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John A. Haslem
University of Maryland

James P. Bedingfield
University of Maryland

A.J. Stagliano
Saint Joseph's University

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AN ANALYSIS OF CAPITAL MEASURES AND RELATIVE BANK PROFITABILITY

*John A. Haslem, James P. Bedingfield, and A.J. Stagliano**

This study reports the results of a longitudinal analysis of the nature of the association between selected bank capital (book value) measures and relative profitability, with emphasis on high-performance banks. Capital management is a major component variable in bank financial management. Interest in bank capital has been stimulated recently by deregulation developments and the rash of bank failures.

Conceptually, every decision should be considered for its impact on the maximization of shareholder wealth. However, in a world of uncertainty, regulation, and limited action/reaction time and resources, it is not possible to follow the conceptually correct approach for the multitude of decisions bankers face. One practical approach to the complex, interactive nature of bank decisions is to disaggregate them into key variables for financial management: (1) spread (net interest margin) management, (2) overhead expense control, (3) liquidity management, and (4) capital management.¹ Both liquidity and capital management are related to the risk component of bank financial management, while the other two variables are related to the income component.²

NATURE OF THE STUDY

The financial management of bank capital is generally concerned with the adequacy of its relative size vis-a-vis the risks that it faces. The debate concerning capital adequacy primarily stems from the regulation of banking as business affecting the public interest.³ Resolution of this issue has been made more difficult by the failure of bankers and bank regulators to agree on the purposes and functions of capital. Regulators tend to emphasize capital as preventing bank failure and, thereby, providing protection to depositors. On the other hand, bankers tend to emphasize the need to earn a satisfactory return on invested capital. This latter approach suggests a capital base large enough to maintain bank operating viability but without any "surplus" capital.

Presumably, capital is adequate to the extent it serves the functions of bank capital: (1) acquisition of the physical plant and facilities to provide banking services; (2) cushion to absorb unanticipated losses, with enough margin to provide continuing confidence in the bank as a viable concern; (3) protection of uninsured depositors in event of liquidation; and (4) regulatory tool to restrain undesirable expansion of bank assets. Nonetheless, there is ample evidence that earnings are the single most important defense against the risks of banking. Thus, variability in earnings, which is generally partly due to uncertainty with respect to credit demand and deposit flows, significantly affects overall bank risk.⁴ In addition, there are several other factors which increase earnings variability: (1) credit (default) risk, (2) interest-rate risk,

(3) liquidity risk, (4) operating risk, (5) fraud and theft risk, and (6) fiduciary (trust) risk. (Over the period (1978-1980) of this study, for example, banks were faced with significant interest-rate and liquidity risks.) Overall, the ultimate function of bank capital is to protect against unforeseen future contingencies by inspiring sufficient confidence in the bank during difficult times to enable it to remain a going concern until it can generate sufficient *earnings* to correct the problems.

To measure a bank's relative capital position, various book value capital ratios have been used over the years.⁵ The major interrelated factors which determine whether or not a bank's relative capital position is "adequate" to its functions are (1) efficiency in liquidity management, (2) rate of internal capital generation (earnings less dividends) to support future growth, and (3) the overall quality of management. It is generally held that banks which are efficient managers of their asset and liability sources of liquidity require relatively small capital positions. Further, it is generally held that banks with high earnings and skilled management require relatively small capital ratios. Assuming that skilled management and large earnings are positively correlated, then the question of whether high-profitability banks would be expected to have relatively large or small capital positions should be determined by the efficiency of their liquidity management. In this regard, empirical work has demonstrated that high bank management performance and cash assets were *negatively* associated in one year but not associated in the other.⁶ Another study found that six of seven liquidity ratios (including short-run assets and variable-rate funds) had a consistent or general *negative* association with relative profitability.⁷ The results of these studies suggest that the level of efficiency in liquidity management and the size of liquidity ratios are negatively associated. In this case, increased efficiency would seem to impart increased bank risk, *ceteris paribus*. Thus, given their relatively small liquidity ratios (and commensurately larger risk), it is hypothesized that high-profitability banks would have relatively large capital ratios.

Because this study analyzes the nature of the association between selected capital measures and *relative* bank profitability, it takes as given that capital management is important in an *absolute* sense to profitability in these banks. The analysis is carried out annually and longitudinally for the years 1978-1980 on large U.S. commercial banks with both domestic and foreign operations. While it is expected that these banks are relatively sophisticated financial managers, any differences in levels of profitability should reflect differences in decision making, including those affecting the relative size of the capital position.⁸

SAMPLE DATA

The sources of data are the 1978-1980 year-end, individual consolidated reports of income, reports of condition, and supplemental schedules of federally-regulated banks.⁹ Data were taken from the financial statements of all 155 banks which, in 1978, had both foreign and domestic operations. The risk/return characteristics of these banks were computed and analyzed

in an effort to make the sample relatively homogeneous with respect to such factors as banking structure, competitive environment, bank services, legal form of organization, and scale economies. The coefficient of variation (σ/\bar{x}) of the mean ratio of net income after taxes to total assets (NI/TA) was calculated for each total assets size category of the 155 banks.¹⁰ The analysis of the computed coefficients resulted in an initial sample of 99 banks — those with total assets of \$1 billion to \$5 billion.¹¹ The largest and smallest banks were omitted from the study.

METHODOLOGY

To analyze the behavior (association) of the capital measures with respect to relative bank profitability, the 99 banks in the initial sample were ranked by the NI/TA ratio and placed into four *profitability quarters* of approximately equal size. *High performance banks* are defined as those in the first profitability quarter; these have the highest mean NI/TA. After the banks were placed into quarters, one bank in the fourth profitability quarter was deleted in all years because of lack of complete data; another bank (in the first quarter) was deleted for the same reason from the 1979 and 1980 analysis. Thus, either 97 or 98 banks were included in the final sample analyzed in the study.

The banks in the 1979 and 1980 analysis were assigned to the same profitability quarter in which they were ranked in the 1978 analysis. This was done because of the longitudinal component of this study. Capital management decisions are made both in anticipation of and in reaction to bank risk/return considerations (including liquidity management) and financial and regulatory environments. Thus, they may provide short-run results that are not indicative of those over a complete capital planning cycle. By keeping the banks in their 1978 profitability quarters, it can be seen whether significant changes occurred over the study period in the mean profitability ranking of the banks in each quarter. This procedure also facilitates assessment of the longitudinal behavior (association) of capital measures with respect to relative profitability.

The *capital measures* analyzed in this study include the following ratios: (1) primary capital to total assets (PC/TA); (2) total capital to total assets (TC/TA); (3) primary capital to earning assets (PC/EA); and (4) total capital to earning assets (TC/EA). The capital measures were suggested by the guidelines established by the Federal Reserve and the Comptroller of the Currency.¹² The earning-asset measures were suggested by the frequent use of earning assets in industry practice and the banking literature.

For purposes of this study, *primary capital* is defined to include (1) common stock, (2) surplus, (3) undivided profits, (4) reserve for contingencies and other capital reserves, and (5) allowance for possible loan losses. *Total capital* includes primary capital plus subordinated notes and debentures.¹³ Further, *earning assets* are defined to include: (1) interest-bearing balances; (2) U.S. Government securities; (3) U.S. Government agency and corporation securities; (4) state and political subdivision securities; (5) trading ac-

count securities; (6) all other securities; (7) Federal funds sold and securities purchased under agreements to resell; (8) total loans, net of allowances for loan losses; and (9) lease financing receivables.¹⁴

To assess the *annual relationships* of the capital measures to relative profitability, the mean and standard deviation were computed for NI/TA and each capital ratio for the banks in each profitability quarter and the entire sample for each of the years 1978-1980. The rank order of the size of each capital ratio in each profitability quarter was used to determine the nature of the annual association between each ratio and relative profitability. The ratio of NI/TA was selected as the profitability criterion because it is the "bottom line" measure of bank performance under the constrained control of management.¹⁵

To assess the *longitudinal relationships*, the mean, standard deviation and coefficient of variation were computed for NI/TA and each capital ratio from their annual mean values in each profitability quarter for the period 1978-1980. The rank order of the size of each capital ratio in each profitability quarter was used to determine the nature of the three-year association between the ratio and relative profitability. Two variability measures were also related to relative profitability for each capital ratio. The standard deviation was used to provide an "absolute" measure of variability and, for the reasons discussed above, the coefficient of variation was used to provide a "relative" measure of variability.

RESULTS

The results of the *overall analysis* of the NI/TA performance of all sample banks are presented in Table 1. First, as mentioned previously, the banks were assigned to the same profitability quarters in 1979 and 1980 as determined by their 1978 NI/TA ranking. The banks in each 1978 quarter maintained the same mean NI/TA ranking in each of the succeeding two years. For example, banks in the first quarter in 1978 also had the highest NI/TA ratio in 1979 and 1980. As indicated for the entire sample, the standard deviation of the mean NI/TA increased somewhat in each succeeding year. This is to be expected because the banks were not re-ranked and reassigned to quarters in the 1979 and 1980 analysis. Second, the differences in mean NI/TA between successive quarters were quite stable from year to year, especially between quarters 1-2 and 2-3. Third, the mean NI/TA ratio in each quarter increased with the level of interest rates over the period. Fourth, as suggested above, both the annual and three-year mean NI/TA ratios (for all profitability quarters) had a consistent, positive association with relative profitability (as measured by profitability quarters). For example, in each year banks in the first quarter had the largest ratio and those in the fourth quarter had the smallest ratio. Fifth, the standard deviation and coefficient of variation of the three-year mean NI/TA ratios had a consistent, negative association with relative profitability. For example, both the deviation and coefficient were smallest for banks in the first quarter and largest for those in the fourth quarter.

Table 1

NI/TA Profitability Performance, 1978-1980

(Mean Data in Percentages)

<u>Profitability Quarter^a</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>\bar{x}^b</u>	<u>σ/\bar{x}</u>
1 [1-2] ^c	0.95 [0.22]	0.96 [0.18]	0.97 [0.22]	0.96 (0.01)	0.01
2 [2-3]	0.73 [0.14]	0.78 [0.15]	0.75 [0.11]	0.75 (0.026)	0.03
3 [3-4]	0.59 [0.22]	0.63 [0.16]	0.64 [0.16]	0.62 (0.027)	0.04
4	0.37	0.47	0.48	0.44 (0.06)	0.14
All ^b	0.66 (0.23)	0.71 (0.27)	0.71 (0.28)		

Notes:

^aBanks placed into profitability quarters based on their 1978 NI/TA ranking.

^bStandard deviation in parentheses.

^cDifferences in brackets, i.e., quarter 1 minus quarter 2, etc.

In summary, the 1978 *high-performance banks* maintained their relative rank over the remaining two years of the study. These banks were strikingly consistent in the level of their profitability performance. This consistency resulted in very low variability in their NI/TA performance and was accomplished in an economy characterized over this period by declining growth rates in GNP, very high and increasing rates of inflation, and high and increasing interest rates.

The results of the *overall analysis* of primary capital to total assets (Table 2) indicated that the three-year mean ratio values had a consistent positive association with relative profitability.¹⁶ However, the annual total mean ratio values had a consistently decreasing trend over the period, indicating an *absolute decrease* in PC/TA.¹⁷ The absolute and relative variability of the three-year mean ratio values had no apparent association with relative profitability.

High-performance banks consistently (annual and three-year means) had the largest proportion of PC/TA, reflecting a positive association with relative profitability. However, the annual mean ratio values had a consistently decreasing trend over the period, reflecting an *absolute decrease* in PC/TA. The three-year mean PC/TA value had the largest absolute and relative variability as annual changes occurred over the period. These results suggest that high-performance banks managed their PC/TA conservatively to maintain their relatively large proportions (within the context of absolute decreases in PC/TA) and with the largest variability in growth over time.¹⁸

The results of the *overall analysis* of total capital to total assets (Table 3) indicated that the three-year mean ratio values had a general, positive association with profitability. The annual total mean ratio values had a consistently decreasing trend over the period, indicating an *absolute decrease* in TC/TA. The absolute and relative variability of the three-year mean ratio values had no apparent association with relative profitability.

High-performance banks consistently had the largest proportion of TC/TA, reflecting a positive association with relative profitability. However, the annual mean ratio values had a consistently decreasing trend over the period, reflecting an *absolute decrease* in TC/TA. The three-year mean TC/TA value had the largest absolute and relative variability as annual changes occurred over the period. These results suggest that high-performance banks managed their TC/TA conservatively to maintain their relatively large proportions (within the context of absolute decreases in TC/TA) and with the largest variability in growth over time. Thus, high-performance banks managed their TC/TA in a manner consistent with that of PC/TA (and probably for the same reasons).

The results of the *overall analysis* of primary capital to earning assets (Table 4) indicated that the three-year mean ratio values had a general, positive association with relative profitability. However, the annual total mean ratio values had a consistently decreasing trend over time, indicating an *absolute decrease* in PC/EA. The absolute and relative variability of the three-year mean ratio values had no apparent association with relative profitability.

Table 2
PC/TA Ratio
by Relative Profitability, 1978-1980
(Mean Data in Percentages)^a

Profitability Quarter ^b	1978	1979	1980	\bar{x} ^c	σ/\bar{x}
1	7.36(L)	7.04(L)	6.91(L)	7.10(L) (0.23)	.03(L)
2	6.10	6.06	6.05	6.07 (0.03)	.004(S)
3	6.07	5.97	6.12	6.05 (0.08)	.01
4	5.59(S)	5.83(S)	5.72(S)	5.71(S) (0.12)	.02
All ^c	6.29 (1.18)	6.22 (1.09)	6.20 (1.06)		

Notes:

^aMeasures ranked as largest (L) or smallest (S).

^bBanks placed into profitability quarters based on their 1978 NI/TA ranking.

^cStandard deviation in parentheses.

High-performance banks consistently had the largest proportion of PC/EA, reflecting a positive association with relative profitability. However, the annual mean ratio values had a consistently decreasing trend over the period, reflecting an absolute decrease in PC/EA. Their three-year mean PC/EA value had the largest absolute and relative variability as annual changes occurred over the period. These results suggest that high-performance banks managed their PC/EA conservatively to maintain their relatively large proportions (within the context of absolute decreases in PC/EA) and with the largest variability in growth over time. Thus, high-performance banks managed their PC/EA in a manner consistent with PC/TA and TC/TA.

The results of the *overall analysis* of total capital to earning assets (Table 5) indicated that the three-year mean ratio values had no apparent association with relative profitability. However, the annual total mean ratio values had a consistently decreasing trend over time, indicating an absolute decrease in TC/EA. The absolute and relative variability of the three-year mean ratio values had no apparent association with relative profitability.

Table 3
 TC/TA Ratio
 by Relative Profitability, 1978-1980
 (Mean Data in Percentages)^a

Profitability Quarter ^b	1978	1979	1980	\bar{x}^c	σ/\bar{x}
1	7.88(L)	7.51(L)	7.26(L)	7.55(L) (0.31)	.04(L)
2	6.71	6.566(S)	6.52	6.61 (0.09)	.014
3	6.75	6.66	6.75	6.72 (0.05)	.008(S)
4	6.44(S)	6.591	6.36(S)	6.46(S) (0.12)	.02
All ^c	6.96 (1.03)	6.84 (0.98)	6.72 (0.98)		

Notes:

^aMeasures ranked as largest (L) or smallest (S).

^bBanks placed into profitability quarters based on their 1978 NI/TA ranking.

^cStandard deviation in parentheses.

Table 4
 PC/EA Ratio
 by Relative Profitability, 1978-1980
 (Mean Data in Percentages)^a

<u>Profitability Quarter^b</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>\bar{x}^c</u>	<u>σ/\bar{x}</u>
1	9.02(L)	8.64(L)	8.40(L)	8.69(L) (0.31)	.04(L)
2	7.46	7.35	7.40	7.40 (0.05)	.007(S)
3	7.43	7.41	7.58	7.47 (0.09)	.012
4	7.09(S)	7.26(S)	7.09(S)	7.15(S) (0.10)	.013
All ^c	7.76 (1.48)	7.66 (1.42)	7.62 (1.33)		

Notes:

^aMeasures ranked as largest (L) or smallest (S).

^bBanks placed into profitability quarters based on their 1978 NI/TA ranking.

^cStandard deviation in parentheses.

Table 5
 TC/EA Ratio
 by Relative Profitability, 1978-1980
 (Mean Data in Percentages)^a

Profitability Quarter ^b	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>\bar{x}^c</u>	<u>σ/\bar{x}</u>
1	9.67(L)	9.21(L)	8.82(L)	9.23(L) (0.42)	.05 (L)
2	8.19	7.99(S)	7.97	8.05(S) (0.12)	.015
3	8.26	8.26	8.34	8.29 (0.05)	.006(S)
4	8.14(S)	8.21	7.87(S)	8.07 (0.18)	.022
All ^c	8.57 (1.30)	8.41 (1.28)	8.26 (1.22)		

Notes:

^aMeasures ranked as largest (L) or smallest (S).

^bBanks placed into profitability quarters based on their 1978 NI/TA ranking.

^cStandard deviation in parentheses.

High-performance banks consistently had the largest proportion of TC/EA, reflecting a positive association with relative profitability. However, the annual mean ratio values had a consistently decreasing trend over the period, reflecting an absolute decrease in TC/EA. The three-year mean TC/EA value had the largest absolute and relative variability as annual changes occurred over the period. These results suggest that high-performance banks managed their TC/EA consistently to maintain their relatively large proportions (within the context of absolute decreases in TC/EA) and with the largest variability in growth over time. Thus, high-performance banks managed their TC/EA in a manner consistent with their PC/TA, TC/TA, and PC/EA.

CONCLUSIONS

The results of the *overall analysis* indicated that the three-year mean values for three of the four capital ratios (excepting TC/EA) had either a general or consistent, positive association with relative profitability. However, the absolute size of all four ratios decreased over the period, reflecting the continuing industry trend towards smaller capital ratios. The absolute and relative variability of all four three-year mean ratios had no apparent association with profitability, thus reflecting no consistent pattern of relative capital management vis-a-vis levels of profitability.

The results of the analysis of *high-performance banks* indicated that the annual and three-year mean values of all four capital ratios were the largest, reflecting a consistent, positive association with relative profitability. Consistent with the industry trend, the *absolute* annual sizes of all four capital ratios decreased over the period. The three-year mean values of all four capital ratios had the largest absolute and relative variability as annual changes occurred over the period.

These results suggest that high-performance banks maintained the most conservative (largest) capital ratios within the context of a continuing industry trend towards smaller capital ratios. These relatively large capital ratios were probably maintained to counter, more so than did less profitable banks, the several increased banking risks (especially interest-rate and liquidity management risk) in a volatile and increasingly inflationary economy with high and increasing interest rates. It appears that high-performance banks had an identifiable pattern of capital management vis-a-vis their level of profitability. This pattern would seem to reflect their desire to reduce (in a relative sense) risk (including the effects of increased liquidity risk) in the increasingly volatile financial environment. Thus, the results support the *hypothesis* that high-performance banks would have relatively large (the largest, in fact) capital positions. It would seem, therefore, that the assumed interrelationship between liquidity and capital management vis-a-vis bank risk has empirical support.

FOOTNOTES

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¹For a more complete treatment of this discussion, see George H. Hempel and Jess B. Yawitz, *Financial Management of Financial Institutions* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1977).

²For a more complete treatment of this discussion, see Ronald L. Olson, et al., "Management of Bank Interest Margins in the 1980s," *Magazine of Bank Administration*, March 1980, pp. 30-33.

³For a more complete treatment of this discussion of bank capital and risk, see Joseph F. Sinkey, Jr., *Commercial Bank Financial Management* (New York: Macmillan, 1983); also, John A. Haslem, *Commercial Bank Management* (Reston, VA: Reston Publishing Co., 1985).

⁴Thus, the relative size of capital also impacts bank stock prices. As a bank's relative capital position decreases (and leverage increases) below the market's perception of adequacy (related to the industry norm), the risk premium demanded by investors increases, thereby reducing its stock price. To remedy this adverse reaction, the bank must increase its relative capital position to where it will again be perceived as "adequate."

The market's perception of capital adequacy is affected significantly by the fact that regulators consider capital important. Bank stock price can be adversely affected if regulatory capital guidelines are not followed.

⁵These capital ratios use capital (various definitions) in the numerator and, typically, total assets, total deposits, or risk assets in the denominator. Evidence indicates that these ratios have trended downwards since the introduction of deposit insurance in 1933; also, they have tended to decrease as bank size has increased.

⁶Haslem, John A. "A Statistical Analysis of Member Bank Profitability Differences." Chapel Hill: University of North Carolina, 1967.

⁷Haslem, John A., James P. Bedingfield, and A.J. Stagliano, "An Analysis of Liquidity Measures and Relative Bank Profitability" (forthcoming, *Akron Business and Economic Review*); also, John A. Haslem, James P. Bedingfield, and A.J. Stagliano, "Bank Performance Measures and Relative Profitability," *Bankers Magazine*, 166 (July-August 1983) pp. 73-76.

⁸For a study of the relationship between management, size, location, and time on relative profitability, see John A. Haslem, "A Statistical Analysis of the Relative Profitability of Commercial Banks," *Journal of Finance*, 23 (March, 1968), pp. 167-176.

⁹Federal Reserve Board, "Report of Income and Report of Condition Subscription Service," April 1979.

¹⁰The coefficient of variation of NI/TA was computed for each total asset size category. This single statistic incorporates both the mean and the standard deviation of the ratio. Otherwise, it would be difficult to make intergroup performance comparisons, for example, where both the mean and standard deviation of the NI/TA ratio in one category are larger than those in another category. In this use, the coefficient of variation provides the number of units of standard deviation per unit of mean NI/TA in a given asset size category.

Future studies could use, where possible, market risk measures to control sample risk and to test the association between market returns and capital ratios.

¹¹The initial sample is reasonably homogeneous with respect to location, legal form of organization, charter, and Federal Reserve District is eight and ranges from three in Minneapolis to 14 in Richmond. As to legal form of organization, 95 banks are affiliates of bank holding companies. Eighty-eight banks have more than one domestic banking office. Thus, the vast majority of the banks are affiliated branch banks. This fact suggests a high degree of uniformity in legal form of organization. With respect to charter authority, 66 are national banks and the remaining 33 are state-chartered banks. Eighty-six banks are subject to Federal Reserve regulation, and 13 banks are subject only to FDIC regulation at the federal level.

Alternatively, a future study could use a control sample to facilitate analysis of paired bank samples. This less general approach could better control for any significant lack of homogeneity in the sample data.

¹²Comptroller of the Currency, "Capital Adequacy Guidelines," December 18, 1981. The Comptroller's guidelines establish primary and secondary components of total capital. *Primary capital* components include: (1) common stock; (2) perpetual preferred stock; (3) capital surplus; (4) undivided profits; (5) contingency and other capital reserves; (6) mandatory convertible issues; and (7) allowance for possible loan losses. *Secondary capital* components include (1) qualifying subordinated debt issues and (2) limited-life preferred stock. The primary capital and total capital guidelines are generally applied to consolidated total assets.

¹³This definition of capital differs from the Comptroller's guidelines because the sample banks did not have any preferred stock; also, their subordinated debt was assumed to "qualify" as secondary capital.

¹⁴See the Comptroller of the Currency, "A User's Guide to the NBSS Bank Performance Report," March 1979, and the specific accounts in the regulatory financial statements.

¹⁵If the focus of the study had been less on capital management and more on overall aspects of bank management, the ratio of the net income to total

capital accounts might have been more appropriate to use. In either case, the general results were similar with respect to the nature of the association of the capital measures and relative profitability.

¹⁶A detailed discussion of these results follows: First, the annual mean PC/TA ratios had a consistent (1978, 1979) or general (1980), positive association with relative profitability. For example, in each year banks in the first profitability quarter had the largest ratio and those in the fourth quarter had the smallest ratio. Second, the three-year mean PC/TA ratios had a consistent, positive association with relative profitability. For example, banks in the first quarter had the largest ratio and those in the fourth quarter had the smallest ratio. Thus, high-performance banks had above average annual and three-year mean PC/TA ratios. Third, both the standard deviation (absolute variability) and coefficient of variation (relative variability) of the three-year mean PC/TA ratios did not have an apparent association with relative profitability. For example, the deviation and coefficient were largest for banks in the first quarter and smallest for those in the second quarter. Thus, high-performance banks had above average absolute and relative variability in their three-year mean PC/TA ratio. Finally, this analytical framework also applies to the subsequent tables.

¹⁷The word "absolute" is used here to refer to whether the size of a ratio (for a particular profitability quarter or overall) increased or decreased over the three-year period. This use contrasts with the relative size of a ratio among the other profitability quarters for a given year or for the three-year period.

¹⁸This high degree of variability is due to several causes, including additions to capital from external and internal sources of funds.

John A. Haslem is Professor of Finance in the College of Business and Management at the University of Maryland. James P. Bedingfield is an Associate Professor of Accounting in the College of Business and Management at the University of Maryland. A.J. Stagliano is the Edward G. Sutula Professor of Accounting at Saint Joseph's University in Philadelphia.