



OIOS

Office of Internal Oversight Services

INTERNAL AUDIT DIVISION

AUDIT REPORT

Investment Management Division's Compliance with Investment Policies

There is a need for the Investment Management Division to strengthen the risk management and compliance governance framework, and to enhance related policies and procedures.

21 July 2009

Assignment No. AS2008/801/01

United Nations  Nations Unies

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

OFFICE OF INTERNAL OVERSIGHT SERVICES - BUREAU DES SERVICES DE CONTRÔLE INTERNE
INTERNAL AUDIT DIVISION - DIVISION DE L'AUDIT INTERNE

TO: Mr. Warren Sach
A Representative of the Secretary-General for Investments of
United Nations Joint Staff Pension Fund

DATE 21 July 2009

FROM: Fatoumata Ndiaye, Acting Director
DE: Internal Audit Division, OIOS

REFERENCE IAD: 09-02685

Fatou

SUBJECT: **Assignment No. AS2008/801/01 – Audit of the Investment Management Division's Compliance
with Investment Policies**
OBJET:

1. I am pleased to present the report on the above-mentioned audit.
2. In order for us to close the remaining recommendations, we request that you provide us with the additional information as discussed in the text of the report and summarized in Annex 1.
3. Please note that OIOS will report on the progress made to implement its recommendations, particularly those designated as high risk (i.e., recommendations 1-8, 15, 16, 19-21, 24, 27 and 28) in its annual report to the General Assembly and semi-annual report to the Secretary-General.

cc: Mr. Bernard Cochemé, Chief Executive Officer, UNJSPF Secretariat
Ms. Suzanne Bishopric, Director, Investment Management Division, UNJSPF
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors
Ms. Maria Gomez Troncoso, Officer-in-Charge, Joint Inspection Unit Secretariat
Mr. Moses Bamuwanye, Chief, Oversight Support Unit, Department of Management
Ms. Maria-Elena Munoz, Programme Officer, OIOS
Mr. William Petersen, Chief, New York Audit Service, OIOS

INTERNAL AUDIT DIVISION

FUNCTION

"The Office shall, in accordance with the relevant provisions of the Financial Regulations and Rules of the United Nations examine, review and appraise the use of financial resources of the United Nations in order to guarantee the implementation of programmes and legislative mandates, ascertain compliance of programme managers with the financial and administrative regulations and rules, as well as with the approved recommendations of external oversight bodies, undertake management audits, reviews and surveys to improve the structure of the Organization and its responsiveness to the requirements of programmes and legislative mandates, and monitor the effectiveness of the systems of internal control of the Organization" (General Assembly Resolution 48/218 B).

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EXECUTIVE SUMMARY

Audit of Investment Management Division's Compliance with Investment Policies

OIOS conducted an audit of Investment Management Division's compliance with investment policies. The overall objective of the audit was to determine whether the investment management policies and procedures were adequate and effective in mitigating the investment risks to the Fund, and whether they were being complied with. A related objective was to assess the reliability of reported data, records and information systems supporting the investment process. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

The audit results indicated that there is an overall need to strengthen the risk management and compliance governance framework, and to enhance related policies and procedures. There is also a need for a clearly communicated investment strategy and business process re-engineering, including the identification and alignment of the business requirements with resources. Achieving overall improvement would require addressing a number of critical issues including the need to:

- Clearly define the investment strategic direction and the establishment of an effective risk management and compliance framework, including a strategy for rebalancing the investment portfolio to established asset allocation targets and weights.
- Update the strategy on real estate, considering the current extreme market volatility and the approved new asset and sub-asset classes, including alternative investments, and the need for a real estate benchmark that is aligned with the current portfolio mix.
- Reassess the continued relevance of long established service provider relationships with non-discretionary advisors, in the context of associated risks: conflict of interests, obscured accountability, and inadequate evaluation of performance, and diminished role which may render the current arrangements less cost-effective and efficient.
- Reassess the reasonableness of delegation of authority thresholds in the context of the growth in the portfolio since its establishment and the sub-delegations to the augmented management team and investment officers; noting also that the same limits were given to all investment officers irrespective of experience and level.
- Clearly outline how the results of the 2006 asset-liability study are being applied to establish and/or modify the investment strategy, long-term goals and objectives, currency and cash management functions.

- Review the oversight roles and responsibilities of the governing bodies and the Investments Committee with respect to risk management and compliance.
- Review the roles and responsibilities of selected areas within IMD to ensure that they are clearly delineated and duties are sufficiently segregated, and that there is a mechanism for independent reporting by the Compliance Officer to the Representative of the Secretary-General and the Audit Committee.
- Adhere to the Compliance Policy requirement to report periodically to the Audit Committee on exceptions and effectively follow-up on the implementation of compliance recommendations.
- Strengthen the compliance review programme in terms of coverage, scope and the need for an effective follow-up and enforcement mechanism with accountability for investment breaches.
- Ensure that the Investment Manual and Policy, Credit Policy and Compliance Policy are updated and approved to, *inter-alia*, provide a proper framework for the risk management and compliance functions.
- Incorporate a clause on responsible investment and related standards in the contracts with the small-capitalization managers and develop procedures for evaluating the managers' performance.
- Strengthen the monitoring of personal investments and financial disclosure to avoid conflict of interest situations.
- Complete and formalize an ICT strategy and governance framework, and establish an ICT Committee to monitor the implementation of the ICT strategy to ensure timely, reliable and secure information and data for the investment, risk management and compliance functions.
- Undertake a comprehensive assessment of the ICT needs of the functional areas and related staffing requirements, and ensure the adequacy of the ICT-related resources to support the implementation of the new ICT applications and systems.

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I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the Investment Management Division's compliance with investment policies as part of the 2008 internal audit work plan for the United Nations Joint Staff Pension Fund (UNJSPF or the Fund). The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing. The Fund comprises the Secretariat, with the responsibility for administrative matters, and the Investment Management Service¹, with the responsibility for the investment of the Fund's assets. The Fund's mandate is to provide retirement, death, disability and related benefits for the staff of the United Nations and the other organizations admitted to membership in the Fund.

2. The management of the investment of UNJSPF assets is the fiduciary responsibility of the Secretary-General of the United Nations, who acts in consultation with the United Nations Joint Staff Pension Fund Investments Committee, taking into account the observations of the United Nations Joint Staff Pension Board (the Pension Board) and the United Nations General Assembly on investment policy issues. The Secretary-General designates the Representative (RSG) for the management and administration of investments of the UNJSPF to act on his behalf. The RSG is assisted by the staff of IMD, which manages the Fund's investment portfolio.

3. The Fund's investment policy is conservative in approach and its overall objective is to strike equilibrium through diversification, after meeting certain criteria of safety, profitability, liquidity, and convertibility. The long-term objectives of the Fund are to: (a) preserve the principal of the Fund; (b) obtain optimal investment returns while avoiding undue risks; and (c) diversify the portfolio with respect to asset type, currency and geography. Therefore, the Fund invests in a global portfolio of debt and equity securities, principally in bonds and equity stocks in the United States, Europe, and Asia markets, and some real estate investments. The actual distribution of assets by type of investment as of 31 December 2008 was 52.2% in equities, 39.4% bonds, 5.1% real estate and 3.3% short-term holdings, which deviated moderately from the allocation ranges established by the Investments Committee. The Fund was invested in 44 countries (including emerging markets), with almost 50 per cent of investments denominated in US dollars, and the remainder in several other currencies.

4. IMD investment officers manage most of the Fund's investment portfolio internally. In addition, IMD has contracted the services of four non-discretionary investment advisors that make recommendations on investment transactions, and provide advice and written reports on global investment trends and asset allocation. The Fund also retains three outside investment firms to manage small capitalization equity accounts on a discretionary basis. IMD currently relies on

¹ On 13 May 2009, the Investment Management Service officially changed its designation to be Investment Management Division (IMD). Hereafter it will be referred to as IMD.

two main Information Communication and Technology (ICT) systems to support the investment process, and has embarked on several new initiatives to automate the investment process. IMD has recently signed a memorandum of understanding (MoU) with the UNJSPF Secretariat to consolidate and streamline the ICT infrastructure. Due to market volatility, the market value of the Fund's assets managed by IMD declined from \$41.4 billion as of 31 December 2007 to \$31.4 billion (unaudited) as of 31 December 2008, The Fund had executed approximately 3,270 investment transactions during 2008.

5. Comments made by IMD are shown in *italics*.

II. AUDIT OBJECTIVES

6. The main objectives of the audit were to assess:

- (a) The adequacy of the Fund's investment policies and procedures, and whether they were being complied with;
- (b) The reliability of reported data, records and information systems supporting the investment process;
- (c) The adequacy and effectiveness of compliance and risk management mechanisms in mitigating investment risks to the Fund; and
- (d) The alignment of IMD information and communication technology (ICT) strategy to the business requirements.

III. AUDIT SCOPE AND METHODOLOGY

7. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing and reviewed the investment management structure, policies, procedures and practices pertaining to internally managed trading. The audit also covered the risk management and compliance functions and related reporting systems. The audit included substantive testing of transactions during the period 2007 to 2008, to verify if the designed controls are adequate and functioning as intended. The scope included a review of the ICT systems in IMD in the context of the ongoing initiatives that could impact on the risk management and compliance functions for the investments of the Fund.

8. The methodology included the review and evaluation of relevant documents including policies and procedures, UNJSPF Board and Investments Committee meeting minutes and discussion papers, observation and interviewing of key staff, and follow-up of prior audit recommendations. A representative sample of investment transactions was drawn using auditing software to test the compliance with established policies and procedures, rules and regulations. The methodology also included a walk-through of existing IMD processes to ascertain whether the existing ICT infrastructure ensured compliance with IMD internal policies.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Governance and Risk Management

Need for a more clearly defined investment strategy and risk management framework

9. The audit included the assessment of compliance with UNJSPF governance principles and its internal policies, procedures and decision-making processes for managing risk. OIOS identified the need for a more effective investment management governance framework, including a strategy, and a formal mechanism for approving risk management and compliance strategies, and the setting of risk tolerance levels.

10. OIOS observed that the current risk management process was reactive and did not fully manage all investment risks. IMD has seen considerable growth in its resources and organization. The most notable changes include the addition of six Investment Officers in the different investment teams since 2003, the establishment of risk management and compliance functions, the appointment of two deputy directors for risk management and investment management, respectively. IMD was still developing its risk management function, and had not developed a strategic response to the recent extreme price volatility and changes in market conditions. Normally, as the market value and weightings of different asset classes change in response to market conditions, the investment portfolio is rebalanced to bring it back into realignment with the target allocations. However, in the recent financial crisis, IMD did not have a rebalancing strategy to enable the Fund to adapt to the market conditions. The Fund experienced significant losses in the market value of its portfolio and consequently deviated materially from the asset allocation targets for an extended period, particularly regarding the equity portfolio which was at 52 per cent compared to 60 per cent. At the time of the audit, IMD had not done a formal assessment of its portfolio to determine whether rebalancing was needed.

11. OIOS also noted that the results of the 2006 Asset Liability Management (ALM) Study informed about deliberations regarding the setting of new asset allocation and the addition of new asset and sub-asset classes. However, it was not clear how the results of the ALM Study had been applied to the Fund's investment strategies, and foreign exchange and cash management. For example, there was not a holistic approach towards the management of foreign exchange exposure, as the monitoring of currency exposure was being done without access to information on the currency profile for the liabilities of the Fund. OIOS took note that IMD had partially implemented OIOS' recommendation (AS2006/800/01) regarding its cash forecasting methodology.

12. Similarly, the Fund's strategy for real estate investments needed to be reviewed considering the current market conditions and the new asset and sub-asset classes approved for investment (farm land, timberland and infrastructure investments). The current real estate investment strategy that was developed in

2005, and endorsed by the Investments Committee in 2007, may no longer be valid or provide sufficient guidance and direction to the investment team. IMD has been gradually implementing the 2007 strategy, in light of the current market conditions, but had not yet developed a strategy for implementing the approved new asset classes. OIOS also observed that the recommendation by the Pension Board on policy change authorizing alternative investments has not been fully implemented by IMD.

13. At the July 2008 Pension Board meeting, the RSG informed the Board of the proposed change from the current private market benchmark of the NCREIF Property Index to the NCREIF Open End Diversified Core Equity Index (ODCE). Although used as a target for long-term return, the ODCE index may not be appropriate as a gauge for the Fund's entire real estate portfolio, particularly the private market funds, and may have implications for risk management and related investment decisions and strategy.

Recommendation 1 to 3

(1) The Investment Management Division, in consultation with the Investments Committee, should define and implement an investment management strategy that addresses, inter-alia, the acceptable risk tolerance levels; alignment of the strategic asset allocation, as well as cash and currency management, with the results of the Asset-Liability Management Study; and criteria for rebalancing the portfolio to ensure that the long-term goals and objectives of the Fund are met.

(2) The Investment Management Division should establish and implement a revised real estate investment strategy and revised benchmark that is more closely aligned with the Fund's real estate portfolio mix.

(3) The Investment Management Division should develop and implement strategies for alternative investments, securities lending and indexation.

14. *IMD accepted recommendation 1 and stated that a comprehensive risk budgeting framework is being implemented with the selection of a risk analytics platform. Value at Risk base approach is being used for the risk budgeting and alignment of asset allocation based on risk budgets. As regards to portfolio balance, at a strategic level the Investments Committee decides the portfolio weights and strategic asset allocation. This process is already in place. Once the risk analytics platform is in place, asset allocation at a finer level can be achieved. Recommendation 1 remains open pending development and implementation of the risk budgeting framework using a risk analytics platform.*

15. *IMD accepted recommendation 2 and stated that IMD is scheduled to meet with its Advisor, Townsend, and prepare a new real estate strategy to be presented at the October 2009 Investments Committee meeting. As part of this*

review, Townsend and IMD will make recommendations to the Investments Committee concerning problems with the existing NCREIF/ODCE benchmark. Recommendation 2 remains open pending receipt of documentation showing a new real estate strategy has been developed and new benchmark(s) selected.

16. *IMD accepted recommendation 3 and stated that IMD is hiring a Senior Investment Officer for Alternative Investments, and is sending out a Request for Proposals (RFP) to hire an advisor for Alternative Investments. Once the Senior Investment Officer and advisor are hired, IMD will work to develop an appropriate investment strategy for Alternative Investments which will be presented to the Investments Committee. The indexation of the North American equities portfolio has been deferred due to the credit crisis that started in August 2007. The focus of IMD has been on the preservation of capital. So long as the ongoing financial crisis continues, avoidance of the most vulnerable market sectors is especially critical and this has been achieved, so far, by active management. Indexation is a tool that can be used to provide flexibility in managing the assets of the Fund, in particular, for the fine tuning of asset allocation. IMD conducted a review of potential rebalancing tools in January 2009, which was presented to the Investments Committee at the 9 February 2009 meeting. IMD is of the opinion that the standard index funds may not be in compliance with the Fund's policies prohibiting tobacco and defense investments. While equity index futures are cost-effective and efficient, the necessary infrastructure, including SWIFT and a trade order management system would be a prerequisite. Pending the implementation of the necessary secure infrastructure, IMD has recommended the use of a basket approach for increasing the equity weighting. The Investments Committee concurred with this recommendation, but urged IMD to implement the necessary IT infrastructure. (As of May 2009, the contracts to procure SWIFT and Charles River systems have been executed. For the trade order management systems, software and secure telephone lines have been ordered, and training is underway for implementation. The hardware, including servers, arrived in May 2009). With regard to securities lending, Procurement Division and IMD conducted an RFP for the requisite service provider. During the credit crisis, the market conditions and legal environment for securities lending were radically changed. Following consultations with the Chairman of the Investments Committee and the RSG, the implementation of securities lending was halted pending stabilization of the financial institutions involved in this market. A new RFP launched by the Procurement Division in 2009 provides for the possibility of implementing securities lending at a future date. Recommendation 3 remains open pending receipt of documentation showing that a strategy for alternative investments has been developed and approved by IMD management, and endorsed by the Investments Committee.*

Oversight roles of governing bodies and committees need to be strengthened.

17. Article 19 of the Regulations and Rules of the UNJSPF provides that all investment decisions shall be made by the Secretary-General or his designee (the RSG) after consultation with the Investments Committee and in light of observations and suggestions made by the Pension Board on investments policy. In addition, the Audit Committee's terms of reference include oversight

responsibilities for risk management. OIOS is of the view that this governance framework leaves gaps in the roles and responsibilities for oversight of the Fund's investment practices, and risk management and compliance functions.

18. The Investments Committee advises the RSG on Investment Strategy and has no executive or oversight authority. Investments Committee meetings are held quarterly and deliberations on the information presented by IMD in the "Blue Book" were documented in meeting minutes. OIOS found, however, that actions to be taken by IMD based on recommendations made by the Investments Committee were not always evident, and no formal directives or communications were issued by the RSG for acting upon these recommendations. There is therefore a risk that investment actions taken by IMD Management and Investment Officers may be inconsistent with the recommendations of the Investments Committee. The lack of clear strategic guidance could also affect the risk and compliance functions.

19. Although the Pension Board reports to the General Assembly on investment matters, in practice, the Board and Assembly's authority for the investment policy decisions was not clear, except for budgetary and related matters. While the rules require the RSG to consult with the Pension Board, there were no criteria for acting upon recommendations made. OIOS observed that recommendations of the Board on policy changes were not always implemented by IMD as noted for indexation and securities lending without formally reporting back to the Board on the justification for non-implementation. OIOS noted that IMD had partially implemented its audit recommendation (AS2006/801/01) regarding engaging in securities lending.

20. The Audit Committee's terms of reference include oversight responsibility for risk management. While industry practice indicates periodic reporting to the Audit Committee on compliance issues, OIOS found that the IMD compliance function did not issue any reports to the Audit Committee on critical exceptions and related risks as provided for in the Compliance Policy.

Recommendation 4 and 5

(4) The Investment Management Division should establish clear criteria for reporting to, and acting upon the recommendations of the Pension Board and Investments Committee regarding investment policy, risk management and compliance.

(5) The Investment Management Division should adhere to the requirement of the Compliance Policy to periodically report on compliance exceptions to the Audit Committee.

21. *IMD accepted recommendation 4 and stated that IMD will improve its governance process to ensure that the recommendations of OIOS, the Pension Board, the Investments Committee and external consultants are recorded, tracked and implemented. IMD will create a master project plan to track activities, dependencies and resources. Recommendation 4 remains open*

pending development and implementation of the master project plan for monitoring and acting upon the recommendations of the Pension Board and Investments Committee.

22. *IMD accepted recommendation 5 and stated that it has recently provided the Audit Committee with an update of its compliance operations. While the proposed Compliance Policy is being reviewed for approval by the RSG, IMD will review the most appropriate approach and frequency of reporting. Recommendation 5 remains open pending approval of the Compliance Policy defining the coverage and frequency of reporting to the Auditing Committee.*

Independence and segregation of duties issues

23. IMD has seen considerable growth in its resources and organization. The most notable changes included the addition of six Investment Officers in the different investment teams since 2003, the establishment of risk management and compliance functions, and the appointment of Deputy Directors for investment management, and risk management and compliance. Within the organizational structure, therefore, the span of control of the Director should improve with the recent filling of the two Deputy Director posts and the Legal Officer, but their roles and responsibilities need to be more clearly defined to ensure accountability and independence.

24. In accordance with the Compliance Policy, periodic reports on compliance activities should be submitted to the Audit Committee to allow the advisory body to exercise proper oversight on the management of the Fund's compliance risk, and to the Investments Committee, so as to facilitate its advisory responsibilities to the RSG. The Compliance Policy provides for the Compliance Officer to report to the Director of IMD, the RSG, the Audit Committee of UNJSP Board, and the Investments Committee. The Policy further provides that compliance staff should not be placed in a position where there is a real or potential conflict of interests between their compliance responsibilities and any other operational responsibilities, as their independence may result undermined. Good industry practice regards independence as a core element of a compliance function in financial institutions.

25. There was no mechanism for independent reporting by the Compliance Officer to the RSG and Audit Committee as required by the Compliance Policy. Although the Compliance Policy defines the reporting line for the Compliance Officer, to the RSG and Audit Committee, this reporting line had not materialized in practice. Until the time the Deputy Director for Risk Management came on board, the Compliance Officer reported to the Director. There was also no documented evidence of formal interaction between the compliance team and the RSG regarding compliance issues and the enforcement of related actions. OIOS did not see any directives from the RSG to the Director or the compliance team regarding compliance issues.

26. OIOS also observed inadequate segregation of duties and possible conflict of interests in some areas. For example:

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- (a) The Chief of Operations post became vacant effective 2 March 2009 and as a stop-gap measure, the Deputy Director for Risk Management and Compliance had been charged with supervising the Operations Section;
 - (b) The Legal Officer reported to the Deputy Director for Risk Management and Compliance;
 - (c) Data input into the accounting system for real estate trades was done by the real estate team instead of the Operations Section; and
 - (d) Back-up for the critical function of Cashiering was provided by the Accounting Assistants.

Recommendation 6

(6) The Investment Management Division should establish a mechanism for the Compliance Officer to report directly to the Representative of the Secretary-General and the Audit Committee. Further, IMD Management should review the organization structure with the view to relocating the Legal Officer's post to the Office of the Director.

27. *IMD accepted recommendation 6 and stated that the Compliance Officer's normal reporting line is to IMD senior management, with periodic reporting to the Audit Committee and the Investments Committee on compliance activities. IMD will review and develop a mechanism for the Compliance staff to report directly to the RSG and the Audit Committee, should a compliance risk be deemed likely to affect the governance of the Fund. IMD also accepted OIOS' recommendation to relocate the Legal Officer's post to the Office of the Director and did so as of 01 May 2009. Recommendation 6 remains open pending the completion of the review and development of a mechanism for the Compliance staff to report directly to the RSG and the Audit Committee.*

B. Investment Policies and Procedures

Need to review investment advisory practices, trading delegations and real estate investment policies

Non-discretionary advisors

28. The non-discretionary advisor model has been in existence since the inception of the Fund without being formally re-assessed. IMD has contracted the services of four companies that acted as non-discretionary investment advisors, at an annual flat fee of about \$7.5 million, to augment the investment management resources of IMD. The advisors provide research and analysis in support of investment decisions, and serve as an additional check and balance in the investment process. As part of this arrangement, however, they do not manage funds for IMD, and are not responsible for decision-making or accountable for investment performance.

29. In the view of OIOS, the non-discretionary model may no longer be efficient or cost effective considering the expansion of IMD investment management resources and a number of shortcomings that put the necessity and relevance of this advisory model into question. OIOS is concerned that there are no mitigating or compensating controls to address the potential conflicts of interest that exist with the current arrangement. As the non-discretionary advisors also manage accounts for other clients and trade for their own accounts, there is the risk of front-running, i.e., taking advantage of information shared by IMD when seeking advice for a particular trade, and/or when IMD confirms it will act on the advisors' recommendations. In 2008, the fixed-income team expressed strong concern about possible front-running by its advisor. Since IMD could not resolve the matter and was dissatisfied with the quality of the advisor's execution on some fixed-income transactions, IMD ultimately decided to place its fixed-income orders directly with brokers, without formally changing the overall advisory structure.

30. OIOS is also concerned about the obscured and weakened accountability that results from this model. IMD Investment Officers are evaluated based on the performance of the investments under their control, and are expected to be accountable for the performance of the portfolio. Under the current advisory structure, however, it may be difficult and unreasonable to fully assign performance accountability to the IMD Investment Officers, as they are required to seek research support and concurrence from the advisors. This arrangement implicitly assumed that the advisors would conduct adequate due diligence and agree on each and every purchase or sale recommendation. The accountability issue particularly applied to the fixed-income team that depended more heavily on the advisor, who acted like a discretionary advisor, due to lack of a system to monitor and manage the fixed income portfolio, and the resultant lack of research capacity by IMD.

31. OIOS found that the contracts with the advisors did not fully outline IMD's requirements in terms of the advisors' research coverage and access to their research resources and products. For instance, it was not specified in the contract whether the advisors were obligated to provide research on securities that were not held in the current portfolios of the Fund. There were instances when research support requested by IMD investment officers could not be provided in a timely manner. As there was no contract provision mandating the advisors to disclose their research analysis and products to IMD, there is the risk that IMD may be receiving insufficient research support and consequently may not be made aware of investment opportunities and risks.

32. It was also difficult to measure the advisors' performances because most of the services specified in the contract were of a qualitative nature. OIOS reviewed the current evaluation procedures and a sample of evaluation reports prepared by IMD, and noted a number of shortcomings. For example, the relative weights assigned to the performance indicators did not adequately reflect the current mix of advisory services. In measuring the advisors' performance, a 40 per cent weighting was assigned to the number of recommendations originated by them and the performance of those recommendations. However,

compared to the total number of trades made in a year, those recommendations originated by the advisors and accepted by the investment teams were very limited; the three advisers for the Asia-Pacific, Europe and North America teams initiated a total of 56 recommendations in 2007, out of which only 23 were accepted.

33. Further, the evaluation metrics did not provide a rating scale to guide the scoring. As a result, the scores given by different investment officers appeared to be subjective and inconsistent. Other weaknesses associated with the performance evaluation of the advisors included:

- (a) Evaluations were not conducted timely by the investment teams;
- (b) The evaluations were generally not supported by sufficient documentation;
- (c) The computation methodology used by the teams was inconsistent; and
- (d) The evaluation results were not shared with the advisors and no action plans were drawn-up, together with the advisors, to improve the quality of the services.

34. Moreover, there was a potential diminishing of the value of service provided by the advisors, as their role in investment decisions has been decreasing, without any reduction in fees, rendering the arrangement less cost-effective. IMD has grown substantially in the past years, and its portfolio management capacity has increased through improved regular portfolio reports and performance review meetings. OIOS noted that Investment Officers did not accept most of the recommendations originated, or follow the number of shares recommended, by the advisors; one advisor in fact frequently reversed its recommendations within a short period using the same fundamental analyses. If the advanced ICT systems that IMD is currently sourcing are successfully implemented, research, trading and portfolio management processes and related controls could be further enhanced and strengthened.

Recommendations 7 and 8

(7) The Investment Management Division should conduct a cost-benefit analysis to determine the value added by the non-discretionary advisors, and based on this analysis, reengineer the non-discretionary advisory model to achieve the desired results efficiently and cost effectively.

(8) Pending the review of the non-discretionary advisor model, the Investment Management Division should establish a more effective performance monitoring mechanism to ensure that the advisors comply with contract terms and conditions, and that their accountability is aligned with performance.

35. *IMD accepted recommendation 7 and stated that IMD has reviewed the whole structure of the advisor framework to maximize IMD's performance while attempting to achieve cost saving by eliminating redundancies and finding more cost competitive advisors and research providers. This recommendation was presented and reviewed by the Investments Committee on 1 May 2009. The Investments Committee will discuss on this issue in the next meeting in July 2009. Recommendation 7 remains open pending development and approval of an enhanced advisory arrangement by the RSG and the Investments Committee.*

36. *IMD accepted recommendation 8 and stated that IMD is recommending the enhancement of the advisory framework which is subject to the approval of the RSG and Investments Committee. Once it is approved, IMD will enhance the evaluation process for the non-discretionary advisors or research providers. Recommendation 8 remains open pending development and approval of revised evaluation procedures for the advisors or research providers.*

Small Capitalization Managers

37. The contracts with the two small-capitalization managers for the North American portfolio did not contain critical terms, including the requirement on responsible investments that prohibits investments in companies that have significant revenue from armament and tobacco companies. This, together with a lack of specific criteria, left IMD with no legal basis to require compliance with its standards for responsible investments, or to hold the advisor accountable for such breaches.

38. OIOS noted that one of the small-capitalization managers continued to have holdings in companies involved in weapons production and tobacco products, exposing the United Nations to significant reputation risk. The compliance team's third quarter 2008 report indicated that this manager had investments in five companies involved in weapons production for more than 10% of their total revenue, and two companies involved in the tobacco industry, for a total investment of \$1.64 million. Although IMD management urged the manager to divest such investments, there was no full agreement on the criteria for responsible investments and the issue was not satisfactorily resolved. OIOS also noted that this manager did not fully comply with the contract requirements on the content of its quarterly reports and the twice per year face-to-face presentations to IMD.

39. According to the Investment Policy and Procedures Manual (the *Investment Manual*), the small-cap managers should be evaluated principally on their investment returns relative to their benchmarks with qualitative evaluation of portfolio management, although reporting communications with IMD also contributed to their assessment by IMD. Annex H of the Manual was entitled "Evaluation procedures and templates for the non-discretionary advisors and small-cap managers". However, no such procedure or template was included for the small-cap managers. Although the investment officers for North America and Europe did meet with the small-cap managers to review their strategy, market analysis, portfolio management and performance, there was no documentation of the reviews. On a quarterly basis, the Risk Officer of IMD

prepared a one-page performance report for the small-cap managers, which was included in the Bluebook submitted to the Investments Committee. Except for brief interpretation of the performance data in terms of outperforming or underperforming the benchmarks, there was no comment on the small-cap managers' strategy and portfolio management.

40. As stated in the third quarter 2008 report to the Investments Committee, the portfolio managed by the small-cap manager noted in paragraph 38 above had underperformed its benchmark for all time periods since inception of the contract. In addition, OIOS noted that this manager had significantly increased its exposure to the financial sector in the final quarter of 2008 from 27.81 to 32.75 percent, while IMD in light of the financial crisis reduced the overall exposure to financials of the equity portfolio from 20 percent to 17.9 percent in the same period, without any explanation from the manager or evidence that this increased exposure was questioned by IMD.

41. OIOS acknowledges that IMD recently conducted a competitive bidding exercise to select new managers for its North-America small-capitalization portfolios and the manager noted above was disqualified because of concerns by IMD on its historical under-performance, research methodology and its analytical model. Hence the current contract will be automatically terminated upon its expiration on 30 June 2009. In the view of OIOS, the reasons for advisor's consistent underperformance should have been analyzed and actions taken to address the issue long before the competitive bidding exercise.

Recommendation 9

(9) The Investment Management Division should incorporate a clause on responsible investment and related standards into the contracts with the small-cap managers, closely monitor compliance with these standards, and develop and implement procedures for monitoring and evaluating their performance.

42. *IMD accepted recommendation 9 and stated that IMD has already incorporated a clause on Socially Responsible Investments (SRI) for the newly assigned small cap managers with which IMD is in the process of signing the contracts. After the new contracts are signed and the managers rebalanced, all of the contracts with small cap managers will have a clause on SRI. Recommendation 9 remains open pending receipt of the signed new contracts showing inclusion of a clause on SRI, and IMD's establishment of a mechanism for performance monitoring.*

Delegations of authority and responsibilities for trading activities

43. The investment procedures set the delegation of authority to investment officers at US\$20 million for equities and real estate and US\$25 million for bonds, currencies and short-term securities. Transactions above these thresholds require approval by the Director of IMD. The same limit was given to all investment officers irrespective of experience and level.

44. Considering the significant growth of the portfolios under management by IMD since the thresholds were established, and considering the recent appointment of the Deputy Director for investment management, OIOS is of the view that these delegation thresholds need to be reassessed in order to balance control and improve process efficiency. Cases were noted where the investment officers had spread the total purchase or sale amount over several recommendation forms that should otherwise have been submitted to the Director for approval. There is a risk that these thresholds may adversely impact the efficiency of the investment process, especially in situations where the Fund may need to decide urgently to buy or sell some positions.

45. Furthermore, the recommendation forms require the signature of two Investment Officers, but often times they were from the same team, i.e., by a supervisor and supervisee. The compliance team raised the concern that this requirement does not constitute an adequate check and balance as intended. In the view of OIOS, determining whether the form should be signed by two officers, and if so, whether the two officers should be from two teams, would depend on the purpose of the second signature. Another officer from the same team is more appropriate if joint accountability is desired because he/she would be more familiar with the background of the decision, while an officer from a different team can provide independent verification of the formality of the recommendation form.

46. Also, according to the Investment Manual, investment officers of IMD may only invest in securities that are on the Approved Lists, which constitute the investment universe for the different asset classes. The additions proposed by the advisors or IMD investment officers had to go through an internal approval process and be reported to the Investments Committee on quarterly basis. The Manual also set out the criteria for selecting and retaining brokers. OIOS observed that the individual investment teams were maintaining the Approved Lists and the List of Authorized Brokers, although the Risk Officer was involved in monitoring credit ratings of the brokers. In the view of OIOS, there needs to be a central point independent from the investment management teams to monitor and maintain these lists to ensure proper segregation of duties, while the investment officers can still propose and participate in the substantive processes. This function could be assigned to the risk management team.

Recommendation 10

(10) The Investment Management Division should reassess the delegation of authority trading thresholds that require the Director's approval, as well as the requirement for having two signatories from the same team on same recommendation form. IMD should also assign to the risk management team the responsibility for maintaining the approved lists of securities and authorized brokers.

47. *IMD accepted recommendation 10 and stated that Delegation of Authority has been reassessed and new levels were presented to and were*

approved by the Investments Committee in May 2009. The Risk Team is working with the investment team and the Procurement Division to develop a process to qualify, approve and evaluate brokers. A questionnaire for broker selection has been completed. The Procurement Division is working on the best way to negotiate contracts with brokers. The Risk team is also working on creating and maintaining the approved list of securities. A Trade Order Management System (TOMS) is required to be implemented in order to maintain the list and ensure that the list is treated as a restricted list for managing conflict of interest. Recommendation 10 remains open pending the implementation of TOMS and receipt of the users' access rights generated from TOMS showing that the creation and maintenance of the approved lists of securities and authorized brokers is limited to the Risk Team.

Limits and policy criteria for real estate investments

48. Section III.D.5(g) of the Investment Manual stipulates that the Fund should hold not more than 20% of a particular real estate fund at the time of initial purchase but the size of holdings could be more than 20% due to withdrawals by other investors. However, OIOS noted that there were no monetary limits for the real estate investments or policy criteria regarding their periodic reassessment. Some open ended real estate funds dated back to 1974, and there were five funds held for more than 10 years with large exposures ranging in value up to \$212 million that may not be sufficiently monitored. Although opportunities to diversify this portfolio should result from the recent approval of new asset and sub-asset classes, there is a need for Management to review these long-term investments and assess whether there should be formal investment limits in this area.

Recommendation 11

(11) The Investment Management Division should institute a policy to periodically reassess long-term real estate investments, particularly the real estate fund partnerships, and establish appropriate investment limits.

49. *IMD accepted recommendation 11 and stated that IMD plans to rebalance its open-ended real estate funds once valuations increase in the real estate markets. IMD is also planning to improve the security recommendation process after the enhancement of the advisor framework is approved. IMD recommended the improved recommendation process in line with the enhancement of advisor framework at the Investment Committee meeting in May 2009. The sample template for investment rationale, which shall replace the fact sheet, was also presented. To ensure the consistency and accuracy of the recommendation sheet, IMD needs to enhance the research infrastructure and is currently requesting a budget for an equity analytical tool. Those modifications should be incorporated in the investment policy. IMD plans to rebalance its nine open-ended real estate funds once valuations increase in the real estate markets. After that, IMD plans to review the appropriate balances between the open-ended funds on an annual basis. Recommendation 11 remains open pending receipt of: a) the updated Investment Policy requiring periodical review of all*

portfolios, including long-term real estate investments, and re-balancing when necessary, and b) documentation showing that the real-estate funds have been reviewed and rebalanced.

Investment policies and procedures were inconsistent and inadequate in some areas

50. The current version of the Investment Manual was approved by the RSG on 26 June 2007. It is a comprehensive document that covers, *inter alia*, the organization and functions of IMD, and the policies and procedures applicable to the investment of the Fund's assets. In July 2008, IMD submitted a draft Investment Policy to the Pension Board after incorporating the comments from the Investments Committee. Major changes in the new Investment Policy relative to the Investment Manual included the addition of alternative investments to the asset classes, a provision on risk parameters, and an increase in the ranges for equities and bonds in asset allocation. At the time of the audit, IMD was in process of implementing these policy changes. The draft Credit Policy that was also in circulation stipulates the position and credit limits for bonds and short-term investments, equity debt factor guidelines, broker credit screening and monitoring.

51. OIOS noted a number of inconsistencies and collective gaps among the policy documents, as well as situations where the current practices were not always aligned with policies. For example:

- (a) Section V.D of the Investment Manual, which requires all fixed-income, short-term and currency recommendations and order forms to be submitted to the Director (or her/his designate) for approval, contradicted the investment procedures on delegation of authority, which only requires approval of the Director for transactions above the \$25 million threshold;
- (b) Several provisions on credit rating thresholds and rating agencies for brokers and short-term securities were not aligned in the Investment Manual, Investment Policy and Credit Policy. The Investment Manual (page 27) requires that the brokerage firm be rated "B" or above by one of the major rating agencies such as Moody's and Standard and Poor's, while the Credit Policy specifically requires a Fitch rating;
- (c) Both the Investment Manual and the Investment Policy classify hybrid assets such as preferred shares as equities, but these securities are managed as part of the fixed-income portfolio. Furthermore, the Investment Policy did not specify cash and short-term investments other than overnight commercial paper;
- (d) The Investment Manual and the contracts with the nondiscretionary advisors require the advisors to provide documentation for IMD transactions and by inference investment officers had to agree with the advisor on each and every purchase or sale decision. However, the procedures for equity and short-term investments did not specify the

requirement for a fact sheet or a recommendation form. OIOS' recommendation in its audit of investments (AS2003/801/02) for IMD to address this issue was not fully implemented;

- (e) According to the Investment Manual, signed order forms for fixed-income securities should be transmitted to the advisor for execution after approval of the recommendation by the Director. Since mid-2008, the fixed-income team carried out trades with brokers directly, instead of through the non-discretionary advisor, but this change in practice has not been reflected in the procedures;
- (f) There was no detailed procedure on monitoring and evaluating performance of the small-cap managers, and no requirement for documentation of the reviews and evaluations performed by IMD officers, although this was recommended in a prior OIOS audit report (AS2001/95/1/19);
- (g) Although the Pension Board has endorsed IMD's proposal to engage in securities lending, indexation, alternative investments, IMD has not developed the strategy and the related policies and procedures; and
- (h) The Investment Manual requires that trading commissions be distributed evenly among the qualified brokers to the extent possible. However, it was difficult to assess the reasonableness of the relative concentration of the fixed-income trade commissions as observed by the compliance team since the fixed-income investment procedures did not require documentation of discussions with and quotations from the brokers.

52. OIOS noted that the roles and responsibilities of the risk management and compliance functions regarding the development of policies and procedures were not clearly set out in the policy documents. Similarly, there was a lack of clear delineation of the roles and responsibilities on contract management, which had previously led to breaches of procurement rules such as the not-to-exceed amounts of contracts.

53. UNJSPF had voluntarily agreed to follow the substantive aspects of the United States Employee Retirement Income Security Act ("ERISA") relating to the fiduciary duties owed to the participants and beneficiaries of the Fund. However, the applicable ERISA standards relevant to IMD had not been specified, although included by reference in the Compliance Manual and Policy as one of the standards to be assessed as part of the compliance programme (Section IV A.).

54. Although IMD had taken steps to revise a number of its policies and procedures, they were not always approved in a timely manner, which could impede the effectiveness of the risk management and compliance functions. For example, the January 2008 draft Compliance Policy and Procedures Manual included proposals for strengthening the monitoring of personal investments, but it had not yet been approved. Similarly, the draft Investment (dated July 2008)

and Credit Policies that were in circulation and in the process of being implemented had not been approved.

Recommendation 12

(12) The Investment Management Division should conduct a comprehensive review of and update the investment policies and procedures to ensure they are consistent and provide clear guidance for IMD investment and compliance staff.

55. *IMD accepted recommendation 12 and stated that review of the Investment Policies and Procedures is done on an ongoing basis, and changes are incorporated based on market conditions. All changes are presented to the Investments Committee for approval.* Recommendation 12 remains open pending receipt of the updated investment policies and procedures showing that the gaps and inconsistencies raised in this report have been properly addressed.

Policies and procedures for documenting the research basis for investment decisions could be improved

56. For investments in equities, the Investment Policy stipulated that IMD should use the "bottom-up" approach that intensively evaluates equity security fundamentals, ranging from the quality of the financial statements and management team to the company's competitive position, to determine whether a security is appropriately priced. Earnings valuation models should be used to aid in the decision making process. The contracts with the non-discretionary advisors also require that the advisors include both fundamental and technical analysis in their fact sheets in support of IMD equity trades.

57. IMD uses the fact sheets to document the research output and justification for the purchase or sale decisions in support of the internal recommendation forms. The recommendation forms are designed to provide basic information on the security and the company, historical and forecast earnings, earnings growth, and valuation measures such as Price Earnings ratios and estimated fair value. Also documented are the advisor's analysis and recommendation, IMD investment officers' justification, two brokers' opinions, and the target price and total number and value of shares to purchase or sell.

58. Leading practices suggest that procedures should be put in place to ensure consistency, accuracy and integrity of the information provided on the forms, and hence a sound research basis for the investment decisions. However, OIOS observed a number of shortcomings, which indicate a lack of consistency in the documentation of the research basis.

59. There was no requirement in the Investment policies and procedures to document the fundamental research performed to derive financial and valuation figures or the sources of information if the figures were obtained from outside. OIOS noted cases where the forecast growth rates and P/E ratios quoted on the internal recommendation forms differed from those implied in the corresponding fact sheets. OIOS also observed that there were no standards for the fundamental

and technical analysis documented on the fact sheets and recommendation forms to support the investment recommendations. As a result, the analyses did not always provide adequate support for the buy or sell decisions. The compliance team and OIOS observed instances where one investment team frequently bought and sold the same stock within short periods of time, and the advisor for the portfolio reversed its buy and sell recommendations using the same analyses. OIOS also noted cases where shares of a company were purchased at prices higher than the estimated fair value indicated on the recommendation form, indicating very limited or negative upside potential.

60. Furthermore, the Investment Officers were not required to document the reason for deviating from the advisors' recommended number of shares to buy or sell. OIOS observed that the investment teams (except the Asia-Pacific team) seldom followed the recommended quantity and no explanation was documented. On the internal recommendation form the Fund's position on an individual stock was provided in absolute terms, but not relative to the benchmark index. Hence, there was no assurance that the company or sector exposures were considered and that they were in line with the overweighting or underweighting strategy.

61. OIOS also observed that current recommendations were not always obtained from the advisors. The Manual stipulated that an investment recommendation was valid for up to three months, but did not define the maximum validity of the fact sheet. OIOS noted a case where a total of four and half months had elapsed between the issuance of the original fact sheet and the last order placed against that fact sheet. In another case, a team bought shares in July 2008 with a buy recommendation from the advisor. The same shares were sold in August 2008 using a fact sheet issued in June with a sell recommendation instead of obtaining an updated fact sheet from the advisor. The research basis provided on the June fact sheet would not be valid in August considering a reverse recommendation was issued in between.

62. Similarly, for bonds, the Investment Policy requires a "bottom-up" approach that intensively evaluates fixed income security characteristics such as duration, credit rating, yield and liquidity. However, there were no detailed procedures or systems in place to ensure that fundamental research was adequately performed and documented by either the IMD investment officers or the advisor.

Recommendation 13

(13) The Investment Management Division should establish, and incorporate in the Investment Manual, research documentation requirements to ensure that investment decisions are based on adequate and current research, and that a long-term investment horizon is taken.

63. *IMD accepted recommendation 13 and stated that IMD will comply with the recommendation and modify the Investment Manual and present it to Investments Committee for their approval.* Recommendation 13 remains open

pending receipt of the updated Investment Manual with specific research documentation requirements for the different asset classes.

Lack of sufficient research capacity to monitor real estate investments

64. Due to the long-term nature of real estate investments, there is an overall liquidity risk. Closed-ended funds with durations of from 8 to 10 years accounted for about 33 per cent of the real estate portfolio. The remainder of the portfolio is in open ended funds that can be liquidated in 90 days. The value of the real estate portfolio was about \$1.8 billion at 31 December 2008.

65. According to IMD, due to the lack of an another investment officer to perform research analysis, and given the global nature of the research and strategic advice provided by the real estate advisor, growth in real estate portfolio may be limited. OIOS took note that IMD had implemented its recommendation (AS2003/72/1) regarding further diversification of the investment portfolio. The addition of more sub-asset classes to real estate portfolio management (infrastructure, timberland, and farmland) as well as alternative investments heightens the need for expertise to allow more time for conducting research and carrying out the necessary networking with the different funds to take advantage of investment opportunities for growing the portfolio.

66. OIOS noted that substantial reliance was placed on the real estate funds statements for accounting information, which was not validated by IMD to an independent source; an inherent risk associated with private partnerships. As the 'Compliance Analyst' system could not monitor the size of the holdings as regards private vehicles, such as limited partnerships, the compliance team has had to work with the Real Estate Investment Team to determine the current size of the Fund's holdings, based on the consultation of the periodic audited statements provided by the different real estate funds.

67. According to the Investment Manual, "The Fund should hold not more than a) 20% of a particular real estate fund at the time of initial purchase but the size of holdings could be more than 20% due to withdrawals by other investors. Under these circumstances the limit will be determined on a case-by-case basis by the Director of IMD who would seek approval from the Representative of the Secretary-General when appropriate, b) but no more than 25% of the investment vehicle in any circumstance" [Investment Manual - III.D.5(g)]. The compliance review reports for September and December 2008, however, noted an exception regarding the breach of position limits, without prior authorization. A review of the compliance recommendation status showed that IMD had not addressed the matter and did not put measures in place to prevent recurrence.

Recommendation 14

(14) The Investment Management Division should ensure sufficient resource capacity to perform necessary research and analysis, and to carry out due diligence to monitor the large number of public and private real estate funds currently in the portfolio.

68. *IMD accepted recommendation 14 and stated that it is planning in the 2010-2011 budget to hire a P4 portfolio manager for real estate, to assist in monitoring existing investments. IMD also plans to add an additional P3 analyst in the 2012-2013 budget. Until the P3 is hired, IMD will continue to rely on its advisor for significant due diligence on prospective fund investments. Recommendation 14 remains open pending receipt of the budget proposal showing that the additional resources have been requested.*

C. Compliance with Investment Policies

Compliance review programme not effective

69. As defined by the Compliance Policy, operational compliance includes the compliance with IMD Investment Policies including eligibility requirements; delegation of authority thresholds, investment terms regarding ownership interests and other criteria as defined by United Nations mandates and IMD Investment Policies; and protection against reputation risks in individual transactions *vis-à-vis* the applicable compliance standards.

70. The main benefit of the compliance function is not in the identification of non-compliance with investment policies, but rather in the recommendations made and their effective resolution. IMD Management has a responsibility, therefore, to take action to effectively resolve compliance breaches. OIOS observed that there was an absence of an effective follow-up and enforcement mechanism for compliance recommendations, and that accountability for investment breaches was not defined. OIOS found that critical recommendations were not always implemented and were therefore repeated in the subsequent reports, and that most recommendations have been outstanding since the first compliance review in September 2007.

71. Of the 26 recommendations raised by the compliance team since October 2007, there were 11 new recommendations; the other 15 recommendations had been repeated throughout the subsequent quarterly reviews. Although two recommendations were not repeated, there was no documented evidence of implementation. Moreover, there was no database for storing and monitoring open recommendations raised as part of the compliance reviews, with the view to ensuring timely implementation. The lack of a process to track the status of compliance recommendations weakens management responsibility for resolving them.

72. In accordance with the Compliance Policy, quarterly reports on compliance matters should summarize the compliance risk review that has taken place during the reporting period, including any identified breaches or deficiencies and the corrective measures recommended and taken to address them. The compliance function was established in February 2007 to assist senior management in managing the investment risks faced by the Fund. An effective compliance function should give reasonable assurance about compliance with investment policies and procedures.

73. Deviations from established asset allocation targets are monitored by the Risk Officer and presented to the Investments Committee to inform decisions on strategic/tactical allocation, and therefore are not treated as breaches by the compliance team. The current system used for compliance monitoring is reactive and not forward looking, and incapable of scenario analysis and stress testing. IMD was in the process of procuring the systems needed to address the weaknesses in risk monitoring.

74. OIOS found that the compliance sampling methodology was not systematic; it was judgemental and biased towards high value transactions and those deemed problematic. The selection was based on the knowledge of the compliance team and most of the cases reviewed were related to a repetitive group of issuers of securities. A more scientific methodology with well defined parameters could enable sampling that is more representative of the portfolio universe and associated risks.

75. OIOS also found that the compliance review program coverage and reports were limited in scope. The compliance reviews were limited to post-trade activities covering 42 key parameters identified from the investment policy and procedures. The reviews did not cover operational compliance functions and related risks such as reconciliation, cash flows, accuracy and timeliness of recording of transactions, or contract management in terms of performance and compliance with contract terms. Exception reports are generated daily but not always checked on a daily basis, which led to untimely detection of compliance breaches, and corrective actions were not taken in a timely and consistent manner. In addition, the compliance team did not review the exceptions identified in SAS 70 reports to determine if there were any related exposures for IMD.

76. The structure and content of compliance reports could be improved in order to be more effective for enforcing compliance, including: (a) risk-rating of exceptions to show the related impact; (b) scrutinizing non-compliance cases to address root causes; (c) using language in the report that clearly describes the occurrence of a breach and related recommendation; and (d) indicating the implementation status and actions taken to resolve compliance recommendations.

77. Part of the responsibility of the Compliance Officer is to provide training on compliance to investment staff. However, regular training was not conducted and no training plan had been developed.

Recommendation 15

(15) The Investment Management Division should immediately address all prior compliance breaches, including determining the reasons for the non-compliance, and report on the implementation of the compliance recommendations to the Representative of the Secretary General and the Audit Committee.

Recommendation 16

(16) The Investment Management Division should improve the compliance program by:

- (a) Employing a scientific statistical sampling approach that ensures a more representative sample of investment transactions;**
- (b) Enhancing the effectiveness of compliance reports by risk-rating the exceptions and investigating the causes of breaches;**
- (c) Establishing a mechanism for spot reporting on breaches to reduce the risks of breaches going undetected;**
- (d) Establishing a mechanism for effectively following up open compliance recommendations; and**
- (e) Developing and implementing a comprehensive compliance training programme.**

78. *IMD accepted recommendation 15 and stated that it is currently reviewing all reported valid breaches and requesting exceptions from the RSG for positions that are determined to be in marginal non-compliance. IMD will reiterate all pending recommendations for review by the RSG with updates on proposed actions. Recommendation 15 remains open pending receipt of documentation showing the decisions made by the RSG with regard to disposition of the outstanding breaches and recommended remedies.*

79. *IMD accepted recommendation 16 and stated that IMD will review its current sampling approach and study statistical sampling approaches to ensure a more representative sampling. For the interim, the current substantive testing method will continue to be used as it is the most effective approach and best represents the history of exceptions and past investment activities which are deemed non-compliances. As a standard practice, all reported exceptions and causes of breaches are monitored, investigated and recommended for action. IMD shall study the suitability of risk-rating for reported exceptions and recommend a course of action if the study finds such a rating effective in countering exposed compliance risk. Northern Trust has introduced RADR, a new feature as part of an enhanced Compliance Analyst system, which monitors and tracks new, recurring and valid breaches eliminating the risk of breaches going undetected. IMD has also planned a compliance training session to be conducted by the CFA in September 2009 as part of its compliance training programme. Upon the recruitment of the Compliance Officer, a comprehensive annual training programme shall be developed and implemented for the next biennium. Recommendation 16 remains open pending the implementation of: a sampling approach to ensure that samples are representative; risk-ratings for non-compliance; procedures for the identification and reporting of interim breaches; a follow-up mechanism for open recommendations; and regular training on compliance policy and procedures.*

Lack of effective execution and monitoring of proxy voting

80. Proxy voting is considered to be one of the first steps in implementing responsible investment policy. IMD has the right to participate in the corporate governance process through the exercise of voting rights of the shares held in the portfolio. As a fiduciary, IMD is obliged to exercise these rights in the best interests of the UNJSPF and its members, in general voting for shareholders resolutions that are likely to enhance shareholder value.

81. OIOS took note that IMD had partially implemented its recommendation (AS2006/800/02) regarding proxy voting guidelines. OIOS found, however, that the policy on proxy voting that was presented as part of the broader policy on socially responsible investment was not specific, and there was a lack of internal capacity, including research tools, to decide on proxy voting. Although the Pension Board had agreed in principle with the policy proposed by IMD on socially responsible investment and proxy voting, it did not approve the resources to embark on any initiative in this area. Moreover, although the Investment Manual requires IMD to comply with the UN Global Compact and Principles of Responsible Investments, there were no detailed guidelines to implement these principles. There was no central system to track proxy voting or mechanism for the voting to be monitored by a unit that is independent from investment officers.

82. The compliance team had performed some statistical research on the proxy votes during a 3-month period as part of the September 2008 compliance review and noted that proxy voting was not always carried out and, when it was, it was not always timely. The review identified the need for improved guidelines to further integrate issues of material concern from an environmental, social and governance compact perspective and those of concern to the United Nations system; the use of a proxy service provider to improve the process, customize voting policies and automate processes in addition to providing research and recommendations on specific issues; and the need for adequate statistical research to be carried out that would speed up and inform the voting process. OIOS found no evidence, however, that IMD had responded to the compliance observations, and these issues remained unaddressed.

Recommendation 17

(17) The Investment Management Division should develop specific policy guidelines on proxy voting, and pursue with the Custodian Bank the option of automating the proxy voting process to enable the use of a service to do online proxy voting, in keeping with industry practice.

83. *IMD accepted recommendation 17 and stated that it has incorporated proxy voting guidelines as part of the proposed Compliance Policy. The Pension Board has endorsed IMD's responsible investing strategy and resource request, based on a Mercer study for the course of implementing such a strategy, of which proxy voting is a part. With the pending approval of the 2010-2011 biennium budget, those resources earmarked for responsible investing shall provide*

capability to enhance compliance with proxy voting guidelines and ensure that the Fund is exercising votes that minimize institutional risk as well as abide by the investment mandate of the Fund. Recommendation 17 remains open pending receipt of documentation showing the implementation of automated proxy voting.

The requirement for investing only in countries where tax exemption was granted to the UN was not always complied with

84. Fund should, in principle, only initiate investments in countries where the Fund has been granted tax exemption. It is the contractual responsibility of the Custodian Bank to reclaim newly withheld taxes by countries not honouring the Fund's tax exempt status, while the recovery of long outstanding claims is the responsibility of IMD.

85. OIOS took note that the compliance review for September 2008 identified cases of non-compliance with investment policy, where equity investments were made in entities of countries that had not granted tax exemption to the Fund, and were traded through Depository Receipts. Similar exceptions were again noted in the December 2008 review. The compliance review report noted that the custodian bank had informed that the Fund was exposed to withholding taxation for the markets where it held Depository Receipts, without any market mechanism to apply for reclaiming related taxes. OIOS observed that the compliance team did not make any specific recommendation requiring IMD to address this issue, although the compliance review report alluded to following up with the office of Legal Affairs to determine whether taxation under the Depository Receipts structure could be deemed acceptable by the Fund.

Recommendation 18

(18) The Investment Management Division should comply with the policy to invest only in countries where the Fund has been granted tax exempt status, and follow-up with the Office of Legal Affairs on the issue regarding reclaiming of taxes withheld when trading through Depository Receipts.

86. *IMD accepted recommendation 18 and stated that IMD will enhance the process of seeking and monitoring the tax exempt status. Recommendation 18 remains open pending receipt of documentation showing compliance with the requirement to invest only in those countries that grant the Fund tax exemption, and establishment of processes to ensure proper follow-up and resolution of the cases where taxes were withheld.*

D. Compliance with Ethics Standards

Inadequate monitoring of personal investments and financial disclosure

87. An effective risk management and compliance function should include the identification, assessment and monitoring of risks relating to standards of ethical behaviour, particularly regarding the management of conflicts of interest, and the handling of confidential and inside information.

88. IMD staff is subject to the standards of conduct of the international civil service and financial disclosure requirements and the UN Staff Regulations and Rules (ST/SGB/2002/13). In addition, the Professional Code of Ethics for the Chartered Financial Analyst Institute provides the professional standards for investment staff. OIOS was also informed that a separate disclosure form was in place for the Investments Committee members regarding conflict of interests.

89. The IMD Compliance Policy was revised in January 2008 to broaden the guidance on compliance with standards of ethics and conduct. The new Compliance Policy would require IMD staff members to periodically acknowledge in writing the awareness of their professional obligations, and of the regulations, rules, standards and codes detailed above, upon joining IMD and annually thereafter, by means of the Acknowledgement of Awareness form provided in Annex G of the Compliance Policy. The compliance function is responsible for obtaining such periodic acknowledgements, and for maintaining records of compliance with the guidelines and procedures on offers of gifts and hospitality. The "Guidelines and procedures on offers of gifts and hospitality" adopted by IMD is shown in Annex D of the Compliance Policy (Reference 1.2(j) – (l) of the ST/SGB/2002/12);

90. The new Compliance Policy also contains a section on personal investments (Annex C) and related rules on personal investments such as pre-trade clearance, prohibited trades, blackout and minimum holding periods. However, there was no common understanding of the policy regarding personal investment between the Ethics Office and OLA, and since the revised Compliance Policy has not yet been approved, Investment Officers are not yet bound by the new Policy's provisions.

91. OIOS further noted that the declaration of interest statement currently used in the UN financial disclosure programme would not be an effective tool for monitoring the personal investments of IMD staff. The UN on-line disclosure form only provided a snapshot of the financial position at year-end as there was no requirement for reporting on personal investment transactions throughout the year. Furthermore, there was no mechanism and/or IT tool in place within IMD to effectively and proactively monitor personal investment. The existing trading system did not have the capability to show all securities traded by the Fund within a specified period and all open recommendations to enable the construction a list of prohibited personal trades.

Recommendations 19 and 20

(19) The Investment Management Division should obtain approval of the new Compliance Policy and implement the new provisions on the annual acknowledgement of ethics and conduct awareness and rules on personal investments.

(20) The Investment Management Division, in consultation with the Department of Management and the Ethics Office, should enhance the United Nations financial disclosure policy, and implement an internal monitoring mechanism to enable the monitoring of compliance with personal investment rules.

92. *IMD accepted recommendations 19 and 20 and stated that IMD currently has a compliance policy to address conflicts of interest in personal trading. IMD is in the process of hiring a compliance officer to enforce the policy. Once the compliance officer is hired, the process will be reviewed and strengthened if needed. IMD will establish an education and acknowledgement program for its ethics policies. Personal trading will be monitored by the use of the restricted list managed in TOMS. Recommendation 19 remains open pending receipt of documentation showing implementation of an education and acknowledgement programme for IMD's ethics policies. Recommendation 20 remains open pending receipt of documentation showing implementation of a system to effectively monitor personal investments.*

E. Information Communication and Technology

IMD needs to define a strategic and governance framework for Information and Communication Technology

93. A clear strategic and governance framework is necessary for ensuring that the ICT resources employed by IMD are effectively and efficiently supporting its operations. OIOS found, however, that IMD did not define and document its needs in terms of data, technology and systems to support the investment strategy, plan and objectives. The current technology did not address the requirements of the investment function, and provided limited support for the risk management and compliance monitoring functions. In addition, IMD lacked a governance structure to ensure alignment between its substantive functions and the Unit supporting ITC systems. OIOS acknowledges that IMD has been responsive to the audit and has started work to develop an ICT strategy in the context of the ICT consolidation with the UNJSPF Secretariat.

94. OIOS took note of the Memorandum of Understanding (MoU) for the consolidation and streamlining of the services supporting the ICT infrastructure of IMD recently entered into between the Information Management System Service (IMSS) of the UNJSPF Secretariat and IMD. The MoU provided for IMD to become a full member of the UNJSPF Secretariat's IT Steering and Executive Committees, which provide the overall governance oversight, control, follow-up and priority setting for the ICT strategies supporting the Fund. OIOS

is of the view, however, that there is a need for IMD to ensure that the Fund's ICT strategies fully encompass the scope of its ICT initiatives, particularly those relating to the identification of critical investment management systems and the resources needed for providing ongoing support for these systems.

95. IMD has started to address prior OIOS audit recommendations (AS2006/801/01 and AT2007/800/01) regarding the automation of the investment process. In this regard, IMD was in the process of implementing several new ICT initiatives, including the "Trade Order Management system" (TOMS), "Back Office" system, "SWIFT" system, and "Risk Analytics" system. Since these initiatives were still pending at the time of the audit, IMD data processing activities were still supported by stand-alone legacy applications (Omega, Wiltshire-Abacus) that were no longer responsive to its needs. In addition, third party applications were used for risk analytics, compliance and monitoring (Thomson's Risk Analytics, Bloomberg, NT Passport, and Compliance Analyst applications).

96. The limitations presented by the applications still in use exposed IMD to several operational risks as follows:

- (a) Trade orders were brokered over the telephone, leading to errors and delays in execution, unclear instructions, lack of an audit trail, unreliable/outdated information, and slow data capture;
- (b) Unencrypted fax lines were used to transmit trade orders, exposing trade executions to the risk of eavesdropping; and
- (c) Manual processing of trades by the Back Office operations team created backlogs in accounting and reconciliations; inadequate/untimely analysis, reporting, and identification of problems; risk of errors; and limitations in the number of transactions processed.

97. IMD did not have a dedicated committee to review and approve the requirements for the acquisition of new technologies and applications. Informal project groups were created without any terms of references to review requests for proposal and request for information with no systematic way of establishing the composition of these groups. Furthermore, there were:

- (a) No approved timelines for the implementation of plans communicated and accepted by all stakeholders; and
- (b) No formal change management process and project management framework to ensure systematic and authorised changes to ICT applications, systems, processes and service parameters.

98. IMD did not adequately research technologies and applications to match its investment requirements for the real estate and fixed income asset classes, which made up 44.5 per cent of the Fund's portfolio value as at December 2008. IMD did not expect to use the new trading system (TOMS) for real estate and fixed income operations, since this system is designed to support equity asset

classes. This would create a situation whereby a significant portion of IMD would still continue to operate without the benefits of automation.

99. IMD developed an information architecture based on its new ICT initiatives. However, this document had not been formally linked to an investment strategy nor signed-off on by key stakeholders. The information architecture did not reflect the changes planned by IMD to adopt a system with multiple custodians and a master record keeper. This new system will significantly change the flow of data, with at least three data sources (at least two custodians and one master record keeper) feeding into the investment system. This change will also increase risks associated with data security and data integrity.

Recommendations 21 to 23

(21) The Investment Management Division should complete and formalize an ICT strategy and governance framework, and should clearly communicate this strategy to the IT Steering and Executive Committees of the Fund to ensure that adequate consideration is given to the ICT needs of IMD.

(22) The Investment Management Division should establish an ICT Committee with the responsibility to:

- (a) Monitor the implementation of the ICT strategy and governance framework; and**
- (b) Approve and monitor ICT projects.**

(23) The Investment Management Division should review and document the relationships between its business functions, system architecture and data model.

100. *IMD accepted recommendation 21 and stated that IMD has reached agreement with the Fund Secretariat to consolidate ICT network and infrastructure services. IMD has clearly defined its strategy, which is focused on building core business applications to support investment activities. And, UNJSPF/IMSS will be responsible for providing IT services up to the operating systems level and non-IMD core applications such as office application and email. In addition, IMD had agreed with IMSS to use the Fund's project management framework and governance mechanisms. IMD is in the process of reviewing them to include IMD's own requirements and ensuring that appropriate planning, control and risk management are utilized. In addition, IMD is in the process of formalizing an internal steering committee to ensure alignment of ICT investment with business needs. On-going collaboration between ICT services and stakeholders will be implemented to ensure the maximum benefits of ICT investment are obtained. Recommendation 21 remains open pending receipt of an approved ICT strategy and evidence of its dissemination to the IT Steering and Executive Committees as part of the ICT consolidation initiative.*

101. *IMD accepted recommendation 22 and stated that in the context of the ICT consolidation, IMD and IMSS agreed to use the Fund's established IT governance mechanisms. In addition, IMD will formalize an internal steering committee, which will report to the Fund's ITEC committee, to perform the following: a) oversee the implementation of the ICT Strategy and contribute to ICT strategic planning, b) monitor the performance of the ICT function, c) assist in the setting of priorities for ICT projects and operations, d) ensure that capital expenditures are supported by a business case and are formally approved, and e) ensure that adequate ICT-related resources are identified to support the implementation of the ICT applications and system.* Recommendation 22 remains open pending the establishment of an IMD Internal Steering Committee and submission to OIOS of the related terms of reference for the Steering Committee.

102. *IMD accepted recommendation 23 and stated that it will be completed once all of the planned IT projects are implemented. IMD had started to document the business processes and workflows. These documents will be used as an input to the projects being implemented.* Recommendation 23 remains open pending documentation of business processes and workflows and their application to ongoing projects.

IMD ICT plan and core applications need to be adequately supported

103. IMD formally documented an ICT plan for 2008-2009. OIOS reviewed this plan and identified the following control weaknesses and risks:

- (a) As part of the ICT consolidation between IMD and the UNJSPF Secretariat, IMD will retain only two posts to support all of its business applications. IMD had listed 24 projects on its ISS project plan for 2008-2009, of which seven were business applications that will require the support of ISS. Since the plan did not include staffing requirements for its implementation and support, the lack of qualified ICT staff is a serious risk that could prevent IMD from achieving its objectives; and
- (b) Functional areas (such as the back office operations section) were not in the position to readily dedicate the extra resources required for the implementation of the ICT plan.

104. The MoU between the Secretariat and IMD included the management of data center operations; help-desk; and network security. As a result of this agreement, IMD will retain the responsibility for planning, budgeting, organizing, liaising with providers and supporting core ICT applications. Moreover, under the terms of the MoU, initially only the IT infrastructure of IMD/ISS will be consolidated with IMSS; services will be incrementally added to support IMD through service level agreements. Considering that IMD is planning to implement new ICT applications for real time processing of trades (i.e. new trade orders platform), it is critical that these applications are supported by adequate and qualified support staff.

Recommendation 24

(24) The Investment Management Division should undertake a comprehensive assessment of the ICT needs of the functional areas and related staffing requirements, and ensure the adequacy of the ICT-related resources to support the implementation of the new ICT applications and systems.

105. *IMD accepted recommendation 24 and stated that it has undertaken a comprehensive assessment of the ICT needs, and IMD is proposing new IT staffing requirement in the 2010/2011 budget submission. Recommendation 24 remains open pending receipt of the approved budget for 2010/2011 showing the new ICT related staff resources.*

IMD needs to establish ICT risk assessment and change management procedures

106. *IMD implemented a risk management and compliance framework. However, the framework focused mainly on the investment function and did not include indicators for the identification, analysis and mitigation of ICT risks. In addition, the compliance framework lacked automated tools for:*

- (a) Supporting an effective compliance and control framework;*
- (b) Checking pre-trade compliance with investment policies; and*
- (c) Performing market research and equity analysis. In addition, since access to real time financial market information for fundamental analysis, analytics and planning was also limited, IMD was forced to rely more on the services provided by external advisers.*

107. *IMD did not document the changes to the investment processes that will result from the adoption and implementation of the new automated applications for the trade order management system, risks analytics system, and the back office operations system, such as embedding delegated authority profiles, and controls relating to online authorization and use of digital signatures.*

108. *The implementation of a disaster recovery strategy for IMD was still in progress. However, there was no evidence that adequate consideration was being given to changes in the disaster recovery strategy that will be required by the implementation of the new ICT systems (i.e. real-time trading system). This will require an appropriate back-up and recovery strategy suitable for real time applications, such as data mirroring, so as to prevent the loss of critical data and information.*

Recommendations 25 to 27

(25) The Investment Management Division should review its risk assessment model and include indicators to adequately capture risks in the information and communications technology domain.

(26) The Investment Management Division should document a change management procedure to record the changes requested and implemented in the applications and systems supporting the investment activities.

(27) The Investment Management Division should review and update its disaster recovery strategy in line with the pending implementation of the real time trade order management system.

109. *IMD accepted recommendation 25 and stated that IMD will create risk management guidelines for ICT. Recommendation 25 remains open pending receipt of the ICT risk management guidelines.*

110. *IMD accepted recommendation 26 and stated that IMD will comply with Information Technology Infrastructure Library (ITIL) guidelines and develop a change management control procedure for any change requests in the applications and systems supporting investment activities. The change control management will be coordinated with IMSS, since the production environment will be hosted by IMSS. Recommendation 26 remains open pending development of a change management control procedure and evidence showing that change requests are documented.*

111. *IMD accepted recommendation 27 and stated that IMD has reached agreement with the Fund Secretariat to consolidate ICT network and infrastructure services including the disaster recovery solutions. IMD is in the process of establishing a Service Delivery Agreement with UNICC in Geneva for Disaster Recovery of all IMD mission critical systems including TOMS and SWIFT under the Fund's Master Agreement with UNICC. Recommendation 27 remains open pending receipt of IMD's disaster recovery strategy.*

Security criteria for systems and applications were not adequately documented

112. *IMD relied on Microsoft Excel to analyse and monitor data and information pertaining to investment operations. However, the use of the Excel application presented the following limitations and control weaknesses: (a) data inputs could not be automatically validated because there were no data entry checks; and (b) data was subject to integrity issues because the application did not generate an audit trail.*

113. *IMD used tools available via third party providers such as the "Passport System", a web portal provided by the custodian bank/master record keeper to enable administration and management of assets. However, the use and management of this application lacked significant controls:*

- (a) Since no formal guidance or direction had been provided by management, these tools were not used in a consistent manner by the investment teams; and*

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- (b) There were no documented criteria, procedures or forms to grant or remove access to the 'Passport System'. Requests to grant access to this application were done using simple email requests, but records were not maintained. There was therefore a possible risk of unauthorized and inappropriate use of data. OIOS' review of user access confirmed that 9 out of 53 users having access to this system

114. There was no independent verification/validation of the changes and updates to the parameters recorded in the "Passport System". The same officer that recorded the parameters into the system also performed the compliance reviews. Hence, there was a risk that the results of compliance reviews could be compromised by incorrect parameters.

115. IMD used the application "Compliance Analyst Tool", a module of the Passport System, for the compliance function. In this regard, OIOS noted that there were no documented maintenance procedures to ensure that data held within the Compliance Analyst tool was updated, and that data requiring actions or changes were identified. This condition applied particularly to reference data such as the 42 investment parameters embedded within the tool. OIOS noted in particular that data anomalies were not timely investigated by the Compliance Assistant. In one case, IMD confirmed that anomalies to the data were first identified in January 2009, but no meaningful actions commenced until March 2009.

116. OIOS observed a weakness in the integrity of data provided by the custodian/master record keeper obtained from third party data vendors. Stale data had been provided that was subsequently used and resulted in a reporting anomaly out of the Passport Compliance Analyst, as identified by IMD. Report ST02 dated March-4-2009 (Debt outstanding < 10%) listed 4 transactions that appeared to have breached the parameters set in the compliance tool. In this regard, OIOS raised the issue as to the reliability of third party data streams used for compliance analysis. While the custodian bank explained that this type of issue was rare, OIOS found that neither the Bank nor IMD had mechanisms in place to detect this type of anomaly.

117. The custodian/master record keeper occasionally issued change notification reports notifying IMD of changes to the compliance analyst parameters; these changes are notified together with the daily exception reports via the passport web portal. OIOS noted, however, that these reports were not consistently checked daily by the Compliance Assistant, which resulted in the lack of detection of a notified change and a reporting anomaly. Report P101, dated March-10-2009 (Prohibited Investment), listed six transactions that appeared to breach the parameters set in the compliance tool. OIOS noted that this exception was caused by changes to an asset class by the custodian bank and notified to IMD, but not promptly observed by the Compliance Assistant. IMD therefore risked untimely verification of system breaches.

118. The absence of appropriate analytical tools impeded the ability of IMD to perform timely and consistent valuation. IMD received reports from multiples sources such as the master record keeper and external advisors. Timing

differences between these two sources of information, however, meant that the reports were not always easily reconciled, a condition that impacted the investment officers' ability to monitor performance using reliable data.

Recommendations 28 to 30

(28) The Investment Management Division should ensure that the design and configuration of new applications and systems includes an assessment of control requirements regarding data security, availability, access management, authentication and protection of transaction integrity and data access rules.

(29) The Investment Management Division should implement periodic maintenance controls to ensure timely updates of the parameters in the Compliance Analyst tool, and independent verification of related data after their input.

(30) The Investment Management Division should establish a mechanism for ensuring the accuracy of data transferred from third party providers, and for timely review of all system breaches.

119. *IMD accepted recommendation 28 and stated that IMD has completed first phase of a risk and vulnerability assessment conducted by Verizon Business. IMD plan to renew the service to strengthen assessment of control requirements regarding data security and policies. In addition, IMD, in collaboration with IMSS, is planning to implement identity management and secure single sign-on to add additional layer of security. Recommendation 28 remains open pending completion of the risk and vulnerability assessment of control requirements regarding data security, availability, access management, authentication of transaction integrity and data access rules.*

120. *IMD accepted recommendation 29 and stated that IMD will study periodic maintenance controls in ways of change management to ensure timely updates of the parameters in the Compliance Analyst (CA) tool in regards to maintaining the compliance guidelines and setting those parameters. CA is a proprietary application provided by Northern Trust to its clients. CA incorporates data acquired by Northern Trust through third party suppliers. Northern Trust has ensured that such data is up-to-date, provided that its suppliers ensure its accuracy. IMD does not have the resources, knowledge and capabilities to verify the related data of such sources as it is not involved in the supply chain of such data. Recommendation 29 remains open pending implementation of periodic maintenance controls and timely updates of parameters in the Compliance Analyst tool.*

121. *IMD accepted recommendation 30 and stated that IMD is planning to center its business applications around a data hub which guarantees data validation, cleansing and quality. The compliance system, which will be implemented by 31 December 2009, and the reconciliation system, which will be*

implemented in 2010, will reduce to almost none or eliminate system breaches. Recommendation 30 remains open pending implementation of the data hub (master data management system) that effectively addresses 3rd party data validation, cleansing and quality.

V. ACKNOWLEDGEMENT

122. We wish to express our appreciation to the Management and staff of IMD for the assistance and cooperation extended to the auditors during this assignment.

STATUS OF AUDIT RECOMMENDATIONS

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
1	Investment Management Division, in consultation with the Investments Committee, should define and implement an investment management strategy that addresses, <i>inter-alia</i> , the acceptable risk tolerance levels; alignment of the strategic asset allocation, as well as cash and currency management, with the results of the Asset-Liability Management Study; and criteria for rebalancing the portfolio to ensure that the long-term goals and objectives of the Fund are met.	Strategic	High	O	Development and implementation of the risk budgeting framework using a risk analytics platform.	31 Mar. 2010
2	Investment Management Division should establish and implement a revised real estate investment strategy and revised benchmark that is more closely aligned with the Fund's real estate portfolio mix.	Strategic	High	O	Documentation showing a new real estate strategy is developed and benchmark(s) selected.	31 Oct. 2009
3	Investment Management Division should develop and implement strategies for alternative investments, securities lending and indexation.	Strategic	High	O	Documentation showing a strategy for alternative investments is developed and approved by IMD management and endorsed by the Investments Committee.	31 May 2010
4	Investment Management Division should establish clear criteria for reporting to, and acting upon the recommendations of the Pension Board and Investments Committee regarding investment policy, risk management and compliance.	Governance	High	O	Development and implementation of the master project plan for monitoring and acting upon the recommendations of the Pension Board and Investments Committee.	31 Oct. 2009
5	Investment Management Division should adhere to the requirement of the Compliance Policy to periodically report on compliance exceptions to the Audit Committee.	Governance	High	O	Approval of the Compliance Policy with defined coverage and frequency of reporting to the Auditing Committee.	30 Sept. 2009

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
6	Investment Management Division should establish a mechanism for the Compliance Officer to report directly to the Representative of the Secretary-General and the Audit Committee. Further, IMD Management should review the organization structure with the view to relocating the Legal Officer's post to the Office of the Director.	Governance	High	O	Completion of the review and development of a mechanism for the Compliance staff to report directly to the RSG and the Audit Committee.	31 May 2009
7	Investment Management Division should conduct a cost-benefit analysis to determine the value added by the non-discretionary advisors, and based on this analysis, reengineer the non-discretionary advisory model to achieve the desired results efficiently and cost effectively.	Governance	High	O	Development and approval of an enhanced advisory arrangement by the RSG and the Investments Committee.	31 July 2009
8	Pending the review of the non-discretionary advisor model, the Investment Management Division should establish a more effective performance monitoring mechanism to ensure that the advisors comply with contract terms and conditions, and that their accountability is aligned with performance.	Operational	High	O	Development and approval of revised evaluation procedures for the advisors or research providers.	31 Dec. 2009
9	Investment Management Division should incorporate a clause on responsible investment and related standards into the contracts with the small-cap managers, closely monitor compliance with these standards, and develop and implement procedures for monitoring and evaluating their performance.	Operational	Medium	C	Signed new contracts showing inclusion of a clause on SRI, and the establishment of a mechanism for performance monitoring.	Not provided
10	Investment Management Division should reassess the delegation of authority trading thresholds that require the Director's approval, as well as the requirement for having two signatories from the same team	Governance	Medium	O	Users' access rights generated from TOMS showing that creating and maintaining approved lists of securities and authorized brokers is limited to the Risk Team.	31 Dec. 2009

Recom. no.	Recommendation	Risk category	Risk rating	C/O	Actions needed to close recommendation	Implementation date ²
	on same recommendation form. IMD should also assign to the risk management team the responsibility for maintaining the approved lists of securities and authorized brokers.					
11	Investment Management Division should institute a policy to periodically reassess long-term real estate investments, particularly the real estate fund partnerships, and establish appropriate investment limits.	Operational	Medium	O	a) Updated Investment Policy requiring periodical review of all portfolios, including long-term real estate investments; and re-balancing when necessary, and b) documented evidence showing that the real-estate funds are reviewed and rebalanced.	31 Mar. 2010
12	Investment Management Division should conduct a comprehensive review of and update the investment policies and procedures to ensure they are consistent and provide clear guidance for IMD investment and compliance staff.	Operational	Medium	O	Updated investment policies and procedures with, at a minimum, the gaps and inconsistencies raised in this report properly addressed.	31 Oct. 2009
13	Investment Management Division should establish, and incorporate in the Investment Manual, research documentation requirements to ensure that investment decisions are based on adequate and current research, and that a long-term investment horizon is taken.	Operational	High	O	Updated Investment Manual with specific requirements on research documentation for the different asset classes.	31 Oct. 2009
14	Investment Management Division should ensure sufficient resource capacity to perform necessary research and analysis, and to carry out due diligence to monitor the large number of public and private real estate funds currently in the portfolio.	Operational	Medium	O	Budget proposal showing that additional resources are requested.	31 May 2010
15	Investment Management Division should immediately address all prior compliance breaches, including determining the reasons for the non-compliance, and report on the implementation of the compliance recommendations to the Representative of	Operational	High	O	Documentation showing decisions made by the RSG with regard to disposition of the outstanding breaches and recommended remedies.	30 Sept. 2009

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
16	<p>the Secretary General and the Audit Committee.</p> <p>Investment Management Division should improve the compliance program by:</p> <p>(a) Employing a scientific statistical sampling approach that ensures a more representative sample of investment transactions;</p> <p>(b) Enhancing the effectiveness of compliance reports by risk-rating the exceptions and investigating the causes of breaches;</p> <p>(c) Establishing a mechanism for spot reporting on breaches to reduce the risks of breaches going undetected;</p> <p>(d) Establishing a mechanism for effectively following up open compliance recommendations; and</p> <p>(e) Developing and implementing a comprehensive compliance training programme.</p>	Compliance	High	O	Updated compliance programme that will define: a) a sampling approach to ensure samples are representative, b) risk-rating of non-compliance, c) identification and reporting of interim breaches, d) a follow-up mechanism for open recommendations, and e) regular training on compliance policy and procedures.	<p>(a) 31 Dec. 2009</p> <p>(b) 31 Dec. 2009</p> <p>(c) 31 May 2009</p> <p>(d) 31 May 2009</p> <p>(e) 30 Sept. 2009</p>
17	Investment Management Division should develop specific policy guidelines on proxy voting, and pursue with the Custodian Bank the option of automating the proxy voting process to enable the use of a service to do online proxy voting, in keeping with industry practice.	Operational	Medium	O	Documentation showing automated proxy voting with adequate research support.	31 Dec. 2009
18	Investment Management Division should comply with the policy to invest only in	Compliance	Medium	O	Documentation showing compliance with requirement to invest only in those	31 Dec. 2009

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
19	countries where the Fund has been granted tax exempt status, and follow-up with the Office of Legal Affairs on the issue regarding reclaiming of taxes withheld when trading through Depository Receipts. Investment Management Division should obtain approval of the new Compliance Policy and implement the new provisions on the annual acknowledgement of ethics and conduct awareness and rules on personal investments.	Operational	High	O	Documentation showing implementation of an education and acknowledgement programme for IMD's ethics policies.	31 Dec. 2009
20	Investment Management Division, in consultation with the Department of Management and the Ethics Office, should enhance the United Nations financial disclosure policy, and implement an internal monitoring mechanism to enable the monitoring of compliance with personal investment rules.	Operational	High	O	Documentation showing implementation of a system to effectively monitor personal investments.	31 Dec. 2009
21	Investment Management Division should complete and formalize an ICT strategy and governance framework, and should clearly communicate this strategy to the IT Steering and Executive Committees of the Fund to ensure that adequate consideration is given to the ICT needs of IMD.	Information Resource Strategy	High	O	Receipt by OIOS of a formally approved ICT strategy, and evidence of its dissemination to the IT Steering and Executive Committees as part of the ICT consolidation initiative.	31 Dec. 2009
22	Investment Management Division should establish an ICT Committee with the responsibility to: (a) Monitor the implementation of the ICT strategy and governance framework; and (b) Approve and monitor ICT projects.	Information Resource	Medium	O	Establishment of an IMD Internal ICT Steering Committee and submission to OIOS of the related terms of reference for the committee.	31. Dec. 2009
23	Investment Management Division should review and document the relationships	Information Resource	Medium	O	Documentation of business processes and workflows and their application to ongoing	Not provided

Recom. no.	Recommendation	Risk category	Risk rating	C/O	Actions needed to close recommendation	Implementation date ²
24	between its business functions, system architecture and data model. Investment Management Division should undertake a comprehensive assessment of the ICT needs of the functional areas and related staffing requirements, and ensure the adequacy of the ICT-related resources to support the implementation of the new ICT applications and systems.	Information Resource	High	O	Receipt by OIOS of approved budget for 2010/2011 showing ICT related resources.	Not provided
25	Investment Management Division should review its risk assessment model and include indicators to adequately capture risks in the information and communications technology domain.	Information Resource	Medium	O	Documentation of the ICT risk management framework.	31 Dec. 2009
26	Investment Management Division should document a change management procedure to record the changes requested and implemented in the applications and systems supporting the investment activities.	Information Resource	Medium	O	Development of a change management control procedure and evidence of change requests documentation.	31 Mar. 2010
27	Investment Management Division should review and update its disaster recovery strategy in line with the pending implementation of the real time trade order management system.	Information Resource	High	O	Receipt by OIOS of a disaster recovery strategy.	Not provided
28	Investment Management Division should ensure that the design and configuration of new applications and systems includes an assessment of control requirements regarding data security, availability, access management, authentication and protection of transaction integrity and data access rules.	Information Resource	High	O	Completion of the risk and vulnerability assessment of control requirements regarding data security, availability, access management, authentication of transaction integrity and data access rules.	31 Dec. 2010
29	Investment Management Division should implement periodic maintenance controls to ensure timely updates of the parameters in the Compliance Analyst tool, and	Information Resource	Medium	O	Implementation of a change management procedure and timely updates of parameters regarding, inter alia, those in the Compliance Analyst.	30 Sept. 2009

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
30	independent verification of related data after their input. Investment Management Division should establish a mechanism for ensuring the accuracy of data transferred from third party providers, and for timely review of all system breaches.	Information Resource	Medium	O	Implementation of the data hub (master data management system) that effectively addresses 3rd party data validation, cleansing and quality.	30 June 2010

1. C = closed, O = open
2. Date provided by IMD in response to recommendations.