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Report to the Chairman, Subcommittee on Commerce, Consumer, and Monetary Affairs, Committee on Government Operations, House of Representatives

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THRIFT INDUSTRY

The Role of Federal Home Loan Bank Advances

GAO

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The Honorable Doug Barnard, Jr.
Chairman, Subcommittee on Commerce,
Consumer, and Monetary Affairs
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

In letters dated January 11, 1988, and March 23, 1988, you asked us to analyze certain aspects of the Federal Home Loan Banks' (FHLBanks) advances program. As you know, the 12 district FHLBanks make collateralized loans, called advances, to member thrift institutions.

This report examines the role of advances in funding the operations of thrifts insured by the Federal Savings and Loan Insurance Corporation (FSLIC). We first examine differences in asset portfolio composition among different thrift categories. These categories are based on thrifts' relative reliance on advances as a funding source. We then relate asset growth and advances growth, as well as differences in the reliance on advances, for impaired thrifts[1] compared to healthy thrifts. We also consider the use of advances by thrifts that failed between 1984 and 1987, and in thrift acquisitions that occurred over that period.

Results in Brief

In addressing the four areas outlined above, we found the following:

- The only consistent relationship between the use of advances as a funding source and asset portfolio composition was that increased use of advances was associated with a decline in the holding of liquid assets as a share of total assets. This result is based on comparisons at both the FHLBank district level and for the industry as a whole.
- Insolvent thrifts relied on advances more than solvent thrifts did. We found that weak and insolvent thrifts in nearly every FHLBank district obtained a greater portion of their total liabilities from advances than did their healthy counterparts.
- On average, thrifts that failed in the mid-eighties increased their reliance on advances both as they approached insolvency and after they

[1]We define thrifts' net worth according to Generally Accepted Accounting Principles (GAAP). An impaired thrift is one operating with negative GAAP net worth, or with GAAP net worth between 0 and 3 percent of assets and negative net income in 1987. Thrifts not meeting any of these criteria are classified as healthy.

became insolvent. These thrifts also experienced rapid asset growth as their net worth deteriorated.

- For mergers and acquisitions taking place between 1984 and 1987, no meaningful change occurred in the use of advances by acquiring thrifts in the quarter of acquisition.

Background

The Federal Home Loan Bank Act of 1932 established the Federal Home Loan Bank System (FHLBS) and authorized the establishment of the 12 district FHLBanks. The act authorized these FHLBanks to make advances to member thrifts.

Advances were originally intended to be a source of funds during periods when the demand for mortgage loans exceeded a thrift's supply of funds, or during periods of limited liquidity. Legislative and regulatory actions in the early 1980s produced numerous changes in the types of assets in which thrifts could invest, as well as in the rules governing advances. In December 1982, the Federal Home Loan Bank Board (Bank Board) liberalized existing restrictions to permit advances for any sound business purpose in which the member thrift is authorized to engage. Each FHLBank sets its own policies concerning advances, subject to Bank Board guidelines. Appendix I provides an overview of the legislative and regulatory requirements concerning advances. The recent changes introduced by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) are briefly discussed at the end of this letter and in appendix I.

Objectives, Scope, and Methodology

This is the second study of the FHLBanks' Advances program we have done at your request. The previous report provided data on the growth in outstanding advances since 1977, and on differences among the FHLBanks in lending volume and pricing.[2]

This report answers the following questions outlined in the request letters:

- Do the asset portfolios of thrifts that rely heavily on advances differ from the portfolios of thrifts that use few or no advances? (Note: Money is fungible, that is, it cannot be traced from a particular liability to investment in a particular asset. Therefore, we cannot attribute the borrowing of advances to any particular investment or type of investment.)

[2] Federal Home Loan Bank Board Advances Program (GAO/GGD-88-46BR Mar. 1988).

- How have the sources of funds differed for impaired thrifts compared with healthy thrifts? How have growth rates for assets and advances differed?
- To what extent have advances been used to fund the portfolios of thrifts that recently failed? In particular,

  a. For thrifts that FSLIC provided with substantial cash assistance, liquidated, or assisted in the acquisition of, between 1984 and 1987,

    i. To what extent were advances used before insolvency?

    ii. How did asset and liability portfolios differ on the basis of the relative use of advances?

    iii. How do these answers change for the period in which the thrifts operated with negative net worth?

  b. What was the role of advances in funding the thrifts that became the 10 largest assistance cases for FSLIC in the period 1984 to 1987?

- To what extent have advances been used by thrifts that acquired other thrifts between 1984 and 1987?

To address these questions, we analyzed financial data on all FSLIC-insured thrifts. For every question, the thrifts examined are the universe of thrifts satisfying the criteria for consideration. For most of the analyses, we consider the period 1984 through 1987. December 1987 data were the most recent data available when the analyses were started. We chose 1984 because it was the year before the Bank Board implemented restrictions on liability growth and direct investments.

We addressed several of the questions by sorting thrifts into three groups, on the basis of how much they relied on advances as a funding source: non-users had no outstanding advances at the end of the relevant quarter, light users had advances less than or equal to 10 percent of assets, and heavy users had advances outstanding in excess of 10 percent of assets. A thrift may change groups from one quarter to the next, depending upon whether they repay outstanding advances, borrow new advances, or change their total assets.

We obtained data from the Bank Board, FSLIC, and the quarterly financial statements that all FSLIC-insured thrifts are required to file with the

Bank Board (Federal Home Loan Bank Board Thrift Financial Reports).[3] The Bank Board and FSLIC provided data on thrifts in the Management Consignment Program (MCP),[4] failed thrifts, and thrift acquisitions. We reviewed these data for errors or inconsistencies. We did not, however, independently verify the completeness of that data nor the accuracy of the quarterly financial statements (call reports). Our work, done between July 1988 and August 1989, was done in accordance with generally accepted government auditing standards.

Principal Findings

In the following section, we have summarized our principal findings. Additional detail on each finding is presented in the appendixes.

Portfolio Selection

In appendix II, we address the portfolio selection of thrifts based on their use of advances. To answer the question of whether the asset portfolios of thrifts that rely heavily on advances differ from the portfolios of thrifts that use few or no advances, we placed all thrifts into one of the three groups — non-users, light users, or heavy users of advances. We then sorted each thrift's earning assets into one of five categories: mortgage assets (residential and commercial); non-mortgage real estate assets (direct investments in real estate, construction loans, and development loans); non-real estate loans (commercial and consumer loans); liquid assets (cash and U.S. Treasury securities); and equity and investment securities. The categories were defined to identify mortgage loans and the general categories of non-mortgage investments available to thrifts.

[3] Due to insufficient data when this report was prepared, we did not include FHLBS-member savings banks insured by the Federal Deposit Insurance Corporation. Information on the advances received by these institutions is presented in appendix VI.

[4] FSLIC began the MCP in April 1985 "to provide a means for stemming the losses of some of the most severely troubled thrifts. Under the program, an institution's management and its board of directors resign and are replaced by new management and directors with new managers chosen by FSLIC, usually through a contract with another, healthier thrift." The Management Consignment Program (GAO/GGD-87-115BR Sept. 1987) p. 1.

Table 1: Average Asset Mix, by Advances User Group and for All FSLIC-Insured Thrifts (December 31, 1987)

Asset category	Non-users	Light users	Heavy users	All
Mortgage loans	66.5	66.1	66.6	66.4
Non-mortgage real estate	5.4	6.3	8.3	7.1
Non-real estate	4.7	6.5	6.6	6.4
Liquid assets	7.5	5.4	4.7	5.3
Equity and investment securities	12.6	10.5	8.7	9.9

Note: All shares are expressed in percentage terms. Columns do not add to 100 percent because the asset categories listed are not exhaustive. Excluded assets primarily include nonearning assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

As shown in table 1, mortgages constituted two-thirds of total assets for each of the three user groups in December 1987. Small differences existed for the other categories of assets. Holdings of non-mortgage real estate assets and non-real estate loans increased with advances use, while holdings of liquid assets and equity and investment securities declined as advances use increased. The results reported in the table, however, reflect regional, macroeconomic,[5] and regulatory conditions at the time. In December 1984, for example, the differences in asset portfolios across the user groups were smaller and less uniform than those reported above.

Reliance on advances varied widely across FHLBank districts. Advances funding at the end of 1987 ranged from an average of 5 percent of liabilities for thrifts in the Chicago district to an average of 17 percent in the Seattle district. Differences also existed in the asset mix of thrifts across districts. However, these differences in the asset portfolios of thrifts across districts did not show any consistent relationship to advances use.

Impaired Versus Healthy Thrifts

In appendix III, we compare impaired and healthy thrifts. For thrifts defined as operating in an impaired condition at the end of 1987, we found that total assets grew 18 percent from 1984 to 1987; advances grew 44 percent over the same period. However, both asset and advances growth were less than those for healthy thrifts over this same period (42 percent and 84 percent, respectively). Despite the larger growth rates for healthy thrifts, impaired thrifts overall obtained a slightly greater percentage of their liabilities from advances than did healthy thrifts at the end of 1987.

[5]Macroeconomic conditions are the various factors making up the overall state of the national economy, such as the level of unemployment and the level of inflation.

Failed Thrifts

In appendix IV, we examine the use of advances by thrifts that required cash expenditures by FSLIC between 1984 and 1987 (that is, failed thrifts or certain thrifts placed in receivership). We also examined a subset of these failed thrifts in more detail i.e., the 10 most costly failures handled by FSLIC between 1984 and 1987.

For the 155 thrifts that failed between 1984 and 1987, we found that total assets grew 51 percent over the 2 years before insolvency, while advances grew 84 percent over the 2 years. At the time of regulatory action by FSLIC, 24 percent of the thrifts held no advances, 30 percent were light users, and 46 percent were heavy users of advances.

We also examined changes in the portfolio mix of these thrifts. On average, mortgage assets declined and non-mortgage real estate loans increased as shares of total assets over the 2-year period preceding insolvency. However, this portfolio shift was more pronounced for non-users of advances than for thrifts that relied on advances.

For the 10 most costly cases handled by FSLIC between 1984 and 1987, assets grew 503 percent for the group over the 4 years preceding the year in which FSLIC took action. While varying somewhat from year to year, advances constituted 10 percent of the group's liabilities both 5 years before and the year before FSLIC's action. The asset growth of these institutions over the same period was funded primarily by deposits, although there was a substitution of brokered deposits[6] for other deposits.

Mergers and Acquisitions

In appendix V, we address the use of advances in funding thrift mergers and acquisitions. For mergers and acquisitions taking place between 1984 and 1987, no meaningful change occurred in the use of advances by acquiring thrifts in the quarter of acquisition.

Recent Legislation

On August 9, 1989, President Bush signed into law the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA). This legislation provides funding for closing hundreds of insolvent thrifts and it drastically changes the regulatory structure of the thrift industry. The Bank Board was replaced by the Office of Thrift Supervision (OTS). OTS, under the oversight of the Secretary of the Treasury, is responsible for the

[6]Brokered deposits are deposits placed in a thrift by brokers, dealers, or agents on the account of others.

regulation and supervision of both federally chartered and state-chartered thrifts. FSLIC was also abolished, with its functions taken over by FDIC. A new insurance fund for thrifts, the Savings Association Insurance Fund (SAIF), was created and placed under the direction of FDIC.

Authority over the FHLBanks was assigned to the newly created Federal Housing Finance Board (Finance Board). The Finance Board is an independent executive branch agency led by a five-person board. This board consists of the Secretary of Housing and Urban Development and four presidential appointees who will serve staggered 7-year terms. The Finance Board was charged with overseeing the FHLBanks. Their authority includes establishing regulations concerning advances. FIRREA modified eligibility and collateral requirements concerning advances, including allowing advances to commercial banks and credit unions that meet certain criteria. These are discussed further in appendix I.

Agency Comments

A draft copy of this report was submitted to Bank Board officials. Noting that the report presents factual information, an official informally said the Bank Board would have no comments.

As arranged with the Subcommittee, unless you publicly announce the contents of the report earlier, we plan no further distribution until 30 days after the report date. At that time, we will send copies to OTS, the Finance Board, and interested congressional committees. We will make copies available to others upon request.

Major contributors to this report are listed in appendix VII. If you have any questions concerning this matter, please call me at 275-8678.

Sincerely yours,

Craig A. Simmons

Craig A. Simmons
Director, Financial Institutions
and Markets Issues

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Appendix VII Major Contributors to This Report

Tables

Abbreviations

FDIC	Federal Deposit Insurance Corporation
FHLBank	Federal Home Loan Bank
FHLBS	Federal Home Loan Bank System
FIRREA	Financial Institutions Reform, Recovery, and Enforcement Act
FSLIC	Federal Savings and Loan Insurance Corporation
GAAP	Generally Accepted Accounting Principles
MCP	Management Consignment Program
OTS	Office of Thrift Supervision
QTL	Qualified Thrift Lender
SAIF	Savings Association Insurance Fund

Legislative and Regulatory Background

The Depository Institutions Deregulation and Monetary Control Act of 1980, along with the Garn-St Germain Depository Institutions Act of 1982, significantly broadened the asset powers of federally chartered thrift institutions insured by the Federal Savings and Loan Insurance Corporation (FSLIC). At about the same time, legislation at the state level granted similar expanded powers to many state-chartered thrifts (and, in some cases, granted powers beyond those granted to federally chartered thrifts).

In addition to restrictions on asset powers before this deregulation, thrifts were restricted in their use of advances. This appendix reviews the legislative and regulatory structure of the advances program. We identify Garn-St Germain changes and later changes to Bank Board regulations concerning advances. At the end of the appendix, we briefly review some of the changes in advances policy introduced by the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA).

While the Bank Board sets policy guidelines for the advances programs of the district banks, each Federal Home Loan Bank (FHLBank) has latitude in how it implements these guidelines. As a result, differences in the use of advances across districts may arise partly because of differences in such things as the interest rates charged and collateral requirements set by the individual FHLBanks. They may also arise because of differences in the degree to which FHLBanks "market" advances to member institutions. Many of our results show significant differences in the use of advances across FHLBank districts. These differences then, may arise partly because of differences in advances policies at the various district banks.

Origin

The Federal Home Loan Bank Act of 1932 established the Federal Home Loan Bank System (FHLBS) and authorized the establishment of the 12 district FHLBanks. The act authorized the FHLBanks to make loans, called advances, to member institutions. Advances originally were meant to be a source of funds during periods when the demand for mortgage loans exceeded a thrift's supply of funds, or during periods of limited liquidity.

Eligibility

All FHLBS members are required to hold stock in their district FHLBank equal to 1 percent of their outstanding mortgages at the end of the previous year. Garn-St Germain permits thrifts to borrow advances up to 20 times their equity investment in their FHLBank; previously, the limit was 12 times. A thrift wishing to borrow advances over this limit must purchase additional stock in its FHLBank so as to maintain the 20:1 advances-to-stock ratio. Furthermore, a thrift failing to meet the Qualified Thrift Lender (QTL) test faces stronger limits on the amount of advances it may borrow.[1]

Uses

Before Garn-St Germain, thrifts could use advances to make residential mortgage loans, meet deposit withdrawals, or satisfy seasonal requirements for funds. Regulations discouraged granting advances for exploiting interest rate differentials, purchasing securities, or increasing cash holdings.

Coincident with the broadened asset powers of the thrifts and the Garn-St Germain changes in the collateral requirements associated with advances, the Bank Board changed federal regulations concerning the use of advances in December 1982. It now permits advances to be made to creditworthy thrifts for

> "any sound business purpose in which members are authorized to engage. Such purposes include, but are not limited to, making residential mortgage, consumer, and commercial loans, covering savings withdrawals, accommodating seasonal cash needs, restructuring liabilities, and maintaining adequate liquidity."[2]

Sources of Funds for Advances

The FHLBanks' sources of funds for making advances are the consolidated obligations issued jointly by the 12 district banks, the equity contribution of member thrifts, and member thrift deposits. Consolidated obligations are debt instruments used to acquire funds in the capital markets. The cost is less than the cost of funds for an individual thrift in the same markets given the well-capitalized position of the FHLBanks and the tax-exempt status of consolidated obligations at the state and local levels. Additionally, because the FHLBanks are agencies of the federal government, an implicit government backing to these securities may be perceived although none exists. Maturities on these issues range from less

[1] The QTL test requires a thrift to maintain at least 60 percent of its asset portfolio in qualifying assets. These assets include residential real estate, certain business property and liquid assets (see 12 CFR 525). A thrift failing this test is eligible for advances not to exceed an amount that is the product of 1) the total amount such a member would be eligible to receive without reference to the qualified thrift lender test, and 2) the percentage of qualifying assets actually held. The QTL was redefined by FIRREA (see the discussion at the end of this appendix).

[2] See 12 CFR 531.1(c).

than 1 year to 20 years with interest paid semiannually at rates somewhat higher than those offered on U.S. Treasury debt of like maturity. In July 1988, the Bank Board authorized the FHLBanks to buy and sell participation interests[3] in each others' advances.

Pricing

While the cost of new funds is the same across districts, each FHLBank sets its own prices on advances, within limits. Bank Board regulations establish those limits as a markup range over the expected cost of new funds.

Advances with maturities (that is, time from the date the loan is made to repayment) between 6 months and 1 year may be priced between 20 and 120 basis points above the expected cost of funds (a basis point is one-hundredth of a percentage point). This maximum markup declines as the maturity of the advance increases. For maturities greater than 10 years, the maximum markup is 60 basis points. For short-term advances (less than 6 months), there are no restrictions on the markup used. The interest rate charged on advances of certain maturities may be fixed or variable.

Non-Price Terms

Beyond setting the rate charged on advances, each FHLBank also sets other terms when granting an advance. While any thrift is charged the same price within a given district, these non-price terms may vary from case to case. Two of these, collateral requirements and prepayment penalties, are discussed in the following section.

Collateral

Garn-St Germain authorized the Bank Board to broaden the categories of assets acceptable as collateral on an advance.[4] Bank Board regulations define eligible collateral as any authorized investment for the member thrift that falls within one of the following categories:

- First mortgages on improved residential property;
- U.S. Treasury or agency securities;
- Deposits at an FHLBank; and

[3]Loan participations are loans made cooperatively by more than one lender.

[4]Garn-St Germain amended 12 USC 1430. The Bank Board issued final rules on eligible collateral on August 29, 1984 (see 12 CFR 525.7).

- Property acceptable to the FHLBank, provided that the property may be appraised easily and accurately and a security interest can be perfected in such property.

In making an advance, each FHLBank sets the collateral requirements. This includes determining the amount of collateral required, whether specific collateral is acceptable, the frequency with which the collateral must be repriced, and whether the collateral must be delivered.

Prepayment Fees

Early repayment of advances is permitted, but each FHLBank may establish prepayment fees. District banks are free to set prepayment fees on advances with maturities of 6 months or less or which are repriced at least every 6 months. On all other advances, prepayment fees are between 90 and 110 percent of the present value of the lost cash flow to the FHLBank. This present value calculation is based upon the difference between the contract interest rate on the advance being repaid and the interest rate on new advances of the same remaining maturity.

Guaranteed Advances

In February 1983, the Bank Board established a program whereby advances may be secured by a FSLIC guarantee. Since the FSLIC guarantee replaced the required collateral, the program enhanced the ability of thrifts with inadequate collateral to obtain advances.

As of July 1988, 41 thrifts had outstanding guaranteed advances totaling $2.7 billion, accounting for approximately 2 percent of total advances outstanding. As illustrated in table I.1, the Dallas district accounts for the largest share of guaranteed advances (63 percent). Of the 41 institutions with guaranteed advances, 21 thrifts were in the Management Consignment Program (MCP), collecting $1.8 billion in guaranteed advances. Another five institutions were in the process of being liquidated, with a total of $366.8 million in guaranteed advances.

Table I.1: Outstanding Guaranteed Advances July 1, 1988

Dollars in millions

	Total		MCP thrifts		Liquidating receiverships	
District	**Number**	**Guaranteed advances**	**Number**	**Guaranteed advances**	**Number**	**Guaranteed advances**
Boston	0	$0.0	0	$0.0	0	$0.0
New York	1	110.0	0	0.0	0	0.0
Pittsburgh	0	0.0	0	0.0	0	0.0
Atlanta	8	406.7	3	243.1	0	0.0
Cincinnati	0	0.0	0	0.0	0	0.0
Indianapolis	1	18.9	1	18.9	0	0.0
Chicago	1	4.7	1	4.7	0	0.0
Des Moines	2	27.4	0	0.0	1	26.4
Dallas	12	1,690.1	8	1,311.6	1	260.0
Topeka	4	20.3	1	7.0	1	2.0
San Francisco	8	212.1	6	107.1	0	0.0
Seattle	4	192.4	1	101.8	2	78.4
Total	**41**	**$2,682.6[a]**	**21**	**$1,794.3**	**5**	**$366.8**

[a]FSLIC has purchased $240 million of the guaranteed advances to the Dallas district and $1 million of the guaranteed advances to the Topeka district.

Note: Columns may not add due to rounding. The difference between the total columns and the MCP and liquidating receivership columns are the non-MCP thrifts operating as of the reporting date with outstanding guaranteed advances.

Source: July 8, 1988, Guaranteed Advances memorandum prepared by the Financial Assistance Division, FSLIC.

Recent Legislation

On August 9, 1989, President Bush signed into law the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA). This legislation provides funding for closing hundreds of insolvent thrifts and it drastically changes the regulatory structure of the thrift industry. The Bank Board was replaced by the Office of Thrift Supervision (OTS). OTS, under the oversight of the Secretary of the Treasury, is responsible for the regulation and supervision of both federally chartered and state-chartered thrifts. FSLIC was also abolished, with its functions taken over by the Federal Deposit Insurance Corporation (FDIC). A new insurance fund for thrifts, the Savings Association Insurance Fund (SAIF), was created and placed under the direction of FDIC.

Authority over the FHLBanks was assigned to the newly created Federal Housing Finance Board (Finance Board). The Finance Board is an independent executive branch agency led by a five-person board. This board consists of the Secretary of Housing and Urban Development and four presidential appointees who will serve staggered 7-year terms. The Finance Board was charged with overseeing the FHLBanks. Their authority includes establishing regulations concerning advances. FIRREA modified collateral and eligibility requirements concerning advances, including several discussed earlier in this appendix.

Section 714 of FIRREA narrows the definition of eligible collateral to whole first mortgages (or securities representing a whole interest in such mortgages), government and agency securities, deposits at an FHLBank, and other real estate acceptable to the FHLBank. The amount of advances secured by this last category may not exceed 30 percent of a thrift's capital. Other non-real estate related assets will no longer be accepted as collateral.

Section 714 also changes rules governing the use of advances. It restricts the use of long-term advances to providing funds for residential housing. It provides for a special category of short-term liquidity advances to weak but solvent thrifts.

Eligibility rules for advances were changed in several ways. First, a new Qualified Thrift Lender (QTL) test, effective July 1, 1991, limits the amount of assets considered "qualifying" and increases the amount of investment in housing finance and related activities required to meet the QTL test. Failure to meet the QTL test will result in a number of restrictions being placed on the activities of the thrift, including a prohibition on taking any new advances. A thrift failing to meet the QTL test may also be required to become a bank.

Second, eligibility for advances was extended to commercial banks and credit unions. Such institutions may apply for FHLBank membership if they hold 10 percent or more of their assets in residential mortgage loans. Conditions for membership include a minimum stock investment in their FHLBank, limitations on the amount of advances they may borrow, and restrictions on the use of advances to housing finance only.

Investment Activities of Borrowers and Non-Borrowers of Advances

As discussed in appendix I, federal and state legislation in the late 1970s and early 1980s expanded the asset powers of both federally chartered and state-chartered thrifts beyond traditional real estate lending. In light of these expanded powers, we were asked to determine whether thrifts were using advances to fund entry into these new areas. The question cannot be answered directly because data are not available and, in any case, money is fungible. However, we can determine whether the asset portfolios of thrifts that rely heavily on advances differ from the portfolios of those that use few or no advances. In this way, we indirectly relate the use of advances to investment in particular activities.

Our results for the end of 1987 showed no relationship between the percentage of mortgage assets that thrifts held and their use of advances. At the industry level, small differences did exist for other categories of assets. Holdings of non-mortgage real estate assets and non-real estate loans were positively associated with advances use, while liquid assets and equity and investment securities were negatively associated with their use. In December 1984, however, the only consistent associations were the negative relationships between advances use and holdings of liquid assets and holdings of equity and investment securities. At the FHLBank district level, the only consistent relationship found in both years was that between advances and liquid assets.

In some cases, the asset mix of thrifts in individual districts varied considerably from the industry averages. However, no consistent relationships were apparent between these differences and advances use. For example, at the end of 1987, thrifts in the Dallas FHLBank district, regardless of advances use, held far fewer mortgages and far more non-mortgage real estate assets than did thrifts in other districts. An analysis of these inter-district differences in asset mix and the cause of those differences is beyond the scope of this report. The differences are important to note, however, because they reflect a lack of homogeneity in the composition of assets of thrifts across the different districts.

Overall, the only consistent relationship we found between advances use and asset mix, at the district level and overall, was that holdings of liquid assets declined with increasing reliance on advances. Since advances are an alternative source of liquidity for thrifts, this result is expected. Furthermore, since both asset mix and advances use are affected by regional, macroeconomic, and regulatory conditions, the relationships reported here may not be stable over time.

Methodology

In order to compare asset portfolios with advances use, we divided thrifts into three groups on the basis of their relative use of advances in funding their asset portfolios. We then compared the asset distribution of these three groups across five asset categories.

The five asset categories used accounted for 95 percent of industry assets at the end of 1987.[1] The categories were defined to identify mortgage loans and the general categories of non-mortgage investments available to thrifts. These categories are defined as

- Mortgage Loans: all mortgages, residential and non-residential, including pass-through, mortgage-backed securities;
- Non-Mortgage Real Estate: all construction loans acquisition and development loans, and direct investment in property;[2]
- Non-Real Estate Loans: all commercial and consumer loans;
- Liquid Assets: all cash and U.S. government and agency securities; and
- Equity and Investment Securities: all equity securities, direct investments in service corporations and subsidiaries, and all other investment securities including corporate debt and promissory notes issued by FSLIC.

At the end of 1987, 40 percent of FSLIC-insured thrifts had no outstanding advances. At the same time, advances funded more than 9 percent of total industry assets. We therefore defined three categories of advances users:

- Non-users: thrifts that had no outstanding advances at the end of the quarter examined;
- Light Users: thrifts whose outstanding advances were between 0 and 10 percent of their total assets; and
- Heavy Users: thrifts with outstanding advances of over 10 percent of their total assets.

For each of these three user groups, we measured the weighted average share of assets invested in each of the five categories. As requested, these calculations were made at both the FHLBank district and industry

[1] Excluded items include non-earning assets such as premises, furniture, and repossessed assets, as well as valuation allowances and hedging instruments.

[2] Non-real estate related direct investments include equity investments in service corporations/subsidiaries. These investments are included in the category investment securities. Citing the costly resolution of failed thrifts with significant amounts of such investments, FSLIC limited the direct investments of thrifts to 10 percent of assets in 1985 (subject to certain exemptions and grandfathering clauses).

levels. Thus, for each user group in each district, we calculated the weighted average share of assets invested in each category.[3]

We considered two time periods: December 1984 and December 1987. The earlier date was chosen because it immediately preceded the implementation of Bank Board restrictions on liability growth and direct investments. The latter date provided the most recent data available when we started the analysis.

Table II.1 shows the number of thrifts in each user category, by district and for the industry, in these two periods. At the end of 1984, 45 percent of all thrifts had no outstanding advances. This figure declined to 40 percent by the end of 1987. At the same time, the percentage of light users declined slightly to 40 percent of all thrifts. The percentage of thrifts classified as heavy users rose from 13 percent at the end of 1984 to 21 percent at the end of 1987.

Across FHLBank districts, the use of advances varied widely. For example, at the end of 1987, the percentage of heavy users in a district ranged from 9 percent in Cincinnati to 44 percent in Seattle.

Table II.1: Number of Thrifts by District and by Degree of Use of Advances

	December 31, 1984					
	Non-users		Light users		Heavy users	
District	Number	Percent	Number	Percent	Number	Percent
Boston	19	19.2	55	55.6	25	25.3
Pittsburgh	109	54.2	80	39.8	12	6.0
New York	132	55.2	87	36.4	20	8.4
Atlanta	224	43.5	237	46.0	54	10.5
Cincinnati	190	53.7	143	40.4	21	5.9
Indianapolis	94	55.3	59	34.7	17	10.0
Chicago	205	57.6	130	36.5	21	5.9
Des Moines	73	37.2	88	44.9	35	17.9
Dallas	221	45.6	205	42.3	59	12.2
Topeka	39	22.0	93	52.5	45	25.4
San Francisco	86	39.8	92	42.6	38	17.6
Seattle	24	18.9	49	38.6	54	42.5
Industy	1,416	45.2	1,318	42.0	401	12.8

(continued)

[3]All averages reported are weighted means where total assets are used as the weighting factor.

District	December 31, 1987					
	Non-users		Light users		Heavy users	
	Number	Percent	Number	Percent	Number	Percent
Boston	21	21.7	39	40.2	37	38.1
New York	102	43.6	91	38.9	41	17.5
Pittsburgh	95	49.7	70	36.7	26	13.6
Atlanta	224	36.9	260	42.8	123	20.3
Cincinnati	191	54.0	131	37.0	32	9.0
Indianapolis	77	47.2	67	41.1	19	11.7
Chicago	165	48.7	138	40.7	36	10.6
Des Moines	71	38.4	72	38.9	42	22.7
Dallas	142	29.7	193	40.3	144	30.1
Topeka	44	26.4	52	31.1	71	42.5
San Francisco	94	42.2	89	39.9	40	17.9
Seattle	21	19.4	40	37.0	47	43.5
Industry	1,247	39.6	1,242	39.5	658	20.9

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Asset Categories

Table II.2 reports the average asset mix for each advances user group at the industry level for 1984 and 1987. We have summarized the results in the following section. Data broken down by FHLBank district are reported on tables II.3 through II.7. As noted, certain user groups in certain districts may vary substantially from industry averages. Because no consistent relationships between asset mix and advances use are detected, these district-level results are not discussed.

Mortgage Loans

At the end of 1987, mortgage loans accounted for 66 percent of total assets in the thrift industry — less than a percentage point decline since 1984 (see table II.2). The decrease was largest for the heavy users, while the non- and light users varied by less than 1 percentage point. In 1987, there was little difference among the three user groups in mortgage-related investments.

Non-Mortgage Real Estate

Non-mortgage real estate loans in the thrift industry accounted for 7.1 percent of industry assets in 1987, down from 9.5 percent in 1984 (see table II.4). Heavy users held the largest share of such assets in 1987 (8.3 percent), followed by light users (6.3 percent), and non-users (5.4 percent).

Non-Real Estate Loans

At the end of 1987, commercial and consumer loans represented slightly more than 6 percent of industry assets, an increase of almost one-third since 1984 (see table II.5). In general, users of advances held more of these loans than non-users, but there was little difference between light and heavy users.

Liquid Assets

Industry holdings of liquid assets at the end of 1987 were 5.3 percent of total assets, a decline of more than half a percentage point since 1984 (see table II.6). Since one purpose of advances is to provide a source of liquidity for thrifts, it is expected that users of advances hold fewer liquid assets than do non-users. We found that non-users held 60 percent more liquid assets than heavy users in 1987. This difference, however, has narrowed substantially since 1984 when non-users held 120 percent more liquid assets than heavy users. Light users remained between these two groups. Since 1984, however, light users and non-users decreased their mean share of liquid assets. Heavy users, on the other hand, increased their holdings from 4.1 percent to 4.7 percent.

Equity and Investment Securities

Industry holdings of equity securities and investment securities rose slightly since 1984, to 9.9 percent of industry assets at the end of 1987 (see table II.7). The increase was largest for non-users, while the holdings of heavy users remained unchanged. As with liquid assets, the non- and light users held more of these securities than did heavy users. Although the assets in this category are riskier than those classified as liquid assets, some are liquid enough to serve as a secondary source of liquidity for thrifts.

Table II.2: Average Asset Mix, by Advances User Group and for All FSLIC-Insured Thrifts

	December 31, 1984			
Asset category	**Non-users**	**Light users**	**Heavy users**	**Industry**
Mortgage loans	65.9	65.7	70.0	67.1
Non-mortgage real estate	7.6	10.0	9.4	9.5
Non-real estate	3.9	5.0	4.4	4.6
Liquid assets	9.1	6.2	4.1	6.0
Securities	10.6	9.7	8.7	9.5
Total	**97.1**	**96.6**	**96.6**	**96.7**

(continued)

Asset category	December 31, 1987 Non-users	Light users	Heavy users	Industry
Mortgage loans	66.5	66.1	66.6	66.4
Non-mortgage real estate	5.4	6.3	8.3	7.1
Non-real estate	4.7	6.5	6.6	6.4
Liquid assets	7.5	5.4	4.7	5.3
Securities	12.6	10.5	8.7	9.9
Total	**96.7**	**94.8**	**94.9**	**95.1**

Note: All shares are in percentage terms. Columns do not add to 100 percent because the asset categories listed are not exhaustive. Excluded assets include non-earning assets, valuation allowances (a contra-asset), and hedging instruments. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table II.3: Average Asset Share of Mortgage Loans

District	Non-users 1984	Non-users 1987	Light users 1984	Light users 1987	Heavy users 1984	Heavy users 1987	All thrifts 1984	All thrifts 1987
Boston	75.9	66.6	65.2	65.0	73.1	64.0	68.3	64.6
New York	66.6	70.1	63.6	59.7	71.6	68.0	65.8	64.5
Pittsburgh	74.0	69.4	73.3	70.5	71.7	58.9	73.2	64.9
Atlanta	67.7	69.2	66.6	63.9	70.0	66.0	67.7	65.4
Cincinnati	70.9	71.9	71.5	71.0	71.9	64.4	71.5	69.7
Indianapolis	70.6	68.9	65.3	68.2	74.4	70.1	69.7	69.6
Chicago	72.1	71.1	69.6	71.2	70.7	69.6	70.4	71.0
Des Moines	73.2	68.1	72.9	70.5	66.0	63.4	70.0	66.8
Dallas	56.0	46.9	45.3	45.2	55.3	51.8	49.6	48.4
Topeka	67.0	63.8	70.0	71.2	69.6	65.8	69.7	67.1
San Francisco	46.5	64.5	69.0	71.6	72.3	72.4	69.6	71.7
Seattle	67.9	69.2	68.6	63.1	69.9	69.5	69.5	68.1
Industry	65.9	66.5	65.7	66.1	70.0	66.6	67.1	66.4

Note: All shares are in percentage terms. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table II.4: Average Asset Share of Non-Mortgage Real Estate

	Non-users		Light users		Heavy users		All thrifts	
District	**1984**	**1987**	**1984**	**1987**	**1984**	**1987**	**1984**	**1987**
Boston	1.7	3.2	3.4	2.8	3.9	11.6	3.5	7.1
New York	1.7	3.0	5.3	4.5	3.0	8.4	4.0	5.7
Pittsburgh	2.5	2.8	4.9	5.9	9.1	9.0	5.2	6.8
Atlanta	9.8	6.4	9.5	8.3	8.4	10.1	9.2	8.9
Cincinnati	2.0	3.2	5.1	3.9	7.8	7.7	4.9	4.6
Indianapolis	1.5	1.3	2.1	2.5	1.8	1.5	1.9	1.7
Chicago	1.4	1.5	3.5	1.9	5.6	5.1	3.1	2.3
Des Moines	2.9	2.6	6.2	2.7	4.4	4.1	5.0	3.4
Dallas	21.5	10.4	31.8	17.3	25.1	19.6	28.3	17.5
Topeka	4.3	1.5	10.4	2.3	15.5	8.1	11.8	6.3
San Francisco	17.5	15.2	8.5	5.5	9.5	6.0	9.3	6.1
Seattle	7.9	4.1	11.3	7.5	9.3	5.0	9.7	5.5
Industry	7.6	5.4	10.0	6.3	9.4	8.3	9.5	7.1

Note: All shares are in percentage terms. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table II.5: Average Asset Share of Non-Real Estate Loans

	Non-users		Light users		Heavy users		All thrifts	
District	**1984**	**1987**	**1984**	**1987**	**1984**	**1987**	**1984**	**1987**
Boston	2.9	4.8	9.5	5.6	5.3	11.6	7.8	8.5
New York	4.4	4.6	7.2	11.6	5.4	6.1	6.1	8.4
Pittsburgh	3.2	5.0	4.6	6.5	2.6	14.5	3.9	9.9
Atlanta	3.3	4.4	4.5	8.1	7.0	9.3	5.0	8.3
Cincinnati	3.5	4.4	3.9	6.0	3.7	7.9	3.8	6.0
Indianapolis	3.5	6.9	6.2	7.4	4.2	5.0	5.0	5.7
Chicago	2.8	3.7	3.8	6.6	4.9	4.8	3.7	5.7
Des Moines	2.3	3.5	3.6	7.0	7.8	10.1	5.3	8.1
Dallas	5.9	7.4	7.2	6.1	6.6	5.6	6.8	6.0
Topeka	3.1	5.4	5.6	6.8	3.7	4.2	4.8	4.9
San Francisco	3.3	2.8	3.9	4.5	2.5	5.1	3.3	4.7
Seattle	6.3	3.3	3.6	3.8	4.7	5.0	4.5	4.7
Industry	3.9	4.7	5.0	6.5	4.4	6.6	4.6	6.4

Note: All shares are in percentage terms. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table II.6: Average Asset Share of Liquid Assets

District	Non-users 1984	Non-users 1987	Light users 1984	Light users 1987	Heavy users 1984	Heavy users 1987	All thrifts 1984	All thrifts 1987
Boston	8.3	9.1	5.9	4.4	4.5	3.9	5.6	4.4
New York	11.7	9.0	5.4	7.9	3.6	2.9	6.7	6.2
Pittsburgh	7.9	7.8	5.3	5.5	3.1	4.3	5.5	5.4
Atlanta	8.5	6.0	6.7	5.5	5.6	4.4	6.7	5.1
Cincinnati	12.5	9.5	6.9	6.4	3.6	4.6	7.5	6.8
Indianapolis	7.7	6.0	4.0	5.0	4.6	6.6	4.9	6.2
Chicago	10.3	9.0	6.4	6.6	4.1	5.2	7.2	6.9
Des Moines	6.4	8.1	5.4	3.5	6.5	6.4	6.0	5.4
Dallas	6.2	5.6	7.1	5.5	3.6	3.4	6.2	4.6
Topeka	10.5	11.1	5.5	6.4	4.1	6.9	5.3	7.0
San Francisco	8.7	5.7	6.1	4.3	3.1	4.8	4.9	4.6
Seattle	6.5	5.0	7.3	8.8	5.1	4.5	5.8	5.4
Industry	9.1	7.5	6.2	5.4	4.1	4.7	6.0	5.3

Note: All shares are in percentage terms. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table II.7: Average Asset Share of Equity and Investment Securities

District	Non-users		Light users		Heavy users		All thrifts	
	1984	1987	1984	1987	1984	1987	1984	1987
Boston	8.1	14.6	13.7	16.0	6.7	7.2	11.1	11.7
New York	11.8	10.6	14.4	10.8	8.8	10.1	12.8	10.5
Pittsburgh	10.1	12.8	8.5	9.7	8.4	7.1	8.9	9.1
Atlanta	9.2	12.0	9.3	10.9	6.8	7.1	8.6	9.3
Cincinnati	7.3	8.4	8.9	8.6	7.5	12.6	8.3	9.5
Indianapolis	11.8	12.8	15.7	11.8	11.4	12.4	13.4	12.3
Chicago	9.5	11.0	9.4	8.7	8.9	8.0	9.4	9.1
Des Moines	11.3	13.3	6.9	11.5	10.8	8.0	9.0	10.0
Dallas	9.0	21.5	9.7	13.1	9.5	9.6	9.5	12.5
Topeka	10.4	12.9	6.2	6.8	6.6	10.6	6.5	9.7
San Francisco	21.6	11.9	8.9	9.9	9.4	7.7	9.6	9.0
Seattle	9.0	13.2	6.0	12.5	6.7	9.1	6.6	10.1
Industry	10.6	12.6	9.7	10.5	8.7	8.7	9.5	9.9

Note: All shares are in percentage terms. Non-users are thrifts with no outstanding advances, light users are thrifts with outstanding advances less than 10 percent of assets, and heavy users are thrifts with outstanding advances in excess of 10 percent of assets.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Liability Composition of Impaired and Healthy Thrifts

We were asked the extent to which advances have been relied upon in recent years by thrifts currently operating in an "impaired" condition. Further, we were asked to relate advances growth in impaired institutions to growth in total assets.

On average, insolvent or thinly capitalized and unprofitable (impaired) thrifts obtained a slightly greater portion of their liabilities from advances than did healthy thrifts at the end of 1987 (10.0 percent and 9.7 percent, respectively). However, the closeness of these averages was driven by two districts, Indianapolis and San Francisco, where impaired thrifts relied on advances as a funding source far less than their healthy counterparts. Impaired thrifts in the other 10 FHLBank districts obtained relatively more of their liabilities from advances than did the healthy thrifts in their districts.

The results also showed that both asset and advances growth in healthy thrifts exceeded growth in impaired thrifts from 1984 to 1987. For the group of impaired thrifts, assets grew at a compound annual rate[1] of 5.6 percent, while advances grew at a compound annual rate of 13.0 percent over this period.

Methodology

In order to provide context for our answers, we expanded the request to include all thrifts operating at the end of 1987. We divided these thrifts into two groups, impaired and healthy, on the basis of their condition at the end of 1987. In this analysis, an impaired thrift is defined as one

- with negative net worth at the end of 1987, as defined by Generally Accepted Accounting Principles (GAAP), or
- with GAAP net worth between 0 and 3 percent of assets at the end of 1987 and negative profits (i.e., with losses) in 1987.

Thrifts operating at the end of 1987 that did not meet either of these criteria were defined as healthy thrifts.

To examine growth rates of assets and advances, we needed to select a date before 1987 as the initial period. Consistent with our approach in

[1] The compound annual growth rate of assets is the yearly rate of growth of assets over time. This growth rate accounts for the increase in the asset base from one year to the next. For example, a thrift with assets of $100 in 1984 and $121 in assets in 1986 has a compound annual growth rate over the 2 years of 10 percent. That is, it has $110 in assets in 1985 (10 percent growth on $100), and $121 in assets in 1986 (10 percent growth on $110). As reported here, this growth rate is the average yearly growth over some period for the group of thrifts being analyzed.

other parts of this report, we studied December 1984 and December 1987.[2] The December 1984 date immediately preceded growth restrictions imposed on weak institutions by FSLIC.[3]

To provide a complete picture of thrifts' funding sources, we also expanded the request to include other sources of funds, not just advances. Five categories of liabilities were examined: insured deposits, uninsured deposits,[4] advances, reverse repurchase agreements,[5] and other liabilities.

Table III.1 shows the number of healthy and impaired thrifts in each district and in the industry as a whole. The percentage of impaired thrifts in a district ranged from 3.5 percent in Boston to 52.2 percent in Dallas. A total of 2,838 thrifts continually operated from December 1984 to December 1987.

[2]The classification of thrifts as healthy or impaired is based on their condition at the end of 1987. A thrift's condition in December 1984 does not affect its classification as healthy or impaired.

[3]In March 1985, the Bank Board imposed restrictions on the liability growth of undercapitalized institutions. Such thrifts were prohibited from expanding their liability growth by more than 12.5 percent in any two consecutive quarters without approval from their primary supervisory agent (see 12 CFR 563.13-1).

[4]Insured deposits and uninsured deposits are estimates based on data reported on the Thrift Financial Report filed by each institution.

[5]A reverse repurchase agreement (reverse repo) is an arrangement whereby a thrift sells securities to another party for cash and agrees to repurchase them at a predetermined price and maturity.

Table III.1: Number and Percentage of Thrifts by Condition (December 1987)

	Healthy		Impaired		
District	Number	Percent	Number	Percent	Total
Boston	82	96.5	3	3.5	85
New York	202	87.5	29	12.6	231
Pittsburgh	179	94.2	11	5.8	190
Atlanta	412	87.1	61	12.9	473
Cincinnati	284	87.4	41	12.6	325
Indianapolis	136	85.0	24	15.0	160
Chicago	260	78.6	71	21.5	331
Des Moines	130	72.2	50	27.8	180
Dallas	203	47.8	222	52.2	425
Topeka	91	58.7	64	41.3	155
San Francisco	146	80.7	35	19.3	181
Seattle	77	75.5	25	24.5	102
Total	**2,202**	**77.6**	**636**	**22.4**	**2,838**

Note: A total of 2838 thrifts reported in both December 1984 and December 1987. These thrifts were classified as healthy or impaired on the basis of their condition at the end of 1987. An impaired thrift is defined as one that was (1) GAAP-insolvent at the end of 1987 or (2) had a GAAP net worth between 0 and 3 percent of assets at the end of 1987 and was unprofitable in 1987. All other thrifts are classified as healthy.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Growth Rates

Over the 3-year period December 1984 to December 1987, thrift industry assets grew at a compound annual rate of 8.6 percent (see table III.2). Healthy thrifts had substantially greater average compound annual growth (12.4 percent) than did impaired thrifts (5.6 percent) over this period.[6] Similarly, healthy thrifts expanded their use of advances more rapidly (compound annual growth rate of 22.6 percent) than did impaired thrifts (13.0 percent). For healthy thrifts, advances grew proportionately[7] more than assets in every district. For impaired thrifts, this was true in 10 of the 12 districts. As seen in the table, there were even greater differences across and within the FHLBank districts in the growth of both assets and advances.

[6] As noted above, we categorized thrifts as impaired or healthy based upon their December 1987 GAAP net worth and 1987 net income. When calculating growth rates on the basis of these categorizations, no adjustment was made for growth due to mergers or acquisitions. Thus, the growth figures reported (particularly for the healthy group) reflect increases due to new inflows of funds into the industry, as well as consolidation of two or more thrifts into one thrift.

[7] A proportionate increase of assets and advances means their respective growth rates are the same. In that case, the ratio of advances to assets remains unchanged. If advances grow proportionately more than assets, then the advances-to-assets ratio increases.

Table III.2: Growth Rates of Total Assets and Advances for Healthy and Impaired Thrifts and for the Thrift Industry
(December 1984 December 1987)

District	Healthy		Impaired[a]		All thrifts	
	Assets	Advances	Assets	Advances	Assets	Advances
Boston	21.0	54.4	6.5	21.8	14.8	35.8
New York	15.6	35.6	0.3	1.1	12.2	28.8
Pittsburgh	10.5	37.7	10.0	41.9	9.1	36.5
Atlanta	9.8	24.0	1.5	15.5	7.3	19.9
Cincinnati	7.5	17.7	0.3	1.6	3.5	9.4
Indianapolis	6.1	20.1	−4.2	−18.5	4.4	18.3
Chicago	7.8	11.3	1.9	11.1	5.2	10.3
Des Moines	9.8	17.2	3.5	7.3	4.7	12.2
Dallas	13.8	29.7	10.1	34.9	7.5	31.8
Topeka	17.6	33.1	4.6	22.1	9.8	24.5
San Francisco	14.7	17.5	7.2	−6.9	11.6	10.3
Seattle	15.3	15.5	−2.4	11.3	4.8	9.3
Industry	12.4	22.6	5.6	13.0	8.6	17.5

[a]The Impaired and Healthy groups consist of the 2,838 thrifts that existed in both December 1984 and December 1987 (see table III.1). The asset and advances growth reported in these columns arises from both new funds in the industry, as well as growth through mergers and acquisitions among thrifts. The "All Thrifts" columns were computed using data from all thrifts operating in either or both of those periods. Industry growth reported in the "All Thrifts" columns is net of growth owing to mergers and acquisitions among thrifts.

Note: All growth rates are in percentages. They are calculated as compound annual rates for the group over the period December 1984 through December 1987.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Changes in Liability Composition.

Table III.3 shows the liability mix for the thrift industry and for the healthy and impaired groups at the end of 1987. Data broken down by FHLBank district are reported on tables III.4 through III.7. As with the asset composition data presented in appendix II, liability mix may vary substantially among districts.

For the industry, insured deposits as a share of total liabilities declined approximately 6 percentage points, to 70.6 percent, from 1984 to 1987. This decline was offset by nearly equal percentage point increases in advances, reverse repurchase agreements, and other liabilities. The healthy and impaired groups both roughly followed this pattern, although impaired thrifts also decreased their holdings of uninsured deposits by 4 percentage points, while increasing their reliance on reverse repurchase agreements by 6 percentage points.

At the industry level, in December 1987, there was little difference between the healthy and impaired groups in their relative use of advances. However, the closeness of the industry averages for the impaired and healthy groups resulted from healthy thrifts in two districts—Indianapolis and San Francisco—obtaining far larger shares of their funds from advances than did the impaired thrifts in those districts. In 10 of the 12 districts, impaired thrifts used relatively more advances than did healthy thrifts as a share of total liabilities.

Table III.3: Average Liability Mix for Healty and Impaired Thrifts and for All FSLIC-Insured Thrifts (December 1987)

Liability category	Healthy[a]	Impaired	All
Advances	9.7	10.0	9.7
Insured deposits	70.8	70.1	70.6
Uninsured deposits	7.3	4.0	6.6
Reverse repos	6.1	10.9	7.2
Other liabilities	6.1	5.1	5.9

[a]See note (a) to table III.2 for definitions of "healthy," "impaired," and "all."

Note: All shares are weighted average percentages of total liabilities. Columns may not add to 100 percent due to rounding.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table III.4: Average Share of Advances in Total Liabilities for Healthy and Impaired Thrifts and for the Thrift Industry (December 1984 - December 1987)

	1984			1987		
District	Healthy[a]	Impaired	All	Healthy	Impaired	All
Boston	6.1	12.7	6.2	12.9	18.7	13.0
New York	4.9	8.9	5.3	8.0	9.0	8.1
Pittsburgh	5.5	7.6	5.8	10.9	16.0	11.5
Atlanta	6.1	7.4	6.3	8.9	10.6	9.2
Cincinnati	4.2	8.6	5.0	5.6	8.7	6.1
Indianapolis	11.1	6.5	10.7	16.4	3.8	15.5
Chicago	3.4	6.3	4.0	4.0	8.0	4.7
Des Moines	8.0	11.5	9.7	9.8	12.6	11.0
Dallas	4.9	6.3	5.8	7.4	10.4	9.5
Topeka	9.4	9.3	9.4	13.7	14.1	13.8
San Francisco	9.4	10.0	9.5	10.2	6.3	9.5
Seattle	15.4	15.5	15.4	15.6	21.7	16.9
Industry	7.3	8.6	7.6	9.7	10.0	9.7

[a]See Note (a) to table III.2 for definitions of "healthy," "impaired," and "all."

Note: All shares are weighted average percentages of total liabilities.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table III.5: Average Share of Insured Deposits in Total Liabilities for Healthy and Impaired Thrifts and for the Thrift Industry (December 1984 - December 1987)

	1984			1987		
District	**Healthy[a]**	**Impaired**	**All**	**Healthy**	**Impaired**	**All**
Boston	82.0	82.2	82.0	67.4	77.9	67.6
New York	83.6	83.2	83.6	76.3	85.0	76.9
Pittsburgh	88.1	83.1	87.5	79.3	76.8	79.0
Atlanta	80.3	77.2	79.8	73.5	73.9	73.6
Cincinnati	88.6	81.3	87.3	85.0	80.2	84.2
Indianapolis	75.4	88.7	76.6	62.2	91.3	64.3
Chicago	88.6	86.5	88.2	85.7	82.1	85.1
Des Moines	85.4	78.1	82.0	77.5	71.8	75.0
Dallas	79.5	78.0	78.5	76.6	75.9	76.1
Topeka	74.2	73.4	73.9	61.1	73.6	64.7
San Francisco	65.1	59.5	63.9	62.3	51.9	60.4
Seattle	73.3	69.0	72.0	65.6	70.8	66.8
Industry	77.2	73.9	76.3	70.8	70.1	70.6

[a]See Note (a) to Table III.2 for definitions of "healthy," "impaired," and "all."

Note: All shares are weighted average percentages of total liabilities.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table III.6: Average Share of Uninsured Deposits in Total Liabilities for Healthy and Impaired Thrifts and for the Thrift Industry (December 1984 - December 1987)

	1984			1987		
District	**Healthy[a]**	**Impaired**	**All**	**Healthy**	**Impaired[a]**	**All**
Boston	3.6	2.6	3.6	5.7	1.8	5.6
New York	1.9	1.4	1.8	3.9	1.4	3.7
Pittsburgh	2.0	1.7	1.9	2.8	2.8	2.8
Atlanta	5.1	4.9	5.1	6.9	4.2	6.5
Cincinnati	2.9	6.4	3.6	2.7	4.0	2.9
Indianapolis	3.1	1.8	3.0	4.1	1.8	3.9
Chicago	1.6	1.7	1.7	2.5	2.2	2.5
Des Moines	2.0	2.4	2.2	3.0	2.8	2.9
Dallas	6.4	7.5	7.1	5.0	4.3	4.5
Topeka	4.7	9.3	6.3	8.4	4.6	7.3
San Francisco	13.7	17.0	14.4	12.9	4.7	11.3
Seattle	5.3	9.5	6.5	5.0	2.8	4.5
Industry	6.6	8.4	7.0	7.3	4.0	6.6

[a]See note (a) to table III.2 for definitions of "healthy," "impaired," and "all."

Note: All shares are weighted average percentages of total liabilities.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table III.7: Average Share of Reverse Repos in Total Liabilities for Healthy and Impaired Thrifts and for the Thrift Industry (December 1984 - December 1987)

	1984			1987		
District	**Healthy[a]**	**Impaired**	**All**	**Healthy**	**Impaired**	**All**
Boston	3.8	0.0	3.7	6.7	0.0	6.6
New York	6.3	3.4	6.0	6.3	2.6	6.1
Pittsburgh	1.0	4.6	1.4	3.5	2.4	3.3
Atlanta	4.8	6.5	5.1	5.1	5.5	5.1
Cincinnati	1.8	1.0	1.6	3.2	2.0	3.0
Indianapolis	6.4	1.5	6.0	12.0	1.6	11.2
Chicago	3.1	2.5	3.0	2.9	2.8	2.9
Des Moines	1.8	5.1	3.4	4.5	10.2	7.0
Dallas	6.1	2.6	3.7	7.7	4.7	5.7
Topeka	6.4	4.3	5.7	10.2	5.3	8.8
San Francisco	6.4	10.0	7.2	6.2	29.1	10.5
Seattle	2.9	1.6	2.5	10.0	1.2	8.1
Industry	5.0	5.1	5.0	6.1	10.9	7.2

[a]See note (a) to table III.2 for definitions of "healthy," "impaired," and "all."

Note: All shares are weighted average percentages of total liabilities.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Advances Borrowing by Thrifts Requiring FSLIC Assistance

We were asked to examine the use of advances by thrift institutions that have either closed or received FSLIC assistance. First, we analyzed the role of advances in funding the portfolio of such institutions before insolvency and/or during any period of forbearance.[1] Second, we reviewed the changes in the portfolio size and mix of these institutions over time. We found that advances are an important source of funds for failing and insolvent thrifts. This suggests that advances are an important element in the Bank Board's forbearance policy.

In accordance with the request, this appendix assesses the use of advances by the following two groups of thrifts.

- Thrifts that received FSLIC assistance between 1984 and 1987. Each of these thrifts was either part of a FSLIC-assisted merger or acquisition, placed into receivership, or liquidated.
- The 10 most costly FSLIC cases between 1984 and 1987.

In the first section of this appendix, we trace the change in assets over the 2 years before insolvency for those thrifts that have failed or required FSLIC assistance between 1984 and 1987. Additionally, we report how the portfolios changed between the time the institutions first became GAAP-insolvent (that is, reported negative capital on a GAAP basis), and the time of regulatory action. We also consider the use of advances in funding the portfolio of these thrifts before their insolvency and during the period in which they operated while GAAP-insolvent.

The second section reviews the 10 most costly assistance cases encountered by FSLIC between 1984 and 1987. We aggregate the 10 cases and report on the growth and changing composition of their portfolios over the 5 years before their closure or placement in receivership.

The results indicate that these thrifts decreased their relative holdings of mortgages and increased their holdings of non-mortgage real estate as their net worth position deteriorated.[2] Overall, this portfolio shift was more pronounced for thrifts that did not use advances. This pattern was also apparent when we examined the 10 most costly thrift failures over this period.

[1] In this appendix, we define forbearance as permitting GAAP-insolvent thrifts to remain operating.

[2] This portfolio shift was not limited to failing institutions. See Trends in Thrift Industry Performance: December 1977 Through June 1987. (GAO/GGD-88-87BR May 1988).

The results also indicate that rapid growth took place as net worth was deteriorating to 0 for the average thrift in this group. Assets grew at an average compound annual rate of 23.0 percent over the 2 years before the thrifts became insolvent. Advances grew even more than assets over this period: they grew by a compound annual rate of 35.3 percent, thereby increasing their share in total liabilities from 10.4 percent to 12.0 percent over the 2 years. Thrifts increasingly relied on advances while they operated with negative net worth. In the quarter before regulatory action, advances averaged 12.8 percent of total liabilities.

Asset growth was even more pronounced for the 10 most costly cases. For those, however, the growth was marked more by an increased reliance on brokered deposits than on advances.

FSLIC Assistance Cases: 1984 to 1987

We were asked to examine the reliance on, and use of, advances by thrifts that failed or required cash infusions by FSLIC over the 2 years before they became GAAP-insolvent. We extended this to include the period in which the thrifts were insolvent but still operating. Our objective was to see if failing thrifts used advances to fuel rapid growth or if they shifted their sources or uses of funds as their net worth position deteriorated.

Methodology

We examined all 155 thrifts that FSLIC provided with substantial cash assistance, liquidated, or assisted in the acquisition of, between 1984 and 1987.[3] For each thrift, the following three points in time were considered:

- 2 years before GAAP insolvency,
- the quarter the thrift first reported negative GAAP net worth,
- the quarter before regulatory action was taken on the thrift.[4]

[3]Thrifts receiving cash assistance were placed in the MCP. We include only those MCP thrifts that received cash or promissory notes from FSLIC, or that were liquidated or merged between 1984 and 1987. Except for MCP thrifts that received cash assistance, this group does not include thrifts that were open and insolvent as of December 1987. Also, nine thrifts that the Bank Board identified as failing between 1984 and 1987 were not included because we had insufficient data on them before their first becoming insolvent. This includes one thrift that was insolvent every reporting period from December 1977 to June 1986.

[4]The time of regulatory action is defined as either placement into the MCP or closure or merger by FSLIC. As noted above, this action occurred between 1984 and 1987 for all thrifts in this group.

For these thrifts, we calculated the mean share of total assets for five asset categories.[5] We analyzed non-, light, and heavy users of advances.[6]

In addition to examining portfolio changes, we calculated compound annual growth rates for assets and advances over the 2-year period before insolvency. We did not make these calculations for the period between insolvency and regulatory action, however, since the time between the two events varies from case to case. The median time period between the date of first insolvency and the time of regulatory action was 18 months.[7]

The results are reported in aggregate and by FHLBank district.[8] Table IV.1 breaks down the thrifts in the group by advances use and FHLBank district. The number of non-, light, and heavy users did not change much over the 2 years before insolvency. From the time of insolvency to the date of regulatory action, however, the number of light users fell, while the number of non-users and heavy users both rose.

Table IV.1: Number of Thrifts in Each District by Advances Use

	2 Years Before Insolvency			
District	**Non-users**	**Light users**	**Heavy users**	**Total**
Atlanta	1	9	6	**16**
Cincinnati	3	11	8	**22**
Dallas	13	14	10	**37**
San Francisco	6	9	5	**20**
Seattle	1	8	13	**22**
Other districts	2	23	13	**38**
Total	**26**	**74**	**55**	**155**

(continued)

[5]We incorporate all construction loans into the category entitled mortgages, rather than non-mortgage real estate, because of data constraints. Otherwise, the asset categories are the same as defined in appendix II (see p. 21).

[6]As in appendix II, we defined a thrift as a non-user of advances if it had no advances outstanding, a light user if advances did not exceed 10 percent of total assets, and a heavy user if advances exceeded 10 percent of total assets. Each thrift is categorized like this at each relevant date.

[7]The inter-quartile range for the amount of time elapsed between insolvency and resolution by FSLIC was 9 to 30 months. That is, 25 percent of these thrifts operated while insolvent for less than or equal to 9 months, and 25 percent of these thrifts operated while insolvent for 30 months or more. Also, those thrifts in which regulatory action was placement in the MCP continued to operate beyond the date of regulatory action as defined here. This is because the MCP provides for replacement of management and the board of directors by FSLIC but the thrift continues to operate until FSLIC arranges a final resolution.

[8]Because of the small number of thrifts in the different categories of advances use, districts with less than 15 thrifts in the group were combined and then analyzed as "other districts."

	At Time of Insolvency			
District	**Non-users**	**Light users**	**Heavy users**	**Total**
Atlanta	2	8	6	**16**
Cincinnati	3	13	6	**22**
Dallas	13	15	9	**37**
San Francisco	7	7	6	**20**
Seattle	2	6	14	**22**
Other districts	3	18	17	**38**
Total	**30**	**67**	**58**	**155**
	At Date of Regulatory Action			
District	**Non-users**	**Light users**	**Heavy users**	**Total**
Atlanta	5	5	6	**16**
Cincinnati	4	8	10	**22**
Dallas	8	13	16	**37**
San Francisco	9	3	6	**18**
Seattle	3	1	18	**22**
Other districts	8	15	13	**36**
Total	**37**	**45**	**69**	**151**[a]

[a]In four cases, FSLIC intervened before the thrift first reported itself GAAP-insolvent. Hence, there was no period in which the thrift operated while GAAP-insolvent.

Source: Federal Home Loan Bank Board Thrift Financial Reports and data provided by the Financial Assistance Division and the Analysis and Evaluation Division, FSLIC.

Portfolio Composition

The distribution of assets discussed in this section is presented for all the failed thrifts in the group in table IV.2. Tables IV.3 through IV.6 present the average portfolio mix in each district at the three dates considered here.

Two years before insolvency, thrifts in all three categories of advances use held approximately 80 percent of their assets in mortgage loans. However, at the time each thrift became insolvent, non-users of advances held the smallest average share of mortgages (60 percent), while the heavy users held the largest share (72 percent). At the time of FSLIC resolution, non-users still held the smallest share (63 percent).

The non-users of advances held the highest mean share of non-mortgage real estate (19.5 percent) at the time of insolvency. The light and heavy users of advances held 13 percent and 6 percent, respectively, at that time. However, during the period between insolvency and regulatory action, non-mortgage real estate holdings decreased slightly for non- and light users, while the heavy users increased their holdings to 8 percent of total assets. Overall, non-users also held more equity and investment securities than users held.

On the liability side of the balance sheet (data not reported here), deposits accounted for 96 percent of the non-users' liabilities, 89 percent of the light users' liabilities, and 77 percent of the heavy users' liabilities 2 years before insolvency. The shares changed little from that date to the date of regulatory action.

The share of deposits in total liabilities is inversely related to thrifts' reliance on non-deposit funds such as advances and reverse repurchase agreements (reverse repos). At the time of insolvency, non-users obtained 2.6 percent of their liabilities from reverse repos, light users obtained 2.2 percent, and heavy users obtained 1.9 percent. All of these percentages declined slightly by the date of regulatory action.

Table IV.2: Mean Asset Shares of Failed Thrifts (2 Years Before Insolvency, Quarter of Insolvency, and Quarter Before Regulatory Action — For All Failed Thrifts: 1984-1987)

Advances use category	Mortgages	Non-mortgage real estate	Securities	Liquid assets	Non-real estate loans
Non-users					
2 years prior	79.4	3.3	9.3	4.8	3.5
At insolvency	60.4	19.5	10.6	5.6	5.4
At reg action	63.2	11.3	13.3	4.3	4.0
Light users					
2 years prior	78.8	9.1	7.8	4.7	3.3
At insolvency	69.4	13.4	6.3	5.3	5.7
At reg action	69.6	12.8	6.8	4.4	6.3
Heavy users					
2 years prior	80.5	2.8	5.4	3.5	5.4
At insolvency	71.8	6.0	9.4	3.4	4.1
At reg action	68.1	8.1	8.0	4.4	5.7
All					
2 years prior	79.6	6.1	6.9	4.2	4.2
At insolvency	69.6	10.6	8.2	4.4	5.0
At reg action	68.0	10.2	8.2	4.4	5.7

Note: All shares are in percentage terms. The asset categories are weighted averages of total assets. For each advances-use category, the first row is the mean percentage share 2 years before insolvency, the second is the mean share at the date of insolvency, and the third is the share at the date of regulatory action.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table IV.3: Mean Asset Shares of Failed Thrifts by District (2 Years Before Insolvency, Quarter of Insolvency, and Quarter Before Regulatory Action)

District	Mortgages	Non-mortgage real estate	Securities	Liquid assets	Non-real estate loans
Atlanta					
2 years prior	85.3	2.9	5.7	3.4	2.5
At insolvency	72.4	9.2	7.8	5.6	2.8
At reg action	74.9	8.2	7.7	2.6	2.4
Cincinnati					
2 years prior	83.7	2.2	3.9	2.8	4.6
At insolvency	70.4	1.3	6.5	4.8	5.4
At reg action	68.4	0.7	9.2	4.8	6.2
Dallas					
2 years prior	75.2	15.8	7.5	4.1	7.5
At insolvency	60.0	26.7	7.6	4.1	8.7
At reg action	57.7	26.0	8.5	4.4	9.1
San Francisco					
2 years prior	77.2	5.9	9.8	5.6	3.5
At insolvency	69.9	8.4	11.4	4.1	3.7
At reg action	69.7	7.3	9.1	4.9	4.3
Seattle					
2 years prior	83.2	3.5	4.7	3.4	3.5
At insolvency	75.4	7.6	5.4	4.8	3.8
At reg action	75.9	7.5	6.2	3.8	4.5
Other districts					
2 years prior	78.8	3.2	6.7	4.2	3.2
At insolvency	75.2	2.7	6.3	4.2	4.3
At reg action	70.1	2.4	7.4	4.6	5.8
All					
2 years prior	79.6	6.1	6.9	4.2	4.2
At insolvency	69.6	10.6	8.2	4.4	5.0
At reg action	68.0	10.2	8.2	4.4	5.7

Note: All shares are in percentage terms. The asset categories are weighted averages of total assets. For each district, the first row is the mean percentage share 2 years before insolvency, the second is the mean share at the date of insolvency, and the third is the share at the date of regulatory action.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table IV.4: Mean Asset Shares of Failed Thrifts: Non-Users of Advances (2 Years Before Insolvency, Quarter of Insolvency, and Quarter [illegible] Regulatory Action)

District	Mortgages	Non-mortgage real estate	Securities	Liquid assets	Non-real estate loans
Atlanta					
2 years prior	63.5	0.0	12.4	8.5	11.7
At insolvency	71.1	11.1	0.5	14.4	5.0
At reg action	59.9	1.2	12.1	3.4	5.6
Cincinnati					
2 years prior	82.9	0.6	6.1	4.7	3.1
At insolvency	67.8	6.1	8.5	7.3	8.8
At reg action	73.9	0.2	9.0	2.5	2.4
Dallas					
2 years prior	79.4	4.3	8.2	4.8	6.4
At insolvency	57.7	34.3	6.4	6.2	6.8
At reg action	61.8	32.5	7.6	6.9	5.7
San Francisco					
2 years prior	78.6	3.6	10.9	6.1	1.0
At insolvency	58.2	10.0	18.2	3.0	3.9
At reg action	57.8	10.4	18.6	3.0	3.6
Seattle					
2 years prior	81.9	1.7	15.3	2.8	0.1
At insolvency	53.1	5.4	7.6	4.3	19.4
At reg action	64.3	2.7	10.5	2.5	9.8
Other districts					
2 years prior	77.7	2.3	5.4	2.8	3.4
At insolvency	75.9	1.5	4.1	6.0	2.8
At reg action	69.1	0.5	13.0	6.8	3.0
All non-users					
2 years prior	79.4	3.3	9.3	4.8	3.5
At insolvency	60.4	19.5	10.6	5.6	5.4
At reg action	63.2	11.3	13.3	4.3	4.0

Note: All shares are in percentage terms. The asset categories are weighted averages of total assets. For each district, the first row is the mean percentage share 2 years before insolvency, the second is the mean share at the date of insolvency, and the third is the share at the date of regulatory action.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table IV.5: Mean Asset Shares of Failed Thrifts: Light Users of Advances (2 Years Before Insolvency, Quarter of Insolvency, and Quarter Before Regulatory Action)

District	Mortgages	Non-mortgage real estate	Securities	Liquid assets	Non-real estate loans
Atlanta					
2 years prior	83.0	5.1	7.0	4.4	2.9
At insolvency	74.6	14.4	6.3	4.6	3.6
At reg action	76.0	17.0	5.2	2.6	3.4
Cincinnati					
2 years prior	82.5	2.5	4.0	3.2	3.5
At insolvency	66.5	1.0	7.4	6.4	4.9
At reg action	64.0	0.7	13.8	2.9	4.8
Dallas					
2 years prior	73.0	22.2	8.3	4.4	5.9
At insolvency	57.4	31.9	8.4	3.2	9.3
At reg action	54.5	33.1	10.5	2.9	9.7
San Francisco					
2 years prior	80.4	7.6	11.8	6.5	2.3
At insolvency	77.4	8.4	3.3	7.7	6.1
At reg action	78.3	6.9	2.5	8.1	7.2
Seattle					
2 years prior	73.2	6.0	6.5	3.8	3.7
At insolvency	74.4	9.1	4.5	7.1	4.1
At reg action	89.5	19.4	2.2	1.7	3.3
Other districts					
2 years prior	80.9	3.6	6.2	4.1	1.9
At insolvency	74.5	3.5	6.2	5.0	3.1
At reg action	71.5	2.3	6.0	4.3	5.1
All Light Users					
2 years prior	78.8	9.1	7.8	4.7	3.3
At insolvency	69.4	13.4	6.3	5.3	5.7
At reg action	69.6	12.8	6.8	4.4	6.3

Note: All shares are in percentage terms. The asset categories are weighted averages of total assets. For each district, the first row is the mean percentage share 2 years before insolvency, the second is the mean share at the date of insolvency, and the third is the share at the date of regulatory action

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table IV.6: Mean Asset Shares of Failed Thrifts: Heavy Users of Advances (2 Years Before Insolvency, Quarter of Insolvency, and Quarter Before Regulatory Action)

District	Mortgages	Non-mortgage real estate	Securities	Liquid assets	Non-real estate loans
Atlanta					
2 years prior	87.8	0.6	4.4	2.4	2.1
At insolvency	69.3	1.1	11.7	5.2	1.1
At reg action	76.1	0.4	9.5	2.5	1.0
Cincinnati					
2 years prior	84.4	2.2	3.7	2.5	5.4
At insolvency	76.3	1.6	5.1	2.3	5.9
At reg action	69.5	0.9	6.0	7.0	8.5
Dallas					
2 years prior	79.7	2.2	4.7	2.6	12.6
At insolvency	67.1	9.8	6.8	4.4	9.1
At reg action	58.9	19.7	7.3	4.9	9.4
San Francisco					
2 years prior	73.5	4.5	7.6	4.5	5.2
At insolvency	69.1	8.0	13.6	2.7	2.5
At reg action	68.6	6.3	9.8	3.5	2.5
Seattle					
2 years prior	86.3	2.9	3.6	3.3	3.7
At insolvency	76.0	7.2	5.7	4.1	3.6
At reg action	74.5	6.2	6.6	4.1	4.6
Other districts					
2 years prior	73.2	2.2	8.3	4.5	6.6
At insolvency	75.9	1.8	6.6	3.1	5.8
At reg action	67.5	3.3	8.0	4.4	8.3
All Heavy Users					
2 years prior	80.5	2.8	5.4	3.5	5.4
At insolvency	71.8	6.0	9.4	3.4	4.1
At reg action	68.1	8.1	8.0	4.4	5.7

Note: All shares are in percentage terms. The asset categories are weighted averages of total assets. For each district, the first row is the mean percentage share 2 years before insolvency, the second is the mean share at the date of insolvency, and the third is the share at the date of regulatory action.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Growth of Assets and Advances

Table IV.7 reports the average compound annual growth rates for thrifts that either failed or received substantial cash assistance between 1984 and 1987. The growth rates are calculated over the 2-year period in which the thrifts' net worth declined to zero. On average, these thrifts grew by a compound annual rate of 23.0 percent over the 2 years. Over the same period, outstanding advances grew at a rate of 35.3 percent. There were, however, considerable differences across certain FHLBank districts in both asset and advances growth rates.

Table IV.7: Compound Annual Growth Rates for the 2 Years Preceding Insolvency for Thrifts That Failed Between 1984 and 1987

Dollars in millions

District	Asset growth	Dollar change in assets	Advances growth	Dollar change in advances
Atlanta	29.0	$1,970	28.8	$180
Cincinnati	13.2	1,135	19.1	161
Dallas	30.2	4,119	26.9	249
San Francisco	37.4	6,954	66.5	1,583
Seattle	10.3	914	12.6	193
Other districts	7.7	1,059	23.9	270
All	23.0	$16,151	35.3	$2,636

Note: Growth rates are expressed as percentages.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Ten Most Costly FSLIC Cases : 1984 to 1987

We were asked to identify for special study the 10 most costly cases FSLIC handled between 1984 and 1987. Assistance was defined as the infusion of cash and/or FSLIC notes into a thrift for the purposes of maintaining the ongoing entity, liquidating the institution, or merging the thrift with another thrift. The payments were made as the result of FSLIC action between 1984 and 1987, not because of agreements reached before 1984.

Methodology

FSLIC's Financial Assistance Division identified the 10 cases for us. Nine of the 10 cases had one impaired thrift each. In these nine cases, FSLIC placed each thrift into the MCP. The tenth case consisted of six impaired thrifts that FSLIC merged together at the same time and treated as one case. Two of these six thrifts were in the MCP at the time the six were combined, and the resulting entity remained an MCP thrift. In the work done and in the following discussion, the six thrifts in this case are combined and treated as one thrift. The institutions making up the 10 cases were located in six states: California (4), Texas (2), Florida, Arkansas, Louisiana, and Oregon.

For each of the 10 cases, we used the call report data submitted each December for the 5 years before the year in which the thrift was placed into the MCP. This gave us 5 years of data on each thrift. These observations were then aggregated each year. The reason for the aggregation was to focus on these 10 cases as a group, thereby facilitating an analysis of the overall pattern in these institutions. We calculated asset and deposit growth rates and changes in asset and liability composition over these 5 years.[9]

Results

For the group, assets increased 503 percent, from 5 years before entrance into the MCP to the year before entrance. Deposits increased 564 percent over the same period. Deposit growth exceeded asset growth in 8 of the 10 cases.

The extreme asset growth in these institutions over the 5 years preceding FSLIC's action was accompanied by changes in the average asset mix, but there was little change in the average liability mix. Table IV.8 shows, for each of the 5 years, the total dollar investments in the 5 asset categories defined in appendix III, and in four liability categories. Additionally, total deposits are also divided into broker-originated deposits and other deposits. Brokered deposits are those placed in a thrift by brokers, dealers, or agents for the account of others. Table IV.9 reports the share of each asset category as a percentage of total assets, the share of each liability category as a share of total liabilities, and GAAP net worth as a percentage of total assets.

On the asset side, these thrifts decreased their share of assets held as mortgages by 16.7 percentage points over the 5 years preceding FSLIC's action. This decline was offset primarily by increases in the share of non-mortgage real estate assets (9.3 percentage points) and investment securities (7.9 percentage points).

On the liability side, the relative shares of the different sources of funds changed little over the time period examined. Although there was some fluctuation in individual years, deposits averaged 83 percent of liabilities while advances averaged 9 percent of liabilities. The notable change in funding was the shift from non-brokered[10] to brokered deposits. Five years before the year each thrift was placed into the MCP, brokered deposits averaged 1.7 percent of liabilities. The year before placement,

[9]Of course, all 10 thrifts did not enter the MCP in the same calendar year, so the 5 years of data collected for each thrift are not for the same 5 calendar years in every case.

[10]A non-brokered deposit is any deposit except those placed in a thrift by brokers, dealers, or agents for the account of others.

brokered deposits averaged 14.5 percent of liabilities, after peaking at 21.2 percent of liabilities 2 years earlier.

Table IV.8: Year-End Aggregate Balance Sheet Data for the 10 Most Costly FSLIC Assistance Cases: 1984 - 1987

Dollars in millions

	Years Before Entering the MCP				
Composition of assets and liabilities	**Five**	**Four**	**Three**	**Two**	**One**
Assets:					
Mortgages	$2,025	$4,226	$5,594	$7,814	$9,838
Other real estate	90	411	857	1,521	1,879
Other loans	140	301	359	555	605
Liquid assets	80	257	463	721	557
Securities	120	400	806	1,148	1,855
Total assets	**$2,369**	**$5,273**	**$7,607**	**$11,340**	**$14,295**
Liabilities:					
Other deposits	$1,795	$3,418	$4,749	$7,932	$10,045
Brokered deposits	39	567	1,564	1,531	2,135
Total deposits	1,834	3,985	6,313	9,463	12,181
Advances	213	601	624	714	1,472
Reverse repurchase	30	108	8	313	330
Other liabilities	152	379	428	576	756
Total Liabilities	**$2,229**	**$5,074**	**$7,372**	**$11,065**	**$14,738**
GAAP net worth	141	198	241	279	−496

Note: The sum of the asset components do not add to total assets because not all components of total assets are presented. The liability components may not add to total liabilities because of rounding.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Table IV.9: Year-End Average Asset and Liability Shares for the 10 Most Costly FSLIC Assistance Cases: 1984 - 1987

Composition of assets and liabilities	Years Before Entering the MCP Five	Four	Three	Two	One
Assets:					
Mortgages	85.5	80.2	73.5	68.9	68.8
Other real estate	3.8	7.8	11.3	13.4	13.1
Other loans	5.9	5.7	4.7	4.9	4.2
Liquid assets	3.4	4.9	6.1	6.4	3.9
Securities	5.1	7.6	10.6	10.1	13.0
Liabilities:					
Other deposits	80.5	67.4	64.4	71.7	68.2
Brokered deposits	1.7	11.2	21.2	13.8	14.5
Total deposits	82.3	78.6	85.6	85.5	82.6
Advances	9.6	11.8	8.5	6.4	10.0
Reverse repurchase	1.4	2.1	0.1	2.8	2.2
Other liabilities	6.8	7.5	5.8	5.2	5.1
GAAP Net Worth	6.0	3.7	3.2	2.5	−3.5

Note: Assets are expressed as percentages of total assets, liabilities are percentages of total liabilities, and GAAP net worth as a percentage of total assets. Percentages may not add to 100 percent because of rounding and because not all asset components are listed.

Source: Federal Home Loan Bank Board Thrift Financial Reports.

Advances and Merger/Acquisition Activity

We were asked the extent to which advances had been employed for funding by institutions that acquired one or more other thrifts. We are unable to say whether an acquiring thrift took advances to fund a particular acquisition. We can, however, look at changes in the use of advances as a source of funds around the time of acquisition. The results of such an analysis are reported here.

We analyzed all 208 mergers and acquisitions among FSLIC-insured thrifts from 1984 to 1987. Several of these involved the simultaneous acquisition of more than one thrift.

Table V.1 presents the results of our analysis. We totaled the advances and assets of both the acquired and the acquiring institutions for the quarter before each acquisition. We did the same for the GAAP net worth and the tangible net worth of each group. Intangible assets, the difference between tangible and GAAP net worth, are also reported. Intangible assets consist of goodwill and purchased loan servicing rights. We then totaled the same categories for the combined entity at the end of the quarter of acquisition.

Table V.1: Mergers and Acquisitions: 1984 - 1987

Dollars in millions

	Quarter before merger		Quarter after merger	
Category	**Acquired**	**Acquiring**	**Combined**	**Percent change**
Advances	$4,224	$40,161	$44,878	1.1%
Assets	54,734	426,154	496,750	3.3
Intangible Assets	1,760	10,573	15,007	21.7
Tangible Net Worth	−1,954	8,792	6,903	1.0
GAAP Net Worth	−194	19,366	21,910	14.3

Source: Federal Home Loan Bank Board Thrift Financial Reports.

In the period of acquisition, the value of outstanding advances increased 1.1 percent for the resulting entities, while assets increased 3.3 percent. Similarly, tangible net worth rose only 1 percent. However, intangible assets (including goodwill) increased by 22 percent with the mergers. As a result, GAAP net worth for the resulting entities was 14 percent greater than for the thrifts before the date of merger.

We find no substantial change in the use of advances as a source of funding in the quarter of acquisition. Advances funded a somewhat smaller proportion of the assets of the combined institution than they did for the aggregated institutions before the acquisition. The measured increase in GAAP net worth arising from the acquisitions is largely driven by increases in intangible assets (including goodwill).

Advances Borrowing by FDIC-Insured Thrifts

As of September 30, 1987, 484 savings banks insured by the Federal Deposit Insurance Corporation (FDIC) were members of the FHLBS. Seven FHLBank districts had FDIC-insured members. From 1981 to 1984, these banks held between 2 and 3 percent of all outstanding advances (see table VI.1). By September 1987, however, these institutions increased their use of advances to $13 billion, or 11.1 percent of total advances to all FHLBS-member thrifts.

The analyses in the preceding appendixes of this report considered only advances to FSLIC-insured institutions.

Table VI.1: Amount of Advances by District for FDIC-Insured Mutual Savings Banks 1981-1987

Dollars in millions

District	1981	1982	1983	1984	1985	1986	1987
Boston	$453	$457	$396	$691	$1,474	$3,294	$5,430
New York	673	849	679	914	2,413	3,572	6,294
Pittsburgh	0	0	15	2	46	159	197
Atlanta	0	0	0	0	0	0	0
Chicago	0	0	0	0	0	0	0
Indianapolis	0	0	0	0	0	0	0
Seattle	332	410	373	413	563	780	1,398
Total	**$1,458**	**$1,716**	**$1,464**	**$2,021**	**$4,497**	**$7,806**	**$13,320**
Percentage of total advances	2.2%	2.6%	2.5%	2.7%	5.1%	7.2%	11.1%

Note: Columns may not add to totals due to rounding. All data are end-of-year except for 1987. The 1987 data are as of September 30.

Source: Office of District Banks, Federal Home Loan Bank Board.

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