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Date: 6 August 2004

To: Ms. Catherine Bertini, Under-Secretary-General
Representative of the Secretary-General for the Investments
of the United Nations Joint Staff Pension Fund

From: Ms. Patricia Azarias, Director
Internal Audit Division I
Office of Internal Oversight Services

A handwritten signature in black ink that reads "P. Azarias".

Subject: **OIOS Audit of the Investment Management Service – Investment
performance measurement system (AS2003/72/1)**

1. I am pleased to present herewith our final report on the subject audit, which was carried out between May and July 2003. The audit has been conducted in accordance with the standards for the professional practice of internal auditing in the United Nations organizations.
2. The report incorporates, as appropriate and marked in italics, IMS' comments of 29 June 2004 to our draft report dated 15 October 2003. We note with appreciation that you have accepted all 18 recommendations contained in the draft report. Based on the response, we have closed recommendations 2, 4, 9, 12, 13, 15, and 18. All other recommendations (1, 3, 5, 6, 7, 8, 10, 11, 14, 16 and 17) remain open pending receipt of additional documentation or information requested in the text of the report. In addition to any comments you may wish to make on the individual findings, kindly specify in respect of each recommendation the expected or actual implementation date.
3. I would like to take this opportunity to thank the staff of the Investment Management Service for their assistance and cooperation during the audit.

Copy to:

Ms. Chieko Okuda, Director, IMS/UNJSPF
Board of Auditors
Programme Officer, OIOS



United Nations
OFFICE OF INTERNAL OVERSIGHT SERVICES
Internal Audit Division I

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AUDIT REPORT

Audit subject: Audit of the Investment Management Service
- Investment performance measurement system

Audit No.: AS2003/72/1

Report date: 6 August 2004

Audit team: Oleg Kotcherga, Auditor-in-Charge
Elizabeth Morrin, Auditor
Carlos Meszarich, Auditor

**AUDIT OF THE INVESTMENT MANAGEMENT SERVICE -
INVESTMENT PERFORMANCE MEASUREMENT SYSTEM
(A2003/72/1)**

Executive summary

The Office of Internal Oversight Services (OIOS), with the assistance of consultants conducted an audit of the investment performance measurement process at the Investment Management Service (IMS) of the United Nations Joint Staff Pension Fund (UNJSPF).

The main audit objectives were to: (i) assess the investment performance measurement process and reporting system at IMS; (ii) assess the appropriateness of benchmarking and investment performance reporting in conformity with best industry practices; and (iii) determine the adequacy and effectiveness of the internal controls applied by the IMS in investment performance measurement and reporting.

From 1998 to 2002, the UNJSPF's investment performance returns were above its overall benchmark, which OIOS' consultants stated was an appropriate measure of performance. However, relative to industry best practices, the performance measurement process used by UNJSPF could be improved. The current performance measurement process makes it difficult to determine if the services provided by individual investment officers, discretionary advisors and non-discretionary advisors are satisfactory. Moreover, the investment accounting structure does not lend itself to comparing investment performance with peer groups.

The main findings were as follows:

Internal controls in the performance reporting process

- IMS' written policies and procedures on Fund performance reporting were limited and of a general nature, and there was a lack of documentation regarding the overall performance measurement process.
- There were no policies and procedures on performance reporting for discretionary advisors, non-discretionary advisors and IMS investment officers, which created a weak internal control environment.

Investment performance reporting

- There was a need to improve analytic risk reporting by including additional reports on standard deviation, Sharpe ratio, benchmark tracking error, Value-at-Risk, and actual versus target allocation returns.
- There was a need to modify the portfolio structure to facilitate reporting at the regional and investment officer levels.

- The use of a single global custodian would improve UNJSPF's investment performance reporting process and would also be more cost-effective than the current practice of using three regional custodians.
- The Master Record Keeper provides performance reporting for "small cap" portfolios only at a consolidated level; the reports from the discretionary investment advisors had to be used to analyze the individual performance of the "small cap" portfolios.
- The "semi-discretionary" advisor for real estate investments, which has decision-making functions, also provides the valuation of the real estate portfolio for performance reporting by the Master Record Keeper. However, there was no independent verification of the performance results for the real estate investments.

Performance reporting on discretionary and non-discretionary advisors and IMS investment officers

- No criteria and methodology had been established for the evaluation of discretionary advisors.
- The evaluation of non-discretionary advisors was based on subjective criteria and not substantiated with statistical data.
- There was a need to review the costs and relevance of each type of service provided by the non-discretionary advisors, including the proportion of costs by type of service rendered and the value added by each function performed by the advisors.
- Goals for investment officers, as set in their PAS, did not always refer to specific benchmarks in order to measure their performance.

Benchmarking

- While the overall Fund benchmark (a weighted average of the Morgan Stanley Capital International World Index and the Salomon Brothers World Government Bond Index) was considered to be appropriate, separate benchmarks need to be established to measure the performance of sub-allocations of the Fund (such as of the emerging markets portfolio).
- Peer group performance reporting could not be done at the manager and regional levels due to the portfolio structure used by IMS.

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I. INTRODUCTION

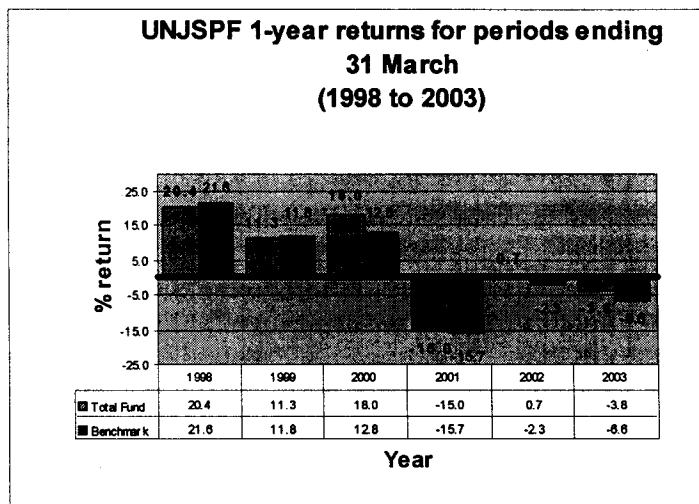
1. The Internal Audit Division I of OIOS carried out an audit of the investment performance measurement system/process within the Investment Management Service (IMS) of the United Nations Joint Staff Pension Fund (UNJSPF). OIOS engaged the services of an external consulting firm with expertise in the field of investment management and performance reporting, to assist the audit team in conducting the audit. Their report is attached as Appendix 1. The audit observations were discussed with the IMS Director and investment officers, and their comments were incorporated in the report where appropriate. The audit team also interviewed key managers of Master Record Keeper (MRK), State Street Bank and Trust Company. The audit was conducted in accordance with the standards for the professional practice of internal auditing in United Nations organizations.

2. The management and administration of investments of the UNJSPF is the fiduciary responsibility of the Secretary-General of the United Nations. This responsibility has been delegated to the Under-Secretary-General for Management, as the Representative of the Secretary-General for the Investments of the UNJSPF. The Representative is assisted by IMS, which manages the Fund's portfolio on a day-to-day basis.

3. The Fund invests in a global portfolio of equities, fixed income, real estate and short-term instruments. All investments must meet the criteria of safety, profitability, liquidity and convertibility as endorsed by the General Assembly. As of 19 May 2003, the market value of the Fund's assets was \$22.5 billion.

4. The Fund's annual total rates of return compared to the benchmark rates of return, based on market value as of 31 March for the years 1998 to 2003, are shown in Figure 1. The Fund underperformed the benchmark during 1998 and 1999, and outperformed it during the period 2000 to 2003. The UNJSPF actuarial surplus of \$4.3bn (as at the 26th valuation in 2001) is based on an assumed annual return of 8.5 per cent.

Figure 1



5. The Fund's current benchmark, comprised of 60 per cent Morgan Stanley Capital International World Index (MSCIWI) and 40 per cent Salomon Brothers World Government Bond Index (SBWGBI), was introduced in 1997. This benchmark was selected for measuring investment performance at the fund level to reflect the (a) geographical diversity of the Fund, and (b) its long-term asset allocation.

6. Portfolio level performance (excluding small cap portfolios) is compared against the appropriate country level component of the fund level benchmarks, MSCIWI and SBWGBI, or the appropriate asset class specific benchmark (e.g. 90-day T-bill for short term, NAREIT for real estate). State Street performance reporting includes risk-analytic reports, some of which are used (fund and asset class levels) in UN reporting. Small cap portfolios, all managed externally, are assigned separate benchmarks.

II. AUDIT OBJECTIVES

7. The audit objectives were to:

- (i) assess the investment performance measurement process and reporting system at IMS;
- (ii) assess the appropriateness of benchmarking and related procedures to determine that they are in conformance to best industry practices, and in compliance with relevant GA approved benchmarks;
- (iii) review all aspects of investment performance reporting for completeness and compliance with best industry practices, including performance reporting for discretionary and non-discretionary advisors, and internal investment officers; and
- (iv) determine the adequacy and effectiveness of the internal controls applied by the IMS in investment performance measurement to ensure proper reporting of investment results.

III. AUDIT SCOPE AND METHODOLOGY

8. Based on the identified risks, the scope of the audit included: (i) review of the performance measurement process and the assessment of related internal controls by reviewing procedures and documents, conducting interviews with the staff involved and performing some audit tests; (ii) assessment of the adequacy of the methodology and benchmarks used by the IMS through the analyses of investment performance reports, including reports on individual investment officer performance, discretionary advisor performance, and contributions of non-discretionary advisors; and (iii) comparison of the investment performance measurement process and reporting to industry best practice.

9. The audit approach included: (i) reviewing related documents and records provided by the IMS and MRK; and (ii) performing limited audit tests to ensure that existing internal controls were in place; and (iii) using industry consultants to review and comment on procedures and reports vis-à-vis best industry practices.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Policies and procedures

Policies and procedures on performance reporting, monitoring and evaluation need to be documented

10. Good industry practice requires policies and procedures as an internal control mechanism to ensure consistency in the way that an operational unit carries out its functions. However, the IMS Organization, Policies and Procedures Manual (the manual) contained only limited information on performance reporting and was of a general nature. For example, the section of the manual relating to General Assembly documents states "The report describes the investment environment during the year ending 31 March and furnishes information on investment returns, portfolio diversification and development-related investments of the Fund". Yet, nothing in the manual states how this is to be done.

11. In OIOS' opinion, the manual should state: (i) what is the source of investment performance data and specific reports that are to be used; (ii) who within IMS is responsible for compiling the information; (iii) who is responsible for reviewing and approving the reports; and (iii) how often is the reporting frequency.

12. For non-discretionary advisors, the manual states that the criterion for selection, monitoring and termination of these advisors is reflected in the request for proposal and service contracts. OIOS reviewed the service contract but this only contained reference to the reporting and meeting requirements and not how IMS would monitor their performance. IMS should include in the manual a section on monitoring non-discretionary advisors, which would define performance indicators and how data on these indicators is collected. For example, the indicators could include the total number of recommendations made by the advisors compared to the number of recommendations which resulted in a transaction.

13. Monitoring relates to the periodic reporting of performance, whereas evaluation is the assessment of whether objectives are being achieved. Neither the manual nor the service contract contained guidelines on how the performance of non-discretionary advisors is to be evaluated. An evaluation form has been produced, but the evaluation process is not covered in the manual's guidelines. IMS should include a section in the manual on the evaluation process including *inter alia*, when evaluations are to be conducted, by whom, how they are conducted, and how feedback is provided to the non-discretionary advisor. Using the indicator example in paragraph 12, an evaluation could include a comparison of the number of advisor-initiated transactions between periods and an analysis for deviations in the number of recommendations made. The manual should also include requirements to monitor and assess the performance of the advisor for real estate investments who performs decision-making functions on a "semi-discretionary" basis.

14. The manual included no provisions on the use, monitoring and evaluation of the discretionary advisors. This could be improved by including a section on monitoring and evaluation similar to that for non-discretionary advisors but including appropriate performance

indicators. OIOS believes it is also important to include in the manual a list of the discretionary advisors together with contact information, and reporting cycles.

15. The evaluation of the performance of IMS investment officers is also not covered in the manual. Again, this needs to be improved by including a section on how individual performance is to be monitored and evaluated in the context of their portfolio management, including appropriate benchmarks against which performance should be evaluated.

Recommendation 1

The Investment Management Service should provide more detailed written policies and procedures on investment reporting, monitoring and evaluation (as indicated in paragraphs 10 to 15) in the manual, to serve as a reference point for investment officers and as an internal control tool (AS2003/72/1/001).

16. *IMS management agreed with recommendation 1, stating that, the manual was updated in March 2003 and again in March 2004. As the adequacy of the Investment Management Service manual continues to be an issue, IMS has included it in the scope of the proposed review of IMS to be conducted by an independent consultant familiar with the industry to ensure that relevant IMS policies and procedures are included in sufficient detail. Recommendation 1 will be closed when the manual is updated after the independent consultant's review.*

The requirement for an internal portfolio accounting system

17. Prior to 1999, the UNJSPF maintained its own internal portfolio accounting system (INCAS). Due to Year 2000 compliance concerns, this system was discontinued but not replaced. While the MRK serves as the primary source of information, it is customary for large pension funds, which manage their own portfolios and execute trades, to maintain an internal accounting system.

18. The Board of Auditors stressed in its report (A/57/9 paragraph 85) that "The lack of Investment Management Service accounting system has introduced a potential financial risk since 2000". This was reiterated in their management letter dated 31 December 2002. However, at its meeting in July 2003, the Standing Committee decided to continue the current process of utilizing the MRK system and to automate the movement of data from MRK to the UNJSPF's Lawson General Ledger. OIOS concurs with the Board of Auditors recommendation, but it would be prudent to conduct a cost-benefit analysis in order to determine the acquisition and maintenance costs of such a system and whether this outweighs the potential financial risk. To date this recommendation of the Board of Auditors has not been implemented.

Recommendation 2

The Investment Management Service should establish an internal accounting system as is customary for large pension funds in the

industry practice, as was recommended by the Board of Auditors (AS2003/72/1/002).

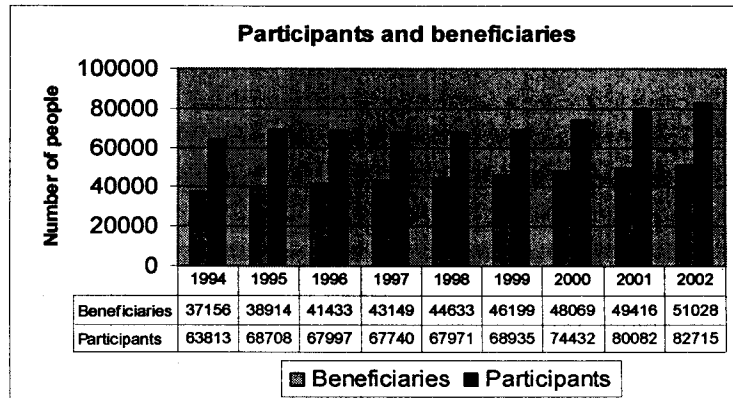
19. *IMS management accepted and implemented recommendation 2, noting that an independent study was completed by a consultant in April 2003, recommending the retention of the existing system with some enhancements. This recommendation was approved and adopted by the Standing Committee in July 2003. The study examined the following three options: (i) utilize the Lawson system (i.e. establish an independent system), (ii) continue with the services of the Master Record Keeper (MRK) and (iii) develop a possible combination of both approaches.*

20. *The study concluded that the third option would enable IMS to take advantage of the significant benefits that the current business model provides with the least disruption of service and at the same time improving operations and flexibility. The report further stated that this solution is the most cost efficient for IMS as opposed to trying to custom build such an application. The Standing Committee approved the recommendation and it has been implemented. In view of the steps taken, this recommendation has been closed.*

Limited diversification in asset classes

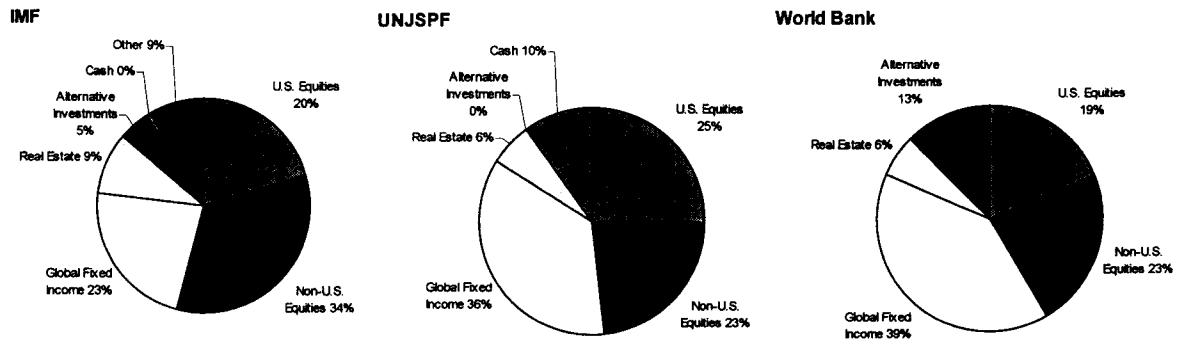
21. Figure 2 depicts the ratio between the participants and beneficiaries of the Fund. While, in 1999, the ratio of participants to beneficiaries was 179 to 100, in 2024, the ratio is projected to be 115 to 100, respectively. This implies that more reliance will be placed on investment income to meet the Fund's liabilities. The UNJSPF should therefore seek additional options to increase investment income. One such option is to invest in higher-yielding alternative investments.

Figure 2



22. Figure 3 compares the asset allocations of the World Bank, International Monetary Fund (IMF) and United Nations pension funds as at 31 December 2002. This figure shows that the range of investments employed by the Fund, is limited and does not include other types of asset classes used by other similar organizations. Traditionally, the UNJSPF has invested in exchange traded equities, fixed income securities, real estate and short-term instruments. OIOS has noted that the other funds allocate between 12 and 21 per cent of their assets in alternative investments such as hedge funds, private equities and high-yield bonds, whereas the UNJSPF does not. Moreover, it is a common practice in the pension fund industry to diversify portfolios by the use of alternative investments.

Figure 3



23. At the 173rd meeting of the Investments Committee held in November 2002, IMS made a presentation regarding investing in private equities. The Investments Committee decided that, the Fund could invest in private equities, but only after it recommends an appropriate investment strategy.

Recommendation 3

The Investment Management Service should review the possibility of further diversifying its investment portfolio (asset classes) using alternative investments, within its tenets of safety, profitability, liquidity and convertibility; and inform the Pension Board of the results of the review for its consideration (AS2003/72/1/003).

24. *IMS agreed with recommendation 3 and stated they would have an external consulting company review the overall investment practices of IMS, including the possibility of diversifying its investment portfolio using alternative investments.* This recommendation will be closed after the completion of the external consulting company's review of the overall investment practices of IMS.

The benefits of a single global custodian

25. A custodian is an entity which holds and safeguards securities owned by a fund. Until 1996, the Fund used a single global custodian. This was changed following the recommendation of a consultant to diversify risk, and the Fund now has three separate custodians based in the USA, Europe and Japan.

26. In 1998, OIOS arranged for an operational audit of IMS, which was conducted by an external accounting firm. In its report the firm stated that while the decision to use more than one custodian was not uncommon, this resulted in the requirement to use a master record keeper. Their recommendation was for IMS to consider consolidation of its custodial relationships. While accepting the Fund's decision to diversify risks by using several custodians, it is OIOS' opinion that the benefits of a single custodian could outweigh these risks, which can be reduced with appropriate internal controls. Besides, there is very little true concentration risk with a single global custodian, because the assets are being kept within each country, and with a local banking entity that typically has a sub-custodian agreement relationship with the global custodian. But these local entities must also comply with local laws and regulations.

27. The consultants assisting OIOS in the current audit, also concurred with the accounting firm's recommendation to consolidate its custodial relationships, noting that multiple service provider arrangements "add unnecessary complexities, costs, redundancies and inefficiencies to the investment reporting process." Using a single global custodian could therefore be: (i) less costly; (ii) improve the operational process; and (iii) place the UNJSPF in a favourable position to undertake securities lending. Revenues from securities lending could be used to offset custodial and record keeping costs. It could also enable the Fund to reduce the reporting lead time from the current 15 days after the quarter end date to an estimated 5 -10 days.

Recommendation 4

The Investment Management Service should review the possibility of employing a single global custodian in order to improve the operational process and to undertake securities lending, using the revenue so generated to offset custody costs; and bring the results of its review to the attention of the Pension Board for their consideration (AS2003/72/1/004).

28. *IMS agreed with recommendation 4, stating that employing a single global custodian would both improve and simplify the operational process, as well as reduce custody costs, while incurring no additional risk to the Fund. IMS consulted with the CEO of the Fund and secretary of the Pension Board and proposed to the RSG the hiring of a single master trustee/global custodian for the Fund. The RSG approved this proposal and an RFP is being prepared. In view of the steps taken by IMS, this recommendation is considered closed.*

B. Investment performance reporting

Account structure could be improved to facilitate additional investment reporting

29. The lowest level of the account structure of the Fund is the country level. Certain country level portfolios contained both equities and fixed-income assets. In OIOS' opinion, this structure does not facilitate performance reporting and accountability at the investment officer level, since asset classes within the portfolio are combined, which limits MRK's ability to provide the information. According to OIOS' consultants, performance reporting at the manager level is a core industry practice, which "provides pension fund sponsors with an objective and quantitative means for tracking individual manager contributions to the overall investment objectives".

30. However, IMS stated that they followed a team-based approach where an individual manager would sacrifice individual performance in order for a fellow officer to hold an equity in another portfolio. For example, shares of HSBC stock are held in the Singapore portfolio while they could also be held in the United Kingdom portfolio. The consultants, however, maintain their opinion that "this would not diminish many of the values gained through sub-fund level performance data."

Recommendation 5

In order to facilitate performance reporting and accountability at appropriate levels, the Investment Management Service should consider amending the structure of country level portfolios so that each contains only a single asset class. This would require at least two portfolio accounts for each country (equities and fixed-income securities) (AS2003/72/1/005).

31. *IMS accepted recommendation 5 and stated they would have an external consulting company review the overall investment practices of IMS. The scope of study will include a report on appropriate benchmarks to reflect the portfolio structure suitable to Fund objectives. This recommendation will be closed with the external consulting company's report on the portfolio structure.*

Only MRK data should be used in performance reporting

32. IMS employs six discretionary advisors to manage various small capitalization portfolios. There are three for North America, two for Europe and one for Japan. In MRK's performance reporting, it was noted that the performance for the North American discretionary advisors was aggregated into a single line. This prevents MRK from providing benchmark and peer universe comparisons for each discretionary manager at the regional and style aggregate (e.g. growth, value) levels.

33. In addition, this aggregation does not allow for the review of individual advisor performance using these reports. Consequently, the performance reports generated by the discretionary advisors are used by IMS in preparing reports for the Investments Committee, Pension Board and Standing Committee. Industry practice requires independent verification of performance which would require using reports produced by the MRK.

34. The MRK confirmed that market valuation data and details relating to the real estate portfolio were provided by the non-discretionary advisor (Pension Consulting Alliance). In the 2003 first quarter performance report, the MRK noted that "This is the seventh quarter using PCA market values for performance at total level". The 1999 amendment to the contract with Pension Consulting Alliance granted them "semi-discretionary authority on investment decisions". This provided "...the authority to buy and sell without obtaining prior approval from IMS" for investments on the list approved by the Investments Committee. Given that the "semi-discretionary" advisor has decision-making authority and provides valuation of real estate portfolio, it is OIOS' opinion that, for control purposes, the valuation should be independently verified by MRK.

Recommendations 6 and 7

The Investment Management Service should request MRK to:

- (i) Report the performance of each small capitalization portfolio separately, and include benchmarks at regional and style aggregate levels in their reports (AS2003/72/1/006); and
- (ii) For control purposes, independently verify valuations provided by the "semi-discretionary" advisor for the real estate portfolio (AS2003/72/1/007).

35. *IMS accepted recommendations 6 and 7, noting that IMS will explore small cap sub-portfolio maintenance and performance with the MRK. IMS will also discuss with the MRK their ability to perform an independent valuation of the real estate portfolio. If additional costs beyond amounts currently budgeted must be incurred, a request will be submitted to the Pension Board. These recommendations will be closed pending finalization of discussions with MRK.*

There is a need to expand risk analytic reporting

36. Investment risk is the quantifiable likelihood of loss or less-than-expected return. Risk analytic reports provide a measure of the risk within the fund (or individual portfolio) and report on performance against benchmarks and peer groups on a risk-adjusted basis. The risk analytic reports produced by MRK for IMS reported only at the fund and asset class level, but not at the investment officer level. This is due to the nature of the account structure as stated in paragraphs 29 to 30.

37. Additional analytic reports, which IMS should consider using, include *inter alia* standard deviation, Sharpe ratio¹, benchmark tracking error², Value-at-Risk³ and actual versus target allocation returns.

Recommendation 8

The Investment Management Service should implement risk analytic reporting at the investment officer level to assess performance against volatility and other benchmark deviation measures. (AS2003/72/1/008)

¹ Sharpe Ratio: A risk-adjusted measure calculated using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe ratio, the better the fund's historical risk-adjusted performance.

² Benchmark tracking error: The amount by which the performance of the portfolio differed from that of the benchmark, which quantifies the degree to which the Fund's strategy differed from the benchmark.

³ Value-at-Risk: A technique which uses the statistical analysis of historical market trends and volatilities to estimate the likelihood that a given portfolio's losses will exceed a certain amount.

38. *IMS accepted recommendation 8 and stated that they would have an external consulting company to review the overall investment practices of IMS. The scope of study will include evaluation on risk analytic reporting suitable to the Fund objectives. This recommendation will be closed upon completion of the study on the risk analytic reporting.*

Discrepancy in reported benchmark performance

39. OIOS noted discrepancies in the Report of the Secretary-General on the Investments of the UNJSPF (A/C.5/57/11). Paragraph 16 of the report showed the benchmark performance for the years ended 31 March 2001 and 31 March 2002 as negative 16.30 per cent and negative 2.00 per cent respectively. However, based on the data in Table 2 of the report, the benchmark performance was calculated by OIOS as negative 15.74 per cent and negative 2.32 per cent, respectively, for the years in question.

Recommendation 9

The Investment Management Service should review the benchmark return as reported in A/C.5/57/11 and make necessary corrections to the benchmark performance and/or Table 2 of the report as appropriate (AS2002/72/1/009)

40. *IMS accepted recommendation 9, noting that the discrepancy was caused by a miscalculation by MRK and that the numbers would be corrected. Based on the impending corrective action, this recommendation is considered closed.*

C. Investment advisors

Reviewing the function of non-discretionary investment advisors

41. IMS has contracted the services of four companies who act as non-discretionary investment advisors. The annual cost of the services is about \$7.6 million. According to their contracts, non-discretionary investment advisors provide the following services: (i) written reports on global investment and asset allocation; (ii) specific investment recommendations; (iii) monthly verbal presentations to IMS on current trends and events; and, (iv) access to research and databases. These companies also provide an opinion on each recommendation. They do not manage funds and are not responsible for decision-making (except for the advisor on real estate) nor are accountable for performance.

42. The Director of IMS stated that the non-discretionary advisors provide "checks and balances" to the investment process through the inclusion of their opinion on each recommendation for investment transaction. The Director also noted that the use of non-discretionary advisors had been in place for several years.

43. Current internal controls include a peer review of investment transactions prior to execution. The recommendation for the execution of the transaction is also signed off by the Director and the Representative of the Secretary-General, and only equities in companies on the

list approved by the Investments Committee can be traded. OIOS is of the opinion that these internal controls are sufficient without the further advice from non-discretionary advisors on individual recommendations for equity trading initiated by the IMS investment officers.

44. For the fixed-income portfolio, the non-discretionary advisor provides all investment recommendations and executes the transactions. The IMS investment officer is only responsible for selecting one of the investment options presented. In contrast, equity portfolio managers all stated that the non-discretionary advisors only generated 20 to 30 per cent of all recommendations, and are not used to execute transactions.

45. Given the absence of independent research for the fixed-income portfolio, the consultants were of the opinion that the advisor acts more as a discretionary advisor, but without proper accountability. While this relationship may offer substantial savings over the cost of a discretionary relationship, OIOS is concerned about the lack of accountability for performance either on the IMS investment officer or the non-discretionary advisor.

Recommendations 10 and 11

The Investment Management Service should review the value added by the non-discretionary advisors in issuing an opinion on each recommendation for equity trading initiated by the Investment Management Service investment officers (AS2003/72/1/010).

In order to establish accountability, the Investment Management Service should either: (i) ensure that the fixed-income investment officer acts with greater independence in the management of the portfolio; or (ii) consider outsourcing the fixed-income portfolio, while maintaining the investment officer to monitor the performance of the outsourced portfolio (AS2003/72/1/011).

46. *IMS accepted recommendations 10 and 11, noting that a comprehensive review of the structure of IMS will be undertaken in 2004. This evaluation will include current utilization of all non-discretionary advisors, the fees being paid and possible alternative arrangements, if any. With regard to recommendation 11, IMS stated that investment operations of the Fixed Income Unit will be included in the comprehensive review of the structure of IMS as noted in the response to Recommendation 10. These recommendations will be closed upon the completion of the comprehensive review of IMS' structure.*

Oversight of discretionary advisors

47. During the audit of investment management in 2002, OIOS found that the performance of discretionary advisors was not monitored on an ongoing basis. Based on OIOS' recommendation, IMS initiated new procedures that required the discretionary advisors to report to the Investments Committee. OIOS noted that since 2003 this process was terminated. IMS stated that discretionary advisors would be evaluated at the end 2003, but the methodology of

how this would be accomplished had not yet been determined at the time of the audit. In OIOS opinion, IMS should evaluate the performance of discretionary advisors on a quarterly basis.

Recommendation 12

The Investment Management Service should develop a methodology to evaluate the performance of discretionary advisors on a quarterly basis, and provide OIOS with a copy of the methodology (AS2003/72/1/012).

48. *IMS has accepted and implemented recommendation 12 and stated in their response: "The performance of the discretionary advisors is monitored on an ongoing basis through quarterly performance reports and is communicated to the Investments Committee via the Blue Book, and through regular scheduled presentations to IMS by these discretionary managers. IMS agrees to enhance the documentation of this monitoring and will devise a more formal written review of the performance of the discretionary advisors."* This recommendation has been closed.

Determining value-for-money in the non-discretionary advisor relationship

49. The non-discretionary advisor agreements provide for the payment of a single annual fee and does not detail costs of the various services. At year-end, an evaluation is conducted based on subjective criteria (e.g. "quality of presentations") as assessed by each IMS investment officer. IMS does not maintain statistics on the various services provided.

50. The combined cost of non-discretionary advisors is more than \$7.6 million per annum. Without performance indicators as discussed in paragraphs 12 and 13 and statistics on the services provided by the non-discretionary advisors, it is impossible to determine whether or not value for money was achieved in these relationships.

Recommendation 13

The Investment Management Service should request the non-discretionary advisors to provide a breakdown of fees charged relating to each aspect of services provided. The Investment Management Service should also maintain statistics on the services rendered by the non-discretionary advisors in order to objectively evaluate their performance (AS2003/72/1/013).

51. *IMS accepted and implemented recommendation 13, stating that advisor fee breakdowns were obtained and will be forwarded to OIOS. The role, value and evaluation of non-discretionary advisors will be included in the review of IMS by an independent consultant later this year.* This recommendation has been closed.

D. IMS investment officers

Concentration of responsibility

52. IMS employs seven investment professionals and eight support staff to manage about \$22 billion in assets, with nearly 90 per cent of the assets managed in-house. As of 28 May 2003, the officer-in-charge of fixed-income and short-term investments had management responsibility for \$9.9 billion (43.7% of the overall portfolio) and the officer-in-charge of the North American portfolio and Japanese equities had management responsibility for \$6.5 billion (28.9% of the overall portfolio).

53. Typically pension funds that manage their investments internally have at least two managers (but usually several) for each investment area in order to: (i) reduce operational risk exposure by ensuring active backups for each investment area; and (ii) reduce volatility risk by spreading investment responsibilities across portfolio managers who have differing investing philosophies and styles.

54. The cost of the current IMS investment mechanism using internal investment officers, discretionary and non-discretionary advisors, is about \$12.6 million per year. In contrast, outsourcing the entire portfolio (including retention of 5 investment officers and 5 assistants) would cost, on a conservative estimate, about \$30.4 million. However, an estimated increase of investment income by only 10 basis points (on a \$22 billion portfolio) would offset the additional cost. Under the outsourcing option, IMS investment officers would continue to be responsible for managing and monitoring the performance of the outsourced portfolios. Such an operating model is used by the World Bank and the International Monetary Fund (IMF) for the management of their pension fund assets.

Recommendation 14

The Investment Management Service should conduct a cost-benefit analyses of the options of (i) outsourcing the investment management service to reduce operational risk, or (ii) increasing the number of investment staff to ensure adequate resources and back-up availability; and report the results of the review to the Pension Board for its consideration (AS2003/72/ 1/014).

55. *IMS accepted recommendation 14, stating that a comprehensive review of the structure of IMS will be undertaken in 2004. This review will include outsourcing the investment management service to reduce operational risk or increasing the number of investment staff. This recommendation will be closed upon OIOS' receipt of the review results.*

Consistency required in setting investment officer goals

56. Setting clear goals in performance of the portfolio under each investment officer's responsibility, including an appropriate benchmarks, is a key accountability mechanism in the investment industry. According to IMS, investment officer performance is documented in the

performance appraisal system (PAS). However, OIOS' review of the PAS for the 5 investment officers noted that PAS goals were not always clearly stated and included statements such as "achieve a good performance" or "achieve a positive performance", which neither adequately stated the goal nor indicated how it is to be measured. For one investment officer, no reference was made to individual portfolio performance.

Recommendation 15

The Investment Management Service should ensure that each investment officer's performance is measured based on the performance of the portfolio under his/her management and documented in their PAS. Individual performance goals should refer to the portfolio under management and the specific benchmarks by which performance will be measured (AS2003/72/1/015).

57. *IMS accepted and implemented recommendation 15, noting that investment performance of an investment officer against a relevant benchmark is reported on the investment officer's PAS. The omission of this in one investment officer's PAS was an oversight. From now on, the investment performance of an investment officer will be evaluated against a relevant benchmark. This recommendation has been closed.*

E. Benchmarking

58. Pension funds typically institute performance measurement systems that permit analysis of fund performance at the total fund level, which is usually measured against customized benchmarks. Pension funds also measure performance of individual portfolios at the sub-fund level usually against standard industry benchmarks and/or peer-groups. Total fund performance provides a guide to the effectiveness of the fund strategy. Sub-fund level performance provides feedback on the effectiveness of each investment manager, offering the opportunity to make adjustments and improve performance without changing the overall fund strategy.

Overall benchmark of the Fund

59. The General Assembly, in resolution 49/224 of 23 December 1994, requested the Secretary General to apply a benchmark for performance comparison. This was implemented in January 1997. The Investments Committee selected a blended benchmark as mentioned in paragraph 5. Our consultants, while concurring that the benchmark is appropriate, pointed out that benchmarks should be selected based on performance requirements needed to meet liability obligations and not the allocation strategy of the Fund.

Peer group benchmarking

60. IMS receives universe reporting from MRK, which compares the UNJSPF performance against that of other master trusts. This comparison is at the total fund and aggregate asset class levels. At the sub-fund level, there was a lack of available data, which impeded IMS' ability to

make complete performance assessments. The consultants stated that sub-fund levels of comparison could be of more use to the Fund, for example, comparing IMS' US equities to US large capitalisation universe, or the IMS Emerging Markets portfolio to the emerging markets universe.

61. As part of the peer benchmarking exercise, OIOS obtained pension fund performance data for the World Bank and IMF. The table below compares 1, 3 and 5-year returns (as at 31 December each year) and shows that UNJSPF has outperformed the other two funds over the 1-year period, while underperforming the IMF fund over 5 years.

Entity	Percentage return over period		
	1 year	3 years	5 years
UNJSPF	(2.9)	(5.8)	3.5
IMF	(4.6)	(6.2)	4.5
World Bank	(7.6)	n/a	n/a

Recommendation 16

The Investment Management Service should request the Master Record Keeper to customize their peer-group reports and use these reports to make sub-fund level comparisons as considered appropriate (AS2003/72/1/016).

62. *IMS accepted recommendation 16, stating that the Madison Consulting Group acknowledged that the UNJSPF is unique in its geographical scope, liability profile and institutional set-up. The approach to investments by the UNJSPF is more of a team approach and global view of investments rather than individually assigned and independently managed portfolios. With respect to input of the Investments Committee, the investment advisors, as well as prior approval requirements by the Director of IMS and the RSG, all affect investment results, which Deloitte & Touche agreed would be difficult to disaggregate. As Madison Group stated in the exit interview, there is no relevant peer group for which a meaningful comparison can be done that would result in value added because comparison with peers assumes comparability of procedures, responsibilities, discretion and autonomy while IMS is unique. These issues will be included in the review of IMS by a consultant later this year. This recommendation will be closed after the completion of consultant's review.*

The need for emerging market benchmarks

63. At the equity sub fund level, country-based portfolios have been assigned specific country components of the MSCIWI as benchmarks. For example, the United Kingdom equity portfolio has been assigned the MSCI United Kingdom index. However, not all emerging markets are included in the MSCIWI, and these country-based portfolios do not have a benchmark assigned in the Fund's performance reports (e.g. Korea, Malaysia, South Africa). As a result, IMS' performance reporting on these markets is not complete.

Recommendation 17

The Investment Management Service should ensure that each country-based portfolio has an appropriate benchmark. Where a country benchmark is not available, the Investment Management Service should apply the regional emerging market component of the index (e.g. MSCI Emerging Market Fund Asia) as a proxy (AS2003/72/1/017).

64. *IMS accepted recommendation 17, stating that benchmarks for emerging markets are not included in the quarterly Performance and Attribution Report because emerging markets are not included in the MSCI World index which represents the 60 per cent equity component of the Fund's 60/40 benchmark. However, emerging markets benchmarks are separately provided in the State Street Returns Analysis report. The possibility of including emerging markets benchmark returns in the quarterly Performance and Attribution Report will be discussed with State Street, but emerging market benchmarks are currently used for internal performance comparisons at IMS. This recommendation will be closed pending the outcome of discussions with State Street.*

Benefits of introducing asset liability management in performance reporting

65. The current investment performance reporting includes the Fund's actual return, and a comparison against the overall Fund benchmark. To place the results in context of the Fund's obligations, OIOS is of the opinion that IMS should include the rates of return on which the actuarial valuation of the Fund has been made in reports to the Pension Board and Standing Committee. This would serve to highlight whether the Fund is on track to meet its liabilities or whether corrective action in investment policy is required in order to generate the required returns.

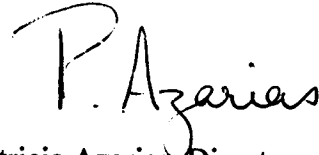
Recommendation 18

The Investment Management Service should include actuarial assumptions on rates of return in its performance reporting to the Pension Board and Standing Committee (AS2003/72/1/018).

66. *IMS has accepted and implemented recommendation 18, noting that IMS currently includes the actuarially based required rate of return in its periodic performance reports to the Pension Board and the Standing Committee as well as to the Investments Committee. It should be noted that the Committee of Actuaries, which meets regularly, prepares a more comprehensive report on the subject that is submitted to the Board and the Standing Committee. We probably can revisit this recommendation once we have the asset liability study done. This recommendation has been closed.*

V. ACKNOWLEDGEMENT

67. We wish to express our appreciation for the assistance and cooperation extended to the audit team by the Investment Management Service.

A handwritten signature in cursive script that reads "P. Azarias". The signature is written in black ink and is positioned above the printed name.

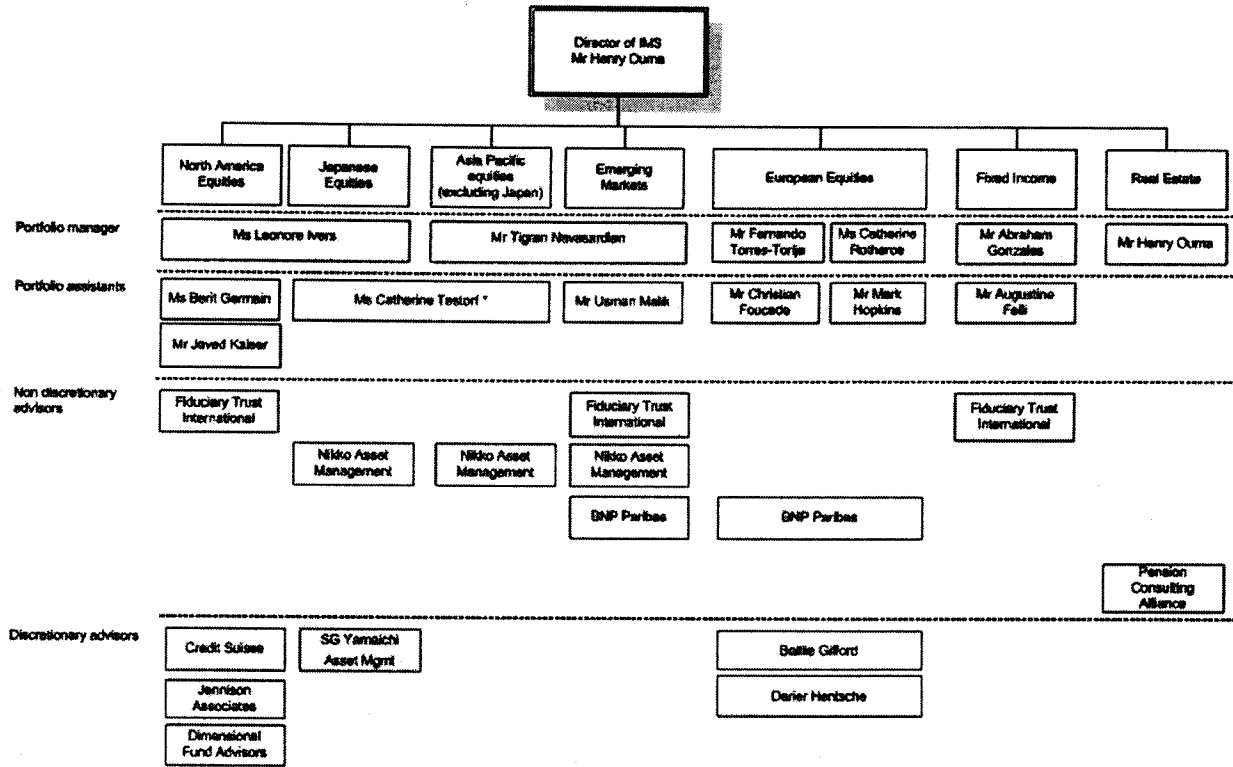
Patricia Azarias, Director
Internal Audit Division I, OIOS

Investment Management Service and investment advisors

This diagram shows the structure of the Investment Management Service including

- the portfolio managers and assistants,
- discretionary and non-discretionary advisors

Investment Management Service



* = on maternity leave