

SIZE, RISK, AND RETURNS IN COMMERCIAL BANKING

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Studies examining U.S. commercial banks generally have found small banks to exhibit higher profitability than large banks. The focus of this dissertation is to determine whether a correlation exists between bank size and returns that have been adjusted for the degree of risk.

A lack of market data in the banking industry necessitated that tests for a size effect be conducted with accounting-determined measures of risk and return. A significant positive correlation was shown to exist between accounting-determined and market-determined betas for a sample of banks. The correlation was sensitive to the choice of market index.

Two separate methodologies consistent with that used in size-effect studies for publicly traded firms were employed. The first test examined the ability of bank portfolios, controlled on the basis of size, to earn differential rates of return when compared to a portfolio of median-sized banks. There was some evidence to suggest a positive size effect. This finding was contrary to both the expected relationship and the relationship found in publicly traded securities.

The second test was a variant of the two-step estimation process. Portfolios were rebalanced to hold size characteristics constant over time. Time series accounting betas were first estimated. These estimates were utilized in a cross-sectional pricing equation that also contained a size regressor.

When the annual GLS estimator was assumed to be i.i.d., both beta and the size variable typically displayed a significant negative relationship with bank portfolio returns. Removal of

the i.i.d. assumption provided results typically indicating beta to be priced positively and size to have an insignificant effect after controlling for systematic risk.

The difference in results indicated that the i.i.d. assumption must be treated very carefully in the presence of limited data observations. The overall results suggest the absence of a size effect and great care in the use of systematic accounting risk in banking studies.