net interest margin. A net interest margin of less than 3% is generally considered low, and more than 6% is very high (S&P 2000).

The net interest margin for institutions with varying board of director characteristics can be evaluated to determine whether the various forms maintain similar gross profit margins. Thus, if outside directors, ownership percentage, and board size influence management in decisions that affect net interest margin, the following hypotheses are proposed:

Hypothesis 1a: *A higher percentage of outside directors results in a higher net interest margin for a bank.*

Hypothesis 1b: *A higher percentage of stock ownership by directors results in a higher Net interest margin for a bank.*

Hypothesis 1c: *There is no relationship between board size and Net interest margin for a bank.*

Net interest margin focuses on the gross margin of the bank. The amount of gross margin not used for expenditures is net income for the institution. Since net interest margin does not capture the level of operating costs, other profitability measures are also considered.

According to Standard & Poor's Banking Industry Survey (2000), return on assets (a bank's net income divided by its total average assets during a given period) is a comprehensive measure of bank profitability. Historically most banks have had ROAs within a range of 0.60% to 1.5%, with a trend of a rising ROA generally considered positive. The S&P survey also lists ROE (total net income before extraordinary items divided by average stockholders equity) as another measure of profitability, with ROEs normally ranging from 10% to 25%. "Banking's Top Performers" published in the ABA Banking Journal (Michael, 2000) ranked large banks and bank holding companies according to their reported ROEs. In instances where the reported ROE was the same for two or more institutions, ROA was used as a secondary-ranking criterion. ROA and ROE are also used as firm performance measures in the relative performance evaluation literature (Antle and Smith, 1986; Gibbons and Murphy, 1990; and Janakiraman et al., 1992).

We use both measures because banks that rely heavily on deposits and borrowings to support assets, rather than on stockholders' equity, tend to have higher ROEs than those that do not. An unusually high ROE versus ROA can indicate that the bank's equity base is too small and its ability to borrow further is limited because of its high leverage.

Net interest margin, as noted above, is used to cover the operating expenses incurred by the institution. The amount not used for expenditures results in net income for the shareholders. Minimizing operating costs may maximize profits for both high and low net interest margin firms, impacting the ROA and ROE. We propose that a larger proportion of outside directors, higher stock ownership, and larger board size may lead to better monitoring of operating costs, leading to the following hypotheses:

Hypothesis 2a: *A higher percentage of outside directors results in a higher ROA for a bank.*
Hypothesis 2b: *A higher percentage of stock ownership by directors results in a higher ROA for a bank.*
Hypothesis 2c: *There is no relationship between board size and ROA for a bank.*
Hypothesis 3a: *A higher percentage of outside directors results in a higher ROE for a bank.*
Hypothesis 3b: *A higher percentage of stock ownership by directors results in a higher ROE for a bank.*
Hypothesis 3c: *There is no relationship between board size and ROE for a bank.*

The measures used thus far focus primarily on profit maximization. The profit maximization model asserts that managers seek to maximize profits as their main goal. Profit maximization, however, may not be the goal of those running the organization. Williamson (1963, 1964) was one of the first to offer an alternative theory to the traditional profit maximization model and posits that

managers seek to maximize their own utility and that managerial utility maximization can conflict with the interests of owners. Agency theory literature (Edwards 1977; Jensen and Meckling 1976; Williamson 1963 and 1964) posits that, when possible, managers will seek to maximize their own utility through increased expenditures on personnel and other operating expenditures. Managers may pay themselves high salaries and/or hire additional employees to reduce their own workload. In addition, management can consume perquisites through increasing other operating expenditures.

Net interest margin does not capture agency costs such as excessive personnel and operating costs, therefore, financial measures that take these costs into consideration are also needed. Since agency costs directly affect firm profitability, a priori, one would expect that a bank with better monitors by the directors would have lower agency costs and higher profitability, so our tests using ROA and ROE measures may capture some of the agency costs. There is, however, another industry specific measure that may capture agency costs, and the measure is called the efficiency ratio.

The efficiency ratio (EFFICIENCY_RATIO) is defined as total overhead expenses (total non-interest income) divided by total interest and non-interest income less interest expense. Overhead expenses include all operating expenditures and deposit expenses (except interest), including any excessive spending by management for their own benefit. A higher value means a greater percentage of net interest revenue is being spent on overhead and would cause a bank to be ranked lower in efficiency, leading to our final set of hypotheses:

Hypothesis 4a: *A higher percentage of outside directors results in a better (lower) efficiency ratio for a bank.*

Hypothesis 4b: *A higher percentage of stock ownership by directors results in a better (lower) efficiency ratio for a bank.*

Hypothesis 4c: *There is no relationship between board size and efficiency ratio for a bank.*

SAMPLE SELECTION AND MODEL DEVELOPMENT

Because the results of prior research in this area are mixed, the question remains as to just how much is empirically known about the effect of board reform on governing effectiveness. Perhaps the previous ambiguous research results relate to the fact that many of the studies look across industrial classifications. Studies that cross industry boundaries raise a question of whether one type of governance structure is preferable to others. Which, as Hermalin and Weisbach (1991) point out, is the implicit argument in calls for board regulation. It is possible, however, that different structures may be appropriate for different industries based on the unique problems each faces. Adams and Maher (2003) lend support to the argument that governance structures are industry-specific and that governance reform should account for industry differences. Even if there were consistent findings in the research, Subrahmanyam et al. (1997) point out that there may be factors that limit the generalizability of studies on outside director effectiveness from nonfinancial firms

to financial institutions. They specifically state the governance structure of banking firms is significantly different from that of nonfinancial firms and the empirical findings of nonfinancial firms cannot be generalized to banks. In an effort to reduce the problems associated with industry uniqueness in cross-industry studies, this study focuses on a single industry.

Our study looks only at the banking industry and estimates the relationship between insider/outsider ratios on corporate boards and composites of financial performance. Since financial institutions have differing levels of regulation, by looking at only banks, we study a group with a common regulatory base. In addition to the common regulatory base, Vafeas et al. (2003: 336) write "bank asset composition is much more homogeneous and concentrated as compared to other industries making the banking industry well-suited for industry-specific study."

We start with a listing of 560 bank holding companies drawn from the Sheshunuff database. We obtain data on board composition from proxy statements available in the SEC EDGAR database. To date we have hand collected board composition data from proxy statements for the years 1999 to 2003 for 370 holding companies. Some holding companies did not exist for the entire five year period, so our initial sample contained 1,768 bank-year observations.

We use the commercially available Sheshunoff database to collect annual financial data. We combined the proxy data for each year to the financial information in the Sheshunoff database. Incomplete financial and outlier information for some of the bank holding companies, results in a loss of 328 observations. Therefore, our final dataset contains 1440 bank-year observations from 1999 through 2003.

Hermalin and Weisbach (1991) note that it is possible for chronic poor performance to lead to a decision to replace insiders with outsiders. This decision may lead to the appearance that the subsequent high level of outsiders "caused" the poor performance. Recognizing that poor performance may lead to changes in board structure we lag the dependent variable by comparing the financial results for each fiscal year to the board characteristics near the beginning of that year.

The definition of "outside director" varies in the literature, but most operationalizations are based on definitions of outsiders as non-employees or relatives of present or former employees. (Barnhart and Rosenstein, 1998; Mayers et al., 1997; Subrahmanyam, et al., 1997; Wagner et al., 1998: Wang and Coffey, 1992). Hermalin and Weisbach (1988), however, designate full-time employees of the corporation as insiders while directors that worked closely with the firm were designated as gray-area directors. Wallace (1997) includes interlocking directorships, directors with related party transactions, firm consultants, and directors having affiliations with the corporation's bank as gray-area directors. Basinger and Butler (1985), and Vafeas et al. (2003) also categorized directors as insider, independent outsider or gray. Even the Internal Revenue Code recognizes the existence of gray directors, where Section 162 of the code considers gray directors to be outsiders.

Since we collected our board information from proxy statements, we used the required disclosures on non-management directors under SEC Regulation 14A, Item 6(b) to classify each board member into one of three groups.[2] Our designation of inside versus gray versus outside is

based as follows. Strict insiders are current and former employees (within past 5 years). Strict outsiders are those with no financial relationship beyond their seat on the board. The remaining board members are classified as gray, and include legal counsel, consultants, and executives with suppliers or customers. Following Vafeas (2000) two measures of board independence (INDEPENDENCE_RATIO) are used in our study: (1) the fraction of strict outsider-to-total directors (STRICT_OUTSIDER_RATIO) and (2) the fraction of total outsiders-to-total directors, where outsiders is the combination of independent plus gray (TOTAL_OUTSIDER_RATIO).

In addition, ownership percent rations are measured similarly. The ownership percent ratio (OWNERSHIP_RATIO), as used in our study, corresponds with the INDEPENDENCE_RATIO used in the models and is segregated into a STRICT_OUTSIDER_RATIO and a TOTAL_OUTSIDER_RATIO.

The variable (BOARD_SIZE) is literally the absolute number of board members. The information for board size each year comes from the proxy statements of each bank.

Institutions may engage in different risk strategies when making loans and these different risk strategies can affect profitability. Although the exact risk-taking behavior of an institution is not known, a proxy for risk behavior can be developed. Wahlen (1995) notes that bank consumer loan charge-offs (net of recoveries) provide a relatively nondiscretionary measure of default risk, and Beatty et al. (1995) find that loan charge-offs and provisions reflect loan quality. Total loan charge-offs divided by total loans is used as a proxy for risk (RISK) behavior in this study.

Profitability also may vary as a result of the amount an institution has accumulated in capital. Institutions that have large amounts of accumulated capital may rely on this capital for operating funds rather than generating all operating funds from profits. A capital ratio, total equity divided by total assets, controls for any differences in equity as a percentage of total assets (CAPITAL_RATIO).

The size of the institution may also have an affect on net interest margin. Therefore, the natural log of assets also is included as a control variable in the model (LN_ASSETS). The log minimizes the effects of extreme observations. In addition, economies of scale may exist for larger institutions, leading to lower required profits for larger companies. An indication of possible economies of scale is a negative relationship between LN_ASSETS and profitability measures. Finally, we use five years of data in our pooled dataset, and control for the year through a series of dummy variables (D1999, D2000, D2001, D2002, D2003).

Consistent with Hermalin and Weisbach (1991) and Wang and Coffey (1992), the hypotheses set forth in Section II are tested using standard OLS regressions. The standard OLS specification of the model constrains composition to a monotonic effect on performance.[3] We tested our hypotheses one performance variable at a time.

Hypotheses 1 a-c are tested using net interest margin as the dependent variable. If the composition of the board, stock ownership, and board size do have the predicted significant impact on the net interest margin of the bank as posited in H1, then INDPENDENT_RATIO,

OWNERSHIP_PERCENT, and BOARD_SIZE will all be positive and significant. We test this model using the two definitions of outsiders described above: total independent ratio and total independent plus gray ratio.

H2a-c and H3a-c use more traditional performance measures as a proxy for profitability. If the composition of the board, stock ownership, and board size do have the predicted significant impact on profitability (ROA or ROE) of the bank, as posited in H2 and H3, then INDEPENDENCE_RATIO, OWNERSHIP_PERCENT, and BOARD_SIZE will be positive and significant.

Hypotheses 4a-c are tested using the efficiency ratio as the dependent variable. If the composition of the board, ownership, and board size do have a significant impact on controlling overhead costs (EFFICIENCY_RATIO) of the bank as posited in H4, then INDEPENDENCE_RATIO, OWNERSHIP_PERCENT, and BOARD_SIZE should be negative and significant.

RESULTS

Table I contains descriptive statistics for all variables, excluding the dummy variables for year, and Pearson Correlations. ROA and ROE, both similar measures of profitability, are highly correlated as expected. However, these variables are only used as dependent variables in separate regression models. While EFFICIENCY_RATIO is highly correlated with NIM, ROA and ROE, these variables are all used independently in the regression models. LN_ASSETS is highly correlated with both OWNERSHIP variables, as well as BOARD_SIZE and the dependent variable ROE. Variance-inflation factors (VIFs) were run on all models and no VIFs exceeded 2.08, indicating that multi-collinearity is not a significant concern in our regression models.

Hypotheses 1a-1c suggest that higher outside (independent) ownership and higher levels of stock ownership by outside directors lead to higher net interest margins and board size has no relation. Our analyses using NIM as the dependent variable in the first two models show only OWNERSHIP_RATIO (H1b) as significant and positive (Table II) in the posited direction, lending support to Hypothesis 1b. Both definitions of INDEPENDENCE_RATIO are insignificant (H1a), as is BOARD_SIZE (H1c). The control variables RISK, CAPITAL_RATIO and LN_ASSETS are all significant at the .001 level with only LN_ASSETS being negative.

Hypotheses 2a-2c state that higher percentages of outside directors and higher levels of stock ownership by outside directors lead to higher returns on average assets while board size will have no relation. The results indicate that, while INDEPENDENCE_RATIO (H2a) is not significant, OWNERSHIP_RATIO (H2b) and BOARD_SIZE (H2c) are both negative and significant at the .01 and .001 levels (Table III). These results are in the not what we expected. RISK is significantly negatively related to ROA, while both CAPITAL_RATIO and LN_ASSETS are both positive and significant.

#	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
	Table 1: Mean, Standard Deviation and Pearson Correlations														
1	INDEPENDENCE_ RATIO =STRICT_OUT-SIDER_ RATIO	.73	.14	1.00											
2	INDEPEND-ENCE_ RATIO =TOTAL_ OUTSIDER_RATIO	.81	.11	.06*	1.00										
3	OWNER-SHIP_ RATIO = STRICT_ OUTSIDER_RATIO	.09	.09	21**	.08**	1.00									
4	OWNER-SHIP_ RATIO =TOTAL_OUT-SIDER_RATIO	.10	.10	.06*	.12**	.91**	1.00								
5	BOARD_ SIZE	11.15	3.79	.10**	.32**	-.06*	-.03	1.00							
6	NIM	3.94	.80	-.00	.02	-.20**	-.22**	-.09**	1.00						
7	ROA	1.11	.43	-.01	.01	-.21**	-.23**	.03	.35**	1.00					
8	ROE	12.97	4.92	-.00	.02	-.20**	-.22**	.05	.13**	.80**	1.00				
9	EFFIC-IENCY_ RATIO	62.15	10.77	.03	.05*	.24**	.28**	-.04	-.60**	-.75**	-.66**	1.00			
10	CAPITAL	8.67	2.09	-.01	.00	-.04	-.03	-.04	.29**	.37**	-.19**	-.22**	1.00		
11	RISK	.29	.31	.04	-.00	-.18**	-.19**	.14**	.00	-.16**	-.12**	.01	-.07*	1.00	
12	SIZE	13.93	1.61	-.02	.12**	-.42**	-.41**	.42**	-.25**	.25**	.40**	-.27**	-.20**	.35**	1.00
**, and * indicate significance at the .01 and .05 level, respectively.															

Table 2: Dependent Variable: NIM (H1a-c)		
Variable	STRICT_OUTSIDER_RATIO	TOTAL_OUTSIDER_RATIO
INDEPENDENCE_RATIO	.014	-.011
OWNERSHIP_RATIO	.098***	.081**
BOARD_SIZE	-.029	-.024
D1999	.129***	.128***
D2000	.053t	.053t
D2001	-.018	-.018
D2003	-.118***	-.117***
RISK	.120***	.120***
CAPITAL_RATIO	.272***	.269***
LN_ASSETS	-.174***	-.183***
Adj. R^2	.175	.172
N	1,440	1,440
***, **, *, and t indicate significance at the .001, .01, .05 and .1 level, respectively.		

Table 3: Dependent Variable: ROA (H2a-c)		
Variable	STRICT_OUTSIDER_RATIO	TOTAL_OUTSIDER_RATIO
INDEPENDENCE_RATIO	.035	-.004
OWNERSHIP_RATIO	-.071**	-.094***
BOARD_SIZE	-.103***	-.090***
D1999	-.007	-.008
D2000	-.078**	-.079**
D2001	-.068*	.068*
D2003	-.065*	-.064*
RISK	-.285***	-.285***
CAPITAL_RATIO	.434***	.431***
LN_SIZE	.447***	.432***
Adj. R^2	.330	.333
N	1,440	1,440
***, **, and * indicate significance at the .001, .01, and .05 level, respectively.		

Hypotheses 3a-3c state that higher percentages of outside directors and higher levels of stock ownership by outside directors lead to higher returns on average equity and board size will have no relation. INDEPENDENCE_RATIO (H2a) is marginally significant in the posited direction when defined as STRICT_OUTSIDER_RATIO only (Table IV), OWNERSHIP_RATIO (H2b) is negative and significant at the .05 level when considering only outside directors as independent. However, negative significance rises to .001 level when the definition of independent includes gray directors as well. BOARD_SIZE (H2c) is negative and significant at the .001 level under both definitions. The results for both OWNERSHIP_RATIO and BOARD_SIZE are in the opposite direction for that predicted by the hypotheses. RISK and CAPITAL are negatively related to ROE at the .001 level, while LN_ASSETS is positive and significant at the .001 level.

Hypotheses 4a-4c posit that higher levels of outside directors and higher stock ownership by outside directors lead to higher efficiency levels (lower efficiency ratios) in banks and board size will have no relation to efficiency. INDEPENDENCE_RATIO (H4a) is significant at the .01 level and positive only when gray directors are included in the definition of outside directors (Table V). OWNERSHIP is significant and positive at the .01 and .001 levels for the differing definitions of outsiders. BOARD_SIZE is positive and marginally significant at the .10 level only when gray are not considered in the definition of outsider directors. These results are all opposite of the hypothesized relationship. ROE, RISK, and CAPITAL are all negative and significant at the .001 level.

Table 4;Dependent Variable: ROE (H3a-c)		
Variable	STRICT_OUTSIDER_RATIO	TOTAL_OUTSIDER_RATIO
INDEPENDENCE_RATIO	.042t	.006
OWNERSHIP_RATIO	-.060*	-.084***
BOARD_SIZE	-.133***	-.123***
D1999	-.041	-.042
D2000	-.056*	-.057*
D2001	-.074**	-.074**
D2003	-.058*	-.056*
RISK	-.298***	-.297***
CAPITAL_RATIO	-.115***	-.119***
LN_SIZE	.510***	.494***
Adj. R^2	.264	.265
N	1,440	1,440
***, **, *, and t indicate significance at the .001, .01, .05 and .1 level, respectively.		

Table 5:Dependent Variable: EFFICIENCY_RATIO (H4a-c)		
Variable	STRICT_OUTSIDER_RATIO	TOTAL_OUTSIDER_RATIO
INDEPENDENCE_RATIO	.012	.048**
OWNERSHIP_RATIO	.062**	.079***
BOARD_SIZE	.038t	.019
D1999	.005	.006
D2000	-.017	-.016
D2001	.010	.010
D2003	.034	.033
ROE	-.720***	-.716***
RISK	-.094***	-.088***
CAPITAL_RATIO	-.358***	-.356***
LN_SIZE	-.011	-.006
Adj. R^2	.566	.570
N	1,440	1,440
***, **, *, and t indicate significance at the .001, .01, .05 and .1 level, respectively.		

DISCUSSION AND CONCLUSIONS

Members of a board of directors have a fiduciary responsibility to ensure that the decisions made by company management are aligned with shareholder interests. This responsibility has been in the forefront over the past several years given scandals faced by some publicly traded corporations. Many of these scandals have centered on management misuse of corporate assets and a failure by the board members to uncover these. Prior research has suggested a general trend of increased board effectiveness with increased board independence and size.[4]

Unfortunately there has been a lack of consensus about these effects with some researchers concluding that there has only been scattered success with this approach (Patterson, 1998). If there is merit in this approach, then a highly precise testing is needed. We attempted to address these issues by refocusing the research efforts and developing a set of models with very precise accounting definitions in a single, regulated industry. In addition, we attempted to substantially increase the value of this study by examining conflicting measures of performance.

The use of a single industry allows us to focus upon the measures rather than potential variations across industries. In addition, the banking industry utilizes very accurate measures of performance that are reported within a highly scrutinized, regulated environment. During the period 1999 – 2003, bank holding companies have performed very well relative to other industries and there were no significant shocks to the industry. Finally, we lagged the dependent variables by a year in order to account for implementation time effects of board changes.

In general, we suggest that board size, independence, and strong ties to the organization (via stock ownership) lead to increased performance for the organization. We measure these three "ties" as they might impact Net Interest Margin (a profitability measure of internal effectiveness without overhead), ROA (a profitability measure of asset utilization with overhead), ROE (a profitability measure of equity utilization with overhead) and Efficiency Ratio (an expenditure measure of size of overhead as a portion of sales/gross income). As can be easily seen, although past research has generically assumed a positive effect across measures (and we hypothesized the same), positive findings across these four very different measures would be highly improbable.

In the most overarching examination we can state that this data found mostly opposite effects from those that have been suggested in the literature and hypothesized in this study. All of the ROA and ROE hypotheses (utilization measures) were negative and significant, with the exception that the relationship between outside directors and ROA was not significant. Efficiency was negative and significant, with the exception of larger board size where it was not significant. Net Interest Margin was generally not significant, except stock ownership which was positive and significant as hypothesized.

These contrary findings suggest that researchers may be examining this issue of the board relationship with performance in a manner that is not effectively tied to reality. Although board composition has been a very large issue in the ethical nature of the business enterprise, as can be

seen with the implementation of the Sarbanes-Oxley Act, its tie to organization performance has not been clear. The performance of an organization, at least in the highly regulated banking industry, appears to be less impacted by any traditional measures of board size, ownership, or percentage of outside directors. We might suggest that a re-examination of an agency approach to this issue is warranted by the results. An agency approach (such as we took in this study) suggests that more oversight, more independence and more of a tie to results would lead to less adverse behavior by management and thus an increase in the performance of the firm. This is not what these results suggest. A supportive resource dependence approach suggests virtually identical findings. Again, not what was found in this study. If larger boards are not associated with higher performance and higher efficiency, then a more appropriate lens may be institutional theory. Using this perspective we might suggest that larger boards lead to a slowing of decision making, a tendency toward passivity and an institutional inertia that leads to adverse impact which may or may not have agency effects. Following this logic, institutional theory might also suggest deference to insiders by outside directors who are not as familiar with the operation of the organization. Banks, in general, are very complex operations where the balance sheet is flipped from the normal business entity. Lacking grounding in this business could lead outside directors to believe that they are providing oversight by deferring to experts. Finally, while stock ownership has long been posited as a means to tie directors to company performance, the simple fact is that directors have a very limited direct impact upon an organization. The volume of decisions that a board addresses, as a percentage of those dealt with within an organization, is miniscule. Focus in the strategy field is increasingly aimed at implementation as the key to success and a board is only in the most limited way involved in such efforts. Board pay (if it is tied to company performance) may be an infinitely more influential measure.

There is a strong desire to find a tie between boards and the performance of businesses. If this tie does not exist, then why is so much time and effort spent in the developing, paying, and advice seeking of a board of directors? Beyond the obvious legal implications, board effectiveness and impact may be tied to the intangibles of board interaction, trust, experience, interpersonal relationships with senior management and ability to provide an effective counterpoint to a strong CEO.

ENDNOTES

[1]   While not strictly an accounting performance issue, the literature shows that the shareholders of take-over targets benefit substantially (Fowler and Schmidt, 1988). Poison pill adoption makes a potential take-over target less desirable, and helps ensure the directors and management can retain their positions, at the expense of the potential gains to the shareholders.

[2]   Among the disclosures are a) Employment by the firm or an affiliate within past five years, b) Family relationship with top management or other director, c) Affiliation as a supplier, banker or creditor within the

past two years, d) Affiliation with the firm as an investment banker within the past two years, and e) Association with a law firm engaged by the corporation.

[3]   Byrd and Hickman (1992), Hermalin and Weisbach (1991) and Weisbach (1988) provide support for a piecewise linear regression. Hermalin and Weisbach (1991) split the analysis at 40% and 60% outsiders. Our sample has only 18 banks (less than 5%) that have 40% or less of strict external only 6 (less than 2%) have 40% or less combined strict external and gray, making any results ungeneralizable.

[4]   See, for example, Mallette and Fowler (1992); Epstein (1992); DiPiazza and Eccles (2002); Vance (1964); Bacon and Brown (1975) and Williams and Shapiro (1979).

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BASEL II: CHALLENGES AND RISKS

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ABSTRACT

This paper presents a comprehensive overview of the New Basel Capital Accord   (Basel II). The study raises a number of issues and research questions concerning the Basel II capital adequacy framework as well as the regulatory capital treatment of asset securitization and their potential impact on current competitive positions of banks and the securitization markets. The article also briefly discusses the challenges and risks of implementation of Basel II in the U.S. and Asia-Pacific countries.

INTRODUCTION

The Basel Committee on Banking Regulation and Supervisory Practices devoted significant resources and considerable attention to the development of the capital adequacy framework for internationally active banks, known as the 1988 Basel Accord (Basel I). The primary purpose of the 1988 Capital Accord was to make regulatory capital requirements more responsive to the credit risk associated with a bank's portfolio of assets and off-balance sheet activities. However, critics have argued that the simplified approach to credit risks under Basel I has encouraged many depository institutions to shroud credit risk embedded in their assets as well as in off-balance sheet activities. In response to the deficiencies of Basel I, the Basel Committee created a new capital adequacy framework including a new "securitization framework" to determine the risk-based capital requirements for banks against credit risk, operational risk, and market risk arising from their on-balance assets, off- balance sheet and securitization activities. The new capital adequacy framework, which is often referred to as Basel II [1], was developed to better align regulatory capital to the underlying risks. The primary goal of Basel II is to improve safety and soundness in the global financial system by placing increased emphasis on bank's risk measurement, internal control, risk management processes and models, the supervisory review process, and market discipline.

The implementation of Basel II has begun in EU countries and is due to take effect in the U.S. by the year end 2007. The primary purpose of this paper is to discuss the reasons for Basel II and the likely effects of Basel II on banking industry and securitization markets in the United States. The rest of the paper proceeds as follows. In Section 2, I outline some weaknesses associated with Basel I and provide the rationale for the development of Basel II. In this section, I present an overview of Basel II. Section 3 discusses the criticisms on Internal Ratings Based (IRB) approach prescribed by Basel II and their impact on competitive positions of banks in the U.S. In this section,

I also provide rationale for supervisory concern for inherent risks associated with securitization activities and the reasons for new regulatory capital treatments for asset securitization. In Section 4, I discuss the potential challenges of the implementation of Basel II including some issues associated with the cross-border implementation in the U.S. In this section, I address the key challenges and risks faced by bank managers and supervisors in the emerging Asia-Pacific countries. Section 5 discusses the capital adequacy beyond Basel II and its potential impact on financial services industry. Section 6 concludes with some final thoughts.

BASEL I CAPITAL REGIME AND REASONS FOR BASEL II

The basic principles of the Basel Capital Accord of 1988 known as Base I [2] are based on minimum capital requirements that a bank must hold against its assets, which allows the bank to sustain losses before depositors are hit[3]. This framework relies on the concept that different asset categories represent differing degrees of risk, and that capital must be calculated appropriately to guard against such risks. The minimum capital requirements comprise three fundamental specifications:

1.   What constitutes regulatory capital,
2.   Weights that must be applied to the different assets,
3.   A minimum capital requirement of 8 percent of total risk-weighted assets.

Basel I requires loans and investments to be grouped into four distinct *buckets* with risk weightings of 0, 20, 50 and 100 percent. Banks were then allowed for the first time to allocate and maintain capital in a manner somewhat consistent with the risk profile of their on- and off- balance sheet activities. Though the risk buckets were limited and did not fully reflect the range of risk sensitivities in the 100 percent bucket, their implementation represented a significant improvement over prevailing practices at the time.

Basel I – on which the world's regulatory capital regime has been based for more than fourteen years - was intended to level the playing field for banks that operated across national boundaries. However, there are several reasons why the Basel I capital adequacy framework is considered obsolete. First, capital requirements under Basel I framework are based on crude measures of risk-weighted assets that do not reflect the increasing complexity of banks' true risk profile. Second, this inadequacy is particularly relevant for large banks, which use non-traditional instruments, such as asset-backed securities (ABS) to securitize loans of all types and to meet their liquidity and investment needs. Third, the existing Basel I capital adequacy rule is less relevant for large international banks today because they generally use enhanced technology resources and risk-management tools to measure and manage all types of risks. Fourth, the 1988 Basel Accord does not recognize the risks left on balance sheet when the assets are securitized and taken off the balance

sheet because it focused on rules for compliance rather than assessments of soundness of banks' risk management mechanisms and internal controls. Finally, Basel I capital adequacy framework does not fully capture the extent of the risk reduction that can be achieved by the use of modern credit risk mitigation techniques.

In order to institute an effective capital framework, the Basel Committee on Banking Supervision introduced a new capital adequacy framework known as Basel II [4] to replace Basel I.

Basel II

Basel II aims at improving the capital adequacy framework that emphasizes on banks' internal controls, risk sensitivity, and risk management[5]. Three elements comprise the essential P*illars* of the "Basel II Framework". The first Pillar is minimum *regulatory capital* requirements. The second is the *supervisory review* element which focuses on the need for banks to assess their internal economic capital adequacy positions appropriate to their own risk profiles[6]. The supervisory review process emphasizes the quality of risk management and internal controls which are not fully addressed in *Pillar I*[7]. *Pillar* 3 is the *market discipline* which places emphasis on enhanced public disclosures of capital adequacy and bank risk.

Pillar I focuses on new approaches for calculating risk-weighted assets which align capital charges more closely with the underlying risk. It provides a specific treatment for securitization, risk measurement and management techniques which are not fully addressed in the 1988 Capital Accord (see Appendix-A).

PILLAR 1: MINIMUM CAPITAL REQUIREMENTS

The following section reviews the modifications in the risk-weighting and definition of the capital ratio.

The Modifications in Risk-weighting and Capital Ratio

The risk sensitivity of minimum capital requirements is increased substantially under the Basel II framework. It introduces three distinct approaches for assessing credit risk as well as operational risk. These approaches vary from the crude to the sophisticated in determining minimum capital requirements. The more sophisticated approaches rely more on supervisory judgment than the standardized approach. The provision of this choice emerged from the non-optimal nature of a "one-size-fits-all" approach to the measurement of either credit risk or operational risk in terms of feasibility and desirability. These approaches allow banks and supervisors to select the slant that they believe is most appropriate to the state of evolution of banks' credit risk and operational risk management methods and practices, and the stage of development

of financial markets. Basel II recommends three primary approaches (**Standardized Approach**, **Internal Ratings Based Foundation Approach**, and **Internal Ratings Based Advanced Approach**) for calculating regulatory capital against credit risk.

Under Basel II, the definition of regulatory capital remains the same as those specified in Basel I. However, the new definition of risk-weighted assets has been modified in two primary ways. First, the treatment of credit risk has been substantially changed. Second, the explicit treatment of operational risk will be included in the denominator of a bank's capital ratio as shown below:

$$0.08 = \frac{K_c + K_o + K_m}{12.5 (K_o + K_m) + A_{rw}}$$ (2.1)

Where, K_c = capital requirements for credit risk

K_o = capital requirements for operational risk

K_m = capital requirements for market risk

A_{rw} = total risk-weighted assets

When a bank is required to deduct a securitization exposure from regulatory capital, the deduction will be taken 50% from Tier 1 and 50% from Tier 2, and 100% from Tier 1 if it has already been accounted for in regulatory capital.

Standardized approach to credit risk

This approach, detailed in **Appendix- A,** is structurally similar to the old Accord in that banks are required to slot their credit exposures into supervisory categories based on observable characteristics of the exposures (e.g. whether the exposure is a corporate loan or a residential mortgage loan). It establishes fixed risk weights corresponding to each supervisory category. The number of asset classes and risk buckets has been increased to make the new approach more risk sensitive than the old one. In theory, the risk-weighted assets can be represented as:

$$A_{rw} = \sum_{i=1}^{n} A_i \, R_i$$ (2.2)

where $R = R(r_c, r_m, r_i, r_o, r_r, n, \varepsilon)$ is the risk weight for a given asset A_i. (2.3)

The subscripts are: c = credit, m = market, i = interest rate, o = operational,   r = reputational, l = legal, and ϵ represents the residual risk.

For Basel I:, $0 \leq r_c \leq 1.0$, $N = 4$, and r_i, r_o, r_r, and r_l are subsumed in ϵ

For Basel II: $0.2 \leq r_c \leq 3.5$ for the standardized approach, and $0.2 \leq r_c \leq 6.5$ for the Internally Ratings Based (IRB) approaches. In both the Basel II cases, $N = 5$, and only r_i, r_r and r_l are subsumed in ϵ.

IRB Approach to Credit Risk

There are three key elements for each asset class covered under the IRB framework:

1.   *Risk components - estimates of risk factors provided by banks some of which will be supervisory estimates. The risk components include measures of the probability of default (PD), loss given default (LGD), the exposure at default (EAD), and effective maturity (M).*
2.   *Risk weight functions - the means by which risk components are transformed into risk weighted assets and therefore capital requirements.*
3.   *Minimum requirements - the minimum standards that must be met in order for a bank to use the IRB approach for a given asset class.*

In some cases, banks that qualify for the IRB approach may be approved for using the *Ratings Based Approach* (*RBA*) that relies on their own internal estimates of risk components in determining the capital requirement for a given exposure. In other cases, banks may be required to use a *supervisory value* (*SV*) for one or more of the risk components. The degree of reliance on SV determines whether the banks are using the *foundation* or the *advanced* IRB approach, or a hybrid. Under the foundation approach, banks provide their own estimates of PD and rely on supervisory estimates for other risk components. Under the advanced approach, banks provide more of their own estimates of PD, LGD, EAD and M, and rely less on SV.

Operational Risk

Operational risk refers to losses resulting from inadequate or failed internal processes, people, and systems or from external events. Basel II created an additional add-on to capital for operational risk. Basel Committee recommends three specific methods to compute capital to protect against operational risk: the **Basic Indicator Approach**, the **Standardized Approach**, and the **Advanced Measurement Approach** (see **Appendix C** for details)

PILLAR 2: SUPERVISORY REVIEW

Pillar 2 focuses on empowering supervisors for early and discretionary (in terms of excess capital) intervention. This pillar provides a central role to national supervisors. The underlying rationale for such a role dwells on the scale economies that a central monitoring agency enjoys, and the fact that financial stability is a public good[8]. Acquiring information, the skills to process it, and then processing it is costly for retail depositors. In addition, there is no one private agency that has the incentive to internalize the negative externalities resulting from bank failure. These externalities induce moral hazard particularly in banks that are perceived as *too big to fail*, which further reinforces the need for supervisory discipline.

In cases where banking activities are undertaken in a mixed activity or mainly non-banking financial group, supervisors should seek to ensure that the Basel requirements are not being circumvented, for instance, through the leveraging of capital issued at levels above the bank (or bank holding company). Thus, the second pillar is based on the following four principles[9]:

1. Banks should have a process for assessing their capital adequacy in relation to their risk profile, and observe a strategy for maintaining their capital levels.

2. Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

3. Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

4. Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored. In the United States, risk-based capital ratios along with the traditional leverage ratio will define well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized banks as part of the prompt corrective action (PCA) program under the FDICIA legislation. For securitization exposures, in particular, Basel II addresses concerns of risk transfer, the use of call provisions, and early amortization features. In addition, possible supervisory responses are outlined to address instances when it is determined that a bank has provided implicit recourse.

PILLAR 3: MARKET DISCIPLINE

Pillar 3 aims at encouraging market discipline through enhanced disclosure by banks. Basel Committee sets out disclosure requirements and recommendations in several areas including the way bank computes its capital adequacy and assesses its risk exposures. Basel II disclosure framework is aligned with national accounting standards that don't conflict with broader accounting information disclosure standards with which banks must comply.

Criticisms on IRB Approach to Credit Risk

Qualifying banks using IRB approach can use various techniques including subjective measures of risk, rigorous capital allocation methodologies, and internal models. Ideally, the chosen internal capital targets should be well founded, and should have a robust stress-testing process in place to support their assumptions. In practice, the banks' decisions on the actual level and structure of capital will continue to reflect largely judgmental considerations including implicit or explicit regulatory expectations, peer group analysis, market expectations and other qualitative factors.

Regulators need to be aware of the advantages and limitations of IRB approach under the Basel II framework. On the plus side, internal ratings may incorporate supplementary customer information such as detailed monitoring of the customers' accounts, or greater knowledge of any guarantees, or collateral, which is usually out of the reach of an external credit assessment institution. The IRB approach may also cover a much broader range of borrowers, providing assessments of the credit quality of individuals and small-to-medium sized companies through credit scoring, and assessment of larger non-rated borrowers through detailed analysis.

On the negative side, the lack of homogeneity among the rating systems at different banks, together with the central role of subjective risk factors and business judgments in assigning internal grades, means that comparability across institutions and countries could be compromised. Moreover, given the multiple roles of internal ratings in overall risk management, such ratings may not be specifically suited for minimum capital requirements. The major challenge with this approach is how supervisors should assess the overall adequacy of bank rating systems. In addition, there are other risks associated with the use of the Advanced IRB (A-IRB) approach. First, it depends too much on past data to predict future losses. Second, the A-IRB approach permits each bank to have different capital charges for the same type of loan based on the assumptions made about the probability of default (PD) and the loss given default (LGD). Third, it is possible that some banks using the A-IRB approach will be motivated to "understate the risks to minimize the initial risk capital required in order to price a loan below their competitors" (e.g., Gup, 2004). Fourth, to the extent that capital is taken into loan pricing, the adoption of A-IRB approach creates an uneven playing field for the banks that employ the Standardized Approach (Gup, 2004)[10].

Empirical analysis conducted by Guill, Smithon and Song (2003) suggests that the minimum regulatory capital requirement calculated using the Standardized Approach is larger than the capital requirements calculated using either of the IRB approaches. However, the minimum regulatory capital using the A-IRB Approach is likely to be higher than that using the Foundation IRB Approach. Saurina and Trucharte (2004) find large banking organizations that adopt the Advanced Internal Ratings-Based (A-IRB) Approach would use reduced risk weights for loans made to small and medium enterprises (SME). Hence, the implementation of the Basel II capital requirements will affect the competitive positions of banks in the SME credit market (Berger, 2004).

Therefore, models used under the IRB framework must be conceptually sound, empirically validated, and must produce capital requirements that are comparable across institutions. Regulators must pay attention to the robustness of the model, the quality of the data, stress-testing, the extent to which it responds to changes in exogenous variables, and the areas of operational risk not covered by the model. The Basel Committee notes that, currently very few, if any, banks have a model that meets these criteria, and therefore, such models could only be used at a later stage. The Committee also points out that the paucity of data and the difficulty in validating models make it impossible to set explicit regulatory capital requirements based on them[11]. Thus, depending on the quality of the model, supervisors could still apply a multiplier or other adjustment factor to the model output. Thus, a dynamic bank that is at the cutting edge of providing new products will by definition, develop new sources of risk that are not well captured in the central internal risk management system. (See Appendix D)

Basel II and Securitization Markets

Securitization transforms illiquid assets into instruments that are actively traded in secondary capital markets. It has become one of many secondary market credit activities that have come to include loan syndication, loan sales and participations, and credit derivatives, as well as the provision to these transactions of credit enhancements, and liquidity facilities. Non-mortgage securitizations sponsored by the ten largest bank holding corporations in the U.S. have been estimated to represent more than 25% of their total risk-weighted loans, and more than 50% in some cases[12]. This evolution has served to broaden and deepen bond markets. Securitization has also enhanced bank profitability as well as credit availability, particularly to small and medium enterprises (SMEs) that otherwise had only limited funding opportunities[13].

On one hand, asset securitization has helped financial institutions manage their risk, return, and liquidity characteristics of financial portfolios, on the other hand, critics argue that the simplified approach to credit risks in the 1988 Basel Accord (Basel I) has encouraged many depository institutions to shroud credit risk embedded in their books by allowing for regulatory capital arbitrage. In response to such criticisms, Basel II created a new framework to determine the risk-based capital requirements in connection with securitization activities of banks.

Basel Committee developed a comprehensive framework for securitization that is risk sensitive. It provides banks with incentives to move from the Standardized Approach to the IRB Approach. The Committee also states: *"In recognition of asset securitization as an important source of funding mechanism for credit risk transference, the IRB approach should be neutral with regard to the capital requirements it produces in order not to create incentives or disincentives for banks to engage in securitizations."* The securitization framework requires highly subordinated positions to be wholly deducted from capital. Under the Basel II framework, a qualifying banking institution that uses internal ratings Based (IRB) approach and that securitizes assets must deduct from its capital any first loss position associated with securitization activities. This deduction must not be less than an amount of capital (referred to as "KIRB") that would have been required to maintain in connection with assets not being securitized. Similarly, banks that invest in securitizations established by third-party organizations must deduct those that are unrated or of low credit quality. For IRB banks that invest in highly rated securitization exposures, a treatment based on the presence of an external rating, the granularity of the underlying pool, and the thickness of an exposure has been developed. In the IRB framework, the capital requirement for unrated positions, such as liquidity facilities and credit enhancements extended to asset-backed commercial paper (ABCP) conduits, is dependent upon a number of factors. They include (1) the asset quality of the underlying pool, (2) the degree of credit enhancements supporting a given position, (3) the thickness of credit exposure, and (4) the effective number of risk exposures in the pool. Bank providers of liquidity facilities are required to calculate KIRB for exposures in the underlying pool on an ongoing basis. Otherwise, the exposure in question must be deducted.

In the U.S., banking institutions have long been involved in asset-backed securities (ABS), both as investors and as major participants in the securitization process. In recent years, banks have both increased their participation in the long established residential mortgage-backed securities market and expanded their activities in securitizing other types of assets, such as credit card receivables, automobile loans, boat loans, commercial real estate loans, student loans, nonperforming loans, and lease receivables[14]. Under Basel I capital regime, regulatory capital is explicitly required only against the amount of the direct-credit substitute, which can be significantly different from the amount of capital that the institution should maintain against the concentrated credit risk in the guarantee. For example, partial, first-loss direct-credit substitutes that provide credit protection to a securitization transaction can, in substance, involve the same credit risk as the risk involved in holding the entire asset pool on the institution's balance sheet.

Under Basel II, supervisors and examiners are required to ensure that banks have implemented reasonable methods for allocating capital against the economic substance of credit exposures arising from early-amortization events and liquidity facilities associated with securitized transactions. If, in the supervisor's judgment, an institution's capital level is not sufficient to provide protection against potential losses from such credit exposures, this deficiency is to be reflected in the banking organization's CAMELS or BOPEC ratings. Furthermore, supervisors and examiners

are required to discuss the capital deficiency with the institution's management and, if necessary, its board of directors. The institution is then expected to develop and implement a plan for strengthening the organization's overall capital adequacy to levels deemed appropriate given all the risks to which it is exposed[15].

Basel II is likely to have significant impact on future securitization activities of banks under the new securitization framework, which creates a strong pressure on banks to minimize their exposure to credit risk. For example, Table 1 shows that the Basle II securitization framework allows banks to hold lower capital by investing in rated securitized assets rather than directly holding a comparable pool of unrated securitized assets (e.g., Jobst, 2005). As shown in Table 1, Basel II does require banks to hold significant amount of regulatory capital against their credit risk associated with unrated securities or sub-investment grade tranches.

Table 1: External Ratings and Risk Weights of Securitized Assets					
(Long-term rating category)					
External Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	B+ and below or unrated
Risk Weight	20%	50%	100%	350%	Deduction
(Short-term rating category)					
External Credit Assessment		A-1 /P-1	A-2 / P-2	A-3 / P-3	All other ratings or unrated
Risk Weight		20%	50%	100%	Deduction
Source: BCBS (June 2006)					

Guill, Smithon and Song (2003) documents that new rules for securitization only partially achieve the objective of neutrality of adopting IRB approach with respect to the calculation of the capital requirements. For example, the cap on the capital requirements for originating banks results in the same minimum regulatory capital before and after the securitization. However, in the case of investing banks, the IRB approach or *Supervisory Formula (SF)* results in larger minimum regulatory capital after the securitization especially for the non-investment grade portfolio. Thus, Basel II could potentially influence how banks structure their securitization deals. Furthermore, given the potential growth in the securitization markets and financial institutions' appetite for credit derivatives, the application of the Basel II securitization framework and its impact on securitization markets will depend largely on banks' risk management practices and the types of securitization transactions (e.g., the type of assets, the inherent default risk, recovery rates of the underlying assets, the tranching of the resulting securitization structure etc.), and how banks identify and respond to new regulatory capital incentives provided by Basel II.

IMPLEMENTATION OF BASEL II IN U.S.

The U.S. agencies incorporated many of the tenets of Basel II into its bank legislation, although some difference of opinion remains, particularly for the small and community banks. In the United States, the Federal Reserve requires that only ten of the largest and most complex banking institutions, and another ten or so that "opt in", will be subject to the new Capital Standards. Supervisors in the U.S. have for some time contemplated that only the most risk-sensitive approaches such as the Advanced Internal Ratings Based (A-IRB) option for credit risk and the Advanced Measurement approach (AMA) for operational risk will be applied to only the largest and most complex, internationally active banking organizations. Banking agencies in the U.S. (FRB, OCC, OTC, and FDIC) reached an agreement on July 20, 2007 that depository institutions with consolidated banking assets of $250 billion or more and/or foreign exposures of $10 billion or more (core banks) are required to adopt the advanced approaches of Basel II by the end of 2007. Other depository institutions (non-core banks) that meet the infrastructure requirements for risk measurement and management could choose to apply the Basel II framework or continue to use Basel I.

Bank regulators in the U.S. will require the largest and most complex banks, but not large banks, to use the costly and more risk-sensitive, sophisticated and complex Advanced IRB approach and Advanced Measurement Approach (AMA) to determine regulatory capital under Basel II. However, the implementation of the Basel II framework in the U.S. raises a number of questions. Will the adoption of Basel II have significant impact on lending to small- and medium sized firms due to increased capital requirements for credit exposures in the U.S.(e.g., Berger, 2004) or in EU (e.g., Saurina and Trucharte, 2004)? To the extent level of bank capital is taken into loan pricing, does Basel II create an uneven playing field for the large banks in the U.S.? (e.g., Repullo, R. and J Suarez, 2004) Will there be "competitive inequality" in bank capital in creating a new framework for how banks measure and allocate capital against credit risk (e.g., Calem and LaCour-Little, 2004; Gup, 2004)? For example, critics have argued that the difference in capital treatment would place those banks that do not adopt Basel II at a competitive disadvantage in the residential mortgage credit market (e.g., Macomber, 2004; and Calem and Follain, 2005)[16]. Critics suggest that the adoption of an IRB and advanced IRB approaches proposed by Basel II framework may lead to lower capital requirements compared to the minimum capital requirements under current regime. This would cause adopting banks to increase their acquisition activity (e.g., Hannan and Pilloff, 2004).

Supervisory Co-operation and Cross-border Implementation of Basel II

Effective supervision of large banking organizations necessarily entails a closer and a more co-operative partnership between industry participants and supervisors. Under the New Accord,

cross-border issues are likely to receive even greater attention than they do today. Basel II requires continuation of existing cross-border responsibilities of supervisors, as set out in the Basel Concordat and Minimum Standards documents. Enhanced cooperation between supervisors will be necessary, especially for the cross-border supervision of complex international banking groups. In particular, redundant and uncoordinated approval and validation work should be avoided in order to reduce the implementation burden for banks, and to conserve supervisory resources. Consequently, in implementing Basel II, supervisors should communicate as clearly as possible to affected banking groups about the respective roles of home- and host-country supervisors so that practical arrangements are understood. Cross-border implementation of Basel II will not change the legal responsibilities of supervisors for the regulation of their domestic banking organizations and the arrangements of consolidated supervision. Since home country supervisors may not have the ability alone to gather the information necessary for effective implementation of the revised Accord, information exchange among supervisors would be essential. Thus, the principle of "mutual recognition" for internationally active banks would be the key for international supervisory co-operation and effective promulgation of the Basel II framework. This principle implies the need for recognizing common capital adequacy approaches when considering the branching of internationally-active banks into host jurisdictions.

Challenges of Basel II for Asia-Pacific Countries

From a banking regulation perspective, both in a regional and global context, the implementation of Basel II poses a formidable challenge for Asia Pacific countries (e.g., see Barth, Caprio, and Levine, 2004). The Asia Pacific region comprises a range of vastly different financial markets with a varying degree of financial development. The countries in Asia Pacific region can be broadly categorized into two groups. The first group comprises countries with well developed financial markets such as Japan, Australia, Singapore, Hong Kong and Taiwan[17] and the second group consists of nations with emerging financial markets such as India, China, Malaysia, Thailand and Sri Lanka. While the countries with developed financial markets in general are planning to incorporate the Basel II framework into their national regulations by the end of 2007, the emerging APEC nations have announced that they need additional time to adopt the new capital guidelines, and thus, are deferring the implementation of Basel II[18]. Some critics suggest that the Basel II framework is not suitable for developing countries, particularly in Asia (e.g., Aldis and Hla, 2002; and Saidenberg and Schuermann, 2003) for following reasons. First, these countries are typified by concentrated ownership structures, with a small number of powerful networks controlling banks, non-banks, and the government (e.g., Karacadag and Taylo, 2000a and 2000b; Griffith-Jones and Spratt, 2001; Powell, 2002; and Ward, 2002; and Large, 2003). Second, do banks have an incentive to disclose accurate information concerning risk and capital adequacy to the markets? Using a game-theoretic model, Estrella (2004) finds that voluntary disclosure can be useful only in the presence

of direct bank supervision and financial market discipline. Thus, if the bank regulator is not independent and the financial markets are not well developed, then all pillars are of limited use. Third, the inadequacy in most emerging countries relate to the difficulty in enforcement rather than the lack of written legislation[19]. Fourth, banks in emerging Asia-Pacific countries lag far behind the banks in mature market in the use of sophisticated risk management tools and in the application of sound risk management practices (e.g., Parrenas, 2003). Finally, the emerging Asia-Pacific countries are not mandating their banks to adopt the Basel II framework by the end of 2007 due to lack of adequate resources and expertise available to either supervisory authorities or bank managers[20].

CAPITAL ADEQUACY BEYOND BASEL II

Pillar I of the Basel II framework covers the regulatory capital requirements for credit, operational, and market risk. However, Basel II does not address the capital requirements due to cyclical effects in credit, operational or market risk. For example, historical evidence suggests that default risk displays a procyclical pattern- increasing during economic downturns and decreasing during economic expansions (e.g. Allen and Saunders, 2002). In addition to creating procyclicality in credit risk, systematic risk factors could lead to procyclicality in operational risk (e.g., Allen and Bali, 2004), and in market risk (Caramazza et. al., 2004; and Forbes and Rigobon, 2002)[21]. Furthermore, the correlations across risks may either heighten or dampen the cyclicality in each of the above risk factors. For example, while credit risk and operational risk tend to be procylical, and market risk tends to be counter-cyclical (e.g., Allen and Saunders, 2004), then the independent measurement of credit risk, operational risk, and market risk as proposed by the Basel II framework would overstate the overall risk exposure and the capital requirements.

While the Basel II framework is primarily designed for banking institutions, the process of intermediation of risks is changing. The new proposal does not address the increasingly integrated nature of the financial world. With the development of large multifunctional finance groups, it is harder now to demarcate institutions according to securities, insurance and credit. With significant increase in securitization transactions and growing linkages to the insurance sector, systemic risk is no longer confined mainly to the banking sector. Like EU countries, should the securities and insurance industry in the U.S. not have a Basel II of their own (e.g., Large, 2003)? While the Basel II framework explicitly addresses capital requirements tied to credit risk, operational risk, and market risk, it ignores systemic risk which may arise from liquidity problems. Thus, the importance of liquidity management should not be overlooked while focusing on capital adequacy and risk management. Some thought needs to be given to mechanisms that could be devised to ensure that liquidity continues to be available in times of crisis such as "liquidity crunch" experienced by large banks around the globe during July-August 2007 "sub-prime lending" crisis.

CONCLUSIONS

Basel II will replace Basel I and it is expected that Basel II will be implemented in the U.S. by the end of 2007. However, only ten largest internationally active banks in the U.S. (core banks) will be required to use the advanced internal rating based (A-IRB) approach to calculate capital against credit risk and to use the advanced measurement approach (AMA) to calculate capital against operational risk. Other banks (non-core banks) may "opt-in" to adopt a standardized approach under the Basel II Accord or continue to use Basel I. It is expected that only a small number of non-core banks will opt-in. Basel II explicitly requires banks to hold capital against credit risk, market risk, and operational risk. Regulators also expect the Basel II framework to provide incentives for banks to continue improving their risk measurement and management on an ongoing basis. It is also envisaged that a new securitization framework which accounts for several important risk drivers such as the credit quality, asset correlations, thickness of tranches, rating of tranche, and the underlying pool's granularity, will help determine regulatory capital requirements for securitized assets.

The study discusses the shortcomings of Basel I and outlines the reasons for the creation of Basel II. The study summarizes the three *Pillars* of the Basel II framework (minimum capital requirements, supervisory review and disclosure) which are recognized to be the key elements of a safe and sound financial system. The paper also discusses the advantages and some limitations of IRB approach and the regulatory capital treatment of asset securitization and raises some concerns about their potential impact on current competitive positions of banks. In addition, the study also raises some issues related to cross-border implementation of Basel II. Thus, the implementation of Basel II may have the unintended consequence of distorting competitive equity in the U.S. banking industry.

Implementation of Basel II will be a major challenge for emerging Asia-Pacific countries. In emerging countries where the corporate governance, public disclosures, regulatory structure and institutions supporting markets are weak, the probability of market failure is significantly high (e.g., IMF, 1998; and Ergungor, 2004). Therefore, the implementation of Basel II in emerging Asia-Pacific nations will be a challenging task for both supervisory authorities and bank managers.

One of the major weaknesses of Basel II is that it does not address the capital requirements due to systematic risks arising from cyclical effects in credit, operational or market risk. Therefore, the future research ought to focus on an integrated approach for capital requirements that incorporates procyclical risk factors into risk measurement and management. Thus, Basel II will continue to provide many opportunities for researchers to contribute to policy debate.

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ENDNOTES

1. See Basel Committee on Banking
2. BIS, 1998
3. The level of capital also affects manager behavior (Dewatripont and Tirole, 1993), although the effect is ambiguous in theory and difficult to measure empirically (see Jackson et al. 1999).
4. The Basel Committee on Banking Supervision is a committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements in Basel, where its permanent Secretariat is located.
5. The level of capital also affects manager behavior (Dewatripont and Tirole, 1993), although the effect is ambiguous in theory and difficult to measure empirically (see Jackson and others, 1999).

6. Bank supervisory responsibilities were set by statute in the U.S. as early as 1863 (National Currency Act of 1863)Italy in1926, Japan in 1928, in Germany, France, Belgium and Switzerland in the 1930s, and in the UK in the 1970s (although the Bank of England exercised an informal supervisory function for many years prior to that).
7. See for example, Mishkin, 2000
8. See, Dewatripont and Tirole(1993).
9. Each principle is supported by explanatory text, and there is a supporting technical document explaining the meaning and its implications.
10. Wyatt (2004) uses the Standardized approach of Pillar I to study the impact of Basel II on capital requirements for 27 New York banks. Wyatt finds that the adoption of Standardized approach prescribed by Basel II would help lower the capital requirements for such banks.
11. See BIS, June 2004
12. Jones, 2000
13. Quite apart from the incentive to holders that pooling of loans provides, securitized issues often require a credit enhancement, which lends the asset a higher credit rating than one the borrowing institution may be able to obtain by itself.
14. See Interagency, 2001
15. The effect of Basel II on a bank's decision to securitize assets will depend upon several factors including default rates and recovery rates of the underlying assets, the types of assets being securitized, and features of the structuring process such as excess spread and reserve funds. (See Fitch Ratings, September, 2005).
16. Hancock, Lehnert, Passmore, and Sherlund (2005) suggest that non-adopters would be largely unaffected by the implementation of Basel II.

17.   These countries are viewed by Standard and Poor's (October, 2004) as being the most advanced in the region in adopting Basel II.

18.   See the article, "Basel II Timetable Thrown into Doubt following QIS 4 Capital Declines", Global Regulator News Service, May 2005.

19.   Some critics suggest that the Basel II framework is not suitable for developing countries, particularly in Asia (e.g., Aldis and Hla, 2002; and Saidenberg and Schuermann, 2003) for following reasons. First, these countries are typified by concentrated ownership structures, with a small number of powerful networks controlling banks, non-banks, and the government (e.g., Karacadag and Taylo, 2000a and 2000b; Griffith-Jones and Spratt, 2001; Powell, 2002; and Ward, 2002; and Large, 2003). Second, do banks have an incentive to disclose accurate information concerning risk and capital adequacy to the markets? Using a game-theoretic model, Estrella (2004) finds that voluntary disclosure can be useful only in the presence of direct bank supervision and financial market discipline. Thus, if the bank regulator is not independent and the financial markets are not well developed, then all pillars are of limited use. Third, the inadequacy in most emerging countries relate to the difficulty in enforcement rather than the lack of written

20.   China and India have formally rejected the implementation of Basel II in 2006, but may implement the new framework at a later stage. South Korea's 19 commercial banks will be required to comply with Basel II, the new international capital standard, by the end of 2007. Basel II will be adopted in Thailand in 2008.

21   See the literature survey on cyclical effects on operational risk, credit risk and market risk provided by Allen and Saunders (2004).

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Appendix A: Important Characteristics of the Three Pillars of Basel II		
PILLAR I	**PILLAR II**	**PILLAR III**
Minimum Capital Requirements	Supervisory Review	Market Discipline
Market risk ● No significant changes from Basel I **Credit risk** ● Significant change from Basel I ● Three different approaches to the calculation of minimum capital requirements ● Capital incentives for banks to move to more sophisticated credit risk management approaches based on internal ratings ● Sophisticated approaches have requirements as well as qualitative requirements for risk management **Operational risk** ● Not explicitly accounted for in Basel I ● Three different approaches to the calculation of minimum capital requirements ● Adoption of each approach subject to compliance with defined 'qualifying criteria'	● Banks should have a defined process for assessing their overall capital adequacy and strategy for maintaining capital levels ● Supervisors should review and evaluate internal capital adequacy assessment and strategies for banks ● Supervisors should expect banks to operate above the minimum capital ratios and should have the ability to require banks to hold capital in excess of the minimum requirement (i.e., trigger/target ratios in th United Kingdom ; prompt corrective action in the United States). ● In U.S., Prompt Corrective Action (PCA) triggered by FDICIA of 1991 requires supervisors to intervene at an early stage to prevent capital from falling below minimum levels.	● Market discipline reinforces efforts to promote safety and soundness in banks and supplementary disclosures to make market discipline more effective
Source: Basel Committee on Banking Supervision, 2004		

Appendix B: Credit Risk Approach under Basel II			
Criteria	Standardized Approach	Internal Ratings Based (IRB) Approach	
Rating	**External**	**Foundation Approach**	**Advanced Approach**
Risk Weight Probability of Default (PD): the likelihood that a borrower will default over a given time period Exposure of Default (EAD): for loans, the amount of the facility that is likely to be drawn if a default occurs Loss Given Default (LGD): the proportion of the exposure that will be lost if a default occurs Maturity: the remaining economic maturity of the exposure Data Requirements Credit Risk Mitigation Techniques (CRMT) Process Requirements (compliance with minimum requirements will be subject to supervisory review under Pillar II)	Calibrated on the basis of external ratings by the Basel Committee Implicitly provided by the Supervisors: tied to risk weights based on external ratings Supervisory values set by the Basel Committee Implicitly provided by the Basel Committee; tied to risk weights based on external ratings Implicit recognition • Provision dates • Default events • Exposure data • Customer segmentation • Data collateral segmentation • External ratings • Collateral data defined by the supervisory regulator; including financial collateral, guarantees, credit derivatives, netting (on and off balance sheet), and real estate • Minimum requirements for collateral management (administration/evaluation) • Provisioning process	Internal Function provided by the Basel Committee Provided by bank based on own estimates Supervisory values set by the Basel Committee Supervisory values set by the or At national discretion, provided By bank based on own estimates (with an allowance to exclude certain exposures) • Rating data • Historical data to estimate PDs (5 years) • Collateral data All collaterals from Standardized Approach; receivables from goods and services; other physical securities if certain criteria are met Same as Standardized, plus minimum requirements to ensure quality of internal ratings and PD estimation and their use in the risk management process	Internal Function provided by the Basel Committee Provided by bank based on own estimates Provided by bank based on own estimates Provided by bank based on won estimates, extensive process and internal control requirement Provided y bank based on own estimeates (with an allowance to exclude certain exposures) Same as IRB Foundation, plus: • Historical loss data to estimate LGD (7 years) • Historical exposure data to estimate EAD (7 years) All types of collaterals if bank can prove a CRMT by internal estimation. Same as IRB Foundation, plus minimum requirements to ensure quality of estimation of all parameters
Source: Basel Committee on Banking Supervision 2004			

Apendix C: Operational Risk Approach under Basel II			
Approach	Basic Indicator Approach	Standardized Approach*	Advanced Measurement Approach (AMA)
Calculation of Capital Charge Qualifying Criteria	● Average of gross income over three years as indicator ● Capital charge equals 15% of that indicator ● No specific criteria ● Compliance with the Basel Committee's "Sound Practices for the Management and Supervision of Operational Risk" recommended function	● Gross income per regulatory business line as indicator ● Depending on business line, 12%, 15%, or 18% of that indicator as capital charge ● Total capital charge equals sum of charge per business line ● Active involvement of board of directors and senior management ● Existence of OpRisk management function ● Sound OpRisk management system ● Systematic tracking of loss data	● Capital charge equals internally generated measure based on: – Internal loss data – External loss data – Scenario analysis – Business environment and internal control factors ● Recognition of risk mitigation (up to 20% possible) Same as Standardized, plus: ● Measurement integrated in day-to-day risk management ● Review of management and measurement processes by internal/external audit ● Numerous quantitative standards-in particular 3 – 5 years of historic data
Source: Basel Committee on Banking Supervision, 2004			

Appendix D				
Constituent	Current Situation	Effects of Basel II	Challenges	Risks
Banks	● Use "one-size-fits-all" regulatory capital approach under Basel I	● Need to implement risk management framework tying regulatory capital to economic risks ● Need to choose credit and operational risk approaches (Pillar I) ● Need to gather, store, and analyze wide array of new data ● Need to embed new/enhanced practices across the organization	● Interpret new regulations and understand effects on business ● Need for enhanced resource, processes, and IT system architecture ● Manage change to risk culture ● Secure and maintain board and senior management sponsorship ● Face new expectations from regulators, rating agencies, and customers ● Need to consider whether to target certain customers/products or eliminate others ● Determine what to do with surplus capital	● Fail to diversify loan portfolio to mitigate risks ● Fail to determine the extent of change required, associated costs, benefits, and relevant options ● Fail to implement change consistently across the organization ● Need to avoid 'gaps'/overlaps in operational and credit risk approaches ● Receive a reduced credit rating ● Become a target of consolidation
Regulators	● Operate in a fragmented environment ● Need enhanced information to be able to anticipate bank problems (vs. react in crisis/default)	● Gain access to more and timely information through the new disclosures Basel II requires of banks ● Gain power to set incentives, penalize wrong-doers, and act (not react) – thus contributing to increased financial stability and transparency	● Need well-trained, educated professionals to fill roles that are traditionally not as well paid as comparable positions within financial institutions ● Create regulation that reflects the linkages among risks ● Provide incentives for banks to evaluate risks through stress-testing and scenario analysis	● May create new costs for banks and ultimately for customers ● Impose numerous locally specific choices that diminish the effects of the leveled playing field that Basel II seeks to create
Sources: Basel Committee on Banking Supervision, 2004 and KPMG International, 2004				

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