

275 East Broad Street Columbus, OH 43215-3771 614-227-4090 www.strsoh.org

March 29, 2011

Mr. Aristotle Hutras, Director Ohio Retirement Study Council 88 E. Broad St., Suite 1175 Columbus, OH 43215

Dear Aris:

Pursuant to Substitute Senate Bill 133 and as required by Section 3307.044 of the Ohio Revised Code, enclosed is a report of the actions of the Audit Committee of the State Teachers Retirement Board for calendar year 2010.

Please don't hesitate to contact me if you have any questions.

Sincerely,

**Executive Director** 

**Enclosure** 

RETIREMENT BOARD CHAIR

TIM MYERS

RETIREMENT BOARD VICE CHAIR JAMES MCGREEVY

EXECUTIVE DIRECTOR

MICHAEL J. NEHF



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#### **AUDIT COMMITTEE ANNUAL REPORT**

**Audit Committee Members:** 

Tim Myers, *Chair*Daniel Martin, *Vice Chair*Craig Brooks
Taiyia Hayden
Bob Stein

ohio Retirement Study Council (ORSC)

STRS Ohio Audit Committee Report — 2010

ate: March 29, 2011

ıbject:

s required by Section 3307.044 of the Ohio Revised Code, the following report outlines the activities of the FRS Ohio Audit Committee and the STRS Ohio Internal Audit Department for the year ending Dec. 31, 2010. nis report outlines the following: audit reviews completed during 2010; STRS Ohio Audit Committee eetings and actions; special reviews completed during 2010; and the 2011 Internal Audit Plan. Audit ommittee members during 2010 were Tim Myers (chair), Daniel Martin (vice chair), Craig Brooks, Taiyia ayden and Bob Stein.

#### udit Reviews Completed During 2010

ne attached 2010 Internal Audit Summary lists the audits performed, the scope for each audit, the commendations to management, management's response and expected implementation dates. The Internal udit Summaries were mailed to all State Teachers Retirement Board members in March, May, August and exember 2010.

#### **FRS Ohio Audit Committee Meetings and Actions**

ay 20, 2010 — The Audit Committee reviewed the May 2010 Quarterly Internal Audit Summary. Internal udit provided background information and clarification to areas of interest ranging from specific audits to neral processes. The Audit Committee was reminded of the development of the Internal Audit intranet site d functionality that will allow the Board access to detailed reports and supporting documentation for the dits summarized and reviewed. The information is made available by Internal Audit upon request and will be ewable by selecting the Internal Audit link on the Board's intranet site.

nere was general discussion related to how Internal Audit identified new areas that required audit attention. r. Brooks and Mr. Stein expressed a general concern that new technology (such as STaRS) and new vestment areas be addressed in future audits. Internal Audit affirmed that the scopes of future audits would insider newly identified areas of risk and that external expertise would be obtained, as needed, to address ghly specialized and technical areas.



#### STATE TEACHERS RETIREMENT SYSTEM OF OHIO

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eve Mitchell, deputy executive director – Investments, informed the Board the new investments would go rough the same level of review and reporting as current investments. Mr. Slater, deputy executive director – nance, updated the committee on the external auditor's schedule for performing a review of STRS Ohio's nancial statements and noted that STaRS was also an area of focus for the external auditors.

ug. 12, 2010 — Kevin Rohrs of Clifton Gunderson presented a summary of its plan for the 2009-10 financial atement audit to the Audit Committee, and the tentative schedule for issuing an audit report and management tter. Clifton Gunderson's overall risk assessment on this engagement is moderate, and it has identified vestments, contributions, benefit payments and actuarial assumptions as critical audit areas. As part of its dit procedures for contributions and benefits, Clifton Gunderson will test system controls in STaRS. The final dit report, including management letter, will be presented to the Audit Committee in December.

Quarterly Internal Audit Summary was also distributed for the Board's review.

ec. 9, 2010 — The Audit Committee reviewed a summary of the 2010 Internal Audit results. There were no aterial weaknesses in the internal controls. Management has accepted all audit recommendations (which have en implemented or are in progress). The Audit Committee also reviewed and approved the 2011 Internal udit Plan.

ne Audit Committee entered executive session to hear a report from Clifton Gunderson on the results of its dit of the STRS Ohio financial statements for the fiscal year ended June 30, 2010.

#### pecial Reviews/Projects

1e STRS Ohio Internal Audit Department has been involved in the enterprise risk management process for ΓRS Ohio.

#### 111 Internal Audit Plan

ne 2011 Internal Audit Plan was approved by the Retirement Board on Dec. 9, 2010. A copy of the 2010 Plan enclosed.

you have any questions or need further information, please feel free to call me at (614) 227-2821.

espectfully submitted,

avid S. Tackett, CFA, CPA, CIA

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nief Audit Executive



### 2010 Internal Audit Summary

	<del></del>	Guilliary		T	Implementation
Audit Area	Scope	Recommendations	Management's Response	Implemented	Implementation Date or Targeted Implementation Date
***		Closed Audits			
Alternative Investments 2009*	Proper Notification and Approval  Due Diligence	Create a formal document that outlines the due-diligence process in a structured and logical manner	Agree	Yes	1/29/2010
	Valuations  Monitoring of Alternative Investments	Establish specific guidelines for con- ducting and summarizing the results of prospective investment interviews	Agree	Yes	1/29/2010
	Segregation of Duties	Establish written policies and procedures for the monitoring of general partners	Agree	Yes	2/26/2010
Associate Payroll	State and Federal Regulations	Audit Resulted in No Recommendations	N/A	N/A	N/A
Associate Payroll  State and Federal Regulations  Access to Payroll Database  Accuracy of Associates' Net Pay  Final Payments to Terminated  Employees					
	Immigration Guidelines/Compliance				
Domestic Equities 2009* Investment Policy C Monitoring of Extern External Manager Fo Reporting/Accountin Custodian	Investment Policy Compliance  Monitoring of External Managers  External Manager Fees	Portfolio managers should document investment decisions that place a portfolio outside the established guideline range for sector weights and/or individual stock exposures	Agree	Yes	12/31/2009°
	Reporting/Accounting  Custodian  Research Costs	Request an electronic format for 5/3 reporting of complete monthly reports to reduce storage issues and increase efficiency	Agree	Yes	11/01/2009
	Approved Brokers				
Educational Assistance 2009*	Compliance: Educational Assistance Apps.	HRS include written documentation in departmental procedures of how certification fails are to be handled	Agree	Yes	1/30/2010
	Tuition Repayments Spending Limitations	Reconcile educational expenses yearly with G/L information from the Finance Dept.	Agree	Yes	3/01/2010
Fixed Assets - Non Computer	Tracking and Reporting  Depreciation	Update the Fixed Asset Policy and periodically review the policy to determine if changes are needed	Agree	Yes	6/30/2010
	Disposition	Perform periodic fixed asset reviews in compliance with policy and use information available in the ITS Dept. to reconcile computer-related assets	Agree	Yes	6/30/2010
Fixed Income*	Compliance Approved Brokers/Commissions	Require secondary review of manually updated pricing of fixed income securities	Agree	Yes	6/30/2010
	Accuracy of Pricing  Due Diligence	Standardize and maintain complete documentation related to buying/selling corporate bonds	Agree	Yes	6/30/2010
	Monitoring of External Managers  Adequacy of Policies and				
	Procedures Interest Income				

Audit Area	Scope	Recommendations	Management's Response	Implemented	Implementation Date or Targeted Implementation Date
International Investments	External Manager Fees	Audit Resulted in No Recommendations	N/A	N/A	N/A
2009*	Monitoring of External Managers Foreign Tax Reclamations BNY Role as Sub-Custodian Valuations				
Investment Performance	Accuracy of PBI Awards	Audit Resulted in No Recommendations	N/A	N/A	N/A
	Investment Policy Compliance				
Liquidity Reserves 2009°	Income Purchases/Sales Compliance	Audit Resulted in No Recommendations	N/A	N/A	N/A
Petty Cash*	Compliance with Policies  Café Operations	Update policy language/access privileges to Cash Room to reflect current business practices	Agree	Yes	12/31/2009*
	Reconciliation Segregation of Duties	Document the deposit recording and notification process to be followed in the absence of key associates	Agree	Yes	10/09/2009
		Require cash handlers to sign or initial ledgers after reconciliations and trans- actions	Agree	Yes	10/09/2009
		Reconcile cash balance after each Petty Cash transaction	Agree	Yes	10/09/2009
		Correct tax-liability calculation spread- sheets and review previous tax sub- missions for accuracy	Agree	Yes	10/09/2009
		Increase segregation of duties by allowing additional Finance Dept. staff access to cash transaction information and performing periodic reviews of transactions and balances listed	Agree	Yes	10/09/2009
Postage*	Compliance	Review the cost/benefit of consolidating postage funds and using one account	Agree	Yes	1/22/2010
	Disbursements	Create a procedures manual that documents key mailing systems functions	Agree	Yes	1/22/2010
		Review the cost/benefit of electronic delivery of certain STRS documents	Agree	Yes	1/22/2010
Post-Retirement Benefits*	Death Matches  Annuity Certain Expirations  Overpayments/Collections	Review the overpayments and collections process and develop methods to keep information between multiple departments synchronized	Agree	Yes	11/01/2008
	Disbursements Compliance Reselections	Review V3 functionality and determine if the overpayments/collections process has been captured or improved	Agree	Yes	12/15/2011
Real Estate 2010	Accuracy of Property Mgmt. Fees	Establish formal, written procedures for	Agree	Yes	10/06/2010
	Site Inspections	responding to External Property Mgr. Reviews			
	External Compliance Reviews Tenant Surveys	Update STRS Valuation Policy Manual to provide a method for independent valuations when there is a dispute	Agree (Dispute provision eliminated)	Yes	10/06/2010
	Compliance with Investment Objectives and Policy	Establish formal procedures for utilizing Tenant Satisfaction Assessments in a consistent manner	Agree	Yes	10/06/2010
		Avoid or reduce business risks related to contractual issues by requiring the immediate notification of the RE Department's legal professional of any identified problems	Agree	Yes	10/06/2010

Audit Area Securities Lending	Scope  Compliance  Accuracy of Income  Approved Borrowers  Quality of Collateral  Counterparty Risk	Recommendations  Require the Bank of New York Mellon to provide sufficient reporting detail that allows STRS to recalculate and verify revenue for loaned securities as needed	Management's Response Agree	Implemented Yes	Implementation Date or Targeted Implementation Date 5/31/2010
<del></del>			1		
Annual Reporting	Report Processing	Active Audits Audit in Progress	N/A	N/A	N/A
Attendance Reporting	Accuracy of Database  Compliance with Policies	Periodically validate the accuracy of data being sent the HRS to manage attendance	Agree	No	7/1/2011
Alternative Investments 2010	General Partner Review/Monitoring  Valuations  General Partner Fees	Audit in Progress	N/A	N/A	N/A
Board Expenses 2010	Pre-approval of Travel  Timeliness/Accuracy of Reimbursements  Compliance with Board Policies	Update the Board Travel Policy to address situations where itemized receipts are unavailable for legitimate Board-related expenses	Agree	No	Board Retreat Agend Item
Derivatives 2010	Semiannual Derivative Exposure Rpt Currency Forward Settlements Equity Swap Settlements Counterparty Risk	On a monthly basis, Investment Performance Dept. Independently reviews swap contract notional values are fully collateralized and inform Fixed Income Dept.  Cross-train another Investment Per-	Agree	Yes	10/01/2010
	Courtor party Prior	formance associate to provide proper backup coverage for State Street swap process			
Domestic Equities 2010	Research Costs  Monitoring of External Managers  Reporting/Accounting  External Manager Fees  Approved Brokers	Audit Resulted in No Recommendations	N/A	N/A	N/A
Healthcare	Records Retention - Contracts  Continuous Quality Improvement  Issues Monitoring and Resolution  Disbursements Reconciliations	Audit in Progress	N/A	N/A	N/A
International Investments 2010	External Manager Fees  Monitoring of External Managers  Foreign Tax Reclamations  BNY Role as Sub-Custodian	Audit Initiated	N/A	N/A	N/A
Internet/Intranet Security	Policy Appropriateness & Enforcement  Systems Access Revocation	Audit Initiated	N/A	N/A	N/A

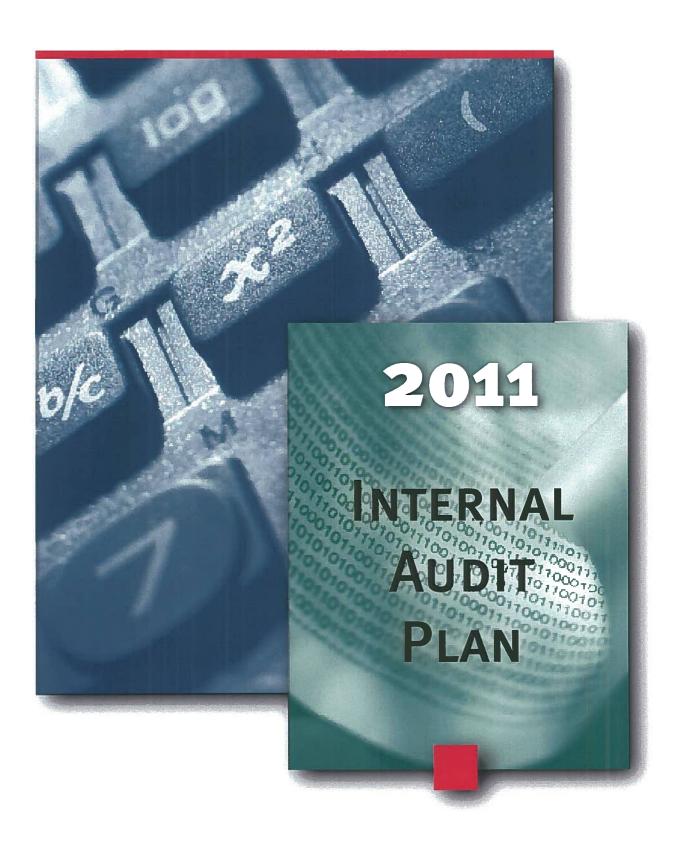
Virus Protection/Firewall Monitoring

Software Monitoring

			Management's		Implementation Date or Targeted Implementation
Audit Area Scope		Recommendations	Response	Implemented	Date
flember Data Mgt.	3rd-Party Access to Member Data  Transmission of Member  Data/Security	Require that each department maintain a centralized list of all external entities that have been granted access to STRS Ohio member data	Agree	Yes	6/16/2010
	3rd-Party Operations/Controls  3rd-Party Contractual Language	Require I.T.S. gather and update lists from each department, no less than annually, to facilitate data loss pre- vention projects	Agree	Yes	6/16/2010
		Investigate the feasibility and cost/benefit of mandating information exchange formats and procedures	Agree	No	1/31/2011
		Develop a centralized authority for review and determining acceptable risk related to data access	Agree	No	1/31/2011
Purchasing Practices	Compliance with Policies	Draft Report Under Mgt. Review	N/A	N/A	N/A
	Due Diligence/Efficient Use of Resources				
	Receipt of Goods and Services				
Risk Mgt./Insurance Compliance with STRS Ohio Insurance and Risk Managemer Manual	Insurance and Risk Management	Draft Report Under Mgt. Review	N/A	N/A	N/A
	Carrier Ratings  Accuracy of Premium Payments				
	Segregation of Duties				
Service Retirement Benef	fits Departmental Process Documentation	Audit in Progress	N/A	N/A	N/A
	Benefit Calculations				
	Management of Overpayments				
	Segregation of Duties				
		Postponed Audits/Implementation			
Network Security**	Remote Access Management	External review planning stage	N/A	N/A	N/A
	Systems Access Management				
	Third-Party Confidentiality Agreement				
	User Software Downloads				
External IT Review**	Risk Assessment of IT Operations	External review planning stage	N/A	N/A	N/A

		Consultant Reviews/Audits	}		
SecureState (Limited Controls Review)	A review of 13 control areas to assess the security of the STaRS Application  Process and documentation reviews  Key associate interviews  External Penetration Test	Various recommendations resulted from the external review. Technical details are presented in a separate SecureState report, as well as the STRS Ohio I.T.S. Department responses to the recommendations, and are available upon request	Agree	Various Stages of Implementation	Various Implementation Dates To Be Later Verified By Internal Audit
	Social Engineering Attacks				

<sup>\*</sup>Audits were listed as "Under Mgt. Review", "In Progress", "Audit Initiated", or had not implemented recommendation(s) at the time of the last Annual Audit Summary presentation
\*\*Changes in resources (human and/or technical), departmental workloads, and other issues may necessitate rescheduling of an audit or an understandable delay in the implementation of an
Internal Audit recommendation



## STATE TEACHERS RETIREMENT SYSTEM OF OHIO

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## INTERNAL AUDIT DEPARTMENT

#### Mission Statement

To work in partnership with associates to conduct value-added independent appraisals of policies and procedures to contribute to the continuous improvement of STRS Ohio.

#### Vision Statement

To be recognized as an innovative department that, through independent appraisals and partnered solutions, strives for quality enhancements and the elimination of non-value-added processes.

To create an environment that encourages teamwork, innovation, open communication, empowerment and personal and professional growth.

#### **Guiding Principles**

To achieve our mission and vision, we will:

- Prepare a comprehensive, practical, planned program of audit coverage consistent with STRS Ohio's mission, vision and guiding principles.
- Perform audits in compliance with professional standards.
- Verify the adequacy and effectiveness of STRS Ohio's systems of administrative, operating and financial controls.
- Understand the associates' business from their perspective.
- Produce objective, clear, concise, constructive and timely reports.
- Maintain contemporary professional proficiency through continuing education and training.
- Seek to continuously improve our team, tools and processes.
- Develop professional expertise for potential career opportunities within STRS Ohio.

# **TABLE OF CONTENTS**

## **EXECUTIVE SUMMARY**

2011 Internal Audit Schedule	1
DETAILED SUMMARY	
Risk Factors	3
Risk Assessment Scale	4
Assignment of Risk Rating	5
Risk Factors Weighted	8
2011 Internal Audit Work Plan	11

# **RISK FACTORS WEIGHTED**

	Risk Factors*										
Audit Area	A	В	C	D	E	F	Total				
MEMBER BENEFITS											
Call Center	18	16	14	12	10	8	78				
Defined Contribution Plan	18	16	14	12	10	8	78				
Disability Benefits	27	24	21	12	10	8	102				
Health Care	27	32	14	12	15	16	116				
Member Data Management	27	32	28	12	10	8	117				
Post-Retirement Benefits	27	16	21	24	10	8	106				
Purchasing Service Credit	18	24	14	12	15	8	91				
Records Management	18	16	14	12	10	12	82				
Reemployed Retirees	27	24	21	18	10	8	108				
Srv. Ret. Benefits — Processing Adm.	18	32	14	18	15	16	113				
Srv. Ret. Benefits — Benefit Processing	18	32	14	18	20	16	118				
Survivor Benefits	18	16	14	18	10	8	84				

## **2011 INTERNAL AUDIT WORK PLAN**

Audia Avaa	Duionitos	Down	Risk	Last	Estimated Audit	Audit	Diek Codes
Audit Area	Priority	Dept.	Score	Audit	Date	Hours	Risk Codes
Alternative Investments	HIGH	<u> </u>	133	2010	Nov-11	240	F, I, C, O
International Investing	HIGH	<u> </u>	125	2010			F, I, C, O
Domestic Equities	HIGH	<u> </u>	125	2010	Oct-11	320	F, I, C, O
Real Estate	HIGH	<u> </u>	119	2010			F, I, C, O
Derivatives	HIGH	1	113	2010	Aug-11	160	F, I, C, O
Fixed Income	HIGH		103	2009	Jun-11	240	F, I, C, O
Liquidity Reserves	HIGH		93	2009	Jan-11	120	F, I, C, O
Business Continuity Plan	MED.	Α	122	2007	Mar-11	120	F,I, C, O
Financial Reporting (STRS Ohio)	MED.	F	121	2006	Sep-11	160	I, C, O
Srv. Ret. Benefits — Benefit Processing	MED.	MB	118	2010			I, C, O
Member Data Management	MED.	MB	117	2009			PS, C
Health Care	MED.	MB	116	2010			I, C, O
Srv. Ret. Benefits — Processing Admin.	MED.	MB	113	2010			I, C, O
Contribution Reporting	MED.	F	90	2008			I, C, O
Insurance/ Risk Management	MED.	Α	86	2010			F,I, C, O
Annual Reporting	MED.	F	86	2010			I, C, O
Accounts Payable	MED.	F	78	2007	Nov-11	200	I, C, O
Annual Statements	MED.	F	78	2007			I, C, O
Defined Contribution Plan	MED.	МВ	78	2007			I, C, O
Benefit Payment Process	LOW	Α	125	2007	Jan-11	120	I, C, O
Member Income Taxes	LOW	F	120	2007	Mar-11	200	I, C, O
Fixed Assets — Computer Equipment	LOW	Α	117	2008			I, C, O
Reemployed Retirees	LOW	MB	108	2008			I, C, O
Securities Lending	LOW	1	107	2010			I, C, O
<del></del>							

#### **Risk Codes:**

- F: Financial = Risk related to financial impact
- I: Integrity = Risk related to accuracy of data or asset managed/presented
- C: Compliance = Risk related to non-compliance with laws/regulations/internal policies
- O: Operational = Risk related to operational efficiencies/inefficiencies
- PS: Public Sensitivity = No material financial impact but high public sensitivity

State Teachers Retirement System of Ohio 2011 Internal Audit Plan December 2010

## **2011 INTERNAL AUDIT WORK PLAN**

			Risk	Last	Audit	Estimated Audit	
Audit Area	Priority	Dept.	Score	Audit	Date	Hours	Risk Codes
Member Withdrawals	LOW	F	106	2006	May-11	120	I, C, O
Post-Retirement Benefits	LOW	MB	106	2007	Mar-11	200	I, C, O
Internet/Intranet	LOW	Α	102	2010			I, C, O
Network Security	LOW	Α	102	2010			I, C, O
Disability Benefits	LOW	MB	102	2007	Oct-11	160	I, C, O
Purchasing Service Credit by Payroll Deduction	LOW	F	99	2008			I, C, O
Purchasing Practices	LOW	A	98	2010		·····	I, C, O, PS
Attendance Reporting	LOW	A	98	2010			I, C, O
Petty Cash	LOW	F	98	2009			I, C, O, PS
Fixed Assets	LOW	F	94	2009			I, C, O
Purchasing Service Credit	LOW	MB	91	2008			I, C, O
Postage	LOW	Α	89	2009			I, C, O
Child Care Center	LOW	Α	86	2004	Jul-11	120	I, C, O
Flexible Spending Plans	LOW	Α	85	2009			I, C, O
Associate Travel Expenses	LOW	Α	85	2007	May-11	120	I, C, O, PS
Survivor Benefits	LOW	MB	84	2006	Jan-11	160	I, C, O
Investment Performance	LOW	1	83	2010	Jul-11	120	I, C, O
Early Retirement Incentive Credit	LOW	F	83	2005			I, C, O
Records Management	LOW	MB	82	2008			C, O
Associate Payroll	LOW	Α	82	2010			I, C, O
Call Center	LOW	MB	78	2008			C, O
Board Expenses	LOW	Α	78	2010	Aug-11	120	I, C, O, PS
Building Maintenance	LOW	Α	78	2008			I, C, O
Educational Assistance Program	LOW	Α	78	2009			I, C, O

#### **Risk Codes:**

- F: Financial = Risk related to financial impact
- I: Integrity = Risk related to accuracy of data or asset managed/presented
- C: Compliance = Risk related to non-compliance with laws/regulations/internal policies
- O: Operational = Risk related to operational efficiencies/inefficiencies
- PS: Public Sensitivity = No material financial impact but high public sensitivity

State Teachers Retirement System of Ohio 2011 Internal Audit Plan December 2010

## **2011 INTERNAL AUDIT WORK PLAN**

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Estimated Audit Hours	Risk Codes
Personal Investment Disclosure	LOW	Α	78	1996	Oct-11	80	I, C
Other Staff Expenses	LOW	Α	76	2009	·		I, C, O, PS
Unused Sick and Vacation Leave	LOW	Α	74	2009			I, C, O
Proxy Voting	LOW	ı	74	2008			I, C
OEC Reporting	LOW	Α	58	2008			I, C, O, PS

Total	
Hours	3080

#### **Risk Codes:**

- F: Financial = Risk related to financial impact
- I: Integrity = Risk related to accuracy of data or asset managed/presented
- C: Compliance = Risk related to non-compliance with laws/regulations/internal policies
- O: Operational = Risk related to operational efficiencies/inefficiencies
- PS: Public Sensitivity = No material financial impact but high public sensitivity

# **ASSIGNMENT OF RISK RATING**

	Risk Factors*						
Audit Area	A	В	С	D	E	F	Total
	FINAN	ICE					S. Van
Accounts Payable	2	2	2	2	2	2	12
Annual Reporting	2	3	2	2	2	2	13
Annual Statements	2	2	2	2	2	2	12
Contribution Reporting	2	3	2	2	2	3	14
Early Retirement Incentive Credit	2	2	2	2	3	2	13
Financial Reporting (STRS Ohio)	3	4	2	2	4	4	19
Fixed Assets	3	2	3	2	2	2	14
Member Income Taxes	4	4	2	2	2	4	18
Member Withdrawals	3	3	3	2	2	3	16
Petty Cash	3	2	4	3	1	1	14
Purchasing Service Credit							
by Payroll Deduction	2	4	2	2	3	2	15

	INVESTM	ENTS			and the second	1155	
Alternative Investments	4	4	3	2	4	3	20
Derivatives	3	4	2	2	4	2	17
Domestic Equities	3	4	2	2	4	5	20
Fixed Income	2	4	2	2	3	3	16
International Investing	3	4	2	2	4	5	20
Investment Performance	2	2	2	2	3	2	13
Liquidity Reserves	2	3	3	2	2	2	14
Proxy Voting	2	2	2	2	2	1	11
Real Estate	3	4	3	2	3	3	18
Securities Lending	2	4	2	2	3	4	17

# **ASSIGNMENT OF RISK RATING**

			Risl	k Facto	rs*		
Audit Area	Α	В	С	D	E	F	Total
MEME	BER B	ENEFIT	S		N V DS		
Call Center	2	2	2	2	2	2	12
Defined Contribution Plan	2	2	2	2	2	2	12
Disability Benefits	3	3	3	2	2	2	15
Health Care	3	4	2	2	3	4	18
Member Data Management	3	4	4	2	2	2	17
Post-Retirement Benefits	3	2	3	4	2	2	16
Purchasing Service Credit	2	3	2	2	3	2	14
Records Management	2	2	2	2	2	3	13
Reemployed Retirees	3	3	3	3	2	2	16
Srv. Ret. Benefits — Processing Adm.	2	4	2	3	3	4	18
Srv. Ret. Benefits — Benefit Processing	2	4	2	3	4	4	19
Survivor Benefits	2	2	2	3	2	2	13

State Teachers Retirement System of Ohio 2011 Internal Audit Plan December 2010

## **RISK FACTORS WEIGHTED**

			Ris	k Facto	rs*		
Audit Area	Α	В	C	D	E	F	Total
AD	MINIST	RATIO	N	AN FRENCH			
Associate Payroll	18	16	14	12	10	12	82
Associate Travel Expenses	18	16	21	12	10	8	85
Attendance Reporting	27	16	21	12	10	12	98
Benefit Check Printing	27	32	21	18	15	12	125
Board Expenses	18	16	14	12	10	8	78
Building Maintenance	18	16	14	12	10	8	78
Business Continuity Plan	27	24	21	18	20	12	122
Child Care Center	18	24	14	12	10	8	86
Educational Assistance Program	18	16	14	12	10	8	78
Fixed Assets — Computer Equipment	27	24	21	18	15	12	117
Flexible Spending Plans	18	16	21	12	10	8	85
Insurance/Risk Management	18	24	14	12	10	8	86
Internet/Intranet	18	24	21	12	15	12	102
Network Security	27	24	21	12	10	8	102
Ohio Ethics Commission Reporting	9	16	7	12	10	4	58
Other Staff Expenses	18	16	21	12	5	4	76
Personal Investment Disclosure	18	16	14	12	10	8	78
Postage	18	16	21	12	10	12	89
Purchasing Practices	27	16	21	12	10	12	98
Unused Sick and Vacation Leave	18	16	14	12	10	4	74

State Teachers Retirement System of Ohio 2011 Internal Audit Plan December 2010

# RISK FACTORS WEIGHTED

			Ris	k Facto	ors*		
Audit Area	A	В	C	D	E	F	Total
	FINAN	NCE	STATE OF	5 1	E BATT	e se	
Accounts Payable	18	16	14	12	10	8	78
Annual Reporting	18	24	14	12	10	8	86
Annual Statements	18	16	14	12	10	8	78
Contribution Reporting	18	24	14	12	10	12	90
Early Retirement Incentive Credit	18	16	14	12	15	8	83
Financial Reporting (STRS Ohio)	27	32	14	12	20	16	121
Fixed Assets	27	16	21	12	10	8	94
Member Income Taxes	36	32	14	12	10	16	120
Member Withdrawals	27	24	21	12	10	12	106
Petty Cash	27	16	28	18	5	4	98
Purchasing Service Credit							
by Payroll Deduction	18	32	14	12	15	8	99

	INVEST	MENTS			T. SEL	WEE	-
Alternative Investments	36	32	21	12	20	12	133
Derivatives	27	32	14	12	20	8	113
Domestic Equities	27	32	14	12	20	20	125
Fixed Income	18	32	14	12	15	12	103
International Investing	27	32	14	12	20	20	125
Investment Performance	18	16	14	12	15	8	83
Liquidity Reserves	18	24	21	12	10	8	93
Proxy Voting	18	16	14	12	10	4	74
Real Estate	27	32	21	12	15	12	119
Securities Lending	18	32	14	12	15	16	107

	2011 INTERNAL	1 INTERNAL AUDIT SCHEDULE	ULE	
Audit Area	Description of Audit Area	Jan. Feb. Mar. Apr. I	May Jun. Jul. Aug. Sep. Oct. Nov.	Dec.
Liquidity Reserves	Compliance Accuracy of Interest Income Quality of Investments Daily Reconciliations			
Survivor Benefits	Benefit Calculations Student Benefits Segregation of Duties			
Benefit Payment Process	Data Backup Pension Reconciliation & G/L Update Information Change Management			
Member Income Taxes	Withholding Change Reconciliations Tax Interface Reconciliation & G/L Updates Segregation of Duties	es		
Business Continuity Plan	Compliance Monitoring & Testing			
Post-Retirement Benefits	Death Match Process Annuity Certain Expirations Overpayment/Collections Disbursement Compliance			
Associate Travel Expenses	Prior Authorization Compliance With STRS Ohio Travel Policy Approval/Payment of Travel Expenses	X.		
Member Withdrawals	Compliance With ORC Refund Estimates/Payments Non-Zero Accounts 1099Rs			
Fixed-Income Investments	Due Diligence Approved Brokers Accuracy of Pricing Interest Income Monitoring of External Managers Compliance With Investment Policies			
Investment Performance	Accuracy of PBI Awards Investment Policy Compliance			

# 2011 INTERNAL AUDIT SCHEDULE

Audit Area	Description of Audit Area	Jan.	Feb.	Mar.	Apr.	May Jun.	Jul.	Aug. Sep.	Sep.	Oct.	Nov.	Dec.
Child Care Center	Compliance With State Licensing State Inspections Tuition Payments Enrollment											
Derivatives	Semiannual Derivative Exposure Report Currency Forward Settlements Equity Swap Settlements Counterparty Risk									) 2 		
Board Expenses	Preapproval of Travel Timeliness/Accuracy of Reimbursements Compliance With Rules/Policies											
Financial Reporting (STRS Ohio)	Role-Based Security/Segregation General Journal Entries Disaster Recovery Process Audit Trail Integrity											
Disability Benefits	Reexamination Schedules Medical Invoice Payments Terminated Benefits - Notification Statement of Employment/Earnings											
Personal Investment Disclosure	Compliance With Policies Accuracy/Completeness	Y										
Domestic Equities	Monitoring of External Managers Recalculation of Management Fees Approved Brokers Research Costs Reporting/Accounting Compliance With Investment Policies											
Accounts Payable	Vendor Approval Process Vendor Payment History Segregation of Duties											
Alternative Investments	General Partner Review/Monitoring Valuations General Partner Fees											

# **RISK FACTORS**

Risk Factor	Risk Factor Description	Weighting
Α	Adequacy and Effectiveness of the System of Internal Controls	9
В	Major Changes in Technology, Operations, the Organization or the Economy	8
С	Dates and Results of Previous Audits	7
D	Recent or Relevant Changes in Key Personnel	6
E	Complexity or Volatility of Activities	5
F	Asset Size or Transaction Volume	4

# **RISK ASSESSMENT SCALE**

The risk assessment scale is a 9-point system with graduations of risk as follows:

Risk Factor Description	Score
Extremely Risky	9
Very Risky	7
Risky	5*
Slightly Risky	3
Not Risky	1

<sup>\*</sup> If no previous audit was performed, the auditable area was assessed a 5 — Risky.

## **ASSIGNMENT OF RISK RATING**

		Risl	(Facto	rs*		
Α	В	C	D	E	F	Total
NISTF	RATION					
_	_	_	_		_	
						13
		-			· · · · · · · · · · · · · · · · · · ·	13
3	2	3	2	2	3	15
3	4	3	3	3	3	19
2	2	2	2	2	2	12
2	2	2	2	2	2	12
3	3	3	3	4	3	19
2	3	2	2	2	2	13
2	2	2	2	2	2	12
3	3	3	3	3	3	18
2	2	3	2	2	2	13
2	3	2	2	2	2	13
2	3	3	2	3	3	16
3	3	3	2	2	2	15
1	2	1	2	2	11	9
2	2	3	2	1	1	11
2	2	2	2	2	2	12
2	2	3	2	2	3	14
3	2	3	2	2	3	15
2	2	2	2	2	1	11
	2 2 3 3 2 2 2 3 2 2 2 2 3 1 2 2 2 3 3 2 2 3 2 2 3 3	2       2         2       2         3       4         2       2         3       4         2       2         3       3         2       2         3       3         2       2         3       3         1       2         2       2         2       2         2       2         2       2         2       2         2       2         3       2	A B C NISTRATION  2 2 2 3 3 3 3 4 3 2 2 2 2 2 2 3 3 3 2 2 2 2	A       B       C       D         NISTRATION         2       2       2       2         2       2       2       2         2       2       2       3       2         3       4       3       3         2       2       2       2         2       2       2       2         2       2       2       2         3       3       3       3         2       2       2       2         3       3       3       3         2       2       3       2         2       3       2       2         2       3       3       2         2       3       2       2         2       3       2       2         2       2       3       2         3       3       3       2         1       2       1       2         2       2       2       2         2       3       2       2         2       2       2       2         2       2	NISTRATION         2 </td <td>A B C D E F NISTRATION  2 2 2 2 2 2 2 2 3 2 2 3 2 2 2 3 3 4 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td>	A B C D E F NISTRATION  2 2 2 2 2 2 2 2 3 2 2 3 2 2 2 3 3 4 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

State Teachers Retirement System of Ohio 2011 Internal Audit Plan December 2010