Determinants of the Rate of Return on S&L Assets: 1970-97

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Abstract

This study identifies determinants of the rate of return on U.S. Saving and Loan (S&L) assets during the 1970-97 period. The Instrumental Variables (IV) estimation reveals that this rate of return is an increasing function of the spread between the S&L mortgage interest rate and the S&L cost of funds, the regulatory S&L capital-asset ratio, and the percentage growth rate of real GDP. It is negatively affected by the Tax Reform Act of 1986 and positively affected by the Federal Deposit Insurance Corporation Improvement Act of 1991. Based on these findings, certain policy implications and general conclusions are suggested. (JEL G20, G21)

Introduction

In the U.S., Savings and Loans (S&Ls) have historically been the principal institution supplying home mortgages to the public. The S&L crisis in the U.S. that began in the early 1980s and involved an enormous increase in the S&L failure rate has received considerable attention in the news media and research literature. The media has focused largely on the number of S&L failures, the pecuniary cost of those failures to taxpayers, and allegations of fraudulent behavior on the part of S&L directors and officers. The research literature has focused more on the resolution costs of the S&L failures and on the apparent causes of these S&L failures, at least in part with the objective of providing insights to help prevent such failures in the future.

A considerable proportion of this research literature focuses on the role of the federal deposit insurance coverage system in S&L failures. A well-known study of the S&L crisis, Barth [1991, p. 101], convincingly argues that, "...federal deposit insurance was the unifying cause of the savings and loan disaster." Barth further argues that federal deposit insurance encouraged the S&Ls to take on additional risk and, in so doing, significantly contributed to the rate of S&L failures. He alleges that, "...the very availability of such insurance enabled many inadequately capitalized savings and loans to engage in high-risk activities and to gamble for resurrection." Other studies [Barth and Bartholomew, 1992; Barth and Brumbaugh, 1992; Brumbaugh, 1988; Cebula and Hung, 1992A; and Kane, 1982] argue similarly, although the study by Saltz [1995] seemingly provides empirical evidence to the contrary.

Federal deposit insurance coverage is by no means viewed as the only significant cause of S&L failures over time. Factors such as the rising cost of deposits, increased interest rate volatility, declining capital-asset ratios, declining crude oil prices, the 1981-82 recession, Regulation Q, and provisions of the Tax Reform Act of 1986 are also viewed as potentially having influenced the S&L failure rate.

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Another dimension of the S&L crisis is the geographic variation in the S&L failure rate. Amos [1992] investigates determinants of interstate differentials in the commercial bank closing rate, focusing principally on interstate differences in the growth rate of gross state product, the volatility of gross state product, the percentage of gross state product deriving from manufacturing, from agriculture, or from oil and natural gas extraction, and other factors. Using Amos [1992] as a point of departure, Cebula [1994] expands the scope of inquiry into interstate differentials in commercial bank closings to include a variety of money market (and other) factors, such as the cost of funds, capital-asset ratios, and the extent to which interstate banking is permitted. Finally, depending to some degree on Amos [1992], Barth [1991], and Cebula [1994], Chou and Cebula [1996] use the heteroskedastic-TOBIT model to investigate determinants of geographic (interstate) differentials in the S&L failure rate.

The present study seeks to extend the inquiry into the economic health of the S&L industry by empirically identifying key determinants of the rate of return on S&L assets over the period 1970-97. Clearly, if the rate of return on S&L assets declines sharply and becomes negative, then a prolonged experience of such negative rates of return would ultimately doom the S&Ls to eventual insolvency. In turn, the failing S&Ls may create significant financial burdens for taxpayers as well as for depositors. In identifying key factors systematically determining the rate of return on S&L assets, the study hopes to provide further insights into the factors that influence the economic and financial health of S&Ls so that poor rates of return can perhaps be prevented or at least moderated in the future.

Using semiannual data, the study period runs from the first half of 1970 (1970.1) through the second half of 1997 (1997.2). Unfortunately, quarterly data for several of the variables in the analysis, including the rate of return on S&L assets, the S&L capital to assets ratio, and the S&L cost of funds, are unavailable prior to 1984. In any event, the period 1970.1-1997.2 is an especially interesting one for the S&L industry because the S&Ls experienced a variety of significant challenges over this time span. These include two major oil-price shocks in the 1970s that sharply raised crude oil prices, followed by sharp oil-price declines in the latter part of the 1980s, two major federal statutes that acted to deregulate the financial services industry, major tax reform legislation enacted in 1986, major legislation to reform the financial services industry in 1991, and sharply rising interest rates, especially in late 1979 and the early 1980s, followed by lower interest rates later in the study period.


Events involving an O.P.E.C. oil embargo in 1973 created a major oil-price shock that nearly doubled the price per barrel of imported crude oil for the U.S. For example, the average price per barrel of imported crude oil rose from $3.89 in 1973 to $6.87 in 1974. Another oil-price shock occurred in 1979. In this case, the price per barrel of imported crude oil rose from an average of $12.64 in 1979 to $21.59 in 1980 and to $31.77 in 1981 (the peak current-dollar average annual price). After 1981 and 1982, oil prices began to drop somewhat. However, after 1985, the price of imported oil dropped sharply. For instance, the average price per barrel of imported crude oil was $24.05 in 1985, whereas the average price had fallen to $12.51 per barrel by 1986.

Barth [1991], Barth and Bartholomew [1992], and others have argued that although the rising price of oil in the 1970s was beneficial to those parts of the country that engaged in extensive oil exploration and production (particularly the Southwest), the reverse effect was true when oil prices dropped during the 1980s. The declining oil prices resulted in lost jobs, lost income, and a declining real estate market. Potentially, this situation could be particularly problematic for S&Ls given the importance of the real estate industry to their