

**STATE OF NORTH DAKOTA
STATE INVESTMENT BOARD**

**RETIREMENT INVESTMENT OFFICE
PERFORMANCE AUDIT
April 30, 2010**

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Independent Accountant's Report

Members of the State Investment Board Audit Committee
Bismarck, North Dakota

We have completed our performance audit of the State Investment Board (SIB) investment compliance procedures for the North Dakota Retirement and Investment Office (RIO). Our performance audit covered the period July 1, 2009 through April 30, 2010.

This report contains the results of a performance audit of the SIB's management and oversight of trust funds administered by the RIO. The performance audit was conducted pursuant to a contract between the State of North Dakota acting through its State Investment Board and Clifton Gunderson LLP. This contract calls for a performance audit relating to the RIO to determine whether the actions of the former Executive Director/Chief Investment Officer complied with the policies in the SIB Governance Policy Manual. The SIB contracted with Clifton Gunderson LLP to conduct the performance audit in accordance with the Work Plan approved by the Audit Committee of the SIB and with *Generally Accepted Government Auditing Standards*, issued by the Comptroller General of the United States. Our performance audit covered the period from July 1, 2009 through April 30, 2010. This report presents our findings, conclusions, and recommendations.

Clifton Gunderson LLP

Baltimore, Maryland
August 27, 2010

EXECUTIVE SUMMARY

Introduction

The purpose of this report is to provide our findings and recommendations regarding the Scope of Work identified in the Request for Proposal dated May 21, 2010; Engagement Letter, together with the Professional Services Agreement dated July 7, 2010, and the Work Plan approved by the RIO Audit Committee on July 7, 2010.

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important longstanding state programs – the retirement program of the Teachers' Fund for Retirement (TFFR) and the investment program for the State Investment Board (SIB).

The RIO is governed by an eleven member board titled the State Investment Board (SIB). The SIB is charged with the responsibility of being the fiduciary for a total of 25 funds. The responsibility of RIO is to advise and implement an investment policy for each fund, diversify plan assets unless circumstances create a reason not to do so, make investment decisions under the discretion of the prudent investor rule, monitor investment performance, control investment expenses and avoid prohibited transactions. This management process includes the hiring of external investment managers to manage the investments of the system.

It is important for the reader to understand some basic controls in place as a result of the structure of the RIO and the delegated responsibilities of the Executive Director/CIO associated therewith. All funds invested by RIO are 100% externally managed; meaning that no trading activity takes place or is initiated by RIO staff. The former Executive Director/CIO, Stephen Cochrane, oversaw a staff of 16 of which five are directly assigned to the investment program. Including Mr. Cochrane, the average tenure of the staff was approximately 13 years with RIO and approximately 17 years with the State. Based on our interviews, each member of the staff indicated they understand their individual roles and expressed a commitment to the success and mission of the office. There were written investment policies and procedures in place. In addition to the investment managers contracted to invest monies on behalf of the pension and insurance pool participants, RIO contracted with Northern Trust as the primary custodial bank and utilized Callan Associates, Inc. as the primary investment consultant.

In addition to the primary objective identified in the SIB's Request for Proposals dated May 21, 2010, our work also covered RIO's internal controls related to investments, investment policies and procedures, compliance with investment policies and procedures, benchmarking for investment expenses, and the process for disclosing information to the SIB. We also developed recommendations to improve the processes and control systems in use by the RIO. Our findings and recommendations are included in this report.

Summary of Objectives, Scope and Methodology

The objectives of our performance audit of the RIO were to determine whether the actions of the former Executive Director/Chief Investment Officer complied with the policies in the SIB Governance Policy Manual. A complete listing of the original performance criteria requested by the Audit Committee is outlined in the contract entered into the by North Dakota Retirement and Investment Office and Clifton Gunderson LLP dated July 7, 2010. Our engagement was structured to address all criteria of the contract. Based on our understanding we included procedures in addition to the criteria listed in the contract. The additional procedures were included in our Work Program, which was approved by the Audit Committee on July 7, 2010. The revised performance objectives that have been communicated to the Audit Committee and approved are as follows:

Objective 1 – Determine whether the former Executive Director/Chief Investment Officer adhered to executive limitation policies regarding

1. the protection, maintenance and risk of assets
2. not allowing conflicts of interest in the procurement of goods and services

Objective 2 – Determine whether the former Executive Director/Chief Investment Officer's actions directed

1. The receipt of cost-effective investment services directed at meeting the written financial goals under the Prudent Investor Rule.
2. The receipt of investment returns consistent with the written investment policies and market variables

Objective 3 – Determine whether the former Executive Director/Chief Investment Officer performed adequate due diligence in the selection, retention, and compensation of money managers.

Objective 4 – Determine whether the former Executive Director/ Chief Investment Officer complied with all laws applicable to SIB and RIO as outlined in the North Dakota Century Code.

Objective 5 – Determine whether the former Executive Director/Chief Investment Officer exercised any exclusive fund transaction access which could lead to any irregular financial activity or discrepancies related to the management of RIO or its funds.

Objective 6 – A comparison of benchmarking of money manager compensation to comparable investment, public pension, or other state investment agencies.

Objective 7 – Verification of the classification of investments into designated categories of

1. *Equities*
3. *Fixed Income*
4. *Real Estate*
5. *Alternative Investments*
6. *Cash*

Additional Procedures:

1. Interview RIO personnel and other appropriate individuals to further enhance our understanding of the RIO's investment structure, policies, procedures, and practices, including the roles of the SIB, CEO/CIO, staff and other relevant topics.
2. Conduct a forensic analysis of the former Executive Director/CIO's work related electronic information (hard drive and email files).
3. Review the Governance and Organizational structure of the RIO. Review, evaluate and assess the lines of authority and actions directed by the former Executive Director/ Chief Investment Officer concerning investment decisions.
4. Review compliance reports related to the investments of the RIO and address any issues related to compliance and monitoring

We conducted this audit in accordance with the performance audit provisions of the *Government Auditing Standards* issued by the Comptroller General of the United States. This audit was performed pursuant to the contract between the State of North Dakota acting through its State Investment Board and Clifton Gunderson LLP. We conducted this audit in accordance with performance audit provisions of the *Governmental Auditing Standards (2007 revision)* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This report presents our findings, conclusions and recommendations. The scope of the review included the period July 1, 2009 through April 30, 2010. We conducted fieldwork between July 11, 2010 and July 29, 2010.

Our methodology included reviews of applicable laws, regulations, and documentation provided by the RIO; analysis of data provided by the RIO; substantive tests using samples of data; and interviews and observations of RIO personnel, external investment managers and other consultants as deemed necessary.

Summary of Findings and Recommendations

Our engagement was not a forensic investigation, and was not designed specifically to detect fraud or illegal acts. Accordingly, investigation into whether the deficiencies and instances of noncompliance were the result of error, fraud or illegal acts was outside the scope of our engagement. However, with respect to fraud consideration in a performance audit, Government Auditing Standards indicate that when planning the audit, auditors should assess risks of fraud occurring that is significant within the audit objectives. If information comes to the auditors' attention indicating a fraud that is significant within the context of the audit objectives may have occurred, auditors should extend the audit steps and procedures, as necessary, to (1) determine whether fraud has likely occurred and (2) if so, determine its effect on the audit findings. If the fraud that may have occurred is not significant within the context of the audit objectives, the auditors may conduct additional audit work as a separate engagement, or refer the matter to other parties with oversight responsibility or jurisdiction.

In designing our procedures, we considered the risks of fraud, within the context of the audit objectives, discussed the potential for fraud with RIO management and obtained written representations from the RIO management.

A summary of the findings and recommendations noted are as follows:

- Enhance the current ‘Conflict of Interest’ policies
- Update Executive Limitation Policy to address new SEC regulations
- Update current policies regarding the selection/hiring process of investment managers
- Expand the number of individuals involved in the initial investment manager due diligence processes
- Consider the prudence of obtaining fee concessions from external managers either via negotiation or re-allocation.
- Expand disclosures of certain investment vehicles and their categorization with asset classes
- Consider modifying the makeup of the Board and the creation of sub-committees specific to investments and oversight
- Develop a Strategic Plan
- Implement a formal valuation policy
- Implement a policy for formal compliance reports and documentation received from the external investment managers
- Re-evaluate/realign the Compliance Officer position and/or create a Deputy Investment executive whose duties include compliance responsibilities
- Maintain a formal log of compliance related issues
- Develop a policy dictating actions to be taken when a compliance matters arise

FINDINGS AND RECOMMENDATIONS

Performance Audit

- Objective 1* - Determine whether the former Executive Director/Chief Investment Officer adhered to executive limitation policies regarding
- a. the protection, maintenance and risk of assets
 - b. not allowing conflicts of interest in the procurement of goods and services

Protection, Maintenance and Risk of Assets:

Background

The investment goals of public retirement systems are different from those of endowments and foundations because retirement systems have liabilities that are set in law. Investment goals can include achieving a specified absolute return (for example, 8%), limiting volatility, earning enough income so that contribution rates do not have to increase, protecting principal, or meeting certain cash flow and liquidity requirements. Investment goals should tie directly to the risk tolerance of the board. The higher a board's tolerance for risk, the higher the goals for returns would be, and the opposite is true as well. When investment returns are strong, boards often do not focus on investment goals and risk tolerances. Difficult markets, however, as we have recently experienced, highlight the importance of these two issues. Many boards have taken a fresh look at their risk tolerances and corresponding investment goals.

Asset allocation is one of the most important decisions a public retirement board is called upon to make. It is the essential strategic decision in determining the expected long-term rate of return and risk profile for a portfolio. Boards typically set asset allocation with the assistance and advice of actuaries, investment consultants, and professional staff. A shift in the asset allocation is usually made to either increase returns or lower risk, achieve additional diversification, or in some cases, all three.

Asset allocation decisions are typically based on either an asset allocation review or an asset liability study. An asset allocation review is an asset-only optimizing exercise theorizing that for every combination of a specified group of asset classes there is a portfolio having the highest expected return for a given level of risk.

While asset allocation reviews are useful in aligning a portfolio with a return goal, they do not take into consideration the liabilities of a pension plan. Results from asset liability studies model anticipated growth rates in liabilities and cash flows, based on a fund's specific benefit formula and demographics. They explore how each asset allocation affects the probability of meeting the fund's actuarial benchmark, funding status, contribution rates, and ability to pay benefits as they come due. By recognizing that a fund's liabilities have certain characteristics and potentially change over time, a consultant can recommend an asset allocation strategy, or set of strategies, that are most likely to maintain or improve the funded status of the plan. An asset liability study provides results that are truly customized to the plan's unique characteristics. Best practices are to have asset liability studies performed every three to five years or when major modifications are made to the benefits offered by the system. The two largest pension funds, TFFR and PERS,

have a 5 year asset/liability study schedule in place and are currently in the process of completing them at the individual Board level. Any changes to the existing asset allocations will subsequently be submitted to the SIB for acceptance and implementation.

Best practices are for institutional investors to adopt fixed target allocations for each major asset class along with a relatively narrow range (e.g., +/- 5%) within which the actual allocation is allowed to fluctuate. Any deviations within this range due to cash flows or market movements are generally acceptable, but if allocations fall outside of the established range, rebalancing is usually necessary.

While proper asset allocation for a system ought to be based upon that system's liabilities, cash flow, risk tolerance, and legal restrictions, some systems find it useful to compare their asset allocations to those of other systems. Exhibit II, included in the next section shows SIB allocation ranges.

A rebalancing process ensures that the strategic asset allocation and resulting risk and return characteristics are maintained. Due to continuous market movements, specific target allocations to an asset class are difficult to maintain, so allowable "ranges" for asset class exposures are typically approved by the board as part of the asset allocation policy. Each approved allocation to an individual asset class may then fluctuate from its expressed target as long as it remains within the allowable range. If a range is exceeded, reallocation of assets or rebalancing is triggered to bring the actual allocation back to its appropriate level. It is common practice for public pension funds to initiate rebalancing either every quarter or every month when the actual allocations exceed the allowable ranges. Often, public pension funds will also use normal cash flows to keep the actual allocation within the ranges.

Rebalancing ranges are set to frame a portfolio that generally maintains the expected return and risk characteristics defined by the asset allocation decision. The ranges are typically expressed as plus or minus a percent around the asset allocation target. If there were no trading costs to rebalance a portfolio, the optimal strategy would be one of continual rebalancing to the target allocations. Ranges are typically no wider than plus or minus 5%. Tighter ranges are often used for asset classes with smaller allocations. Wider ranges are not preferred for two important reasons; (1) a wider range allows for tactical asset allocation, a particularly difficult and not historically successful strategy; and (2) a wider range effectively negates the asset allocation decision by materially changing the expected return and risk profile of the portfolio.

Findings and Analysis re: Protection, maintenance and risk of assets

Based on the procedures described below, we concluded that the former Executive Director/CIO adhered to the executive limitation policies regarding the protection, maintenance and risk of assets.

The SIB's Governance Policy, Section A (Executive Limitation), Page A-7 (Asset Protection) states "The executive director may not allow assets to be unprotected, inadequately maintained, nor unnecessarily risked." In carrying out his duties as Executive Director/CIO, Mr. Cochrane was responsible for supervising the monitoring and evaluation of the performance of money

managers, the master custodian, and other agents contracted by the board. All of the investment portfolio was externally managed and no trades were initiated by Mr. Cochrane or other RIO staff. All transactions were processed and recorded through Northern Trust, the master custodian and book of record. In fact, Mr. Cochrane's primary function in terms of asset protection following the hiring of a manager was ensuring that managers adhered to the strategy for which they were hired, complied with ND law, SIB Governance and Investment Policies and certainly their determined asset allocation.

We reviewed the asset allocations for each month during the audit period. We reviewed all rebalancing transactions for propriety. We reviewed all trades processed and noted none were initiated by Mr. Cochrane or RIO staff. We did not note any transactions which were deemed unusual or unnecessary. During our testing of monthly actual allocations and rebalancing, that strict adherence to the target was commonplace. RIO did not appear to be engaged in tactical allocations sometimes deemed as "market timing".

Conflicts of Interest:

Background

Conflict of interest and ethics policies define the guidelines boards and staffs are to use when conducting business for the system. Best practices in this area are clear; fiduciaries are to avoid conflicts of interest (actual or perceived) if possible. If avoidance is not possible, they are to disclose conflicts promptly, refrain from discussing the issues, and recuse themselves from voting on matters where conflicts exist.

On June 30, 2010, the SEC unanimously passed new rules to significantly curtail the corrupting influence of "pay to play" practices by investment advisors in the use of placement agents. A placement agent is any third-party intermediary that is directly or indirectly hired, used, retained, compensated, or otherwise given anything having monetary value or benefit, tangible or intangible, by an investment manager to assist the investment firm in securing an institutional investor's commitment. For example, many private equity fund managers will enlist the services of placement agents (typically affiliated with an investment bank) to assist with the marketing and relationship building aspects of raising a fund. Recent investigations revealing abuses related to the use of placement agents have resulted in significant controversy and increased scrutiny of conflicts of interest in the management of public fund assets.

The new SEC rule has three key elements:

- It prohibits an investment adviser from providing advisory services for compensation either directly or through a pooled investment vehicle — for two years, if the adviser or certain of its executives or employees make a political contribution to an elected official who is in a position to influence the selection of the adviser.
- It prohibits an advisory firm and certain executives and employees from soliciting or coordinating campaign contributions from others — a practice referred to as "bundling" — for an elected official who is in a position to influence the selection of the adviser. It also prohibits solicitation and coordination of payments to political parties in the state or locality where the adviser is seeking business.

- It prohibits an adviser from paying a third party, such as a solicitor or placement agent, to solicit a government client on behalf of the investment adviser, unless that third party is an SEC-registered investment adviser or broker-dealer subject to similar pay to play restrictions.

Findings and analysis re: Conflicts of Interest

Based on the procedures described below, we concluded that the former Executive Director/CIO adhered to executive limitation policies regarding conflicts of interest.

We reviewed all transactions initiated by the Executive Director/CIO during the audit period. We reviewed all contracts entered during the period and all contracts pertaining to private equity investments. We analyzed the former Executive Director/CIO's hard drive and email files, the process of which is discussed further in Objective 4. We reviewed the internal audit report titled "Office Administration – SIB Executive Limitations Policy" which was issued February 1, 2010 by the internal auditor for the RIO. We noted no instances of non-compliance with the Executive Limitation policy pertaining to conflicts of interest.

The SIB's Governance Policy related to Executive Limitations and regarding conflicts of interest states, "The executive director will not allow a conflict of interest in the procurement of goods and services. "Conflict of Interest" means a situation in which a board member or staff member has a direct and substantial personal or financial interest in a matter which also involves the member's fiduciary responsibility." This statement encompasses the entire policy. We recommend the SIB consider enhancing the Executive Limitations Policy pertaining to conflicts of interest which specifically addresses interests and outside activities that might cause a conflict and establish protocols for compliance, monitoring and enforcement.

We recommend the Executive Limitation Policy pertaining to conflicts of interest be further updated to address new SEC regulations. RIO is not prohibited from hiring investment managers who use placement agents; however, a new regulation requires disclosure of certain information about placement agents. RIO does not have a placement agent policy detailing the Board's views on the topic.

- Objective 2** - Determine whether the former Executive Director/Chief Investment Officer's actions directed
- a. The receipt of cost-effective investment services directed at meeting the written financial goals under the Prudent Investor Rule.
 - b. The receipt of investment returns consistent with the written investment policies and market variables.

Background

The most critical policies, procedures, and practices related to the investment of assets by public retirement systems ensure that the boards and staffs fulfill their fiduciary responsibility of prudence. Prudence is an ever-evolving standard that has become increasingly high as the investment vehicles and strategies used by institutional investors have become more complex.

The Prudent Investor Rule is not only a common standard imposed on those who invest in public retirement funds, but it is also the optimal standard. It is stricter than the prudent man rule that merely requires fiduciaries to invest assets of others as they would invest their own. The Prudent Investor Rule, on the other hand, says that the actions of fiduciaries will be judged by the care, skill, and diligence that a person acting in a like capacity and familiar with such matters would use under the same circumstances. Essentially this means that the contemporary best practices of other public retirement systems and relevant institutional investors are the appropriate standards not out-dated standards of the past. This standard of prudence is parallel to what is required by federal law of those who manage assets of pension funds in the private sector.

While fiduciaries are not guarantors that every investment decision will be profitable or turn out as expected, they must employ pure, thorough, and scrupulous processes in their decision-making in order to meet the high standards of prudence and avoid personal liability. Anything less is not good enough. Therefore, the policies, procedures, and actual practices of boards, staffs, consultants, and investment managers must reflect sound processes.

The financial resources required to handle an investment program for a public retirement system are dependent on many factors. Those with the greatest impact are:

- Number of separate trust funds managed
- Types of asset classes used
- Internal versus external management of assets
- Active versus passive strategies
- Division of labor between staff and outside consultants
- Revenue from securities lending to offset expenses
- Soft dollar arrangements, rebates, and commission recapture

RIO's annual investment expenses are currently approximately \$27 million. We obtained investment manager fee information for five other systems, San Diego City Retirement System (SDCRS), New Hampshire Retirement System (NHRS), State of Wyoming Employees Retirement Systems (WRS), Baltimore County (Maryland) Employees Retirement System (BCRS) and the District of Columbia Retirement Board (DCRB) and compared their investment expenses with the RIO. The systems were selected based upon similarity in size to the North Dakota investment portfolio. We obtained information on operating expenses for each of the 5 peer systems to measure where the RIO ranks in terms of total investment expenses. We then calculated investment expenses in terms of basis points as it relates to the net assets under management. A basis point is equal to 1/100th of one percent (.01% equals 1 basis point). As noted in the chart below, RIO pays approximately 65 basis points to investment managers. This means they paid .65 of 1% of fund assets for investment expenses for the year ended June 30, 2009.

North Dakota Retirement and Investment Office Operating Expenses						
	North Dakota	NHRS	DCRB	SDCERS	BCERS	Wyoming
Operating Expenses for Fund (Basis Points)	65	39	33	59	79	21

As documented above, there is significant disparity between the expense of operating retirement systems which appear on the surface similar in terms of asset size. Benchmarking can be flawed in that the universe data is often not an “apples-to-apples” comparison. Different institutional investors have different investment objectives and risk parameters and thus may structure their portfolios very differently. Because of these shortcomings, the most important performance comparison is against the stated performance benchmark which takes into account the portfolio’s asset allocation or manager strategy. Many other factors play into this disparity. Certain systems will have higher operating expenses based upon the number of managers contracted with. Contracting with a high amount of managers means the commitments to each manager are smaller. If the commitments are smaller the fee structure will be higher. Asset allocation, active vs. passive management, manager strategies and the frequency of rebalancing are also significant contributors to excess costs.

The investment policy statements, approved December 1, 2009 and October 19, 2007 for the PERS and TFFR, respectively outline the allowable asset classes and types of investments in which RIO may invest so long as their use is in compliance with the Uniform Prudent Investor Act. These asset classes are comparable to those used by other sophisticated institutional investors.

- Equities – includes both domestic and international stocks, mutual funds, commingled funds and portable alpha strategies as well as private equity strategies that specialize in certain subclasses of equities such as emerging markets and small cap domestic companies.
- Fixed Income – includes bonds, notes and other obligations of both domestic and international companies and governments, including investment grade, high yield and collateralized debt obligations. Also includes limited partnership funds that invest in mezzanine debt and distressed mortgages. Additionally, the SIB has analyzed timberland and infrastructure investments and determined that they have risk and return profiles very similar to bonds, leading to inclusion of these types of investments within this asset class.
- Real Estate - includes investments in private vehicles through limited partnerships or commingled vehicles that have an ownership interest in direct real estate properties. The investment strategies may include “value added” strategies, which derive their return from both income and appreciation, “opportunistic”, which derive their return primarily through appreciation, and “alternative” which invest in less traditional types of property. Both domestic and international real estate funds are utilized.
- Alternative Investments - considered to be any investments that do not fit into any of the other specific asset classes available for investment. Examples of investments the SIB has

included in the alternative investments asset class are private equity, venture capital and distressed debt. All of the investments in this asset class are in the form of limited partnerships with specific time horizons and capital commitments.

The goal of the SIB's investment policies is to optimize long-term returns through a well diversified portfolio in order to pay current and future retirement benefits and expenses. Furthermore, the SIB looks to provide enhanced protection for future benefits.

The investment performance objectives seek to obtain returns necessary to provide long-term stability and meet or exceed benchmarks set by the Board without deviating in excess of the board approved range.

The Executive Director operates under the responsibilities set forth in the North Dakota Century Code, Investment Policies and Governance Manual adopted by the SIB.

As noted in the Governance Manual under section *C Board-Staff Relationship*, policy title: *Delegation to the Executive Director*: The Executive Director must use reasonable judgment in the implementation or administration of the board's *Ends* and *Executive Limitations* policies; the executive director is authorized to establish practices, and develop activities.

Section D *Ends*, policy title: *Investment Performance*: SIB clients are to receive cost-effective investment services directed at meeting their written financial goals under the Prudent Investor Rule, as previously defined.

We reviewed the asset allocation for the trusts for the period of July 1, 2009 through April 30, 2010 and noted no instances where the asset allocation was outside the acceptable range approved by the board. In addition, we reviewed the performance of the trusts as of March 31, 2010 for both the Pension Trust and Insurance Trust by asset class. We assessed the reasonableness of the returns compared to the approved target benchmarks taking into consideration market variables and adherence to the investment policies.

The following two tables present the actual returns for the quarter ended March 31, 2010 by asset class compared to their approved target benchmarks:

Pension Trust			
Asset Class	Actual Return	Target Return	Difference
Large Cap Equities	6.44%	5.39%	1.05%
Small Cap Equities	11.09%	8.85%	2.24%
Domestic Fixed Income	0.01%	2.43%	-2.42%
Real Estate	-1.19%	0.76%	-1.95%
International Equity	2.21%	2.56%	-0.35%
International Fixed Income	0.80%	-2.10%	2.90%
Alternative Investments	4.49%	4.49%	0.00%
Cash Equivalents	0.06%	0.01%	0.05%

Insurance Trust			
Asset Class	Actual Return	Target Return	Difference
Large Cap Equities	6.27%	5.39%	0.88%
Small Cap Equities	10.17%	8.85%	1.32%
Domestic Fixed Income	3.04%	1.78%	1.26%
Real Estate	-6.46%	0.76%	-7.22%
International Equity	3.21%	2.60%	0.61%
Insurance TIPS	-0.13%	0.56%	-0.69%
Enhanced cash	2.19%	0.01%	2.18%
Cash and Equivalents	0.08%	0.01%	0.07%

In addition, we obtained the investment returns for similar sized systems and reported their performance based on asset class in comparison to North Dakota as shown below:

Investment Returns for the quarter ended March 31, 2010				
Asset Allocation	Pension Trust	SDCERS	BCERS	DCRB
Domestic Equity	7.43%	7.22%	6.10%	5.20%
Domestic Fixed Income	0.01%	3.42%	3.90%	4.40%
Real Estate	-1.19%	-3.84%	1.40%	-3.80%
International Equity	2.21%	2.07%	2.90%	2.50%
International Fixed Income	0.80%	-0.69%	n/a	n/a
Alternative Investments	4.49%	n/a	n/a	n/a
Cash Equivalents	0.06%	n/a	0.40%	n/a

Findings and Analysis

Based on the procedures described below, we concluded that the former Executive Director/CIO's actions directed the receipt of cost-effective investment services directed at meeting the written financial goals under the Prudent Investor Rule and the receipt of investment returns consistent with written investment policies and market variables.

We reviewed the asset holdings of the RIO for the period of July 1, 2009 through April 30, 2010 to determine if the assets held during this time period were acceptable under the investment policy and asset allocations. We also reviewed the Callan performance reports and returns for the period to determine if there were any anomalies in the results of the fund over the period of July 1, 2009 through April 30, 2010. There were none noted.

Objective 3 - Determine whether the former Executive Director/Chief Investment Officer performed adequate due diligence in the selection, retention, and compensation of money managers.

Background

The steps in the due diligence process should include identifying skilled managers, validating a verifiable track record, assessing the compatibility of the general partnerships (GP's) with issues of investment strategy, reference checks, understanding the group's economics, achieving a comfort level with their decisions, ensuring proper corporate governance, reviewing legal terms and conditions, and making sure adequate reporting policies and procedures are in place.

Programs can use internal staff or outside consultants, or both to ensure full-coverage during due diligence.

Alternative investments require special due diligence to thoroughly and accurately gauge the quality and risk factors associated with each before a commitment is made. Many alternative investments, like limited partnership interests, can be illiquid. Exit opportunities for these instruments are limited and if exercised, often result in a discount to the fund value.

Findings and Analysis

Due diligence procedures can be exemplary, but if they are not well documented, they fall short of best practices. RIO's investment policy does not outline due diligence steps in sufficient detail. We reviewed evidence of proper due diligence for all managers hired during the audit period. Further we interviewed staff and board members and reviewed internal policies and board minutes to substantiate our understanding of the process. It was determined in many cases due diligence conducted prior to the audit period lacked appropriate documentation. It is obvious that due diligence was taking place but how robust it was could only be determined by the review of board minutes and discussions with members of RIO staff, the board and the outside consultant, Callan. This was the case for many of the managers currently investing on behalf of the Board. That said, during the audit period, the SIB as a group required the former CIO to enhance the documentation of the due diligence process. This enhancement to the process was evidenced by a more robust documentation of due diligence for managers recently hired through April of 2010.

Additionally, it was evidenced based on reviews of documentation and interviews that the initial due diligence process (prior to hiring a manager) was driven solely by the former CIO. It was determined that Callan has not been engaged to perform due diligence for potential managers and/or general partners at any time during the former CIO's tenure. Callan indicated that the former CIO performed this function, and aside from an informal inquiry regarding a potential manager/general partner, Callan has not participated in the initial due diligence process. As discussed above, the CIO did implement a procedure to document the due diligence process. While it was noted that the board approved each of the investment managers, we reviewed the policy for the selection process of investment managers and noted that each time a manager is to be selected there is supposed to be a listing of finalists presented to the board from which they can choose. We noted that typically, one investment manager was recommended to the board by the Executive Director/CIO and that a listing of finalists was not presented to the board to aid in the selection process. We recommend that the RIO begin implementation of the steps set forth in the selection process for external managers mandated by the governance manual of the SIB and maintain adequate documentation over the process in order to provide a more transparent process or formally amend the current policy.

It was noted that all contracts are approved by the Attorney General's Office.

The fact that the initial due diligence process and the determination of which single manager was presented to the board for approval was conducted solely by the former CIO is not conducive with best practices. In an era of increased scrutiny of those charged with governance, the fiduciary responsibilities related thereto and the demand for heightened transparency, we would recommend the introduction of at least one other individual or group to be involved in the

determination of which manager(s) are presented to the Board for approval. Many peer systems involve the primary investment consultant and even engage other specialized consultants for decisions related to alternative investments or other non-traditional asset classes.

Objective 4 - Determine whether the former Executive Director/ Chief Investment Officer complied with all laws applicable to SIB and RIO as outlined in the North Dakota Century Code

Background

North Dakota Century Code 21-10-05: Subject to the limitations contained in the law or the policymaking regulations or resolutions adopted by the board, the investment director may sign and execute all contracts and agreements to make purchases, sales, exchanges, investments, and reinvestments relating to the funds under management of the board. This section is a continuing appropriation of all moneys required for the making of investments of funds under the management of the board. The investment director shall see that moneys invested are at all times handled in the best interest of the funds. Securities or investment may be sold or exchanged for other securities or investments. The investment director shall formulate and recommend to the investment board for approval investment regulations or resolutions pertaining to the kind or nature of investments and limitations, conditions, and restrictions upon the methods, practices, or procedures for investment, reinvestment, purchase, sale or exchange transactions that should govern the investment of funds under this chapter.

Findings and Analysis

During our review of available documentation including our forensic data analysis described below we did not find any indications of fraud, illegal acts, violations of provisions of contracts or grant agreements, or abuse.

Fraud and irregularities by their very nature are most often hidden, and no absolute assurance can be given that all such matters will be detected. Our engagement cannot be relied on to disclose all irregularities or illegal acts, including fraud that may exist.

Based on the procedures performed and items reviewed it appears that the former Executive Director/CIO adhered to all applicable Century Code laws.

We reviewed all of the investment managers' contracts that were finalized within the period July 1, 2009 through April 30, 2010 and noted that the former Executive Director/CIO was the individual contracting with the investment managers on each contract. We interviewed personnel at the RIO and discussed the former Executive Director/CIO's management and operating style.

On July 12, 2010, we obtained electronic evidence from the State of North Dakota through the Burleigh County Sheriff's Department including the following:

- A forensic image (seven DVDs) of the desktop hard drive of Mr. Cochrane;
- A copy of the state server files of Mr. Cochrane; and

- A copy of the email export file (.PST file) of Mr. Cochrane.

We also initially took possession of the physical computer hard drive of Mr. Cochrane (Serial Number: WMAD1A234454). However, we transferred custody of the hard drive back to ND RIO on July 12, 2010.

We obtained the following investigation reports:

- Report of Special Agent Erickson of the North Dakota Bureau of Criminal Investigation, Case Number 100251; and
- Report of the Burleigh County Sheriff’s Department, Incident Number S2010-1797.

Forensic Analysis

Restoring and Importing the Data for Analysis

Each of the above mentioned electronic evidence items was imported into a forensic tool called AccessData Forensic Toolkit Version 1.71 (“FTK”) for analysis. A total of 350,495 files were found in the data.

General File Examination

The FTK software provides an overview summary of all of the evidence added to a case file. The following image is a screen shot of the overview summary of this case file:

Evidence Items		File Status		File Category	
Evidence Items:	5	KFF Alert Files:	1	Documents:	36198
File Items		Bookmarked Items:	0	Spreadsheets:	1653
Total File Items:	350495	Bad Extension:	4159	Databases:	23
Checked Items:	29	Encrypted Files:	28	Graphics:	10697
Unchecked Items:	350466	From E-mail:	26940	Multimedia:	2270
Flagged Thumbnails:	0	Deleted Files:	651	E-mail Messages:	12989
Other Thumbnails:	10697	From Recycle Bin:	4	Executables:	0
Filtered In:	350495	Duplicate Items:	14611	Archives:	15374
Filtered Out:	0	OLE Subitems:	145028	Folders:	6672
Unfiltered	Filtered	Flagged Ignore:	0	Slack/Free Space:	54642
All Items	Actual Files	KFF Ignorable:	0	Other Known Type:	34534
		Data Carved Files:	24	Unknown Type:	175442

We performed a general examination of the files, including but not limited to looking through graphics files, deleted files, and files with an origination date on or after January 1, 2010.

Key Word Searches

We performed key word searches on email and hard drive files.

Email Examination

We restored the .pst file onto a secure off-line computer and used Microsoft Outlook to examine the contents of Mr. Cochrane's email account. We looked at emails contained in the inbox, cabinet, deleted, and draft folders.

Objective 5 - Determine whether the former Executive Director/Chief Investment Officer exercised any exclusive fund transaction access which could lead to any irregular financial activity or discrepancies related to the management of RIO or its funds.

Findings and Analysis

The majority of investment transactions for the RIO are performed by external managers and processed and recorded by their custodian bank, Northern Trust. Based on discussions with operating personnel at the RIO, the only time investment transactions are directed by RIO personnel is when rebalancing needs to occur. We obtained the detail of transactions performed by the RIO for the period July 1, 2009 through April 30, 2010 and examined who initiated the transaction and who approved the transaction. Based on our review there were zero transactions in the population provided in which the former Executive Director/CIO had exclusive fund transaction access.

Objective 6- A comparison of benchmarking of money manager compensation to comparable investment, public pension, or other state investment agencies.

Background

The RIO had contracted with 42 investment managers to invest on behalf of the pension and insurance trust participants. Investment managers are hired for specific asset classes and strategies. We obtained investment manager fee information for five other systems, San Diego City Retirement System (SDCRS), New Hampshire Retirement System (NHRS), State of Wyoming Employees Retirement Systems (WRS), Baltimore County (Maryland) Employees Retirement System (BCRS) and the District of Columbia Retirement Board (DCRB) and compared their fee structure with the RIO. The systems were selected based upon similarity in size to the North Dakota investment portfolio.

Investment manager fees can vary based upon criteria set forth in the agreement between the system and the manager. Asset allocation also plays a role in the amount of management fees paid. Equities and Fixed income generally cost less than Alternative Investments. However, certain investment strategies regarding equities and fixed income can cost more than others based upon the amount of time and attention a manager needs to properly execute the strategy.

Findings and Analysis

As detailed in Exhibit I and discussed earlier in relation to Objective 2, there is much disparity among investment expenses incurred by otherwise similar size portfolios. It is beyond the scope of this engagement to opine as to whether investment manager compensation paid by RIO is reasonable compared to the peer systems. Multiple factors play into the disparities noted and

without access to the contracts and terms negotiated with managers of other systems it is not possible to ascertain the reasonableness of those fees in comparison to RIO. It is our understanding that RIO has engaged Callan, Inc. to conduct a detailed investment fee study, the goal of which should be to provide further insight into the reasonableness of actual fees paid by RIO.

U.S. public pension fund officials are increasingly asking their external investment managers for fee concessions as part of an effort to cut operating costs. We recommend RIO consider the prudence of partaking in discussions with their external managers to negotiate more favorable terms particularly in conjunction with results of the Callan fee study.

Objective 7 - Verification of the classification of investments into designated categories of

- a. *Equities*
- b. *Fixed Income*
- c. *Real Estate*
- d. *Alternative Investments*
- e. *Cash*

Background

Asset allocation is typically a duty that is designated to the board of the system. The asset allocation generally has a target percentage with an acceptable range for each asset class. In determining an effective asset allocation, a system reviews the goals it has set for itself, desired performance, and risk tolerance. Taking into consideration that systems of different sizes have varying asset allocation policies, we selected five other systems, San Diego City Retirement System, New Hampshire Retirement System, Wyoming Retirement System, DC Retirement Boards, and Baltimore County (Maryland) Retirement System, which are similar in size to North Dakota and performed a benchmarking analysis of the asset allocations set forth by each of the system's respective boards.

A benchmarking of 'Asset Allocation and Ranges' is located at Exhibit II including a comparison to the aforementioned five peer systems.

Findings and Analysis

During our review of asset allocation and classification we noted that the overall categorization of individual investments and strategies appeared appropriate and in line with "industry standard". It was noted that timber is classified in fixed income and portable alpha strategies are categorized as equities in RIO's financial statements. A differing point of view in each case would be that Timber would be categorized separately or in Real Assets and Portable Alpha Strategies could be categorized as hedge funds or alternative investments. Either categorization is appropriate and commonplace among other peer systems around the country. More important is the disclosure and rationale of RIO's position in terms of classification. Timber categorized as fixed income is appropriately disclosed in the financial statements. The portable alpha strategies disclosure however is not as transparent and we would recommend a more enhanced disclosure of RIO's position and rationale for including in the Equity class.

Other Matters and Recommendations

As indicated earlier in the Executive Summary, we performed additional procedures to supplement the original criteria in order to obtain a complete understanding of the processes and procedures of the RIO. As a result, of these additional procedures we compiled a listing of several other matters related to internal controls and best practices. A summary of our findings and recommendations are listed below.

1. During our review of policies, procedures and other governing documentation of the North Dakota Retirement and Investment Office, it was noted that the RIO has not implemented a formal strategic plan. A strategic plan is used to provide direction and goals for personnel through the implementation of specific goals and procedures mandated by the plan. We recommend that a strategic plan be devised and implemented to better align the entire RIO, allowing all personnel to work as a more cohesive unit.
2. We reviewed the policies and procedures surrounding monitoring and compliance of investments held by the RIO and noted the following:
 - a. Reports and presentations provided to the Board come directly from the investment managers and may not be as transparent as a formalized watch list maintained and monitored by RIO personnel. We recommend that a formalized investment manager watch list be implemented and written policy and criteria be established, setting the parameters for determining if managers need to be added or removed from the list.
 - b. During our review of the policies of the RIO, it was noted that a formalized and documented valuation policy has not been created. A valuation policy should include, but not be limited to, a process for price challenges, processes to estimate fair values in regards to non-readily determined values (Private Equity and Real Estate), and a valuation hierarchy.
 - c. We noted during our review of the compliance and monitoring procedures of the RIO that formal compliance reports are not produced on a regular basis. We suggest that at a minimum, the RIO request external asset managers provide the RIO with compliance reports on a monthly basis. Personnel at the RIO assigned to review the reports should have the appropriate experience and training necessary to comprehend the infractions and prepare a proper recommendation based on the circumstance to present to the board. The action plan should include but is not limited to, a description of the infraction, recommendations for subsequent actions, a specified time-frame in which action must be taken. Each infraction should be designated into a hierarchy depending upon the significance of the infraction and there should be certain thresholds which required reporting to the board.

- d. During our interviews with RIO personnel it was noted they receive Statement on Auditing Standards No.70 reports and review the opinion letter to ensure a clean opinion is issued. Based on our understanding of current processes, staff merely reviews the reports for an unqualified opinion. We recommend the reports are reviewed on a more detailed level to ensure the no findings were identified that might impact particularly relating to user controls and the overall control environment of the service organizations being used by RIO.
3. The portfolios administered by the SIB are very sophisticated (private equity, limited partnerships, portable alpha strategies, etc.). Consequently, close monitoring of the investment managers hired to implement the various asset class strategies is very important.

Review of the RIO organization chart does not include a high level position such as a Deputy CIO. We recommend the SIB consider such a position to perform duties such as:

- a. Continuity of the operation of RIO in the event that the CIO position is vacated.
- b. Provide enhanced and formal investment manager compliance reports to the SIB on a regular basis.
- c. Assist the CIO in the initial due diligence and screening of prospective new investments
- d. Assist the CIO in the continuous monitoring of the investment managers and conducting research on new methodology and portfolio management.

EXHIBITS

EXHIBIT I

North Dakota Retirement and Investment Office
 Comparison of Investment Manager Fees by Asset Class

	North Dakota			San Diego City			New Hampshire			Wyoming			Baltimore County			DCRB		
	Market Value of Assets Under Management	Total Fees Paid	Basis Points	Market Value of Assets Under Management	Total Fees Paid	Basis Points	Market Value of Assets Under Management	Total Fees Paid	Basis Points	Market Value of Assets Under Management	Total Fees Paid	Basis Points	Market Value of Assets Under Management	Total Fees Paid	Basis Points	Market Value of Assets Under Management	Total Fees Paid	Basis Points
Equities	1,601,764,606	9,429,989	59	2,067,198,935	9,678,049	47	2,570,248,000	7,954,000	31	3,268,417,355	4,322,599	13	700,294,345	3,153,677	45	2,054,724,569	6,935,801	34
Fixed Income	2,022,995,466	942,1732	47	1,351,948,852	4,705,121	35	1,338,205,000	3,275,000	24	1,576,809,151	2,386,473	15	387,722,896	1,656,543	43	940,285,848	1,782,394	19
Alternative Investments	414,755,646	7,032,315	170	354,551,209	4,379,622	124	376,587,000	3,648,000	97	294,425,223	2,614,982	89	232,888,301	3,394,578	146	689,935,636	11,172,214	162

EXHIBIT II

Investment by Fund Type	Pension Trust		SDCERS		New Hampshire		Wyoming		DC		BCERS	
	Target Allocation	Range	Target Allocation	Range	Target Allocation	Range	Target Allocation	Range	Target Allocation	Range	Target Allocation	Range
Equities							50%	40-60%				
Domestic Equities			38%	28.55-50.45%	30%	26-43%		+/-10%	40%	35-45%		
Large Cap	30%	26.25-33.75%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	34%	29-39%
Small Cap	10%	8.13-11.88%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7%	5-9%
International Equities	10%	8.13-11.88%	17%	11.41-22.59%	15%	11-19%		+/-10%	20%	15-25%	12%	9-15%
Global Equities	N/A	N/A	N/A	N/A	5%	3-7%	N/A	N/A	N/A	N/A	N/A	N/A
High Yield	5%	4.88-5.13%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	0-7%
Emerging Markets	5%	4.88-5.13%	N/A	N/A	N/A	N/A		+/-10%	N/A	N/A	3%	0-5%
Fixed Income	24%	21-27%	30%	26.25-33.75%	30%	26-34%	30%	20-40%	25%	20-30%	16%	13-19%
International Fixed Income	5%	4.88-5.13%	4%	3.12-4.88%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Estate	5%	4.88-5.13%	11%	8-14%	10%	5-15%	N/A	N/A	5%	2-8%	5%	0-7%
Private Equity	5%	4.88-5.13%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	0-7%
Alternative Investments	N/A	N/A	N/A	N/A	10%	0-15%	10.00%	0-20%	10%	7-13%	N/A	N/A
Cash and Cash Equivalents	1%	.75-1.25%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0%	0-5%
Global Bonds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8%	0-10%
TIPS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Emerging Market Debt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Commodities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Risk Parity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hedge fund of funds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	0-5%
Global Asset Allocation	N/A	N/A	N/A	N/A	N/A	N/A	10%		N/A	N/A	N/A	N/A
Mortgages	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Totals	100%		100%		100%		100%				100%	