

UNAUDITED  
WEST VIRGINIA STATE BOARD OF INVESTMENTS  
FOR THE PERIOD  
JANUARY 1, 1988 - DECEMBER 31, 1988

*West Virginia*



**LEGISLATIVE AUDITOR**

**CHARLESTON**

To Members of the West Virginia Legislature:

In compliance with the West Virginia Code, Chapter 12, Article 6, Section 15, one thousand nine hundred thirty-one, as amended, transmitted herewith is the report of the investment balances of the West Virginia State Board of Investments. This report covers the calendar year 1988 and other matters.

Very truly yours,

*Theodore L. Shanklin*

Theodore L. Shanklin, CPA, Director  
Legislative Postaudit Division

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WEST VIRGINIA STATE BOARD OF INVESTMENTS

TABLE OF CONTENTS

Board Members and Staff . . . . .	1
General Remarks . . . . .	2
Independent Auditors' Opinion . . . . .	34
Unaudited Schedule of Consolidated Fund Investment Balances by Retirement System . . . . .	35
Unaudited Schedule of Consolidated Fund Investment Balances by Pool . . . . .	37
Unaudited Notes . . . . .	39
Certificate . . . . .	45

WEST VIRGINIA STATE BOARD OF INVESTMENTS  
BOARD MEMBERS AND STAFF

Board Members

Arch A. Moore, Jr.  
Governor  
Chairman . . . . . Charleston

A. James Manchin  
State Treasurer  
Secretary . . . . . Charleston

Glen B. Gainer, Jr.  
State Auditor  
Member . . . . . Charleston

Staff

Arnold Margolin 1/ . . . . . Associate Treasurer/Investments

Kathryn M. Lester 2/ . . . . . Assistant Treasurer/Investments

Mary O. Hudson 3/ . . . . . Assistant Treasurer/Investments

Diana Will . . . . . Assistant Director of Investments

Jack Fuller . . . . . Investment Officer

Rockland Poole . . . . . Investment Officer

Celeta Wade . . . . . Investment Officer

Mary Jane Lopez . . . . . Investment Clerk

Wilma Groves . . . . . Local Government Liaison

June Ceffey . . . . . Local Government Liaison

Susan Guthrie . . . . . Investment Secretary

Debores Humbles . . . . . Investment Secretary

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1/ Resigned effective December 9, 1988

2/ Resigned effective December 1, 1987

3/ Effective December 1, 1988

WEST VIRGINIA STATE BOARD OF INVESTMENTS

GENERAL REMARKS

BACKGROUND

The requirements of corporations to be eligible for investment purchases by the Board are set out by the West Virginia Code, Chapter 12, Article 6, Section 9, as follows: "(g) Any bond, note, debenture, commercial paper or other evidence of indebtedness of any private corporation or association organized and operating in the United States: Provided, that any such security is, at the time of its acquisition, rated in one of the three highest rating grades by an agency which is nationally known in the field of rating corporate securities: Provided, however, that if any commercial paper and/or any such security will mature within one year from the date of its issuance, it shall, at the time of its acquisition, be rated in one of the two highest rating grades by such an agency: Provided further, that any such security not rated in one of the two highest rating grades by any such agency and commercial paper or other evidence of indebtedness of any private corporation or association shall be purchased only upon the written recommendation from an investment advisor that has over three hundred million dollars in other funds under its management."

The West Virginia Code, Chapter 12, Article 6, Section 10, as amended, states in part:

"(1) At no time shall more than seventy-five percent of the portfolio of either fund be invested in securities described in subdivision (g) of said section nine;

(2) At no time shall more than twenty percent of the portfolio of either fund be invested in securities described in said subdivision (g) which mature within one year from the date of issuance thereof;

(3) At no time shall more than three percent of the portfolio of either fund be invested in securities issued by a single private corporation or association ...."

Pursuant to authorization given by House Bill 1321, effective July 1, 1978, Administrative Rules and Regulations filed with the Secretary of State on October 13, 1978, and portfolio policy guidelines adopted by the Board of Investments, the State Treasurer's Office completed the conversion of State agency short-term investments to the Consolidated Fund (Short-Term Pools) on October 15, 1978 and all State retirement system funds to the Consolidated Pension Fund (Long-Term Pool) on March 17, 1979.

The Consolidated Fund was composed of 29 "pools" during 1988 which are identified below. Pool 0100 contains investments from agencies which are unrestricted by type, i.e., not restricted by instrument. Pool 0140 contains investments from agencies which may only be government instruments. The remaining 21 pools contain specific investments for individual agencies due to constitutional or bonding restrictions prohibiting commingling with Pools 0100 or 0140.

1. Consolidated Investment Pool No. 100

This Pool consists of the operating funds of State agencies and the investments funds of local governments.

2. Local Housing Development Authorities Pool No. 105

This Pool is a restricted fund for local housing development funds where only U.S. Treasury Securities and Repurchases may be bought.

3. Workers' Compensation Operating Fund Pool No. 110

This Pool consists of operating funds from the Workers' Compensation Fund and the Coal Pneumoconiosis Fund.

4. Local Government Pension Fund Pool No. 115

This Pool consists of funds from the local government pension systems.

5. Construction Trust Fund - Huntington Toll Bridge Pool No. 120

This Construction Trust Fund is restricted to investment made solely on the behalf of the Huntington Toll Bridge and may only be invested in U.S. Treasury obligations.

6. The School Fund Pool No. 130

The School Fund is not an investment Pool within the Consolidated Fund. The Office of the Treasurer of State serves as the staff agency for the "Board of the School Fund". The Fund is restricted to investments in securities of the United States Government or of the State of West Virginia.

7. Restricted Consolidated Pool No. 140

This Pool is limited to investments made in securities offered by U.S. Treasury, U.S. Government Agencies, or investments collateralized by U.S. Treasury securities.

8. National Credit Union Administration Fund Pool No. 145

This is a restricted Pool for credit unions serving public employees where only U.S. Treasury securities and repurchases may be bought.

9. Municipal Bond Commission - Huntington Toll Bridge Pool No. 150

This Municipal Bond Commission Account is for the Huntington Toll Bridge obligation. No purchases or sales of investments may occur in Pool No. 150 without Municipal Bond Commission authorization. This account was closed December 29, 1988.

10. Municipal Bond Commission - County Revenue Pool No. 152

This Municipal Bond Commission Account is for the investment of county revenues. No purchases or sales of investments may occur without the authorization of the Municipal Bond Commission.

11. Municipal Bond Commission - General Obligation Pool No. 156

This Municipal Bond Commission Account is for the defeasance of general obligations on municipalities, only U.S. Treasury Securities may be purchased.

12. Municipal Bond Commission - WVU Project 11 Escrow Pool No. 160

This Escrow Account is for West Virginia University's Project 11. No purchases or sales of investments may occur without the authorization of the Municipal Bond Commission.

13. Municipal Bond Commission - County Schools Pool No. 162

This Pool is for the investment of funds held by county schools systems. No purchases or sales of investments may occur in Pool No. 162 without Municipal Bond Commission authorization.

14. Municipal Bond Commission - Public Service Districts Pool No. 164

This Pool is for the investment of Public Service District Funds. No purchases or sales of investments may occur in Pool No. 164 without Municipal Bond Commission authorization.

15. Municipal Bond Commission Pool No. 166

No purchases or sales of investments may occur in Pool No. 166 without Municipal Bond Commission authorization.

16. Municipal Bond Commission - State Building Commission Pool No. 170

This account is for the investment of State Building Commission Funds. No purchases or sales of investments may occur in Pool No. 170 without the authorization of the Municipal Bond Commission. This account was closed on December 29, 1988.

17. Municipal Bond Commission - Huntington Bridge 65 Revenue Pool No. 400

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This account is for the Huntington Toll Bridge obligation. No purchases or sales of investments may occur in Pool No. 400 without Municipal Bond Commission authorization. This account replaces Pool No. 150.

18. Municipal Bond Commission - Combined Revenue Account Pool No. 401

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This account is for the investment of State Building Commission Funds. No purchases or sales of investments may occur in Pool 401 without Municipal Bond Commission authorization. This account replaces Pool No. 170.

19. Municipal Bond Commission - Hancock County Schools 83G/0 Pool No. 402

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This newly created account contains investments originally held in Pool No. 162. These investments are escrowed for the retirement of Hancock County Schools general obligation bonds. No purchases or sales of investment may occur in Pool 402 without Municipal Bond Commission authorization.

20. Municipal Bond Commission - Fairmont 85 Sewer Revenue Pool No. 403

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This account contains investments originally held in Pool No. 166. These investments are escrowed for the retirement of Fairmont Sewer Revenue Bonds. No purchases or sales of investments may occur in Pool No. 403 without Municipal Bond Commission authorization.



21. Municipal Bond Commission - Fairmont 85 Water Revenue Esc Pool No. 404

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This account contains investments originally held in Pool No. 166. These investments are escrowed for the retirement of Fairmont Water Revenue bonds. No purchases or sales of investments may occur in Pool No. 404 without Municipal Bond Commission authorization.

22. Municipal Bond Commission - Huntington 80 Sewer Revenue Pool No. 405

This account was created December 29, 1988 to hold escrowed investments for the Municipal Bond Commission. This account contains investments originally held in Pool No. 166. These investments are escrowed for the retirement of Huntington Sewer Revenue bonds. No purchases or sales of investments may occur in Pool No. 405 without Municipal Bond Commission authorization.

23. Retirement Systems' Operating Fund Pool No. 3300

This Pool is designed to accomodate the investment needs of the individual retirement systems. The participating systems are the Judges' Retirement System, Public Employees' Retirement System, Public Safety Retirement System and Teachers' Retirement System.

24. Workers' Compensation Fund Housing Development Loan Fund Pool No. 4900

Pool No. 4900 was established by statute (Chapter 31, Article 18B, Section 2, West Virginia Code, June 11, 1982) to track the Workers' Compensation Fund Loan to the Housing Development Fund.

25. Workers' Compensation Fund - Economic Development Authority Loan  
Pool No. 5100

Pool No. 5100 was established by statute (Chapter 31, Article 18B, Section 2, West Virginia Code, June 11, 1982) to track the Workers' Compensation Fund loan to the West Virginia Economic Development Authority.

26. Lottery Defeasance Pool No. 8013

This Pool is used to annuitize the lottery winners by buying U.S. Treasury Zero Coupon Bonds.

27. Finance and Administration - Reserve Restricted Fund Pool No. 9523

The Department of Finance and Administration invests its issuance in this restricted Pool.

28. Finance and Administration - Issuance Differential Fund Pool No. 9524

The Department of Finance and Administration invests its issuance differential funds in this Pool.

29. Revenue Sharing Fund Pool No. 9700

All Federal Revenue Sharing Funds received by the State are invested through this Pool until they are needed to pay appropriated obligations.

The Consolidated Pension Fund is composed of the following retirement systems:

Judges' Retirement  
Department of Public Safety  
Workers' Compensation  
Pneumoconiosis Fund  
Public Employees' Retirement  
Teachers' Retirement

INVESTMENT POLICY

At a regular meeting of the West Virginia State Board of Investments on February 19, 1985, a new investment policy was adopted. The proposal was introduced by the Treasurer and seconded by the Governor. The proposal was approved with the Auditor opposing. The proposal, as adopted, contained three broad policy guidelines:

(1) The Treasurer of State, as staff agency for the Board, shall administer the Consolidated Funds in accordance with the following guidelines for diversification of the portfolio according to the kind of investment instrument, the quality of investment instrument, and the maturity of investment instrument;

(2) No investment may be made with a maturity date beyond ten (10) years, without approval of the majority of the Board, for those funds managed by and within the Treasurer of State's Office; and,

(3) The Treasurer of State, as staff agency for the Board, shall be authorized to sell any investment within the Board's portfolio regardless of the maturity that he deems prudent and in the best interest of maintaining the financial integrity of the Consolidated Funds."

We noted that the policy guidelines pertained to the Consolidated Funds. We were informed by the Assistant Treasurer/Investments that the Treasurer's staff follows in most instances the investment advice of the individual investment advisors for the long-term pension funds. However, during those periods when the Treasurer's staff managed those funds in 1985, the investment advisors' contracts were voided, the Treasurer's staff followed the investment strategy utilized for the Consolidated Funds.

General Investment Policies (Board Approved)

(1) Purpose

To invest and protect the assets of the Consolidated funds for the benefit of the citizens of the State of West Virginia. To seek the highest investment return consistent with the fiduciary standards established under State and Federal law, the regulations of the State of West Virginia and the guidelines of the Board of Investments.

(2) Standard of Care

All investments are to be made with the exercise of that degree of judgment and care, under circumstances then prevailing, which people of experience, prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation but for investment, considering the probable safety of their capital as well as the probable income to be derived.

(3) Diversification

To diversify the investment of the assets of the Fund so as to minimize the risk of large losses.

(4) Permissible Investments

The Fund shall abide by Section 12.6.9 of the West Virginia Code with regard to permissible investments.

(5) Social Responsibility

To the extent that investments are consistent with all other standards established by the Board of Investments, selection of investments should consider the interests of the people of the State of West Virginia.

(6) Supervision

The sole responsibility in the supervision of the assets of the Fund shall be with the Board of Investments of the State of West Virginia.

(7) Custody

The Board of Investments shall designate and maintain custodian arrangements in its sole discretion and no investment advisor shall maintain custody of the securities of the Fund.

(8) Investment Advisors

The Board of Investments will select and maintain investment advisors who shall act in accordance with the terms and conditions specified by the Board of Investments' Advisory Agreement.

Investment Objectives

(1) Preservation of Capital

To preserve the capital investment in Funds.

(2) Stability

To maintain a high level security in the Funds by minimizing risk and volatility insofar as possible within the rate of return objectives.

(3) Liquidity

To maintain sufficient liquidity to provide for all anticipated withdrawals or transfers and to invest in issues with sufficient marketability to provide for unexpected withdrawals.

(4) Turnover

To minimize transaction costs.

(5) Rate of Return

- a. The Fund shall seek an investment return from income which should exceed the inflation rate by at least three percentage points, using the annual GNP deflator, measured over a three to five year period.
- b. The Fund shall seek a total investment return which exceeds the Shearson-Lehman Government Bond Index, measured over a one to three year period.
- c. The Fund shall seek total investment performance which would place it in the top one-third of comparable funds, measured over each one year period by SEI.

Investment Restrictions

(1) West Virginia Code

The Fund shall abide by the quality restrictions of Section 12.6.9 of the West Virginia Code.

(2) Diversification

- a. Not more than 20% of the Fund's value at market may be invested in any single industry sector. (The utility industry shall be separated for the purpose of this restriction between telephone, electric, gas distribution and similar segments.)
- b. Not more than 3% of the Fund's value at market may be invested in the securities issued by a single private corporation or association.
- c. The Fund shall maintain a reasonable balance between the various classes of fixed income securities, without over concentration.

(3) Quality

The Fund shall abide by the quality restrictions of Section 12.6.9 of the West Virginia Code.

(4) Equity Investments

The Fund shall not invest in equity securities or equity equivalent securities."

Changes in Policy Guidelines - Calendar Year 1986

In addition, at the regular meeting of the West Virginia Board of Investments on May 14, 1986, new policy guidelines were adopted concerning the divestiture of investments from companies and/or financial institutions doing business with the Republic of South Africa or Namibia. The proposal was introduced by the Treasurer and seconded by the Auditor. The proposal was approved unanimously. The proposal, as adopted, contains these new guidelines:

"Whereas, the policy of Apartheid as maintained by the present government of the Republic of South Africa is not only morally repugnant to all who believe in the inherent rights of individual freedom and equal treatment under the law and has resulted in the systematic enslavement and subjugation of the non-white majority of South Africa and Namibia but casts doubt on the safety and stability of investment in companies doing business with, operating in, or making loans to the Republic of South Africa or Namibia;

Now, Therefore, Be It Resolved That:

1. No monies under the control of the West Virginia Board of Investments shall remain invested in or hereinafter be invested in the securities or other obligations of any company doing business directly in or with the Republic of South Africa or of Namibia.
2. No monies under the control of the West Virginia Board of Investments shall be deposited in any bank or financial institution which makes loans directly to the Republic of South Africa or Namibia or a governmental enterprise thereof.
3. It is the expressed goal of the West Virginia Board of Investments that the divestiture required by Section 1 be completed within three years of approval of this resolution so that no less than one-third the value of said investments be

sold in any one year. However, consistent with the Board's fiduciary responsibilities and fiscal prudence, the three-year time period may be extended to complete the divestiture program so as to minimize financial market disturbances and to avoid absorbing any realized capital (market) losses within the portfolio.

NOTE: This policy shall be in effect so long as apartheid remains the official policy of the government of South Africa."

Also, at a regular meeting of the West Virginia Board of Investments on July 24, 1986, the Treasurer proposed that the investment policy established by the Board on July 3, 1984 be rescinded. The investment policy established by the Board on July 3, 1984 regarding investment in real estate or real estate related trust investments stipulated that the Board's participation could not exceed either 50% of the project or the participation level of the lead lender. The proposal was seconded by the Auditor and was passed unanimously. The investment policy established by the Board on July 3, 1984 contained these guidelines:

"The West Virginia Board of Investments will invest in real estate or real estate related trust investments under the following conditions:

1. The project supporting the security will be located in West Virginia: real estate, shopping center and other property investments outside the State will not qualify.
2. The West Virginia State Board of Investments will not be the 'lead lender'. The West Virginia Board of Investments will participate only with a lead lender.
3. The maximum participation by the Board of Investments will not exceed either 50% of the project or the participation level of the lead lender.
4. The participation by the State Board of Investments will include full and proportionate participation in all conditions of the security agreement.

5. The total yield to the State Board of Investments will be at least equal to such yield as would be available through investments in Treasury securities of like term.
6. At no time shall more than 25% of any individual fund be invested in real estate related trust investments."

Also, at a regular meeting of the West Virginia State Board of Investments on December 29, 1986, a policy guideline regarding options was adopted. Following is the Board minutes adopting the policy: "Mr. Margolin distributed a copy of an opinion from the Office of the Attorney General regarding the legality of investing in financial futures and a recommended policy guideline to be considered by the Board for adoption . . . Auditor Gainer suggested that language be added to the recommended policy that advance unanimous approval of the Board be obtained of each transaction relating to futures and options. After further discussion, Auditor Gainer moved the adoption of the policy guideline as amended. Treasurer Manchin seconded the motion which was passed unanimously." The proposal, as adopted, contains this new guideline:

"The Treasurer of State, as staff agency for the Board, shall be authorized to invest in financial futures contracts, options and other similar instruments for the sole purpose of performing hedges in order to reduce the risk associated with fluctuations in interest rates or market prices of investments made by the Board. Such investments shall be limited to direct obligations of, or obligations guaranteed as to the payment of both principal and interest by the United States of America; namely, treasury bills, notes and bonds. For purposes of this guideline, the word 'hedge' means taking a position in the futures market which is opposite and approximately equal to the one held in the cash market. This policy guideline shall only be used as a defensive strategy in order to protect the overall values of our portfolios. Advance unanimous approval of the Board must be obtained prior to each transaction enacted under this guideline."



### Management of the Funds

The State Treasurer's Office administered the activities of the Pneumoconiosis Fund within the Consolidated Pension Fund during calendar year 1988. The activities of the other pension funds were administered by the following advisors during calendar year 1988:

Investment Advisers, Inc.:  
Public Employees' Retirement System  
Workers' Compensation Fund

Charleston National Bank:  
Public Safety Retirement System  
Judges' Retirement System

Duff and Phelps Investment Management Company:  
Teachers' Retirement System

The State Treasurer's Office administered the activities of all "pools" making up the Consolidated Investment Fund during calendar year 1988.

### CONSOLIDATED INVESTMENT FUND

#### Reserve Fund

We noted in our audit report of the West Virginia State Board of Investments, Investment Service Fees Account (8004-08) for the period July 1, 1978 to June 30, 1987 that the Board did not apportion the investment income of several pools within the Consolidated Fund in their entirety beginning in August 1984. Specifically, those pools were Pool 100 - Consolidated Fund Unrestricted - Account 7600-05; Pool 110 - Workers' Compensation Fund - Account 7645-12; Pool 115 - Local Government Pension - Account 7605-13; Pool 140 - Consolidated Fund Restricted - Account 7610-05 and Pool 3300 - Retirement System Operating Account - Account 7649-13. At the date of issuance of that report, December 5, 1988, we reported that a reserve account existed within the Consolidated Fund totalling \$53,797,096.58 on December 31, 1986. Based on records examined by us, the balance of the reserve account remained at that amount through June 30, 1987, however, the actual amount was (\$160,476,510.06) on June 30, 1987.

Our estimate of the reserve fund was initially arrived at by using several records produced by the State Treasurer's Office. The earnings of the various pools were taken from the gross interest earnings worksheet, this record was presented to us as a summarization of the earnings of the various pools within the Consolidated Fund, and was produced each quarter of the calendar year. The apportionment of those earnings was determined by scheduling intragovernmental transaction documents (IGT's) used to transfer investment service fees from the investment fund to the Board's operating account, as well as attachments which showed the apportionment amount the investment service fee was based on. Our reconstruction of the reserve fund was accurate through December 31, 1986 using these records. However, the gross interest earnings worksheet was changed at the beginning of calendar year 1987. The amounts shown on the worksheet beginning January 1, 1987 represented the gross apportioned earnings and not the actual earnings. As a result, it appeared that all earnings were being apportioned and the reserve fund was neither increasing nor decreasing.

During the course of constructing the activity in the reserve fund, we met with the former Associate Treasurer/Investments on at least two occasions to discuss the existence of a reserve fund and to inquire as to whether the State Treasurer's Office was maintaining accounting records to account for the reserve fund. Specifically, on August 2, 1988 at 3:00 p.m., we met with him to discuss the reason why the State Board of Investment had not apportioned all earnings during the period August 1984 through December 1986. He was supplied with a copy of our documentation of investment earnings and allocation of those earnings among the various pools within the Consolidated Fund. He confirmed our assertion that all earnings were not apportioned was correct. He stated this practice was underway in January 1985 when the current Treasurer took office and it was continued by them. At no time, during this meeting, did he indicate that the balance of the reserve fund as presented to him was incorrect. Following the meeting, several

questions remained unanswered. We were concerned that these funds may have been lying idle and uninvested, particularly since the reserve account was not recognized as a part of the formal accounting system.

As a result, a second meeting was held with the former Associate Treasurer/Investments on August 22, 1988 at 3:00 p.m. to again discuss our concerns about the accounting of the reserve fund. We again requested access to any accounting records documenting the reserve fund. Again, we received no accounting records documenting the reserve fund by the Treasury or any indication that the balance of the reserve fund as determined by us was incorrect. Consequently, we proceeded to complete the remainder of our audit work regarding the Investment Service Fees Account and prepare the report. As a standard courtesy to the agency under audit, an exit conference was held on November 21, 1988 with the former Associate Treasurer/Investments representing the State Treasurer's Office. Our findings and recommendations were reviewed and discussed and formal responses to those findings were obtained. Once more, we received no indication the balance of the reserve fund was not correct.

Subsequent to the issuance of the 1987 audit report, allegations surfaced that the reserve account had been depleted by heavy actual losses incurred in the sale of investments during the period April 1, 1987 through June 30, 1987. We proceeded to investigate the validity of these claims. During the course of this review, we documented evidence of heavy actual losses on investment transactions during the period April 1, 1987 through June 30, 1987; evidence of utilization of reverse repurchase agreements in amounts that exceeded the Board's adopted guidelines for portfolio diversification; evidence of speculation in violation of Chapter 12, Article 6, Section 12 of the West Virginia Code; and, evidence that the Board's staff agency, the State Treasurer's Office, reported earnings to participants in several pools of the Consolidated Fund during months in which massive losses were incurred by the pools. Also, in reviewing minutes of

meetings of the West Virginia State Board of Investments, we saw no evidence the heavy losses incurred in April 1987 were reported to the Board during the meeting held on May 14, 1987. Likewise, we saw no evidence that losses incurred in May 1987 and June 1987 were reported to the Board during the meeting held on September 30, 1987. Our review of Board minutes, through the meeting held on December 6, 1988, show no indication the losses incurred or the substantial deficit balance of (\$160,476,510.06) existing on June 30, 1987, in the Consolidated Fund had been brought to the Board's attention.

The failure of our prior audit of the Investment Service Fees Account to disclose these losses was due to the falsification of aforementioned records maintained by the State Treasurer's Office and the failure of some employees within the State Treasurer's Office to supply us with accurate records which documented the existence of the reserve account and the balance of the reserve account for each pool which was affected by the policy of not apportioning actual earnings each month. These records did exist and were updated monthly; however, we did not gain access to the records until December 9, 1988.

On December 9, 1988, we gained access to a report entitled "Monthly Portfolio and Apportionment Statistics" and attached memoranda. The report and memorandums were produced monthly by the State Treasurer's Data Processing Section and tracked the movement of the reserve fund. If we had been supplied with these records, we would have been alerted to the problems which existed in the investment program during much of 1987 and 1988. The monthly memorandum was addressed to the former Assistant Treasurer/Investments during the period November 1984 through November 1987 and the former Associate Treasurer/Investments during the period March 1986 through November 1988.

### Reverse Repurchase Agreements

The Board adopted policy guidelines for diversification of the investment portfolio at a Board meeting held on February 19, 1985. The guidelines state that a maximum of 15% of the moneys making up the Consolidated Fund may be held in the form of reverse repurchase agreements at any time. A reverse repurchase agreement is a financing arrangement in which funds are borrowed from a broker-dealer and investments owned by the borrower are used to collateralize the borrowing. Our analysis shows that the State Treasurer's Office far exceeded the allowable limit for reverse repurchase agreements during most of April 1987. We saw no evidence in our review of Board minutes that indicated any effort to inform the Board. Also, we saw no attempt to obtain Board approval for this deviation from Board policy which was on going during a large part of April 1987.

To illustrate, the carrying book value of the Consolidated Fund was \$2,559,213,908.77 on March 31, 1987 and \$2,425,385,850.81 on April 30, 1987. During April 1987, reverse repurchase agreements were renewed daily. We tracked the movement of the total dollar value of reverse repurchase agreements during the month as follows:

<u>Date</u>	<u>Amount</u>	<u>Percentage of Total Fund</u>
April 1, 1987	\$996,344,313.00	41%
April 3, 1987	\$797,608,813.00	33%
April 8, 1987	\$822,952,325.00	34%
April 13, 1987	\$623,217,325.00	26%
April 15, 1987	\$619,205,306.00	25%
April 21, 1987	\$514,515,981.00	21%
April 27, 1987	\$ 76,400,000.00	3%
April 30, 1987	\$ -0-	- 0 -

Total dollar volume of reverse repurchase agreements utilized in April 1987 was \$10,849,302,773.88. A review of these agreements showed \$1,028,101,923.08 financed through Bear Stearns of New York; \$4,673,292,000.00 financed through Goldman Sachs of Philadelphia and \$5,147,908,850.80 financed through Morgan Stanley, Inc.

As can be seen from the above, the State Treasurer's Office exceeded the allowable limit of 15% between April 1, 1987 and April 21, 1987. Also, the Board incurred interest cost of \$2,769,119.31 as a result of the heavy use of reverse repurchase agreements in April 1987. Our examination shows that no reverse repurchase agreements were entered into in May 1987 and \$65,640,633.31 was financed through E. F. Hutton, Inc. in June 1987. Therefore, the State Treasurer's Office was in compliance with the policy guidelines for portfolio diversification regarding reverse repurchase agreements during May and June 1987.

Trading Activities - April 1, 1987 - June 30, 1987

Our examination of the investment activity within the Consolidated Fund during the period April 1, 1987 through June 30, 1987 does show a significant number of days with net losses on sales of investments. A summary of the gains and losses on sales of investments during this period is:

<u>Month</u>	<u>Monthly Gains on Investment Sales</u>	<u>Monthly (Losses) on Investment Sales</u>	<u>Net Gain/(Loss)</u>
April 1987	\$14,836,766.00	(\$121,164,993.00)	(\$106,328,227.00)
May 1987	20,536,909.00	(39,812,741.00)	(19,275,832.00)
June 1987	9,141,399.00	(86,041,266.00)	(76,899,867.00)
	<u>\$44,515,074.00</u>	<u>(\$247,019,000.00)</u>	<u>(\$202,503,926.00)</u>

Large losses were incurred primarily on sale of United States Treasury Notes and Bonds during the period. The following schedule highlights days during the three months on which unusual dollar volumes of purchases and/or sales occurred or substantial losses on sale of investments were incurred:

<u>Date</u>	<u>Purchases</u>	<u>Sales</u>	<u>(Loss)/Gain on Sales</u>
April 1, 1987	\$2,712,468,609.00	\$1,771,529,188.00	(\$11,842,841.00)
April 2, 1987	\$ 368,492,188.00	\$ 788,421,094.00	(\$ 7,097,346.00)
April 13, 1987	\$ 980,801,563.00	\$1,197,432,813.00	(\$ 9,289,673.00)
April 21, 1987	\$ 711,425,204.00	\$ 712,472,656.00	\$ 421,875.00
April 22, 1987	\$ 655,258,281.00	\$1,120,328,126.00	(\$38,966,779.00)
April 29, 1987	\$ 369,564,108.00	\$ 636,527,856.00	(\$13,709,540.00)

(continued)

May 12, 1987	\$ 357,556,250.00	\$ 277,078,125.00	(\$22,765,625.00)
May 15, 1987	\$3,563,606,879.00	\$3,519,174,799.00	\$ 2,363,768.00
May 28, 1987	\$ 597,193,494.00	\$ 597,660,156.00	\$ 726,563.00
May 29, 1987	\$ 725,494,393.00	\$ 797,274,294.00	(\$ 3,205,581.00)
June 3, 1987	\$1,973,425,900.00	\$1,755,871,531.00	(\$12,631,713.00)
June 4, 1987	\$1,083,332,247.00	\$ 817,820,313.00	(\$21,634,375.00)
June 5, 1987	\$ 953,383,594.00	\$ 534,315,314.00	(\$10,158,426.00)
June 15, 1987	\$1,010,875,582.00	\$ 574,648,438.00	(\$ 7,754,375.00)
June 30, 1987	\$1,401,503,658.00	\$1,044,117,751.00	(\$ 906,222.00)

Next, we analyzed the deposit and withdrawal activity in the affected pools during the months of April, May and June 1987.

The following schedule details the deposit and withdrawal activity of the following pools:

<u>Description</u>	<u>Pool Number</u>				
	<u>100</u>	<u>110</u>	<u>115</u>	<u>140</u>	<u>3300</u>
April 1987:					
State Deposits	\$ 18,245,947	\$14,777,804	\$ -0-	\$ 456,539	\$10,703,726
State Withdrawals	21,840,510	25,287,493	5,057	1,783,088	8,541,008
	(3,594,563)	(10,509,688)	(5,057)	(1,326,550)	2,162,718
Local Deposits	148,706,024	-0-	809,821	44,737,725	-0-
Local Withdrawals	99,057,199	-0-	507,806	45,043,037	-0-
	49,648,825	-0-	302,015	(305,312)	-0-
Net Deposits/ (Withdrawals)	<u>\$ 46,054,262</u>	<u>(\$10,509,688)</u>	<u>\$296,958</u>	<u>(\$ 1,631,861)</u>	<u>\$ 2,162,718</u>
May 1987:					
State Deposits	\$ 15,952,080	\$29,188,973	\$ -0-	\$ 1,041,921	\$ 4,422,475
State Withdrawals	27,645,293	27,403,206	4,288	3,877,341	7,345,696
	(11,693,213)	1,785,767	(4,288)	(2,835,420)	(2,923,221)
Local Deposits	91,777,014	-0-	972,807	17,931,359	-0-
Local Withdrawals	100,751,779	-0-	427,566	80,738,977	-0-
	(8,974,765)	-0-	545,241	(62,807,618)	-0-
Net Deposits/ (Withdrawals)	<u>(\$ 20,667,978)</u>	<u>\$ 1,785,767</u>	<u>\$540,953</u>	<u>(\$65,643,039)</u>	<u>(\$2,923,221)</u>

(continued)

June 1987:

State Deposits	\$ 24,027,654	\$ 5,519,394	\$ -0-	\$ 259,208	\$ 6,684,510
State Withdrawals	67,131,335	28,726,755	4,120	6,207,061	6,773,507
	<u>(43,103,681)</u>	<u>(23,207,361)</u>	<u>(4,120)</u>	<u>(5,947,852)</u>	<u>(88,997)</u>
Local Deposits	72,283,470	-0-	979,740	33,249,918	-0-
Local Withdrawals	134,878,657	-0-	492,351	137,910,430	-0-
	<u>(62,595,187)</u>	<u>-0-</u>	<u>487,389</u>	<u>(104,660,513)</u>	<u>-0-</u>
Net Deposits/ (Withdrawals)	<u>(\$105,698,868)</u>	<u>(\$23,207,361)</u>	<u>\$483,269</u>	<u>(\$110,608,365)</u>	<u>(\$ 88,997)</u>

Based on our analysis of reverse repurchase agreements as shown earlier, it appears investment officers utilized the reverse repurchase agreements during April 1987 to delay settlement on a significant portion of the purchases made on those days in an effort to allow for market recovery to reduce losses which would otherwise have been incurred. Accordingly, as the investment officers moved to settle the reverse repurchase agreements, investments held were generally sold at substantial losses to raise cash funds for that purpose.

We performed an analysis of monthly cash demands during the period and noted there did not appear to be an excessive demand for cash by the participants during April 1987. In fact, there was a net increase in the participants' balances during the month of April of \$36,372,389. as compared to May's (\$86,907,517) and June's (\$239,120,322).

#### Apportionment

As noted in the first paragraph of the Reserve Fund Finding, the Board had not allocated the actual income earned by several pools beginning August 1, 1984 which resulted in the creation of the reserve fund. As stated in our prior report, "Our examination of minutes of meetings of the State Board of Investments showed no indication the Board had voted to establish a reserve within the Consolidated Fund although the Board has had such power since 1978."

The amount of earnings is determined monthly for each pool within the Consolidated Fund in accordance with generally accepted accounting principles. Accordingly, losses or gains on sales of investments will be only one component



used to determine the income or loss of a pool. The other components are amortization of premiums or discounts and interest earned on investments held in the portfolio of the pool.

Earnings of the pools are apportioned among the participants on the first day of each month, and as noted above the amount apportioned was not the actual amount of earnings or losses. Therefore, in months which had actual losses but apportionment of earnings there was a reduction of the reserve fund and if continued would result in a fund deficit. The existence of a fund deficit means the obligation to the participants would exceed the pool's assets.

Upon learning that the records originally used by us did not reflect the actual income earned within the Consolidated Fund beginning in January 1987, we proceeded to update the condition of the reserve fund through December 31, 1988. We included in our update two new accounts created after June 30, 1987; Pool 105 - Local Housing Development - Account 7647-25 created in August 1987 and Pool 145 - National Credit Union - Account 7648-46 created in November 1987. Our analysis shows that a substantial deficit exists on several pools of the Consolidated Fund as of December 31, 1988. The following schedule shows the components of the deficit existing within the Consolidated Fund on December 31, 1988:

Under Apportioned Earnings	\$ 84,685,896.61
(Over) Apportioned Earnings	<u>(111,522,372.37)</u>
Net (Over) Apportioned Earnings	(26,836,475.76)
Net Losses from Trading	<u>(185,402,780.60)</u>
Deficit at 12/31/88	<u><u>(\$212,239,256.36)</u></u>

#### Options

Chapter 12, Article 6, Section 12 of the West Virginia Code, as amended, states in part, "Any investment made under this article shall be made with the exercise of that degree of judgement and care, under circumstances then

prevailing, under which men of experience, prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation but for investment, considering the probable safety of their capital as well as the probable income to be derived." At a Board meeting held on December 29, 1986, the Board voted unanimously to allow investment in options by adopting a policy guideline submitted for Board consideration by the State Treasurer. In support of this proposed change in guidelines, members of the Treasurer's staff presented an Attorney General's opinion dated December 19, 1984 regarding investment in financial futures.

Utilizing this authority, the State Treasurer's Office wrote two options in March 1987. As the writer of the options, the State Board of Investments received a premium paid by the buyer. The State Treasurer's Office wrote a call option on March 4, 1987 on \$15,000,000.00 of Federal National Mortgage Association (FNMA) notes due on March 10, 1992 and received a premium of \$37,500.00. The State Treasurer's Office purchased \$67,000,000.00 of FNMA notes on March 10, 1987 maturing on March 10, 1992, (\$15,000,000.00 of which was to cover the call option in the event it was exercised by the buyer). The call option expired on May 4, 1987 without being exercised, meaning the buyer did not buy the FNMA notes. Thereafter, the Treasurer's Office sold the \$67,000,000.00 of FNMA notes on June 4, 1987 and incurred a loss of \$4,284,375.00 of which \$956,250.00 of the loss resulted from the sale of the FNMA notes purchased to cover the call option. The net loss would be reduced by the premium received of \$37,500.00 to \$918,750.00 on these transactions.

The State Treasurer's Office wrote a put option on March 12, 1987 for \$200,000,000.00 of United States Treasury Notes due on November 15, 1996 and received a premium of \$1,671,875.00. However, the put option was exercised by the buyer of the put on May 12, 1987 meaning the buyer of the put forced the Treasury to take possession of the \$200,000,000.00 of United States Treasury Notes. In

turn, the Treasurer's Office sold the investments on the same day at a loss of \$15,421,875.00. The net loss would be reduced by the premium received of \$1,671,875.00 to \$13,750,000.00 on this transaction.

The Chicago Board of Trade in the pamphlet entitled "Opportunities In Options on U.S. Treasury Bond Futures" states beginning on page 22, "Whereas options are purchased to accomplish an ever-widening number and variety of investment objectives that range from conservative to speculative, most options are written for a single investment purpose: To earn premium income . . . . (Unlike option buying, which generally involves limited risks and potentially unlimited rewards, option writing involves a limited reward-the-option premium - and potentially unlimited risks.) Based on our review of the aforementioned pamphlet and other option literature, it appears option writing is speculative in nature and prohibited by Chapter 12, Article 6, Section 12 of the West Virginia Code.

#### Overdrawn Investment Service Fees

The State Board of Investment under Section 4.02, Subsection (e) of the "Rules for the Administration of the Consolidated Fund by the West Virginia State Board of Investments" adopted in 1978 and last amended in 1983 is allowed to charge and invest service fees for providing investment services. Section 4.02 Subsection (e) states, "The treasurer may collect a fee up to one percent of the earnings of the local government account as a charge for the investment services being provided to local governments." Also, the Board minutes in 1978 authorized charging up to 1% on all investment income. The Board charged a fee of three-fourths of one percent of earnings from March 1983 through June 1988. Since July 1, 1988 the service fee has been one percent of earnings. The Board does not transfer the earned service fee until the investment income is apportioned among the participants in the pool.

As disclosed in our 1987 report, a reserve for service fees existed in the Consolidated Fund totaling \$403,478.22 on December 31, 1986. However, the

reserve for service fees was depleted by the practice of the State Treasurer's Office of apportioning earnings in larger amounts than those actually earned by the pools in the Consolidated Fund in much of 1987 and 1988. Chapter 12, Article 6, Section 6 states in part, "All costs and expenses of the board . . . shall be proper charges against, and payable on a pro rata basis from the earnings of the various funds managed by the board."

It appears the aforementioned code section allows service fees to be charged against earnings, but all losses accrue directly to the participants. As such, in evaluating whether service fees may have been overcharged, we excluded the portion of the Fund deficit caused by losses and included net under/over apportionments of earnings between August 1, 1984 and December 31, 1988. Based on our work, the Board had overapportioned a net amount of \$26,836,475.76 of earnings by December 31, 1988 resulting in overcharges totaling \$215,340.63 in service fees as of December 31, 1988. It appears this amount would be refundable on a pro rata basis to all of the pools which are affected.

#### EVALUATION OF THE CONSOLIDATED PENSION FUND

We obtained copies of the rating service's evaluation of the Consolidated Pension Funds' performance for the quarters ended December 31, 1987, March 31, 1988, June 30, 1988 and September 30, 1988 as prepared by SEI Funds Evaluation, Inc.. The rating service's evaluation of the quarter ended December 31, 1988 was not yet available at the conclusion of our current fieldwork (January 31, 1989). We reviewed the rating services' reports and noted the following observations:

Fund	Time-Weighted Rate of Return for Quarter Ended			
	09/30/88	06/30/88	03/31/88	12/31/87
Judges'	2.2%	1.2%	3.6%	5.2%
Public Safety	2.1%	1.1%	4.1%	5.7%
Workers' Compensation	1.7%	0.3%	4.7%	5.0%
Pneumoconiosis	1.5%	2.3%	3.5%	7.5%
Public Employees'	1.8%	1.4%	3.6%	4.8%
Teachers'	2.0%	0.5%	4.4%	6.3%

The asset allocation was ranked against SEI's bond fund universe. The results reported by the rating service concerning asset allocation for the quarters ended December 31, 1987, March 31, 1988, June 30, 1988 and September 30, 1988 were as follows:

Fund	Quarter Ended			
	09/30/88	06/30/88	03/31/88	12/31/87
Judges':				
Bonds	97.2%	86.9%	88.6%	77.3%
Cash Equivalents & Cash	2.8%	13.1%	11.4%	22.7%
Public Safety:				
Bonds	99.1%	88.2%	88.5%	87.9%
Cash Equivalents & Cash	0.9%	11.8%	11.5%	12.1%
Workers' Compensation:				
Bonds	95.9%	90.7%	80.5%	86.1%
Cash Equivalents & Cash	1.6%	6.6%	16.8%	11.0%
Private Placements	2.5%	2.7%	2.7%	2.9%
Pneumoconiosis:				
Bonds	96.4%	80.6%	87.4%	70.7%
Cash Equivalents & Cash	1.3%	17.1%	12.6%	29.3%
Private Placements	2.3%	2.3%	0.0%	10.6%
Public Employees':				
Bonds	91.9%	89.1%	0.0%	86.1%
Cash Equivalents & Cash	3.4%	5.9%	0.0%	8.3%
Private Placements	4.7%	5.0%	0.0%	5.6%
Teachers':				
Bonds	95.3%	98.2%	99.0%	98.7%
Cash Equivalents & Cash	4.7%	1.8%	1.0%	1.3%

Relative conditions in the financial markets are subject to change within the year. As a result, certain aspects of portfolio diversification while aiding overall performance of the fund in one quarter of the year may be detrimental to performance in another quarter of the year. The rating service made the following statements relative to the asset allocation of the various funds:

Public Employees'

For the quarter ended March 31, 1988, "Asset allocation had little effect on performance" and regarding marketable bonds "Short maturity hurt performance," and "Quality was not an important factor in accounting for performance during the quarter". For the quarter ended June 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Maturing and quality were not important factors in accounting for performance during the quarter." For the quarter ended September 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds "quality was not an important factor in accounting for performance during the quarter."

Workers' Compensation

For the quarter ended March 31, 1988, "The high commitment to cash equivalents hurt performance" and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter". For the quarter ended June 30, 1988. "Asset allocation had little effect on performance", and regarding marketable bonds, "Maturity and quality were not important factors in accounting for performance during the quarter." For the quarter ended September 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter."

### Teachers'

For the quarter ended March 31, 1988, "The high commitment to bonds helped performance and the low commitment to cash equivalent helped performance", and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter." For the quarter ended June 30, 1988, "The high commitment to bonds hurt performance and the low commitment to cash equivalent hurt performance," and regarding marketable bonds, "Maturity and quality were not important factors in accounting for performance during the quarter." For the quarter ended September 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter."

### Pneumoconiosis

For the quarter ended March 31, 1988, "Asset allocation had little effect on performance" and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter." For the quarter ended June 30, 1988, "The high commitment to cash equivalents helped performance", and regarding marketable bonds, "Maturity and quality were not important factors in accounting for performance during the quarter." For the quarter ended September 30, 1988, regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter."

### Public Safety

For the quarter ended March 31, 1988, "Asset allocation had little effect on performance" and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter." For the quarter ended June 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Maturity and quality were not important factors

in accounting for performance during the quarter." For the quarter ended September 30, 1988, regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter."

Judges'

For the quarter ended March 31, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Quality was not an important factor in accounting for performance during the quarter. For the quarter ended June 30, 1988, "Asset allocation had little effect on performance," and regarding marketable bonds, "Maturity and quality were not important factors in accounting for performance during the quarter." For the quarter ended September 30, 1988, regarding marketable bonds. "Quality was not an important factor in accounting for performance during the quarter."



INVESTMENT ACTIVITIES

The following schedule is a comparative analysis of the activities of the State long-term trust funds for calendar years 1988 and 1987:

	<u>Judges'</u>	<u>Public Safety</u>	<u>Workers' Compensation</u>
<b>Sales 1988:</b>			
Number	4	4	13
Average Years Held	1.47	1.07	2.55
Average Years to Maturity from Sale Date	10.28	10.67	2.86
Average Rate of Return	5.510%	2.750%	22.910%
Average Approximate Yield to Maturity	8.170%	0.410%	5.150%
Par Value	\$1,996,656	\$3,172,124	\$130,225,000
Book Value	\$2,001,846	\$3,180,696	\$129,870,112
Sale Proceeds	\$1,980,003	\$3,171,087	\$131,096,739
Net Gain (Loss)	\$ 21,843	(\$ 9,608)	\$ 1,226,627
Interest Earnings	\$ 131,814	\$ 113,872	\$ 14,922,925
Total Earned	\$ 109,972	\$ 104,264	\$ 16,149,552
<b>Sales 1987:</b>			
Number	9	8	16
Average Years Held	1.21	1.05	0.58
Average Years to Maturity from Sale Date	6.72	7.03	7.36
Average Rate of Return	14.378%	11.702%	4.723%
Average Approximate Yield to Maturity	9.291%	9.021%	8.351%
Par Value	\$5,583,487	\$7,943,952	\$267,500,000
Book Value	\$5,564,501	\$7,915,622	\$261,584,507
Sale Proceeds	\$5,675,073	\$8,001,934	\$264,456,679
Net Gain (Loss)	\$ 110,573	\$ 86,312	\$ 2,872,172
Interest Earnings	\$ 483,910	\$ 733,504	\$ 14,538,535
Total Earned	\$ 594,483	\$ 819,816	\$ 17,410,707
<b>Purchases 1988:</b>			
Number	8	5	5
Average Years to Maturity	6.39	8.63	14.84
Approximate Yield at Maturity	8.300%	8.810%	8.710%
Total:			
Par Value	\$4,250,000	\$5,000,000	\$ 92,500,000
Purchase Price	\$4,278,225	\$5,028,821	\$ 90,725,684
<b>Purchases 1987:</b>			
Number	10	10	28
Average Years to Maturity	9.19	9.72	7.58
Approximate Yield at Maturity	8.574%	8.607%	7.362%
Total:			
Par Value	\$4,509,615	\$8,973,631	\$374,700,000
Purchase Price	\$4,519,245	\$8,978,420	\$351,655,378

<u>Pneumoconiosis</u>	<u>Public Employees'</u>	<u>Teachers'</u>
263	12	6
0.022	1.94	2.51
8.345%	3.24	10.62
0.274%	19.618%	13.033%
8.614%	4.138%	9.167%
\$2,131,537,500	\$105,250,000	\$21,957,650
\$2,131,718,504	\$105,354,859	\$22,271,878
\$2,132,271,568	\$106,859,631	\$22,334,231
\$ 553,064	\$ 1,504,772	\$ 62,353
\$ 432,337	\$ 23,786,492	\$ 2,034,242
\$ 985,400	\$ 25,291,264	\$ 2,096,595
71	24	2
0.07	1.28	1.59
10.17	4.87	4.27
0.313%	19.180%	4.881%
8.094%	9.018%	7.394%
\$ 534,199,111	\$306,096,375	\$16,870,000
\$ 513,976,409	\$300,295,655	\$17,356,236
\$ 513,052,739	\$307,821,557	\$17,430,204
(\$ 923,670)	\$ 7,525,901	\$ 73,968
\$ 965,131	\$ 17,728,758	\$ 685,236
\$ 41,461	\$ 25,254,660	\$ 759,204
290	5	1
9.338%	16.63	9.13
8.931%	7.530%	9.32%
\$2,454,401,333	\$165,000,000	\$ 3,000,000
\$2,442,613,011	\$162,311,328	\$ 2,707,500
71	40	4
10.84	7.60	22.21
8.379%	7.509%	8.638%
\$ 548,250,000	\$580,286,713	\$20,008,773
\$ 520,250,229	\$544,340,753	\$19,172,314

Items of Note

The trust funds experiences net gains (losses) on sale of investments during 1988 as follows: Judges' \$21,843; Public Safety (\$9,608); Workers' Compensation \$1,226,627; Pneumoconiosis \$553,064; Public Employees' \$1,504,772; and, Teachers' \$62,353.00. The total net gain on sale of investments for all funds in 1988 was \$3,359,051.00.

Also, the trust funds achieved interest earnings from investments sold during 1988 as follows: Judges' \$131,814; Public Safety \$113,872; Workers' Compensation \$14,992,925; Pneumoconiosis \$432,337; Public Employees' \$23,786,492; and, Teachers' \$2,034,242. The total interest earnings for all funds in 1988 was \$41,491,682.00.

The total earnings generated by the sale of investments is the sum of the net gain on sale of investments and interest earnings. The trust funds had total earnings from investments sold during 1988 as follows: Judges' \$109,972; Public Safety \$104,264; Workers' Compensation \$16,149,552; Pneumoconiosis \$985,400; Public Employees' \$26,291,264; and, Teachers' \$2,096,595. The total earnings generated by the sale of investments for all funds in 1988 was \$44,737,047.00.

There were 302 investments sold during 1988 compared to 130 investments sold during 1987. The following is a comparative schedule of the number of investments sold during those years:

<u>Fund</u>	<u>1988</u>	<u>1987</u>	<u>Increase (Decrease)</u>
Judges'	4	9	(5)
Public Safety	4	8	(4)
Workers' Compensation	13	16	(3)
Pneumoconiosis	263	71	192
Public Employees'	12	24	(12)
Teachers'	6	2	4
	<u>302</u>	<u>130</u>	<u>172</u>

Overall, the sales activity increased by 32% from 1987 sales.

There were 314 purchases in 1988 compared to 163 purchases during 1987. The total par value of 1988 purchases was \$2,724,151,333 while the total purchase price of 1987 purchases was \$1,536,728,732 resulting in a discount of \$1,187,422,601.00. The following is a comparative schedule of the number of investments purchased during those years:

<u>Fund</u>	<u>1988</u>	<u>1987</u>	<u>Increase (Decrease)</u>
Judges'	8	10	(2)
Public Safety	5	10	(5)
Workers' Compensation	5	28	(23)
Pneumoconiosis	290	71	219
Public Employees'	5	40	(35)
Teachers'	<u>1</u>	<u>4</u>	<u>(3)</u>
	<u>314</u>	<u>163</u>	<u>151</u>

Overall, the purchases activity increased by 93% from 1987 levels.

We noted the following changes in the amount of repurchase agreements on hand at December 31, 1988:

<u>Fund</u>	<u>1988</u>	<u>1987</u>	<u>(Over) Under 1988</u>
Judges'	\$ 460,000	\$ 2,270,000	(\$ 1,810,000)
Public Safety	390,000	2,380,000	(1,990,000)
Workers' Compensation	4,065,000	44,770,000	(40,705,000)
Pneumoconiosis	75,000	6,650,000	(6,575,000)
Public Employees'	4,900,000	43,550,000	(38,650,000)
Teachers'	<u>5,110,000</u>	<u>3,980,000</u>	<u>1,130,000</u>
	<u>\$ 15,000,000</u>	<u>\$103,600,000</u>	<u>(\$ 88,600,000)</u>

The amount of repurchase agreements decreased by \$88,600,000 at December 31, 1988 over the amount invested on December 31, 1987.

INDEPENDENT AUDITORS' OPINION

Members of the West Virginia Legislature  
State Capitol  
Charleston, West Virginia

We were required to audit the schedules of investment balances of the West Virginia State Board of Investments for the year ended December 31, 1988. The schedules are the responsibility of the management of the West Virginia State Treasurer's Office, staff agency for the West Virginia State Board of Investments.

Certain records required in the application of auditing procedures were under subpoena by the Office of the United States Attorney and, accordingly, unavailable for examination. We were unable to apply other auditing procedures to the investment balances.

Since these records were not available for examination and we were not able to apply other auditing procedures to satisfy ourselves as to investment balances, the scope of our work was not sufficient to enable us to express, and we do not express, an opinion on the schedules of investment balances.

Respectfully submitted,



Thedford L. Shanklin, CPA, Director  
Legislative Postaudit Division

February 3, 1989

Auditors: Michael E. Sizemore, CPA, Supervisor  
Charles L. Lunsford

WEST VIRGINIA STATE BOARD OF INVESTMENTS  
 SCHEDULE OF CONSOLIDATED PENSION FUND  
 INVESTMENT BALANCES BY RETIREMENT SYSTEM

UNAUDITED

<u>Agency Number</u>	<u>Name of Agency</u>	<u>As of December 31, 1988</u>	
		<u>Par Value</u>	<u>Current Book Value</u>
7615	Judges' Retirement	\$ 10,960,000.00	\$ 11,012,834.27
7620	Department of Public Safety	20,190,000.00	20,270,013.94
7625	Workers' Compensation	598,731,058.76	563,999,232.23
7630	Pneumoconiosis Fund	148,901,188.03	126,653,860.64
7635	Public Employees' Retirement	930,953,432.42	888,298,785.40
7640	Teachers' Retirement	<u>234,858,515.02</u>	<u>209,524,900.75</u>
	Total Investment Balances	<u>\$1,944,594,194.23</u>	<u>\$1,819,759,627.23</u>

See Accompanying Notes

As of December 31, 1987

<u>Par Value</u>	<u>Current Book Value</u>
\$ 10,267,358.59	\$ 10,283,255.84
20,353,486.92	20,391,117.73
600,032,213.51	567,025,708.88
32,687,500.00	22,653,016.40
857,228,441.45	817,750,892.09
<u>253,710,930.21</u>	<u>229,791,808.17</u>
<u>\$1,774,279,930.68</u>	<u>\$1,667,895,799.11</u>

WEST VIRGINIA STATE BOARD OF INVESTMENTS  
 SCHEDULE OF CONSOLIDATED FUND INVESTMENT  
 BALANCES BY POOL

UNAUDITED

As of December 31, 1988

<u>Description</u>	<u>Pool (Fund) Account Number Number</u>	<u>Par Value</u>	<u>Current Book Value</u>
Consolidated Pool Unrestricted	100 7600-05 \$	444,371,240.75 \$	441,913,542.82
Local Housing Development	105 7647-25	510,000.00	510,234.37
Consolidated Pension	110 7645-12	214,622,395.07	213,069,150.42
Local Government Pension	115 7605-13	9,605,529.51	9,703,543.38
Highway Construction and Huntington Toll Bridge	120 6940-05	7,410,000.00	7,306,678.13
The School Fund	130 7440-05	998,000.00	1,003,188.44
Undistributed Restricted	140 7610-05	329,962,015.49	267,195,964.13
National Credit Union Administration Fund	145 7648-46	-0-	-0-
Municipal Bond Commission (Huntington Toll Bridge)	150 7320-10A	-0-	-0-
Municipal Bond Commission (County Revenue)	152 7320-10H	149,000.00	138,192.98
Municipal Bond Commission (General Obligation)	156 7320-10K	148,000.00	118,837.95
Municipal Bond Commission (WVU Project II Escrow)	160 7320-10B	992,000.00	1,093,491.91
Municipal Bond Commission (County Schools)	162 7320-10E	2,157,000.00	2,274,219.25
Municipal Bond Commission (New Martinsville Toll Bridge)	164 7320-10F	411,000.00	153,668.53
Municipal Bond Commission (Escrow Account)	166 7320-10G	4,488,000.00	3,305,746.05
Municipal Bond Commission	170 7320-10C	-0-	-0-
Municipal Bond Commission (Huntington Bridge 65 Revenue	400 7320-10L	13,601,000.00	7,136,220.05
Municipal Bond Commission (Combined Revenue Account)	401 7320-10M	15,642,000.00	10,741,684.23
Municipal Bond Commission (Hancock County Schools 83G/0)	402 7320-10N	4,632,700.00	4,632,700.00
Municipal Bond Commission (Fairmont 85 Sewer Revenue)	403 7320-10P	3,877,900.00	3,895,000.00
Municipal Bond Commission (Fairmont 85 Water Revenue Esc)	404 7320-10Q	10,651,000.00	10,651,000.00
Municipal Bond Commission (Huntington 80 Sewer Revenue)	405 7320-10R	7,293,000.00	7,293,000.00
Retirement System Operating Account	3300 7649-13	209,626,759.03	205,740,345.67
WCF-HDF Loan Fund	4900 7645-34	17,958,055.18	17,958,055.18
WCF-OECD Loan Fund	5100 7645-23	23,827,509.73	23,827,509.73
Lottery Defeasance	8013 7612-15	22,754,042.00	10,017,522.39
Finance and Administration Reserve Account	9523 9500-23A	1,539,405.00	1,539,405.00
Finance and Administration Issuance Differential	9524 9500-24A	-0-	-0-
Revenue Sharing	9700 9700-05	-0-	-0-
Total Investment Balances		<u>\$1,347,227,551.76</u>	<u>\$1,251,218,899.61</u>

See Accompanying Notes



As of December 31, 1987

<u>Par Value</u>	<u>Current Book Value</u>
\$ 630,247,319.99	\$ 574,166,271.16
2,000,000.00	2,000,000.00
382,123,891.71	347,112,650.61
59,856,909.07	56,699,445.08
7,410,000.00	7,306,678.13
998,000.00	1,003,188.44
451,539,829.57	437,988,979.41
1,000,000.00	1,000,000.00
1,005,000.00	993,221.88
159,000.00	148,577.36
196,000.00	163,905.42
1,670,000.00	1,721,665.00
8,011,100.00	8,232,872.91
350,000.00	94,932.83
26,683,200.00	25,812,287.81
18,322,000.00	13,190,573.75
-0-	-0-
-0-	-0-
-0-	-0-
-0-	-0-
-0-	-0-
-0-	-0-
238,771,244.06	230,941,817.77
37,705,592.35	37,705,592.35
15,118,500.03	18,118,500.03
19,080,692.00	8,818,366.81
1,539,405.00	1,539,405.00
1,131,392.00	1,131,392.00
3,000,000.00	3,000,000.00
<u>\$1,907,919,075.78</u>	<u>\$1,778,890,323.75</u>

WEST VIRGINIA STATE BOARD OF INVESTMENTS

NOTES - UNAUDITED

Note A - Accounting Policies

Investments - Short-term investments are stated at cost. Long-term investments are stated at cost, less amortization of premiums, plus accretions of discount. In relation to investments shown in Note B, only investments in United States Treasury Notes and Bonds have a readily determinable market value for inclusion in the calculation of market value and book value in the Consolidated Fund. However, in relation to investments as shown in Note B below, only repurchase agreements and any investments maturing within one year from the schedule of investment date do not have a readily determinable market value for inclusion in the calculation of market value and book value in the Consolidated Pension Fund. The accrual basis of accounting is followed in the accounting for all investments.

Note B - Deposits and Investments

Deposits - The following narrative briefly describes the various accounts maintained by the Treasurer of State's Office for the purposes of collecting, investing and disbursing funds. The following amounts are disclosed at December 31, 1988:

	<u>Carrying Amount</u>	<u>Bank Balance</u>	<u>Fund</u>
Insured (FDIC)	\$ 397,308	\$ 397,308	Consolidated
Uninsured:			
Collateral Held by Bank's Trust Department in State of West Virginia's Name	<u>284,699,275</u>	<u>284,699,275</u>	Consolidated
Total Deposits	<u>\$285,096,583</u>	<u>\$285,096,583</u>	

The Treasurer of State's Office currently has demand deposit accounts at 218 financial institutions. These accounts are basically of four types, which are described below.

Receipts Accounts

These accounts serve two basic purposes. First, all moneys due the State must be deposited into an account of the Treasurer of State. Receipts accounts, established at financial institutions throughout the State, allow State agencies to deposit these funds into the Treasurer of State's account wherever they are located.

Second, all CD's purchased from financial institutions are processed through the receipts account. On the date of purchase, funds are transferred to the receipts account. The financial institution then debits the account, thus reflecting the CD purchase.

There are two types of receipts accounts. First, the four major State depositories are compensated for the services they provide the State on a fee basis. Once the actual charges are determined, a compensating balance remains with the financial institution to pay for these charges. These institutions and the major agencies they serve are as follows:

First National Bank of Morgantown	- West Virginia University
Kanawha Valley Bank of Charleston	- Department of Motor Vehicles
National Bank of Commerce - Charleston	- Tax Department and Workers' Compensation Fund
United National Bank - Charleston	- Treasurer of State's Office

Second, the other 211 financial institutions are compensated in the following manner. After the State agency has notified the Treasurer of State that funds have been deposited into his account, a depository transfer check (DTC) is written on the account any time during the week the account balance exceeds \$20,000. Once a week, a DTC is written for any sums that exceed \$1,000. These DTC's are deposited with United National Bank of Charleston.

All collected balances from the three major receipt financial institutions, in excess of the compensating balances, are wired to the receipts account at Kanawha Valley Bank of Charleston. This account is also used to settle all wire activity for local governmental subdivisions investing in the State Consolidated Investment Fund. Any funds in excess of compensating balance requirements are wired to Morgan Guaranty Bank in New York. This financial institution settles all investment activity relating to the Consolidated Investment Pool. The Treasurer of State's book balance for the receipts accounts and collateral account at December 31, 1988 was \$285,096,588.

#### Investment Account

The Treasurer of State's Office currently uses two financial institutions to settle all investment activity. These are Morgan Guaranty Bank of New York for all activity related to the Consolidated Investment Pool, and Chemical Bank of New York for all activity related to the Consolidated Investment Fund.

#### Collateral Account

The Treasurer of State's Office maintains a collateral account at Charleston National Bank. Among the purposes of the collateral account is the securing of any deposits in excess of the \$100,000 limit consistent with FDIC insured accounts. At December 31, 1988, the compensating balance on deposit at Charleston National Bank was \$2,866,300.

#### Disbursement Account

Effective December 1, 1987, the disbursement account activity was transferred from Wheeling Dollar Bank to One Valley Bank, National Association. This account must be awarded by competitive bid. As stated, One Valley Bank, National Association currently has the contract for this account. The fees charged by this financial institution are paid for by a compensating balance.

The only funds on deposit in this account are those for the compensating balance. No funds are transferred to this account to cover the checks written on the account until the checks are presented for payment. At that time, funds are wired

from Morgan Guaranty Bank to cover the checks. At December 31, 1988 the compensating balance on deposit at One Valley Bank, National Association was \$5,600,000.

Investments - Investments in the State of West Virginia's consolidated cash and investment pool are stated at cost or amortized cost, plus accrued interest. Market values include accrued interest only if the carrying amounts include it.

	<u>Carrying Amount</u>	<u>Market Value</u>
<b>Repurchase Agreements:</b>		
Consolidated	\$ 17,539,405.00	\$ 17,539,405.00
Consolidated Pension	15,000,000.00	15,000,000.00
	<hr/>	<hr/>
Total Repurchase Agreements	32,539,405.00	32,539,405.00
<b>Other Investments:</b>		
U.S. Treasury Notes/Bonds:		
Consolidated	247,027,523.15	234,014,530.42
Consolidated Pension	1,144,489,589.04	1,100,887,353.00
	<hr/>	<hr/>
	1,391,517,112.19	1,334,901,883.42
U.S. Agency Notes/Bonds:		
Consolidated	86,482,726.55	86,349,601.55
Consolidated Pension	162,609,446.70	156,299,828.65
	<hr/>	<hr/>
	249,092,173.25	242,649,430.20
State and Local Government Units:		
Consolidated	25,734,600.00	25,734,600.00
Zero Coupon Bonds:		
Consolidated	142,546,953.58	142,546,953.58
Consolidated Pension	89,553,227.99	96,428,424.63
	<hr/>	<hr/>
	232,100,181.57	238,975,378.21
Governmental National Mortgage Association:		
Consolidated	184,456,409.61	184,456,409.61
Consolidated Pension	39,967,850.00	38,184,972.45
	<hr/>	<hr/>
	224,424,259.61	222,641,382.06
Farmers' Home Administration/Veterans' Administration Mortgages:		
Consolidated Pension	42,296,950.04	39,597,127.89
Board of Investments Mortgage Program:		
Consolidated Pension	9,629,052.37	9,629,052.37
West Virginia Housing Development Fund Program:		
Consolidated	36,497,053.76	36,497,053.76

	<u>Carrying Amount</u>	<u>Market Value</u>
Corporate Mortgage Obligation		
Earnings Pools:		
Consolidated	\$ 34,289,062.50	\$ 34,289,062.50
Consolidated Pension	<u>24,320,494.99</u>	<u>23,744,672.50</u>
	58,609,557.49	58,033,735.00
Municipal Bonds:		
Consolidated	38,352.32	38,352.32
Corporate Bonds:		
Consolidated	203,289,634.41	203,289,634.41
Consolidated Pension	<u>235,132,671.75</u>	<u>222,786,588.14</u>
	438,422,306.16	426,076,222.55
Industrial Loans:		
Consolidated	101,201,925.58	101,201,925.58
Consolidated Pension	<u>26,760,344.35</u>	<u>26,760,344.35</u>
	127,962,269.93	127,962,269.93
Certificates of Deposit:		
Consolidated	202,540,253.15	202,540,253.15
Intergovernmental Loans:		
Consolidated	45,100,000.00	45,100,000.00
Consolidated Pension	<u>30,000,000.00</u>	<u>30,000,000.00</u>
	75,100,000.00	75,100,000.00
Reverse Repurchase Agreement:		
Consolidated	<u>(75,525,000.00)</u>	<u>(75,525,000.00)</u>
Total Other Investments	<u>3,038,439,121.84</u>	<u>2,964,851,740.86</u>
Total Investments	<u>\$3,070,978,526.84</u>	<u>\$2,997,391,145.86</u>

Note C - Equity in Pooled Cash, Pooled Investments and Investments

Chapter 12, Article 6, Section 8, Subsections (a) through (f) of the West Virginia Code describe the management of the Consolidated Fund and Consolidated Pension Fund, as well as identify those governmental units that may invest funds. Chapter 12, Article 6, Section 8, Subsections (a) through (f) state:

" (a) There is hereby established a special investment fund to be managed by the board and designated as the "consolidated pension fund" for the common investment of pension funds. All administrators, custodians or trustees of the various pension funds are hereby authorized to make moneys available to the board for investment. Pension funds received by the board shall be deposited in the consolidated pension fund. Any security deposited by the various pension funds shall be valued at the prevailing market price on the day of deposit.

(b) There is hereby also established a special investment fund to be managed by the board and designated as the "consolidated fund." The consolidated fund shall consist of a special account for the common investment of state funds designated as the "state account" and a special account for the common investment of local government funds designated as the "local government account." Moneys in both accounts may be combined for the common investment of the consolidated fund on an equitable basis.

(c) Each board, commission, department, official or agency charged with the administration of state funds is hereby authorized to make moneys available to the board for investment. State funds received by the board shall be deposited in the state account.

(d) Each political subdivision of this State through its treasurer or equivalent financial officer is hereby authorized to enter into agreements with the board for the investment of moneys of such political subdivision: Provided, that it first be determined by the treasurer for such political subdivision that the available interest rate offered by an acceptable depository in such treasurer's county be less than the interest rate, net of administrative fees referred to in article six (§ 12-6-1 et seq.), chapter twelve of this Code, offered it through the state board of investments. Local government funds received by the board pursuant to such agreements shall be deposited in the local government account. Any political subdivision may enter into an agreement with any state agency from which it receives funds to allow such funds to be transferred to their investment account with the state board of investments.

(e) Each county board of education through its treasurer is hereby authorized to enter into agreements with the board of investments for the investment of moneys of such county board of education: Provided, however, that it first be determined by the treasurer for such county board of education that the available interest rate offered by an acceptable depository in such treasurer's county be less than the interest rate, net of administrative fees referred to in article six (§ 12-6-1 et seq.), chapter twelve of this Code, offered it through the state board of investments.

(f) Moneys held in the various funds and accounts administered by the board shall be invested as permitted in section nine (§ 12-6-9) and subject to the restrictions contained in section ten (§ 12-6-10) of this article. The board shall maintain records of the deposits and withdrawals of each participant and the performance of the various funds and accounts. The board shall also establish such rules and regulations for the administration of the various funds and accounts established by this section as it shall deem necessary for the administration thereof, including, but not limited to: (1) The specification of minimum amounts which may be deposited in any fund or account and minimum periods of time for which deposits will be retained; (2) creation of reserves for losses; (3) provision for payment of expenses from earnings; and (4) distribution of the earnings in excess of such expenses or allocation of losses to the several participants in an equitable manner: Provided, that in the event any moneys made available to the board may not lawfully be combined for investment or deposited in the consolidated funds established by this section, the board may create special accounts and may administer and invest such moneys in accordance with the restrictions specially applicable thereto. "

Deposits - At December 31, 1988, the carrying amount and bank balance of compensating balances and receipts account balances forming the State of West Virginia's deposits was \$285,096,583. Of this amount, \$397,308 was covered by Federal depository insurance and \$284,699,275 was covered by the collateral account.

Investments - Chapter 12, Article 6, Section 9 of the West Virginia Code describes the permissible investments. Chapter 12, Article 6, Section 9 states:

" Notwithstanding the restrictions which may otherwise be provided by law as to the investment of funds, the board may invest funds made available to it in any of the following:

(a) Any direct obligation of, or obligation guaranteed as to the payment of both principal and interest by, the United States of America;

(b) Any evidence of indebtedness issued by any of the following agencies: Government National Mortgage Association, federal land banks, federal home loan banks, federal intermediate credit banks, banks for cooperatives, Tennessee valley authority, United States postal service, farmers home administration, export-import bank, federal financing bank, Federal Home Loan Mortgage Corporation, Student Loan Marketing Association and Federal Farm Credit Banks;

(c) Any evidence of indebtedness issued by the Federal National Mortgage Association to the extent such indebtedness is guaranteed by the Government National Mortgage Association;

(d) Any evidence of indebtedness that is secured by a first lien deed of trust or mortgage upon real property situate within this State, if the payment thereof is substantially insured or guaranteed by the United States of America or any agency thereof;

(e) Direct and general obligations of this State;

(f) Any undivided interest in a trust, the corpus of which is restricted to mortgages on real property and, unless all of such property is situate within the State and insured, such trust at the time of the acquisition of such undivided interest, is rated in one of the three highest rating grades by an agency which is nationally known in the field of rating pooled mortgage trusts;

(g) Any bond, note, debenture, commercial paper or other evidence of indebtedness of any private corporation or association organized and operating in the United States: Provided, that any such security is, at the time of its acquisition, rated in one of the three highest rating grades by an agency which is nationally known in the field of rating corporate securities: Provided, however, that if any commercial paper and/or any such security will mature within one year from the date of its issuance, it shall, at the time of its acquisition, be rated in one of the two highest rating grades by such an agency: Provided further, that any such security not rated in one of the two highest rating grades by any such agency and commercial paper or other evidence of indebtedness of any private corporation or association shall be purchased only upon the written recommendation from an investment adviser that has over three hundred million dollars in other funds under its management;

(h) Negotiable certificates of deposit issued by any bank, trust company, national banking association or savings institution organized and operating in the United States, which mature in less than one year and are fully collateralized; and


(i) Interest earning deposits including certificates of deposit, with any duly designated state depository, which deposits are fully secured by a collaterally secured bond as provided in section four (§ 12-1-4), article one of this chapter. " (1967, c. 162; 1970, c. 53; 1971, c. 10; 1973, c. 14; 1978, c. 58; 1979, c. 65; 1983, c. 123.)

STATE OF WEST VIRGINIA

OFFICE OF LEGISLATIVE AUDITOR, TO WIT:

I, Thedford L. Shanklin, Director, Legislative Postaudit Division, do hereby certify that the report appended hereto was made under my direction and supervision, under the provisions of the West Virginia Code, Chapter 12, Article 6, Section 15, as amended, and that the same is a true and correct copy of said report.

Given under my hand this 10<sup>th</sup> day of February,  
1989.

  
\_\_\_\_\_  
Thedford L. Shanklin, CPA, Director,  
Legislative Postaudit Division

Copy forwarded to each member of the Legislature, each member of the Board and the Attorney General.