Briefing Report

Review of Odessa College Investments

Office of the State Auditor
Lawrence F. Alwin, CPA

December 1994

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Key Points Of Report

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Key Findings

- The Board of Odessa College did not exercise proper oversight over the investment function. The College invested millions of dollars over a four-year period in high-risk derivative investments without implementing investment management controls. Developing the following investment management controls could have prevented the 50 percent decline in the College's investment portfolio and the loss of $3 million in public funds:

    - Developing a written investment policy which clearly outlines the College's liquidity needs and the Board's expectations for portfolio diversification, allowable investments, allowable risk levels, and expected rates of return

    - Requiring written investment reports to allow for periodic monitoring of the investment portfolio

    - Establishing conflict of interest policies and requiring annual financial disclosures from key employees and the Board

- Odessa College's investment cash flows have declined significantly as interest rates have risen and investment maturities have extended.

- Odessa College's operating budget for fiscal years 1994-1995 is $20 million. The College employs 333 full-time employees and 461 part-time employees. The College has an enrollment of 4,577 credit students and 4,420 non-credit students.

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This review was conducted in accordance with Government Code, Section 321.0133. The review was undertaken as a result of a legislative request.

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Executive Summary

The Board of Odessa College did not exercise proper oversight over the investment function by establishing investment policies which addressed the College's liquidity needs, setting expectations for portfolio diversification, and establishing allowable investments and risk levels, nor did the Board ensure that procedures were developed to provide strong investment internal controls and to provide for periodic monitoring of compliance with policies. The Board also did not ensure that the College was complying with state investment laws.

This helped to create a situation where Odessa College's entire portfolio of $22 million as of August 31, 1994, was comprised of the highest risk tranches, or pieces, of Collateralized Mortgage Obligations. The College was able to make tremendous returns on its investments during fiscal years 1991 through 1993. The returns on investments ranged from $1.5 million in 1991 to a high of $4.3 million in 1993. However, the nature of these types of Collateralized Mortgage Obligations make the College's portfolio susceptible to the following:

- substantial declines in market price
- extending of maturity dates as interest rates increase ("extension risk")
- decreasing cash flows as interest rates increase

The unpredictability of principal and interest cash flows made these types of investments difficult to manage for budgeting and short-term operational needs.

Since January 1994 Odessa's Collateralized Mortgage Obligation portfolio has declined in value by more than 50 percent. In addition, the Odessa College District's taxable mineral valuation decreased by 25 percent largely due to changes in valuation methods prescribed by Section 23.175 of the Texas Tax Code, as amended by House Bill 925, 73rd Legislature. These two events, along with potential litigation regarding Title IX programs, have caused the College to employ revenue raising and numerous cost-cutting measures, including:

- issuing $10.75 million in taxable bonds
- increasing the effective ad valorem tax rate by 7.2 percent, from $.1851 to $.1984
- increasing tuition by $4 per credit hour
- discontinuing the tennis team
- discontinuing the men's track team

Summary Of Management's Responses

Management generally concurs with the findings and recommendations contained in this report. They have included corrective actions they have undertaken to implement some of the recommendations.

Summary Of Objective And Scope

The objectives of the review were to disclose to the Legislature the circumstances leading to Odessa College's investment in derivatives and its subsequent loss of funds. The review was also conducted to assist state entities and political subdivisions by providing management control recommendations to avoid similar public fund losses.

The scope of this review included consideration of:

- the existence of management controls over the investment function

Executive Summary

- whether the derivative investments' level of risk was properly disclosed to the President and the Board
- the investment portfolio's current status

Section 1:

Investment Management Controls Were Nonexistent

The Board did not exercise proper oversight over the investment function by establishing investment policies that addressed the College's liquidity needs, setting expectations for portfolio diversification, and establishing allowable investments and risk levels. Investment management controls did not exist at Odessa College:

- The Board did not develop a formal investment policy nor did it receive annual written investment reports, as required by the Public Funds Investment Act.
- The College's independent auditors verified that the investments were legal but did not verify compliance with other requirements of the Public Funds Investment Act.
- The Board's own policies stated that written investment reports shall be presented to the Board annually. We found no evidence that written investment reports were presented to the Board.
- There were no written ethics policies or financial disclosure requirements.
- Odessa College's organizational structure limited the effectiveness of internal controls by inadequately segregating job responsibilities. Transactions were entered into without the President and the Board's knowledge.
- The President and the Board may have lacked sufficient information and training to understand investment risk.
- There was also no indication that the Board monitored the investment portfolio to ensure that the Vice President of Business Affairs followed the Board's directions to divest.

Section 1-A:

Board Did Not Develop A Formal Investment Policy Nor Did It Receive Annual Written Investment Reports, As Required By The Public Funds Investment Act

According to the Board members interviewed, the College's investment policy was simply to comply with the Public Funds Investment Act. There is no formal investment policy which addresses issues on liquidity, diversification, and risk.

Additionally, we found no evidence that written investment reports were presented to the Board. The Board's own policies stated that written investment reports shall be presented to the Board annually. Apparently, all such investment reports were presented orally or with informal documentation to the Board's Finance Committee. If the Board was informed of these discussions, it was not documented in the Board's minutes.

We did find evidence that investment information was presented to the Finance Committee of the Board which explained the nature and risk associated with the College's Collateralized Mortgage Obligation investments, including the potential extension risk. In July 1993, the Vice President of Business Affairs met with the Finance Committee to discuss the College's investments. We were told during interviews that the Finance Committee advised the Vice President of Business Affairs to divest of these securities, after he had explained the current market conditions and its effect on the College's investments. There was no documentation that this meeting ever occurred. Although the Board members interviewed indicated that they were aware of this investment discussion, there was also no documentation that the full Board was apprised of the situation.

There was no indication that the Board monitored the investment portfolio to ensure that the Vice President of Business Affairs followed its directions to divest. The Board members interviewed stated that they were not aware that the Vice President of Business Affairs had not followed its directions until March 1994, even though the College posted losses of $792,000 in December 1993.

The College's independent auditors verified that the investments were legal, but they did not verify compliance with other requirements of the Public Funds Investment Act (for example, requirements that the College have a formal investment policy and that written investment reports be presented annually to the Board).

Recommendations:

- Develop a written investment policy addressing the College's liquidity needs and clearly setting the Board's expectations for portfolio diversification, allowable investments, and allowable risk levels.
- Require periodic written investment reports.
- Establish internal reporting requirements so that the Board can periodically monitor compliance with its policies and state laws, including requiring independent audit verification of compliance.

Management's Response:

Although Odessa College did not have a formal, written investment policy in specific, the Board of Trustees did state that it required investments to be made in accordance with the Public Funds Investment Act. The College now has a written investment policy addressing the College's liquidity needs and clearly setting the Board's expectations for portfolio diversification, allowed investments, fund restrictions, weighted average maturities, collateralization, authorized personnel, reporting, and standards of care.

The new Investment Policy and Procedures do require periodic written investment reports which will monitor our compliance with its policies and state laws.

The College intends to require independent audit verification of compliance in the future as well.

Section 1-B:

There Were No Written Ethics Policies Or Financial Disclosure Requirements

There were no written ethics policies or financial disclosure requirements which applied to the investment function at Odessa College. Ethics policies strengthen internal controls and guard against the appearance of impropriety or conflicts of interest. They also provide clear guidelines of permissible behavior to employees and board members.

The Vice President of Business Affairs made personal investments with some of the same brokers he was investing with for the College. Since the College did not have a written ethics policy and annual financial disclosure statements were not required, the President and the Board were not aware that the Vice President of Business Affairs made personal investments with these brokers.

The practice of using the same broker for personal and College investments creates the appearance that inappropriate transactions may have occurred. The scope of our review would not necessarily disclose if the Vice President of Business Affairs realized any personal benefit from trading with the College's brokers. The State Securities Board's inquiry will determine the nature and extent of the benefits, if any, derived by the Vice President of Business Affairs.

Recommendation:

- Establish strong internal controls, including the establishment of ethics policies and requirements for annual financial disclosure statements for key employees and Board members.

Management's Response:

Odessa College established many years ago a Conflict of Interest Policy governing employees and Board members of the College. There already exist State Laws regarding conflict of interest for locally elected public officials. There is no statutory authority authorizing the College to require financial disclosure by its employees and assurance of confidentiality under the Open Records Act. There is no statutory authority authorizing the College to require financial disclosure by its publicly elected Trustees. It is very difficult for a college to require financial disclosure information for our elected officials in the absence of legislation mandating such practices. Should the Legislature in its wisdom elect to pass requirements, of course the institution would be happy to comply.

Consideration of financial disclosure statements for employees is now being taken.

There is a question as to whether or not this information might infringe on the personal privacy rights of employees. However, this is a recommendation that the College is taking seriously and will certainly consider for future action.

Auditor Follow-up Comment

The Board has the authority, without changes to statute, to establish policies that hold the Board and the College's employees to a high standard of ethical conduct. To ensure that such policies are followed, some monitoring mechanism must be in place, such as requiring periodic financial disclosures. Board members and employees of the State are currently required to provide such financial disclosures annually. Although state law, in some cases, establishes the ethics and financial disclosure requirements, some agencies have chosen to adopt more stringent requirements, including financial disclosures for middle management employees.

Section 1-C:

Odessa College's Organizational Structure Limited The Effectiveness Of Internal Controls By Inadequately Segregating Job Responsibilities

Job responsibilities for the investment function were inadequately segregated. The Vice President of Business Affairs' responsibilities covered both the accounting and investment functions, including:

- purchasing investment securities
- selling investment securities
- authorizing the release of funds to finalize investment purchases
- supervising the accounting function

For example, the Vice President of Business Affairs was allowed to independently authorize his own travel, including visits to investment brokers. Allowing the Vice President of Business Affairs to authorize his own travel did not ensure that the travel expenses incurred were necessary to conduct College business.

The College did require that the College President, as well as the Vice President of Business Affairs, sign documents indicating their authorization for an investment purchase. However, the President stated that he did not understand the risk involved in the investment transactions. Thus, any control provided by requiring his signature was ineffective.

Proper segregation of duties would prevent the same individual from making investment decisions as well as influencing the accounting treatment for the investment transactions. It would also prevent an individual from independently authorizing personal travel.

Recommendations:

- Segregate investing and accounting functions so that individuals with investment authority cannot influence accounting decisions.
- Require approval of expenses by individuals other than the individual incurring the expense.

Management's Response:

Although any good auditing procedure does indicate that segregation of function is important, the College would like to point out that small staffs make these activities very difficult.

Following the proposed recommendation of segregation would obviously preclude any community college from managing its own investment program. By definition, the chief financial officer shall ultimately supervise the accounting function. This does not imply inappropriate control of the function as long as adequate internal control measures are in place.

However, we do understand the point and are undertaking a study to determine whether or not we can find a way to more adequately separate these functions to provide safeguards for the future of the institution.

Even though the Vice President of Business Affairs was allowed to independently authorize his own travel, there is absolutely no indication anywhere that there was any abuse of any kind. The Vice President of Business Affairs constantly underspent his budget, traveled only on rare occasions, and expended funds very frugally. We are not aware of any travel expenditures which the State Auditor's Office may have deemed inappropriate.

In an ideal world there could perhaps be a situation where travel might be authorized by some system outside the vice president's area of control. However, again, with a small staff and limited financial resources, it is very difficult to understand how a college could operate in this manner. The Board did establish the budget. Travel expenditures were well within that budget. It's difficult to understand what further could have been done to make this situation more appropriate.

Auditor Follow-up Comment

We agree that establishing proper segregation between accounting and investing is more difficult for smaller entities. The Chief Financial Officer, by definition, does supervise the accounting function. However, it is an inappropriate segregation of functions to also have the Chief Financial Officer make investment decisions or supervise the investing function.

Accounting information is used to record the results of the investing activities of the College. Allowing one individual to control both functions increases the risk that the true results of the investment activities may be compromised. As a result, the actions of one individual may influence the College's financial stability.

The College might consider using an external investment manager in order to segregate accounting and investing functions.

Section 1-D:

The President And The Board May Have Lacked Sufficient Information And Training To Understand Investment Risk

The President and the Board may have lacked sufficient information and training to understand investment risk:

- The College did not receive any independent assessment of the investment portfolio's asset allocation or performance. According to the Board members, the Vice President of Business Affairs told them that:
  - The investments were legal.
  - The investments were backed by the full faith and credit of the U.S. Government.
  - The principal was secure.
- Independent auditors, according to the Board members interviewed, did not raise any concerns about the investment portfolio.
- The President and the Board members did not receive training on types of investment instruments, portfolio diversification, investment risks, or portfolio management.
- The Board did not receive written investment reports. (See Section 1-A.)
- The Board was not aware that the Vice President of Business Affairs had:
  - Not followed the instructions of the Finance Committee to divest
  - Entered into repurchase agreements with brokers when he did divest
  - Made personal investments with the brokers used for College investments
- Only one member of the Board had investment experience.

The President did receive detailed information from a brokerage firm in February 1993 which included a description of the College's investment types and a statement that these investments are more speculative than some other fixed income investments. He also received a Publication, titled "Investor's Guide to Mortgage Securities."

The Board and the President were also aware that the College was earning an abnormally high rate of return, ranging from 11.59 percent to 24.84 percent, on its investments from 1991 to 1993. They stated that they questioned the Vice President of Business Affairs about the College's ability to generate substantially higher investment returns than other junior colleges. He stated that the other junior colleges were not earning high rates of return because the investment officers simply did not understand these types of investments.

In addition, the Board and the President said that they expressed concerns to both the Vice President of Business Affairs and the College's attorney as to whether the investments were legal. According to interviews, the Board members and the President were told by the College's attorney that the investments were legal. When we interviewed the College's attorney, he stated that in 1990 he determined that U.S. Government agency securities were authorized investments by the Public Funds Investment Act. He did not review the legality of the investments after the College began investing in the more risky derivatives.

The Board and the President appear to have relied exclusively on the College's Vice President of Business Affairs to make investments for the College.

Recommendations:

- Design investment policies so that the Board does not place reliance on one individual's investment abilities.
- Consider periodic investment reviews of asset allocation and performance by experts independent of the College.
- Ensure that Board members and College management receive adequate training in investment practices.

Management's Response:

Investment policies of the College are now designed so that the Board does not place reliance on one individual's investment abilities. An Investment Advisory Committee, made up of community citizens experienced in financial and investment matters, has been established to provide assistance and advice to the Board concerning investment strategies and policy compliance and revisions.

Odessa College is considering employing a financial consulting firm to assist the institution in making investment decisions, as well as to asset allocation and performance of investments. As the College has few investment opportunities at the moment, this has not been done, but it will be done as the financial pictures brightens for the institution. Odessa College Board of Trustees will attend the required board training sessions established by the State of Texas. Although not currently required by Title 19 of the Texas Administrative Code, it is recommended by Odessa College that these training sessions will include information in investment practices. The Board of Trustees will make every attempt to employ managers in the future who have adequate training in investment practices, and will insist that the College's investment officer in the future work closely with a qualified financial advisement firm.

Section 2:

Currently, The Portfolio Consists Entirely Of High-Risk Derivatives, And Maturity Dates Are Impossible To Predict

Odessa College's entire portfolio of $22 million as of August 31, 1994, was comprised of the highest risk tranches, or pieces, of Collateralized Mortgage Obligations. The nature of these types of Collateralized Mortgage Obligations make the College's portfolio susceptible to the following:

- substantial declines in market price
- extending of maturity dates as interest rates increase ("extension risk")
- decreasing cash flows as interest rates increase

Since January 1994, Odessa's Collateralized Mortgage Obligation portfolio has declined in value by more than 50 percent. As of August 1994, the rate of return was approximately 6.1 percent annualized and has continued to fall as interest rates have risen. If these securities are held to maturity, they are guaranteed to pay back over $27 million in principal. However, under current estimates, it might take over 22 years for Odessa to be paid all of this principal.

Many of these investments are paying no principal and no interest. If interest rates continue to rise, Odessa could receive no cash flows for a period of several years from these investments.

Section 2-A:

Entire Portfolio Currently Comprised Of "Inverse Floaters" and "Principal Only Strips"

Odessa's entire portfolio of $22 million as of August 31, 1994, was comprised of types of Collateralized Mortgage Obligations which are considered to be "high risk" investments. Specifically, Odessa's current portfolio is invested in two classes of Collateralized Mortgage Obligations:

- **Inverse floaters (69 percent of the portfolio)** -- Inverse floaters are Collateralized Mortgage Obligation instruments whose interest rates fluctuate on a monthly basis in the opposite direction of market interest rates. The monthly interest rate of inverse floaters is tied to a calculation derived from a specific index. As the prevailing market interest rates decline, the interest rates of inverse floaters can increase significantly. **(Figure 1 presents an interest calculation using one of Odessa College's actual inverse floating investments.)**

- **Principal only strips (31 percent of the portfolio)** -- Principal only strips are Collateralized Mortgage Obligations typically sold at significant discounts. As the name implies, these securities represent the principal stream of cash flow from the collateral mortgages and bear no interest rate. The yield on these securities comes from the discount paid since principal dollars paid back are greater than the dollars used to purchase the security. This class of Collateralized Mortgage Obligation benefits from high rates of mortgage prepayments usually occurring when interest rates decline.

Figure 1

Monthly Interest Rate Calculations On One Of Odessa College's Actual Inverse Floating Investments

Formula: -5.25842 X LIBOR[1] 1 Month + 31.81345%
Cap = 31.81345% (Maximum Interest Rate)
Floor = 0.00% (Minimum Interest Rate)

Assumed LIBOR Index	Formula Calculation	Monthly Interest Rate
0.00%	-5.25842 X 0.00% + 31.81345%	31.81345%
3.00%	-5.25842 X 3.00% + 31.81345%	16.03819%
6.05%-and up	-5.25842 X 6.05% + 31.81345%	0.00%

1 LIBOR = London Interbank Offer Rate

This chart shows how significantly the actual monthly paid interest rate can fluctuate with relatively small swings in the index rate and demonstrates how unpredictable the cash flow from interest payments may be. Odessa purchased leveraged inverse floaters which use a multiplier (-5.25842 in the chart above) on the index rate that exaggerates small swings in the actual index rate, compounding the unpredictable nature of Odessa's investments.

Since Odessa's investment portfolio was not diversified when interest rates began to rise, the entire portfolio experienced a significant decline in market value. Both inverse floaters and principal only type Collateralized Mortgage Obligations benefit in a period of declining interest rates, as was seen in 1992 and 1993.

Section 2-B:

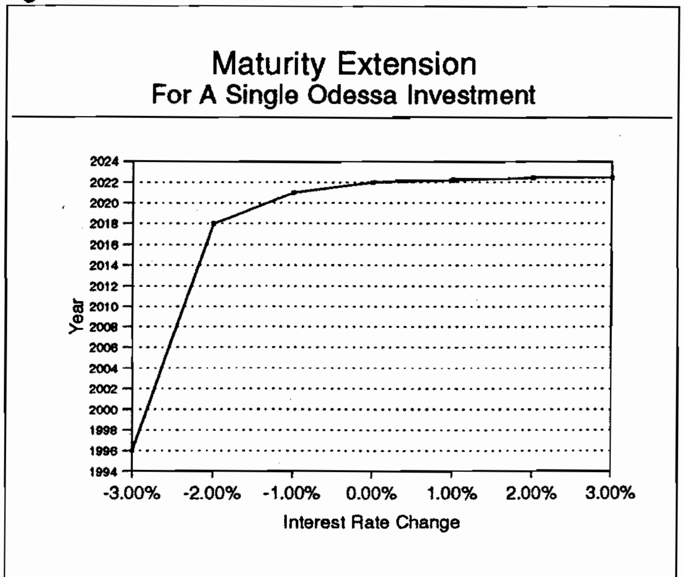
Maturity Date Of Odessa College's Investments Are Impossible To Predict

The final maturity date of Odessa's investments is difficult to predict because of the volatility of the investment instruments. The investments' cash flows and the maturity dates are affected dramatically by changes in interest rates. Since it is not possible to predict future changes in interest rates, it is not possible to know precisely when Odessa's investments will mature.

The maturity of principal for these types of investments is not a specifically defined date, but rather a range of possibilities depending on the amount of mortgage principal prepayment occurring. Therefore, when mortgage prepayments are high, which typically occurs when interest rates are low and people begin to refinance their old mortgages, the maturity of these types of investments become greatly shortened due to the prepayment of entire mortgages in the underlying collateral. However, relatively small rises in the interest rates cause these types of Collateralized Mortgage Obligations to significantly extend their maturity, more so than other stable classes of Collateralized Mortgage Obligations.

Odessa's entire portfolio has experienced this type of extending of its maturity. What appeared to be two-year investments have now extended to approximately 20-year bonds.

Figure 2



As an example of the volatility in the extending of Odessa's portfolio maturity, due to rising interest rates, the graph at Figure 2 depicts the potential maturity date on a single investment held by Odessa, based on a range of assumed movement in interest rates. With no change (0.00 percent) in current interest rates, Odessa's investment is predicted to mature on April 15, 2022. However, should current interest rates decline by 3.00 percent, this investment is predicted to return all principal by April 15, 1996.

Section 2-C:

Actual Current Year Losses On Investments Total $3 Million

Odessa realized actual losses of $3 million during fiscal year 1994 from the sale of a portion of its portfolio. An additional $3.5 million loss of funds was incurred due to Odessa's Vice President of Business Affairs entering into dollar role repurchase agreements. Dollar role repurchase agreements involve selling a security to a broker with the promise to purchase the security back at a later date.

The $3.5 million loss of funds can be accounted for as a financing transaction or as a sale and purchase since the College still owns the securities. If the dollar role repurchase agreements are accounted for as financing transactions, the $3.5 million loss of funds will not be reflected as an actual loss in the College's financial statements. If the accounting criteria for financing transactions is not met, the repurchase agreements will be accounted for as purchases and sales, and the entire $3.5 million will be reported as an actual loss. If the repurchase agreements are accounted for as purchases and sales, the total reported loss will be $6.5 million. The decision to report these repurchase agreements as financing transactions or purchases and sales will be made by the College's independent auditors.

Irrespective of the auditor's decision, if Odessa holds these securities until maturity, the College will recover the $3.5 million. However, as noted in Section 2-B, it is not possible to predict future changes in interest rates; therefore, it is not possible to know precisely when Odessa's investments will mature and the losses will be recovered. The maturities are potentially as long as 23 years.

Although dollar role repurchase agreements were entered into beginning in December 1993, the President and the Board were not aware of these transactions until March 1994. At that time, the Vice President of Business Affairs disclosed that the entire investment portfolio had suffered a significant decline in market value and liquidity. He used dollar role repurchase agreements to meet the operating needs of the College because the College's operating funds were now tied up in long-term investments.

Section 3:

Odessa College's Investment History: Expansion Of Investment Options In 1990 Led To Exclusive Investment In High-Risk Tranches

On February 27, 1990, the Board expanded the College's investment options by authorizing the College to invest in U.S. Government agency securities. Before February 1990, the College's investments were limited to certificates of deposit. Odessa quickly moved from a conservative investment strategy of investing in certificates of deposits into complex mortgage backed securities. (See Figure 3 for the quarterly balances of investments held by Odessa from September 1990 until August 1994.)

Odessa had, in fact, invested over $1 million in mortgage backed securities prior to the Board's authorization. Initially, purchases were limited to mortgage backed securities in which the College received a pro-rata share of the principal and interest earnings from pooled mortgages.

After February 1990, Odessa began to quickly invest in mortgage backed securities. As certificates of deposits matured Odessa used those funds to invest in mortgage backed securities. Once Odessa began purchasing mortgage backed securities, no other type of investment was made. This change in investment strategy violates basic investment fundamentals of portfolio diversification.

At August 31, 1990, a balance of $7.67 million of mortgage backed securities was built up.

In fiscal year 1991, the College further increased its investment portfolio risk when it began investing in the more complex mortgage backed derivatives known as Collateralized Mortgage Obligations. The Vice President of Business Affairs began purchasing the more risky derivative investments, such as inverse floaters and principal onlys. These investments are pieces, or tranches, of Collateralized Mortgage Obligations. In general, these investments absorb mortgage prepayment risk for other tranches in the same Collateralized Mortgage Obligations. Since the investments' marketability and rate of return is dependent on interest rate fluctuations, they are more volatile or risky than other tranches of the same Collateralized Mortgage Obligation.

By fiscal year 1992, Odessa College exclusively purchased Collateralized Mortgage Obligations in what are considered high risk tranches.

The College's investment strategy was not to purchase and hold particular securities. Odessa's portfolio turnover rates were very high. Odessa College turned over its portfolio in a range from 2.6 to 5.5 times each year from fiscal years 1991 to 1994. In fiscal year 1993, the Vice President of Business Affairs purchased and sold investments so that the average investment portfolio turned over 5.5 times. Even in fiscal year 1994, when they discontinued trading in July 1994, the investment portfolio turned over 2.9 times.

Figure 3

Quarterly Balances Of Investments Held By Odessa From September 1990 Until August 1994

Quarter Ending	Mortgage Backed Securities/Collateralized Mortgage Obligations	Certificates of Deposits
Sep'90 Beginning	7,671,495	6,700,000
Nov'90	10,837,421	3,200,000
Feb'91	16,792,237	2,300,000
May'91	16,252,399	500,000
Aug'91	13,892,373	900,000
Nov'91	13,066,447	0
Feb'92	24,006,117	0
May'92	21,958,135	0
Aug'92	15,875,752	0
Nov'92	17,129,538	0
Feb'93	15,831,267	0
May'93	17,979,633	0
Aug'93	21,068,828	0
Nov'93	21,328,373	0
Feb'94	31,578,497	0
May'94	20,619,200	0
Aug'94	22,204,077	0

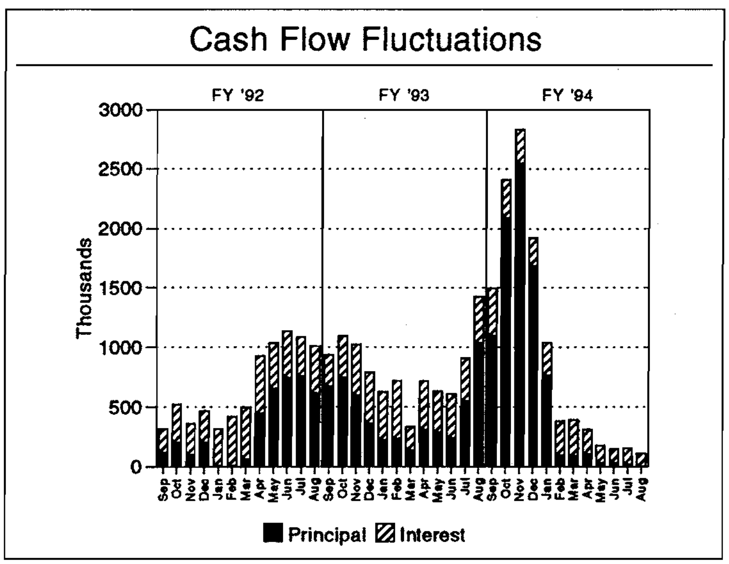
The College's investments produced significant rates of return at a time when interest rates in the market were low. Both the payment of interest and principal fluctuated significantly from month to month. (See Figure 4 for the past four years' rates of return.) The investment portfolio rate of return has fallen dramatically.

Figure 4

Odessa's Return On Investments Provided Substantial Cash Flow To The College For Some Time

Fiscal Year End	Interest Payments	Annual Rate of Return
1991	$1,541,542.60	11.59%
1992	$4,024,250.20	21.61%
1993	$4,325,037.51	24.83%
1994	$2,671,308.77	11.40%

Figure 5



The cash flows from Odessa's investments were highly irregular. Monthly payments of interest and principal during fiscal year 1994 ranged from a high of $2.8 million in November 1993 down to $112,000 in August 1994, a drop of 96.03 percent. (See Figure 5 for a depiction of the cash flows from Odessa's investments.)

Section 4:

Investment Activities Have Influenced Compliance With Bond Requirements

Section 4-A:

Extension Risk Resulted In A Technical Violation On Bonds

Odessa College is in technical violation of its bond reserve fund requirements. The outstanding bond issues require the College to establish a reserve fund to pay the final principal and interest payments on the bonds. Monies within this reserve fund cannot be invested in securities with maturity dates past the final maturity of the bond issues.

The current maturity dates of the College's investments have extended past the maturity of the outstanding bonds. The investment portfolio's average life or maturity has extended dramatically. This is known as "extension risk" and is influenced by fluctuations in market interest rates. Fluctuations cause a Collateralized Mortgage Obligation investment portfolio's average life or maturity to extend dramatically. For example, a minor change in interest rates can change the average life of this type of investment portfolio from 1 1/2 years to 26 years. Since the average life or maturity is dependent upon interest rate fluctuations, the actual maturity date of the investment portfolio fluctuates.

Recommendation:

- Odessa College should take steps to cure the technical violation by funding its bond reserve funds.

Management's Response:

Although the College acknowledges the technical violation of bond fund requirements, it would note that both the State Attorney General's Office and the bonded insurer have been notified of this technical violation, and the intent of the institution to correct it as soon as possible. Both the insurer and the Attorney General note the violation, but have indicated that it is acceptable for the College to work toward curing this violation by funding its bond reserve funds as soon as it becomes feasible.

Appendix 1:

Objective, Scope, And Methodology

Objectives

The objectives of the review were:

1. To prepare a briefing report for the Legislature disclosing the circumstances leading to Odessa College's investment in derivatives and the College's subsequent loss of funds.
2. To assist state entities and political subdivisions by providing management control recommendations to avoid similar public funds losses.

Scope

The initial scope of this review included consideration of:

- The existence of management controls over the investment function
- Whether the derivative investments' level of risk was properly disclosed to the President and the Board
- Indications of any conflicts of interest or legal or ethical violations
- The investment portfolio's current status

The review excluded an evaluation of any conflicts of interest or legal or ethical violations because the College has initiated legal proceedings against one brokerage firm and is considering additional lawsuits. As a result, the information necessary to properly evaluate this area is subject to attorney/client privilege and not available for review. In addition, the State Securities Board is independently inquiring into possible sales practice abuses by the brokers and dealers selling the derivative investments to Odessa College.

Methodology

Information collected to accomplish our objectives included the following:

- State statutes relevant to the investment of public funds
- Vice President of Business Affairs dissertation, *The Development of Financial Strategies to Fund Capital Projects for Texas Community Colleges*
- Bond official statements
- Annual financial reports for fiscal years 1988-1993
- Investment portfolio activity for fiscal years 1990-1994

Procedures conducted to accomplish our objectives included reviewing:

- Board meeting minutes for fiscal years 1989-1994
- Investment transactions for fiscal years 1989-1994
- Bond resolutions for debt issued during fiscal years 1989-1994

- Correspondence between the College and its investment brokers, auditors, bond counsel, and financial advisors

In addition, we conducted interviews with the College's personnel, attorneys, and auditors, as well as other interested parties. We also analyzed the current investment portfolio.

Fieldwork was conducted from August 24, 1994, through October 31, 1994. The audit was conducted in accordance with applicable professional standards, including:

- Generally Accepted Government Auditing Standards
- Generally Accepted Auditing Standards

The review work was performed by the following members of the State Auditor's staff:

- Carol Smith, CPA (Project Manager)
- William Wood, CPA
- Catherine Smock, CPA (Audit Manager)
- Deborah Kerr, Ph.D. (Director)

Appendix 2:

Glossary Of Selected Key Terms

Average Life - The average number of years the principal in a mortgage pool is expected to remain outstanding.

Collateral - The underlying mortgage backed securities backing a Collateralized Mortgage Obligation (CMO) deal.

Collateralized Mortgage Obligations (CMO) - A security created using the underlying cash flows from mortgage backed securities as collateral. A CMO shifts the uncertainty regarding the exact timing of principal return in a mortgage backed security. This uncertainty exists because the timing of mortgage principal payments is influenced by changes in interest rates, the current economic climate, and the geographic make up of loans.

Coupon - The interest rate paid on a security.

Credit Risk - The likelihood that a party involved in an investment transaction will not fulfill its obligations. This type of risk is often associated with the issuer of the investment security and is affected by the concentration of deposits or investments in a single instrument or with a single institution.

Derivatives - Financial arrangements whose returns are linked to, or derived from, some underlying stock, bond index, commodity, or other asset. They come in two basic types: options and "forward-type" derivatives, which include forwards, futures, and swaps. They may be listed on exchanges or negotiated privately between institutions.

Derivative Securities - Trade like normal bonds, but their returns are determined by, or derived from, other factors than plain old interest rates. For instance, returns on "structured notes" may vary in line with changes in stock prices, commodity prices, foreign exchange rates, or two different interest rates. Returns on mortgage derivatives involve bets on the rate at which homeowners will repay mortgages and often act like leveraged interest-rate options.

Extension Risk - The risk that a security will lengthen in average life due to slower prepayment speeds.

Floater - A CMO class created from fixed rate mortgage backed collateral whose coupon adjusts on a monthly basis versus a market index.

High-risk - A type of security deemed unsuitable for specified investors by certain regulatory agencies.

Index -A benchmark measure of interest rates used in calculating coupons on adjustable securities.

Interest Only - A security whose payment represents the coupon payments on the outstanding principal balance of the underlying mortgage backed security collateral and pays no principal.

Inverse Floater - CMO class whose coupon adjusts opposite changes in a market index.

Interest Rate Risk - The risk that longer-term fixed income stocks will drop in market value if general interest rates climb or the risk that interest rates will change above current levels on a locked-in or fixed rate instrument.

London Interbank Offered Rate (LIBOR) - The average rate offered for U.S. dollars deposited in the international money market.

Market Risk - The risk that the market value of an investment, collateral protecting deposit, or securities underlying a repurchase agreement will decline. This type of risk is affected by the length to maturity of a security, the need to liquidate a security before maturity, the extent that collateral exceeds the amount invested, and the frequency at which the amount of collateral is adjusted for changing market values.

Mortgage-backed Securities - The securities are structured by pooling together standardized residential mortgage loans of similar characteristics. The investor purchases a pro-rata share of the interest and principal that the borrowers pay on the mortgage loans in the pool.

Prepayment - Any additional principal payments made on a mortgage loan.

Prepayment Risk - The risk associated with the extension or contraction of principal repayments in a pooled mortgage security. Prepayments of any loan in the mortgage pool by a borrower will shorten the average life of the security and also affect the yield. As interest rates decline, the borrowers are more likely to refinance their mortgage into a lower rate loan.

Principal Only - A security whose payment represents the principal stream of cash flow from the underlying mortgage backed collateral and bears no interest rate.

Tolerable Risk - The level of risk an entity is willing to accept without regard to the potential returns. Only investment activity below this threshold will be undertaken. Tolerable risk should be established when the entity outlines its investment objectives.

Tranche - The security class of a CMO deal.

Volatility - The relative impact of changing interest rates in general market conditions on an investment.

Weighted Average Life - The average amount of time the principal balance of a mortgage pool is outstanding.

Yield - The annual return on an investment (from dividends or interest) expressed as a percentage of either cost or current price. **Yield to maturity** refers to the yield of a bond also taking into account the premium or discount of the bond.

Copies of this report have been distributed to the following:

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