

range of alternative investment opportunities, and shift at the margin from one investment to another." By comparing the cyclical fluctuations of yields in this market with bond yields, the authors are able to conclude that the often observed fact that mortgage yields lag bond yields at cyclical turning points can be explained by market organization, *i.e.*, negotiated vs. dealer markets. This is contrary to the more commonly held view that changes in mortgage market conditions are reflected first in such dimensions of mortgage loans as loan-to-value ratios, maturities, or fees and charges, and only later in contract rates and yields. The evidence advanced by the authors suggests the opposite—that contract rates are more sensitive to market conditions than the other terms of the mortgage.

It is not possible to summarize all the new insights which the authors provide in the short space of a review. Suffice it to say there is much of interest to students of capital markets and financial institutions broadly defined as well as mortgage market specialists.

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Business Loan Costs and Bank Market Structure: An Empirical Estimate of Their Relations. By DONALD P. JACOBS. National Bureau of Economic Research, Occasional Paper 115. New York and London: Columbia University Press, 1971. Pp. xi + 103. \$5.00.

As the most recent in a long line of empirical studies of the relationship between bank performance and banking market structure, this book provides the richest potential data source yet developed. Financed by the American Bankers' Association and blessed by the National Bureau of Economic Research, Jacobs has compiled the most complete set of data presently available on the business borrower-bank relationship. In all, he has amassed detailed information on 8,500 business borrowers by sending a questionnaire to more than 600 banks (of which 160 responded).

This distinguishing feature of this study, therefore, is that it incorporates additional dimensions of the borrower-bank relationship into the traditional empirical analysis of the effect of market structure on the pricing of business loans. In particular, Jacobs explores such previously neglected borrower and loan characteristics as the customer's average deposit balance and its relative variability, the borrower's account activity and time in debt, the nature of the loan collateral, and the length of the lending arrangement between the bank and the customer. He also incorporates information on services other than lending and checking which banks customarily provide to individual borrowers and on whether banks make separate charges for these services. Thus, the primary contribution of this study is that it estimates a more complete model of the borrower-bank relationship.

The heart of Jacobs' study is Chapter 3, where he presents his estimating equations. Although an abbreviated theoretical model of bank profitability is developed in Chapter 2, this model does little more than indicate that profit-maximization by banks is a multi-faceted decision-making problem. For example, loan rates are shown to be only one dimension of the profit-maximizing decision, other dimensions being customer deposit balances, service charges, etc. Moreover, the specific equations which Jacobs ultimately estimates cannot be derived rigorously from this theoretical model. Consequently, the relationship between theory and empiricism in this study is loosely suggestive rather than tightly predictive, which not surprisingly causes some ambiguity in the interpretation of Jacobs' statistical results.

The plethora of statistical results found in Chapter 3 are all based on two general estimating equations. One equation has business loan rates as the dependent variable; the other uses the borrower's deposit account size as the dependent variable. In both equations these variables are a function of two structural variables (concentration and type of branching), several proxy variables for demand and cost differences (*e.g.*, population increase and bank size), and numerous features specific to the bank-borrower relationship (*e.g.*, original amount of loan, account activity, deposit fluctuation, length of lending arrangement, and time in debt). Both equations are estimated with cross-section data (107 metropolitan areas) collected in February, 1967.

Jacobs' chief conclusion is that loan rates rise as the lending bank's market power increases; or rates rise with tightened branch restrictions and with increases in concentration. Branching restrictions affect only loan rates paid by very small businesses (firms with less than one-half million dollars in assets), while concentration has a significant impact on rates paid by firms with assets up to at least \$5 million. Jacobs also finds, on the other hand, that the size of the deposit balance maintained by business borrowers is not determined by the lending bank's market power but is determined solely by other characteristics of the bank-borrower relationship.

The striking feature of these findings is their similarity to those of prior studies. Jacobs reports that a 10 per cent rise in concentration (from its mean of 67 per cent) increases loan rates by approximately 4.59 basis points (see Table 3, p. 34 and Table D-1, p. 84); he then claims that in the prior studies of Edwards [1] and Phillips [2] the same percentage increase in concentration would raise loan rates by 6 and 8 basis points respectively (see p. 58). Because of confusion over percentage changes and percentage point changes in concentration, however, Jacobs misinterprets these earlier studies. Correctly interpreted, Edwards finds that a ten per cent increase in concentration raises loan rates by only 4.62 basis points (Edwards, p. 65), while Phillips finds that a similar increase in concentration raises loan rates by only 5.46 basis points (Phillips, Table 4, Part D, p. 923). Thus, Jacobs' and Edwards' findings are practically identical and Jacobs' and Phillips' findings differ by less than a percentage point. Since these studies are all separate and distinct experiments, conducted with different data, in different time periods, and under different conditions, the remarkable similarity in their results strongly suggests that these studies have succeeded in discovering the true relationship between business loan rates and market concentration.

In sum, this study is best looked at as another empirical experiment on the structure-performance relationship in banking markets. Seen in this context, it contributes some important pieces to the puzzle surrounding the structure-performance nexus.

REFERENCES

1. F. Edwards. *Concentration and Competition in Commercial Banking: A Statistical Study*, Federal Reserve Bank of Boston, Research Report No. 26, 1964.
2. A. Phillips. "Evidence on Concentration in Banking Markets and Interest Rates," *Federal Reserve Bulletin* (June, 1967), pp. 916-26.

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The Economics of the Stock Market. By RICHARD R. WEST and SEHA M. TINIC. New York and London: Praeger Publishers, 1971. Pp. vi + 222. \$10.00.

This book presents theoretical and empirical economic analysis of the stock trading process and of stock exchanges (principally the New York Stock Exchange). An im-