



OKLAHOMA TEACHERS RETIREMENT SYSTEM

AUDIT COMMITTEE MEETING

DECEMBER 14, 2010

8:15 AM

VIA CONFERENCE CALL

MEETING MATERIALS

AUDIT COMMITTEE MEMBERS:

Chair: Bruce DeMuth

Members: Sherrie Barnes, Richard Gorman, Galeard Roper

**ALL BOARD MEMBERS ARE ENCOURAGED TO ATTEND AUDIT COMMITTEE
MEETINGS**

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA
Audit Committee Meeting
Tuesday, December 14, 2010 - 8:15 AM
Via Conference Call

AGENDA

- 1. CALL TO ORDER**
- 2. DISCUSSION AND POSSIBLE ACTION ON INVESTMENT COMPLIANCE REVIEW**
- 3. QUESTIONS AND COMMENTS FROM TRUSTEES**
- 4. ADJOURNMENT**

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AUDIT COMMITTEE:

Chair: Bruce DeMuth

Members: Sherrie Barnes, Joe Ezzell, Richard Gorman, Galeard Roper



OKLAHOMA TEACHERS
RETIREMENT SYSTEM
INTERNAL AUDIT DEPARTMENT

Investment Compliance Review

December 2010



OKLAHOMA TEACHERS
RETIREMENT SYSTEM
INTERNAL AUDIT DEPARTMENT

Investment Compliance Review

Purpose:

- To ensure Oklahoma Teachers Retirement System receives complete, reliable and timely information regarding the compliance of its investment portfolio with its Investment Guidelines.
- To inform the Board of Trustees which components of the Investment Guidelines can and cannot be actively monitored for compliance.



OKLAHOMA TEACHERS RETIREMENT SYSTEM

INTERNAL AUDIT DEPARTMENT

Significant Findings:

- Many sections of the prior Investment Guidelines were inconsistent throughout the document, replicated and/or intangible to monitor. These inconsistencies along with the manager exceptions made the logical rules for monitoring the portfolio contradictory, unreliable and cumbersome. These findings were taken into consideration and used as an aid in forming the revised and current Investment Guidelines.
- Investment Consultants request compliance certifications from each manager on a quarterly basis. These certifications are signed and kept on file by the Investment Consultants. Certifications are not actively communicated to OTRS at this point.
- The Investment Analyst receives a report from the Custodian regarding possible compliance issues which are researched and resolved on a daily basis.



OKLAHOMA TEACHERS RETIREMENT SYSTEM

INTERNAL AUDIT DEPARTMENT

Significant Findings (cont.):

- All Domestic and International Equities managers were in compliance with the updated guidelines during our manual portfolio testing and manual tests correlated with JP Morgan's compliance reports.
- All exceptions to the investment guidelines found during the manual testing for Fixed Income and High Yield Fixed income were also captured by JP Morgan's compliance reports. These exceptions were immaterial in nature and are monitorable on a daily basis. (Excess cash, over 5% single holding).
- JP Morgan's compliance reports surpass OTRS' ability to manually test and monitor compliance.



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The following Investments Guideline Sections cannot be monitored by the Custodian and OTRS staff other than self-monitoring of managers via compliance certifications:

- I. Derivatives
- A.1.1. Ineligible Investments - futures and options instruments
- Section A.1.10 Ineligible Investments - Private Equity
- Section 6.7 Fixed Income - which refers to unrated securities requiring a minimum internal advisor rating



OKLAHOMA TEACHERS RETIREMENT SYSTEM

INTERNAL AUDIT DEPARTMENT

Commendations:

- Compliance matrix is reviewed semiannually and approved by the Investment Analyst and JP Morgan to ensure they are an accurate representation of the Investment Guidelines and their intent.
- Managerial Investment Guideline exceptions are now formally documented internally and will follow a consistent review process prior to initiation.
- New Investment Guidelines have resolved all significant redundancies and conflicting language.
- Prior to the initiation of this audit, there was no formal documentation of manager guideline exceptions. This issue has been resolved and manager exceptions are formally documented by the Investment Analyst.
- The revised Investment Guidelines define compliance roles for Custodian, Investment Consultants and Managers.



OKLAHOMA TEACHERS RETIREMENT SYSTEM

INTERNAL AUDIT DEPARTMENT

Recommendations:

- Investment Consultants should require manager compliance certifications to be sent directly to OTRS for periodic review. Likewise, OTRS investment analyst should review compliance certifications as they are received.
- Manager exceptions should be reviewed periodically to ensure the benefits to the portfolio are still warranted.
- The Investment Guidelines should be reviewed periodically to ensure the issues presented in the prior guidelines do not develop again.
- The Board of Trustees and OTRS staff should determine whether the Compliance Certifications are sufficient for the sections of the Investment Guidelines that cannot be monitored.
- The Board of Trustees should consider their risk appetite regarding the self-monitoring of Securities Lending through JP Morgan.
- Ensure High Yield Fixed Income is mapped to JP Morgan's compliance monitoring system and perform a manual test to determine its reliability.



OKLAHOMA TEACHERS RETIREMENT SYSTEM

INTERNAL AUDIT DEPARTMENT

Conclusion:

- While there are a few sections in the Investment Guidelines that are not capable of being monitored, the majority of the portfolio is reviewed by the Custodian's system on a daily basis.
- OTRS will always have to rely on its managers to comply with the Investment Guidelines, to what extent will be determined by the Board of Trustees and OTRS Executive Staff.
- OTRS can reliably outsource the majority of its compliance monitoring to its Custodian.

Project Name: Investment Compliance Review
Project Number: AS10-04
Service Performed: Assurance
Date:

Purpose: To ensure Oklahoma Teachers Retirement System receives complete, reliable and timely information regarding the compliance of its investment portfolio with its Investment Guidelines.

To inform the Board of Trustees which components of the Investment Guidelines can and cannot be actively monitored for compliance.

Who: JP Morgan, Consultants, Staff

Background: The Board of Trustees requested an audit of OTRS' investment compliance at the 2010 Strategic Retreat. To this point OTRS had not formally reviewed the overall compliance of the Investment Portfolio.

The main source of compliance review is performed by the Custodian which consists of a set of logical rules derived from the Investment Guidelines that are applied to the data of the portfolio. These rules generate exceptions which are reviewed by the Custodian and delivered to the Investment Analyst on a daily basis.

The role of monitoring investment compliance belongs to the Board of Trustees, OTRS internal staff, the Custodian and OTRS Investment Consultants however no specific roles were formally defined internally or externally during the time the audit was requested.

Work Performed: This audit began prior to the initial consolidation and rewrite of the Investment Guidelines and accordingly consists of two distinct sections.

The first section was a review of the prior guidelines to assist in the consolidation. This section was also designed to assess the current environment, procedures and roles which encompass the compliance function of OTRS.

Following are the significant steps taken to complete this section:

- Analysis of standing Investment Guidelines
- Comparison of guidelines with Custodian's compliance matrix
- Interview with Gregory W. Group regarding their compliance activities
- Discussions with other pension systems concerning best practices
- Interviews with JP Morgan regarding their compliance matrix process



- Discussions with Money Managers regarding outstanding exceptions and their genesis
- Documentation of all Money Managers investment guidelines exceptions
- Multiple discussions with Executive Management regarding changes to the Investment Guidelines

The second section was a review of the revised guidelines to ensure all changes have been properly included by the Custodian and to determine which policies if any cannot be actively monitored. This section also consisted of tests to ensure all Investment Guidelines are accounted for in the Custodian's compliance reports and to ensure the compliance reports are reliable.

Following are the significant steps taken to complete this section:

- Interviews with JP Morgan regarding their compliance matrix process
- Detailed review of new investment guidelines and comparison to new compliance matrix
- Manual testing of compliance rules performed by JP Morgan

Findings:

Compliance Process

1. Many sections of the prior Investment Guidelines were inconsistent throughout the document, replicated and/or intangible to monitor. These inconsistencies along with the manager exceptions made the logical rules for monitoring the portfolio contradictory, unreliable and cumbersome. These findings were taken into consideration and used as an aid in forming the revised and current Investment Guidelines.
2. Investment Consultants request compliance certifications from each manager on a quarterly basis. These certifications are signed and kept on file by the Investment Consultants. Certifications are not actively communicated to OTRS at this point.
3. The role of reviewing specific compliance issues is being performed by the Investment Analyst while the role of requesting compliance certifications is being performed by the Investment Consultants.
4. Obtaining a sufficient and all encompassing compliance matrix requires significant effort by Custodian and OTRS. The matrix went through numerous iterations before being considered complete.
5. The Investment Analyst receives a report from the Custodian regarding possible compliance issues which are researched and resolved on a daily basis.



6. Investment exceptions are requested by managers and delivered in writing to the Executive Director or the Investment Consultants. Exceptions are reviewed internally and then presented to the Board of Trustees to be approved or denied. When an exception is approved the investment analyst communicates with the Custodian to ensure this exception is included in the Custodian's compliance matrix.
7. All Domestic and International Equities managers were in compliance with the updated guidelines during our manual portfolio testing and manual tests correlated with JP Morgan's compliance reports.
8. All exceptions to the investment guidelines found during the manual testing for Fixed Income and High Yield Fixed income were also captured by JP Morgan's compliance reports. These exceptions were immaterial in nature and are monitorable on a daily basis. (Excess cash, over 5% single holding).
9. JP Morgan's compliance reports surpass OTRS' ability to manually test and monitor compliance.

Guideline Findings

10. Section I (Derivatives) of the Investment Guidelines cannot be monitored by the Custodian and OTRS staff other than through self-monitoring of managers via compliance certifications.
11. Section A.1.1 (Ineligible Investments- futures and options instruments) of the Investment Guidelines cannot be monitored by the Custodian and OTRS staff other than through self-monitoring of managers via compliance certifications.
12. Section A.1.10 (Ineligible Investments-Private Equity) of the Investment Guidelines cannot be monitored by the Custodian and OTRS staff other than through self-monitoring of managers via compliance certifications.
13. Over the counter holdings cannot be monitored by the Custodian and OTRS staff other than through self-monitoring of managers via compliance certifications.
14. Securities Lending is monitored by a JP Morgan internal block rule. (Should update with changes) OTRS can only review this via a JP Morgan monthly report. JP Morgan self-monitors using SEC Rule 2A-7. Internal Staff does not have the capacity to monitor updates in SEC Rule 2A-7.



Commendations:

1. Compliance matrix is reviewed semiannually and approved by the Investment Analyst and JP Morgan to ensure they are an accurate representation of the Investment Guidelines and their intent.
2. Managerial Investment Guideline exceptions are now formally documented internally and will follow a consistent review process prior to initiation.
3. New Investment Guidelines have resolved all significant redundancies and conflicting language.
4. Prior to the initiation of this audit, there was no formal documentation of manager guideline exceptions. This issue has been resolved and manager exceptions are formally documented by the Investment Analyst.
5. The revised Investment Guidelines define compliance roles for Custodian, Investment Consultants and Managers.

Recommendations:

1. Investment Consultants should require manager compliance certifications to be sent directly to OTRS for periodic review. Likewise, OTRS investment analyst should review compliance certifications as they are received.
2. Manager exceptions should be reviewed periodically to ensure the benefits to the portfolio are still warranted.
3. The Investment Guidelines should be reviewed periodically to ensure the issues presented in the prior guidelines do not develop again.
4. The Board of Trustees and OTRS staff should determine whether the Compliance Certifications are sufficient for the sections of the Investment Guidelines that cannot be monitored.
5. The Board of Trustees should consider their risk appetite regarding the self-monitoring of Securities Lending through JP Morgan.



Conclusion:

- While there are a few sections in the Investment Guidelines that are not capable of being monitored, the majority of the portfolio is reviewed by the Custodian's system on a daily basis.
- OTRS will always have to rely on its managers to comply with the Investment Guidelines, to what extent will be determined by the Board of Trustees and OTRS Executive Staff.
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