severely eroded the industry's capital position. In the third quarter of 1985, the net worth of thrifts as an industry stood at a low 3.1 percent on the basis of generally accepted accounting principles (GAAP). Lower interest rates have improved earnings, and the industry has begun to repair net worth. However, since the level of net worth is extremely low, a sustained period of low interest rates is still required so that strong earnings can sufficiently recapitalize the industry.

Thrifts, moreover, will have to consistently generate even higher earnings if the FHLBB adopts a proposal to raise capital requirements from 3 percent to 6 percent, which is the capital ratio for commercial banks. Beginning in 1980, the FHLBB reduced capital standards, first from 5 percent to 4 percent; then, in 1982, dropped it to the current level of 3 percent. As in the banking industry, there also are proposals under discussion to impose risk-based capital standards on the thrift industry.

There is a large segment of the thrift industry that still requires low interest rates to generate the long-term earnings needed to adequately rebuild capital. According to a recent U.S. General Accounting Office (GAO) report, the number of GAAP-insolvent institutions (i.e., those with negative GAAP net worth) has risen steadily since 1979.[7] As of mid-1985, there were 461 GAAP-insolvent institutions with assets of approximately $113 billion, or 11 percent of total industry assets.

If thrifts that are poorly capitalized (i.e., those having less than 3 percent GAAP net worth) are included, the financially weak segment of the thrift industry rises to a total of 1,300 institutions, or 41 percent of all FSLIC institutions.[8] As of June 1985, these weak thrifts had assets of almost $433 billion, or nearly 43 percent of total industry assets. The GAO study also found that low net worth is correlated with low profitability. Thus, we can infer that lower interest rates have not improved the earnings of the weakest segment of the industry on any sustainable basis.

Concluding Remarks

It is evident that a large segment of the thrift industry has only marginally benefited from lower interest rates since 1983. Using the GAO's data, the financial condition of 471 thrifts, or 15 percent of the industry has, in fact, worsened or failed to improve, even as rates have fallen. It is still far from clear that marginally lower interest rates will eventually ease their financial problems.

There is even a larger thrift industry group whose long-term viability depends on a sustained period of low interest rates in the future. This group comprises about 800 thrifts (26 percent of the industry) that are currently profitable, but that have negative or extremely low net worth under GAAP.

Thrifts have made significant strides to protect themselves. The duration of their assets today is shorter than it was during the 1981-82 recession. Thrifts as a whole, however, have taken limited advantage of new asset powers under the Garn-St Germain and the DIDMCA Acts. Some observers are critical of the slow pace at which they are adjusting to their new powers. However, many thrifts apparently have adopted a moderate diversification pace because it allows them to become familiar with these powers more wisely and prudently.

Thrifts also are relying on ARMs and are adopting mortgage banking as a viable lending strategy. However, as a whole, they have made only slow progress toward portfolio immunization. The industry is still vulnerable to rising and volatile interest rates because their asset portfolios are still dominated by long-term, fixed-rate mortgage loans.

Some thrifts currently are even taking a step backwards. Indeed, history could repeat itself. The current return to fixed-rate lending by some thrifts, combined with the tendency to hold these instruments as portfolio loans, and to rely on short-term, variable-rate deposits for funding could provide all the ingredients for a case of deja vu. This could prove damaging because the duration imbalance could put some already capital-depleted thrifts in a situation of paying out more than they take in—if and when interest rates rise.

7. See, "Thrift Industry Problems — Potential Demands on the FSLIC Insurance Fund," United States General Accounting Office, GAO/GGD-86-48BR, February 1986.

8. As the number of insolvent institutions grew rapidly, the FHLBB liberalized its *regulatory* accounting principles (RAP) in 1982 to avoid liquidating or providing financial assistance to a large number of problem cases. The purpose of RAP was to buy time so that lower interest rates could allow technically insolvent thrifts to rebuild capital. There is growing criticism of RAP in some circles because RAP has been in place for four years, has not materially improved the condition of or outlook for thrifts, and merely conceals the true net worth of the thrift industry. The FHLBB has begun taking steps to repeal liberalized RAP rules, bringing them gradually in line with GAAP standards. Examples of this are the proposed FHLBB rule changes that would substantially limit the future use of deferred loan losses and appraised equity capital by FSLIC-insured thrifts.

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ECONOMIC COMMENTARY

The Thrift Industry: Reconstruction in Progress

by Thomas M. Buynak

During the 1981-82 recession, high interest rates sparked a financial crisis in the savings and loan (thrift) industry.[1] A number of companies were liquidated; others required help from the Federal Home Loan Bank Board (FHLBB). Since then, the industry has shrunk from about 4,000 to 3,200 institutions.[2]

In this *Economic Commentary,* we discuss the problems that high and volatile interest rates have caused for thrifts, starting with the first major hint of trouble back in 1966. We show that, despite deregulation of the lending and other asset powers of thrifts since 1980, more must be done to reduce their susceptibility to high interest rates and to unfavorable economic conditions.

Setting Up Thrifts for a Crisis

The vulnerability of thrifts stems primarily from their traditionally narrow composition of assets and liabilities. Historically, thrifts specialized in offering savings deposits and mortgage loans. This special role was recognized in the 1930s with establishment of the FHLBB and the Federal Savings and Loan Insurance Corporation (FSLIC). During the 1960s and the 1970s, government policy encouraged thrift industry growth in an effort to provide a reliable source of home financing credit. It was mostly thrifts that financed the housing booms during those years.

Regulatory restrictions on thrifts traditionally limited their acquisition of assets to making mortgage loans or to purchasing mortgage-backed securities. The regulatory restrictions were reinforced by federal tax code provisions that offer thrifts a tax deferral on current income. As recently as 1980, thrifts were still affected strongly by these historic asset restrictions. At the end of 1980, for example, FSLIC-insured thrifts held more than 77 percent of their assets in residential mortgage loans and mortgage-backed securities. Commercial mortgages and consumer loans accounted for about 7 percent and 3 percent of their assets, respectively. Prior to 1980, thrifts were barred from the corporate lending market.

Thrifts also were handicapped because they traditionally relied on personal savings deposits that were subject to interest-rate ceilings.[3] As of year-end 1980, for example, almost 79 percent of thrifts' total liabilities were retail deposits. Approximately 60 percent of these liabilities were small-denomination certificates of deposit (CDs). Until the 1980s, few thrifts attempted to manage their liabilities actively, and most thrifts had only a small number of large-denomination (over $100,000) certificates of deposit (Jumbo CDs), repurchase agreements, and borrowed funds.

The Disintermediation Problem

The first major sign of thrifts' vulnerability to high interest rates occurred during the 1966 credit crunch, when they experienced the first substantial amount of *deposit disintermediation.* This describes a phenomenon in which depositors shifted funds into higher-yielding investments when market interest rates rose above rates that thrifts were legally allowed to pay.

In 1966, and again in 1969 and 1974, Treasury bill interest rates rose substantially above interest rates that thrifts could pay. As a result, depositors shifted funds from thrifts into higher-yielding instruments. Commercial banks also experienced fund-shifting, but they had more diversified sources of funds and could better weather deposit losses than thrifts.

One effect of fund-shifting was a disruption in the flow of credit to mortgage markets. Consequently, when there was a deposit outflow, or a slowdown in deposit inflows, many thrifts had to ration mortgage credit. Some thrifts also had to liquidate assets and to recognize capital losses on those sold assets to cover deposit withdrawals.[4]

As an alternative to asset sales, thrifts borrowed funds from outside sources, including the FHLBB, or purchased wholesale deposits. Those borrowings, and a reliance on purchased funds, enabled thrifts to avoid or minimize asset sales. However, the borrowed money hurt their earnings because market-rate liabilities were substituted for lower-cost deposit liabilities.

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1. In this article, thrifts refer to institutions that have Federal Savings and Loan Insurance Corporation (FSLIC) insurance; another segment of the thrift industry, which includes most savings banks and credit unions, are not discussed here.

2. After 1982, the frequency of FHLBB-assisted mergers decreased dramatically, in part due to the comparatively low remaining level of financial resources available to FSLIC. As of year-end 1985, FSLIC only had approximately $2 billion of its $6 billion fund available as unobligated funds to insure an industry whose assets presently exceed $1 trillion.

3. On March 31, 1986, one of the last vestiges of interest-rate ceilings was removed when passbook savings accounts were deregulated.

Initial Adjustments in the 1970s and Early 1980s

Because of a loosening of interest rate ceilings and because of more proficient liability management during the 1970s, thrifts became less vulnerable to fund-shifting. In May 1973, the Federal Reserve removed remaining interest-rate ceilings on Jumbo CDs, allowing depository institutions to pursue liability management aggressively.

With managed liabilities, thrifts could offset retail deposit outflows. When the economy was expanding, thrifts also could use liability management to accommodate growing loan demands if retail deposit inflows were sluggish or inadequate.

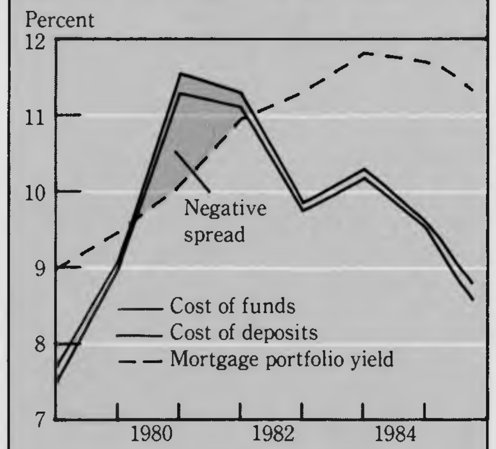
Greater dependence on wholesale liabilities, however, has a potentially negative aspect because such dependence subjects thrifts to sudden and large wholesale deposit withdrawals if investors lose confidence in the institutions' financial condition. This situation, for example, faced Continental Illinois of Chicago in 1984, which suffered large wholesale deposit losses and was forced to seek financial assistance from other large banks and from the Federal Reserve.

In June 1978, federal regulators authorized the 6-month money market certificate (MMC). The MMC required a $10,000 minimum deposit and its interest rate was tied to the 6-month Treasury bill rate. Armed with the MMC, depository institutions finally had a retail liability product that was competitive in a high-interest-rate environment.

At that time, thrifts began replacing liabilities that had low ceiling rates, like the passbook savings account, with market-rate deposit instruments. The MMC was a key factor that reduced thrifts' vulnerability to fund-shifting in the 1979-82 period as interest rates escalated into double digits.

Although these initial regulatory changes and steps toward liability management enabled thrifts to avert severe fund-shifting when interest rates began rising rapidly in 1978, high interest rates severely undermined the thrift industry's overall financial condition. Because of traditionally strict asset limitations, thrifts were financing long-term, fixed-rate mortgages with rising, market-rate deposits. Thus, while MMCs prevented deposit losses, they greatly increased the cost of deposits relative to the average yield on their mortgage portfolio (see chart 1).

Chart 1 Selected Financial Ratios for FSLIC-insured Institutions



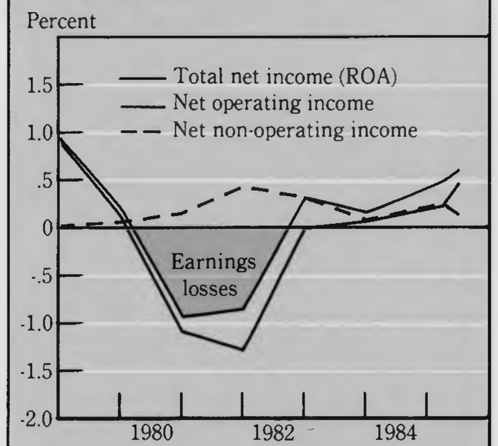
SOURCE: Federal Home Loan Bank Board.

In 1978 and 1979, thrifts were offering mortgages in the 9 percent to 10 percent range, while paying as much as 15 percent on their short-term, market-rate liabilities. Consequently, from 1980 through 1982, thrifts suffered severe losses (see chart 2).

As high interest rates battered thrifts' earnings, and as uncertainty grew over when interest rates would decline, some thrifts switched from low-yield, residential mortgage assets to higher yielding, but riskier, commercial mortgage assets. This strategy adds high-yielding assets at a rapid pace by purchasing high-cost wholesale or brokered deposits. Many insolvent or near-insolvent thrifts viewed this as a necessary tactic for near-term survival.

Riskier assets often indeed provided these thrifts with high returns, but also contributed to large losses when market conditions became unfavorable. An insolvent thrift, or a thrift approaching insolvency, has the incentive to take chances to improve its position because FSLIC deposit insurance creates a "heads I win, tails the FSLIC loses" situation. If its strategy is successful, a risk-taking thrift and its stockholders profit enormously. But, if unsuccessful, the FSLIC shields depositors and bears much of the loss. This situation faces some thrifts today.[5]

Chart 2 Return on Assets for FSLIC-insured Savings and Loan Associations



SOURCE: Federal Home Loan Bank Board.

Deregulating Thrifts in the 1980s

As the financial health of the thrift industry deteriorated, Congress enacted the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) in 1980 and passed the Depository Institutions Act of 1982, popularly known as the Garn-St Germain Act.[6] Following DIDMCA and Garn-St Germain, many states granted *state*-chartered thrifts similar or broader asset powers.

Under DIDMCA and Garn-St Germain, federally chartered thrifts can invest up to 30 percent of their total assets in nonmortgage loans, including consumer loans, commercial paper, and corporate securities. Federally chartered thrifts also are empowered to offer up to 10 percent of their assets in non-real-estate commercial loans.

In 1982, federal regulators liberalized the adjustable rate mortgage (ARM), giving thrifts wider discretion over ARMs' terms and conditions. ARMs enabled thrifts to shorten the maturities of their mortgage portfolios, making mortgage portfolios more responsive to changing interest rates.

A major consequence of the 1980 deregulation acts is that the susceptibility of thrifts to fund-shifting caused by high interest rates was virtually eliminated. As a result of being permitted to offer money market deposit accounts (MMDA) and Super Nows, thrifts can now compete effectively for retail deposits.

Immunizing Thrifts' Balance Sheets

Although deregulation eliminated the fund-shifting problem and improved the sensitivity of thrifts' earnings to interest-rate changes, thrifts today still remain vulnerable to rising interest rates. Deregulation, however, has provided many of the requisite tools for thrifts to *immunize* their balance sheets, thus protecting themselves from interest-rate fluctuations.

A balance sheet is immunized if a percentage change in interest rates affects the market value of assets and the market value of liabilities by correspondingly exact amounts. Portfolio immunization relies on the concept of *duration.* A balance sheet is immunized if the duration of assets exactly equals the duration of liabilities. The duration of assets or liabilities is the weighted average maturity of cash flows from assets or payments to depositors associated with those assets or liabilities. If the duration of an asset or a liability is short, then a small change in interest rates will have a negligible impact on the prepayment of mortgages or on when depositors are paid.

The current problem faced by thrifts is that, despite deregulation and portfolio adjustment, their liability duration is still shorter than their asset duration; if interest rates rise, they could pay out money faster than they earn it. Ironically, deregulation initially aggravated thrifts' duration mismatch because the rapid growth of MMDAs, a liability of extremely short duration, came mainly at the expense of savings deposits and small CDs. This affected commercial banks as well.

Currently, thrifts' duration mismatch between assets and liabilities is narrower because they have altered the composition of their assets in several ways. During the past five years, residential mortgage assets as a percentage of thrifts' total assets has declined from over 77 percent to approximately 61 percent today. (The fixed-rate mortgage loan has the longest duration of all the assets in thrifts' asset portfolios.) In fact, the position of portfolio-held residential mortgage *loans* as a percentage of total assets has fallen from almost 73 percent in 1980 to just above 50 percent, as of 1985's third quarter. This retreat from mortgage markets by thrifts as direct lenders is being partially offset by a steady rise in their net purchases of mortgage-backed securities.

Since 1980, thrifts have gradually added consumer and commercial loans to their asset portfolios, increasing to 5.2 percent of total assets in the third quarter of 1985 from 2.7 percent as of year-end 1980. (These assets typically have considerably shorter durations than fixed-rate mortgage loans.) Commercial mortgage loans moreover have grown even more rapidly since 1980, rising from approximately 7 percent to 12 percent as of 1985's third quarter.

The acquisition of commercial loans by FSLIC-insured institutions has slowed considerably in recent months, owing to strong mortgage credit demand and possibly to more stringent regulations that require thrifts to hold reserve balances against poorly performing commercial loans.

Until recently, the thrift industry was actively marketing ARMs instead of fixed-rate mortgage loans. Indeed, the ARM share of new total loan originations grew rapidly in late 1983, peaking at 68 percent in August 1984. According to FHLBB estimates, ARMs presently account for about one-third of the current value of all mortgage loans held by thrifts.

Fixed-rate mortgage rates have declined substantially since mid-1985. Borrowers are demanding more fixed-rate financing of new mortgages, and are refinancing existing mortgages that have high fixed or adjustable rates. Consequently, ARMs today constitute less than one-third of all new loans.

Mortgage banking techniques are becoming an ever-growing part of the thrift business. Mortgage banking involves making mortgage loans that are sold in secondary mortgage markets to agencies such as the Federal Home Loan Mortgage Corporation. Thrifts are selling both new loans and seasoned loans—i.e., loans that are currently held in their mortgage portfolios. In the face of strong fixed-rate financing demands, some thrifts are avoiding a larger asset duration by selling their fixed-rate loans in secondary mortgage markets while retaining ARMs in their portfolios.

Financial futures contracts also are becoming more popular among thrifts as a method to protect themselves. The FHLBB broadened the ability of thrifts to use financial futures in 1981, when it eased regulations governing their use by thrifts. A financial futures or a forward contract permits thrifts to hedge interest-rate risk, particularly if they retain fixed-rate assets in their portfolios.

The Capital Adequacy Problem

Since 1983, interest rates have declined, and thrift industry profits have steadily improved. As chart 1 shows, the cost of funds to the thrift industry has fallen sharply since 1981, while the yield on mortgage portfolios has grown through 1983. After 1983, since thrifts still are liability-sensitive, their cost of funds has fallen more rapidly than the decline in their average portfolio yield.

In the third quarter of 1985, net *operating* income, which includes interest income and income from loan origination and services after deducting the cost of funds, doubled from the first half results because of even lower interest rate declines. *Non-operating* income, which results from the sale of assets, has provided thrifts with a major source of income since 1983 (see chart 2). Thus, asset sales provide a means to bolster current earnings or to minimize current losses, but do not provide a viable, long-run strategy to generate earnings because the most attractive assets are the ones sold in the market.

Thrifts' earnings losses, which were attributed to high interest rates, have

4. Capital losses occurred when market rates rose above the current mortgage yields on the loans sold. A disparity between contractual and market interest rates reduces the price of existing mortgage assets (this effect is analogous to the way in which rising market interest rates affect existing bond prices).

5. In 1985, the FHLBB implemented a program to control the quantity and quality of direct investments, constraining thrifts' capacity to assume an equity stake in certain real estate and other investments. There is disagreement over whether direct investments have been an important cause of thrift failures, or whether they actually have strengthened thrifts' financial condition. In another 1985 FHLBB proposal, the growth of thrifts' liabilities was tied to capital growth.

6. See, "Leveling the Playing Field — A review of the DIDMCA of 1980 and the Garn-St Germain Act of 1982," *Readings in Economics and Finance,* the Federal Reserve Bank of Chicago, December 1983, pp. 34-39.