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Report to Congressional Requesters

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HIGH YIELD BONDS

Issues Concerning Thrift Investments in High Yield Bonds

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The Honorable Donald W. Riegle
Chairman, Committee on Banking, Housing
and Urban Affairs
United States Senate

The Honorable Henry B. Gonzalez
Chairman, Committee on Banking, Finance
and Urban Affairs
House of Representatives

This report completes our response to the requirements of Section 1201 of the Competitive Equality Banking Act of 1987 (P.L. 100-86), which directed us to study several aspects of the high yield bond market.

As required by the act, we did our work in consultation with the Securities and Exchange Commission, the Federal Home Loan Bank Board, the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Federal Savings and Loan Insurance Corporation, the Federal Deposit Insurance Corporation, the Secretary of the Treasury, and the Secretary of Labor. Copies of this report are being provided to those agencies and are available to others on request.

This report was prepared under the direction of Craig A. Simmons, Director, Financial Institutions and Markets Issues. Other major contributors are listed in the appendix.

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Executive Summary

Purpose

The growth of the high yield ("junk") bond market in the 1980s has been fraught with controversy. Numerous congressional hearings have focused on the role of these bonds as a tool to finance takeovers of companies. Major figures in the high yield bond market have been the target of investigations by congressional committees, the Securities and Exchange Commission, and the Justice Department.

The Competitive Equality Banking Act of 1987 (Public Law 100-86) directed GAO to study several aspects of the high yield bond market. The act reflected congressional concerns about the extent to which high yield bonds might foster corporate takeovers and the risks to federal deposit insurance funds represented by insured institutions that invest in high yield bonds.

GAO has issued two reports in response to certain of the act's requirements. The first, issued in February 1988, discusses the issuers and purchasers of high yield bonds and the extent to which the bonds had been used to finance corporate takeovers. The second, issued in May 1988, provides the record of a March 1, 1988, public hearing on the nature of the high yield bond market. This final report responds to the act's remaining requirements. It focuses on investment in high yield bonds by federally insured thrift institutions and also discusses state and federal laws regulating those investments and the relationship of high yield bonds to federal monetary policy.

Background

In 1977, the high yield bond market consisted primarily of bonds of companies that had fallen on hard times, called "fallen angels." The market has evolved considerably since then. It now consists primarily of bonds issued by small- or medium-sized companies that are not able to obtain an investment grade rating or bonds issued in connection with leveraged buyouts, mergers and acquisitions, or corporate restructurings. The amount of high yield bonds issued each year has increased from less than $2 billion in 1978 to about $31 billion in 1987, and the amount of high yield bonds outstanding rose from about $9 billion in mid-1977 to about $159 billion in mid-1988.

Within certain limits, federally insured thrifts can invest in high yield bonds under the provisions of the Garn-St Germain Act of 1982. About 5 percent of the 3,025 federally insured thrifts held high yield bonds, and almost 76 percent of the bonds held by these thrifts are held by just 10 institutions. However, several thrifts have recently become investors in high yield bonds, and the amount held by thrifts has more than doubled since the end of 1985 to over $13 billion in September 1988. As discussed in GAO's February 1988 report, bank regulators discourage banks from investing in high yield bonds.

Results in Brief

So far, high yield bonds have been attractive investments for thrifts compared to many alternative investments, and high yield bond investments have not contributed to the thrift industry's current problems. However, the higher yields on these bonds carry higher risks compared to traditional thrift assets such as residential mortgage loans. In addition, the high yield bond market, in its present size and form, has not been tested by a recession. A severe economic downturn might increase bond defaults, especially for those companies issuing bonds as part of leveraged buyouts. For these reasons, thrifts need to have the expertise to invest in high yield bonds and should exercise caution in selecting and managing their portfolios.

In January 1989, the Federal Home Loan Bank Board (FHLBB), the agency that regulates thrifts, took prudent steps to establish management and review standards for thrifts investing in high yield bonds. If properly understood and enforced, these standards should help assure thrifts invest in high yield bonds without incurring unnecessary or unreasonable risk.

Principal Findings

Returns on High Yield Bonds Exceed Risks to Date

Compared to other fixed income investments, such as Treasury and investment grade bonds, high yield bonds have a higher risk of default. However, studies by academics and investment bankers show that from 1977 to 1987 high yield bonds have provided investors higher net returns than these other investments because their relatively high yields have outweighed the additional losses from default. (See pp. 21-25.)

GAO found that not much data were available from the FHLBB or from thrifts regarding how the risks and returns on high yield bonds compare to other thrift assets. GAO did, however, obtain and analyze a study by Wharton Econometric Forecasting Associates which showed that, from 1985 to 1987, returns on high yield bonds were second only to credit cards and ahead of residential mortgage lending, commercial and consumer loans, and Treasury and investment grade bonds. The study also showed that credit losses on high yield bonds were greater than on other assets except for credit cards, but the higher losses were outweighed by higher yields. The study had certain data limitations and cannot be used to predict future trends of asset risk and returns during a recession or sluggish economic growth. However, its conclusions were supported by testimony at a GAO March 1, 1988, public hearing and by information GAO obtained during visits to the major thrift investors in high yield bonds. (See pp. 34-37.)

High Yield Bonds Have Not Caused the Current Thrift Industry Problems

A review of FHLBB data and discussions with its officials showed only one case in 1985 where high yield bond investments appeared to have been a factor in a thrift failure. However, in that case, mismanagement of the institution's high yield bond portfolio was only one part of a broader pattern of unsafe lending and investment practices leading to the institution's collapse. (See pp. 46-48.)

High yield bond portfolios for the 11 thrifts GAO visited had default rates of about 2 percent on bond holdings totaling over $9 billion as of March 1, 1988. After actual and estimated recoveries, the thrifts expected total losses of about $73 million, or less than 1 percent of the portfolio. (See pp. 31-33.)

Current Bond Market Has Not Been Tested in Recession

Proponents of high yield bonds have pointed to the 1981 to 1982 recession as proof that the bonds can survive in bad economic times. However, since then the size of the market expanded significantly from $19 billion in bonds outstanding in mid-1982 to $159 billion by mid-1988. In addition, in the mid-1980s high yield bonds began to be used to finance mergers and acquisitions, leveraged buyouts, and financial restructurings. These changes in the market occurred during an unprecedented peacetime economic expansion, and many market observers point out that the market in its present size and form has not weathered a recession that could test many issues. (See pp. 25-27.)

FHLBB Increasing Oversight Over High Yield Bonds

In January 1989 FHLBB issued final guidelines for federally insured thrifts to use in purchasing and managing high yield bond investments. These standards were under review and consideration for nearly a year. The guidelines prohibit insolvent thrifts from making any new investment in high yield bonds and provide that institutions that are solvent but undercapitalized may make new investments in high yield bonds only with the approval of FHLBB. The guidelines also state that a thrift's board of directors is responsible for establishing and maintaining a high yield bond investment policy that is consistent with the safe and sound operation of the institution, provides guidance for diversifying the high yield bond portfolio, outlines the standards thrifts should use in carrying out a credit analysis of the bond, and provides guidance for thrifts to follow in establishing adequate loss reserve allowances.

FHLBB also is in the process of developing a program to uniformly classify high yield bonds held by thrifts and identify those for which a loss reserve allowance should be established. (See pp. 43-46.)

Recommendations

GAO is not making recommendations in this report.

Agency Comments

Officials of the Securities and Exchange Commission, FHLBB, the Comptroller of the Currency, the Federal Reserve System, the Federal Savings and Loan Insurance Corporation, the Federal Deposit Insurance Corporation, the Department of the Treasury, and the Department of Labor received a draft of this report for informal comment. Only the Federal Reserve and FHLBB had comments.

At the Federal Reserve's suggestion, the report was revised to reflect the Federal Reserve's concern that the heavy reliance by corporations on debt financing, including high yield bonds, for mergers and leveraged buyouts raises risks for borrowers and lenders.

FHLBB stated that the report was generally accurate, unbiased, and a fair representation of thrift investment and FHLBB regulation of that investment. It suggested certain changes to improve the report's accuracy, which have been incorporated.

Contents

Abbreviations

FRS	Federal Reserve System
FHLBB	Federal Home Loan Bank Board
FSLIC	Federal Savings and Loan Insurance Corporation
GAO	General Accounting Office
LBO	Leveraged Buyout
OCC	Office of the Comptroller of the Currency
ORA	Office of Regulatory Activities
SEC	Securities and Exchange Commission
S&P 500	Standard and Poor's index of 500 widely held common stocks
WEFA	Wharton Econometric Forecasting Associates

Introduction

Section 1201 of the Competitive Equality Banking Act of 1987 (Public Law 100-86) directed us to study the high yield, non-investment grade bond market. More specifically, we were directed to focus our study on congressional concerns about the rapid growth of this market and its connection to hostile corporate takeover attempts, as well as the potential threat that investments by federally insured thrifts in high yield bonds might have on the financial stability of the Federal Savings and Loan Insurance Corporation (FSLIC) and the thrift industry as a whole. The act also directed us to determine the impact of high yield bonds on corporate debt as it relates to monetary policy.

We reported on the growth of the high yield bond market and its connection to hostile corporate takeovers in February 1988.[1] In addition, in May 1988, we published a transcript of a March 1, 1988, hearing held jointly by our office and several federal agencies on the high yield bond market.[2] This report focuses on high yield bonds as investments for federally insured thrift institutions. It also comments on the effects of high yield bond use on federal monetary policy.

What Are High Yield Bonds?

Most publicly traded corporate bonds receive credit risk ratings from major bond rating agencies such as Moody's and Standard & Poor's. The ratings reflect expectations of the ability of the issuer of the bonds to repay principal and pay interest in accordance with the terms of the bond. Moody's ratings range in nine categories from Aaa, the highest rating, to C, the lowest. Standard & Poor's labels its nine categories somewhat differently with a top bond rating of AAA and the lowest rating also a C. Standard & Poor's adds another rating, D, for bonds that have defaulted.

Bonds in the four highest rating categories of both agencies are referred to as "investment grade" bonds. This grouping includes bonds with a Moody's rating of Aaa through Baa or a Standard & Poor's rating of AAA through BBB. Bonds in the lower rating categories are referred to as below investment grade bonds, speculative grade bonds, junk bonds, or, because they normally provide higher yields than investment grade bonds, high yield bonds. High yield bonds also include nonrated bonds,

[1] Financial Markets: Issuers, Purchasers, and Purposes of High Yield, Non-Investment Grade Bonds (GAO/GGD-88-55FS, Feb. 29, 1988).

[2] High Yield Bonds: Nature of the Market and Effect on Federally Insured Institutions (GAO/GGD-88-75, May 1988).

which have similar characteristics to bonds with below investment grade ratings.

Evolution of the High Yield Bond Market

Until the late 1970s, the high yield bond market consisted primarily of "fallen angels," bonds that had lost their investment grade rating because the issuing companies' financial condition and performance had deteriorated. In about 1977, the high yield bond market began to grow. Small- and medium-sized companies that had previously obtained long-term capital from traditional sources—commercial banks, equity markets, and the private placement market—began to raise capital by issuing bonds with a below investment grade rating. These bonds are called original issue high yield bonds. This change occurred, according to some observers, because these companies found that high yield debt was a cheaper and less restrictive way to raise capital than the traditional sources, primarily bank loans.

Between 1978 and 1984, the amount of high yield bonds issued each year rose from $1.5 billion to $15.7 billion. In the mid-1980s, high yield bonds became a popular method of financing corporate restructuring and takeover activity, and the market grew even more, to $31.3 billion in high yield bonds issued in 1987. By mid-1987, according to one study, fallen angels, which 10 years before had represented most of the market, comprised only about 28 percent of the high yield bond market. Bonds issued by companies to finance growth represented about 20 to 25 percent; and financial restructuring issues, such as leveraged buyouts (LBO),[3] merger and acquisition financing, recapitalization, and distressed exchanges of debt,[4] were estimated to account for about 50 percent of the market.

According to investment bankers, the primary purchasers of high yield bonds are mutual funds and insurance companies that each hold about 30 percent of bonds outstanding, followed by pension funds and individuals, estimated to hold 10 percent each, and thrifts with 7 percent. Thrifts have been permitted to invest in high yield bonds under the Garn-St Germain Depository Institutions Act of 1982 (Public Law 97 -

[3]In an LBO, a small group of investors acquires a company or a subsidiary of a large corporation through a transaction financed mainly by debt. This debt is normally collateralized with the assets and cash flow of the acquired company.

[4]A distressed exchange of debt is an exchange of one security for another to avoid default. According to Drexel Burnham Lambert, usually the new security contains features designed to convince existing debt holders to accept the new debt, such as higher coupons, shorter maturities, greater seniority, and, in some cases, more collateral.

320), as well as the Federal Home Loan Bank Board's (FHLBB) interpretation of the commercial lending authority granted to thrifts. The amount thrifts can invest varies depending on whether they are state or federally chartered. Commercial banks are discouraged by their regulators from investing in high yield bonds because of Comptroller of the Currency, Federal Reserve Board, and Federal Deposit Insurance Corporation regulations.

Objectives, Scope, and Methodology

This report completes our response to the Competitive Equality Banking Act of 1987 requirements. As required by the act, this report discusses the effect of high yield bond debt on monetary policy, compares the risks and returns of high yield bonds to other investments made by thrifts, and summarizes state laws on high yield bond investments by financial institutions. It also presents the policies and procedures used by thrifts to invest in high yield bonds and discusses FHLBB oversight of high yield bond investment.

To gather the information necessary for the report, we discussed thrift investment in high yield bonds and the regulation of these investments with representatives from the FHLBB's Office of Policy and Economic Research and its Office of Regulatory Activities (ORA); examiners and supervisory agents from the Federal Home Loan Banks in San Francisco, Atlanta, Dallas, and New York; officials from 11 federally insured thrifts; and other experts in the industry. We reviewed and analyzed data FHLBB provided us on high yield bond investments by thrifts from June 1985 to September 1988, the latest data available, and examination reports pertaining to the thrifts we visited. We also reviewed and analyzed information on the high yield bond market provided to us by investment bankers. We reviewed published studies of the high yield bond market by the academic community and discussed the results of these studies with the authors.

We visited the 11 federally insured thrift institutions to determine why these thrifts purchase high yield bonds and how they manage their portfolios. We initially selected the thrifts to visit because, according to FHLBB data, they either ranked in the top 10 thrift institutions holding high yield bonds as of June 30, 1987, or reported more than 10 percent of their assets invested in high yield bonds. We added an institution that later became a major high yield bond investor and did not visit two institutions that we initially selected. We decided not to visit one of the two institutions because it was not near the others we selected; the second institution did not respond to our contacts.

At each thrift, we obtained information on high yield bond investments, including the portfolio composition, investment policies and practices, and default experience. We did not determine whether the thrifts adhere to their stated investment policies, nor did we evaluate the quality of their high yield bond portfolios. The thrifts we visited are in California, Texas, Florida, and New Jersey. The Federal Home Loan Banks we visited are responsible for oversight of these thrifts.

We contacted thrift regulatory officials in all 50 states to obtain information on the laws in each state that regulate investments in high yield bonds by state chartered institutions. We also discussed the growth of the high yield bond market and its effect on federal monetary policy with officials from the Federal Reserve System (FRS) and reviewed data on corporate debt growth that was provided us by FRS officials.

This report includes data that compare estimated net returns for various kinds of thrift investments, including high yield bonds. This data was obtained from a Wharton Econometric Forecasting Associates (WEFA) study of high yield bond risks and returns compared to other investments. The study was prepared for the Alliance for Capital Access, an organization representing the interests of high yield bond issuers and investors. We reviewed the methodology and assumptions that WEFA used to make its calculations, but we did not test their accuracy. As discussed in chapter 4, the WEFA report has certain shortcomings and limitations.

For the public hearing held on March 1, 1988, we solicited and obtained comments from market experts and interested observers on the nature of the high yield bond market and on several major issues, including the riskiness of high yield bonds compared to other investments, the purposes for which high yield bonds are issued, whether high yield bonds are appropriate investments for thrift institutions, whether more regulation of this investment activity is needed, and the role of high yield bonds in increased corporate leverage. The comments and testimony of the hearing witnesses have been incorporated where appropriate into this report.

We did our work between August 1987 and February 1989 and in accordance with generally accepted government auditing standards. Officials of the Securities and Exchange Commission, FHLBB, the Comptroller of the Currency, the FRS, the Federal Savings and Loan Insurance

Corporation, the Federal Deposit Insurance Corporation, the Department of the Treasury, and the Department of Labor received a draft of this report for informal comment. Only the FRS and FHLBB had comments.

At the FRS's suggestion, the report was revised to reflect the FRS' concern that the heavy reliance by corporations on debt financing, including high yield bonds, for mergers and LBOs raises risks for borrowers and lenders.

FHLBB stated that the report was generally accurate, unbiased, and a fair representation of thrift investment and FHLBB regulation of that investment. It suggested certain changes to improve the report's accuracy, which have been incorporated.

In addition, we provided relevant portions of the draft to Dr. Altman of New York University, Drs. Blume and Keim of the University of Pennsylvania's Wharton School, First Boston, and WEFA for comment as we had used statistical data from each of them in our study. We incorporated their technical comments where appropriate.

High Yield Bonds Have Not Directly Affected Monetary Policy

FRS staff told us that the growth of the high yield bond market has had no direct effect on the implementation of monetary policy. However, they said high yield bonds may indirectly relate to monetary policy to the extent that (1) they are a component of domestic nonfinancial debt, a measure of debt that is monitored by the FRS, and (2) the heavy reliance on debt financing, including high yield bonds, for mergers and LBOs raises risks for borrowers and lenders.

The extent to which the growth of the high yield market has added to total nonfinancial corporate debt is unclear. In some cases, high yield bonds have substituted for other credit sources. However, in others, the availability of high yield bond financing likely made possible deals involving large amounts of bank debt as well. Since 1983, high yield bonds have represented an increasing share of total corporate debt, while bank loans have decreased on a percentage basis. However, numerous factors, including interest rate developments and expectations regarding the business cycle, may also cause the ratio of bonds to total corporate debt to vary.

High Yield Bonds as a Part of Corporate Debt Are of Growing Concern

The high yield bond market grew from $9 billion in bonds outstanding in mid-1977 to approximately $159 billion by mid-1988. Despite this growth, high yield bonds are still a relatively small part of the total domestic nonfinancial debt.[1] According to FRS data and our calculations, as of the third quarter of 1988, high yield bonds represented only about 1.8 percent of total domestic debt. However, high yield bonds have represented an increased share of corporate debt, rising from 1 percent in 1977 to 9 percent in 1988.

FRS staff told us that the expanding volume of high yield bonds reflects, in part, both direct and indirect effects of merger and LBO activity. They stated that many firms whose debt previously was rated investment grade had ratings lowered largely as a result of high debt ratios and the effects of financial restructuring. These "fallen angels" indirectly add to the universe of high yield bonds outstanding. FRS staff also said that the high yields offered on low-rated bonds have attracted investors to these instruments; the greater liquidity of this market has made financing of mergers and LBOs easier and has provided some small- and medium-sized firms access to long-term capital markets.

[1]Total domestic nonfinancial debt as defined by the FRS includes various components of which corporate nonfinancial debt is a part. Total domestic nonfinancial debt is monitored by the Federal Open Market Committee of the FRS, which sets monetary policy.

The growth of the high yield bond market has no direct effect on the implementation of monetary policy, according to FRS staff. However, they stated they are concerned about the increased risks that heavy reliance on debt financing associated with mergers and LBOs pose for both borrowers and lenders. In congressional testimony given in February 1989, the Chairman of the Federal Reserve said the increased use of debt makes the corporate sector, especially cyclically sensitive industries, more vulnerable to an economic downturn or a rise in interest rates. He said about two-fifths of merger and acquisition activity, as well as LBOs, have involved companies in cyclically sensitive industries.

The Chairman also said the financial stability of some lenders could also be affected. He noted that many lenders to leveraged enterprises are mutual funds, pension funds, and insurance companies—lenders that can most easily absorb losses without major systemic consequences. These institutions generally have well diversified portfolios and experience with securities involving risk. However, the Chairman said he is worried about the extent to which such debt is held by individual institutions that are not well diversified.

The Relationship of High Yield Bonds to Growth in Corporate Debt Is Unclear

FRS staff told us that it is not clear to what extent growth of the high yield bond market represents the addition of new debt by businesses or a shifting of debt from one type to another. It appears, however, that both factors are involved. They stated that in many cases, low-grade bonds have substituted for other credit sources, such as bank loans. In other cases, however, the ability to use high yield bonds, particularly in mergers and LBOs, likely has made possible some deals that also involve large amounts of bank debt as well.

Our analysis of the 1986 LBO of Safeway Stores Inc. for $4,195 million provides an example of the importance of high yield bonds in LBO financing. Initially $2,720 million of the LBO financing came from bank loans; $1,025 million, from high yield bonds; $320 million, from a partnership bridge loan; and $130 million, from a stock issuance. High yield bonds constituted 24 percent of the deal. After the acquisition, Safeway issued an additional $1 billion in high yield bonds to refinance some of the debt. In the final analysis, high yield bonds constituted 48 percent of the LBO financing.

Table 2.1 illustrates the growth of the high yield market compared to the growth of total corporate debt.

Table 2.1: Corporate Debt Outstanding by Type, 1977 to 1988

Dollars in billions

Year	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Investment grade bonds[a]	$291	$311	$327	$351	$371	$389	$395	$428	$484	$571	$627	$683
Percent of total	46%	44%	42%	42%	40%	40%	39%	36%	36%	38%	38%	38%
High yield bonds	$9	$9	$11	$15	$17	$19	$28	$42	$59	$93	$137	$159
Percent of total	1%	1%	1%	2%	2%	2%	3%	4%	4%	6%	8%	9%
Bank loans	$155	$175	$204	$226	$252	$294	$306	$352	$375	$418	$415	$444
Percent of total	24%	25%	26%	27%	27%	30%	30%	29%	28%	28%	25%	25%
Other debt[b]	$184	$210	$231	$237	$285	$265	$294	$376	$416	$423	$486	$516
Percent of total	29%	30%	30%	29%	31%	27%	29%	31%	31%	28%	29%	29%
Total nonfinancial corporate business debt	**$639**	**$706**	**$774**	**$828**	**$925**	**$966**	**$1,023**	**$1,197**	**$1,334**	**$1,506**	**$1,664**	**$1,802**
Percent total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes

[a]Includes all corporate bonds except high yield, noninvestment grade bonds.

[b]Other debt is defined as the sum of tax-exempt debt, mortgages, loans from foreign sources, commercial paper, acceptance liability to banks, nonbank finance loans, and U.S. government loans.

Percentages may not equal 100 percent and figures may not equal totals due to rounding.

Figures are year end except for high yield bonds, and 1988. High yield bond figures are mid- year; 1988 figures are from the third quarter.

Sources: Flow of Funds Accounts, First Quarter 1988, as published by the Federal Reserve System, and Measuring Corporate Bond Mortality and Performance, by Edward I. Altman, Professor of Finance, New York University, February 1988.

Two witnesses at our March 1988 hearing said that part of the growth of the high yield bond market represented a shifting of borrowers from privately financed transactions with banks and insurance companies to the bond market. The shift occurred, according to a witness at our hearing, because high yield bonds provided fixed-rate, long-term capital that banks were unwilling or unable to provide.

Our analysis of FRS data indicated that, between 1983 and 1988, high yield bonds grew as a percentage of total corporate debt outstanding from 3 percent to 9 percent. During the same period, bank loans decreased from 30 percent to 25 percent of corporate debt. As shown by table 2.1, between 1977 and 1984, investment grade bonds actually decreased as a percentage of corporate debt while bank loans increased. However, beginning in 1985, 1 year after the high yield bond market greatly expanded, bonds as a percent of corporate debt increased while bank loans and other debt decreased. During the same time period, high yield bonds also took a larger share of the total corporate bond market rising from 3 percent of the value of corporate bonds outstanding in 1977 to about 19 percent in 1988.

According to FRS staff, numerous factors affect corporate decisions to rely on bank loans and short-term sources of funds or to rely on long-term debt such as bonds for financing. These factors include the relative costs of such funds, the outlook for interest rates, and types of outlays to be financed. Thus, the ratio of bonds to total debt tends to vary in response to business cycle events and interest rate developments.

Risks and Returns of High Yield Bonds and Other Investments

There are three major types of risk associated with high yield bonds: the risk that the issuer of the bond will default on required principal and interest payments, the risk that the value of the bond will decline because of increasing interest rates or decreasing bond ratings, and the risk that the investor will not be able to readily sell the bond for a reasonable price.

Since 1977, high yield bonds have provided investors yields that appear to have compensated them for the additional risks of default associated with these bonds. In addition, studies of the high yield market show that for the past 10 years, total returns on these bonds, including interest income and changes in principal value, have been greater than total returns on Treasury bonds and investment grade bonds. However, in some years, high yield bond returns have been exceeded by the returns of these other investments. In general, high yield bonds are less liquid than Treasury bonds and investment grade bonds, but there is a secondary market for high yield bonds and many issues are actively traded. Most high yield bonds are more liquid than commercial and consumer loans.

Despite the performance of the high yield bond market to date, many observers, including supporters of the high yield bond market, caution that the market's growth paralleled a long economic expansion. They point out that the market has not weathered an economic recession that may test many issues, especially those used to finance highly leveraged corporate restructurings, which have come into increased use in the past few years. Many of the bonds that have financed LBOs and restructurings have not been on the market long enough for their performance to be fully evaluated.

Default Risk

Most of the concerns about the riskiness of high yield bonds and their appropriateness as an investment for thrift institutions center on credit quality and the likelihood of losses from default due to nonpayment of interest and principal. In contrast to Treasury obligations, which have no default risk, high yield bonds do carry the risk of default. In this respect, they are similar to loans.

Default risk is measured by calculating default rates on an average annual basis. Yearly rates are combined and averaged over a period of years to form the estimate for the average annual rate. The yearly rate is calculated from the dollar amount of defaulting issues in the year divided by the total amount of high yield bonds outstanding as of some point during that year.

Bond analysts have recognized that this approach, which measures only the total value of defaulted bonds, actually overstates the loss to investors because, even after default, bonds usually retain some percentage of their original value. In addition, some analysts believe the effects of distressed exchange offers—exchanges of one bond issue for another to relieve financially distressed issuers—should be included in the default rate. The same analysts also believe that defaulted fallen angels should be separated from original issue high yield bonds to more accurately reflect default rates from these two kinds of high yield bonds. Data compiled by the investment banking firm, First Boston, indicate that default rates on bonds originally issued with a non-investment grade rating are lower than default rates on bonds that later drop into that category (fallen angels).

Regardless of the computation method used—either default rates based on the value of bonds defaulting or the actual percentage of principal and interest loss to investors—the results vary substantially from year to year with no clear up or down trend. Table 3.1 shows both methods as calculated by Edward I. Altman, a professor of finance at New York University. First Boston calculated only the percentage of actual principal and interest loss to investors.

Altman's calculations show that on average, the default rate (the value of defaulted bonds compared to the total bonds outstanding) over the 11-year period, 1977 to 1987, was slightly more than 2 percent. However, the actual loss to investors was less because defaulting bonds seldom lose all their value. For 1982 to 1987, the period for which Altman had calculated actual loss data, the actual loss of principal and interest on defaulting bonds was about 1.35 percent.

First Boston's calculations result in somewhat higher rates than Altman's, primarily because First Boston includes exchange offers in the calculations. For the 12-year period between 1977 and 1988, First Boston found that actual losses of principal and interest on defaulting bonds and exchange offers averaged 1.63 percent.

Table 3.1: High Yield Bond Default Calculations, 1977-1988

	Altman		First Boston
Year	Default rate[a]	Loss to investors[b]	Loss to investors[c]
1977	4.49%	NC	3.64%
1978	1.27	NC	0.99
1979	0.19	NC	0.21
1980	1.48	NC	1.07
1981	0.16	NC	0.76
1982	3.12	2.05%	3.62
1983	1.07	0.54	0.55
1984	0.83	0.46	0.50
1985	1.68	1.02	1.55
1986	3.39	2.40	2.64
1987	5.12[d]	1.65	1.88
1988	NC	NC	1.33
Average rate	2.07[e]	1.35	1.63[f]

Notes: NC = Not calculated

[a]Default rate calculated by dividing the par value of the defaulting high yield bond by the par value of high yield bonds outstanding.

[b]Dr. Altman's calculations account for residual value of defaulted bonds to determine actual loss.

[c]First Boston's default rate calculations used market value of bonds as opposed to par value to determine actual loss.

[d]Rate would have been about 1 percent without Texaco Inc. and affiliates default of $1,345 billion. Virtually all of these bonds were originally issued as investment grade.

[e]Rate would have been 1.69 percent without Texaco.

[f]Rate would have been 1.15 percent without Texaco and other "fallen angel" defaults.

Source: Measuring Corporate Bond Mortality and Performance, Edward I. Altman, Professor of Finance, New York University, February 1988, and additional data supplied by Dr. Altman in September 1988.

High Yield Handbook, The First Boston Corporation, January 1988, and additional data supplied by First Boston's high yield research group in February 1989.

Price Risk

The risk that the price, or value, of the bond will go down is especially important to the investor who does not plan to hold a bond to maturity. Bond prices vary according to measurable factors, such as interest rates and credit risk, and immeasurable factors, such as market psychology. We discuss only the measurable factors in this section but recognize that immeasurable factors, such as economic uncertainty and investor fears like those after the October 1987 stock market crash that depressed high yield bond prices, can be equally, if not more, significant.

High yield bond prices, like the prices of other bonds, are usually inversely related to interest rates. Thus, when interest rates increase, bond prices fall and when interest rates decrease, bond prices rise. However, studies of the high yield bond market have shown that high yield bond prices are less sensitive to interest rate changes than the prices of Treasury bonds because, assuming no default occurs, high yield bond investors get their initial investment back more quickly (see p. 24). As a result, their interest rate risk is less than for Treasury securities that tend to have wider price swings as interest rates change.

Bond prices are also affected by the creditworthiness of the issuer. If the credit rating of the issuer goes down, so will the price. Creditworthiness is not a consideration for Treasury obligations, but deteriorating credit quality of either an investment grade or high yield bond issuer will result in a rating downgrade and a decline in the price of the bond. We did not study the effect of rating downgrades on bond prices. However, one investment banking firm estimated that a downgrade from investment to high yield status could translate into a 10- to 15-percent price decline.

Unlike many high yield bonds, investment grade bonds often do not have covenants that protect against the issuer embarking on a policy, such as an LBO, massive acquisition, or takeover, that would result in a lower bond rating and loss in bond value. In one recent example, the announcement of a $20-billion proposed management buyout of RJR Nabisco resulted in a 1-week loss of $134 in the price of a $1,000 RJR Nabisco bond because the buyout would be financed with new high yield debt that makes the old debt worth considerably less. Data obtained from Standard & Poor's shows that between 1982 and 1986, 135 bond issues that originally had an investment grade rating were downgraded to high yield status or became fallen angels.

Lower ratings are also a problem for high yield bond holders. Between 1982 and 1986, 353 high yield issues were also downgraded. The total of 488 downgrades far exceeds the 189 high yield bond issues upgraded between 1982 and 1986, indicating a general decline in credit quality of corporate bonds during this period.

Liquidity Risk

The risk that investors will not be able to sell a bond when they want to at a reasonable price is liquidity risk. The existence of a secondary market in which trades are made with small bid-asked spreads through numerous dealers indicates that a particular type of security is liquid.

The lack of a secondary market, or a market that relies on only a few dealers, indicates that liquidity is limited.

Liquidity can be affected by specific security factors. In the case of high yield bonds, for example, holding small issues (under $25 million) or a controlling interest (10 percent or more) in an issue may reduce portfolio liquidity. Also, private placements may be very illiquid. However, the traditional illiquidity of the private placement market can be significantly reduced by the inclusion of registration rights.[1]

A secondary market exists for high yield bonds, and many of the more widely held and better known high yield bonds trade on the New York Stock Exchange. Secondary market activity varies; for example, Drexel Burnham Lambert estimated that daily trading volume ranges between $1 billion and $5 billion. FHLBB officials told us that high yield bonds are less liquid than Treasury bonds, investment grade bonds, and municipal bonds but more liquid than commercial and consumer loans. Officials of several thrifts we visited also said that high yield bonds offer greater liquidity than most categories of loans, especially if appropriate investment strategies are followed. For example, one thrift's officials told us they reduce the liquidity risk of high yield bonds by (1) only buying issues with at least two market makers, (2) limiting purchases to bond issues of more than $100 million, (3) not buying more than 5 percent of any issue, and (4) restricting purchases of private placements to those that would be registered with the Securities and Exchange Commission (SEC) and publicly traded.

Measuring Yields and Returns of High Yield Bonds

Two ways to measure high yield bond performance are (1) by comparing yields and default losses at a point in time to other investments and (2) by comparing total rates of return, which account for bond price changes over time, to other investments. Available data show that, to date, the yields on high yield bonds have exceeded the risks of default and that total returns over an 11-year period have been greater than Treasury and investment grade bonds. Since 1982, however, the annual rates of return on Treasury and investment grade bonds exceeded the rate of return on high yield bonds in 4 of 6 years because of the effect of declining interest rates on bond prices.

[1] Registration rights require the issuer to register the security with the Securities and Exchange Commission, usually within 6 to 9 months of issuance. Once the registration is effective, any new buyer will be purchasing a publicly, rather than privately, traded security, making the issue much more liquid.

Yields Have Exceeded Risk

The difference in yields between high yield bonds and other bonds is called a yield spread or "risk premium." According to officials of one investment banking firm, the size of the yield spread can be affected by a number of factors, including perceived credit risk, bond characteristics such as the stated interest rate, the duration of the bond, whether the bond can be redeemed or called before its maturity date by the issuer, covenants or conditions under which the bonds are issued, economic outlook, and the supply and demand of bonds. This firm's officials also said that spreads have had a tendency to widen during periods of high interest rates and during economic recessions.

Major events that affect the high yield bond market also affect yield spreads. For example, the July 1986 bankruptcy and default by the LTV Corporation on over $2 billion in high yield bonds and the November 1986 disclosure of the Ivan Boesky insider trading scandal each resulted in a widening of the yield spreads and a reduction in high yield bond prices. The October 1987 stock market crash also resulted in widened yield spreads as investors left riskier investments in what some observers referred to as "a flight to quality." In each case, yield spreads narrowed shortly after the event occurred.

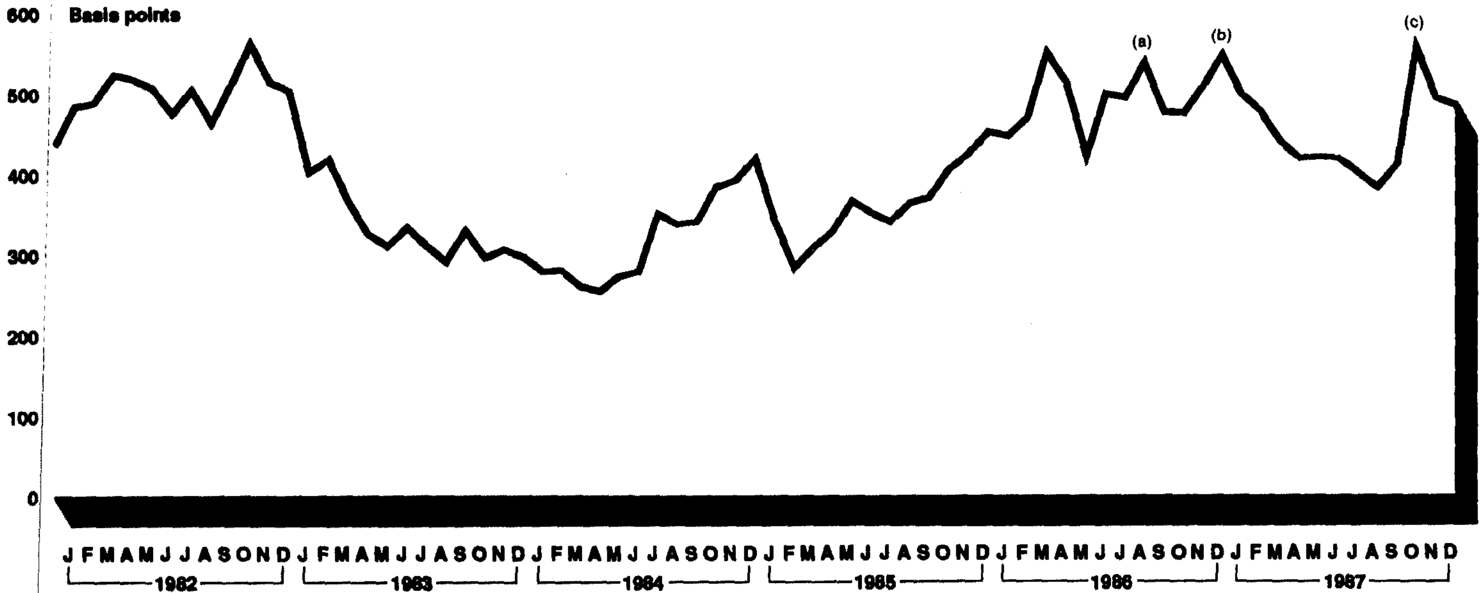
According to data compiled separately by Drexel Burnham Lambert and Dr. Altman, the yield spread on high yield bonds between 1982 and 1987 averaged about 411 basis points[2] over comparable Treasury bonds. During the same time, data supplied by Dr. Altman indicated that the average net loss due to defaults was about 135 basis points. The difference, 276 basis points, represents the additional earnings investors made by investing in high yield bonds as opposed to Treasury bonds. Figure 3.1 illustrates that between January 1982 and December 1987 the yield spread of high yield bonds ranged between 260 and 560 points over Treasury bonds.

The reasons high yield bonds have provided yields greater than their implied risk are not completely clear. One expert on the high yield market suggested a number of possible reasons, including the following:

- The market has been mispricing the bonds; in other words, it has been inefficient.

[2] A basis point is one one-hundredth of a percentage point; consequently, 411 basis points equals 4.11 percent.

Fig 3.1: High Yield Bond Spreads Over U.S. Treasury's, 1982-1987



[a] LTV bankruptcy, July 1986.

[b] Boesky insider trading scandal, December 1986.

[c] Stock market crash, October 1987.

Source: Drexel Burnham Lambert.

- The demand for high yield bonds has been artificially reduced because some classes of institutions, such as commercial banks, are restricted from investing in them.
- The high yield market is young compared to the market for investment grade bonds and must offer very attractive yields to secure capital.
- The yield spread includes a premium for liquidity risk.
- Issuers have been optimistic about what they could earn on their new investments, especially LBOs, and have been willing to pay relatively high rates.

In addition, a portion of the yield spread probably reflects some expected future decline in the economy. However, the economy has continued its unprecedented peacetime expansion.

Interest Rate Changes Affect Total Returns

We found two studies that compared the annual rates of return on high yield bonds to other investments. One, by Dr. Altman, compared rates of return on high yield bonds to long-term U.S. Treasury bonds. The other, by Drs. Marshall E. Blume and Donald B. Keim of the University of Pennsylvania's Wharton School, compared high yield bond returns to investment grade bonds and to Standard and Poor's index of 500 widely held common stocks (S&P 500). Table 3.2 summarizes the results of these studies.

Table 3.2: Annual Rates of Return of High Yield Bonds and Other Investments

	High yield bond returns		Long-term U.S. Treasury bonds	Investment grade bonds	S&P 500
	Altman	Blume-Keim	(Altman)	(Blume-Keim)	(Blume-Keim)
1977	NC	11.5%	NC	1.7%	−7.2%
1978	7.57%	−1.3	−1.11%	−0.1	6.6
1979	3.69	2.6	−0.86	−4.2	18.4
1980	−1.00	1.1	−2.96	−2.6	32.4
1981	7.56	8.0	0.48	−1.0	−4.9
1982	32.45	32.8	42.08	43.8	21.4
1983	21.80	19.5	2.23	4.7	22.5
1984	8.50	9.4	14.82	16.4	6.3
1985	22.51	22.8	31.54	30.9	32.2
1986	16.09	13.3	24.08	20.6	18.5
1987	4.67	1.6	−2.67	1.5	5.2

Note: NC = Not calculated.

Table 3.2 shows that there are differences between the high yield return rates calculated by Dr. Altman and Drs. Blume and Keim. However, both studies show the same result: high yield bonds outperformed both Treasury and investment grade bonds between 1979 and 1981 and in 1983 and 1987 but underperformed them in 1982 and 1984 through 1986.

The primary reason, according to both Dr. Altman and Drs. Blume and Keim, is that the prices of high yield bonds are not as sensitive to interest rate changes as are Treasury and investment grade bonds. This is because, assuming no default occurs, investors get their initial investment back quicker with high yield bonds. As a result, when interest rates rise causing bond prices to fall, high yield bond prices do not fall as much as government bonds or investment grade corporate bond prices. Consequently, high yields outperform these bonds when interest rates are rising as in 1978 to 1981, 1983, and 1987. Conversely, when interest rates fall, high yield bonds underperform Treasury and investment grade bonds because high yield bond prices do not rise as much as the prices of these bonds.

Although high yield bonds have been outperformed in certain years by other investments, both the Altman and Blume-Keim studies show that over a period of years, high yield bonds have outperformed other types of bonds. The Blume-Keim study shows, for example, that compound annual returns on high yield bonds were 10.4 percent between January 1977 and December 1987 compared to 9.5 percent for investment grade bonds. Altman's work showed that compound average annual returns on high yield bonds were about 12 percent between 1978 and 1987 compared to about 9.7 percent on long-term U.S. Treasury bonds, or more than 2 percent a year.

Past Success of the High Yield Bond Market Does Not Guarantee Future Performance

Many observers of today's high yield bond market caution that the performance of high yield bonds could be rigorously tested in a recession. For example, several witnesses at our March 1, 1988, high yield bond hearing expressed caution concerning the high yield bond market. Proponents of high yield bonds point to the recession that occurred in the early 1980s as evidence that the market can withstand an economic downturn. However, the high yield market then was much smaller than it is now and did not include the financial restructuring issues that are a part of today's market.

A Standard & Poor's official testified at our hearing that one distinguishing characteristic of the current market is the large number of issues resulting from LBOs, recapitalizations, and acquisitions. This official observed that although these transactions had not resulted in defaults at that time,[3] most LBOs and recapitalizations were consummated between 1985 and 1987 and have not been tested by an adverse business or financing environment.

Similar views have been expressed by some investment bankers. In its March 1988 publication on the high yield bond market, Morgan Stanley stated that

> "to date, the boom in leveraged buyout and recapitalization activity has not led to the widespread financial distress predicted by some pundits. The next recession will

[3]Revco defaulted after March 1, 1988. (See p. 27.)

test restructured companies more arduously, however, and we believe selection of bonds will be critical to investors' performance at that time."[4]

First Boston also cautioned investors to examine more than default rates. Noting that the universe of debt issues has undergone dramatic change with the large increase in both fallen angels and underwritten high yield issues, First Boston reported in January 1988:

"To assume that future default rates will resemble the pattern of the past may be misleading. New systematic and specific risks have been created by the wave of leveraged acquisitions and the general increase in leverage of corporations in both low and high grade sections."[5]

The U.S. League of Savings Institutions also testified at our hearing on the limitations of existing evidence of high yield bond performance. The League's testimony stated that the history of the high yield bond market, beyond that of the traditional fallen angels, is relatively short and the market, at its present size, has not weathered a full business cycle. The League commented that while existing studies of default risk indicate that returns have adequately compensated investors for risk, these studies implicitly assume a strict "buy and hold" strategy. In light of the increasing numbers of LBOs where debt service and retirement may depend on extensive asset redeployment, the past record of high yield bond returns more than compensating investors for default risk may not be relevant.

We agree that past experience may not provide an accurate indication of the future performance of the high yield bond market, especially during an economic recession. Most experts agree that high yield bond default rates, as well as those of other investments, will probably increase during an economic downturn. As noted in table 3.1, default rates and returns varied considerably from year to year, even as the economy expanded from 1982 to 1987. Also, most of the growth and change in the market, including the increased use of high yield bonds to finance LBOs, recapitalizations, and acquisitions, has taken place since the last recession in 1981 and 1982, with most large deals involving high yield bonds occurring only in the last few years.

[4]High Performance, The Magazine of High Yield Bonds, ed. Martin Fridson (Morgan Stanley & Co., Inc., Mar. 1988).

[5]High Yield Handbook, The First Boston Corporation (Jan. 1988).

According to Standard & Poor's, between the beginning of 1972 and March 1988, 142 companies defaulted on their investment and non-investment rated, publicly traded bonds. Highly leveraged acquisitions contributed to 25 defaults, and none were LBOs. However, in July 1988, Revco D.S., a drugstore chain taken private in a $1.3-billion LBO in December 1986, filed for bankruptcy. This action was about 3 months after Revco stopped making payments on the high yield bonds used to finance the buyout. According to analysts, the bankruptcy occurred because (1) required interest payments left the company pressed for cash, (2) projected sales and profits did not materialize, and (3) sales of assets to repay debt did not occur as planned.

Thrift Investment in High Yield Bonds

Thrift investments in high yield bonds have more than doubled between December 1985 and September 1988. However, only about 5 percent of thrifts invest in high yield bonds, and about 76 percent of high yield bond investments are concentrated in 10 institutions. Federal regulations limit federally chartered thrift investment in high yield bonds to 11 percent of their assets, but several state laws are more lenient. Thrift officials we visited said their institutions invest in high yield bonds primarily because the returns are high. They also said high yield bond investments can be an easy and less risky way to do commercial lending, can allow an institution to diversify its assets, and can offer protection against falling interest rates. The data needed to compare the risk-adjusted returns of various thrift investments were limited. Only two of the thrifts we visited had data available, and FHLBB data collection is not currently set up to afford a direct comparison of high yield bonds to other thrift investments. However, the data from the two thrifts and that available from a study of thrift investment returns by WEFA indicate that high yield bonds have provided thrifts high returns in relation to their other investments.

Thrift Investments in High Yield Bonds Have Increased

According to FHLBB data,[1] thrift investment in high yield bonds as of September 30, 1988, amounted to approximately $13.2 billion, an increase of 136 percent over the $5.6 billion invested as of December 31, 1985. Also, over the same time period, the number of thrifts investing grew to 161, or 5.3 percent of the 3,025 FSLIC-insured thrifts nationwide, an increase of 34 percent. Ten thrift institutions owned about 76 percent of the total amount of high yield bonds held by thrift institutions, and 25 institutions owned about 91 percent of the total.

The increase in thrift investments in high yield bonds between 1985 and 1988 resulted both from institutions increasing their high yield bond holdings and from additional institutions investing in high yield bonds. The 10 institutions with the largest investment in high yield bonds as of September 30, 1988, had increased their investments $6.2 billion from those held at December 31, 1985. This increase was 81 percent of the total increase for all thrifts. Our analysis of FHLBB data also showed that part of the increase was caused by several additional institutions becoming significant high yield bond investors. For example, 3 of the 10 thrifts with the largest high yield bond investments as of September 30, 1988,

[1] The data come from FHLBB's report, FSLIC Firms Reporting 'Junk Bond' Holdings. The report may include, for some thrifts, certain below investment grade or nonrated bonds that are not considered high yield bonds. Although we recognize the limitations of these data, they are the best available, and we believe that they reliably portray general trends.

had no high yield bond investments at June 30, 1987. These three thrifts reported combined holdings of over $1.4 billion in high yield bonds as of September 30, 1988. Table 4.1 summarizes thrift investments in high yield bonds between December 31, 1985, and September 30, 1988.

Table 4.1: High Yield, Non-Investment Grade Bonds Held by FSLIC-Insured Institutions

As of	Number of institutions holding high yield bonds	Book value of high yield bonds held (in billions)
12/31/85	120	$5.6
3/31/86	125	6.0
6/30/86	127	6.6
9/30/86	126	7.2
12/31/86	129	7.6
3/31/87	128	8.3
6/30/87	133	9.8
9/30/87	149	11.2
12/31/87	141	12.3
3/31/88	145	12.3
6/30/88	150	13.2
9/30/88	161	13.2

Note: Totals shown for book value of high yield bonds held as of 6/30/87, 9/30/87, and 12/31/87 differ slightly from totals shown on page 25 of GAO/GGD-88-55FS due to adjustments made by FSLIC after that report was issued.

Source: FHLBB reports (FSLIC Firms Reporting 'Junk Bond' Holdings), June 1985 through September 1988.

As of September 30, 1988, thrifts in 36 states and the District of Columbia reported investments in below investment grade securities to FHLBB. Twenty thrifts invested either more than $100 million, or 10 percent of their assets in high yield bonds; 10 of the 20 accounted for about 76 percent of the high yield bonds held by thrifts. The 20 thrifts were in 11 states as follows: 6 in California; 3 in Texas; 2 each in Florida and Missouri; and 1 each in New Jersey, Connecticut, Ohio, Kansas, Massachusetts, Utah, and New York. Seven of the 20 thrifts invested more than 11 percent of their assets in high yield bonds as of September 30, 1988. Three of the seven were in California, and one each was in Florida, Ohio, Texas, and Utah.

Federal and State Limitations on Investments in High Yield Bonds

Under the Garn-St Germain Depository Institutions Act of 1982, federally chartered thrifts may invest up to 11 percent of their assets in high yield bonds. In the 1983 regulations implementing the act, the FHLBB authorized federally chartered thrifts to (1) invest up to 1 percent of their assets in commercial paper and corporate debt securities (12 CFR 545.75d) and (2) invest up to 10 percent of their assets in commercial loans (12 CFR 545.46a). The FHLBB considers high yield bonds to fall under the category of commercial loans.

Federal limitations for investments in high yield bonds do not apply to state-chartered thrift institutions, which may be federally insured. These thrifts may invest in high yield bonds up to the limits imposed by their individual states. State limits may be higher, lower, or the same as the limit on federally chartered thrifts.

Between March and June 1988, we contacted officials in each state to determine their regulations governing high yield bond investments. On the basis of the information they submitted, we found that 32 states allowed state-chartered thrift institutions to invest in high yield bonds. Seventeen states adopted the federal limitations, and 15 states have limitations that differ from federal limitations. Of the latter group, six allow state-chartered thrifts to invest in high yield bonds in excess of the federal limitation. Table 4.2 summarizes the investment limits in these six states from the information provided by state officials.

Table 4.2: Summary of High Yield Bond Investment Limits in States Whose Limits Exceed the Federal Limit

California	15 percent of assets, consisting of 5 percent in corporate securities and 10 percent in commercial lending authority. High yield bonds may be treated as commercial loans. (One California thrift has about 29 percent of its consolidated assets, which includes subsidiaries, invested in high yield bonds.)
Connecticut	28 percent of assets, consisting of 20 percent of assets in investment grade bonds or any corporate bonds considered prudent by the State Department of Banking, and another 8 percent of assets under Connecticut's "leeway" law, which permits investments in any type of asset that is considered prudent.
Florida	Florida prohibits investments in bonds that have below investment grade ratings, but permits thrifts to invest up to 25 percent of assets in unrated bonds if they are supported as to investment quality and marketability by a current credit rating file maintained by the thrift and are not issued by an affiliate of the thrift.
Louisiana	Corporate debt securities including high yield bonds are aggregated with consumer loans, which are limited to 30 percent of assets.
Ohio	Generally, 25 percent of assets, consisting of 10 percent in bonds and up to 15 percent under a limited discretionary investment authority for the thrift's board of directors. In addition, another section of Ohio's laws provided that a well-capitalized thrift may invest another 3 to 10 percent of its assets in investments, including high yield bonds.
Utah	Unlimited; however, as of March 1988, Utah was drafting regulations to require diversification, management expertise, and portfolio monitoring.

Profile of 11 Thrifts With Significant Investments in High Yield Bonds

Ten of the 11 thrifts we visited were state-chartered thrift institutions; the remaining thrift was federally chartered. Eight ranked among the nation's top 10 thrifts holding the largest dollar amount of high yield bonds as of March 31, 1988. According to data provided by the thrifts, their high yield bond portfolios on March 31, 1988, ranged from approximately $79 million to over $3.3 billion and from less than 3 percent to over 28 percent of assets. The high yield bond investments of these 11 institutions totaled $9.1 billion, or 74 percent of the $12.3 billion held by all thrift institutions. The $9.1 billion represents an increased investment in high yield bonds of almost 98 percent for the 11 thrifts between December 31, 1985, and March 31, 1988. During that same time frame, total assets of the 11 thrifts increased by only 42 percent. Table 4.3 portrays the growth of high yield bonds and total assets for the 11 thrifts.

Table 4.3: Assets and High Yield Bond Investments of 11 Thrifts

Dollars in millions

	As of 12/31/85			As of 12/31/86			As of 6/30/87			As of 12/31/87			As of 3/31/88		
Thrift	Assets	High yield bonds	Percent	Assets	High yield bonds	Percent	Assets	High yield bonds	Percent	Assets	High yield bonds	Percent	Assets	High yield bonds	Percent
A	$4,827	$756	15.7	$6,167	$836	13.6	$7,326	$915	12.5	$8,187	$1,059	12.9	$8,690	$1,038	11.9
B	7,470	162	2.2	9,725	300	3.1	10,918	295	2.7	11,952	320	2.7	11,420	300	2.6
C	7,116	1,997	28.1	10,158	2,286	22.5	10,387	2,971	28.6	11,227	3,385	30.1	11,561	3,326	28.8
D	1,001	50	5.0	1,181	105	8.9	1,379	143	10.4	1,534	149	9.7	1,592	137	8.6
E	2,426	264	10.9	3,030	309	10.2	3,371	343	10.2	3,720	371	10.0	3,991	433	10.9
F	9,525	323	3.4	11,406	461	4.0	12,427	456	3.7	13,499	548	4.1	13,271	506	3.8
G	8,284	510	6.2	7,583	422	5.6	9,002	471	5.2	9,051	521	5.8	9,035	534	5.9
H	7,996	47	0.6	9,520	1,068	11.2	10,081	1,456	14.4	10,870	1,480	13.6	10,922	1,422	13.0
I	514	25	4.8	436	44	10.0	478	56	11.6	509	65	12.7	611	79	12.9
J	4,938	461	9.3	6,431	509	7.9	7,345	584	8.0	7,147	687	9.6	6,290	609	9.7
K	8,032	0	0.0	10,449	0	0.0	10,776	258	2.4	10,737	634	5.9	10,707	705	6.6
Total	**$62,129**	**$4,595**	**7.4**	**$76,086**	**$6,340**	**8.3**	**$83,488**	**$7,949**	**9.5**	**$88,432**	**$9,219**	**10.4**	**$88,090**	**$9,089**	**10.3**

Note: High yield bond values based on book value.

Source: Data supplied by thrifts.

According to FHLBB, three of the thrifts visited failed their minimum capital requirements as of March 31, 1988. Under new guidelines issued in January 1989 by FHLBB, thrifts that fail to meet minimum capital requirements face certain restrictions with respect to investing in high yield bonds. (See pp. 43 to 46.) None of the thrifts we visited were insolvent as of March 31, 1988; as of September 30, 1988, however, one was insolvent.

Our analysis of the asset composition of the 11 thrifts showed that most invested less in mortgage loans on one to four dwelling units (residential units) than the industry as a whole, and more in mortgage-backed securities. Also, the 11 thrifts, in comparison to the industry, devoted a greater percentage of net assets to investment securities and, in particular, to high yield bonds.

Defaults on Thrift-Owned High Yield Bonds

Data provided by the 11 thrifts we visited showed that about $184 million, or 2 percent of the $9.1 billion in high yield bonds they held as of March 31, 1988, had defaulted. The thrifts had already recovered, or expected to recover, about $111 million, or 60 percent of the $184 million of the principal amount defaulted. Thus, the loss of principal on the bonds was about 0.8 percent of the book value of bonds held as of March 31, 1988.[2] Three thrifts had no bond defaults, but two thrifts had over 6 and 7 percent of their portfolios default, respectively. However, after actual and estimated recoveries of principal, the losses expected by these two thrifts were 1.1 and 1.5 percent of the book value of the portfolio. Table 4.4 summarizes high yield bond default information for the 11 thrifts we visited.

[2]Loss from default should also include interest payments not received. However, we were not able to accurately calculate the interest foregone. Normally, at least one semiannual payment is lost when a bond defaults.

Table 4.4: High Yield Bond Default and Loss Experience at 11 Thrifts as of March 31, 1988

Dollars in millions

Thrift	Book value of high yield portfolio	Number of issues in default	Book value of defaulted bonds	Percent of portfolio book value in default	Actual or estimated loss	Loss as a percent of book value
A	$1,038	4	$63.5	6.1	$11.3	1.1
B	300	0	NA	NA	NA	NA
C	3,326	10	45.0	1.4	25.5	0.8
D	137	3	10.0	7.3	2.0	1.5
E	433	1	1.5	0.4	1.3	0.3
F	506	4	23.6	4.7	10.2	2.0
G	534	2	5.6	1.0	3.9	0.7
H	1,422	2	9.1	0.6	5.9	0.4
I	79	0	NA	NA	NA	NA
J	609	3	25.6	4.2	12.0	2.0
K	705	0	NA	NA	NA	NA
Total	**$9,089**	**29**	**$183.9**	**2.0**	**$72.1**	**0.8**

NA = Not applicable

Source: Data calculated by GAO using information supplied by thrifts.

Thrifts Cite Several Reasons for High Yield Bond Investments

Officials at each of the 11 thrifts we visited said the primary reason they invested in high yield bonds was the substantial yields these bonds offer; they said these yields more than compensated them for the additional risks the bonds might have over alternative investments. We asked each thrift for data to substantiate its statements and to provide an indication of how the risks and returns on high yield bonds compared to other investments. Two of the 11 thrifts provided us this kind of data. Their data showed that high yield bonds had provided higher returns than their other investments.

Officials at several thrifts said that because high yield bonds are similar to commercial loans, investing in the bonds allows thrifts to become commercial lenders without the expense and effort involved in developing a commercial lending group and building customer contacts. Although granted the authority to make commercial loans under the Garn-St Germain Act of 1982, officials at one thrift said that in analyzing the commercial loan market, they found they would have to compete against commercial banks with well-established customer relationships. To compete, they said they would need to penetrate existing markets, which would require extensive marketing, competitive terms and interest rates, and underwriting of somewhat more risky loans. To achieve this, a commercial lending group would need to be established and staffed at considerable expense. Comparing high yield bonds with commercial loans, some thrift officials said that high yield bonds provide investors the additional protection of "due diligence"[3] by the issuers and underwriters not available on commercial loans.

Officials at four thrifts said investing in a high yield bond portfolio can allow a thrift to diversify its assets. An official of the U.S. League of Savings Institutions said that high yield bond investments allow thrifts to diversify assets into other regions of the country and into other industries, thereby avoiding cyclical economic downturns that are industry- or region-specific. For example, officials from a Texas thrift said high yield bond investments are one way to diversify away from the depressed real estate and energy industries in Texas.

Thrift officials also said that compared to home mortgages, high yield bonds offer income protection in a declining interest rate market. Home mortgages may be prepaid, usually without penalty, anytime during the life of a note. In a declining rate market, home mortgages are often refinanced, reducing the income a thrift makes. In contrast, a high yield bond and similar investments provide a fixed yield to a specific future date, either the maturity date or an earlier call date.

High Yield Bond Returns for Thrifts Appear Attractive

While information is available on the risks and returns of high yield bonds in general (see ch. 3), comparing the risks and returns of various investments made by federally insured thrifts is difficult because not much data are available and the available data have limitations. However, the information that is available, together with comments from thrifts at our hearing and during our visits, indicate that high yield bonds have provided thrifts attractive risk-adjusted returns in relation to other assets available to thrifts.

Risk and Return Data Generally Unavailable

We tried to obtain data on the risks and returns of several types of investments from the institutions we visited and from their federal regulator, the FHLBB. The information FSLIC-insured institutions must provide to the FHLBB is not sufficiently detailed to determine the risk-adjusted returns of various asset categories. FHLBB officials said that, except for

[3]Due diligence requires the accurate representation by both the issuers and the underwriters of high yield bonds of all material information concerning the issuance of the bond. Both the issuers and the underwriters are liable, under the Securities Act of 1933, for omissions and misstatements of material fact in the disclosure documents and other information disseminated in both public and private deals.

mortgage loans on which foreclosure data are available, they did not have information on default rates for various classes of investments and had not studied the risks and returns of thrift investments in high yield bonds and other assets.

Studies of Risk-Adjusted Returns on Thrift Investments

We reviewed a special study that analyzed risk-adjusted returns on various thrift assets. The study was completed in August 1988 by WEFA. WEFA prepared the study for the Alliance for Capital Access, an organization representing the interests of high yield securities investors and issuers. The study compares net profit margins for eight categories of assets available to thrift institutions and covers the period from January 1983 to May 1988. Its results are subject to some limitations.

WEFA calculated the net profit margin of an investment by deducting certain expenses from total income to arrive at a net income figure. This figure is then divided by the total amount invested. Deducted expenses include servicing costs (expenses incurred by the thrift to process and manage the asset), credit losses, and funding costs (the cost of the money used to purchase the asset). The study reviewed eight types of assets: fixed rate residential mortgages, adjustable rate residential mortgages, commercial loans, consumer installment loans, credit cards, high yield bonds, investment grade bonds, and Treasury bonds.

WEFA found that high yield bonds ranked second to credit cards in the net returns realized by thrifts. Fixed rate home mortgages, consumer loans, and Treasury bonds offered the lowest returns. Table 4.5 summarizes WEFA's results.

Table 4.5: Average Net Return on Thrift Assets Compiled by WEFA

	Net return as a percent of assets		
Asset category	**1985**	**1986**	**1987**
Fixed rate mortgage loans	1.03	0.96	0.90
Adjustable rate mortgage loans	2.38	2.45	1.47
Commercial loans	1.48	1.36	1.06
Consumer installment loans	1.44	1.60	0.74
Credit cards	4.47	5.12	4.73
High yield bonds	2.61	2.97	3.19
Investment grade bonds	1.88	1.77	1.73
U.S. Treasury bonds	0.46	−0.23	0.23

WEFA's data show that, on the average, credit losses on high yield bonds are higher than for all other asset categories except credit cards. However, the higher yields on high yield bonds, together with relatively low servicing costs, outweigh the higher credit losses.

The results of the WEFA study should be considered in light of the study's limitations. First of all, it uses estimates and data from several sources. It was not intended to be a study that uses actual data derived from a scientific sample of thrift institutions. For example, to estimate servicing costs for loans and credit cards, WEFA relied on a telephone survey of just four institutions. This may not have provided representative results. Also, WEFA obtained and included in its calculations data on options costs[4] for fixed rate mortgages but not for other assets. This tends to lower the risk-adjusted return on fixed rate mortgages relative to other assets.

Finally, the study does not, and was not intended to, predict future trends of asset risks and returns. It calculates past returns during a period of unprecedented peacetime economic growth. It does not suggest what these patterns may be in the future or provide guidance on the behavior of high yield bond earnings during a recession or sluggish economic growth. This point may be critical because the types of businesses that issue high yield bonds are often those that might be expected to be hurt the most during an economic downturn.

Information also is available from the Federal Reserve Bank of New York that raises some uncertainty about the reliability of data WEFA used to calculate credit losses on commercial loans, the investment that experts most often compare to high yield bonds. We found that the WEFA-calculated credit losses on commercial loans from 1985 to 1987 ranged between 1.5 and 1.7 percent, slightly less than the default rate on high yield bonds WEFA calculated during the same time frame (1.6 to 2.4 percent). However, reports compiled by the Federal Reserve Bank of New York from data submitted by thrifts indicate the loss rate on commercial loans from 1985 to 1987 ranged from 0.2 to 0.6 percent, much less than the commercial loan loss rate calculated by WEFA and significantly below the high yield bond default rate. However, the Federal Reserve Bank's data are also subject to limitations. It had no data before

[4]When a borrower has the option to prepay a loan, the lender incurs an "options cost." This cost refers to the valuation of the risk of receiving a lower than expected yield if the borrower exercises the prepayment option.

1985. In addition, its data were submitted on a voluntary basis by a limited number of thrifts. As a result, the data may not be representative of the industry as a whole.

The differences in and the limitations of the data available suggest the difficulty in making a definitive comparison of the risk-adjusted returns among various thrift investments. However, the conclusions of the WEFA study were supported by a witness who testified at our March 1988 hearing and officials of the thrifts we visited who said that high yield bonds offer institutions large risk-adjusted spreads compared to other assets that can be obtained in quantity. As a general note, as we reported earlier, high yield bonds have been an attractive investment to date.

Guidelines for Thrift Management of High Yield Bond Portfolios

Officials and experts at our high yield bond hearing stressed three key elements in the management of high yield bond portfolios: adequate loss reserves, adequate diversification, and sound credit analysis. We examined these elements at the 11 thrifts we visited and found that the thrifts' portfolio management strategies varied and, in a few cases, did not meet specific criteria suggested by the experts. In January 1989, FHLBB issued a bulletin to thrifts establishing guidelines for high yield bond investing. These guidelines addressed the need to have thrift board of directors' involvement in establishing investment policies and specific diversification standards, outlining specific steps to be covered in credit analyses, and establishing standards for determining the amount of loss reserve allowances to be maintained. The bulletin also imposes restrictions on high yield bond investing by insolvent and undercapitalized institutions.

High yield bond investments have not been a reason for recent thrift industry problems, and no thrift has failed because of unsuccessful bond investing. However, as we have discussed, thrifts have achieved this success during a time of continued economic expansion and continued growth in the bond market. No one knows how long this growth will continue, but, as indicated by the economic downturns in energy and real estate, market prosperity is subject to change.

Key Elements in Managing High Yield Bonds

Federal Home Loan Bank officials, market experts, and thrift officials said good management of high yield bond portfolios requires establishing adequate reserves for losses, sufficiently diversifying the portfolio, and doing sound and well-documented credit analyses. Dr. Altman and the Federal Home Loan Bank of San Francisco had developed suggested guidelines in these areas, and we used them to analyze the portfolio management policies of the thrifts we visited. These guidelines provided a reasonable standard against which we compared thrift management practices.

Loss reserves cover the thrift against defaults or other losses that occur in the high yield bond portfolio. According to Dr. Altman, a policy of setting aside reserves would treat investments in the same way loans are now treated. This would discourage investment in high yield bonds by institutions that have a shaky capital base, the type of institution that is now such a concern to regulators. Dr. Altman suggested that, on the basis of the default loss experience for 1985 to 1987, a loss reserve allowance of 1.5 to 2.0 percent of the high yield bond portfolio would be appropriate, assuming that the portfolio is adequately diversified.

Diversification helps to diminish the risks in an investment portfolio. By reducing the concentration of bonds held in any one issuer, industry, or geographic area, risk is spread and the likelihood of a large loss is reduced. Dr. Altman suggested that adequate diversification might include a minimum of 30 to 40 different issuers with no more than 5 to 10 percent of the portfolio invested in any one issuer and no more than 15 to 20 percent invested in any one industry.

Credit analysis, or underwriting, assesses the expected performance of an individual bond. It allows a thrift to determine if the issuer of the bond will have sufficient cash flow and profits to meet required interest and principal payments. Credit analysis begins before a bond is purchased and can continue as long as a thrift holds that bond. Federal Home Loan Bank of San Francisco officials suggested that a bond credit analysis should include

- an evaluation of current and projected economic conditions;
- a review of industry characteristics, including growth trends, capital intensiveness, ease of entry, competition, tax law changes, and currency fluctuation;
- an analysis of the issuer's historical trends of sales growth, returns on capital, debt to capital, operating margins, market position, cost controls, asset values, contingent liabilities, and responsiveness to changing economic and industry climates; and
- an analysis of the specific security to determine conditions and covenants attached to the bond issue, such as the position of the debt in the event of default, maturity date, call features, extent of collateralization, and the use of proceeds.

Portfolio Management Policies Vary

Each of the thrifts we visited had written policies and procedures for managing its high yield bond portfolio, including loss reserves, diversification, and credit analysis. However, the policies and practices followed by the thrifts differed. In some cases, these did not meet the criteria suggested by Dr. Altman and the Federal Home Loan Bank of San Francisco.

Loss Reserves

Two thrifts we visited set aside general loss reserves determined by the amount of their entire investment portfolio. One had reserves equivalent to about 0.3 percent of its total assets; the other, about 2.1 percent. The other nine thrifts set aside reserves specifically for their high yield bond portfolios. Their policies called for reserves between 0.5 and 4.5 percent of the book value of the high yield bond portfolio. Actual reserve amounts varied from about 0.2 to about 3.4 percent. Five of the nine thrifts had reserves that were less than the 1.5 percent minimum suggested by Dr. Altman. Table 5.1 summarizes data on the loss reserve allowances for the 11 thrifts we visited.

Table 5.1: Reserves for High Yield Bond Portfolios

Dollars in millions

Thrift	High yield bond investment as of 3/31/88	Amount of loss reserve	Loss reserve as a percent of high yield portfolio	Loss reserve policy
A	$1,038	$27.0[a]	2.6	1% of portfolio
B	300	5.0	1.7	1% of portfolio
C	3,326	112.0[b]	3.4	Minimum of 3.5% and maximum of 4.5% of portfolio
D	137	0.0[c]	[c]	No reserves for high yield bond portfolio
E	433	5.1	1.2	Minimum of 1% and maximum of 1.5%
F	506	10.4	2.1	2% of portfolio
G	534	0.0[d]	[d]	No reserves for high yield bond portfolio
H	1,422	19.1	1.3	0.87% of portfolio
I	79	0.9	1.1	1% of portfolio
J	609	14.6[e]	2.4	0.76% of portfolio
K	$705	$1.5	0.2	0.50% of portfolio

Notes:

[a]Includes certain bonds reserved at 20 percent.

[b]This figure represents $89.7 million in general loss reserves plus $22.3 million for specified unrealized losses.

[c]Thrift D maintains a $5-million general reserve for its total assets of $1.6 billion (0.3 percent).

[d]Thrift G maintains a $200-million general reserve for its total assets of $9.5 billion (2.1 percent).

[e]This figure includes $2.6 million in general loss reserves and $12.0 million for specified unrealized losses.

Diversification

Each of the thrifts we visited had policies and procedures that contained at least one diversification standard. One thrift had established a limit only on the percentage of its total high yield bond portfolio that would be invested in any one industry. In contrast, another thrift had policies that limited not only the percentage of its investments in any one industry, but also in any one issuer and in any one issue. This thrift also had a dollar limit on the amount it would invest in the bonds of any one issuer.

In some cases, the limits established also varied. For example, one thrift limited its investment in any one industry to 6 percent of its portfolio, while another had a 33-percent limit for investment in any one industry. One thrift's policies said that $5 million was the minimum it would invest in any one issue, while another said $5 million was the maximum it would invest in any one issue.

In some cases, the diversification policies of the thrifts were not as rigorous as the guidelines suggested by Dr. Altman. For example:

- 1 of the 11 thrifts owned bonds of 21 issuers, 9 less than the minimum suggested, and 3 of the 21 issuers were thrifts;
- 2 of the 6 thrifts that had a policy on the amount to be invested in any 1 issuer established a limit that exceeded the 10-percent maximum suggested; and
- 2 of the 9 thrifts that had a policy on the maximum amount to be invested in any one industry established a limit that exceeded the 20-percent maximum suggested.

Table 5.2 summarizes the diversification policies for the 11 thrifts we visited.

Table 5.2: Thrift High Yield Bond Investment Policies

Dollars in millions

Thrift	Investment as of 3/31/88 (book value)	Maximum investment established by thrift	Portfolio limits established by thrifts: Dollar limits		Percent limits		Thrift established maximum percent ownership of any one issue
			Issuer	Industry	Issuer	Industry	
A	$1,038	10% of total unconsolidated assets or 15% of consolidated	[a]	[a]	20%	15%	10%
B	300	$400	$7	[a]	[a]	15%	10%
C	3,327	40% of consolidated assets	[a]	[a]	1% of consolidated assets	20%	[a]
D	137	[a]	[a]	[a]	[a]	25%	[a]
E	433	15% of consolidated assets	$5	[a]	25%	20%	10%
F	506	5% of consolidated assets	[a]	[a]	[a]	6%	10%
G	534	[a]	[a]	[a]	[a]	[a]	10%
H	1,422	$1,500	$25	[a]	5%	15%	10%
I	79	18% of corporate assets	5	$25	[a]	[a]	[a]
J	609	$700	30	[a]	[a]	33%	5%[b]
K	$705	[a]	$25	[a]	5%	15%	10%

[a]Policy or guideline not identified or defined.

[b]Up to 10% for senior notes or increasing rate notes.

Credit Analysis

We did not review thrift files in detail to determine the type and extent of credit analysis that was actually being done. However, we examined the thrifts' written policies and procedures for credit analysis and discussed them with thrift officials. Officials at each thrift said that they do a credit analysis at the time of purchase and actively monitor their high yield bond portfolios after purchase. Three of the thrifts contracted with investment management firms for credit analysis and portfolio management, and the other eight thrifts did their own credit analysis and portfolio management.

Officials at one thrift told us that, because of short time frames between the offer and actual purchase of a high yield bond, they do a full credit analysis only after the bond is purchased. However, they said that they do a limited credit analysis to insure the bond is a good credit risk before purchasing it.

Our review of the most recent FHLBB examination report for the 11 thrifts we visited showed that 7 had been criticized for doing an inadequate credit analysis. The criticisms included not doing enough analysis before purchasing bonds and not appropriately monitoring high yield bond portfolios after purchase.

FHLBB Oversight of High Yield Bond Investments Has Increased

At the time of our fieldwork, FHLBB had not provided thrifts with specific guidelines and standards they should follow in purchasing and managing high yield bond investments. However, FHLBB officials told us that such standards had been under review and consideration for nearly a year. In January 1989, FHLBB's ORA issued a bulletin to federally insured thrifts establishing standards for thrift investments in high yield bonds. In addition, since March 1988 FHLBB has been developing a system to achieve consistency in its review and classification of thrifts' high yield bond investments and has established a group of individuals having special skills in credit analysis to provide on-site expertise in the examination of thrift institutions with significant high yield bond holdings.

In addition to the regulations that govern the thrift industry, FHLBB issues regulatory and thrift bulletins that provide instruction and guidance to thrifts and to FHLBB's staff and supervisory agents concerning interpretations, opinions, and statements of policy on its rules and regulations. Regulatory and thrift bulletins differ primarily in their audience. A regulatory bulletin is primarily directed to FHLBB's supervisors and staff, and a thrift bulletin is primarily addressed to thrifts. Before a bulletin is adopted, it is reviewed by all 12 Federal Home Loan Banks and key offices within the FHLBB. While failure to comply with bulletins is not necessarily a violation of a regulation, an FHLBB publication has provided that "the Board will closely examine conduct that clearly disregards such memoranda, and such conduct may well constitute a violation of a regulation warranting action by the Board."[1]

In August 1984, FHLBB issued a regulatory memorandum that stated that thrifts that invest in corporate high yield bonds should exercise exceptional caution and prudence in underwriting procedures. This memorandum was very general and did not provide any specific guidance or standards to be followed in purchasing bonds or managing a high yield bond portfolio. According to an ORA official, between 1985 and 1987, ORA attempted three times to adopt a regulatory memorandum with specific

[1] Bulletins were until recently referred to as memoranda.

guidelines, but these attempts were not approved because the changes were too strict and specific to gain the necessary approval throughout the system.

In 1989, ORA continued its efforts to develop specific guidelines for management of high yield bond investments, issuing the thrift bulletin in January that addresses establishing investment policies, diversification standards, underwriting criteria, credit analysis procedures, and loss reserve allowances. The guidelines provide that:

- The thrift board of directors is responsible for establishing, maintaining, and formally adopting a written investment policy that specifically delegates responsibilities, investment authorities, and limitations and identifies specific standards to be used in managing the portfolio. FHLBB's guidelines also state that before investing in high yield bonds, the board should thoroughly analyze the risk and returns of these investments compared to alternate investments. It should also retain competent and qualified staff to monitor and analyze the portfolio on a continuous basis or retain consultants to manage the portfolio when in-house expertise is inadequate or the size of the portfolio does not justify hiring in-house specialists.
- The thrift institution should adopt diversification standards to minimize risks in the portfolio. The guidelines suggested having a minimum of 20 different issues, holding no more than 5 percent of the portfolio in any one issuer's bonds, maintaining more than one broker relationship, limiting exposure to a single industry, and not investing in any high yield bonds issued by an FSLIC-insured institution.
- An analysis of each investment should be made that includes a review of the issuers' business prospects, cash flows, repayment source, management quality and experience, and other factors. In addition, the analysis should cover specific factors, such as purpose of the financing, position of the security relative to other liabilities, covenants, and other specific features of the bond issue.
- The board of directors and management of the thrift should maintain written policies for determining loss reserve allowances and establish allowances adequate to meet expected probable losses in the portfolio on the basis of periodic and detailed review of the entire portfolio and each investment within the portfolio.

In addition to providing standards for purchasing and managing high yield bond investments, the bulletin places restrictions on the amount of high yield bond investing that can be done by insolvent and undercapitalized institutions. Insolvent institutions may not make any new investments in below investment grade securities (high yield bonds) and may retain existing high yield bond investments only if the Federal Home Loan Bank authorizes it to do so. Undercapitalized institutions–those that fail to meet minimum capital regulatory requirements–may make new investments in below investment grade securities only with the approval of the bank, and the bank may require these institutions to divest existing holdings of below investment grade securities that are considered unsafe and unsound.

FHLBB is also developing a program to uniformly classify high yield bonds held by insured institutions and to determine appropriate loss reserve levels on the basis of the classification of the bond. Under FHLBB regulations issued in January 1988, thrifts are required to identify and classify problem assets and establish adequate loss reserves for assets classified substandard, doubtful, or loss.[2] FSLIC examiners review these classifications and may change the classification and direct the thrifts to establish a greater reserve if they determine the existing reserve is inadequate. High yield bonds are classifiable under this regulation. According to FHLBB, a uniform classification system is needed to achieve consistency in the classification of high yield bond issues held by more than one thrift institution. Because these thrifts may be in more than one Federal Home Loan Bank district, examinations by different staffs could result in differing classifications and loss reserve amounts being established for the same high yield bond.

The program not only could result in more consistent bond classification but also in increased efficiency. It may reduce the expenditure of examination resources by district banks because a bond held by more than one thrift will be reviewed only once during a specific time period for classification purposes. Other district bank examiners would not have to spend time reviewing the bond again, and the amount of time needed to complete an examination could be reduced as fewer bonds would require review during an exam.

[2]According to FHLBB regulations, assets classified substandard are inadequately protected by the current net worth and paying capacity of the obliger. Assets classified substandard must have a well-defined weakness or weaknesses and are characterized by the distinct possibility that the insured institution will sustain some loss if the deficiencies are not corrected. Doubtful assets have all the weaknesses of substandard assets with the added characteristic that the weaknesses make collection in full, on the basis of current conditions, facts, and values, highly questionable and improbable.

To augment the uniform classification system, FHLBB plans to establish a group of individuals with expertise in commercial credit review drawn from the ranks of the district banks' staffs who could be called on to provide on-site expertise during an examination.

High Yield Bonds Have Not Been a Factor in the Failure of Thrift Institutions

According to FHLBB data, 20 institutions holding high yield bonds were liquidated or merged with FSLIC assistance between June 1985 and June 1988. Of these, only six institutions had more than $1 million in high yield bonds, and only one had more than 2 percent of its assets invested in high yield bonds. The largest investment of any of these institutions was $38.6 million, representing 4.5 percent of the institution's assets.

FHLBB officials said there is no indication that investing in high yield bonds has, to date, caused the failure of a thrift institution. However, in one case, the April 1985 failure of Beverly Hills Savings and Loan, mismanagement of that institution's high yield bond portfolio was part of a broader pattern of unsafe and unsound lending and investment practices leading to that institution's collapse.

In a lawsuit filed by FSLIC against the management of Beverly Hills Savings and Loan, FSLIC alleged that the managers of the institution breached their fiduciary responsibilities and failed to operate the institution in a safe, prudent, and lawful manner. FSLIC also alleged the managers committed the institution to a hazardous course of numerous and repeated unsafe and unsound lending and investment practices and regulatory violations. FSLIC enumerated a number of specific complaints with respect to Beverly Hills' management of its high yield bond portfolio. They included

- failure to establish policies and guidelines for investment in high yield bonds;
- failure to adequately underwrite its investments in high yield bonds, making investment decisions in the absence of an adequate investigation of its own into the risks of particular bonds and the financial condition of the issuers, and reliance upon only one brokerage firm for the purchase and sale of high yield bonds; and
- unsafe and unsound concentration of its high yield bond investments among a relatively small number of issuers and failure to adequately diversify its holdings.

Regulatory Agencies Cite Mismanagement and Fraud as Reasons Why Financial Institutions Fail

Instead of a particular kind of investment being a cause of insolvencies, FHLBB and the Office of the Comptroller of the Currency (OCC) have both found that the key issue is management. In a recent report to Congress on the prevention of insolvencies, FHLBB said historically there are three principal reasons for thrift insolvencies: mismanagement, changing economic conditions, and fraud and insider abuse. According to FHLBB, the most significant cause of thrift institution failure falls under the category of management deficiencies, including failure to implement adequate policies, procedures, and controls over loan underwriting; investments; interest rate risk; and liquidity, as well as failure to comply with directives and regulations and embarking on an imprudent growth strategy. This thought was echoed to us by researchers in FHLBB's Office of Policy and Economic Research who said that, historically, interest rate risk and real estate speculation have been the specific causes of thrift failure, but that the overall factor is the individual thrift's management strategy for these two areas.

In a June 1988 report on the factors contributing to the failure of national banks, OCC also cited poor management and other internal problems as the reasons for commercial banks' failures. OCC's report states that management-driven weaknesses played a significant role in the decline of 90 percent of the failed and problem banks OCC evaluated. Management problems included inadequate loan policies, lack of controls to insure compliance with policies and banking law, imprudent lending practices, and excessive loan growth. The report also stated that insider abuse and fraud were significant factors in the decline of more than one-third of the failed and problem banks and were related to the failure of management to provide adequate oversight and controls. Finally, OCC found that economic decline was a significant cause of problems in more than one-third of the banks evaluated. However, rarely were economic conditions the sole cause of a bank's decline. All but 7 percent of the failed and problem banks also had significant internal management problems.

Recent GAO testimony[3] confirms that mismanagement and fraud are the greatest threats to federal insurance funds. We found that failed thrifts had the following characteristics:

- fraud and insider abuse existed,

[3]FAILED FINANCIAL INSTITUTIONS: Reasons, Costs, Remedies and Unresolved Issues, Statement of Frederick D. Wolf, Assistant Comptroller General, before the Committee on Banking, Finance and Urban Affairs, House of Representatives (GAO/T-AFMD-89-1, Jan. 13, 1989).

- extensive and repeated violations of laws and regulations occurred,
- unsafe and unsound operating practices were being followed, and
- board of director supervision was inadequate and dominated by one or more individuals.

In contrast, solvent institutions investing in the same kind of risky assets did not have losses because they had better management systems and controls and obeyed banking laws and regulations.

Conclusions

High yield bonds have been good investments in relation to other investments for thrifts during a period of unprecedented peacetime economic expansion. So far, the returns on an actively managed and diversified portfolio of high yield bonds have been higher than returns on most alternative investments, after accounting for comparative risk. However, whether this will continue to be the case is uncertain. The dramatic recent increase in the size of the market and the increasing debt levels of some of the companies issuing bonds causes concern about how these bonds would fare in a recession.

Questionable management of thrifts and local economic downturns have been cited as the causes of most thrift failures. Because mismanagement of investments by thrifts has contributed to thrift failures, and because high yield bonds are both riskier than traditional thrift investments and untested by a recession, FHLBB's decision to establish standards and criteria for thrifts to follow in managing their high yield bond investments is a step in the right direction. Such standards should help assure that thrifts that have made or plan to make high yield bond investments thoroughly analyze the investment's creditworthiness, adequately diversify their portfolios, and establish prudent reserves for potential losses. If properly understood and enforced, these standards can reduce the risks involved for thrifts that invest in these bonds and, consequently, for the insurance fund.

In addition, FHLBB is making progress toward establishing a system to uniformly classify these bonds nationwide. This system is needed to provide a consistent measure for evaluating the high yield bond portfolios of all the thrifts.

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Related GAO Products

Financial Markets: Issuers, Purchasers, and Purposes of High Yield, Non-Investment Grade Bonds (GAO/GGD-88-55FS, Feb. 29, 1988).

High Yield Bonds: Nature of the Market and Effect on Federally Insured Institutions (GAO/GGD-88-75, May 1988).

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