

FIDUCIARY AND CONFLICT OF INTEREST REVIEW OF THE NEW YORK STATE COMMON RETIREMENT FUND

Final Report

Funston Advisory Services LLC

February 4, 2013



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February 4, 2013

Hon. Thomas P. DiNapoli
New York State Comptroller
110 State Street
Albany, NY 12236

Dear Comptroller DiNapoli:

On behalf of the entire Funston Advisory Services LLC team, I am pleased to submit our final report on the Fiduciary and Conflict of Interest Review of the New York State Common Retirement Fund ("the Fund"). Such a review is required by Section 136-2.5(g)(5) of the regulations of the New York State Insurance Department (now the Department of Financial Services) to be conducted every three years. Our review of investment operations covers the three-year period ending March 31, 2012. We began our review on September 4, 2012 and completed it on January 31, 2013.

The attached report provides an executive summary, background and detailed descriptions of the scope of our review, our findings and observations, conclusions and opportunities for improvement.

We wish to thank the staff of the Office of the State Comptroller, including the Division of Pension Investment and Cash Management, the Division of Legal Services, and the Division of Retirement Services (especially the Accounting Bureau and the Actuarial Bureau), as well as members of the Fund's Advisory Committees, the Inspector General and also the Fund's external investment managers, consultants, and custodian who participated in the review, for their candor and cooperation. At no time did anyone attempt to exert any undue influence on the outcome of our report.

Sincerely

A handwritten signature in blue ink, appearing to read "Rick Funston", is written over the word "Sincerely".

Rick Funston
Managing Partner
Funston Advisory Services LLC

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New York State Common Retirement Fund Fiduciary and Conflict of Interest Review

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Executive Summary

Purpose of the Review

Every investment organization attempts to achieve return goals within its risk parameters. It must make a host of decisions about its organizational focus and deployment of resources (both assets and people). Decisions about which asset classes are appropriate, where active management may prove effective, what services to “build vs. buy” and where it makes sense to take more or less risk are just a few examples. Such decision-making is made more challenging in the case of most public sector investment organizations by limitations and constraints.

In many instances, pension fiduciaries must operate without full “prudent investor” discretion because of legislative, regulatory and other externally imposed limitations. Likewise, fiduciaries may be required to engage in particular activities. Staffing and compensation may be subject to external approvals and significantly limited. In short, fiduciaries often have full fiduciary responsibility but less than full fiduciary authority. The Common Retirement Fund (CRF) is such an organization.

Nonetheless, working within the defined constraints and mandates, the fiduciary must still address the same investment considerations as if they had no resource or other constraints. A significant portion of this fiduciary review involved assessing fiduciary decision-making and execution in light of the particular structure and constraints set for the CRF.

The purpose of a fiduciary review is to obtain reasonable (but not absolute) independent  ssurance from third parties that fiduciaries are fulfilling their responsibilities and are in compliance with applicable laws, regulations and policies. Our findings are presented in that context. The Executive Summary which follows describes the overall conclusions regarding each task we were asked to undertake. We have also identified several opportunities for improvement which cut across each of the individual tasks and sub-tasks.

These opportunities for improvement are summarized at the end of this section. Detailed descriptions of each task and sub-task, the related findings and observations, conclusions, and opportunities for improvement for the CRF’s consideration are provided in the body of the report.

Scope of the Fiduciary Review

Following a competitive Request for Proposal process, Funston Advisory Services LLC (FAS) was selected to conduct the required fiduciary and conflict of interest review of the New York State Common Retirement Fund (the “Fund” or “CRF”). The review was to cover the investment-related operations of the Fund as constituted under and regulated by the law in effect during the covered period; it was not to cover the administrative operations of the New York State & Local Retirement System. The review was to take into consideration all investment-related constitutional, statutory, and regulatory requirements as they are currently prescribed and not to evaluate those requirements or consider recommendations for their modification. The covered period is defined as the three-year period ending March 31, 2012.

In this context, FAS was asked to compare the Fund’s investment-related policies, procedures, and practices with common and leading practices among selected enterprises of like character and with like aims (e.g. state, provincial and international public pension funds and state investment boards, etc.). In addition, FAS was asked to suggest, where appropriate, options for improvement to the CRF’s investment-related policies, procedures, and practices to bring them in line with prevailing and/or leading practices. At a minimum, we were asked to determine whether policies, procedures, and processes are in place to assure that the conduct of the business of the Fund is consistent with the following principles, which are contained in the Department of Financial Services regulations (see *Appendix A - Official Compilation of Codes, Rules and Regulations of The State of New York, Title 11. Insurance Department*):

- A. the Comptroller fulfills his fiduciary responsibility to act for the sole benefit of the System’s members, retirees, and beneficiaries and maintains a strong framework for the governance (i.e., the operations and decision making) of the Fund;
- B. the Comptroller ensures the highest ethical, professional, and conflict of interest standards are employed in managing the Fund;
- C. the Fund maintains a high level of operational transparency; and,
- D. the Comptroller ensures the Fund is managed in an efficient, effective manner.

Summary Conclusions

Based on the information made available to Funston Advisory Services LLC (FAS) in the form of documents and interviews, we can provide independent and reasonable (but not absolute) assurance that:

1. Fiduciary Responsibilities and Framework for the Operations and Decision Making Processes of the Fund

The Comptroller is fulfilling his fiduciary responsibility to act for the sole benefit of the System's members, retirees, and beneficiaries. The Fund has a strong and effective framework for operations and decision making processes. Investment-related policies and practices are robust and appropriate. The CRF is in compliance with its policies.

2. Ethical, Professional, and Conflict of Interest Standards

The Comptroller manages the Fund in accordance with the applicable ethical, professional, and conflict of interest standards. The CRF's committees are functioning according to law. Committee reviews of Investment Policy have been done as required. The CRF's fiduciary and ethics training for committees seems exemplary. Information provided to the committees is detailed and comprehensive. Employee training appears consistent with prevailing practice.

Policies and practices concerning conflicts of interest for investment managers, consultants and advisors are consistent with prevailing practice. Compliance certifications are completed in a timely manner in most cases. The CRF's policy on the use of placement agents or intermediaries is an appropriate exercise of the Comptroller's fiduciary responsibilities which has been prudently implemented and operates as an effective risk management tool. The CRF's process to investigate complaints is consistent with legal requirements and prevailing practice.

3. Operational Transparency

The Fund maintains a high level of operational transparency. The CRF is a leader in most categories of data and policy disclosure. The type and detail of data contained in the CRF's Comprehensive Annual Financial Report (CAFR) is consistent with prevailing practices. The CRF has also received a certificate of excellence in financial reporting issued by the Government Finance Officers Association (GFOA). Third party contractual reports are appropriately accessible. Expense recording and transparency comply with regulations and provide a leading practice for peers in regard to the level of detail disclosed.

4. Efficiency and Effectiveness of Management

Investment-related operations are well-run. The Investment Advisory Committee and the Real Estate Advisory Committee are used effectively. The level of support provided to the CRF and investment staff by attorneys, both internal and external, are appropriate. The number of external managers and the sizes of the accounts or funds under management, in comparison with common and leading practices of diversification, appear to be suitable. Other costs associated with external asset management, including custody, securities lending, and transaction fees appear to be appropriate.

The Investment Accounting section of the Accounting Bureau is adequately staffed, effectively managed and in compliance. Investment accounting and reporting are in conformance with Generally Accepted Accounting Principles (GAAP). The Accounting Bureau also appears to be well prepared for upcoming changes resulting from Governmental Accounting Standards Board (GASB) Pronouncements 67 and 68 relating to accounting and financial reporting for pension plans. The Compliance Officer is appropriately independent and there seem to be effective systems to monitor compliance. Investment Performance and Fund Analytics appear appropriately independent.

The CRF's due diligence procedures with respect to the selection, monitoring, and termination of external managers are consistent with common and leading practices and appear to be effective.

A complete compliance checklist is contained in *Appendix B - Comptroller's Compliance with the Official Compilation of Codes, Rules and Regulations of The State of New York*.

Summary Opportunities for Improvement

Context

In general, the Fund has a consistently high quality investment staff despite constraints on headcount and compensation. However, the CRF is very thinly staffed relative to its size and complexity. This was evident from interviews and discussions with staff, consultants and managers and was confirmed by the FAS Leading Practices Survey.

In addition, the CRF has gone through a very turbulent period. First, it had to respond to the 2007 "pay to play" scandal. Then the 2008-2009 financial meltdowns quickly ensued. In response, the CRF underwent a series of regulatory and leadership changes which resulted in interim positions and vacancies in the CIO and other key positions. The effects of these crises, combined with the resultant changes in leadership, and lack of investment staff in asset classes

targeted for growth, have slowed the CRF's progress towards achieving its 2009 target asset allocation plan.

The Fund does need to address several basic challenges to ensure that it is managed in an efficient and effective manner in the future. The Fund has relatively low staffing levels in several asset classes, a tendency to leave vacancies unfilled for many months and underdeveloped / underutilized human resources and information technology support. While these issues have not prevented the Fund from managing the existing investment program effectively, it has slowed development and implementation of new strategies. The Fund recognizes it needs a long-term resources plan that aligns with its long-term investment strategy.

In 2007, the Comptroller established a special Pension Task Force to assess the adequacy of safeguards and controls and make recommendations for improvement. The Task Force submitted its report in 2009 and the CRF has since implemented most of its recommendations. These recommendations included, for example, establishing a Risk and Reporting Department and a Compliance Department. However, those two functions have not yet been given adequate resources to fulfill their duties optimally.

1. Improve utilization of HR and IT support functions

Maintaining a strong investment operation with the staff and infrastructure to effectively manage risk and respond to investment opportunities requires running not only the investments of the Fund, but also its associated HR and IT functions. The Fund has had a strong focus on managing the CRF's investments effectively, but the CRF's employee recruitment and development processes, related human resource (HR) programs and information technology (IT) infrastructure appear, as noted earlier, to be underdeveloped or underutilized. This includes recruiting and on-boarding of staff, providing ongoing training, succession planning, and building and maintaining an integrated, highly-functional supporting information technology infrastructure.

2. Re-align and optimize resources

Chronic understaffing and limitations on investment staff compensation levels have shaped several aspects of the Fund's investment operations and approach to resource deployment as investment strategies have become more sophisticated and complex.

First, as mentioned earlier, the growth of Fund investment staff has not kept pace with the growth in assets under management and investment complexity, nor has the Fund had adequate resources to implement the 2009 asset allocation plan in a timely manner. As a

result, the Fund is not fully invested in the markets in the manner intended. We recognize there were interim targets (due to the challenge of moving the allocations of a fund the size of the CRF) but the CRF is still behind in meeting those targets.

Second, the level of resources has significantly affected the decisions as to whether to manage various investments internally or through external managers. The Fund has lacked the resources to efficiently gain exposure to various asset classes and management styles and, as a result, has had to tailor how it gains that exposure to fit available resources. This resulted in higher investment management costs, which reduce net returns to the Fund.

Third, the CRF also makes more extensive use of consultants than most of its peers. At least part of that cost seems to be a substitution of external resources for internal ones, at a higher cost. In evaluating the deployment of Pension Investment and Cash Management (PICM) resources, Fund leadership should first consider the desired mix of asset class, active management and passive management, internal management and external management and then consider the resources available. Some adjustments may improve effectiveness.

Finally, as mentioned earlier, the Risk and Reporting and Compliance functions appear to be understaffed. Although there have not been major financial or compliance incidents over the past few years, it would be prudent to ensure that these two functions are staffed at a level that supports enhanced investment risk management and compliance capabilities.

3. Improve organizational effectiveness

The Fund staff is very dedicated and capable and has performed admirably under challenging circumstances over the past few years. However, our review identified several potential areas for improving the effectiveness and efficiency of how the Fund operates on a day-to-day basis.

It may be worthwhile to assess the current structure of decision-making delegations to identify decisions which could be made more appropriately and efficiently at a different level. A leading practice identified among the peer funds is the delegation of certain investment functions to the CIO, for example, asset rebalancing and exposure management. This should result in delegations being structured to reflect the degree of relevant expertise and value added at each level, with appropriate reporting and monitoring of how authority is exercised.

Administrative delegations might also be examined.

The format of documentation requirements for investment decisions appears to be less consistent across asset classes than we have seen at other funds. PICM's current efforts to rationalize and streamline the process should help to reduce this diversity and result in more effective and efficient document management and compliance review processes across asset

classes and locations. This should be seen as an important initiative for risk management and compliance monitoring.

In addition, Fund policies have not been updated on a consistent basis, nor are they well-coordinated with each other. However, the Fund has established a General Investment Policy framework, and this should provide a platform for the future integration and updating all of its policies. Ensuring that all policies are updated on a regular, consistent and coordinated basis could help avoid compliance questions arising due to inconsistent policies.

Finally, the PICM staff is physically located in three sites, one in Albany and two in New York City, adding to coordination issues. Several efforts now underway, including a new document management system and an enlarged attendance at the Internal Investment Committee meetings, should help. Ultimately, consolidation of the two New York City offices is an option that ought to be considered.

The main body of the report

For a fund the size of the CRF, operating as it does in the complex markets in which it invests, challenges likely will continue to increase. Evolution of the Fund and adaptation to the growing complexities of the financial markets will be required, especially in an environment where achieving assumed returns will be difficult.

The report that follows is an attempt to address in some detail the positive foundation in place, improvements that may be indicated and preparation for the growing challenges of the financial markets. As noted at the beginning of this Executive Summary, a host of decisions are required in meeting fiduciary standards. We have attempted to provide in-depth analysis and considerations to help with those decisions, within the existing CRF structure.

Background

The New York State Common Retirement Fund

The New York State Common Retirement Fund (“CRF” or the “Fund”) is the third largest state public pension trust in the United States and among the largest pools of institutional capital globally. The CRF holds assets in trust for over one million public sector members, retirees, and beneficiaries of the New York State and Local Employees’ Retirement System and the New York State and Local Police and Fire Retirement System (collectively, the “System”), which include over 3,000 participating employers. As sole trustee of the CRF, the Comptroller is responsible for the investment, oversight, and management of the assets of the Fund to provide retirement and other benefits for current and future members, retirees and beneficiaries of the System. As of March 31, 2012, the Fund had invested assets of \$150.6 billion. For fiscal yearend 2011-2012, the funded ratio for the System was 90%.

Mission Statement

The objective of the Fund is to manage its assets on behalf of the System’s members, retirees and beneficiaries in a manner that will meet actuarial return, minimize volatility, and protect and enhance long term value.

Structure

The CRF is constituted as a trust that holds and invests the assets of the Fund for the exclusive benefit of the members, retirees and beneficiaries of the System. The Comptroller must operate the CRF in a manner consistent with the fiduciary responsibility required of him as sole trustee of the Fund. With staff support from the Executive Deputy Comptroller for the System, the Chief Investment Officer/ Deputy Comptroller for the Division of Pension Investment and Cash Management (“PICM”) and the Counsel to the Comptroller and their professional staffs, and the CRF’s outside counsel, consultants, and advisory committees, the Comptroller determines policies and manages the investment operations of the Fund. PICM staff manages the assets of the Fund on a day-to-day basis.

Because PICM functions as a division within the Office of the State Comptroller (OSC) it is subject to the internal controls, reporting and management processes of the overall organization. Staff of the Division of Retirement Services, which administers the benefit operations of the System, and staff of Division of PICM, which is responsible for investing the assets of the Fund, also report to the Executive Deputy Comptroller for the System.

Fund Assets

The following chart shows target allocations of asset classes within the Fund. New York imposes statutory restrictions on the type and amount of assets in which the Fund can invest which may affect the allocations (see Table 1 below):

TABLE 1		
Target Asset Allocations		
Asset Class	Long Term Policy Allocation	Actual Allocation as of 03/31/2012
Domestic Equity	30.0%	39.1%
International Equity	13.0%	15.4%
Private Equity	10.0%	9.6%
Real Estate	6.0%	6.1%
Absolute Return	4.0%	2.0%
Opportunistic Portfolio	4.0%	0.3%
Real Asset	3.0%	0.0%
Bonds, Cash and Mortgages	22.0%	19.9%
Inflation Indexed Bonds	8.0%	7.6%
Fund Total	100.0%	100%

Regulation

The Common Retirement Fund, similar to other New York public pension plans, is subject to State statutory limitations on investments.¹ This “legal list” system specifies broad categories of permissible investments for the Fund and is in contrast to the unlimited “prudent investor” standard that now applies to many other state public pension plans, as well as to corporate pension plans under ERISA. For example, the following categories of investments are prescribed by statute²:

¹Article 9 of the New York Retirement and Social Security Law (“RSSL”)

² The Comptroller, as the Trustee of the CRF and the administrator of the System, is permitted to invest the assets of the CRF in specific types of investments enumerated in several sections of the RSSL, including Sections 13, 313, and 177 – 179, and by incorporation under Section 177(1), those securities that the trustee of a savings bank could invest in pursuant to Section 235 of the State Banking Law. These statutory sections also contain limitations on the amount of specific investments the CRF may hold. In addition to the foregoing, Section 177(9) of the RSSL provides that up to 25% of the Fund’s assets may be invested in investments that do not qualify or are otherwise not permitted under the RSSL (the “Basket Clause”). The Fund utilizes the investment flexibility created by the Basket Clause to invest in real estate, private equity, international equity, and absolute return strategies investments (the CRF’s investments pursuant to the legal list and the Basket Clause shall be collectively referred to herein as “Investments”).

- investment grade, U.S. dollar denominated bonds;
- up to 70 percent of the CRF in equities (of which 10 percent can be allocated to international equities);
- up to 10 percent of the CRF in real estate; and,
- a “basket clause” in State law allows up to 25 percent of the CRF’s assets to be invested outside constraints of the legal list, provided those investments are consistent with the prudent investor standard. Investments such as private equity, hedge funds, and international equities above the cap specified above, as well as international bonds, all fall within the “basket clause.”

In addition to regular external and internal audits, the CRF is subject to external oversight by New York State Department of Financial Services (formerly the Department of Insurance), which is authorized by State law to promulgate regulations applicable to all public pension plans in New York State. Working collaboratively with the State Comptroller, the Department promulgated new regulations (which include additional oversight activities) applicable to the Fund, effective in November 2008. A key purpose of this review is to determine the extent to which the CRF has implemented the regulations. This is described further under “Scope of Fiduciary Review.”

Investment processes are documented in a series of policies and procedures. These are prepared by staff and approved by the Comptroller and the Deputy Comptroller for PICM. Under current policies and procedures, significant investment decisions must be approved by professional investment staff, an independent consultant, the relevant CRF committee, legal counsel, the Chief Investment Officer and the Comptroller. Adherence is tested by internal compliance staff, internal and external audit and audits by the State Department of Financial Services.

Background to the requirement to conduct a Fiduciary review

In December of 2006, former State Comptroller Alan Hevesi pleaded guilty to a felony involving misuse of State resources, including having a state employee working as a driver for his wife, and resigned his office. In February of 2007, the current Comptroller, Thomas P. DiNapoli, was elected by the State Legislature to serve the remainder of the term through December 31, 2010.³ Beginning in 2007, the New York State Attorney General, the Securities and Exchange Commission and the Albany County District Attorney conducted investigations into new allegations that investment firms had made improper payments to politically connected

³ Comptroller DiNapoli was elected to a full, four-year term in November, 2010.

intermediaries in exchange for investments from the New York State Common Retirement Fund during Hevesi's administration.

These investigations of "pay to play" practices and subsequent prosecutions extended over a period in excess of three years and culminated in eight guilty pleas from individuals, including Alan Hevesi and David Loglisci, former Chief Investment Officer of the Fund. Former Comptroller Hevesi and Hank Morris, a longtime political consultant to Mr. Hevesi, received prison sentences for their misconduct. In addition, the Attorney General's Office recovered over \$100 million for the Fund from various investment managers and intermediaries.

Upon taking office, the current Comptroller and his staff assisted in the investigation, providing thousands of documents and electronic records and significant staff resources including extensive interviews. At the same time, the Comptroller undertook a number of initiatives to restore integrity to the Office of the State Comptroller, imposing a variety of ethics reforms to address the manner in which the Common Retirement Fund is managed; to address potential conflicts of interest in the payment of placement agent fees by investment managers to third parties in connection with CRF investments; and, to improve the investment process by adopting policies and procedures to strengthen internal controls and to increase oversight and transparency.

These actions included:

- Initially, establishing and implementing a system to review and publicly report the use of a placement agent paid by investment managers in connection with CRF investments, and later, banning them altogether;
- Prohibiting investment advisors that have made campaign contributions to the Comptroller, or a candidate seeking to become Comptroller, from doing business with the Fund for a period of two years from such a contribution;
- Establishing new ethics and conflicts of interest standards for Fund staff and advisory committees;
- Creating new positions of Inspector General and Special Counsel for Ethics within OSC to increase oversight and establish a comprehensive ethics compliance program;
- Implementing mandatory ethics training for all staff and the Comptroller, including special training for investment staff; and
- Requiring monthly public disclosure of investment transactions.

Robust policy and process improvements such as these become particularly important structural safeguards against abuse regardless of the incumbent.

Pension Task Force Recommendations

In December 2007, a special Pension Task Force (Task Force) composed of independent experts was convened by the Comptroller. The Task Force performed a comprehensive independent review and assessment of the operations, policies and practices of CRF and made recommendations on both short-term actions and long-term best practices for the Fund.⁴

The Task Force assessed the adequacy of safeguards and controls that currently existed for the CRF (including those put in place by the Comptroller upon taking office) and recommended additional safeguards and controls in the areas of oversight, transparency, and decision making at CRF. The Task Force also provided input on how to best position CRF for the long-term in order to continue to operate as a world class fund in an ever changing, complex, and competitive investment environment.

The Task Force's final report, issued in March 2009, made a number of key recommendations in three inter-related areas: ethics, oversight and accountability; transparency; and investment decision making, which were subsequently adopted by the Comptroller:

- Effective immediately, CRF will report investment performance results quarterly, in addition to publishing results in the Comprehensive Annual Financial Report;
- CRF policies will be made available to the public through publication on the OSC web site;
- Placement agent use, if any, paid by investment managers will continue to be disclosed prior to investment of CRF assets (later replaced by a ban on use of a placement agent);
- All transactions of CRF will be released in a timely manner to the public on the OSC website;
- A newly formed internal investment committee will provide additional transparency in the internal investment decision making process;
- The external Investment Advisory Committee which provides independent advice to the Comptroller and CRF staff will be expanded and strengthened;
- Members of the external Investment Advisory and Real Estate Advisory Committees will be subject to increased financial disclosure in order to minimize potential conflicts of interest;
- The current policies prohibiting insider trading and misuse of confidential information applicable to Advisory Committees will be updated and expanded, and Advisory Committee members will be required to fulfill ethics training in connection with their service;

⁴ Report of the Pension Task Force, March 2009

- A CRF compliance officer will be appointed, reporting to the Deputy Comptroller for Retirement Services, to better monitor potential conflicts and/or unethical behavior;⁵ and,
- The existing Code of Ethics will be strengthened by adding enhanced conflict of interest disclosure and enforcement provisions.

As part of the Comptroller's commitment to assuring the full implementation of the Task Force recommendations, the CRF monitored the actions taken to address each element of the report. An internal audit of the CRF dated July, 2011 found that most of the recommendations had been fully or substantially implemented and actions to implement those recommendations that had been partially or not yet implemented were in progress. As the scope of this current review does not directly address the Task Force recommendations, FAS has not independently verified implementation progress.

During the same period, the Comptroller collaborated with the Superintendent of Insurance (now, the Superintendent of Financial Services) to develop a new regulatory framework for the Fund. The CRF and the System are subject to oversight by the New York State Insurance Department (now, the Department of Financial Services) (Insurance Law, Section 314). The Superintendent of Insurance is authorized by statute to promulgate regulations, after consultation with the administrative heads of the systems and following a public hearing, as part of its supervisory function over all the public pension plans in New York. Subpart 136-2 of the regulations of the Department of Insurance (11 NYCRR Subpart 136-2) was first adopted effective in November 2008 to make permanent several of the reforms that had already been implemented by the Fund or recommended by the Task Force, to increase accountability, and to implement additional reforms with respect to management of the Fund.

Among other things, the regulations require that CRF investment managers, consultants and advisors acknowledge they owe the Comptroller a fiduciary duty and disclose all material conflicts of interest; preclude the CRF from investing with managers that have used a placement agent to obtain the investment; require establishment of a process to receive and investigate complaints concerning corruption, fraud, criminal activity, conflicts of interest or abuse involving any person or entity doing business with the CRF; and mandate creation of a CRF audit committee.

In response to the revision, the CRF reviewed its existing policies, procedures, and practices to determine whether they were in compliance with the requirements of the Insurance

⁵ The Director of Compliance now reports to the Executive Deputy Comptroller for the Retirement System, a new position that oversees both the administrative operations of the System and the investment functions of the Fund. In addition, a new position, Director of Risk and Reporting, was added.

Department Regulations, and, to the extent necessary, adopted, or revised policies and procedures and implemented practices to bring them into compliance. This review is the first review conducted by the Fund pursuant to section 136-2.5(g) (5) of the Insurance Department Regulations, which requires “fiduciary and conflict of interest reviews of the Fund every three years by a qualified unaffiliated person.”

Structure of the Main Report

Four questions were raised by the CRF and four key tasks and related sub-tasks were defined. The main body of our report is organized by each of these tasks. *Appendix C - Fiduciary and Conflict of Interest Review Tasks* includes the detailed tasks contained in the Request for Proposal.

Task 1: Fiduciary Responsibilities and Framework for the Operations and Decision Making Processes of the Fund

Does the Comptroller fulfill his fiduciary responsibility to act for the sole benefit of the System’s members, retirees, and beneficiaries and does the Fund have a strong and effective framework for the operations and decision making processes of the Fund?

Task 2: Ethical, Professional, and Conflict of Interest Standards

Does the Comptroller adhere to and manage the Fund with the highest ethical, professional, and conflict of interest standards?

Task 3: Operational Transparency

Does the Fund maintain a high level of operational transparency?

Task 4: Efficiency and Effectiveness of Management

Is the Fund managed in an efficient and effective manner?

Review Methodology

Our review was conducted between September and December 2012. During this time, Funston Advisory Services LLC (FAS) utilized a number of methods to arrive at our findings and observations, conclusions, opportunities for improvement and options for the CRF’s consideration. These methods ranged from interviews to document reviews, benchmark surveys and expert opinion. See *Appendix D - Glossary of Acronyms Used* for frequently used acronyms and abbreviations.

Interviews

Our review team conducted a series of over 50 structured interviews, often with multiple individuals, both within and external to the New York State Common Retirement Fund. These included, for example:

- a. The Comptroller, CRF and OSC personnel, including the Comptroller's legal staff, the Executive Deputy Comptroller, the current Chief Investment Officer, the former interim Chief Investment Officer and the primary Pension Investment and Cash Management (PICM) senior staff persons responsible for each asset class.
- b. Members of the Investment Advisory Committee (IAC), Audit Committee (AC) and the Real Estate Advisory Committee (REAC)
- c. CRF consultants, including the general consultant and the consultants with primary responsibility for every asset class.
- d. Ten CRF external investment managers, including the most recently selected managers, joint venture partners or general partners in each asset class. Consultants were asked about CRF selection, monitoring and oversight of external managers. Both managers and consultants were asked how CRF compared to other large public pension fund clients in terms of selection, due diligence, monitoring and termination procedures.
- e. The CRF custodian, including various individuals responsible for custody, securities lending, foreign exchange and performance analysis.

Document Reviews

We reviewed over 1,700 documents including a sampling of external manager and consultant contracts, all advisory committee minutes from the review period, as well as a review of all related CRF investment, ethics and committee policies and guidelines provided to us. We also reviewed 11 NYCRR Subpart 136-2; Sections 13, 313 and 177 - 179 of the New York Retirement and Social Security Law; Section 235 of the New York State Banking Law; Section 73 of the New York Public Officer's Law; Section 314 (b) of the New York Insurance Law; and related opinions of the Attorney General and reported cases. We verified the factual basis of our evaluation comparison with the CRF. All numbers have been reviewed by the CRF for accuracy including the factors to be considered in their interpretation.

FAS Leading Practices Survey

The purpose of a fiduciary review is to obtain independent reassurance from third parties that fiduciaries are fulfilling their responsibilities and are in compliance with applicable laws, regulations and policies. We were asked to identify and compare CRF practices to leading, prevailing and lagging fiduciary and conflict of interest practices. Accordingly, we conducted a customized benchmark review of leading fiduciary and conflict of interest policies and practices comparing the CRF to 11 large U.S. state public pension funds with at least \$50 billion in assets under management and 3 international public funds with at least \$100 billion in assets under management. Throughout this report we will refer to this as the “FAS Leading Practices Survey.” The participating funds are listed below in Table 2:

	TABLE 2 Participating Public Pension Plans	Reported Asset Market Value as of 12/31/2011 (US\$ billions)
1	Norges Bank Investment Management	\$555
2	Caisse de dépôt et placement du Québec	\$159
3	California State Teachers’ Retirement System	\$147
4	New York State Common Retirement Fund	\$140
5	Ontario Teachers’ Pension Plan	\$114
6	Teacher Retirement System of Texas	\$104
7	New York State Teachers’ Retirement System	\$83
8	State of Wisconsin Investment Board	\$77
9	Ohio Public Employees Retirement System	\$74
10	North Carolina Department of State Treasurer	\$72
11	State Teachers Retirement System of Ohio	\$62
12	Washington State Investment Board	\$59
13	Oregon Investment Council	\$55
14	Michigan Treasury Bureau of Investments	\$48
15	Pennsylvania School Employees’ Retirement System	\$47
	Median Assets Under Management	\$77
	Average Assets Under Management	\$120

Leading or Best Practice

Leading practice is a matter of opinion (of peers and experts). However, the determination of what constitutes best practice ought to be made by the organization itself since what is best for that organization depends on its unique circumstances and constraints. For this reason, when we identify opportunities for improvement, we present options for consideration rather than recommendations.

CEM Benchmark Survey⁶

The FAS project team worked with CEM Benchmarking Inc., a firm which has been working with pension funds for over 20 years and has compiled a unique global benchmarking database which includes over 350 public and private sector funds. We utilized the CEM peer group survey cost and investment data to compare the CRF to 10 large U.S. public funds with at least \$50 billion in assets under management. In particular, this information was utilized in comparing costs of external investment management, consultants, and the custodian. Throughout this report we will refer to this as the “CEM Benchmark Survey.”

Expert Opinion

We used our general knowledge of public pension fund policies and practices from years of FAS team members' internal investment staff experience and external investment consulting work with many different funds. Our draft final work product was also independently reviewed by a panel of pension fund governance experts, Keith Ambachtsheer, Peter Clapman and Stephen Davis. They found the process to be thorough and of high quality and they concur in the overall conclusions. The FAS team thanks them for their contributions.

The Funston Advisory Services team members participating in this review included:

- Rick Funston, managing partner of Funston Advisory Services LLC, was the National Practice leader for Deloitte’s Governance and Risk Oversight Services. Rick led major governance and fiduciary reviews at the California Public Employees’ Retirement System (CalPERS) in 2011 which was initiated by the President of the CalPERS Board of Administration, and earlier in 2012 for the Oregon Investment Council (OIC) at the behest of the Oregon State Treasurer.
- Keith Bozarth, recently retired as Executive Director of the State of Wisconsin Investment Board (SWIB) and previously CEO of the Orange County (California) Employees Retirement System; he has overseen the investment function at these two public pension funds for 11 years.
- Keith Johnson, chair of the Institutional Investors Group at the law firm of Reinhart, Boerner, Van Deuren s.c., supported by his team of investment and fiduciary attorneys. Keith represents numerous public pension funds as fiduciary counsel, speaks on fiduciary and investment topics at pension fund, legal and investor conferences across the United States, Canada, Europe and Asia, and was also part of the CalPERS and OIC

⁶ Cost Effectiveness Measurement Inc. Toronto, Canada

project teams. Reinhart represents 11 of the 50 largest pension plans in the world and 27 of the 300 largest pension plans in connection with alternative investments, corporate governance, fiduciary responsibilities, and securities litigation.

- Ken Johnson served in the roles of Chief Operating Officer, Chief Financial Officer, and Chief Administrative Officer at SWIB for over 10 years, with oversight of SWIB support services including financial operations, information technology and communications with the public. Ken currently serves as a board member and investment committee chair for the Wisconsin College Savings Program (EdVest).
- Virginia Brizendine has over 30 years of experience in public pension administration, including serving as Chief Financial Officer of Missouri PSRS/PEERS for five years and the School Employees Retirement System of Ohio for eleven years before her recent retirement. She holds a Certificate of Public Accounting, is a Certified Government Financial Manager and has a Masters degree in Accountancy.
- Jon Lukomnik served as Deputy Comptroller for the City of New York, where he was the investment advisor for the City's \$80 billion in defined benefit assets, and was responsible for investing the City's treasury assets. He has also chaired the investment committee for Sears Canada's multi-billion pension fund, is currently a Trustee for the Van Eck family of mutual funds and insurance trusts, and serves on three investment committees (two charitable endowments and one registered investment advisor). Over the course of his career, he has conducted more than 1,000 due diligence and external asset manager monitoring meetings. He also worked with FAS as part of the Governance Expert Panel on both the CalPERS and OIC projects.
- Mark Barrott has significant experience in organizational analysis, governance and compliance in 18 years with Deloitte, where he was a Principal, and recently was part of the FAS team working with the Oregon Investment Council.
- Randy Miller was a Principal and consultant with Deloitte for 27 years before retiring in 2010 and recently led very successful governance benchmarking processes as part of the FAS assignments with CalPERS and the Oregon Investment Council.

***1. FIDUCIARY RESPONSIBILITIES AND
FRAMEWORK FOR THE OPERATIONS AND
DECISION MAKING PROCESSES OF THE
FUND***

1.A. Overall Fiduciary Compliance Conclusion

Our overall conclusion is that the Comptroller is appropriately implementing his fiduciary duties and governance responsibilities consistent with the New York State codes, rules and regulations regarding ethics provisions, transparency and financial reporting requirements, financial soundness and actuarial principles that were covered by the review. Nonetheless, there were several areas where improvements can be made. These are noted throughout the report.

1.B.-G. Investment Related Policies, Procedures and Practices

Scope of Review

Our firm reviewed the investment-related policies, procedures, and practices of the Fund relating to the Comptroller's ability to delegate his powers of investment to a committee or agent. Where the Comptroller has delegated powers of investment (in writing or in practice), we determined whether:

- (1) such delegation is in accordance with the Fund's investment policy statement;
- (2) the Comptroller has established a schedule for such committee or agent to render written reports of its activities and reports are rendered according to the schedule; and
- (3) such reports are sufficiently detailed to allow the Comptroller to analyze financial performance and planning, consistent with his obligation as a fiduciary.

We undertook a detailed comparison of those CRF policies (including the Investment Policy Statement), procedures, and practices with applicable legal requirements, as well as common and leading practices in place at eleven peer funds. We determined whether all employees of the Office of the State Comptroller (OSC) who have responsibility for matters related to the Fund are subject to an insider trading policy. Finally, we compared with common and leading practices the policies adopted by the Fund with respect to investment manager use of the services of a placement agent or intermediary to assist the investment manager in obtaining investments by the Fund.

To determine transaction compliance with policies and applicable legal requirements, we examined file materials for all 81 reported investment transactions that were approved by the

Comptroller or by PICM staff during the review period. Those investment transaction file reviews included confirmation of compliance with the following items (as applicable):

- Investment advisor report and recommendation
- Internal PICM asset class staff analysis and recommendation
- Real Estate Advisory Committee or Internal Investment Committee review
- Chief Investment Officer analysis and recommendation
- Approval by the Comptroller
- Confirmation of legal review and approval
- Files contain copies of executed transaction documents consistent with approvals
- Compliance with the Comptroller's placement agent policy
- Confirmation of adherence to the Executive Order on Political Contributions
- Acknowledgment of fiduciary duty and conflict disclosure obligations
- Submission to review by the Department of Financial Services

Additional discussion of related transaction and policy compliance functions is included in sections 2 C and 4 D of this report on Investment Managers, Consultants and Advisors Conflicts of Interest and on Due Diligence Procedures.

Findings

1. Investment transactions approved during the review period by the Comptroller, or by PICM staff under delegated authority, were authorized in compliance with applicable requirements in all material respects.
2. CRF transaction approval and due diligence procedures fulfill requirements of the New York statutes and regulations covered by our review.
3. Investment transactions were closed in accordance with CRF policies and established practices.

Conclusions

1. The CRF has a robust and appropriate set of investment-related policies and procedures that are consistent with those in place at similar pension funds.
2. CRF's policies contain a suitable delegation of authority by the Comptroller which reflects the requirements of the New York statutes and regulations covered by this review.
3. Standards for exercising delegated authority and related reporting under CRF policies are similar to those in place at comparable benchmark pension funds and are appropriate to facilitate CRF fiduciaries meeting their fiduciary obligations.

4. All PICM employees who have fiduciary responsibilities are subject to a comprehensive code of conduct and an insider trading policy established by the Comptroller. These policies supplement the State Public Officers Law ethics and integrity regulations that also apply to the Comptroller and all senior PICM employees.
5. The Comptroller's Placement Agent Disclosure Policies and Procedures are an industry leading practice amongst peer public pension funds.

Improvement Opportunities

We have separately provided PICM staff with a detailed comparison of key CRF investment-related policies with those of benchmark peers. PICM staff has initiated a project to update and consolidate current CRF policies, which we believe is necessary and timely.

In connection with this ongoing policy review, we see a number of opportunities for improvement worth highlighting.

- Several of the CRF policies have not been updated in a long time. For example, the CRF Alternative Investments Policy was last approved in 2004 but was updated during our review. The Absolute Return Strategies Policy was last done in 2007. Responsibility for these periodic updates of policies should now be formally assigned to a PICM staff member under a regular review schedule. Over half of peer funds review and update their investment policy statement annually according to the results of the FAS Leading Practices Survey.
- There are several CRF policies that cover the same practices with inconsistent language. If it is necessary to maintain separate policies, then consistent language should be used. If separate policies are not necessary, duplicative provisions could be combined into one standard policy.
- Some established PICM practices are based on staff interpretations that fill gaps in current policies. The ongoing policy update provides an opportunity to explicitly include provisions that formalize those practices.
- We found current CRF policies as appropriate to meet fiduciary duty requirements. However, there are always opportunities for further improvement. We separately provided copies of peer policies that were reviewed as part of the benchmarking process (many of which are not public documents) to PICM legal staff. They provide a framework for the CRF to identify new provisions or alternative approaches that might be considered. For example (and without limitation), the CRF might evaluate whether to include the following peer policy provisions as part of the ongoing policy update:

- *Investment Policy Statement*
 - Include a section on risk constraints or risk management
 - Incorporate the Iran and Sudan divestment policy
 - Explicitly address whether the use of derivatives is allowed and, if so, establish appropriate limits
 - Consolidate standards and schedules from asset class policies for monitoring internal and external managers
 - Formalize all asset class rebalancing practices
- *Alternative Investments - Absolute Return Strategies*
 - Specify risk analysis and monitoring standards
- *Proxy Voting Guidelines*
 - Establish a proxy voting policy for foreign public equity holdings
 - Consider whether and how to extend the considerations underlying the proxy voting guidelines to other asset classes
 - Specify the extent to which consideration is given to proxy advisor recommendations
- *Securities Litigation Guidelines*
 - Explicitly address unique considerations that apply when evaluating claims that may only be brought outside of the United States
 - Formalize factors evaluated when considering arrangements for joint pursuit of shared legal claims with other investors
- *Code of Ethics for Advisory Council and Committee Members*
 - Reference the OSC policy that deals with handling media inquiries
 - Consolidate all policies applicable to Council and Committee Members in one document for easy reference
 - Codify the pre-vote conflict disclosure requirements to include ex-parte communications received by Committee members from parties with pending investments before the Real Estate Advisory Committee
- *Code of Conduct for NYSLRS and NYSCRF*
 - Consider appending the other policies it references
 - Reference the OSC policy that deals with handling media inquiries
- *Insider Trading and Misuse of Information*
 - Reference the OSC policy on confidentiality and safeguarding of electronic information
 - Expand the reporting requirement to cover outside accounts for which an employee exercises discretion or provides advice

Great strides in the development of a thorough set of policies and procedures have been made at the CRF over the past few years. The focus can now turn to updating and fine tuning the comprehensive standards that are in place.

See 2.A.3 in the following section for a consolidated discussion of Committee Training.

2. ETHICAL, PROFESSIONAL, AND CONFLICT OF INTEREST STANDARDS

2.A. Committees

Scope of Review

The Comptroller is required by statute, regulation, or executive order to establish an Investment Advisory Committee (“IAC”) (RSSL Section 423), a Real Estate Advisory Committee (“REAC”) (RSSL Section 423, also known as the Mortgage Advisory Committee), an Actuarial Advisory Committee (11 NYCRR Section 136-2.6), an Audit Committee (11 NYCRR Section 136-2.4(e)), and an Advisory Council for the Retirement System (2 NYCRR Part 320) (hereafter collectively referred to as “Committees”).

Our Firm was asked to review whether:

- 2.A.1 the Committees are established and functioning in accordance with law.
- 2.A.2 the Investment Advisory Committee (IAC) has reviewed the Fund’s investment policy statement and offered advice regarding amendments, if any, to the investment policy statement.
- 2.A.3 the information and training provided to members of the Committees pertaining to their ethical responsibilities, and the keeping of Committee meeting minutes, is consistent with common and leading practices.

2.A.1 Committees are established and functioning according to law.

For the purpose of our review, we have assessed each of the five committees separately based on the requirements of the relevant statute, regulation, or executive order relating to each committee. Our summary findings and observations, conclusions, opportunities for improvement and options for consideration are described at the end of this section.

1. Investment Advisory Committee (IAC)

Findings and Observations

IAC Meetings and Records

IAC policies require that:

- The IAC meets not less than four times per year
- The Chair and the Comptroller preside at the meetings
- The CIO, Chair and Comptroller develop the meeting agenda

Based on our review of the IAC meeting minutes and interviews, during the period under review, the IAC has met at least five times per calendar year. Additionally, the Chair and Comptroller have presided over each of these meetings. The IAC thus exceeds the minimum requirements for meeting frequency and is administering the meeting according to documented procedures.

The IAC has not adopted a rolling annual calendar of agenda items that schedules each of the topics required to fulfill the committee's duties. Adopting such an approach could help ensure the full responsibilities of the committee are covered and allow members to plan their preparation accordingly.

During the review period, the IAC has met between five and seven times per year. We have reviewed the IAC minutes from 2009 onwards and found each of the minutes record the meeting date, place, all attendees (CRF staff and external parties), approval of the previous meeting minutes, a detailed description of the committee discussion, a brief overview of any presentation, and notification of the next meeting time. While meeting minutes are approved by the IAC at the following meeting, the final minutes are neither signed nor do they contain a notation of the official committee approval date; additionally, minutes reporting the topics discussed in IAC Executive Session were not recorded.

IAC Policies and Procedures

The IAC has six primary functions:

- Monitor and annually review the CRF's asset allocation
- Review the Investment Policy Statement
- Annually review and provide input on the strategic plan for each asset class
- Monitor the CRF's risk profile and risk management reports
- Approve the appointments of new members to the REAC
- At the request of the Comptroller, review and make recommendations on other items such as the selection of investment managers and consultants.

Based on our review of the committee meeting minutes, member interviews and documents presented at meetings, the IAC is performing all the duties outlined above. The level of discussion and input from the IAC members is at the fund and/or asset class level, depending on the meeting agenda. Individual investment transactions are rarely discussed at IAC meetings, and this is appropriate given the purpose and scope of the committee.

More recent IAC meetings have benefited from a robust discussion of the CRF's risk factors based on input from the Director of Risk and Reporting. This is an appropriate use of IAC time

and resources that allows the members to interpose their market knowledge into the formal CRF risk management process.

During our interviews with IAC members, we noted a desire for more substantive documentation of IAC responsibilities and expectations, to assist members in their duties. Members indicated further guidance would be helpful, particularly as a supplement to current materials used to onboard new IAC members. An update of the committee's charter, as part of the ongoing comprehensive policies revision, could also help to address these concerns.

IAC Composition

The committee policies require that the IAC be comprised of:

- Not less than seven members
- Members experienced in the field of investments
- Members defined as “Unaffiliated persons”

At the end of our review period, the IAC was composed of eight members:

- Wale F. Adeosun – IAC Chair - CEO & Chief Investment Officer, Kuramo Capital Management
- Amy Chen - Chief Investment Officer, Smithsonian Institution
- Timothy C. Collins - CEO & Senior Managing Director, Ripplewood Holdings, LLC
- Jacques Jiha, Ph.D - Executive Vice President, COO & CFO, Earl G. Graves, LTD/Black Enterprise
- Hugh Johnson - Chairman & Chief Investment Officer, Hugh Johnson Advisors, LLC
- Douglas Phillips - Senior Vice President Institutional Resources, University of Rochester
- Raymond D. Potter - Managing Director, Head of International Fixed Income & Emerging Markets Group, Hapoalim Securities USA, Inc.
- R. Charles Tschampion - Director, Special Projects, CFA Institute

The IAC membership numbers exceed the required minimum, and the members have a wide variety of investment-related experience. The IAC membership primarily consists of senior investment advisors, professionals or academics in related fields of study. Each one of the members meets the criterion of serving or having served as a senior officer or board member of an insurance company, banking corporation, or other financial or investment organization authorized to conduct business in the State of New York.

In addition to considering experience level, the selection process also aims to incorporate a cross section of expertise and market knowledge relevant to the CRF's active asset classes in

the IAC membership. The addition of asset class specific selection criteria can be of significant benefit to CRF in providing relevant market expertise to the IAC oversight role.

Given the requirement for IAC members to be unaffiliated persons and the time commitment required from members, the Fund is to be commended on its ability to recruit and retain a full complement of committee members.

However, the IAC membership selection process and criteria are still evolving and are not yet formalized. The members are selected and nominated to the Comptroller by the Chairman without documented input from other members (although informal feedback is solicited by the Chair). This could also be addressed in the pending update of the committee's charter, which would make it consistent with the Audit Committee charter.

2. Real Estate Advisory Committee (REAC)

Findings and Observations

REAC Meetings and Records

We reviewed REAC minutes from 2009 onwards and found each of the minutes records the meeting date, place, all attendees (CRF staff and external parties), approval of the previous meeting minutes, a detailed description of the committee discussion, a brief overview of any presentation, and notification of the next meeting time. The Chair or presiding officer signs the minutes. Based on our review of the REAC meeting minutes and interviews, during the review period, the REAC has met 10-12 times per calendar year. Additionally, the Comptroller and Chair have presided over each of these meetings.

REAC Duties

“REAC’s primary function is to review and advise the Comptroller on proposed mortgage and real estate investments. Unlike the IAC, if REAC disapproves a proposed mortgage or real estate investment, the investment shall not be made. Subsequent to any meeting of the committee, the Deputy Comptroller shall independently review the investments affirmatively recommended by the committee. Such recommendations shall be considered advisory only, and the Comptroller may, within his sole discretion, refuse to make any such investment.”⁷

⁷ Official Compilation of the Codes, Rules and Regulations of the State of New York - Part 330 Real Estate Advisory Committee.

Our review found that the REAC addresses real estate portfolio strategy and risk, reviews individual transaction recommendations from PICM staff, as well as manager selection and overall management of the real estate portfolio. REAC appears to fulfill the duties outlined in the REAC regulations.

During our interviews with REAC members, we identified a desire for more detailed and substantive documentation of REAC responsibilities and expectations to assist members in understanding their duties. REAC members receive an overview of committee duties based on Section 423 of the New York Retirement and Social Security Law and NYCRR Part 330. However, they indicated a desire for more formal orientation and on boarding. Members observed that orientation and learning for new members was primarily conducted by existing REAC members and through reviewing committee reports and packages.

While the current documentation of committee policies and procedures does not appear to have had a material impact on the quality of input given by the REAC members, it is an area that could be improved. An update of the committee's charter as part of the ongoing policies review could help to address these concerns.

REAC Composition

The committee policies require that the REAC be comprised of:

- Not less than seven members
- Members appointed by the Comptroller, with the advice and consent of the Investment Advisory Committee

At the end of our review period, the REAC was composed of nine members:

- Alice M. Connell – Principal, AM Connell Associates, LLC
- Louis M. Dubin – President & Chief Executive Officer, LMD Worldwide, Inc.
- G. Gail Edwards – President, JH Investments, Inc.
- Jo Ann Hanson – President, Avanti Real Estate Corporation
- Glenn M. Johnson – Chief Investment Officer, Northland Investment Corporation
- Everett B. Miller, III – Consultant to the YMCA Retirement Fund
- David H. Peirez, Esq. – Senior Partner, Reisman, Peirez & Reisman, LLP
- Barry S. Seidel – Executive Vice President, LMD Worldwide, Inc.
- Alan C. Sullivan – Senior Vice President, The DeMatteis Organization

The REAC Regulations do not define minimum standards of experience for committee members. Committee members are recommended by the REAC Chair, with advice and consent of the IAC, and ultimately appointed by the Comptroller. Despite the lack of documented

standards, REAC membership is principally comprised of senior investment advisors in the real estate market and provides significant expertise to CRF. Additionally, members are selected with complementary skills and experience to address various aspects of the real estate market.

The current REAC membership numbers exceed the required minimum and we again commend CRF on its ability to recruit competent and committed REAC members. As with the IAC, member selection criteria could be formalized in the committee's charter as part of the ongoing policies update.

3. Audit Committee (AC)

Findings and Observations

AC Meetings and Records

The AC charter requires that the committee meet quarterly, or as frequently as circumstances dictate. For the period from 2010 onwards, each of the minutes appropriately records the meeting date, place, all attendees, a detailed description of the committee discussion, a brief overview of any presentation, and notification of the next meeting time.

AC Quarterly Progress Reports

The AC is required by DFS Regulation 136-2.4 (e) 6 to:

Authorize the audit committee to develop quarterly progress reports to the Comptroller that, at a minimum, discuss:

- (i) the audits of the retirement system and the fund scheduled to be conducted, along with the scope of the audits;
- (ii) the audits of the retirement system and the fund completed; and
- (iii) significant audit findings and recommendations related to the retirement system and the fund.

The AC charter does not contain specific language addressing the development of quarterly AC progress reports to the Comptroller. However, reports of audits scheduled and completed, plus significant findings are reported and discussed with the committee (including the Comptroller) by the external auditor (KPMG) and by the Director of Internal Audit. Either the meeting minutes or supporting presentation material from KPMG appear to represent the written progress reports to the Comptroller, and the Comptroller attends AC meetings.

While we acknowledge that the AC is in the formative stage of development and is giving quarterly progress reports to the Comptroller, they lack consistency. To address this, the AC charter should expressly require provision of quarterly external auditor progress reports to the Comptroller in a consistent manner.

AC Composition

At the end of our review period, the AC membership was comprised of:

- Eugene Farley – Director, M.S. in Accounting Program, Siena College – AC Chair
- Gary Johnson – Director, Governor’s Office of Employee Relations
- Alan Lubin – Executive VP, New York State United Teachers (Retired)
- Stanley Winter – President, Retired Public Employees’ Association

The AC membership fulfills the requirements of Regulation 136 2.4 (e) and the AC charter. Specifically:

- Each member of the AC fulfills the definition of “unaffiliated person” as outlined in the AC charter above
- The AC currently has four members which falls within the range of required number
- From our background reviews (we have not interviewed each member of the AC) we conclude that each member qualifies as “financially literate” based on the definition in the AC charter
- From our interview and background review we conclude that the Chair of the AC qualifies as a “financial expert” based on the AC charter definition given his experience and education
- From our background review we understand that Mr. Gary Johnson represents the interests of public employers. Additionally we understand that Mr. Alan Lubin represents the interests of public employees. Both these interests are required to be represented on the AC and we conclude this requirement is properly fulfilled.

The AC is properly composed in accordance with Section 136 of the regulation.

AC Charter

The AC charter was developed and adopted by the committee in 2009 in response to the introduction of Insurance Department Regulation Part 136. The contents of the charter are drawn in part from the requirements of the regulations and in part from practical

requirements. While improvements could be made, it appears an appropriate AC charter has been developed.

Written standards for the selection of committee members

The regulations require written standards be developed and used in the selection process for AC members to ensure the appointment of appropriately qualified candidates. These standards are outlined in the AC charter (see above) and include definitions of, and requirements for, “financial expert”, “financial literacy” and “unaffiliated persons”. These standards are appropriate to help CRF select suitably qualified AC members to provide CRF with the required financial expertise.

Internal Audit Reports

The charter clearly defines the scope of reviews and reports the AC is authorized to conduct by the Comptroller. The AC charter states:

“Internal Audit

- Review Internal Audit’s annual audit plan, charter, activities, staffing, organizational reporting relationship, and reports resulting from its audit engagements pertaining to the System.
- Review, with the Chief Audit Executive, any significant scope restrictions pertaining to the System that are encountered by Internal Audit.
- Review the Quality Assurance Review reports that opine on Internal Audit’s compliance with professional auditing standards.
- Develop comments and suggestions for the Comptroller’s consideration based on information and reports provided by Internal Audit. However, the Comptroller maintains full authority regarding the activities of Internal Audit, and will take those actions he considers appropriate concerning any comments or suggestions provided by the committee”.

The AC is appropriately reviewing and reporting the results of the audits to the Comptroller. Each AC meeting discusses the internal audit reports and plan. For example, the March 12, 2012 AC meeting received a briefing on ongoing internal audits and reviewed the 2012-13 audit plan based on a report from the Assistant Comptroller. We find the AC is appropriately authorized to review and report to the Comptroller on the internal audit plans and the internal audit and is fulfilling that mandate.

Procurement of external auditor services

The charter clearly defines the role of the AC in reviewing the procurement of external audit services. The charter states the Comptroller requires the AC to:

- Review the process for selecting the external auditors.
- Review the external auditor's audit plan and engagement letter.

The AC appears appropriately authorized to review and report to the Comptroller on the procurement of external auditor services by the retirement system and the fund. However, since the external auditor's contract is current and active, it appears the procurement process has not been reviewed since the inception of the AC. The AC is to be the primary advisor to the Comptroller regarding procurement of external auditor services and should fulfill this mandate in due course.

Review and report on the annual audit process

The charter clearly defines the role of the AC in reviewing the annual audit process. The charter states the Comptroller requires the AC to:

“Understand the scope of the external auditors’ review of internal control over financial reporting, and obtain reports on significant findings and recommendations pertaining to the System, together with management’s responses.”

It appears the AC is appropriately reviewing and reporting the annual audit process and findings. Each AC meeting discusses the external auditor reports progress and findings with the Lead Engagement Partner of the External Auditor. The AC appears appropriately authorized to review and report to the Comptroller on the annual external audit plan and is fulfilling that mandate.

4. Actuarial Advisory Committee (AAC)

Findings and Observations

AAC Meeting Records

The AAC typically meets once a year. Based on a review of AAC minutes from 2009 onwards, the minutes of each meeting records the meeting date, place, all attendees, a detailed description of the committee discussion, a brief overview of any presentation, and notification of the next meeting time.

AAC Composition

At the end of our review period, the AAC was comprised of four members:

- Jeremy Brown - Executive Vice President & Chief Actuary, Mutual of America Life Insurance Company
- Armand DePalo - Retired - Former Chief Actuary, Guardian Life Insurance Company of America
- Michael Heller - Vice President — Actuarial Consulting Services, Teachers Insurance and Annuity Association — College Retirement Equities Fund (TIAA-CREF)
- Stanley Talbi - Executive Vice President, Metropolitan Life Insurance

The Comptroller chairs the meetings. All four of the existing AAC members meet the definition of an “unaffiliated person” in 11 NYCRR 136-2.2(j). Additionally, based on our review of the qualifications, background and professional accomplishments of the AAC members, all meet the definition of having “expertise and experience in actuarial science” as required by the AAC charter.

However, whereas the AAC charter specifies a requirement of “not less than five” members, the AAC is currently comprised of four members. The membership has remained constant at four since the AAC charter was adopted in 2009. Whilst the expertise available to CRF from the current AAC membership is considerable, the committee itself has recognized the need to fill the required complement of members as reported in the 2010 AAC meeting minutes. As a result, we find the current AAC membership composition is in substantial but not full compliance with the committee charter.

Committee Charter

The AAC charter was developed and adopted by the committee in 2009 in response to the introduction of Insurance Department Regulation Part 136 (11 NYCRR 136-2). The contents of the charter are drawn, in part, from the requirements of the regulations and, in part, from practical requirements. Based on our review of the contents of the charter, it appears an appropriate AAC charter has been developed.

Written standards for the selection of committee members

The regulations require that written standards be developed and used in the selection process for AAC members to ensure the appointment of appropriately qualified candidates. The AAC members appear to be suitably qualified to serve and provide CRF with the required expertise. However, there does not appear to be any evidence of formally adopted written standards for AAC member selection.

While the lack of written standards does not appear to have materially impacted quality of the AAC members, it is not compliant with the regulation. Additionally, the lack of documented selection criteria limits transparency and may potentially cause inconsistency in candidate selection. This could be addressed through the ongoing update of CRF policies and procedures.

Actuarial assumptions and methodologies

The charter clearly defines the scope of reviews and advice the AAC is authorized to conduct by the Comptroller. The AAC charter states that the committee will:

“Annually review actuarial assumptions and employer contributions; and discuss any other actuarial items of interest, including the application of emerging, developing, and current actuarial standards and disclosures.”

In addition, based on a review of the minutes of the last three AAC meetings, there appears to be robust discussion of actuarial assumptions, trends and implications for the Fund. These discussions form the basis of the committee’s recommendations to the Director of the Actuarial Bureau and Comptroller. The AAC is authorized to make actuarial assumption recommendations and appears to be appropriately fulfilling that mandate.

Report on financial soundness

The charter clearly defines the scope of reviews and advice the AAC is authorized by the Comptroller to conduct and provide. The charter states:

“The Actuarial Advisory Committee will review and discuss the actuarial soundness and financial condition of the Fund.”

Based on a review of the minutes of the last three AAC meetings, it appears that an in depth discussion has been conducted at each meeting addressing soundness of the fund’s financial condition. Those discussions have covered:

- General economic climate
- Inflation and investment return assumptions
- Asset valuation
- Employee salary scales
- Pensioner mortality rates
- Contribution rates
- Ability to meet liabilities

The AAC is authorized to discuss financial soundness of the Retirement System and appears to be appropriately fulfilling that mandate.

5. Advisory Council for the Retirement System (ACRS)

Findings and Observations

ACRS Meetings and Records

The Advisory Council typically meets once a year. Based on a review of Advisory Council minutes from 2010 onwards, each set of minutes records the meeting date, place, all attendees, a detailed description of the committee discussion, a brief overview of any presentation, and notification of the next meeting time.

Committee Composition and Meetings

The ACRS is required by regulation to be comprised of members representing broad based interests. The committee selection criteria require representatives from a range of bodies to form the ACRS's membership, including: employees, municipalities, New York State and local agencies, pensioners, businesses, labor and the Legislature.

At the end of our review period, the ACRS was comprised of 22 members representing all the above constituencies, in accordance with the legal requirements. The ACRS is also required to meet periodically under 2 NYCRR Part 320. The committee has met annually throughout the review period and is satisfying this requirement of the law.

Committee Duties

The purpose of the ACRS is to advise the Comptroller on a wide range of issues related to the administration and operation of the Fund and the Retirement System. The ACRS provides the Comptroller with perspectives and input from a range of critical stakeholders and is viewed as an important check within the overall governance of the Fund, on behalf of the beneficiaries and the State.

Based on our review of meeting minutes, we note the ARCS discussed a broad range of topics that provide the Comptroller with timely and balanced input reflecting the views of the various stakeholders. Similarly, the Comptroller and senior staff exchange information and insights to help stakeholders understand the status and challenges of the Fund on an annual basis. Accordingly, we believe that the ARCS plays an important role in oversight of the Fund, fulfilling its current purpose and mandate.

Conclusions

Our overall conclusion regarding the Fund's advisory committees is that each committee is operating effectively, supporting oversight of and providing expertise to the Fund.

In particular, the committees:

1. Meet, and in most cases exceed, the minimum requirements for committee composition, convening frequently and performing the duties required of the committee (with the exceptions noted below).
2. Provide the level of independent expertise required to appropriately assist in oversight of the decision making processes of the Fund.
3. Record, make available to the Superintendent of Financial Services, and disseminate meeting minutes in full compliance with regulations.
4. Receive adequate and appropriate reports and information from staff to allow the committees to become informed and freely communicate opinions, advice and, where appropriate, recommendations to the Comptroller and senior Fund staff, in order to effectively fulfill each committee's oversight responsibility.

Improvement Opportunities

There are several committee-related issues which could be improved. A number of options for the CRF's consideration are listed below:

- ***Committee member selection criteria*** – with the exception of ACRS and the Audit Committee, the process and criteria for selecting committee members are largely undocumented and undefined. As mentioned earlier, the Fund has generally recruited and retained committee members who provide significant combined expertise and oversight to the Comptroller and staff. However, the lack of defined criteria does not provide a standard against which to assess if committee members have appropriate qualifications to serve. Additionally, in the case of the AAC, the Comptroller is required to establish written selection criteria by Department of Financial Services regulation 136 2.6 (b) 2. Appropriate standards should be developed and disseminated.
- ***Committee member selection process*** – with the exception of the ACRS, the process for selecting members is not well defined and documented. When combined with the lack of

documented committee member selection criteria, absence of an established process for sourcing members represents a gap in committee governance structure. Standards and processes should be developed that are appropriate to each committee.

- ***Committee Charters and Regulations*** – charters for the IAC and REAC are out of date and provide limited descriptions of the committees’ duties.
 - In the case of the IAC, policies and procedures have been developed to augment the previous regulations that provide an additional level of guidance for members.
 - While the IAC discussions are in and of themselves valuable in advising the Comptroller, formalizing the consensus emerging from those discussions could increase their value. Towards that end, the IAC could be asked to formally recommend to the Comptroller the adoption of the asset allocation plan and to annually suggest to the Comptroller whether the asset allocation plan remains appropriate given market and Fund conditions.
 - The IAC could also be asked to formally recommend to the Comptroller the adoption of the various asset class strategic plans.
 - To the extent the Fund would like to have the IAC formally recommend the asset allocation and/or the strategic plans for each asset class, those responsibilities could be included in the revised descriptions of duties.
 - In the case of REAC, we found the regulations referenced in the policies lack meaningful guidance for new and existing committee members on their duties and expectations. These committee policies and procedures should be updated and/or supplemented by additional guidance for members. Updated policies and procedures should be developed in conjunction with the Comptroller, CIO and committee members to ensure appropriate guidance is available to members.
- ***Audit Committee Quarterly Progress Reports*** - The Audit Committee (AC) was formed in mid-2010 as part of the ongoing reforms for oversight and transparency of the CRF. While the Comptroller's staff has noted that the committee is still in its formative stage, the AC has made significant progress since its inception and generally meets the requirements of Department of Financial Services Regulation 136 2.4 (e). However, the AC has yet to settle into a regular meeting cadence, with established agenda topics and a consistent reporting format.
- In addition, the AC has yet to formalize the procedures used to meet requirements of 2.4 (e) (6). In order to do so, the Comptroller should consider:
 - Amending the Audit Committee charter to explicitly direct the committee to develop quarterly reports on audit progress for the Comptroller;

- Developing a consistent quarterly report due diligence process that provides a formalized schedule of discussions with:
 - The External Audit Team,
 - Executive Deputy Comptroller,
 - Assistant Comptroller for Internal Audit, and
 - Director of Compliance.
- Developing a consistent quarterly progress report format, with content requirements that include:
 - Review of completed, ongoing and scheduled audits.
 - Review of progress against the current audit plan.
 - Overview of significant findings.
 - Overview of trends and implications of the audit findings for the retirement fund.
 - An independent summary of the observations, concerns and recommendations of the AC members.
- **Actuarial Advisory Committee Composition** - Since 2009, the Committee has been operating with 4 members instead of five, leaving one of the membership slots provided for in the AAC charter vacant. Given the depth of expertise held by the current AAC members, the fund does not appear to have been materially impacted by the lack of full committee membership. As a result, the Comptroller should consider:
 - Amending the current AAC charter to require four (rather than five) members; or
 - Selecting a fifth committee member to fill the vacant slot under the current AAC charter.
- **Committee meeting minutes and records** - while we cannot independently verify the accuracy of the meeting minutes, the detail, form and structure of each document appear to provide a full record of the conduct of each meeting.
 - The CRF should leverage the future document management system to house meeting minutes. This would allow access to the documentation (password protected as necessary) for all PICM functions.
 - While committees approve minutes at the subsequent meeting, only the Real Estate Advisory Committee ("REAC") minutes bear the signature of a staff person who is accountable for accuracy of the minutes. Consideration should be given to adoption of a formal method to identify final approved minutes for all committees.

- **Internal Investment Committee** - while the Internal Investment Committee ("IIC") is a staff committee, it plays an important role in due diligence and documentation of compliance with investment-related policies. However, IIC meeting minutes are often less detailed than those of the advisory committees, even though the Investment Policy Statement requires that IIC minutes on transactions be provided to the Comptroller with final approval recommendations. While the same level of detail may not be required as is applied to external advisory committee minutes, we recommend that the CRF consider a greater level of consistency and specificity for IIC minutes. Regular use of a signatory on the minutes (as is done for REAC minutes) would also provide accountability and ensure an appropriate level of content integrity.

2.A.2 Committee Review of Investment Policy

Scope of Review

Our firm was asked to determine whether:

- 2.A.2 the Investment Advisory Committee (IAC) has reviewed the Fund's investment policy statement and offered advice regarding amendments, if any, to the investment policy statement.

Findings and Observations

The IAC reviewed and suggested modifications to the new CRF Investment Policy Statement ("IPS") at its meeting on June 10, 2010. The revised IPS was brought back to the IAC for consideration and approved at its October 14, 2010, in compliance with the requirements of DFS regulation 136-2.4(a)(2) regarding Investment Advisory Committee review of the CRF Investment Policy Statement.

Based upon the results of the FAS Leading Practices Survey, a review of the Investment Policy Statement every three years is longer than the review period that has been adopted at more than half of the peer funds.

Conclusions

The IAC has reviewed the Investment Policy Statement and provided feedback to the Comptroller regarding modifications to the policies and has been fulfilling its duties with respect to review of the Fund's Investment Policy Statement.

Improvement Opportunities

The Comptroller should consider establishing a practice of reviewing the Investment Policy Statement, with the support of the IAC, more frequently than every three years, ideally annually.

2.A.3 Committee Information and Training

Scope of Review

Our Firm was asked to compare the training provided to committee members with respect to the discharge of their fiduciary duties and responsibilities to the Fund, with common and leading practices. We were also asked to compare the information and training provided to members of the committees pertaining to their ethical responsibilities and the keeping of committee meeting minutes, with common and leading practices.

Findings and Observations

The frequency and quality of fiduciary, ethics and insider trading policy training that is provided to the CRF's advisory committees meets applicable legal requirements and is equivalent to or better than training provided at similar pension funds. Training is given to new committee members and provided annually to committees by OSC legal and compliance staff. Internal training is supplemented by outside counsel presentations. The presentations and materials are structured to cover not only legal requirements but also to be interactive and include examples of how fiduciary and ethics principles apply to actual situations. In addition, minutes of CRF advisory committee meetings are consistent with those of the fund's peers.

The FAS Leading Practices Survey found that most large pension funds provide fiduciary training to boards or advisory committees annually and when new members join, just like the CRF. Results on fiduciary and ethics training practices from the FAS Leading Practices Survey are summarized in Tables 3 and 4 below (the CRF's responses are highlighted in yellow in the tables throughout this report).

TABLE 3 ETHICS AND FIDUCIARY TRAINING (Frequency)

How frequently is ethics and fiduciary training provided to: (check all that apply)	Number of Responses (N=15)				
	When they join the Board or committee or are hired	Annually	Biennially (every 2 years)	Never	Not Applicable
Fiduciary Board	9	7	0	2	3
Advisory Board	4	1	0	2	5
Investment Staff	7	9	3	1	1
Non-Investment Staff	7	9	2	2	1

TABLE 4 ETHICS AND FIDUCIARY TRAINING (Timing)

How frequently is training provided to Board or Advisory Committee members regarding their duties and fiduciary responsibilities? (check all that apply)	Number of Responses (N=15)
When they join the Board or Committee	11
Annually	8
Biennially (every 2 years)	1
Never	2
Verbatim comments:	
Board members are encouraged to take courses. Each board session includes one supper-conference that covers one topic of the Fund's business (IT, HR survey, etc.).	
On a business-need basis; no statutory obligation.	
Or refreshers as needed.	
Also provided after joining, without any particular period of time between training sessions.	
Also specific items are addressed on an as needed basis internally or through attendance at external education opportunities.	

Conclusions

1. The CRF fiduciary and ethics training program for committees is exemplary and meets or exceeds training provided at similar pension funds.
2. Committee minutes are also detailed and comprehensive.

2.B. Employee Training

Scope of Review

Our Firm was asked to determine whether all employees of OSC who have responsibility for matters related to the Fund:

- (1) have been provided a resource for guidance on the Public Officers Law and utilize that resource in an effort to ensure that they are operating in a manner consistent with the Public Officers Law;
- (2) have been provided training with respect to discharge of their duties and responsibilities to the Fund; and,
- (3) are subject to an insider trading policy.

Findings and Observations

CRF's investment-related operations and training for the Comptroller and PICM staff on the standards applicable to management of CRF assets are generally consistent with the statutory and regulatory requirements covered by this review. They are also in line with common practices at similar pension funds.

The quality of internal fiduciary duty, ethics and insider trading training materials is very good. Training materials comprehensively covered the Public Officers Law, fiduciary responsibilities, the Code of Conduct, insider trading prohibitions and financial reporting requirements.

Training is provided to all new PICM staff members and is provided periodically thereafter. Internal training is supplemented by attendance at external conferences and meetings, as well as web-based programs. Reimbursement for classes and programs (e.g., Chartered Financial Analyst and Certified Public Accounting training programs) is available, subject to advance approval and successful completion (i.e., passing an exam or receiving a set final grade) of the program. We were told that there is no official schedule for periodic staff training beyond the initial training of new employees.

The FAS Leading Practices Survey found that the vast majority of large pension funds provide extensive quarterly and annual training to investment staff. In addition, a broad variety of training vehicles are used, including external conferences, web-based training and classroom courses at educational institutions. However, ongoing training at the CRF, while ad hoc, is consistent with peer procedures. Results of the FAS Leading Practices Survey on staff training practices are summarized in Tables 5, 6 and 7 on the following pages.

TABLE 5 INVESTMENT STAFF TRAINING (Type)

What type of training does the investment staff receive in each asset class? (check all that apply)	Number of Responses (N=15)				
	Conference-based (External)	Classroom-based (External)	Classroom-based (Internal)	Web-based	Other
Public Equity	14	6	4	10	5
Fixed Income	14	6	5	10	4
Private Equity	14	5	5	10	5
Real Estate	14	6	5	10	4
Other Alternatives	11	3	3	8	3
Other					

TABLE 6 INVESTMENT STAFF (Frequency)

How frequently does the investment staff receive training in each asset class?	Number of Responses (N=15)				
	Quarterly	Annually	Biennially (every 2 years)	Other	Never
Public Equity	5	4	0	3	0
Fixed Income	4	5	0	3	0
Private Equity	4	4	1	3	0
Real Estate	4	5	0	3	0
Other Alternatives	2	4	1	2	0
Other					

TABLE 7 TRAINING VERBATIMS

What type of training does the investment staff receive in each asset class? How frequently does the investment staff receive training in each asset class?
Verbatim comments:
No mandatory training; training on a need-based approach. Annual compliance/awareness training for all employees.
External asset managers and various speakers visit periodically.
Presentations from economists, internal investment conference.
Other methods of training include self-study courses for industry exams, such as CFA and CAIA.
As identified and required, any and all mediums/forums.
Strongly encourage CFA program.
It is ad hoc, but on average, each investment professional attends at least one educational conference per year.
Ad hoc, as requested/available.
All responses above reflect the minimum, not the maximum. Each asset class receives training through industry conferences a minimum of once per year.
Informally, we attend conferences, vendors come in to talk to staff, we have conference calls, etc. We have a large research staff and I would say that we are all continually training. Most junior investment staff study for and take the CFA exams.
Generally on a regular basis with training on specific topics as the need/opportunity arises.
As identified and required. An annual training budget for employees that is the responsibility of the department SVP.

Conclusions

1. The quality of CRF staff training on the Public Officers Law, as well as fiduciary, ethics, insider trading and financial reporting policies compares well with in-house training provided at similar pension funds.
2. PICM's ad hoc approach to ongoing staff training is also consistent with the prevailing approach at peer funds.

Improvement Opportunities

Participation in regular refresher or supplementary training programs, through a variety of internal and external resources used by other funds, is a leading practice that should be encouraged and monitored by the CRF.

2.C. Investment Managers, Consultants and Advisors Conflicts of Interest

Scope of Review

Our firm reviewed the Fund's policies and procedures that were designed to ensure:

- (1) that investment managers, and consultants or advisors promptly disclose to the Fund in writing any conflict of interest the investment manager or consultant or advisor may have which could reasonably be expected to impair the investment manager's, or consultant's or advisor's ability to render unbiased and objective advice; and
- (2) that investment managers, and consultants or advisors will file annually a statement that they are aware of and in compliance with the following language:

"All investment managers, and consultants or advisors owe the comptroller a fiduciary duty. This means that investment managers, or consultants or advisors must disclose to the Comptroller information about material conflicts of interest. Failure to truthfully complete this statement may result in criminal or civil liabilities".

We also compared the Fund's policies and procedures relating to the selection and/or procurement of investment managers, and consultants or advisors, with common and leading practices. (See also the reports on Tasks 4.B. and 4.D. for findings relating to selection of investment managers, consultants and advisors.)

In addition to those described earlier under Review Methodology, FAS also used several further methods to evaluate the Comptroller's exercise, delegation and implementation of transaction approval authority; the CRF's compliance with transaction-related requirements in regulations of the Department of Financial Services; and how the CRF's policies and procedures compare with common and leading practices. These include:

1. Review of 11 NYCRR Subpart 136-2; Sections 13, 313 and 177 - 179 of the New York Retirement and Social Security Law; Section 235 of the New York State Banking Law;

Section 73 of the New York Public Officer's Law; Section 314 (b) of the New York Insurance Law; and related opinions of the Attorney General and reported cases.

2. Review of investment documents and compliance-related materials produced by PICM staff from the files for all reported investment transactions during the review period that were approved by the Comptroller or pursuant to authority delegated by the Comptroller. The investment transaction file reviews, also discussed under section 1.B.-G. of this report on Investment Related Policies, Procedures and Practices, included confirmation of compliance with fiduciary duty and conflict of interest disclosure obligations, as well as submission to review by the Department of Financial Services.

Findings and Observations

Contracts with managers, consultants and advisors include provisions that are adequate to trigger manager compliance with applicable fiduciary duty, annual conflict of interest disclosure and oversight review provisions in regulations of the Department of Financial Services.

The CRF transaction approval and due diligence procedures appear to be consistent with peer practices and general pension investment industry standards.

PICM staff was able to produce all material file documents requested during our transaction compliance review. However, we did experience several difficulties with the following:

- The CRF does not have a centralized document management system. Transaction files are maintained at the asset class level in different locations and are not readily available to administrative staff in other offices. While files were scanned for this review, some were not previously available in an electronic format that could be easily accessed from other CRF offices.
- File contents for the same transactions were often produced to us in separate batches, sometimes with duplicative or initially missing documents.
- PICM has not established a mechanism for ensuring all transaction documents are in the closing file. While only one-third of peers in the FAS Leading Practices Survey have this file management system capability, we believe that a system for centrally tracking transaction and compliance is particularly important when files are maintained in separate offices, as at the CRF.
- Approval reports, policies and committee minutes do not always use a consistent format for similar content. Providing for greater consistency across similar asset classes could facilitate more efficient transaction approval, review and compliance processes.

- Contract clauses for required CRF legal compliance items have evolved over time and can vary between transactions. To ensure consistent implementation of legal compliance requirements, use of standard contract clauses should be a priority in transaction document negotiations.
- Compliance staff has had difficulty obtaining annual compliance certificates from some managers, though this has improved and is being addressed. We recognize that some of these managers were retained prior to enactment of the current DFS regulations requiring contract terms on annual certifications and that many peer funds also experience difficulties getting timely compliance certificates. However, given the context of past events at the CRF, timely receipt of the annual certifications of compliance with fiduciary duties and conflict reporting obligations required under 11 NYCRR 136-2.4 (c) (1) should be a priority.

Conclusions

1. **Adequate contract provisions have been negotiated and procedures are in place to obtain annual fiduciary duty and conflicts reporting compliance certifications from managers, advisors and consultants.**
2. **Success in implementing those requirements has improved over the review period.**
3. **At the end of the period, the Fund was in substantial compliance with requirements of 11 NYCRR 136-2.4 (c). As of the writing of this report, the CRF had received all but about seven percent of CRF service provider certifications for the year ending March 31, 2012. We understand that this compliance function is prioritized for assignment of additional resources.**
4. **Investment-related contracts are signed and transactions are closed in substantial compliance with applicable CRF policies and procedures.**

Improvement Opportunities

The Comptroller's staff recognizes that file management and related compliance functions have not been adequately resourced, and they have been identified as priorities for continued improvement. We strongly endorse this initiative and believe these are areas of potential risk that should be promptly addressed.

The FAS Leading Practices Survey found that 70 percent of peers (9 of 13) are satisfied with their investment tracking system for non-public investments. However, the CRF was one of only four funds that were dissatisfied.

We believe the following projects to improve the CRF's file maintenance, document control, and enforcement of service provider compliance certification reporting are critical:

1. Develop a robust and centralized electronic file management and document control system.
2. Review PICM policies, practices and procedures to provide greater standardization and consistency for transaction file management, internal transaction approval report forms and the CRF's transaction contract requirements for compliance matters.
3. Establish service provider timely compliance reporting expectations, embed enforcement standards in both compliance and investment staff position descriptions, and incorporate standard provisions in contract negotiations which allow the CRF to withhold payments to managers, advisors or consultants that do not comply.

2.D. Placement Agents or Intermediaries

Scope of Review

Our firm was asked to compare the policies adopted by the Fund with respect to the use of the services of a placement agent or intermediary by investment managers to assist the investment manager in obtaining investments by the Fund, with common and leading practices.

Findings and Observations

The Comptroller adopted a Policy on Placement Agent Disclosure in 2007 and subsequently changed it to an outright ban with compliance reporting in 2009. The Policy was most recently updated on December 2, 2011. It was subsequently incorporated into DFS regulation 136-2.4 (d), which precludes the CRF from investing with any outside manager who is using the services of a placement agent or intermediary to assist in obtaining the Fund's investment. The Policy applies this regulatory prohibition and also requires that the CRF's investment managers provide a disclosure letter 15 days prior to the closing of an investment by the Fund, confirming that no placement agent is being used. This representation must also be confirmed at closing. The Policy contains remedies for a false disclosure statement, which may include termination of the manager, removal of the general partner in a partnership or termination of obligations to contribute additional capital to the investment vehicle.

The FAS Leading Practices Survey determined that placement agent disclosure policies are common at large public pension funds. However, most peers do not preclude investment with a manager that uses a placement agent. They only require disclosure of the relationship and

typically preclude the manager from passing the costs of any placement fee on to the investor. Nevertheless, the CRF policy is seen as a leading practice amongst similar pension funds and does not appear to have precluded the Fund from accessing qualified managers.

Conclusions

1. **The Comptroller adopted the CRF's Placement Agent Policy to preserve the independence and integrity of the Fund, while reducing conflicts of interest.**
2. **Given past problems encountered by the CRF, we believe the policy is an appropriate exercise of the Comptroller's fiduciary responsibilities which has been prudently implemented and operates as an effective risk management tool.**

2.E. Process to Investigate Complaints

Scope of Review

Our firm was asked to compare the Fund's process to receive and investigate complaints from any source, or upon the Comptroller's own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest, or abuse (a) by a committee member, (b) in OSC by a State officer or employee relating to his or her office or employment, or (c) by a person or entity having business dealings with the Fund relating to such dealings, to common and leading practices.

Findings and Observations

The Comptroller's Executive Order on the Office of Inspector General and the OSC's Guidelines for the Conduct of Business by the Office of the Inspector General establish a process to receive and investigate complaints of wrongdoing from any source, in accordance with DFS regulation 136-2.4 (a) (3). The Inspector General is given full authority to investigate complaints, including the power to take testimony under oath, require production of documents and refer matters to law enforcement authorities. Employees who use the process in good faith are protected from retaliation, discipline or other adverse personnel action. The Inspector General's Guidelines are posted on the OSC website.

Conclusions

The OSC process for receiving and investigating complaints relating to the CRF is consistent with applicable regulatory requirements and with policies at other similar pension funds.

Improvement Opportunities

Consideration should be given to formally referencing the complaint Investigation process in personnel policies and ethics codes of the OSC. Consideration should also be given to adding provisions that explicitly deal with:

- according confidentiality to someone who files a complaint;
- specifying with whom a complaint against the Inspector General would be filed;
- including an obligation to expeditiously complete investigations of meritorious complaints; and,
- extending protection from retaliation beyond OSC officers and employees to third party CRF service providers, counterparties or investment candidates.

3. OPERATIONAL TRANSPARENCY

3.A.1 Publication of Policies and Procedures

Scope of Review

Our Firm was asked to compare the publication of various policies and procedures and other information on OSC's website with common and leading practices. The FAS Leading Practices Survey examined the disclosure of:

- Data related to the investment portfolio and performance
- Investment related policies and performance
- Governance related documentation

Findings and Observations

Funds broadly consider overall investment portfolio and performance as public data. However funds are more guarded about the disclosure of individual transactions and fees to protect confidentiality and market sensitive information. In many regards, the CRF fits in the leading peer group in relation to the disclosure of investment related information. For example, the majority of funds (9 of 15) do not disclose transactions whereas the CRF discloses transactions on a monthly basis, the most frequent in the peer group. Similarly, the CRF fits in the peer group of funds (11 of 15) that disclose investment performance more frequently than annually.

The prevailing practice for disclosure of investment holdings is annually, as CRF does, but 4 of the 15 disclose more frequently. Peer group funds are about evenly split between annual or more frequent disclosure of payments to external managers. The CRF is in the latter category.

Results of the FAS Leading Practices Survey on the publication of investment related data is summarized in Table 8 below.

TABLE 8 PUBLIC DISCLOSURES

What level of disclosure do you provide to the public with respect to the following?	Number of Responses (N=15)		
	Annually	Monthly, quarterly or semi-annually	No disclosure
Investments and portfolio holdings	9	4	1
Individual investment transactions	1	4	9
Investment managers	7	6	1
Investment performance	3	11	0
Placement agents and payments to third parties (if allowed)	4	3	5
Verbatim comments:			
Significant individual investment transactions are announced by press release. Otherwise, no disclosure on individual investment transactions, unless required by local legislation (ex: form 13F for the US SEC).			
Most investments are public information, there are exceptions due to confidentiality issues. Individual investment transactions only provided upon request.			
Use of placement agents are banned; however, there is a disclosure and representation that none are used prior to an investment closing, as reported monthly. Management fees, consultant costs, and commissions are reported annually.			
Additional information provided under FOIA requests.			
System information is available to the public upon request as and to the extent required by the state Freedom of Information Law. Investment transactions authorized by the Retirement Board are reported in summaries of Board meeting actions.			
Partial disclosure only (over certain size threshold) for all except investment performance which has full disclosure.			

The survey found consistency in the documentation and disclosure of investment and risk related policies. The CRF’s investment and risk policy documentation and transparency practices are similar to the peer group and we note that CRF publicly discloses the Investment Policy Statement on the OSC website. The exception within the peer group is Environmental, Social and Governance (ESG) policies, which are not published to the OSC website. Together with the majority of the peer group, CRF documents risk policies and reports but does not publicly disclose these documents. The CRF’s transparency on ethics and conduct policies appears to be among the leaders of the peer group. We credit the effective implementation of the Pension Reform Task Force recommendations as one of the drivers behind the high level of transparency of investment policies.

TABLE 9 POLICY DISCLOSURES (Investment and Risk)

Please indicate which of the following are documented and, if so, if it is available on your web site.	Number of Responses (N=15)	
	Documented	Available on Fund Website
<i>Investment and Risk:</i>		
Investment guidelines/investment policy	15	11
Risk management policy	10	2
Risk management reports	15	2
Quarterly and annual portfolio and fund performance reports	15	10
Asset allocation and rebalancing policies	13	7
Securities lending cash collateral investment guidelines	15	1
Fund and portfolio benchmarks	15	10
Responsible investment or ESG policy	9	6
Proxy voting policies	15	8
<i>Ethics and Conduct</i>		
Standards of Conduct, ethics code(s) and conflict of interest policies for staff, board/committee members and consultants/advisors	15	7
Insider trading and/or personal trading policies	14	7
Policy on use/disclosure of placement agents	10	4
Whistleblower and/or complaint policy	13	5
Securities litigation policy	10	4

The FAS Leading Practices Survey also found consistency in the documentation and disclosure of governance related policies. At least half of the peer funds, including the sole fiduciaries, make board and committee charters and meeting agendas and minutes available online. The CRF does not disclose this category of information.

The CRF is aligned with the majority of peer funds that document external manager policies but do not post them on their web sites. The CRF does, however, provide guidance and information on upcoming RFPs for external managers.

TABLE 10 POLICY DISCLOSURES (Board and External Managers)

Please indicate which of the following are documented and, if so, if it is available on your web site.	Number of Responses (N=15)	
	Documented	Available on Fund Website
<i>Boards and Committees</i>		
Schedule of board and committee meeting agenda topics (or agendas for past year)	14	9
Board and committee charters	13	7
Committee minutes	15	7
Board or committee member charters or job descriptions	11	4
<i>External Managers</i>		
External manager review, watch list and/or termination policy	14	2
RFPs for external managers and advisors	12	6

Conclusions

The CRF is a leader in most of the categories of data and policy disclosure:

1. In particular, the CRF ranks in the leading group for investment performance, transaction and fee disclosure. The emphasis given to transparency of data in these categories in response to the Pension Task Force recommendations is clearly evident in these peer group leading results.
2. The Fund broadly tracks the peer group in relation to the publication of investment and risk policies and is aligned with prevailing practice.

Improvement Opportunities

The peer group is evenly split in the disclosure of governance related policies and information. The Fund, together with approximately half the peer group, currently chooses not to disclose this type of information. The Fund may wish to enhance transparency in this area.

3.A.2 Level of Disclosure in the CAFR

Scope of Review

Our firm was asked to review the type and amount of information disclosed in CRF's Comprehensive Annual Financial Report (CAFR) in comparison to common and leading practice.

The review was conducted based on:

- The New York State and Local Retirement System Comprehensive Annual Financial Reports (CAFR) for the last three fiscal years covering the review period
- CAFRs of the 14 benchmark peer group funds

Findings and Observations

Using the CRF's CAFR as a baseline, we compared the categories of detailed information disclosed to the other 14 Funds in our FAS Leading Practices Survey.

In summary:

- Most of the US funds in the peer group employ the common elements defined by the Government Finance Officers Association (GFOA) for the major report sections. The typical sections are:
 - Introduction/Background
 - Financial
 - Investment
 - Actuarial
 - Statistical
- We note that CRF has been awarded the Certificate of Achievement for Excellence in Financial Reporting by GFOA for each of the CAFRs published during the review period.
- Across the peer group the data disclosed in the CAFRs is relatively consistent, particularly the summary, financial and investment information. Through the adoption of GFOA reporting elements, the content and structure of CAFRs in the peer group appear to becoming more standardized to allow for cross fund comparison by stakeholders.

- The variations from this standard structure include the omission of either the actuarial or the statistical sections. In these instances, the data included in these sections is typically available either through the fund website or other reports published by the fund.
- The non-US funds in the peer group share much of the same information categories but do not typically follow the same defined structure as the U.S. funds. In particular, the statistical and actuarial sections are not typically included in the CAFR.
- The format for non-US fund CAFRs reflect approaches, content and format typically found in private sector company annual reports.
- Across the peer group, several CAFRs included additional topics that are not referenced in the CRF CAFR, including:
 - Risk management overview
 - Compliance overview
 - Reports from committees

Conclusions

1. **We conclude that the CRF is consistent with the peer group in the type and detail of data contained in the CAFR.**

Improvement Opportunities

Several funds have started to disclose more operational information, including on compliance and risk management. The CRF may wish to consider the merits of disclosing additional information related to these topics to continue to demonstrate the Fund's commitment to transparency and leading governance practices.

3.A.3 Third Party Contractual Requirements

Scope of Review

In this part of our review, we examined the contractual requirements imposed on investment advisors, consultants and advisors and any third party administrators with respect to responding to inquiries by the Superintendent of Insurance.

Findings and Observations

Section 136-2.5(b)(2) of the Regulations of the State Insurance Department requires that all agreements with consultants or advisors, investment managers or third party administrators include provisions that require a response in writing to any inquiry by the Superintendent of Insurance concerning fees paid by the Fund and services rendered to the Fund. This provision was adopted in December 2008.

We reviewed a sample of 32 agreements signed with investment management firms during the three years ending March 31, 2012. Of those, 18 included specific provisions which provide the Superintendent access to records with a response to inquiries in writing. All of the other management contracts include a general access to records provision for Fund investors, although there is not typically a requirement that the general partner or Fund manager respond in writing.

We also reviewed a sample of 16 contracts signed with consultants or advisors during the three years ending March 31, 2012. Of those, 13 included specific provisions which provide the Superintendent access to records with a written response from the vendor required to the Superintendent's requests. The remaining three contracts with consultants included general access provisions that did not specifically name the Superintendent.

Conclusions

The CRF's contracts with investment managers and consultants provide appropriate access to their records by the Superintendent of Insurance, either through a specific provision or through a more general access provision.

Improvement Opportunities

In the majority of cases, there is a requirement for a written response to the Superintendent's inquiries, although it is less consistently included in investment management contracts. These requirements could be more consistently included in all contracts.

3.A.4 Expense Recording and Transparency

Scope of the Review

The scope of this part of the review addresses the extent to which the Fund's records related to expenses incurred in the course of operations are available for inspection. For the purpose of this analysis, we have included operational and investment expenses.

The review was conducted based on reviews of:

- The New York State and Local Retirement System Comprehensive Annual Financial Reports (CAFR) for the last three fiscal years covering the review period
- The Office of the State Comptroller website
- The CAFRs and websites of the benchmark peer group funds

Findings and Observations

Our review of the Fund's records of expenses incurred in the course of operations reveals the Fund tracks and discloses in the Annual CAFR expenses related to:

- Administrative expenses including:
 - Personnel services – salaries and benefits
 - Building and occupancy
 - Computers – hardware, software, consulting
 - Personnel and operating expenses – training, travel, etc.
 - Professional expenses – medical and consulting
- Investment expenses
 - Investment management and incentive fees – detailed by Asset Class including commission, incentive and management fees
 - Investment related expenses including: legal, loan servicing fees, licenses, consulting and monitoring services by asset class, administrative, audit, custodial services

The expenses incurred are scheduled in the additional supplementary information of the financial section of the CAFR. Detailed fees paid to individual managers, consultants and other third parties are included in the Investment Section of the CAFR.

We compared the level of detail to which the CRF's records are maintained and the extent to which these records are published with the other 14 Funds in our FAS Leading Practices Survey in a separate review of each of the CAFRs and websites. The results are shown in Table 11 on the following page.

Our review indicates:

- The CRF maintains and publishes a comprehensive record of expenses incurred by the Retirement System and the Fund on their behalf in the course of operations in accordance with Regulation 136 2.5 (e). This data has been published and made publicly available in the Fund's CAFR on an annual basis for the duration of the review period.
- The Fund's level of transparency of expense records compared to common and leading practices shows the CRF as the peer group leader.
- The categories used by the CRF to record operational expenses, both administrative and investment related, are the most granular in our peer group. The CRF used the largest number of categories to structure the information and presents the data in clear and logical structure to allow analysis and comparison. Only two other funds in the peer group match the level of detail in both categories and data reported as the CRF.
- The level of detail in the recording of administrative operational expenses is relatively consistent across the peer group. Of the 14 other peers, eight funds record and report the same expense categories as the CRF. Typically, this detail is presented as supplemental information in the financial report sections of the CAFR and this relative uniformity appears to be driven by adopted financial reporting standards. There are two outliers in the peer group that do not publish detailed expense data in the Fund's CAFR.
- The largest variation in expense records is seen in investment related expenses. Again, the CRF leads the peer group, along with two other funds, in the detail of the records.
- Five of the peer group present at least some level of investment related expense records at an aggregate level of detail including data related to management fees, consultant fees, professional and legal, general administrative expenses, custodial and other fees. A further four also break down management and consulting fees by asset class. Only four funds record and publish expenses data by firm (manager, consultant, legal, etc.). Of the outliers, one fund publishes investment related expenses as a single line item, while one fund omits any investment expense data from the CAFR.

- The CRF, together with two other funds, records and publishes data at the most detailed level within the peer group to allow review of investment related expenses by manager or consultant.

Conclusions

1. The CRF appears to be compliant with the regulations relating to the maintenance of operational expense records.
2. Furthermore, the Fund leads the benchmark peer group in the detail of operational expense records disclosed.

TABLE 11 POLICY DISCLOSURES (Expense Categories)

Expense Category	CRF	Fund 1	Fund 2	Fund 3	Fund 4	Fund 5	Fund 6	Fund 7	Fund 8	Fund 9	Fund 10	Fund 11	Fund 12	Fund 13	Fund 14
Administrative Expenses								X		X			X		
Salaries & Benefits	X	X	X	X	X	X	X		X		X	X		X	X
Buildings	X		X	X	X	X	X		X		X			X	X
IT	X	X	X	X	X	X	X		X	X	X	X		X	X
Personnel operating expenses	X	X		X	X	X	X		X		X	X		X	X
Professional Services	X	X		X	X	X	X		X		X			X	X
Others	X		X	X	X	X	X		X		X	X		X	X
Invested Related Expenses													X		
Management Fees:	X	X	X	X	X	X	X	X	X	X		X		X	X
by manager	X			X		X	X								
by asset class	X			X			X		X	X		X			
Consulting Fees:	X	X		X		X	X	X	X	X		X		X	X
by consultant	X			X			X		X						X
Legal & Professional	X			X		X	X	X	X	X		X			X
Other	X			X		X	X		X	X		X			X
Administrative Custodial	X	X		X				X	X	X		X		X	X
Others	X	X		X				X		X		X		X	X

4. EFFICIENCY AND EFFECTIVENESS OF MANAGEMENT

4.A. Investment-Related Operations

Scope of Review

Our firm was asked to compare the CRF's investment-related operations within the current legal framework with common and leading practices. The evaluation focused on ascertaining whether there is a need for clarification and/or additional specification of roles and responsibilities.

4.A.1 The training provided to the Comptroller and staff with respect to investment matters.

This task is addressed under Task 2.B. Employee Training.

4.A.2 The reporting lines of authority and whether the roles of the Comptroller and staff are clearly defined, i.e., what actions staff may take independently and what actions require approval of the Comptroller

Findings and Observations

Delegations of investment authority by the Comptroller are contained in the General Investment Policies and in related policies, procedures, reporting and control guidelines for the asset classes. Our FAS Leading Practices Survey found that peer funds approach delegation of authority and reporting in a similar fashion.

The CRF Investment Policy Statement was compared to benchmark peers. In addition, the following FAS Leading Practices Survey charts demonstrate that the board or sole fiduciary retains approval authority for hiring and firing investment managers at approximately half of the FAS Leading Practices Survey peers, the same practice as the CRF.

However, ongoing manager evaluation is typically delegated to investment staff at over 70 percent of similar funds, including at the CRF. Reporting on investment activity is almost universally done either quarterly or, like the CRF, monthly.

TABLE 12 ROLES AND AUTHORITIES

What are the roles of each of the following groups for the indicated activities of the investment fund? Please indicate from the drop-down menu whether the role for that group is:	Number of Responses (N=15)			
	1. Approve	2. Oversee	3. Recommend	4. Monitor
Investment risk management - Fiduciary (Trustee or Board)	7			6
Investment risk management - Advisory Committee		1	2	1
Investment risk management - Investment Staff	6	1	6	1
Investment risk management - Consultant		2	4	1
Manager hiring and termination - Fiduciary (Trustee or Board)	8	2		4
Manager hiring and termination - Advisory Committee		1	2	1
Manager hiring and termination - Investment Staff	8		7	
Manager hiring and termination - Consultant	1	1	7	

TABLE 12 ROLES AND AUTHORITIES (Cont'd)

What are the roles of each of the following groups for the indicated activities of the investment fund? Please indicate from the drop-down menu whether the role for that group is:	Number of Responses (N=15)			
	1. Approve	2. Oversee	3. Recommend	4. Monitor
Ongoing investment manager evaluation - Fiduciary (Trustee or Board)	1	2		8
Ongoing investment manager evaluation - Advisory Committee			1	1
Ongoing investment manager evaluation - Investment Staff	11	2	1	
Ongoing investment manager evaluation - Consultant	1	4	3	1
Ongoing internal investment staff evaluation - Fiduciary (Trustee or Board)		4		6
Ongoing internal investment staff evaluation - Advisory Committee		1		1
Ongoing internal investment staff evaluation - Investment Staff	11			
Ongoing internal investment staff evaluation - Consultant	1	2		

TABLE 13 FREQUENCY OF FIDUCIARY REPORTS

What is the frequency of activity reports to the fiduciary from the investment staff and/or investment agent(s) to whom investment decisions have been delegated?	Number of Responses (N=15)				
	Monthly	Quarterly	Semi-Annually	Annually	Other
Public Assets	5	9	0	0	1
Private Assets	4	10	0	0	1
Cash and Liquid Assets	6	8	0	0	1

Conclusions

The Comptroller's delegation of authority and reporting lines at the CRF are clearly detailed in the Fund's investment policies and are well within common practices used at similar funds.

Improvement Opportunities

A project to consolidate and improve the consistency of related policies and update policy language is under way at the CRF. This project should be given priority, as a way to improve clarity and consistency of the Comptroller's delegation and reporting policies.

4.A.3 CRF’s use of IAC and REAC

Findings and Conclusions

1. Based on our review of IAC and REAC committee charters and minutes and interviews with committee members, PICM asset class heads, the current and interim Chief Investment Officers and the CRF's investment advisors, it appears that both the IAC and REAC are being effectively used, though there are some improvement opportunities, as discussed in section 2.A.1 on Committees.
2. In addition, the FAS Leading Practices Survey confirmed that most peer funds also have similar investment and risk committees, with advisory committees being the more prevalent structure at funds with sole fiduciaries. Further discussion of IAC and REAC, including options for consideration; appear in Section 2 of this report.

TABLE 14 STANDING INTERNAL STAFF COMMITTEES

What types of standing committees does your organization utilize?	Re-sponses	Sole Fiduciary N=3	Trustee Board		Number of meetings annually	
			Investment N=5	Integrated N=7	Average	CRF
Internal Staff Committees:						
Investment (all asset classes)	12	2	4	6	12	11 or more
Risk	7	1	4	2	8	6-10
Executive	6	1	2	3	9	
Private Assets	5	1	3	1	10	
Real Estate	5	1	3	1	8	
Alternatives	5	1	2	2	8	
Public Assets	4	1	1	2	12	
Finance and Administration	4	1		3	9	
Corporate Governance/ESG	3		1	2	6	
Governance	2			2	8	
Strategic Planning	2			2	8	
Pension Benefits/Actuarial	2		1	1	8	
Personnel and Compensation	1			1	4	

4A 4 Evaluate the level of support provided to CRF and investment staff by attorneys, both internal and external.

Findings and Observations

Staffing of the CRF legal function is similar to staffing at peer pension funds. On a normalized assets-under-management basis, the CRF is staffed within half a position of the median peer group level for in-house attorneys. In addition, like most of its peers, the CRF is beginning to use flat fee arrangements for outside counsel working on investment transactions. This is expected to moderate expenditures on outside counsel fees.

TABLE 15 INVESTMENT LEGAL OPERATIONS

Legal Operations	Average	Median	Minimum	Maximum	CRF
How many attorneys are on your fund's internal counsel staff with duties relating primarily to investment and operational matters (not benefits and administration)?	4.0	3.3	0	11	7
Number of attorneys per \$100 billion in AUM	4.4	4.5	0.0	9.6	5.0
Over the past year, approximately what percentage of total legal services expenditures for investment and operational matters (not on benefits and administration) was for external counsel?	58% ^{1/}	60-80%	0-20%	80-100%	60-80%
Verbatim comment:					
Legal support for public market investments is provided predominantly by in-house lawyers. Legal support for alternative investments, especially real estate, which comprises most of the legal time devoted to investments, is provided almost entirely by outside counsel.					

TABLE 16 OUTSIDE LEGAL COUNSEL

Legal Operations	Yes	No	Sometimes
Do you engage outside legal counsel on a flat fee or set transaction budget basis?	4	3	7
Verbatim comments:			
For transactions we don't have a standard flat fee arrangement. We do have a variety of other alternative fee arrangements for transaction/deal work with our external legal providers. The nature of those arrangements depends on the jurisdiction and the specific deal. These arrangements have reduced external legal costs although none would be classified as a flat fee. We do have a flat fee arrangement in place for our NDA work which we've outsourced to a legal provider, but NDAs are more of a true commodity legal service which is where you typically see flat fee arrangements employed.			
Contingent fee arrangements are typically used for securities litigation matters.			

TABLE 17 LEGAL FEES

Legal Operations	Yes	No	Uncertain
Do you believe flat fees or working to a set transaction budget lowers legal fees?	7	2	4
Verbatim comments:			
We are in our first procurement with external counsel for flat fees for some work.			
Sometimes, depending on the fee arrangement.			
Yes, flat fees work for commodity legal service. The vast majority of our legal spend, however, is for investment transaction work all of which requires bespoke legal service.			
It also improves efficiency.			

From reviews of the CRF’s investment transaction documents, committee materials, minutes and various interviews, it appears that the CRF’s legal operations staff is providing an appropriate level and quality of service to PICM officers and staff. Outside law firms engaged by the CRF are qualified for their assignments. Internal legal staffing levels, use of outside counsel and standards for quality and scope of legal services are comparable to the CRF’s peers. Legal support is provided across all aspects of PICM operations where it would be expected. Increased attention is being accorded to selection and engagement of outside counsel on a flat fee basis, which we believe will reduce fee expenditures.

Conclusions

1. We support the decision to move toward selecting investment transaction counsel on a flat fee basis. This should help to reduce legal fee expenditures going forward.
2. As a result of the improper activities during the Hevesi administration, the fund engaged a law firm to review all transactions and provide assistance in unwinding some transactions, which created a high level of expense. The culmination of that review should result in lower future OSC legal fees. Nevertheless, legal fees are highly dependent on the types of investment programs in place (real estate and private market transactions require a greater level of customized legal services) and the occurrence of bankruptcy, litigation or other extraordinary events can be legal service intensive.

Improvement Opportunities

Several projects are being initiated which will enhance legal services being provided to the CRF and PICM staff:

- (a) the initiative to update and better integrate currently separate investment policies into a comprehensive policy manual: and,
- (b) standardization of contract clauses for required compliance and regular CRF investment transaction documentation provisions.

4.B. Use of External Managers and Consultants

Scope of the Review

We compared the CRF's investment management operations within the current legal framework regarding the use of external managers and consultants with common and leading practices. Consideration was also given to the advantages and disadvantages of various styles of investment management. Our analysis and evaluation includes:

- (1)** The number of external managers and the sizes of the accounts or funds under management, for comparison with common and leading practices of diversification;
- (2)** The knowledge and expertise, scope of work, reporting responsibilities, and fees of external managers;
- (3)** the knowledge and expertise, scope of work, and fees of consultants;
- (4)** Effect on the performance of the Fund of augmenting staff capabilities through the use of external managers and consultants;
- (5)** The expenses for managing the Fund, and comparison with selected enterprises of like character and with like aims in relation to the performance of the Fund; and
- (6)** Other costs associated with external asset management, including custody, securities lending, and transaction fees.

We identified the number of external managers, their average mandate size by asset class and whether there were any significant changes during the three-year review period. We also benchmarked the CRF compared to its peers and we identified significant strategic considerations which may affect the number of external managers. In the following analysis, we separate the discussion of external managers and consultants/advisors.

As described earlier, FAS used a number of methods to establish the knowledge and expertise, scope of work, reporting responsibilities and fees of external managers and consultants or advisors. These included:

1. A 360 degree structured interview-based evaluation process. This primary research included more than 50 conversations, including:
 - a. More than 25 interviews of CRF and OSC personnel, including the primary person responsible for every asset class at the CRF, plus follow up interviews;
 - b. Three interviews with members of the Investment Advisory Committee (IAC) and the Real Estate Advisory Committee (REAC); and.

- c. 15 interviews with the CRF's consultants and external managers, including the general consultant and the consultants with primary responsibility for every asset class.
2. Document review of a sample of managerial contracts, Internal Investment Committee minutes, Investment Advisory Committee minutes and Real Estate Advisory Committee minutes; as well as a review of other CRF documentation such as the CAFR, legislative reports and web site postings.
3. Review of a sample of manager web sites.

4.B.1 Evaluate the number of external managers and the sizes of the accounts or funds under management, for comparison with common and leading practices of diversification

Findings and Observations

The CRF primarily utilizes three types of legal structures for external managerial relationships. Those structures, by which assets are deployed, have material implications for how much customization the CRF can accomplish, the fees paid, and the flexibility of entering and exiting manager relationships.

1. Separate accounts involve a direct contract between the CRF and the external manager and allow maximum customization and negotiation. Under this arrangement, primarily utilized by the Global Equity group within the CRF, assets are managed by an external manager but the assets, primarily public equities, are held by the CRF's custodial bank, and the CRF owns the assets directly.
2. Partnerships, wherein the CRF is a limited partner and the asset manager is the general partner are primarily used in the private equity, real estate, absolute return strategies, and opportunistic asset classes. These are often comingled funds, with standard terms for all limited partners. While some level of negotiation occurs particularly around fees (given the CRF's size and desirability as a limited partner), terms and conditions are usually established at the beginning of the partnership period and are not revisable except under certain, specified circumstances. Nor can the CRF exit a partnership before its expiration, except under specified conditions.

3. The CRF utilizes joint venture partners, particularly in the real estate asset class. In these situations, the CRF negotiates a partnership agreement directly with the general partner, usually for a specific, single, sizeable asset (such as an office building).⁸

Conclusions

1. The number of the CRF's external managers and the size of the accounts or funds under management, when compared with common and leading practices of diversification, are relatively larger and yet overseen with fewer staff.
2. The CRF has over 450 external mandates, a relatively large total compared to its peers. Those mandates are largely in alternative assets. The number may grow as the Fund pursues strategic changes in private equity and real estate, and increases allocations to absolute return, opportunistic investments and real assets. This also has workload implications for staff involved in the selection and oversight of external managers.
3. The CRF has more assets and a larger number of external mandates than its peers in absolute return and private equity. The CRF is generally in the mainstream of its peers with respect to the average size of its external mandates, although the average for domestic equities and absolute return is relatively low.

Improvement Opportunities

The CRF lags its peers with respect to the number of staff it has to manage external mandates in areas such as private equity.

- Options would include fewer but larger mandates in certain areas, increased reliance on consultants in the oversight of external managers and/or increased internal resources. The new CIO has indicated that an early priority will be to examine external manager relationships with an eye towards reducing or discontinuing those that have been less productive.

⁸ For the sake of completeness, the CRF internally manages all fixed income and passive domestic equity. Since there is no external management, those asset classes are not considered in this section.

4.B.2 Knowledge and expertise, scope of work, reporting responsibilities and fees of external managers

Findings and Observations

Knowledge and expertise of external managers

As is detailed in the due diligence section (4.D.) below, the CRF's managerial hiring process includes four different levels of approval. (The total approvals are arguably five, given the de facto need for consultant approval). In order to be hired, an external manager must first be approved by the asset class head, then the Internal Investment Committee (IIC), then the CIO and finally the Comptroller. In addition, the asset class consultant's memorandum must be included in the approval package for the Comptroller. While, in theory, a manager could be hired over the objections of the asset class consultant, we found no such instances.

The combination of this approval process, together with the due diligence process, results in selection of managers who are of institutional quality. Each manager contacted by FAS was experienced and knowledgeable in its asset class, had other material institutional investor clients, and was clear as to what was expected of it, not only by contract or partnership agreement in its relationship with the CRF, but also by culture and by the staff. The vast majority of the CRF's managers are well-known and respected within their respective asset classes. The selection processes used by the CRF appear to provide standards that are consistent with the standards for selection of managers used by peer funds, while following applicable New York legal requirements.

The FAS Leading Practices Survey found that authority for selection and termination of managers is evenly split between the named fiduciary (as is the case with the CRF) and investment staff. However, the CRF was one of only two funds in the survey that reported their private market decision-making process occasionally results in disadvantages to the Fund. As a result, greater delegation of investment authority to the CIO was mentioned in the survey as a leading practice.

No managers, staff or consultants reported any improper attempts to influence them or to hire unqualified managers. All managers were aware of the "no placement agent" prohibition that applies to mandates to manage the CRF's assets. All managers contacted directly followed that prohibition and filed the appropriate documentation. There was one manager who had used a placement agent, however this was a general partner where the partnership pre-dated the

prohibition. This occurred during the period when disclosure was the only requirement. Such disclosure was made appropriately.

External Managers' Scope of Work

The external managers' scopes of work appear to be industry-standard, involving appropriate management of assets in the various asset classes. Also, the CRF leverages its size and standing to benefit from managers' areas of expertise, gaining valuable industry and market expertise beyond the scope called for in the contract or partnership or joint venture agreement.

For example, the CRF is investigating the potential of infrastructure investing. Although CRF employs one manager as a global equity manager and its infrastructure investment team is completely separate from that mandate, the manager made the infrastructure team available to the CRF upon request.

Other examples include: The real estate staff has used a real estate general partner to provide its views of the real estate market, both generally and in areas as specific as how technology companies are using buildings on the U.S. West Coast; the absolute return strategies staff has asked a distressed manager for its views on other hedge funds; and the corporate governance unit has utilized the expertise of the legal staff at an activist fund to gain insight into regulatory and legal developments.

External Manager Reporting

Manager reporting is at or above industry standard in terms of frequency for each asset class. Managers report both to the appropriate CRF staff and the asset class consultants. Many managers hold periodic telephonic, web-based, or in person meetings with multiple investors, and the CRF participates in those.

In addition, as virtually all equities and fixed income assets are directly custodied at the CRF's custodial bank, the CRF receives daily reports on those assets. Also, managers will make special reports to the CRF upon their request. For example, an activist equity manager routinely makes a non-periodic, substantively-triggered report to the CRF whenever it believes that one of its actions will cause public notice. Finally, we note that managerial reporting is inextricably intertwined with the monitoring of those managers by the CRF staff, discussed in 4.D.3, below.

External Manager's Fees

External management fees represent the largest expense for the CRF, as it does for its peers. Fees can have a significant effect on the net return delivered by investment managers. In FY 2012, the CRF paid \$405.0 million in management and incentive fees, more than 93% of the CRF's total expenses.

TABLE 18 CRF Expenses Fiscal Year 2012*		
	Amount (in Millions)	Percent of Total
External Management and Incentive Fees		
Private equity	\$128.7	29.7%
Absolute return strategy funds	110.7	25.5%
Real estate	69.7	16.1%
International equity	64.3	14.8%
Domestic equity	25.5	5.9%
Opportunistic	6.1	1.4%
Subtotal	\$405.0	93.3%
Consulting, Legal and Other External Fees	\$18.6	4.3%
Internal Expenses	\$10.5	2.4%
Total	\$434.1	100.0%
*Source: FY 2012 CAFR		
**Excludes capitalized expenses and carried interest		

Most of the CRF's investment programs, including private equity and real estate, are mature, resulting in relatively stable fee levels. Indeed, the CRF's external management costs have remained essentially the same or decreased over the last three years in all asset classes but absolute return strategies.⁹ Absolute Return Strategies (ARS) is a relatively young asset class. ARS assets more than doubled and management expenses grew by nearly 70% from FY 2009 through FY 2012¹⁰. Other factors affecting fees include market supply and demand. As the 2008 financial crisis took hold, private equity and real estate fees dropped with weaker investor demand. This contributed to the CRF's relatively flat to declining external management expenses. As the economy recovers, staff anticipates that market rate fees may increase again.

⁹ Domestic equity fees declined by 27% in FY 2012, this is largely as a result of terminating several external managers in that asset class.

¹⁰ In addition to \$78.7 million in management fees, CRF paid \$32.2 million in ARS incentive fees in FY 2012.

TABLE 19				
Change in CRF External Management Fees FY 2010 to FY 2012				
	2009	2010	2011	2012
Private equity	\$129.4	\$115.8	\$109.2	\$128.7
Absolute return strategy funds*	46.3	48.8	54.2	78.4
Real estate	72.6	76.9	81.9	69.7
International equity	63.9	70.2	70.6	64.3
Domestic equity	34.9	34.6	36.7	25.5
Opportunistic			11.1	6.1
Total	\$347.0	\$346.3	\$363.8	\$372.6
*Excludes incentive fees. Source: CAFRs for FY 2009 through 2012				

CEM's analysis of 2011 fees shows that the fees the CRF paid in basis points (costs divided by assets) were lower than the peer median for eight types of assets, at the median for three, and higher than the median for four. On a relative basis, the differences were material in the areas where the CRF exceeded the peer median cost, particularly in emerging market equities and hedge funds (absolute return).

TABLE 20
CEM Analysis of CRF External Management Fees
Compared to Large U.S. Public Fund Peers¹ in 2011

Management Style	Asset Type	CRF's Average Holding (in \$ mm)	Number of Peers	Cost in basis points		Estimated CRF (Savings) or Additional Cost	
				CRF	Peer Median	Basis Points	Amount (In \$ millions)
CRF Below Median Cost							
Active	Domestic Equities –Small/Mid Cap	3,779	9	44.2	64.5	(20.3)	(7,671)
Active	Real Estate ³	4,346	3	52.4	63.0	(10.6)	(4,618)
Active	International Equities - EAFE ²	9,703	10	28.5	33.3	(4.8)	(4,612)
Active	Private Equity - Other	544	4	97.3	141.1	(43.8)	(2,381)
Fund of Funds	Absolute Return –Hedge Funds	240	3	195.9	250.6	(54.7)	(1,314)
Passive	Domestic Equities – Small/Mid Cap	2,720	2	1.9	4.4*	(2.4)	(662)
Active	Real Estate – Fund of Funds ⁴	50	1	98.8	141.4*	(42.6)	(213)
Passive	International Equities – ACWI ex U.S. ³	5,637	3	3.2	3.2	0	(27)
CRF at Median Cost							
Active	International Equities – ACWI ex U.S. ³	1,583	3	37.6	37.6	0	0
Active	Real Estate - Limited Partnerships	7,074	7	96.2	96.2	0	0
Active	Private Equity – Fund of Funds	2,591	7	148.7	148.7	0	0
CRF Above Median Cost							
Active	Absolute Return –Hedge Funds	4,319	9	171.6	129.5	42.1	18,193
Active	Emerging Market Equities	2,604	11	93.3	58.9	34.4	8,952
Active	Global Equities	3,241	7	43.5	34.7	8.8	2,862
Active	Domestic Equities –Large Cap	2,924	8	39.3	30.0	9.3	2,729
Not Benchmarked							
Active	Private Equity – Active	15,077	11	99.5**	Excluded	NA**	NA**
Total added cost						0.8	11,237
¹ Excludes carried interest, performance fees and incentive fees for private equity, real estate and hedge funds. Includes public market performance fees, ² EAFE = Europe, Asia and Far East, ³ ACWI ex U.S. = All Country World Index except U.S., ⁴ Excludes Real Estate Investment Trusts (REITS) *Universe peer median Large fund peer data insufficient, **Insufficient limited partnership data to draw comparison							

External Manager Fee Negotiations

As staff and consultants noted, and consistent with leading practice, the CRF's primary objective is not to seek managers who simply offer the lowest fee. Instead, it is finding managers who are likely to provide the leading return, net of fees, on a risk adjusted basis over time. Within that objective, however, staff and consultants indicate that the Comptroller and senior managers give high priority to lowering fees.

The CRF actively negotiates fees and other terms. While fee concessions from external managers are not always achievable, the CRF has a record of achieving fee reductions. For example,

- The August 18, 2011 private equity presentation to the IAC notes ten fee reductions (or the equivalent thereof) achieved in the preceding year. Overall, the 2% management fee for private equity limited partnerships has dropped to 1.5% or less in most cases because of the negotiating leverage the CRF has with a very large portfolio and long-standing relationships with general partners. In some transactions, the CRF has also been able to reduce the 20% carried interest the general partner receives.
- The CRF negotiated a significant reduction in the management fee and carried interest for the in-state private equity program.
- Discussions with external managers confirm the CRF's active negotiations: One hedge fund recalled that when it merged two funds into one, thereby saving investors (including the CRF) various duplicative fees, the CRF was the only investor to leverage the assignment condition in the partnership agreement into a lower fee.

In our review of staff recommendation memos for proposed transactions, approximately 90% of fees were described as at or below market rates and, in the few instances of above market rate fees, explicit justifications were documented.

Other reductions in fees resulted from structural changes such as moving from a fund of funds strategy to direct investments in hedge funds. According to CEM's analysis, that change is saving the absolute return portfolio at least 25 basis points in fees. Given the actions the CRF has taken to reduce fees, there are two potential explanations for the apparent paradox between the CEM data showing a small net above peer-level fees and the internal evidence of fruitful negotiation and appropriate focus. First, there can be a time-frame mismatch, particularly in younger asset classes such as ARS. Indeed, structured interviews with both the CRF staff and consultants suggest an increased emphasis on fees by ARS in the past year.

Second, fee levels are dependent upon both the nature of the asset classes and investment structures. Certain investment structures, which in and of themselves do not determine investment strategy, can be used to both reduce fees and give the investment staff more control over investments (as the CRF has done with the move away from hedge funds of funds).

Potential savings require more in-house staff. Within private equity, for example, many investors use material co-investment programs to both fine-tune exposure to different sub-asset-classes, as well to reduce fees overall. However, the August 18, 2011 presentation notes that only 4% of private equity investments are co-investments and that additional staff would be necessary to ramp up such a program. Within ARS, an increased use of "funds-of-one" –

technically a partnership but wherein the CRF would be the only limited partner -- might provide a path to lower fees, but could require additional resources.

Similarly, the opportunistic asset class head would like to explore strategic partnerships akin to what some other large public funds have done. The theoretical rationales for strategic partnerships are multifold: To provide risk exposure control, alpha, intellectual property and market knowledge exchange, and, of course, lower fees.

While FAS expresses no opinion as to the desirability of instituting a strategic partnership program, we do note that there is only one staff member for opportunistic assets. As one CRF consultant noted, properly structuring, monitoring and implementing a strategic partnership would require a deeper staff. The consultant for private equity noted similar constraints around staffing levels, and it believes such constraints make it difficult to establish robust co-investment, direct investment, or strategic partnership programs. These would, in turn, allow for better terms and conditions.

Use of structures such as separate accounts and co-investments has been an effective strategy for containing costs, according to the CRF and the majority of surveyed peers. Concentrating business with fewer external suppliers was also rated as effective.

The CRF is in the bottom of staffing ratios compared to peers. The new CIO and the former interim CIO have affirmed that the CRF would like to consider such structures. However, multiple sources, as well as the FAS Leading Practices Survey, indicate that the CRF may not be staffed to allow taking greater advantage of separate accounts and co-investments. The CRF ranks tenth out of 12 surveyed peers in the ratio of staff to externally managed private equity assets and seventh out of ten in the absolute return staff to assets ratio. The 2012 private equity strategy presentation noted, for example, that staff constraints prevent the private equity team from focusing on direct co-investments or purchases of funds in the secondary market, even though the team acknowledged that such strategies might be attractive from both a fee and investment opportunity perspective.

External Manager Fee Documentation

Staff typically works with the asset class consultant to identify and recommend managers. Fee negotiations are done by staff with the assistance of consultants in some cases. We examined a sample of transactions approved during the three-year review period to determine whether file documents include: (1) staff and consultants' recommendations for proposed transactions that clearly describe fees and how they compare to market rates; and (2) Internal Investment Committee (IIC) and REAC minutes that demonstrate that the committees examined fees for each transaction they reviewed.

In all but one transaction, the staff recommendation memos to the IIC, CIO and Comptroller described the fees. For 85% of transactions, staff memos made some comparison of fees to the market. However, the format and depth of these fee discussions vary considerably. Of those transactions: 60% were described as market rate; 30% as below market; and 10% as above market, with strategic justifications provided.

One-third of the consultant recommendation memos in the transaction files included no direct reference to fees; fee negotiations often occur after investment recommendations have been presented. IIC minutes make reference to fees for about 70% of transactions they reviewed, with varying degrees of detail; REAC minutes document the committee's review of real estate transactions, but with limited mention of fees in most cases.

We found documentation that the CRF has "most favored nation" protection through the contract or side letter to prevent the fund manager from offering lower fees to another investor.

Conclusions

- 1. The knowledge and expertise, scope of work, reporting responsibilities, and fees of the CRF's external managers appear to be appropriate.**
- 2. The knowledge and expertise of external managers meets fiduciary standards and is of appropriate institutional investment quality.**
- 3. The scope of work done by external managers is appropriate. The CRF makes use of the resources of its external managers to gain expertise beyond the specific scope of a managerial engagement. Sometimes called "non-investment alpha," such market and domain information is valuable, even if it cannot be quantified.**
- 4. Manager reporting is of the frequency and type expected in an institutional setting. Where desirable, the CRF receives extra reporting commensurate with its size and special requirements.**
- 5. Reporting for public assets in separate accounts is supplemented by custodial bank reports.**

Opportunities for Improvement

CRF could adopt a more standard format for the staff recommendation memo for proposed transactions that: (a) clearly describes fees; (b) indicates whether or not fees are market rate; and (c) describes mitigating circumstances if fees are greater than market rate. IIC and REAC minutes could include a more complete description of the committees' review of fees for proposed transactions.

4.B.3 The knowledge and expertise, scope of work, and fees of consultants

Scope of Review

In addition to the review methods described in 4.B.1 regarding external managers, we also reviewed documents specific to consultants as contained in the Report of the Pension Task Force, the General Investment Policies for the New York State Common Retirement Fund, December 15, 2010, the Fund's general consultant's Executive Summaries for the Investment Advisory Committee, March 31, 2011 and March 31, 2012 and the Securities and Exchange Commission "Staff Report Concerning Examinations of Select Pension Consultants" (2005).

We conducted interviews with eight consultants, the Chief Investment Officer, the Director of Strategic Research and executives from Public Equities, Absolute Return Strategies, Private Equity, Real Estate and Opportunistic Investments.

Findings and Observations

Similar to the section on the use of external managers, we have organized our evaluation as follows:

- Knowledge and expertise of consultants
- Scope of work
- Fees and Fee documentation

Use of Consultants

The CRF uses consultants to advise the Fund on a variety of macro and micro issues, from fund-level strategic advice to administrative support for private equity documentation. They also provide asset class-level strategy, manager search assistance, pre-investment due diligence, post-investment monitoring, administrative support and education.

Compared to its peers, the CRF appears to use more consultants. We surveyed large US public pension funds regarding their number and costs of consultants in 11 major categories. The CRF reported a total of 8 consultants in these areas compared to a median of 5.5 among the ten funds who responded, as shown below. (The list and number of consultants and advisors in Tables 23 and 24 reflects the broader definition the CRF uses in its Comprehensive Annual Financial Report and includes certain types of advisors not reflected in Table 21.)

TABLE 21 Number of Consultants by Major Function: FAS Leading Practices Survey of 12 U.S. Public Funds					
	Average	Median	Minimum	Maximum	CRF
General Consultant	0.8	1	0	2	1
Asset Allocation	0.4	0	0	1	0
Performance Measurement	0.5	0	0	3	0
Manager Selection and Review	0.7	0	0	3	1
Real Estate	0.9	1	0	1	1
Private Equity	0.8	1	0	1	1
Other Assets	0.3	0	0	2	1
Audit	0.7	0.5	0	2	1
Fiduciary	0.2	0	0	1	0
Compensation	0.3	0	0	1	0
Other	0.5	0	0	2	2
TOTAL	6.3	5.5	1	12	8

In 2010, the CRF:

- Selected a new consultant, through an RFP process, to replace its former consultant for private equity. The new consultant provides strategic support, deal sourcing, due diligence and post-investment monitoring and back office support. Its scope of services is greater than was provided by its predecessor. At \$1.7 million, the private equity consultant was the largest consultant expense in FY 2012.
- Engaged a consultant to support a changed strategy for the Absolute Return portfolio. By switching from fund of funds to direct investments in hedge funds, the CRF eliminated a layer of external management fees. However, that required more middle- and back-office support. In 2011, the CRF's former strategy consultant for Absolute Return resigned and was replaced at a savings of more than \$2.0 million annually. An RFP process was used.

- Replaced its former general consultant via RFP. The new general consultant is engaged to provide an annual asset allocation review, fund strategy, performance analysis, investment manager searches, asset/liability analysis and other ongoing advice. This range of services and the resultant fees are greater than its predecessor.
- Added, via RFP, a consultant to help implement a shift to a global strategy in public equities.

Knowledge and expertise of consultants

The CRF generally selects consultants through a request for proposal (RFP) process analogous to what is used to procure other types of state services. Selection through an RFP is designed to allow an “apples-to-apples” comparison of consultants and provide a high degree of transparency. One real-world effect of the need for a potential consultant to complete a proposal and participate in the selection process is that it limits the potential pool of consultants to those with a commitment to the pension fund space and a certain minimum level of resources. The vast majority of the CRF’s managers are well-known and respected, in effect “brand names” within the pension consulting world. The Fund does have the authority to utilize consultant-driven searches and to engage in single-source procurements, where appropriate.

Each consultant contacted by FAS was experienced and knowledgeable, and had other material institutional investor clients. Asset class consultants were appropriately expert in their asset class. The CRF makes an effort to assure that the experience, knowledge and expertise of the consultants is not conflicted, or, if so, the conflict is disclosed and managed.

Conflicts are an acknowledged issue for the industry. Accordingly, particular attention should be given to the full, accurate and timely completion of all annual compliance requirements. The SEC issued a staff report examining the potential for conflicts in 2005, and later published recommendations for plan fiduciaries. This issue, as it applies to the CRF, was discussed in depth by the Pension Task Force (2009), with particular focus on the potential conflicts that can arise if the CRF uses the same entity as a consultant and as an asset manager. At that time, the Task Force recommended “that the Comptroller continue to seek the best available consultants and, if possible, use consultants that do not manage assets on behalf of the fund.

However, if the Comptroller determines that it is in the best interests of the Fund to choose a consultant that also manages assets, the Task Force recommends that the Comptroller be able to do so.” The report then notes the CRF should adopt various policies designed to manage that potential conflict, including disclosure to REAC or IAC, as appropriate. A footnote in the report also notes that restricting the selection of consultants to those that do not manage assets would potentially be most restrictive in the private equity and real estate asset classes.

At the time of the Task Force report, the CRF used two consultants which managed Fund assets, in private equity and in real estate. At least partially as a result of the Task Force discussions and report, the CRF selected a new consultant for private equity. However, the real estate consultant continues to manage assets for the CRF, as staff and the Comptroller reached the conclusion that continuing to use the consultant was in the best interests of the fund. Appropriately, the CRF has notified the REAC of the situation.

To its credit, the real estate consultant acknowledges the potential for a conflict, and states that it has instituted internal measures to manage the situation. Staff and the consultant agree that those procedures have been disclosed to the CRF. Further, a check with a different CRF real estate manager confirms that all its dealings with CRF's real estate consultant have been of the highest professional quality with no evidence of any conflicts or ethical concerns. However, as the real estate consultant notes, it has not provided its internal procedures to the CRF in writing. The consultant does file an annual compliance questionnaire with the CRF, but the questionnaire does not expressly address the potential conflicts of interest that can arise when consultants also act as asset managers.

Moreover, the real estate consultant noted in its annual compliance questionnaire that disclosure of potential conflicts of interest were "N/A" (not applicable). The definition of conflicts referenced (Section 136-2.4(c) (1)(i)) says disclosure must be made of "any conflict of interest the investment manager or consultant or advisor may have which could reasonably be expected to impair the investment manager's, or consultant or advisor's ability to render unbiased and objective advice."

Given: a) that the consultant is aware of the potential for a conflict and, indeed, appropriately recuses itself from issues at REAC meetings on which it has a conflict; and, b) that the potential conflicts have been recognized by the Task Force, by FAS, and by the CRF staff, FAS believes that the annual compliance questionnaire should have reflected the potential conflicts.

Consultant Scope of work

Public pension funds use consultants for a variety of reasons. According to the FAS Leading Practices Survey, these reasons include (in descending order of importance): 1. specific expertise; 2. the ability to act as a reassurance mechanism for the fiduciary; 3. provision of a check and balance on investment decisions; 4. as an information source; and, 5. as an extension of staff.

As Table 22 below suggests, the CRF's estimate of the value to the consultants' various functions is similar to its peers, with the exception that it does not appear to value the reassurance aspect as highly as some others.

TABLE 22 Valued Consultant Functions		
Please rank, with 1 being the most important, what you value the most from your investment consultants. If the choice is not something you obtain from your investment consultant, please indicate by checking N/A.	Average Rank	CRF Rank
Specific expertise in various asset classes (e.g. private equity or real estate) or investment approaches (e.g. liability driven investment, risk budgeting)	2.00	1
A reassurance mechanism for the fiduciary or board	2.46	5
An important check and balance in the investment process	2.46	2
An information source	3.5	3
An extension of internal staff to increase resources	3.67	4

The averages, however, mask a variety of on-the-ground detail that varies on a situation-by-situation basis, even within a single pension fund. By definition, the optimal use of a consultant in any one situation is unlikely to be exactly the same as the next.

For example, the CRF, like its peers, prefers not to use consultants as an extension of staff. Interviews with the CIO and former interim CIO confirm that: “One of (my) goals is to make sure that we’re not using them (consultants) as extensive additions to staff. Functioning as consultants, (they are) there to provide a detached opinion,” the CIO explained. That is consistent with how the CRF uses the majority, but not all, of its consultants.

The fixed income class consultant notes that it considers itself “more than an advisor, (we’re) part of their staff.” The fixed income staff and the consultant speak daily, and the consultant is responsible for such security-level, portfolio manager and analyst duties as credit research and pricing checks. The head of fixed income said she could not remember the last time the CRF did something other than what the consultant recommended. This level of day-to-day involvement and integration into the portfolio management function may conflict with the CIO’s desire for a “detached opinion”.

One reason for that level of integration with staff may be that fixed income is managed internally by a small staff that also oversees cash management. The head of fixed income said

she would like to use the consultant in a more strategic way, but that the intense day-to-day focus made that difficult. The interplay of staffing patterns and how consultants are used also was cited by the Fund's general consultant, which said the CRF has had a general theme of using external resources to compensate for an under-resourced internal staff.

At the same time, the desire for a "detached opinion" is described in the CRF policies and procedures. The CRF requires a consultant memorandum prior to managerial hiring or firing decisions. Most of the asset class and project consultants stated that they were being used effectively. A few suggested that they could provide more services to the CRF within the existing contractual relationships, such as fee benchmarking or more education about long-term issues. The Fund's general consultant, which is in a unique position as it has been involved in every asset class other than real estate, noted that the CRF is progressively becoming more efficient and effective in using consultants over time.

Consultant Fees

In fiscal year 2012, the CRF spent \$6.8 million for services provided by 16 consultants (both investment consultants and other advisors). Most were compensated based on a fixed annual amount, but some were by assignment or by the amount of assets in the asset class. The \$6.8 million cost represented 1.5% of total fund expenses.

TABLE 23 CRF Investment Consultants and Advisors Fiscal Year 2012		
Consultant	Services	Cost
LP Capital Advisors LLC	Private equity strategy and transaction support	\$1,739,061
Bank of New York Mellon	Hedge fund administrative support	750,761
J.P. Morgan Investment Management	Real estate asset management	737,469
Aksia LLC	Absolute return (former consultant)	693,701
RV Kuhns & Associates, Inc.	General consultant for the Fund	612,500
Townsend Group	Real estate strategy	576,730
Smith Graham & Co. Investment Advisors	Fixed income general consultant	500,000
Albourne America, LLC	Absolute return	420,000
Hewitt EnnisKnupp, Inc.	Public equities strategy	330,000
Pension Consulting Alliance, Inc.	Private equity and other assignments	168,890
Glass Lewis & Co	Corporate governance	83,750
Wilshire Associates, Inc.	Public equities strategy	61,750
A. Gary Shilling & Company, Inc.	Market strategist	56,250
Bentall Kennedy	Real estate advisor	35,000
Situs Strategic Advisors, LLC	Real estate advisor	24,855
Stockbridge Risk Management, Inc.	Real estate advisor	24,224
	TOTAL	\$6,814,941
Source: Fiscal Year 2012 CAFR		

The number of consultants increased beginning in fiscal year 2010 as the CRF began to implement a new asset allocation plan and sought to add expertise the Fund could draw on, consistent with the recommendations of the Task Force. Annual consultant expenses rose by approximately \$1.0 million.

TABLE 24 CRF Investment Consultants and Advisors: Fiscal Years 2009-2012*		
Fiscal Year	Number of Consultants	Total Cost
2009	11	\$5,830,800
2010	17	\$5,942,100
2011	16	\$7,043,900
2012	16	\$6,814,900
*Source: CAFRs for fiscal years 2009-12		

The FAS Leading Practices Survey suggests the CRF may be paying more for particular types of consulting than many of its peers. The amount the CRF pays is determined through a competitive process. The CRF's greater costs may reflect the comparatively large amount of assets it manages. This is clear in the case of the consultant who provides record-keeping and documentation services to the absolute return portfolio, as its fee schedule is based on assets under management in the asset class. FAS notes that record keeping and documentation services are akin to those provided by a transfer agent, not traditional asset class consulting. In some cases, fee levels may be due to the CRF receiving a broader or differentiated scope of services, consistent with the Fund's general consultant's comment that external, consultant resources are being used to compensate for under-resourced internal staff. For the CRF, as for its peers, private equity is the area of greatest consultant expense.

TABLE 25							
Expenditures for Consultants in 2011:							
FAS Leading Practices Survey of Large Public Funds							
Type of Consultant	Number of Respondents (N= 9)	Cost in \$ 000s					CRF Cost
		Average	Median	Minimum	Maximum		
General Consultant	6	\$438	\$500	\$28	\$695	\$490	
Asset Allocation	2	\$408	\$408	\$165	\$650	NA	
Performance Measurement	2	\$79	\$79	\$60	\$98	\$98	
Manager Selection and Review	2	\$236	\$225	\$218	\$265	\$265	
Real Estate	8	\$297	\$265	\$175	\$570	\$570	
Private Equity	7	\$1,294	\$1,200	\$150	\$2,275	\$1,882	
Other Assets	3	\$610	\$550	\$260	\$1,049	\$1,049	
Audit	3	\$94	\$97	\$2	\$180	\$180	
Fiduciary	1	\$15	\$15	\$15	\$15	NA	
Compensation	3	\$188	\$35	\$3	\$525	NA	
Other	3	\$257	\$225	\$45	\$711	\$711	

The CEM Benchmark Survey breaks out consulting costs that are not attributable to particular asset classes. They include third-party costs for manager searches, scenario testing, system consulting, and internal or external costs for performance measurement. The CRF's costs for this segment of consulting services were approximately \$1.0 million in 2011, which were among the lowest as a percentage of assets under management of the six funds that provided data.

The CRF has yet to begin investment in real assets and has only five investments in the Opportunistic Assets. Under the 2009 asset allocation plan they are each to grow to 4% of the Fund's assets. Discussions with staff suggest that additional consultant expertise (and therefore expense) will likely be necessary in order to move toward those goals.

Conclusions

1. **The knowledge and expertise, scope of work, and fees of the CRF's consultants appear to be appropriate.**
2. **The knowledge and expertise of the CRF's consultants meets fiduciary standards and is of appropriate institutional investment quality.**
3. **One consultant, who also manages assets for the Fund, said that there were no potential conflicts of interest that needed to be revealed in its annual compliance questionnaire. However, that same consultant acknowledged the potential conflicts telephonically, said it had been discussed verbally with the CRF staff, and noted it had internal procedures to manage potential conflicts. The CRF's staff also acknowledged the potential conflicts and disclosed them to the REAC. Substantively, with the exception of the non-responsive filing, the consultant appears to have acted appropriately, including recusing itself from deliberations when there were potential conflicts.**

Improvement Opportunities

- Any potential consultant conflicts of interest and how they are managed should be documented in writing.
- The annual compliance questionnaire should be updated to capture sources of revenue (including subsidiaries and affiliates) from other than consulting clients.
- Where a review of the annual compliance questionnaire reveals information at odds with the knowledge of the CRF staff, the compliance officer, assisted as necessary by the appropriate asset class staff, should investigate and resolve the inconsistency and the results of that investigation should be documented.
- The record-keeping and documentation consultant who assists in managing the absolute return portfolio's fees are based on assets under management in the asset class. However, the actual services provided are administrative in nature, with the

amount of work based on the number of managers and transactions, not assets. In that way, the services provided are more akin to a transfer agent than a traditional asset class consultant. The CRF may want to explore changing the basis on which it pays the consultant from an asset based to account based calculation, so as to better align fees and workload.

4.B.4 Effect on the performance of the Fund of augmenting staff capabilities through the use of external managers and consultants

Findings and Observations

External Managers

The CRF makes appropriate use of external managers. However, there may be less expensive ways to implement some externally managed investments and, with additional resources, some active external strategies could potentially be managed internally at a net savings to the Fund. Like its peers, the CRF makes greatest use of external managers in private markets and international equities markets where it is more difficult to replicate the expertise and amount of resources that money management firms can assemble. In that way, external managers augment staff capabilities and contribute to the performance of the Fund.

External management can be a more nimble way, or the only practical way, to make investments in some markets or to implement certain strategies in a timely manner. However, as discussed in other sections of the report, there are less expensive ways to implement some externally managed investments and, with additional resources, some active external strategies could potentially be managed internally.

Based on a high level review by FAS of Fund performance data, active external management has underperformed benchmarks more often than it has outperformed in recent years. However, in fiscal year 2012 there was improvement. The review of active managers is an ongoing activity at the CRF.

Consultants

Consultants play an important role in developing strategy, identifying investment opportunities, performing due diligence and supporting post-investment implementation, all of which augment staff capabilities and contribute to the performance of the Fund.

The CRF makes adequate use of the resources its consultants provide. However, there may be additional services consultants could provide under existing contracts which would be worthwhile to the CRF. The new CIO is beginning a review of all consultant relationships and the value they each add. The costs of the CRF's consultant services increased beginning in 2010, as the CRF was implementing changes in investment strategy and sought to expand the range of expertise it could draw on, consistent with the Task Force recommendations.

The Pension Task Force recommended that at least once every four years, the Fund should review its current group of consultants and make a written report to the Comptroller as to the adequacy of the arrangements and/or make suggestions for adjusting the mix of consultants. That report has not yet been done, although the Fund has reviewed and changed several of its consultant relationships over the last several years. The new CIO will be reviewing the roles and performance of consultants.

The Pension Task Force recommended that the CRF use its pool of consultants as a "strategic sounding board", by posing a particular issue or question to several of its current consultants to get a diversity of opinion. The CRF's consultants largely function independently of each other and the general consultant does not have much contact yet with the asset class consultants. Such collaboration would need to be staff directed. The new CIO indicated that she intends to pursue a strategy in which consultants will be asked to offer competing views on various topics.

The Pension Task Force recommended that the CRF maintain a pool of prequalified consultants for special project work. One consultant was hired in 2010 on a project basis and has completed diverse assignments in several asset classes. In addition, contracts with the global equities consultant and general consultant enable the CRF to draw on them for advice on a wide variety of matters as needed.

The fixed income consultant functions as an extension of staff in the day-to-day management of the portfolio.

The scope of work done by the CRF's consultants is varied. To the extent that consultants are being used as extensions of staff, and if the philosophy of the CRF is not to do so, the CRF ought to examine whether staffing levels are adequate to allow the CRF to use consultants in a manner that best meets its needs.

Improvement Opportunities

- Given the day-to-day role of the fixed income consultant, the CRF may want to examine whether it would be less expensive to add fixed income staff to perform some of the duties now performed by the consultant. Additional considerations may be a

recalibration of the consultant's role along the spectrum from extension of staff to independent opinion provider.

- There may be ways consultants could collaborate or offer contrasting views on key strategic topics. Such collaboration would need to be staff directed. As recommended by the Pension Task Force, and as required by the CRF policy, the Fund is due to submit its own assessment of its consultant services.

4.B.5 The expenses for managing the Common Retirement Fund, and comparison with selected enterprises of like character and with like aims in relation to the performance of the Fund

Findings and Observations

External management fees represent the largest expense for the CRF and most peers. External management expenses for absolute return strategies increased over the last three years, while expenses for other externally managed assets were relatively level. The CRF's total cost in FY 2012 was \$434.1 million. Over 97% was for external investment management and related external expenses.

The rates the CRF paid in 2011 for external management were less than the median of its peers for eight types of assets, at the median for three types and greater than the median for four according to CEM. The CRF's fees were most above the median for absolute return strategies and emerging market equities. The CRF's expense growth rate is lower than peers: As markets recovered over the last three years, the CRF's assets grew by 38% while expenses grew by less than 8%.

The CRF has a lower average total cost than peers. The average total cost for large public funds in CEM's benchmarking survey was 51 basis points. The CRF's cost was from 34 to 40 basis points depending upon how private equity costs are measured. Much of the CRF's significantly lower cost is due to its smaller allocation to private markets and greater use of passive management.

Overall, CEM concluded that the CRF spent a net \$12.7 million less than its peers would have spent to manage the CRF's asset mix. The CRF realized savings from its heavy reliance on passive management, no use of overlays, and its lower custody and oversight costs. Those savings were partially offset by the somewhat greater fees the CRF paid for several types of active external management.

The CRF had the highest one year net return compared to peers. Costs matter, particularly when market returns are low. The CRF's return for 2011 was 3.2%. It was 2.9% net of fees, the highest net return of the CEM peer group. Nevertheless, the impact of costs on returns should be judged over longer periods of time and relative to the strategic objectives and performance benchmarks of the Fund.

Increasing cost pressures for all funds are being driven largely by allocations to hedge funds and private markets and increasing complexity of investment strategies. Increased allocations to hedge funds and other private markets are ranked by peers as the greatest source of upward pressure on their costs. "More complex investment strategies" ranks second. The CRF's responses are consistent with the peer group.

Conclusions

The 2009 Strategic Asset Allocation is not yet fully implemented: The plan would significantly reduce the CRF's investments in public equities and make allocations to real assets and opportunistic investments, which may cause costs to rise.

Additional consultant expertise and expense may be required to implement remaining portions of the 2009 asset allocation plan in such areas as Real Assets and Opportunistic Investments. However, we note that CRF's total expenses for consultants and average cost per consultant were the highest among the eight U.S. funds which reported consultant costs.

According to peers, the most effective investment cost management strategies are: 1) Forming strategic partnerships that concentrate business with fewer suppliers; 2) Increasing internal management /reducing external management; and 3) Increasing passive management/reducing active management. The CRF ranked all three as effective.

Two basic options seem open to the CRF to contain growth in expenses. One is to make greater use of separate accounts, co-investments and other less expensive strategies in private markets. The second is to manage more assets internally. Both options would require an increase in internal resources to fully implement, but should result in a net savings to the Fund, even after personnel costs. The new CIO is working with the leadership team to identify resource needs, with increased support for the current investment program as the top priority.

The FAS Leading Practices Survey peer group reflects a range of budget-setting authority, from complete autonomy to being part of the state budget-setting process. Limitations on internal investment resources are a challenge for many state pension funds. Lack of autonomy in establishing the CRF's operating budget and staffing levels may continue to force more extensive use of external investment management than desired even though all

the CRF's expenses are paid from the retirement trust fund. This is because the approval process to secure internal funding and staff is more layered and can be challenging in a state budget environment. This may create an unintended incentive for the CRF to choose external management even when internal management could be more cost-effective.

Improvement Opportunities

The CRF could likely reduce management fees by making greater use of separate accounts, co-investments and other structures that avoid the higher costs of commingled limited partnerships. The CRF may also determine that these structures offer other advantages beside lower fees. However, such structures will probably require more staff. Discussions with consultants and analysis of the CEM Benchmark Survey suggest that any additional staff expenses would be more than offset by a reduction in fees. The CRF should develop a long-term resource plan to support its long-term asset allocation plan in the most cost effective way. The new CIO is working with the leadership team to identify resource needs, with increased support for the current investment program as the top priority.

4.B.6 Other costs associated with external asset management, including custody, securities lending, and transaction fees

Findings and Observations

1. Custody

The primary role of a custodial bank is the safekeeping of a pension fund's assets. The custodian typically performs a number of major functions, including fund accounting, facilitating the settlement of purchases and sales of securities, income collection, securities valuations, processing corporate actions and serving as a primary source of financial data about the fund.

JP Morgan Chase (JPM) signed a five-year custody contract in June, 2010, after being selected through a competitive RFP process. The contract provides that the CRF will not be charged a fee for custody services assuming:

“...the securities lending program now in place, continues in the same form throughout the contract period. Should substantial changes occur that impact gross lending revenue, additional custody fees may apply.”

The CRF is one of six of surveyed peers with agreements that link custody costs to the custodian's role in securities lending to achieve lower costs. Staff indicates that because of the potential complexity of the RFP, the CRF did not bid the current custody contract both with and without lending. As a result, it is not clear to what extent the costs would differ under each arrangement.

JPM is the sole lending agent for the CRF and receives a percentage of lending revenue. Its share in fiscal year 2012 is considered by CEM to be, in effect, an expense for custody services. That amount ranked at the 40th percentile of custody expenses for the 11 large U.S. public funds in the CEM Benchmark Survey.

JPM indicated the services the CRF receives are similar to those it provides other large funds, but the CRF's greater level of internal management may require more trading and cash management support. While the CEM Benchmark Survey indicates the CRF's custody cost is below median, the FAS Leading Practices Survey indicates the CRF may be using more types of custody services than many peers. The CRF uses services in nine of 11 major categories

compared to a peer group median of 6. Only two of 15 survey participants received more types of services than the CRF.

TABLE 26 Custodial Services	
“Which of the following services offered by your custodial institution do you use?” FAS Leading Practices Survey of Large Public Funds (CRF received services in shaded boxes)	Number of responses (N = 15)
Portfolio performance reporting and analysis	12
Fund accounting	12
Standing instruction foreign exchange trades	10
Directly-negotiated foreign exchange trades	9
Compliance monitoring	9
Daily fund valuation	8
Class action claims processing	8
Derivatives services (trading, valuation, reporting)	7
Tax support	7
Fund exposure and structural analysis	5
Other	9

Under its current contract, the CRF’s custody costs through June, 2015 (and potentially through two optional one-year extensions) could increase should substantial changes affect JPM’s lending revenue. The current contract was signed after the CRF significantly curtailed its lending. That would seem to diminish but not eliminate the risk of a custody cost increase.

The significant drop in securities lending revenue may affect the way banks package and price custody services in the future. JPM indicated that the 10% of securities lending revenue it keeps under the CRF contract is less than it would accept in recent negotiations with some clients. For their next custody hire, nine of 15 surveyed funds indicated they will likely bid lending and custody separately – about the same number that did so for current contracts. The CRF indicated that it “would likely seek all options.”

2. Securities Lending

Most large U.S. public pension funds (including all participants in the FAS Leading Practices and CEM Benchmark Surveys) lend securities to generate additional income. The principal reason securities are borrowed is to cover short positions.

According to the CRF's securities lending policy:

“The purpose of the Fund’s lending program is to prudently supplement the income normally received from securities held in its portfolio by lending securities to approved borrowers. Borrowers are required to pledge cash or approved securities as collateral for loaned securities. Income is generated from the investment of the pledged cash or, if securities are pledged, fees the borrowers pay for the use of the loaned securities.”

The program is managed under a contract with the CRF's custodian, JP Morgan Chase, the sole lending agent for the Fund. JPM is authorized to lend securities within borrower limits and guidelines established by the CRF. JPM retains 10% of lending income. One of the CRF's fixed income staff oversees the day-to-day management of the program as one of her responsibilities.

The CRF and many other investors scaled back securities lending as the financial markets collapsed in 2008. Some had experienced lack of liquidity and losses in their cash collateral investments. In addition to reducing the amount on loan, the CRF and other institutional investors adopted more restrictive guidelines as to what they would accept as collateral. The market returns for lending also diminished. In fiscal year 2009, the CRF had \$14.0 billion on loan and earned \$178.4 million. In fiscal year 2012, \$10.7 billion was on loan, from which the CRF earned \$30.0 million.

TABLE 27			
CRF Securities Lending			
Fiscal Years 2010 through 2012*			
	Securities on loan		
Fiscal Year	as of March 31 (in \$ billions)	Expenses (in \$ millions)	Net Income (in \$ millions)
2009	\$14.0	\$46.1	\$178.4
2010	\$9.8	\$6.7	\$60.1
2011	\$12.7	\$3.2	\$28.6
2012	\$10.7	\$3.3	\$30.0
*Source: CAFRs for FY 2009 through 2012			

No securities lending losses were realized during the three-year review period; however, the CRF will realize an estimated \$127.3 million loss in fiscal year 2013 from a cash collateral investment in a structured investment vehicle that was made prior to the 2009 tightening of guidelines. The loss equals the CRF’s total lending revenue for the last three years.

The CRF retained a larger percentage of securities lending revenue but had lower lending income than the peer average in CEM’s 2011 survey. This may reflect that the CRF scaled back its program to a greater extent than many peers. The CRF is one of six of the 15 funds in the FAS Leading Practices Survey who reduced the amount on loan by more than 30% since 2008. According to JPM, the CRF’s lending program has become far more conservative than what is typical for its other clients.

TABLE 28 Securities Lending Income CEM U.S. Public Fund Peer Group 2011 (N=11)		
	CRF	Peer Average
Percent of lending revenue retained by custodian:		
Domestic lending	10%	16%
Foreign lending	10%	14%
Lending income	\$29.8 m.	\$46.8 m.
Income as percent of stock and bond holdings	2.6 bp	6.9 bp

3. Transaction Costs

The purchase or sale of securities includes fees and commissions paid to brokers, agents, advisers and dealers. Our review focused on four types that account for the vast majority of the transaction volume at the CRF: (1) the purchase and sale of public equities (stocks); (2) the purchase and sale of bonds and other fixed income investments; (3) foreign exchange transactions; and (4) mortgage loan servicing fees.

The CRF and nearly all surveyed peers use an independent service to monitor the cost of public equities transactions. For other types of transactions, the CRF and the majority of peers rely more on self-reporting by external managers and/or monitoring by internal investment staff. (the CRF is not active in the derivatives markets and is not reflected under the monitoring of “Derivative Contracts” in the comparison below.)

TABLE 29 Monitoring of Transaction Costs FAS Leading Practices Survey of Public Funds* (CRF Included in Shaded Boxes) (N=12)				
Monitoring Method	Public Equities	Fixed Income	Derivative Contracts	Foreign Exchange
An independent measuring service	13	3	1	4
Self-reporting by external managers and/or internal investment staff	8	9	4	8
We do not measure since we look at our returns on a net basis	2	4	5	4

Public equities. Public equities trades represented nearly 95% of major transactions in FY 2012. When shares of stock are bought and sold, a commission is typically paid to the broker and is netted from the price of the stock. In addition to execution of the trade, the broker may provide investment research to the client as part of the commission. The CRF and the majority of peers surveyed by CEM do not currently participate in “soft dollars” or other types of trading in which a portion of the commission is rebated or can be used to purchase third-party research services.

TABLE 30 Number of CRF Securities Transactions FY 2012	
Public Equities	70,279 ⁱ
Long-Term Fixed Income	329 ²
Short-term Fixed Income	1,610 ²
Mortgage Loans	262 ³
Foreign Exchange	2,100 ⁴
Sources:	
¹ Elkins-McSherry Quarterly Reports	
² CRF Fixed Income Group	
³ CRF Real Estate Group	
⁴ Estimate based on January 2012 Request for Proposal	

In FY 2012, the CRF paid \$19.4 million in commissions, of which \$11.7 million was for domestic trades and \$7.7 million for international. Over 63% of domestic commissions and all but 1% of international commissions in FY 2012 were for trades generated by external managers. Most actively traded domestic equities are managed externally, as are nearly all international equities. External managers select the brokers they use to trade for the CRF's accounts, but managers' contracts with the CRF require that the brokers provide best execution on the CRF's behalf.

The CRF caps domestic equities commission rates for internally-managed portfolios at a per share rate. International commissions must be within a range set for each country based on typical rates for the country. The CRF's global equities has not yet fully implemented the recommendations of a 2012 internal audit to establish the global equities commission limits as a formal policy and to create a compliance review process to ensure commissions do not exceed approved limits.

Shares traded and commissions paid by CRF's external managers of domestic equities declined during the three-year review period. That may reflect a reduction from 24% to 19% in the share of domestic equities managed externally since 2010. Trading staff also cite a decline in mergers and acquisition (M&A) activity following the 2008 financial crisis as a cause for less trading.

TABLE 31 Domestic Equities CRF Trading FY 2010 - 2012									
Fiscal Year	Commissions (in \$ millions)			Shares Traded (in millions)			Average Cost Per Share (in cents)		
	Internal Managers	External Managers	Total	Internal Managers	External Managers	Total	Internal Managers	External Managers	Total
2010	\$4.6	\$13.4	\$18.0	209.4	592.6	802.0	2.2	2.3	2.2
2011	\$3.4	\$12.0	\$15.4	173.6	527.6	701.2	2.0	2.3	2.2
2012	\$4.3	\$7.4	\$11.7	211.9	313.8	525.7	2.0	2.4	2.2

TABLE 32 International Equities CRF Trading FY 2010 - 2012									
Fiscal Year	Commissions (in \$ millions)			Shares Traded (in millions)			Average Cost Per Share (in cents)		
	Internal Managers	External Managers	Total	Internal Managers	External Managers	Total	Internal Managers	External Managers	Total
2010	\$0.3	\$11.0	\$11.3	38.7	1,833.9	1,872.60	0.78	0.60	0.60
2011	\$0.2	\$11.8	\$12.0	70.3	1,490.1	1,560.40	0.28	0.79	0.77
2012	\$0.1	\$7.6	\$7.7	13.3	1,495.0	1,508.30	0.75	0.51	0.51

The CRF and most peers use an independent measuring service to compare the trading efficiency of their brokers to various industry benchmarks. Typically, this includes the average commission per share. However, the price at which the stock was bought or sold to the range in which it was trading in the market at the time can be more significant. The CRF indicates it uses such data when it meets with external managers to call attention to the performance of brokers whose performance is sub-standard over a sustained period.

Two comparisons indicate the CRF's cost per share and trading performance were better than the median during fiscal year 2012, as measured by the independent analysis firm Elkins-McSherry using data from 1,300 institutional investors and 1,900 brokers.

TABLE 33
CRF Public Equities Trade Cost Analysis
Elkins-McSherry (EMc)
(Internally and Externally Managed Portfolios)
Fiscal Year 2012*

Quarter Ending	U.S. Equities		Global Equities	
	<i>Market Impact--</i> NYCRF Percentile Ranking	<i>Total Cost--</i> NYCRF Percentile Ranking	NYCRF's Cost <u>Lower</u> than EMc Universe (Number of Countries)	NYCRF's Cost <u>Higher</u> than EMc Universe (Number of Countries)
June 30, 2011	36th	29th	33	6
September 30, 2011	9th	6th	24	14
December 31, 2011	29th	33rd	23	13
March 31, 2012	39th	39th	41	4

*Source: Elkins McSherry Quarterly Trade Cost Analysis

For its internally managed portfolios, the CRF currently uses 35 brokers selected through an RFP process in 2008. Staff recognizes that because of the pace at which markets and brokerage firms' change, the selection process should be done more frequently. For example, CalPERS uses a continuous on-line application process managed by an expert consultant, and the Fund reevaluates its broker list semi-annually.

In FY 2012, the CRF used 22 broker-dealers selected from an RFP in 2009 to trade its long-term and short-term fixed income portfolios. The broker list was updated in 2011 and a new broker search is to be conducted in 2013.

Fixed Income. The CRF's fixed income investments are all internally managed. It has tended toward a "buy and hold" strategy for its long-term bond portfolio, averaging only 320 transactions annually during the three-year review period. In FY 2012, the dollar volume traded increased due to asset rebalancing and the realignment of the portfolio to a new benchmark, but the number of transactions remained about the same.

TABLE 34 Long-Term Bond Portfolio Trading Levels		
Fiscal Year	Number of Transactions	Dollar Volume (in \$ billions)
2010	246	\$3.8
2011	386	\$4.2
2012	329	\$11.3

Fixed income transactions do not involve payment of an explicit commission. The transaction cost is in the difference between the price the dealer paid for the bond and the price the dealer sells it to a buyer. It is only possible to make assumptions about the amount of the actual “mark-up”. Using models developed by its consultant, the CRF makes rough estimates as to how much each broker nets from bond trades. For FY 2012, the estimate for the long-term portfolio was \$8.2 million.

To obtain best price, the fixed income group gets bids from three dealers via the Bloomberg system before purchasing Treasuries, government agency bonds and mortgage-backed bonds. For commercial bonds, the CRF relies on the advice of its consultant.

Each business day, the fixed income group determines the amount of cash available and the cash needs of the various investment divisions. The fixed income group solicits competitive offers from brokers for the amounts and dates needed to meet cash needs. As is the case for long-term bonds, the CRF estimates the amount each broker nets from these transactions. For FY 2012, the estimate was \$2.7 million.

TABLE 35 Short-Term Fixed Income Trading		
Fiscal Year	Number of Transactions	Total Purchases (in \$ billions)
2010	811	\$55.7
2011	1,186	\$70.5
2012	1,610	\$86.4

Foreign Exchange. The CRF does not directly invest or trade in foreign currencies for profit. However, as part of its normal investment activities, the CRF needs foreign currency in order to make foreign investment transactions. It must also be able convert foreign currency back to dollars.

Foreign exchange (“FX”) transactions may occur either through the CRF’s custodian, or a third party broker. In calendar year 2010, the CRF executed 1,152 standing instructions FX trades through the custodian totaling approximately \$1.1 billion. Third party brokers executed 923 transactions totaling \$1.5 billion.

Most of the CRF’s FX transactions are by external managers because they manage most of the CRF’s international investments. External managers may choose the custodian or a third-party broker but are bound by their contract with the CRF to use best execution. The cost of FX transactions is reflected in their investment returns which are monitored by the CRF.

In recent years, a number of public pension funds alleged that they were overcharged for FX transactions because the custodian used the least favorable price of the day for the fund’s currency trades. There has been a general call for greater transparency in the way FX transactions are priced and executed. Nearly all survey peers have increased FX oversight, and some have imposed additional limitations on the custodian.

TABLE 36
Oversight of Foreign Exchange Costs

Has your fund recently taken any of the following steps to increase oversight of foreign exchange costs through its custodian?	Number of Responses (N=15) (CRF response included in shaded boxes)
FAS Leading Practices Survey of Major Public Funds	
Conducted an internal review of foreign exchange costs	11
Required that the custodian provide greater transparency into foreign exchange costs	11
Engaged an outside specialist in foreign exchange to conduct a review	5
Imposed limitations on the custodian's pricing of standing instruction trades	3
Filed suit or took other actions to recover inappropriate charges from the custodian	3
Imposed limitations on the custodian's pricing of direct negotiation trades	0

In our interview, JP Morgan would not disclose how it sets its FX prices except to say that they reflect the range of prices that occur over the course of the trading day. A number of its other clients have moved toward a “transparent spread” model in which the price is fixed at a certain number of basis points. The CRF is one of five survey peers who have hired an outside expert to examine its FX management. The CRF’s consultant is reviewing FX activity over the past three years, benchmarking CRF’s transactions against peers and providing recommendations for increased transparency and best execution. The CRF has decided not to switch to a different pricing model until after it has considered the consultant’s recommendations.

Mortgage Loan Servicing. Through the non-profit New York Community Preservation Corporation (CPC), the Fund provides loans for affordable housing for senior citizens and other constituents with special needs, and for the mentally or physically disabled. CPC services the loans for a monthly fee per loan. The fee has not changed since the program started in 1995.

Servicing expenses have increased since FY 2009 as the number of new loans grew from 207 in FY 2010 to 262 in FY 2012.

TABLE 37	
Mortgage Loan Servicing Fees*	
Fiscal Year	Amount
2009	\$1,234,000
2010	\$1,797,000
2011	\$2,565,000
2012	\$2,822,000
Source: CAFRs for FY 2009 through 2012	

4. Other Costs

In addition to asset management fees and transaction costs, other expenses associated with external management include:

- Internal costs for staff whose primary responsibilities are the selection and oversight of external managers
- Consulting, research, legal and other third party costs attributable to external assets
- Overhead such as information technology, investment accounting, and audit attributable to external assets

For the CEM Benchmark Survey, the CRF reported these costs to be \$13.9 million, almost 90% of which was attributed to private equity, real estate and absolute return investments. The largest of those expenses were for consultants and advisors, which are detailed in another section of this report.

Conclusions

Custody

1. **The CRF's custody costs (and those of half of the surveyed peers) are linked to the lending of the fund's securities by the custodian.**
2. **The CRF's custody cost is below the median of its peers, as measured by the dollar amount of the CRF's lending revenue retained by the custodian.**
3. **For a below median cost, the number of custody services CRF receives appears to be greater than most of the surveyed peers.**

4. The CRF is contractually exposed to the risk of a custody cost increase should there be a substantial change in the custodian's lending revenue. The CRF indicates that when the custody contract is up for renewal, it "will consider all possible options" regarding the custody/lending relationship.

Securities Lending

1. The CRF retains a greater percentage share of lending revenue than the average for its peers.
2. Under tightened guidelines and more restricted lending, the CRF's revenues from lending are below the peer group average.
3. The CRF will realize an estimated \$127 million loss in fiscal year 2013 from a cash collateral investment that was made prior to the 2009 tightening of guidelines. That is equivalent to the total lending income the CRF earned during the last three years.

Transaction Costs

1. Domestic equities trading by external managers declined over the last three years, with the shift to more internal passive management.
2. Independent analysis indicates that the CRF's equities transaction costs are competitive with those of other institutional investors.
3. Foreign exchange transactions are largely conducted by the CRF's external managers. The CRF has retained an expert consultant to examine and benchmark its FX management and provide recommendations.

Improvement Opportunities

The CRF has not conducted an equities broker search since 2008, but should do so more frequently to better assure best execution. A continuous selection process is a practice amongst peer funds and was identified by the CRF trading staff as an option worth considering.

4.C. Investment Accounting, Compliance, and Performance and Fund Analytics

Scope of Review

Our firm was asked to compare the CRF's investment accounting processes with common and leading practices in three areas: Investment Accounting; Compliance; and, Performance and Fund Analytics.

Findings and Observations

1. Investment Accounting

Staffing. The Accounting Bureau consists of 39 employees, 22 of which are associated with investment accounting. The Bureau provides accounting services both for the Common Retirement Fund (CRF) and the State and Local Retirement System. The Accounting Bureau, including the Investment Accounting staff reports directly to the Executive Deputy Comptroller and is separate from the investment function. We consider this separation to be a leading practice. In our FAS Leading Practices Survey, the investment accounting staff reported to the Chief Financial Officer in nearly three-quarters (11 of 15) of the peer funds.

All investment accounting personnel are civil service. New personnel must be hired from a list of people who have qualified for a more generic accounting position. As a result, newly hired employees require on-the-job training in the specific investment accounting position. This is not unusual, in FAS's experience, because accounting for investments is a specialized field, but the recruiting structure does limit the Bureau's opportunity to hire individuals with previous investment accounting experience who could add knowledge and value from other sources. In response to this limitation the Accounting Bureau has emphasized the use of in-depth desk procedures to ensure quality work and as a result has very well developed procedures. Having such desk procedures is helpful but the ability to more easily add staff with investment accounting experience could strengthen the section's capability.

The 2011 independent audit letter to management recommended adding additional personnel due to the new alternative investment funds and, as a result, the Investment Accounting group was able to acquire an additional position at that time. The Bureau has instituted additional measures to handle the increased workload, such as leveraging technology and reassigning personnel temporarily to help with overloads in particular areas.

The custodial bank accounting team assigned to the New York State CRF works closely with the Accounting Bureau and reported no issues were experienced with the CRF's accounting. The

custodial bank team also complimented the investment accounting group on their diligence and attention to detail.

Training. Training in Investment Accounting meets minimum standards. The Accounting Bureau director is active in a national Public Pension Financial Forum and three or four individuals typically attend the annual conference. Ethics training is mandatory for all employees and is enforced. CPAs (there are four on staff) must maintain their own Continuing Professional Education. There are no additional benefits provided by the CRF for having the CPA license.

An understanding of internal controls and the composition of processing systems (as evidenced by a CPA license) is desirable in both regular financial and investment accounting groups. Some provision of assistance or incentives may help foster CPA recruitment and retention. Training in controls and processes should be made available to all staff on at least an ad hoc basis. The benchmarking data of peer systems shows that 10 out of 12 systems responding (including the CRF) provide training on at least an annual basis.

Flexibility and resiliency. Investment Accounting has tools in place to provide basic investment accounting functions in the event of a business disruption. Investment Accounting has the ability to telecommute, allowing staff to continue to work if access to the building is hindered. Furthermore, the custodian accounting and settlement systems parallel the CRF investment accounting process, reinforcing the ability to maintain continuity in the case of material CRF internal process downtime or other disruption.

The custodian bank has multiple accounting and processing locations and can transfer the CRF's investment and accounting operations to other staff, if needed. This actually occurred during Hurricane Sandy. The custodian was able to continue to provide a full spectrum of services to the CRF.

The Accounting Bureau management staff experienced a sizeable turnover a few years ago but is stable now. They consider that they will be able to continue to handle any upcoming retirements. Limited staff size has made cross training difficult to implement, although there are staff members who have experience in other positions within the section. Detailed procedures for each desk provide assurance that others may step in when needed.

Services provided. The CRF staff invests a substantial portion of the Fund money internally, which requires the Accounting Bureau to provide settlement and accounting services akin to middle and back office functions at an asset manager. Investment Accounting uses Microsoft Dynamics for the general ledger and SunGard for trading transactions. Both are standard software packages for investment accounting based on FAS's experience. The CRF is a long-term user of both packages and the staff seems very comfortable with both. The custodian also

uses SunGard, which minimizes software incompatibility when comparing data in the two systems. Investment Accounting balances the investment accounts with the custodian daily.

PICM staff authorizes trades and informs investment accounting of the transaction. Investment Accounting approves the transaction with the custodian and enters it in the SunGard System. Investment Accounting uses the custodian's "Access" program to assure that both accounting systems are in tandem.

JP Morgan Chase serves as the custodian for the CRF. The CRF investment accounting staff who work with the custodian are satisfied with the quality of service. Dedicated JP Morgan Chase teams are assigned to the CRF (this is standard for large funds in FAS experience). Investment Accounting is in daily contact with the custodian team.

The CRF contract with the custodian does not specify service levels. However, the custodian has provided a service performance document to Investment Accounting and quarterly review sessions are held to discuss any issues. Some metrics are provided by the custodian at these quarterly meetings. The Investment Accounting group indicated that they felt they were receiving good service. However, documenting these practices through a contractual provision would provide assurance of continuity in this regard.

The custodian provides unaudited daily pricing on marketable securities for the CRF with corresponding investment performance data. The Investment Accounting group balances publicly-traded assets daily with the custodian, and PICM relies on this balancing process.

Disclosure and transparency. The independent external audit, executed for the past three years by KPMG, LLP, has been performed under generally accepted governmental auditing standards. The auditor's reports are unqualified.

During the past three years, the CRF received a Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for the previous year's Comprehensive Annual Financial Report (CAFR). The GFOA certificate is awarded by comparing the CAFR against a checklist determined by GFOA to be the standard of excellence for pension disclosure.

The New York State and Local Retirement System also has received the Public Pension Coordinating Council's Public Pension Standards Award for Funding and Administration during the past three years. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, including financial reporting, and The New York State Fund meets those standards. The CAFR is the primary vehicle for disclosing the financial condition and results of operations of the CRF. In addition, the Comptroller releases a quarterly press release of investment performance.

Financial information and status information regarding the CRF and the State and Local Retirement System are required by law to be provided to the NY Division of Budget and published in the New York State Annual Statement and Financial Disclosure (pages 112-119), May 11, 2012.

Independence. The Investment Accounting group is sufficiently independent. The Accounting Bureau, containing the investment accounting group, reports directly to the Executive Deputy Comptroller and operates separately from PICM. Separation of duties between accounting and PICM provides that neither section can access or perform the functions of the other group. Both groups expressed an understanding of the boundaries of their role in the investment process. Having an accounting staff report to a CFO independent of investment staff is a leading and prevailing practice (11 of 15 funds) among the benchmarked funds.

Internal controls. For the past three years, the Internal Control Audit Report, a part of the annual external audit of the system required under Governmental Auditing Standards, has reported no material internal control issues that were required to be disclosed. Some non-material weaknesses have been reported by the auditors in the management letter.

Controls are in place to require PICM to authorize transactions and contracts and require Investment Accounting to settle transactions and pay contracts. The authorization of cash disbursements must be initiated elsewhere in the organization and approved for release within the Accounting Bureau. Adequate policies and procedures are in place.

There is a well-defined procedure for the payment of money from the CRF to investment managers and consultants. Manager fees are reviewed in comparison to the contract provisions by the Investment Accounting group and affirmed by PICM before the custodian is authorized to make payment.

The Comptroller's Advisory Audit Committee is comprised of 3-7 members who are to be unaffiliated with the Comptroller or the retirement systems and must be financially literate, as defined in state law. The committee's charter sets forth other requirements for members and requires quarterly meetings each year (or as circumstances dictate). The committee is charged with oversight of the external auditor relationship, with a review of the activities of the internal auditor, and with review of the compliance environment of the Common Retirement Fund, The State and Local Employees Retirement System and the State and Local Police and Fire Retirement System. An audit committee of this nature is considered a leading practice within the overall financial community. There is a trend in this direction in the public pension community. Of the funds reporting in the custom benchmark study, 13 had audit committees that were either decision-making or advisory, and having specific committee qualification requirements was most prevalent with respect to investment and audit committees.

Conclusions

1. The Investment Accounting Bureau is adequately staffed.
2. Training in Investment Accounting meets minimum standards.
3. Investment Accounting will be able to provide basic investment accounting functions in the event of a business disruption.
4. Services provided to PICM by Investment Accounting and the custodial bank meet industry standards.
5. Disclosure and transparency are in compliance with the regulations.
6. The Investment Accounting group is sufficiently independent.
7. Internal Controls appear reasonable and adequate.

2. Compliance

Staffing. The compliance office consists of one person, and that position was created following a recommendation from the Pension Reform Task Force in 2009. The compliance officer's responsibilities are compliance in portfolio trading, insider trading, manager due diligence, risk assessment inventory and gap analysis (where controls can be added). She is also assisting with the creation of a policy and procedure manual. The position is responsible for identifying regulatory changes that affect the CRF.

Once the position was added and filled, the compliance officer began the process of structuring a sophisticated compliance program designed to meet the demands of an investment fund the size of the CRF and to meet the growing complexity of the financial markets in which PICM participates. In addition to the strategic structuring of the program, the compliance officer executes current compliance testing to meet immediate needs. She maintains involvement in national peer groups, helping to assure familiarity with developing issues and leading practices.

While the compliance officer has been able to leverage staff from internal audit and the agency ethics officer to carry out critical functions, additional resources are likely needed to achieve the type of compliance function envisioned in the Task Force report. In order to assure daily compliance checks are executed, the compliance officer must call-in while on leave. In other words, she has no true back-up. In addition, it is now anticipated that the original rough projection of having a fully state-of-the-art compliance office in three to five years is more likely to take much longer. Additional resources may help with that timing.

The compliance officer has oversight of the compliance of managers. She requires all managers to sign off annually that they are in compliance with SEC regulations, DFS regulations, etc. She must rely on the consultants employed by PICM to do the compliance due diligence reviews of proposed managers. This is a reasonable approach provided there is confidence in the

consultants' processes. A review of the consultants' procedures could provide a basis for that confidence.

Compliance software systems. The compliance officer uses the custodian compliance system to scrub the data for non-compliance with system policies and to determine whether internal and external investments are handled correctly. The rules within this system are defined by CRF staff and coded and reviewed by custodian staff. There are 68 daily rules, 6 weekly rules and 33 monthly rules. Most have been written and reviewed between 2008 and 2011. The compliance officer has verified that the rules are working correctly, and the rules are reviewed at least annually for completeness and accuracy.

Independence. The compliance officer reports to the Executive Deputy Comptroller. She has frequently scheduled meetings with him. She is independent of PICM, Investment Accounting and the custodial bank. This is a leading practice within the industry. The CRF is one of three systems in our benchmarking review that has the compliance officer reporting directly to the executive officer. It is a leading practice within that group to have the compliance officer report independently of the investment staff.

Conclusions

1. **The compliance office provides effective compliance testing but could improve its function, and complete the migration of the compliance office to a leading practice structure, with additional resources.**
2. **The compliance officer must rely on consultants to ensure that external managers are in compliance with regulations and to perform due diligence reviews of potential managers.**
3. **A software system is in place to monitor compliance with system policies.**
4. **The compliance officer appears to be appropriately independent.**

Performance and Fund Analytics

Staffing. PICM relies on consultants and a third party administrator to oversee the performance calculations performed by the custodial bank. Almost 75% of the CRF's peers in the FAS Leading Practices Survey have, however, found it expedient to designate an internal resource, independent of the investment staff, to oversee the process, which is a prevailing and leading practice. About half of the peer funds reported that at least one of those internal staff members overseeing performance calculations has either a CFA or CIPM designation, also a leading practice.

Independence. The performance of the investments of the fund is calculated by the custodian bank performance and analytics team and appears to be independent and not influenced by

the CRF. The custodial bank performs the performance calculations for the CRF and also provides additional analytics for PICM. The calculations are sent to the global equities section of the CRF which distributes them internally. The performance numbers are also provided to the CRF consultants.

Conclusions

- 1. The performance of the investments of the fund is calculated by the custodian bank performance and analytics team and appears to be independent and not influenced by the CRF.**

Improvement Opportunities

Investment Accounting

- Inclusion of a formal service performance level agreement in the contract with the custodian is recommended under the axiom of “what gets measured gets managed.” Such an agreement will become more valuable if, for example, the Fund increases international holdings (tax letters and tax rebate reclamations) and invests in swaps (swap resets).
- The custodian, investment accounting and PICM could review the current daily pricing process. There may be appropriate proxies for entities that routinely fail to make pricing deadlines or for investments whose values are statement driven. The CRF should know the percentage of transactions, if any, that do not make the end of day cut-off and the percentage of assets in the total portfolio that were priced to market for that day. A specific person on the CRF staff should be responsible for reviewing the pricing report daily for rectifying any anomalies that occur.

Compliance

- The compliance officer should do a due diligence review of the consultants to determine if she can rely on their reviews of proposed managers.
- The CRF should consider additional resources for the compliance office to assure daily functions and strategic development of the compliance function both can be effectively accomplished.

Performance and Fund Analytics

- The CRF should consider an internal staff person responsible for oversight of reporting fund performance. That individual should have expertise in performance reporting (and, ideally, be separate from PICM).

4.C.2 CRF's investment accounting reporting compared with generally accepted accounting principles.

Findings and Observations

The external, independent auditor's reports for the three years covered by this review show that the statement of position at year end and statement of operation for the year are presented in conformity with generally accepted accounting principles (GAAP). The Government Accounting Standards Board promulgates GAAP for the governmental sector.

The audit reports for all three years are unqualified and the auditor confirms that, in all material aspects, the financial statement fairly presents the position and results of operations for the year.

The audit opinions do not include any material weaknesses in the internal controls of the system. However, management letters are issued by the auditor to point out some weaknesses that are less severe than a material weakness, yet are important enough to merit attention by those charged with governance. The Fund has resolved all issues for the past three years that directly apply to investment accounting.

However, the audits did identify some deficiencies in information technology security which serve investment accounting and operations that have not yet been implemented. On the unimplemented items, management responded in the 2012 audit that the level of risk associated with them is either not significant or has been mitigated through other controls.

GASB statements 67 and 68 make some significant changes in how employers and pension plans report their pension obligation. The CRF participated in the GASB field test as that standard-setting body was developing the new standards and, as a result, is well-positioned to provide information to employers and to meet the new disclosures for the pension fund.

Conclusions

1. **The investment accounting and reporting are in conformance with generally accepted accounting principles.**
2. **The New York Common Retirement Fund is well-positioned for future GAAP Reporting**

Improvement Opportunities

While the process is currently being performed informally, the year-end values of the investments of the New York Common Retirement Fund should be confirmed in a written document by the Director of Accounting Bureau, the Chief Investment Officer and Executive Deputy Director.

The Director of the Accounting Bureau, the Chief Investment Officer and the Executive Deputy Comptroller currently all sign the management representation letter to the auditor, acknowledging responsibility, among other things, for the values of the assets shown on the financial statement.

The Director of Accounting prepares the financial statements and she keeps the other two informed of issues and late pricing. However, because all three share responsibility for the investment values, it is recommended that a formal committee comprised of at least the three management representation letter signers (and any others deemed necessary) review a report of valuations, discuss any issues or pending valuations, and officially affirm or adjust the values for financial disclosure. Within the benchmark survey, nearly half (7 or 15) of the respondents have an internal committee that signs off on the existence and value of assets.

4.D. Due Diligence Procedures

Scope of Review

Our review compared the CRF's due diligence procedures with respect to the selection, monitoring, and termination of external managers with common and leading practices and concluded there are effective due diligence procedures in place. Our analysis and evaluation included:

1. The division of responsibilities between staff and consultants to determine efficiency and effectiveness of due diligence procedures;
2. The selection process for external managers, including the criteria for selection;
3. The process for monitoring external managers, including the criteria for monitoring, the frequency of monitoring, and the topics covered during due diligence;
4. The frequency of site visits by the CRF staff or consultants to the place of business of external managers and to the location of real assets under management;
5. The procedures for terminating external managers; and
6. The extent of review of external managers' internal guidelines.

Findings and Observations

Division of responsibilities between staff and consultants

FAS found that the combination of due diligence by the CRF's staff and by the consultants created an effective due diligence process in all asset classes and situations examined. The division of due diligence responsibilities between the CRF staff and each asset class consultant varies depending upon the resources, needs, and expertise necessary and available in a specific asset class.

The CRF's diligence includes both portfolio issues and operational risk issues and uses both quantitative and qualitative analysis. When a potential managerial hiring is in the form of a partnership subscription, the CRF looks beyond the partnership level details to the underlying investments of that fund or the predecessor fund, where they exist. The CRF actively negotiates terms and conditions.

The CRF's due diligence is consistently well-regarded by managers and consultants. For example:

- A hedge fund opined that the CRF had the leading due diligence process of the public funds it knows, noting that the CRF staff made multiple on-site due diligence visits, even though the ARS consultant already knew that hedge fund well, and that the CRF met with both portfolio and operational personnel. The hedge fund also noted that the CRF aggressively but professionally negotiated terms and conditions, including fees, key man provision, and notice provisions.
- A global equity manager said the CRF's due diligence process was at least as thorough as other public funds, and also noted multiple in-person visits from the CRF in both Albany and London.
- A CRF project consultant, with particular expertise in private equity, concluded that staff does more due diligence for itself than many of its other clients. The consultant gave the CRF high marks for looking at underlying deals in private equity partnerships.
- A specialist equity manager observed that the CRF staff "drove the process," comparing its CRF experience favorably to experiences with other public funds, where consultants seemed to make decisions. This particular manager experienced a particularly long and involved due diligence process, as it was initially considered by the private equity group and then referred to public equity. As a result, it was reviewed for due diligence by both groups and by multiple consultants over a three year period.

To use private equity as an example of the full process, the CRF's private equity consultant prepares a 3-5 page summary memoranda of potential investments. If the CRF decides it is preliminarily interested in one of the funds, the consultant undertakes in-depth due diligence. That process takes an average of 4-6 weeks and results in a 60-80 page report. That report does not rely on work done by the CRF. Meanwhile, the CRF does its own due diligence and writes its own report. By contrast, the consultant reports that some of its clients rely on it solely. (For a further description of the due diligence process, see *"The selection process for external managers"* below.)

The due diligence process culminates with both the CRF staff and the consultant making a recommendation to the Comptroller. The dual recommendations are designed to result in independent due diligence and opinions. This seems to be the case in most situations.

The one asset class in which the consultant's role vis-a-vis external managers appears to differ slightly in this regard is Absolute Return Strategies (ARS). Both the CRF ARS staff and the asset class consultant said the consultant was an extension of staff insofar as operational due diligence and checking conflicts were concerned.

FAS believes that is within the range of normal hedge fund due diligence procedures. Even larger pension funds may not have adequate internal resources to fully execute due diligence on operational risk at hedge funds (including diligence of the accountants, prime brokers,

lawyers and other key service providers). We note that while ARS staff would not recommend a hedge fund poorly rated by the consultant, staff retains the final decision on whether or not to recommend an investment.

The CRF increases the level of diligence for emerging equity managers, employing specialists to vet and monitor them, even while the CRF retains direct control over allocations to the recommended emerging managers. Similarly, the CRF uses a specialist to vet and monitor private equity managers for an in-state investment program, which invests in smaller and geographically focused managers. Other specialists are used in other asset classes. This use of specialists to oversee emerging, or in-state managers, is a prevailing practice.

The selection process for external managers, including the criteria for selection

The criteria for selection of external managers for the CRF are a direct result of strategic decisions made by the fund, influenced by regulatory and resource constraints. Strategic planning for the Fund begins with an asset allocation study. The most recent full asset allocation study was 2009. The asset allocation study determines how much of an allocation the CRF targets to the various asset classes. Strategic plans by the various asset class heads embed a number of selection criteria designed to roll up to an effective implementation of the asset allocation plan, including whether to manage assets internally or externally, and whether to manage assets passively or actively. Those strategic plans are presented to the Investment Advisory Committee (IAC).

Within an asset class, the determination of whether to manage assets internally or to use an external manager is dependent upon the skills and resources resident within the CRF. The CRF internally manages all fixed income assets (except for fixed income-based hedge funds) and the domestic passive equity internally. The decision on whether to manage assets actively or passively is determined by the fund's opinion as to the efficiency of the asset class and the opportunity for alpha generation through active management.

While each asset class modifies the specifics somewhat, the basic manager selection process is to use a consultant to recommend a manager, based on specific criteria, then to use the CRF staff and consultants to make independent due diligence investigations and evaluations. This is consistent with the general approach taken by the CRF's peers, as evidenced by the FAS Leading Practices Survey.

To use global equity as a typical example of the CRF selection criteria and process, the CRF first examines the asset class portfolio to determine where the fund is overweight or underweight, in terms of sub-asset class or style. CIO approval is needed to start a search process. The CRF and the asset class consultant then agree upon the specific criteria to search for as they examine managers for that mandate.

In the past, these criteria have included the following: manager capacity; no use of derivatives that would result in the allocation being counted against the “basket clause”; the ability to use a separate account structure; no outstanding legal issues; no market timing (fully invested normal state); ability to comply with the CRF restrictions on tobacco, and Sudan and Iran; fees; whether the manager uses a team-approach or a star portfolio manager; performance over various time periods; and risk, as measured by information ratio and other modern portfolio theory metrics.

The consultant then prepares an initial list of qualified managers and then performs an operational review, resulting in a universe of potential managers. The portfolios and returns of those potential managers are then input into a simulation exercise to examine the correlations the manager’s portfolio would have had to the rest of the global equity portfolio. Potential managers then are invited to present in Albany, where both the CRF staff and the consultants are usually present. At that point a short list of finalists is developed.

The CRF staff, often accompanied by the asset class consultant, then perform a due diligence visit to the managers at their offices, and make a final determination of which manager to recommend. That recommendation is then brought before the Internal Investment Committee (IIC) for deliberation. The discussion at the IIC usually focuses on risk. Assuming no major issues at the IIC, the recommendation is then subject to CIO review and approval, and, if such an approval is forthcoming, a hiring recommendation is made to the Comptroller. A consultant memorandum is included in the information package presented to the Comptroller.

The process varies somewhat depending upon the asset class. In asset classes where investments are typically made through partnerships, the selection process is designed to achieve the same strategic goal – asset class, sub-asset class and style first, then an examination of the quality of the manager and ability to potentially generate alpha at acceptable risk levels – but the process is tempered by the limited availability of funds in the market at that time. The CRF attempts to manage around that market reality in two ways.

First, it is as proactive as possible. In private equity, for example, the CRF and its asset class consultant have biweekly calls to monitor the pipeline of funds in the market at any time, and the consultant notes that the CRF is more active in sourcing managers than most other clients. Secondly, the CRF actively monitors its sub-asset class and style exposure, and does not consider partnerships or investments which are in areas in which it is already at or above target allocations, even if a particular fund in the marketplace would otherwise be attractive. Otherwise, the selection process, from asset class to IIC to CIO to Comptroller, is the same.

The most significant selection process change is in real estate. In that asset class, the Real Estate Advisory Committee must approve every allocation before it is presented to the Comptroller.

The process is well within the range of normal as indicated by the FAS Leading Practices Survey. FAS notes that the CRF's peers are evenly split on whether the ultimate fiduciary approves manager hiring and termination with staff and consultants making recommendations and overseeing the selection process, or whether that authority is delegated to staff.

The process for monitoring external managers.

The CRF uses multiple sources, techniques and procedures to monitor external managers. The CRF typically monitors portfolio characteristics, performance versus benchmark, organizational changes at the manager, any compliance breeches, and current market conditions. Monitoring by the Director of Risk and Reporting and by the asset class consultants, as well as monthly performance reporting by the custodial bank, and compliance checks by the Director of Compliance, add to the robustness of the monitoring program.

While the specifics vary by each asset class, they always feature at least quarterly performance monitoring (sometimes monthly), quarterly or biannual contact with the manager, and at least annual (sometimes more frequent) on-site visits.

Global equity, which employs managers through separate accounts and therefore custodies the underlying equities at the CRF custodial bank, receives an electronic report of those assets daily. Additionally, it holds in-person, in-depth visits with external managers at least annually, but often on a more frequent basis. For example, the CRF has met with one global equity manager three times this year, including an on-site visit to its London operations. In addition, the CRF has quarterly investment calls.

In asset classes where investments are typically made through partnerships, the CRF usually takes a seat on the advisory committees, if one exists, which provides an opportunity for greater monitoring and influence than would otherwise be available to limited partners. If the CRF staff is unable to attend, due to scheduling issues or travel restrictions, the CRF will sometimes ask its asset class consultant to attend. The CRF also has one-on-one visits with managers at least once a year; in real estate, the CRF tries to meet with its general partners and JV partners at least twice a year. In FAS experience, those frequencies are prevailing practices for large pension funds.

Perhaps more importantly, the indications are that the CRF monitoring is substantive. A distressed investment specialist noted that the CRF staff "reads the documents. They are diligent and spend time with us." Several real estate experts noted the CRF staff is informed

and active, and really endeavors to understand the investments from an on-the-ground perspective.

In addition to the CRF asset class staff efforts, at least three other entities help monitor external managers, providing appropriate redundancy, an extra set of checks, and potentially differing viewpoints:

- The performance and analytics group at the custodial bank calculates performance and provides it to the CRF staff, asset class consultants and the managers themselves on a monthly basis. The custodial bank also monitors all trading, both internal and external, through an automated trading compliance system. Any exceptions are sent to the Compliance Officer. The system is coded to monitor managerial guidelines required by law or regulation or policy, such as those that relate to the tobacco, Sudan, and Iran restrictions, as well as concentration limits.
- The Director of Risk and Reporting monitors the portfolio and individual managers from a risk exposure perspective. The recently selected Barra One risk reporting tool includes individual manager information and analysis.
- The asset class consultants monitor all individual managers.

In addition, as noted above, the CRF subjects prospective managers to an extensive due diligence and selection process. Analysis of manager guidelines and of manager controls is a part of those processes.

Perhaps because of the extent of the monitoring and the comprehensive nature of it, the CRF does not emphasize guideline monitoring (aside from the compliance system) on a stand-alone basis. For example, the CRF does not periodically review and update guidelines, preferring instead to do so “as needed”. This is the prevailing practice amongst its peers, as only a third of the funds updated guidelines annually, while two thirds of the funds took the same ad hoc, as needed approach.

Also, while not the focus of this segment of the report, FAS notes that the CRF’s general consultant provides quarterly in-depth monitoring reports which are reviewed by the IAC; and the risk manager also provides quarterly and ad hoc reports. While such reports primarily focus on asset class and total fund issues, they do occasionally refer to specific managers, and certainly spark questions regarding specific managers. They also help to prevent fallacies of composition, wherein individual managers may be doing their job but the cumulative effect of the individual managers’ actions would not align with the overall asset allocation.

The procedures for terminating external managers.

“Terminations” of external managers within the CRF primarily apply to the externally managed portion of the global equity portfolio and the hedge fund allocations. “Terminations” do not apply to the internally managed portions of the portfolio, such as fixed income and the passive equity allocation. Nor do they apply to partnerships such as private equity funds or real estate funds with defined lives which expire naturally, and which are difficult to exit except for cause during the life of the partnerships.

The CRF appears to use a mirror image of the hiring process with regard to terminations. Termination recommendations are proposed by investment staff, and then vetted by the asset class head and CIO. The relevant asset class consultant writes a memorandum, and the termination is proposed to the Comptroller.

Our documentation review found the termination recommendation files to be robust; as with the rationales for selection, the rationales for termination were clear. The vast majority related to the strategic plans for the asset class. For example, a May 2011 memorandum from the CIO to the Comptroller suggests nine actions, including three non-renewals of contracts, two terminations, one approval of a manager’s resignation and one reduction in assets to a manager “to align the Global Equity Portfolio with the structure outlined in the *Global Equity Strategic Plan*.”

Similarly, the decision to move from using funds of funds to direct hedge fund investing resulted in some fund terminations. Some of the funds continue to be in a run-off mode. The next most common cause for termination was organizational issues at the manager.

Most institutional investors feel that changes in strategy or managerial organizational concerns are relatively clear-cut rationales for termination, whereas performance concerns can be more nuanced. Performance can be affected by a style that is in or out of favor, one-off security selection challenges, or even the timing of the measurement period. Moreover, performance is a lagging indicator; it is the output of the investment process.

Therefore, terminating a manager for performance runs the risk of “selling low”, before either a style returns to favor or before some tweak to a manager’s investment process has time to produce positive results. However, waiting too long runs the risk of damaging the fund through consistent underperformance. Getting the balance right is an art. Our review found that the CRF appropriately considered these issues. Here are two examples:

- One asset manager managed an emerging markets equity mandate from 1993 until 2011, when it was terminated for underperformance. The manager admitted to FAS that the CRF was correct to terminate that mandate. It had underperformed for from one to two years,

and said the termination decision was well considered and neither rushed nor panicked. The manager also gave credit to the CRF for working with it to exit the investment in tranches, so as to minimize market impact issues.

- A large capitalization growth manager which had an allocation within the emerging manager program was terminated for performance. The consultant memorandum compared that manager's performance to its benchmark over various time periods and documented a series of different market conditions during which the manager had underperformed.

Of course, some terminations do not neatly fit into one category or another. Where there is overlap, it too was appropriately documented. For example, the termination of a quantitative "tilt" strategy (a "tilt" strategy uses various factors to overweight or underweight certain stocks while maintaining a narrow active risk to the benchmark) large capitalization domestic equity mandate in 2010 was precipitated by both "performance and product fit" within the global equity portfolio.

Conclusions

- 1. The combination of due diligence by the CRF staff and the consultants appears to create an effective due diligence process in all asset classes and situations examined**
- 2. The CRF uses consultants in various ways in the different asset groups, but never delegates total responsibility.**
- 3. Selection of managers starts with an appropriate top-down analysis based on the strategic asset allocation, proceeds to specific selection criteria, then modeling and then specific manager (or partnership) due diligence. The process is effective and includes both quantitative and qualitative analysis.**
- 4. In asset classes where investments are typically made through partnerships, the CRF tries to be as proactive as possible, and to avoid commitments to areas already at asset allocation targets so as to keep the strategic asset allocation central to the process.**
- 5. The CRF's monitoring of external investment managers is multi-faceted and robust.**
- 6. The frequency of CRF staff monitoring visits and conversations is at prevailing practice levels and, in some cases, at leading practice levels.**
- 7. Terminations of external managers are subject to a mirror image process to selection. Rationales for termination are clear and documented.**
- 8. Terminations for underperformance appear to strike a reasonable balance between efficiency and cautious analysis so as to avoid "selling low".**

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Appendix A - Official Compilation of Codes, Rules and Regulations of The State of New York, Title 11. Insurance Department,

Chapter IV. Financial Condition of Insurer and Report to Superintendent, Subchapter F. Public Retirement Systems, Part 136. Public Retirement Systems, Subpart 136-2. Standards for the New York State and Local Employees' Retirement System, the New York State and Local Police and Fire Retirement System and the New York State Common Retirement Fund

*** Section 136-2.1.* Purpose.**

(a) Section 314(b) of the Insurance Law authorizes the Superintendent of Insurance to promulgate certain standards with respect to the public retirement and pension systems of the State of New York or of a municipality thereof. Specifically, subsection (b) states as follows:

"(b) Notwithstanding any other provision of law to the contrary, the superintendent shall have, in addition to any other powers conferred upon him by law, the following authority with respect to any system:

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(2) to promulgate and amend from time to time, after consultation with the administrative heads of systems and after a public hearing, standards with respect to actuarial assumptions, accounting practices, administrative efficiency, discharge of fiduciary responsibilities, investment policies and financial soundness----"

(b) This subpart establishes standards for the management of the New York State and Local Employees' Retirement System and the New York State and Local Police and Fire Retirement System (hereinafter, collectively, "the retirement system"), and the New York State Common Retirement Fund (hereinafter "the fund"). These standards are intended to assure that the conduct of the business of the retirement system and the fund, and of the State Comptroller (as administrative head of the retirement system and as sole trustee of the fund) are consistent with the following principles:

(1) the retirement system and the fund shall operate under a strong governance framework with a rigorous system of internal controls;

(2) the retirement system and the fund shall maintain a high level of operational transparency;

(3) the Comptroller shall adhere to and manage the retirement system and the fund with the highest ethical, professional and conflict of interest standards;

(4) the Comptroller shall have a fiduciary responsibility to act for the sole benefit of the retirement system's members and beneficiaries; and

(5) the retirement system and the fund shall be managed in the most efficient and effective manner possible.

11 NY ADC 136-2.1
11 NY ADC 136-2.1
2009 WL 6454163
11 NY ADC 136-2.1

*** Section 136-2.2.* Definitions.**

The following words and phrases, as used in this Subpart, unless a different meaning is plainly required by the context, shall have the following meanings:

(a) Comptroller shall mean the Comptroller of the State of New York in his capacity as administrative head of the Retirement System and the sole trustee of the Fund.

(b) Consultant or advisor shall mean any person (other than an OSC employee) or entity retained by the Fund to provide technical or professional services to the Fund relating to investments by the Fund, including outside investment counsel and litigation counsel, custodians, administrators, broker-dealers, and persons or entities that identify investment objectives and risks, assist in the selection of investment managers, securities, or other investments, or monitor investment performance.

(c) Family member shall mean any person living in the same household as the Comptroller, and any person related to the Comptroller within the third degree of consanguinity or affinity.

(d) Fund shall mean the New York State Common Retirement Fund, a fund in the custody of the Comptroller as trustee, established pursuant to Section 422 of the Retirement and Social Security Law ("RSSL"), which holds the assets of the Retirement System.

(e) Investment manager shall mean any person (other than an OSC employee) or entity engaged by the Fund in the management of part or all of an investment portfolio of the Fund. "Management" shall include, but is not limited to, analysis of portfolio holdings, and the purchase, sale, and lending thereof. For the purposes hereof, any investment made by the Fund pursuant to RSSL § 177(7) shall be deemed to be the investment of the Fund in such investment entity (rather than in the assets of such investment entity).

(f) Investment policy statement shall mean a written document that, consistent with law, sets forth a framework for the investment program of the Fund.

(g) OSC shall mean the Office of the State Comptroller.

(h) Placement agent or intermediary shall mean any person or entity, including registered lobbyists, directly or indirectly engaged and compensated by an investment manager (other than a regular employee of the investment manager) to promote investments to or solicit investment by the Fund, whether compensated on a flat fee, a contingent fee, or any other basis. Regular employees of an investment manager are excluded from this definition unless they are employed principally for the purpose of securing or influencing the decision to secure a particular transaction or investment by the Fund. For purpose of this paragraph, the term "employee" shall include any person who would qualify as an employee under the federal Internal Revenue Code of 1986, as amended, but

shall not include a person hired, retained or engaged by an investment manager to secure or influence the decision to secure a particular transaction or investment by the Fund.

(i) Retirement System shall mean the New York State and Local Employees' Retirement System and the New York State and Local Police and Fire Retirement System.

(j) Third party administrator shall mean any person or entity that contractually provides administrative services to the Retirement System, including receiving and recording employer and employee contributions, maintaining eligibility rosters, verifying eligibility for benefits, paying benefits or maintaining any other Retirement System records. "Administrative services" do not include services provided to the Fund relating to Fund investments.

(k) Unaffiliated Person shall mean any person other than:

(1) the Comptroller or a family member of the Comptroller;

(2) an officer or employee of OSC;

(3) an individual or entity doing business with OSC or the Fund; or

(4) an individual or entity that has a substantial financial interest in an entity doing business with OSC or the Fund. For the purpose of this paragraph, the term "substantial financial interest" shall mean the control of the entity, whereby "control" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of the entity, whether through the ownership of voting securities, by contract (except a commercial contract for goods or non-management services) or otherwise; but no individual shall be deemed to control an entity solely by reason of his being an officer or director of such entity. Control shall be presumed to exist if any individual directly or indirectly owns, controls or holds with the power to vote ten percent or more of the voting securities of such entity.

11 NY ADC 136-2.2

11 NY ADC 136-2.2

2009 WL 6454164

11 NY ADC 136-2.2

*** Section 136-2.3.* Fiduciary responsibilities.**

(a) The Comptroller is a fiduciary and as such shall act solely in the interests of the members and beneficiaries of the retirement system. At all times the Comptroller shall perform his or her responsibilities with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

(b) The fund shall at all times be under the control of the Comptroller, who shall adopt an investment policy statement and any amendments to such as needed. Key elements of an investment policy statement shall include, without limitation:

(1) investment purpose;

(2) investment objectives;

(3) roles and responsibilities of the Comptroller, and the Comptroller's staff and committees, with respect to investments of the assets of the fund;

(4) investment guidelines and limits encompassing all types of investments;

(5) asset allocation targets, including procedures for rebalancing;

(6) standards for measuring investment performance and evaluating investment risk; and

(7) any other guidelines adopted by the Comptroller with respect to specific investment related issues, including, but not limited to, securities lending, proxy voting, brokerage, and securities litigation.

(c) No investment or loan transaction shall be made by the fund unless the same has been approved in writing by the Comptroller. The Comptroller may delegate his or her powers of investment to a committee or agent of the Comptroller in accordance with the fund's investment policy statement. Such committee or agent shall render timely written reports of its activities to the Comptroller under a schedule to be established by the Comptroller, and shall render special reports whenever requested by the Comptroller. The Comptroller shall furnish any such reports promptly upon the request of the superintendent.

(d) In respect to the delegation of investment powers, the Comptroller shall regularly review:

(1) the present holdings in the investment account;

(2) any material changes in the account during the preceding period;

(3) the reasons for such changes and the results achieved thereby;

(4) the investment activity in the account including the rate of turnover; and

(5) any other factors that the Comptroller considers pertinent to an analysis of financial performance and planning, consistent with his or her obligation as a fiduciary.

(e) The Comptroller shall adopt, as shall be deemed necessary, such mortality, service and other tables recommended by the retirement system's actuary and certify the rates of deduction from compensation and ascertain contributions by the employers computed to be necessary to pay the benefits authorized under the provisions of law. The Comptroller shall also submit to the superintendent, in writing, the reasons for the decision not to adopt such recommendations presented by the retirement system's actuary.

(f) The Comptroller shall not reverse, reject, or unduly delay the adoption of the recommendations of the retirement system's medical board in the performance of its statutory duty, unless such rejection, reversal or delay is supported by objective reasons stated, in writing, by the Comptroller.

(g) The Comptroller shall ascertain when contributions to the retirement system are due and institute appropriate procedures to enforce prompt payment thereof. Contributions for a fiscal year

which are more than three months overdue shall be reported to the superintendent by a schedule appended to the annual statement filed with the Insurance Department.

(h) Neither the Comptroller, nor any consultant or advisor, investment manager, agent or employee, shall:

(1) deal in the assets of the retirement system or the fund for his or her own account;

(2) act in any capacity in any transaction involving the retirement system or the fund on behalf of a party whose interests are adverse to the retirement system or the fund;

(3) receive any consideration from any party other than OSC, the retirement system or the fund in connection with a transaction involving the retirement system or the fund; or

(4) own or maintain any indicia of ownership or personal interest in any assets of the retirement system or the fund other than an interest in the retirement system as a member or beneficiary.

(i) The Comptroller shall require proper minutes of meetings of any committee established by law, regulation or the Comptroller. The Comptroller shall furnish such minutes promptly upon the request of the superintendent.

(j) The Comptroller shall be responsible for ensuring that all members of any committees established by law or regulation or by the Comptroller to assist in the management of the retirement system or in the investment of the assets of the fund have been:

(1) provided with appropriate information pertaining to their duties and their fiduciary and ethical responsibilities; and

(2) provided training with respect to discharge of their fiduciary duties and responsibilities to the fund.

11 NY ADC 136-2.3

11 NY ADC 136-2.3

2009 WL 6454165

11 NY ADC 136-2.3

*** Section 136-2.4.* Governance responsibilities and ethics provisions.**

(a) Committees.

(1) The Comptroller shall appoint committees required by statute, regulation, or executive order of the Comptroller, including but not limited to, the Investment Advisory Committee and the Real Estate Advisory Committee (also known as the Mortgage Advisory Committee) required by section 423 of the Retirement and Social Security Law. The Comptroller shall establish and administer written ethical standards applicable to the members of such committees. The ethical standards shall establish a financial disclosure and conflicts of interest process designed to ensure that decisions are made for the benefit of the retirement system members and beneficiaries. Such ethical standards shall be published on the OSC public website.

(2) The Comptroller shall authorize the investment advisory committee to review the investment policy statement and offer advice regarding amendments to the investment policy statement as needed.

(3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse by a committee member. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website.

(b) Employees.

(1) All employees of OSC who have responsibility for matters related to the fund are subject to the applicable provisions of the Public Officers Law.

(2) All employees of OSC who have responsibility for matters related to the fund shall be provided training with respect to discharge of their duties and responsibilities to the fund.

(3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse in OSC by a State officer or employee relating to his or her office or employment. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website.

(c) Investment managers, and consultants or advisors.

(1) The Comptroller shall require that investment managers, and consultants or advisors:

(i) promptly disclose to the fund in writing any conflict of interest the investment manager or consultant or advisor may have which could reasonably be expected to impair the investment manager's, or consultant or advisor's ability to render unbiased and objective advice; and

(ii) file annually with the fund a statement acknowledging that they are aware of and that they are in compliance with the above standard. Such statement shall contain the following language:

"ALL INVESTMENT MANAGERS, AND CONSULTANTS OR ADVISORS OWE THE COMPTROLLER A FIDUCIARY DUTY. THIS MEANS THAT INVESTMENT MANAGERS, OR CONSULTANTS OR ADVISORS MUST DISCLOSE TO THE COMPTROLLER INFORMATION ABOUT MATERIAL CONFLICTS OF INTEREST. FAILURE TO TRUTHFULLY COMPLETE THIS STATEMENT MAY RESULT IN CRIMINAL OR CIVIL LIABILITIES".

(2) The Comptroller shall establish transparent procurement guidelines and procedures with respect to procurement of all investment managers, and consultants or advisors. Such guidelines and procedures shall be published on the OSC public website. The method of selection of investment managers, and consultants or advisors shall be documented in writing, in a procurement record.

(3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse by a person or entity having business dealings with the fund relating to such dealings. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website.

(d) Placement agents or intermediaries: In order to preserve the independence and integrity of the Fund, to preclude potential conflicts of interest, and to assist the Comptroller in fulfilling his or her duties as a fiduciary to the Fund, the Fund shall not engage, hire, invest with or commit to an outside investment manager who is using the services of a placement agent or intermediary to assist the investment manager in obtaining investments by the Fund.

(e) Audit committee. Consistent with his or her obligations as a fiduciary, the Comptroller shall establish an audit committee for the retirement system and the fund comprised exclusively of unaffiliated persons, one of whom shall reflect the interests of public employees and one of whom shall reflect the interests of public employers. The Comptroller shall:

(1) develop an audit committee charter for the committee;

(2) establish written standards for the selection of audit committee members;

(3) authorize the audit committee to review and report to the Comptroller on the internal audit plans and the internal audit and regulatory examination reports related to the retirement system and the fund;

(4) authorize the audit committee to review and report to the Comptroller on the procurement of external auditor services by the retirement system and the fund;

(5) authorize the audit committee to review and report to the Comptroller on the annual audit process related to the retirement system and the fund and the Comprehensive Annual Financial Report, which shall include meeting with external auditors to review the adequacy of internal controls and significant findings and recommendations; and

(6) authorize the audit committee to develop quarterly progress reports to the Comptroller that, at a minimum, discuss:

(i) the audits of the retirement system and the fund scheduled to be conducted, along with the scope of the audits;

(ii) the audits of the retirement system and the fund completed; and

(iii) significant audit findings and recommendations related to the retirement system and the fund.

11 NY ADC 136-2.4

11 NY ADC 136-2.4

2009 WL 6454166

11 NY ADC 136-2.4

*** Section 136-2.5.* Transparency and financial reporting.**

(a) All records, including work papers for the preparation of the annual statement filed with the superintendent, shall be available to the department's examiners and be maintained in accordance with the requirements of 11 NYCRR Part 243 (Regulation No. 152).

(b) The Comptroller shall require that all agreements with consultants or advisors, investment managers, or third party administrators include provisions that require the person or entity to:

(1) submit to a review by the superintendent concerning fees paid by the fund and services rendered to the fund; and

(2) respond in writing to any inquiry or request for information by the superintendent concerning fees paid by the fund and services rendered to the fund.

(c) Books of account and records of the retirement system and of the fund shall be maintained by fiscal year for which the retirement system files reports.

(d) The Comptroller shall maintain a classification of its accounts, numbered and titled, together with an accurate description of the content of each account by debit and credit. The classification of accounts shall be consistent with the requirements of the accounting and financial reporting standards of the Governmental Accounting Standards Board and of any other reporting requirement judged to be necessary by the superintendent.

(e) The Comptroller shall maintain records that set forth the expenses incurred by the retirement system and the fund on their behalf in the course of operations.

(f) The Comptroller shall have on his or her staff an internal auditor who shall report to the Comptroller and shall submit regular reports of the audits of the retirement system's and fund's records, accounting procedures, and investment operations, including recommendations for improvement and correction. The Comptroller shall require the internal auditor to conduct audits on an annual basis based on risk assessment criteria of the operations of the retirement system and the fund, including audits of business relationships with the retirement system and the fund. The Comptroller shall share all internal and external audit reports related to the retirement system and the fund with the audit committee. The Comptroller shall furnish any such reports promptly upon the request of the superintendent.

(g) The Comptroller shall:

(1) file with the superintendent an annual statement in the format prescribed by Section 307 of the Insurance Law, including the Retirement System's financial statement, together with an opinion of an independent certified public accountant on the financial statement;

(2) file with the superintendent the Comprehensive Annual Financial Report within the time prescribed by law, but no later than the time it is published on the OSC public website;

(3) disclose on the OSC public website, on at least an annual basis, all fees paid by the Fund to investment managers, consultants or advisors, and third party administrators;

(4) disclose on the OSC public website the Fund's investment policies and procedures; and

(5) require fiduciary and conflict of interest reviews of the Fund every three years by a qualified unaffiliated person.

11 NY ADC 136-2.5

2009 WL 6454167

11 NY ADC 136-2.5

*** Section 136-2.6.* Financial soundness and actuarial principles.**

(a) Consistent with his or her obligations as a fiduciary, the Comptroller shall establish an actuarial committee comprised exclusively of unaffiliated persons that have expertise and experience in actuarial science.

(b) The Comptroller shall:

(1) develop an actuarial committee charter for the committee;

(2) establish written standards for the selection of actuarial committee members;

(3) authorize the actuarial committee to make recommendations to the retirement system actuary regarding actuarial assumptions and methodologies; and

(4) authorize the actuarial committee to review and report to the Comptroller on the financial soundness of the retirement system.

11 NY ADC 136-2.6

11 NY ADC 136-2.6

2009 WL 6454168

11 NY ADC 136-2.6

*** Section 136-2.7.* Implementation.**

(a) Failure to implement provisions of applicable law or regulation shall be regarded as a breach of fiduciary responsibility.

(b) The Comptroller, any officer or employee of OSC, or any other person or entity having a fiduciary responsibility to the fund, who willfully violates or knowingly participates in a violation of any fiduciary standard promulgated pursuant to section 314 of the Insurance Law or other applicable law or regulation, shall be guilty of a breach of fiduciary responsibility.

(c) In the event the superintendent determines that there is reasonable cause to believe that the breach has occurred, the superintendent shall, after providing notice to the Comptroller or his or her designee, and to the subject officer or employee of OSC or such other person or entity having a fiduciary responsibility to the fund, transmit a notice of reasonable cause to: the Temporary President of the Senate and the Speaker of the Assembly, if the notice relates to the Comptroller; or to the Comptroller, if the notice relates to an officer or employee of OSC or to any other person or entity having a fiduciary responsibility to the fund.

(d) In any case where the superintendent determines that there is reasonable cause to believe that a breach by the Comptroller, an officer or employee of OSC, or any other person or entity having a fiduciary responsibility to the fund, has resulted in a depletion of the fund, the superintendent, after providing notice to the Comptroller or the Comptroller's designee, may transmit a copy of his or her determination to the Attorney General or any other appropriate civil or criminal law enforcement authorities for any appropriate further action.

(e) In any case where the superintendent's transmittal results in an adjudication that the fund has been depleted by reason of any breach, the adjudication will be published on the OSC public website.

(f) This Subpart shall take effect upon publication in the State Register, and will apply to all contracts related to the management of the fund entered into or renewed by the Comptroller subsequent to that date.

11 NY ADC 136-2.7

11 NY ADC 136-2.7

2009 WL 6454169

Appendix B - Comptroller's Compliance with the Official Compilation of Codes, Rules and Regulations of The State of New York

TITLE 11. INSURANCE DEPARTMENT CHAPTER IV. FINANCIAL CONDITION OF INSURER AND REPORTS TO SUPERINTENDENT

SUBCHAPTER F. PUBLIC RETIREMENT SYSTEMS PART 136. PUBLIC RETIREMENT SYSTEMS

SUBPART 136-2. STANDARDS FOR THE NEW YORK STATE COMMON RETIREMENT FUND

11 NYCRR Section 136-2.3. Fiduciary Responsibilities.

Evidence of
Compliance

2.3 (a) The Comptroller is a fiduciary and as such shall act solely in the interests of the members and beneficiaries of the retirement system. At all times the Comptroller shall perform his or her responsibilities with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. YES

2.3 (b) The fund shall at all times be under the control of the Comptroller, who shall adopt an investment policy statement and any amendments to such as needed. Key elements of an investment policy statement shall include, without limitation:

(1) investment purpose; YES

(2) investment objectives; YES

(3) roles and responsibilities of the Comptroller, and the Comptroller's staff and committees, with respect to investments of the assets of the fund; YES

(4) investment guidelines and limits encompassing all types of investments; YES

(5) asset allocation targets, including procedures for rebalancing; YES

(6) standards for measuring investment performance and evaluating investment risk; and YES

(7) any other guidelines adopted by the Comptroller with respect to specific investment related issues, including, but not limited to, securities lending, proxy voting, brokerage, and securities litigation. YES

2.3 (c) No investment or loan transaction shall be made by the fund unless the same has been approved in writing by the Comptroller. The Comptroller may delegate his or her powers of investment to a committee or agent of the Comptroller in accordance with the fund's investment policy statement. Such committee or agent shall render timely written reports of its activities to the Comptroller under a schedule to be established by the Comptroller, and shall render special reports whenever requested by the Comptroller. YES

The Comptroller shall furnish any such reports promptly upon the request of the superintendent. YES

- 2.3 (d) In respect to the delegation of investment powers, the Comptroller shall regularly review:
- (1) the present holdings in the investment account; YES
 - (2) any material changes in the account during the preceding period; YES
 - (3) the reasons for such changes and the results achieved thereby; YES
 - (4) the investment activity in the account including the rate of turnover; and YES
 - (5) any other factors that the Comptroller considers pertinent to an analysis of financial performance and planning, consistent with his or her obligation as a fiduciary. YES
- 2.3 (h) Neither the Comptroller, nor any consultant or advisor, investment manager, agent or employee, shall:
- (1) deal in the assets of the retirement system or the fund for his or her own account; YES
 - (2) act in any capacity in any transaction involving the retirement system or the fund on behalf of a party whose interests are adverse to the retirement system or the fund; YES
 - (3) receive any consideration from any party other than OSC, the retirement system or the fund in connection with a transaction involving the retirement system or the fund; or YES
 - (4) own or maintain any indicia of ownership or personal interest in any assets of the retirement system or the fund other than an interest in the retirement system as a member or beneficiary. YES
- 2.3 (i) The Comptroller shall require proper minutes of meetings of any committee established by law, regulation or the Comptroller. The Comptroller shall furnish such minutes promptly upon the request of the superintendent. YES
- 2.3 (j) The Comptroller shall be responsible for ensuring that all members of any committees established by law or regulation or by the Comptroller to assist in the management of the retirement system or in the investment of the assets of the fund have been:
- (1) provided with appropriate information pertaining to their duties and their fiduciary and ethical responsibilities; and YES
 - (2) provided training with respect to discharge of their fiduciary duties and responsibilities to the fund. YES

11 NYCRR Section 136-2.4. Governance Responsibilities and Ethics Provisions.

Evidence of
Compliance

(a) Committees.

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| (1) The Comptroller shall appoint committees required by statute, regulation, or executive order of the Comptroller, including but not limited to, the Investment Advisory Committee and the Real Estate Advisory Committee (also known as the Mortgage Advisory Committee) required by section 423 of the Retirement and Social Security Law. The Comptroller shall establish and administer written ethical standards applicable to the members of such committees. The ethical standards shall establish a financial disclosure and conflicts of interest process designed to ensure that decisions are made for the benefit of the retirement system members and beneficiaries. Such ethical standards shall be published on the OSC public website. | YES |
| (2) The Comptroller shall authorize the investment advisory committee to review the investment policy statement and offer advice regarding amendments to the investment policy statement as needed. | YES |
| (3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse by a committee member. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website. | YES |

(b) Employees.

- | | |
|--|-----|
| (1) All employees of OSC who have responsibility for matters related to the fund are subject to the applicable provisions of the Public Officers Law. | YES |
| (2) All employees of OSC who have responsibility for matters related to the fund shall be provided training with respect to discharge of their duties and responsibilities to the fund. | YES |
| (3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse in OSC by a State officer or employee relating to his or her office or employment. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website. | YES |

(c) Investment managers, and consultants or advisors.

(1) The Comptroller shall require that investment managers, and consultants or advisors: SUBSTANTIAL

(i) promptly disclose to the fund in writing any conflict of interest the investment manager or consultant or advisor may have which could reasonably be expected to impair the investment manager's, or consultant or advisor's ability to render unbiased and objective advice; and

(ii) file annually with the fund a statement acknowledging that they are aware of and that they are in compliance with the above standard. Such statement shall contain the following language:

"ALL INVESTMENT MANAGERS, AND CONSULTANTS OR ADVISORS OWE THE COMPTROLLER A FIDUCIARY DUTY. THIS MEANS THAT INVESTMENT MANAGERS, OR CONSULTANTS OR ADVISORS MUST DISCLOSE TO THE COMPTROLLER INFORMATION ABOUT MATERIAL CONFLICTS OF INTEREST. FAILURE TO TRUTHFULLY COMPLETE THIS STATEMENT MAY RESULT IN CRIMINAL OR CIVIL LIABILITIES".

(2) The Comptroller shall establish transparent procurement guidelines and procedures with respect to procurement of all investment managers, and consultants or advisors. Such guidelines and procedures shall be published on the OSC public website. The method of selection of investment managers, and consultants or advisors shall be documented in writing, in a procurement record. YES

(3) The Comptroller shall develop a process to receive and investigate complaints from any source, or upon his or her own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest or abuse by a person or entity having business dealings with the fund relating to such dealings. The process shall be set forth in written guidelines and such guidelines shall be published on the OSC public website. YES

(d) Placement agents or intermediaries:

In order to preserve the independence and integrity of the Fund, to preclude potential conflicts of interest, and to assist the Comptroller in fulfilling his or her duties as a fiduciary to the Fund, the Fund shall not engage, hire, invest with or commit to an outside investment manager who is using the services of a placement agent or intermediary to assist the investment manager in obtaining investments by the Fund. YES

(e) Audit committee.

Consistent with his or her obligations as a fiduciary, the Comptroller shall establish an audit committee for the retirement system and the fund comprised exclusively of unaffiliated persons, one of whom shall reflect the interests of public employees and one of whom shall reflect the interests of public employers. The Comptroller shall:

(1) develop an audit committee charter for the committee; YES

(2) establish written standards for the selection of audit committee members; YES

(3) authorize the audit committee to review and report to the Comptroller on the internal audit plans and the internal audit and regulatory examination reports related to the retirement system and the fund; YES

(4) authorize the audit committee to review and report to the Comptroller on the procurement of external auditor services by the retirement system and the fund; YES

- (5) authorize the audit committee to review and report to the Comptroller on the annual audit process related to the retirement system and the fund and the Comprehensive Annual Financial Report, which shall include meeting with external auditors to review the adequacy of internal controls and significant findings and recommendations; and YES
- (6) authorize the audit committee to develop quarterly progress reports to the Comptroller that, at a minimum, discuss: SUBSTANTIAL
- (i) the audits of the retirement system and the fund scheduled to be conducted, along with the scope of the audits;
 - (ii) the audits of the retirement system and the fund completed; and
 - (iii) significant audit findings and recommendations related to the retirement system and the fund.

11 NYCRR Section 136-2.5. Transparency and Financial Reporting.

Evidence of Compliance

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| (a) All records, including work papers for the preparation of the annual statement filed with the superintendent, shall be available to the department's examiners and be maintained in accordance with the requirements of 11 NYCRR Part 243 (Regulation No. 152). | YES |
| b) The Comptroller shall require that all agreements with consultants or advisors, investment managers, or third party administrators include provisions that require the person or entity to: | |
| (1) submit to a review by the superintendent concerning fees paid by the fund and services rendered to the fund; and | YES |
| (2) respond in writing to any inquiry or request for information by the superintendent concerning fees paid by the fund and services rendered to the fund. | YES |
| (c) Books of account and records of the retirement system and of the fund shall be maintained by fiscal year for which the retirement system files reports. | YES |
| (d) The Comptroller shall maintain a classification of its accounts, numbered and titled, together with an accurate description of the content of each account by debit and credit. The classification of accounts shall be consistent with the requirements of the accounting and financial reporting standards of the Governmental Accounting Standards Board and of any other reporting requirement judged to be necessary by the superintendent. | YES |
| (e) The Comptroller shall maintain records that set forth the expenses incurred by the retirement system and the fund on their behalf in the course of operations. | YES |
| (g) The Comptroller shall: | |
| (1) file with the superintendent an annual statement in the format prescribed by Section 307 of the Insurance Law, including the Retirement System's financial statement, together with an opinion of an independent certified public accountant on the financial statement; | YES |
| (2) file with the superintendent the Comprehensive Annual Financial Report within the time prescribed by law, but no later than the time it is published on the OSC public website; | YES |
| (3) disclose on the OSC public website, on at least an annual basis, all fees paid by the Fund to investment managers, consultants or advisors, and third party administrators; | YES |
| (4) disclose on the OSC public website the Fund's investment policies and procedures; and | YES |
| (5) require fiduciary and conflict of interest reviews of the Fund every three years by a qualified unaffiliated person. | YES |

11 NYCRR Section 136-2.6. Financial Soundness and Actuarial Principles.

Evidence of
Compliance

- | | |
|--|---------|
| (a) Consistent with his or her obligations as a fiduciary, the Comptroller shall establish an actuarial committee comprised exclusively of unaffiliated persons that have expertise and experience in actuarial science. | YES |
| (b) The Comptroller shall: | |
| (1) develop an actuarial committee charter for the committee; | YES |
| (2) establish written standards for the selection of actuarial committee members; | PARTIAL |
| (3) authorize the actuarial committee to make recommendations to the retirement system actuary regarding actuarial assumptions and methodologies; and | YES |
| (4) authorize the actuarial committee to review and report to the Comptroller on the financial soundness of the retirement system. | YES |

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Appendix C - Fiduciary and Conflict of Interest Review Tasks

Task 1: Fiduciary Responsibilities and Framework for the Operations and Decision Making Processes of the Fund

Does the Comptroller fulfill his fiduciary responsibility to act for the sole benefit of the System's members, retirees, and beneficiaries and does the Fund have a strong and effective framework for the operations and decision making processes of the Fund?

A. General standards for the conduct and activities that are the subject of this Task are:

(1) The Comptroller, as a fiduciary, must act solely in the interests of the members, retirees, and beneficiaries of the System;

(2) The Comptroller must perform his responsibilities with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims; and

(3) Neither the Comptroller, consultant, advisor, investment manager, agent, nor employee may deal in the assets of the Fund for his or her own account or otherwise breach a duty of loyalty.

B. the Firm will review the investment-related policies, procedures, and practices of the Fund relating to the Comptroller's ability to delegate his powers of investment to a committee or agent. If the Comptroller has delegated any such powers of investment (in writing or in practice), the Firm will determine whether:

(1) such delegation is in accordance with the Fund's investment policy statement;

(2) the Comptroller has established a schedule for such committee or agent to render written reports of its activities and reports are rendered according to the schedule; and

(3) such reports are sufficiently detailed to allow the Comptroller to analyze financial performance and planning, consistent with his obligation as a fiduciary.

C. the Firm will also compare such policies, procedures, and practices with common and leading practices.

D. the Firm will determine whether investment and loan transactions by the Fund have been approved by the Comptroller, or if authority has been delegated, approval is in accordance with the requirements of such delegation.

E. the Firm will compare the framework for the operations and decision-making processes of the Fund – including policies, procedures, and practices – with common and leading practices, e.g., the time available to review investment opportunities and make decisions, the expertise of the decision makers, and the organizational effectiveness of the decision making.

F. the Firm will compare the Fund's Investment Policy Statement with common and leading practices.

G. the Firm will compare the written ethical standards applicable to the members of the Committees establishing a financial disclosure and conflicts of interest process that is designed to ensure that decisions are made for the benefit of the System's members, retirees, and beneficiaries, with common and leading practices.

H. the Firm will compare (a) the information provided to members of the Committees pertaining to their duties and their fiduciary responsibilities and (b) the training provided to Committee members with respect to discharge of their fiduciary duties and responsibilities to the Fund, with common and leading practices.

Task 2: Ethical, Professional, and Conflict of Interest Standards

Does the Comptroller adhere to and manage the Fund with the highest ethical, professional, and conflict of interest standards?

A. Committees:

The Comptroller is required by statute, regulation, or executive order to establish an Investment Advisory Committee (“IAC”) (RSSL Section 423), a Real Estate Advisory Committee (“REAC”) (RSSL Section 423, also known as the Mortgage Advisory Committee), an Actuarial Advisory Committee (11 NYCRR Section 136-2.6), an Audit Committee (11 NYCRR Section 136-2.4(e)), and an Advisory Council for the Retirement System (2 NYCRR Part 320) (hereafter collectively referred to as “Committees”).

(1) The Firm will review whether the Committees are established and functioning in accordance with law.

(2) The Firm will compare the information and training provided to members of the Committees pertaining to their ethical responsibilities, and the keeping of Committee meeting minutes, with common and leading practices.

(3) The Firm will determine whether IAC has reviewed the Fund’s investment policy statement and offered advice regarding amendments, if any, to the investment policy statement.

B. Employees:

The Firm will determine whether all employees of OSC who have responsibility for matters related to the Fund:

(1) have been provided a resource for guidance on the Public Officers Law and utilize that resource in an effort to ensure that they are operating in a manner consistent with the Public Officers Law;

(2) have been provided training with respect to discharge of their duties and responsibilities to the Fund; and

(3) are subject to an insider trading policy.

The Firm will also compare such training and insider trading policy with common and leading practices.

C. Investment managers, and consultants or advisors:

The Firm will review the Fund’s policies and procedures designed to ensure:

(1) that investment managers, and consultants or advisors promptly disclose to the Fund in writing any conflict of interest the investment manager or consultant or advisor may have which could reasonably be expected to impair the investment manager’s, or Consultant’s or advisor’s ability to render unbiased and objective advice; and

(2) that investment managers, and consultants or advisors will file annually a statement that they are

aware of and in compliance with the following language:

"All investment managers, and consultants or advisors owe the comptroller a fiduciary duty. This means that investment managers, or consultants or advisors must disclose to the comptroller information about material conflicts of interest. Failure to truthfully complete this statement may result in criminal or civil liabilities".

The Firm will compare the Fund's policies and procedures relating to the selection and/or procurement of investment managers, and consultants or advisors, with common and leading practices.

D. Placement agents or intermediaries:

The Firm will compare the policies adopted by the Fund with respect to the use of the services of a placement agent or intermediary by investment managers to assist the investment manager in obtaining investments by the Fund, with common and leading practices.

E. Process to Investigate Complaints:

The Firm will compare the Fund's process to receive and investigate complaints from any source, or upon the Comptroller's own initiative, concerning allegations of corruption, fraud, criminal activity, conflicts of interest, or abuse (a) by a Committee member, (b) in OSC by a State officer or employee relating to his or her office or employment, or (c) by a person or entity having business dealings with the Fund relating to such dealings, to common and leading practices.

Task 3: Operational Transparency

Does the Fund maintain a high level of operational transparency?

A. The Firm will compare the Fund's level of transparency with common and leading practices. At a minimum, the Firm will examine:

- (1) Publication of various policies and procedures and other information on OSC's website;
- (2) The level of disclosure in the CAFR;
- (3) Contractual requirements imposed on investment advisors, consultants and advisors and any third party administrators with respect to responding to inquiries by the Superintendent of Insurance; and
- (4) Records maintained that set forth the expenses incurred by the Fund in the course of operations.

Task 4: Efficiency and Effectiveness of Management

Is the Fund managed in an efficient and effective manner?

A. Investment-Related Operations

The Firm will compare the CRF's investment-related operations within the current legal framework with common and leading practices. The evaluation should focus on ascertaining whether there is a need for clarification and/or additional specification of roles and responsibilities. The analysis should include:

- (1) The training provided to the Comptroller and staff with respect to investment matters;
- (2) The reporting lines of authority and whether the roles of the Comptroller and staff are clearly defined, i.e., what actions staff may take independently and what actions require approval of the Comptroller;
- (3) CRF's use of IAC and REAC; and
- (4) Level of support provided to CRF and investment staff by attorneys, both internal and external.

B. Use of External Managers and Consultants

The Firm will compare CRF's investment management operations within the current legal framework regarding the use of external managers and consultants with common and leading practices. Consideration should be given to the advantages and disadvantages of various styles of investment management. The analysis and evaluation should include:

- (1) The number of external managers and the sizes of the accounts or funds under management, for comparison with common and leading practices of diversification;
- (2) The knowledge and expertise, scope of work, reporting responsibilities, and fees of external managers;
- (3) the knowledge and expertise, scope of work, and fees of consultants;
- (4) Effect on the performance of the Fund of augmenting staff capabilities through the use of external managers and consultants;
- (5) The expenses for managing the Fund, and comparison with selected enterprises of like character and with like aims in relation to the performance of the Fund; and
- (6) Other costs associated with external asset management, including custody, securities lending, and transaction fees.

C. Investment Accounting Processes

The review will compare CRF's investment accounting processes with common and leading practices.

D. Due Diligence Procedures

The review will compare CRF's due diligence procedures with respect to the selection, monitoring, and termination of external managers with common and leading practices. The analysis and evaluation should include:

- (1) The division of responsibilities between staff and consultants to determine efficiency and effectiveness of due diligence procedures;
- (2) The selection process for external managers, including the criteria for selection;
- (3) The process for monitoring external managers, including the criteria for monitoring, the frequency of monitoring, and the topics covered during due diligence;

- (4)** The frequency of site visits by CRF staff or consultants to the place of business of external managers and to the location of real assets under management;
- (5)** The procedures for terminating external managers; and
- (6)** The extent of review of external manager's internal guidelines.

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Appendix D - Glossary of Acronyms Used (in alphabetical order)

AAC	Actuarial Advisory Committee
AC	Advisory Audit Committee
ACRS	Advisory Council for the Retirement System
AR	Absolute Return
ARS	Absolute Return Strategy
AUM	Asset Under Management
CAFR	Comprehensive Annual Financial Report
CalPERS	California Public Employees' Retirement System
CEM	Cost Effectiveness Measurement Benchmarking (Toronto, Canada)
CFA	Chartered Financial Analyst
CFO	Chief Financial Officer
CIO	Chief Investment Officer
CIPM	Certificate in Investment Performance Measurement
CPA	Certified Public Accountant
CPC	Community Preservation Corporation
CRF	Common Retirement Fund
DFS	Department of Financial Services
EMC	Elkins McSherry LLC, a State Street Company
ERISA	Employee Retirement Income Security Act
ESG	Environmental, Social and Corporate Governance
FAS	Funston Advisory Services LLC
FX	Foreign Exchange
FY	Fiscal Year
GAAP	Generally Accepted Accounting Principles
GASB	Government Accounting Standards Board
GFOA	Government Finance Officers Association
HR	Human Resources
IAC	Investment advisory Committee
IIC	Internal Investment Committee
IPS	Investment Policy Statement
IT	Information Technology

JPM	J. P. Morgan Chase & Co.
M&A	Mergers & Acquisitions
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
NYSCRF	New York State Common Retirement Fund
NYSLRS	New York State & Local Retirement System
OSC	Office of the State Comptroller
PICM	Pension Investment and Cash Management
REAC	Real Estate Advisory Committee
RFP	Request for Proposal
RSSL	Retirement and Social Security Law
SEC	Securities & Exchange Commission