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Parliament of New South Wales

Public Accounts Committee of the Forty-eighth Parliament

Fourteenth Report

Inquiry pursuant to section 57 (1) of the Public Finance and Audit Act, 1983, concerning the investment practices of New South Wales statutory authorities

(Transcripts of Evidence tabled together with this Report)

June, 1985

Committee Members

The members of the Public Accounts Committee as at June, 1985 were:

Mr John Aquilina, M.P., Chairman*

John Aquilina was elected Member for Blacktown in September, 1981. A high school teacher by profession, John Aquilina was a Commissioner of the Ethnic Affairs Commission for two years and the Mayor of Blacktown for four years before entering Parliament.

Mr John Murray, M.P., Vice-Chairman

John Murray, formerly a teacher, was elected Member for Drummoyne in April, 1982. An Alderman on Drummoyne Council for three terms, John Murray was Mayor of the Council for five years, the longest time ever served continuously by a Mayor of Drummoyne. Mr Murray is also a member of the Prostitution Committee and the House Committee.

Mr Colin Fisher, M.P.

Colin Fisher was elected Member for Upper Hunter in February, 1970. Former Minister for Local Government (1975) and Minister for Lands and Forests (1976), in opposition Colin Fisher has served as National Party Spokesman on Local Government, on Planning and Environment, and on Energy.

Mr Phillip Smiles, M.P.

Phillip Smiles was elected Member for Mosman in March, 1984. A management and marketing consultant since 1974, Phillip Smiles has been involved with entrepreneurial business activities since his teens. Since entering Parliament he has been actively interested in the areas of emergency services, welfare and financial analysis.

Dr Andrew Refshauge, M.P.**

Andrew Refshauge was elected as Member for Marrickville in October, 1983. He previously practised as a Medical Practitioner with the Aboriginal Medical Service and was a past President of the Doctors' Reform Society. He is currently a fellow of the Senate of the University of Sydney.

* Mr Bob Carr was Chairman of the Committee until he was appointed Minister for Planning and Environment on 12 December, 1984.

** Dr Refshauge was appointed to the Committee on 20 February, 1985.

Committee Members. From left: Phillip Smiles, John Murray (Vice-Chairman), Andrew Refshauge, John Aquilina (Chairman), Colin Fisher

Secretariat

Frank Sartor, B.E., B.Comm.(Hons.), Director

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Consultants and Advisors for the Investment Inquiry

Bain & Co.

E. S. Knight & Co.

Emeritus Professor A. H. Pollard, M.Sc., M.Sc.(Econ.), Ph.D., D.Sc., F.I.A.A., F.I.A., F.A.S.S.A.

Michael Cole, Director B.T. Australia Ltd

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Section 1

Chairman's Foreword

Statutory Authorities in New South Wales have investments worth at least $11 billion - roughly $2,000 for every man, woman and child in the State. The issue addressed in this report is the extent to which these funds are being invested so as to maximise returns to the State.

After inquiring into the management of the investments, the Public Accounts Committee is convinced that the income earned by many Authorities, particularly the smaller ones, could be significantly increased.

This inquiry was initiated as a result of the Committee's examination of the Auditor-General's 1982-83 Report. Firstly, the Committee was concerned to establish whether investment practices were adequate both in the short and long term. Secondly, it was important to establish whether any increase in the level of accumulated funds, as a result of greater funding of superannuation liabilities by Authorities, would be adequately invested.

In the latter respect, as a result of a previous inquiry into the Superannuation Liabilities of Statutory Authorities (August 1984), the Committee had recommended that the level of funding of superannuation liabilities by Statutory Authorities be increased. The higher level of funding was expected to lead to Authorities accumulating substantial amounts of money. Such accumulated funds must be put to good use and, in the opinion of the Committee, should be invested at the market rate. This aspect was considered to be important for Government before any decision could be made on whether superannuation liabilities should be fully funded, at least in respect of future services of employees.

In order to address these issues, and after examination of the Auditor-General's report, the Committee decided to undertake an inquiry according to the following terms of reference:

(a) whether surplus funds held by Statutory Authorities are being utilised efficiently within the capital market to provide a level of return to the State which is considered satisfactory in light of

returns on investment achieved in the private sector by comparable entities having regard to the extant legislative and other restrictions placed on the public sector;

(b) the amount of any differentials between returns achieved by Authorities and those obtained in the private sector;

(c) the advisability of implementing alternative financial arrangements which would improve the investment performance of Statutory Authorities.

To assist the Committee with the inquiry Bain and Co. were commissioned as consultants. Bain and Co. in turn, commissioned E. S. Knight & Co. to carry out two surveys of investment practice and performance.

The first of the E. S. Knight & Co. reports dealt with a sample of six Authorities selected as representing a cross-section of the major service Authorities, i.e. Authorities that are not primarily fund managers.

The six Authorities were the Department of Main Roads, Elcom, Maritime Services Board, Metropolitan Water Sewerage and Drainage Board, Public Trust Office and the Totalizator Agency Board of New South Wales. This sample of six was extracted from a sample of 12 to which the Committee had originally written letters requesting information on investment practices.

In the second review, E. S. Knight & Co. surveyed the major public sector fund managers, excluding the State Bank. Past investment asset distributions as well as past practices in monitoring performance were analysed and compared to comparable private sector fund managers who subscribe to the IMS Survey.

The Committee then took evidence from the following parties:

- Mr Michael Cole, Director of B.T. appearing in a private capacity
- Mr Michael O'Riordan, Investment Manager of the State Superannuation Board, appearing in a private capacity
- Australian Bank

- Department of Main Roads
- Electricity Commission of New South Wales
- Metropolitan Water Sewerage and Drainage Board
- Maritime Services Board
- State Bank
- Government Insurance Office
- Public Authorities Superannuation Board
- State Superannuation Board
- Dominguez, Barry, Samuel and Montagu Limited, Stockbrokers
- Treasury and the N.S.W. Treasury Corporation

Of the $11 billion of funds held by the Statutory Authorities, $1.3 billion is held by the State Bank and $3.5 billion is held by the public sector "investment" authorities such as GIO, and the Superannuation Boards.

The investment practices of New South Wales Statutory Authorities are very diverse, depending upon the nature of the Authority and the nature of funds held by it.

The managers of public sector funds, namely the Government Insurance Office, the State Superannuation Board, the Public Authorities Superannuation Board and the State Bank hold the vast majority of the funds. For these organisations, earning income from investments is a key activity.

It was found that investment returns of Statutory Authorities sampled during the inquiry were generally consistent with returns achieved by private companies studied by IMS Investment Services - a private sector investment survey organisation.

The Committee is delighted to report that in the last two or three years, at least, the State has not lost significant revenue as a result of poor investment performance.

It was noted that the investment portfolios of most authorities were conducive to high returns by virtue of the fact that the types of government securities held by them over the last two or three years happened to be the most appropriate.

Further, a closer examination of the strategies, policies and practices of the bodies surveyed revealed that there are substantial deficiencies which, if not corrected, in the long term would result in poor investment returns.

The Committee has been advised that the returns on the investments of short term funds could be increased by 0.5 per cent. For smaller authorities, not surveyed, the Committee believes greater improvements in the performance of investments are possible.

It was not possible to determine how much the investment returns of the 'investment' authorities could have been improved. However, from a study of the investment strategies used, the Committee did find that, on the basis of probability, the longer term performance of the 'investment' authorities could have been better.

To some extent these strategies were a result of legislative restrictions.

In the latter respect the Committee congratulates the Treasurer, the Honourable Mr Ken Booth, and the Minister for Industrial Relations, Mr Pat Hills for the broadening of investment powers that has occurred in respect of the State Superannuation Board and the new Public Authorities Superannuation Board under new Acts. The broadening of investment powers proposed in these new Acts is consistent with the view of the Public Accounts Committee.

In the course of the inquiry the Committee was hampered by the lack of information on investments and investment performance. Up until the very recent past almost all statutory authorities failed to adequately measure and report regularly on their investment performance.

The Committee considers this to be completely unacceptable, especially for the authorities that handle billions of dollars.

Bodies like the State Superannuation Board have since taken steps to subscribe to investment surveys. However, it has not escaped the Committee that such steps have only been taken since the Committee

started to inquire into investment practices, firstly in relation to its inquiry into the Superannuation Liabilities of Statutory Authorities and secondly in relation to the current inquiry.

The Committee has recommended a number of measures to the Government for improving investment performance including:

- that the investment powers of Statutory Authorities be broadened
- a greater use of outside investment expertise
- a requirement that all bodies regularly measure, and annually report, investment performance
- the establishment of a Committee to advise the Treasurer on issues relating to investment performance of Statutory Authorities.

The measures provide two key incentives for better investment performance - competition and greater disclosure. It is only with the heat of competition and the light of public scrutiny that those Authorities that have sat back complacently for years will be forced to ensure that their performances are at least average when compared with the private sector.

The Public Accounts Committee believes another measure worthy of consideration is the setting up of a State Investment Authority.

Such an Authority would bid for investment of both short term and long term funds including the employer portion of superannuation funds. The Committee envisages that the only mandatory funds paid to the Authority would be the employee superannuation contributions which are currently paid to the various superannuation boards. Such an Authority would replace the investment arm of the existing Superannuation Boards.

The idea of having the investment authority handle both short and long term funds was appealing for a number of reasons.

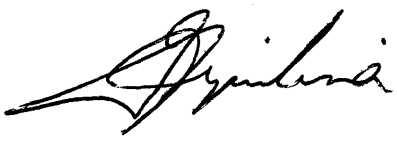
Firstly, the Committee doubted whether there were enough funds available to yield sufficient economies of scale to justify setting up an Authority simply for short term investments.

Secondly, it doubted whether adequate investment expertise could be attracted to the investment bodies already operating in the public sector. A State Investment Authority would clearly have the status to attract such expertise.

Thirdly, such a body would be of a manageable size and would have the capacity to ensure that the overall investment returns from short and long term funds would be at least average by market standards.

An essential feature of the proposed body is that its use by authorities would not be mandatory. This is necessary to ensure that the organisation be forced to perform in order to attract funds.

Finally, I would like to thank the Committee's consultants, Bain and & Co., E. S. Knight & Co. and Professor Pollard for their contribution to this report. I would also like to thank Mr Michael Cole of B. T. Australia for his advice on issues covered in the inquiry. Last but not least I would like to thank the staff of the Public Accounts Committee, the Director Frank Sartor, Bob Pritchard and Paul Grant (on secondment from the Auditor-General's Office) and the Committee's typists Christina Assargiotis and Sandra Vine for their excellent contributions.



John J. Aquilina, M.P.
3 June, 1985.

Section 2

Summary and Recommendations

2.1. The Committee believes there is scope for significantly increasing net revenues from investment portfolios of New South Wales Authorities while maintaining prudential risk parameters.

2.2. The absolute quantum of funds under management by New South Wales Public Authorities was approximately $11,000,000,000 at the end of June, 1984. Of this amount approximately 12% or $1,300,000,000 was represented by short term investments of less than twelve (12) months to maturity. (Paragraphs 3.1.1 and 3.1.3).

2.3. The importance of obtaining the highest level of earnings is indicated by the fact that an extra 0.5% p.a. would result in extra investment earnings of about $50 million per annum (paragraph 3.1.5).

2.4. In assessing the investment operations of the New South Wales Public Authorities the Committee considered separately the operations and performance of:

a) "Service" Authorities whose primary funtion is unrelated to investment e.g. M.W.S.& D. Board, Elcom, D.M.R. etc. (Section 4), and

b) "Investment" Authorities, representing Authorities for whom investment represents a primary function e.g. State Superannuation Board, GIO. (Section 5).

2.5. A majority of the Service Authorities undertake the investment of their own surplus funds in accordance with investment powers defined by legislation. A number of Service Authorities are required to hold their surplus funds with the New South Wales Treasury which invests the funds on their behalf. (Paragraph 3.1.4).

2.6. A majority of the funds held by the Service Authorities were found to be either of a short term working capital nature or representing provisions for future loan repayments. The appropriate avenue for the investment of these funds is primarily deposits and fixed interest securities in preference to the equity markets. (Section 4).

2.7. The Investment Authorities undertake the investment of their funds in accordance with investment powers defined by legislation.

2.8. The funds held by the Investment Authorities are mainly of a longer term nature (i.e. superannuation and insurance funds etc.) accumulated to meet future commitments, a major proportion of which have wage-related growth factors. It is appropriate that a high proportion of these funds be invested in equity markets (mainly shares and property). (Section 5).

2.9. The Committee has been unable to rigorously assess past investment performance of the Authorities because of the unavailability of appropriate data. Nevertheless it was possible to make judgments on such information as was available.

2.10. As assessment of the investment performance of six selected Service Authorities over the three year period to 30 June, 1984, indicates that the relative performance of four of these Authorities was below what may have been reasonably expected given the range of investment assets to which the Authorities were restricted. (Section 4).

2.11. The Service Authorities would be able to improve their investment performance whilst maintaining acceptable risk profiles if they were able to invest in a wider range of debt investments and adopt fundamental levels of active management. (paragraph 4.5).

2.12. Whilst it is impossible to quantify the extent to which investment returns would be increased, the Committee believes that at least an additional 0.5% per annum could reasonably be expected from the investment of short term funds. (paragraph 4.4 and 4.5).

2.13. The Committee considers there should be regular monitoring and reporting of investment performance and recommends that the larger service Authorities should be required to participate in an appropriate investment survey. (paragraph 4.8).

2.14. An assessment of the past investment performance of six selected Investment Authorities was attempted. Only limited conclusions could be drawn as a rigorous assessment of the past investment performance of the four major funds (the State Superannuation Board, the former Local Government Superannuation Board, the former New South Wales Retirement Board and the Government Insurance Office of New South Wales) was not possible because the necessary historical cash flow and asset valuation data is not available.

2.15. The information available suggests that the returns obtained by the State Superannuation Board for shares and property over the five years to 30 June, 1984 were consistent with the IMS average for large funds. Its return on all assets for the one year to 30 June, 1984 was well above the IMS "all funds" average (paragraph 5.3.1).

2.16. The returns obtained by the Local Government Superannuation Board in the two years to 30 June, 1984 were very close to the IMS "all funds" average. For shares, the Board's performance over the 5 years to 30 June, 1984 appears to rank with the top private sector funds; the other sectors were marginally below IMS results (paragraph 5.3.2).

2.17. Figures were not available to enable the Committee to report on the New South Wales Retirement Board. (paragraph 5.3.3).

2.18. The results of the Government Insurance Office Third Party Fund over the last five years were marginally below the average returns obtained by IMS funds on Government fixed interest securities. This is to be expected as 35% of assets were in their "social" portfolio. (paragraph 5.3.6).

2.19. The relative investment performance of the two smaller Investment Authorities reviewed over the three year period to 30 June, 1984 was not inconsistent with what may have been reasonably expected given the range of investments to which these Authorities were restricted. (paragraphs 5.3.4 and 5.3.5).

2.20. An assessment of the past significance of equity/debt investment ratios (i.e. level of equity investment in relation to the level of debt investment) has supported the view that, in the long term, investment performance of a fund will be increased by a higher equity/debt ratio. In contrast to professionally managed private sector superannuation funds, the Investment Authorities have in the past adopted relatively low equity/debt ratios regardless of their high levels of salary related liabilities requiring a higher proportion of equity investment. It is therefore reasonable to presume that the level of investment performance over longer periods was likely to have been below the average achieved by private sector superannuation funds. (Section 5).

2.21. It is considered that the Investment Managers would be able to improve their investment performance in the long term if they were able to increase their investment in equity assets. (Section 5).

2.22. The past investment management practices of the Public Authorities exhibit a number of fundamental deficiencies which are primarily attributable to the restricted investment environment characterised by:

a) restrictions imposed on the investment powers of Authorities,

b) lack of investment expertise due in some instances to non-competitive remuneration for investment personnel due to Public Service Board staffing parameters,

c) lack of delegation to staff and lack of commercial outlook,

d) various social and political pressures for investment (paragraphs 5.5 to 5.8).

2.23. The legislative restrictions have effectively limited the ability of management to build and actively manage a properly diversified portfolio of assets and thus to maximise investment returns. The attempt to eliminate risk by the imposition of prudential prerequisites on individual investments actually increases the risk of lower investment returns. (Sections 4 and 5).

2.24. Various social and political objectives have caused Authorities to undertake in certain sectors a level of investment which could not be justified on purely commercial grounds resulting in sacrifices of management flexibility and ultimately investment return.

2.25. The extent to which service Authorities monitor and report their investment performance is extremely limited. This applies even to Authorities responsible for the investment of substantial funds. The levels of performance monitoring undertaken by a number of the service Authorities has been severely inhibited by a lack of computerised information systems with the financial records of a number of Authorities having been maintained manually. (Section 4.8.)

2.26. If the investment authorities had subscribed for some years to one of the investment performance surveys or if they had taken steps to monitor their own performance as a guide to management, any deficiencies in performance would have been detected some time ago and traced back to the ultimate cause e.g. investment policy, legislative restrictions, lack of investment expertise. Some idea of the cost to the fund of these problems might have been obtained and used to effect changes. In fact, in no case was this effective monitoring carried out, despite in many cases very large funds being involved. It is not possible to reconstruct past cash flows and past market values of assets, and accordingly the Committee was not able to get a precise picture of the long term performance of funds; yet it is in most cases the long term performance which is of importance.

2.27. The Committee is most critical of the larger public sector investment authorities for not adequately measuring and reporting their investment performance.

2.28. The present legislative restrictions imposed on the investment powers of all Authorities should be replaced with investment charters containing investment powers which are determined in accordance with the individual investment requirements and objectives of each Authority. The Committee notes that the investment powers of some Authorities have recently been considerably widened.

2.29. The drafting and review of the Authorities' investment charters and approved lists should be undertaken by the proposed Treasurer's Investment Advisory Committee recommended in Paragraph 2.42.

2.30. The Committee does not favour the proposal that key investment personnel in the Public Sector be excluded from the parameters of the Public Service Board. (paragraph 6.6).

2.31. It is essential for investment performance measurement purposes that records be kept of the market values of the investments of all Authorities. The Investment Authorities and larger Service Authorities (i.e. holding in excess of $100 million) must adopt a suitable, consistent system for investment performance measurement which allows:

- quarterly internal management reviews, and

- annual public reporting of investment performance incorporating duly qualified comparisons with the private sector at both an investment sector and total fund level.

The authorities to be included and the form of measurement and reporting should be referred to the proposed Treasurer's Advisory Committee for recommendation. (Paragraphs 4.8, 5.9 and 6.4.)

2.32. The Committee recommends that regulations be gazetted under the Annual Reports Act requiring all authorities to report on their investment performance, measured on an appropriate market valuation basis, in their annual reports including appropriate comparisons drawn from both the public and private sector. (Paragraph 6.4.)

2.33. The public investment sector within New South Wales has been influenced to make investments with social or political objectives. These include private loans and credit foncier loans to smaller authorities and Councils, loans to hospitals, housing loans, a high support for Government and semi-Government borrowings, and the use of loan repayment reserves to finance capital works. This has resulted in lower rates of return and Authorities holding high levels of non marketable securities. The Committee does not comment on the merits or demerits of such a policy but draws attention to the effect which this has on the ability of Authorities to build and manage an appropriate portfolio and hence on the returns achieved on their funds. (paragraphs 4.6 and 5.6).

2.34. The Committee is convinced that Service Authorities need to have access to expert investment advice. (paragraph 6.1).

2.35. It is not desirable for even the larger Service Authorities to build up complete investment departments. The Committee recommends that Authorties be given power to use, and be encouraged to use, private sector consultants and/or private sector fund managers. It stresses the importance of competition in fund management in achieving high performance (paragraph 6.5).

2.36. The Committee considered the merits of setting up a Central Investment Authority to compete with private sector managers in the management of the Authorities' short time funds (paragraph 6.7).

2.37. The New South Wales Treasury Corporation has the necessary experience, personnel, computer and other facilities and should be able to take over the management of short-term funds with a minimum of delay. It would need to be an entity quite distinct from Treasury. The Committee was concerned about possible conflicts of interest with other activities of the Corporation, and could see difficulties in recruiting the necessary dealer oriented staff. (paragraph 6.7.1).

2.38. The creation of a new body purely for short-term investment was considered. An analysis of costs suggested that it may not be able to compete effectively with private sector managers because the overheads of these managers are already covered by their existing clients. (paragraph 6.7.2).

2.39. The establishment of an additional investment authority was considered for the investment of Authorities' long term funds which are likely to increase with the funding of superannuation liabilities. Such an organisation would need a full range of expertise, would take some time to establish and would compete with existing public sector managers for specialist staff in short supply. The Committee doubted whether it would be seen by Authorities as an acceptable alternative to private sector managers. The Committee does not recommend the proposal. (paragraph 6.7.3).

2.40. Another proposal considered was to give Authorities the power to place long term funds with any of the Investment Authorities. This proposal was not supported because of the conflicts of interest which could arise in allocating attractive investment propositions, and because of the criticisms, however unwarranted, which could arise if investments held by an outside Authority, but not by the Investment Authority itself, failed. (paragraph 6.7.3).

2.41. In view of the importance to performance of competition and the tendency for compulsion to generate inefficiency, the Committee recommends that legislation should be altered to permit employers to have a choice of private sector or public sector managers for managing their long term funds. The Committee does not recommend such a change in the case of employees' contributions. (Paragraph 6.7.3).

2.42. It is recommended that a committee be established to provide investment advice on a continuing basis to the Treasurer of New South Wales. This Committee should comprise representatives from Treasury and other areas of the public sector and persons from the private sector selected on the basis of a high level of expertise in the funds management area in Australia. Its functions would include:

(a) to review the investment powers of every authority and recommend appropriate investment charters;

(b) to advise on the use of external consultants by individual authorities;

(c) to advise on performance monitoring and reporting;

(d) to give guidance on the steps involved in setting up a State Investment Authority (paragraphs 6.3 and 6.7.)

2.43. The Committee recommends that a State Investment Authority be formed by separating the investment operations of the State Superannuation Board and the Public Authorities Superannuation Board from their other activities and combining them with the short term funds investment authority discussed in 2.33, to produce an investment authority which provides the full range of investment services.

2.44. Initially all funds currently held by the the State Superannuation Board and the Public Authorities Superannuation Board would become the responsibility of the State Investment Authority. On an ongoing basis the Authority would provide investment advice to public sector authorities and would be responsible for the investment of

(a) contributions of employees to the State Superannuation Fund and the Public Authorities Superannuation Fund,
(b) any funds which public sector authorities may choose to place with it for investment. These would include:
    (i) employers' superannuation contributions,
    (ii) provisions for deferred superannuation liability,
    (iii) long service leave, loan repayment and other funds for long-term investment
    (iv) cash and short-term funds

Funds under (a) would automatically be placed with the Authority. For funds under (b) it would compete with the private sector. All authorities, including the Superannuation Authorities in respect of

employee contributions, would be its clients. It would act like any private sector fund manager, and would compete with them for some of the public sector business.

2.45. The Committee favours the establishment of the State Investment Authority because

(a) The present problems relating to investment expertise should be ameliorated. The Chairman, Board and staff would all be selected for their investment expertise. As it would cover the full range of investment activity, staff of high calibre at both junior and senior levels should be attracted to it.

(b) the duplication of effort by the major investment Authorities, and the competition between them for investment staff would be eliminated. A more efficient use of public sector investment resources would thus be achieved.

(c) Effective delegation of authority and the development of the necessary commercial environment would be possible.

(d) it would be a specialist institution with standing in the market place. Because of its standing it would attract major investment opportunities.

(e) a facility for the investment of short-term funds, while not recommended as a separate entity for reasons given earlier, would be a useful section of an institution providing the full range of investment services and would fulfill an existing need.

(f) it would introduce competition with the private sector for employers' funds which is feasible and essential where maximum investment performance is to be achieved.

2.46. Statutory Authorities would then have the choice of using one or more managers and the choice of the public or private sector or both. The advantages of split funding (i.e. dividing the responsibility for investing funds between two or more managers) could be obtained (paragraph 6.8).

2.47. The Committee is of the opinion that Statutory Authorities, given the necessary investment powers, and with the choice of private sector managers and/or the proposed State Investment Authority, should be able responsibly to invest their large funds most effectively.

Section 3

The Magnitude of Public Sector Investment in New South Wales and the Measurement of Relative Investment Performance

3.1. Public Sector Investment

The various organisations which make up the public sector of New South Wales are responsible for the efficient management of a substantial level of investment funds. The Public Authorities in New South Wales together have approximately $11,000,000,000 (eleven billion dollars) placed in the investment markets.

Excluding the State Bank there are thirty seven (37) Authorities each with investment funds in excess of $10,000,000 (ten million dollars). Together these Authorities hold in excess of $9.7 billion[1] (see Appendix 1 for details).

The three (3) largest investors (each holding in excess of $1.0 billion of investment funds) are Authorities for whom investment of funds is a key function. These are:

- Government Insurance Office of New South Wales
- New South Wales State Superannuation Board
- Public Authorities Superannuation Board (representing the merged operations of the Local Government Superannuation Board and the New South Wales Retirement Board).

Together these three managers hold about $6.6 billion or 68% of the funds held by the above 37 Authorities.

The balance of $3.1 billion is shared between the thirty-four (34) remaining Authorities, most of which are 'service' Authorities not primarily concerned with investment. The largest holdings in this group are those of the Metropolitan Water Sewerage and Drainage Board and the Electricity Commission of New South Wales.

[1] These figures include an amount of investment by a number of authorities in stock of their own organisations which represents either internal loans or the repayment of external borrowings and thus is not considered as true investment for the purposes of this Report.

3.2. Investment funds held by the Public Authorities may be placed in three broad categories, viz:

a) Short term working capital,
b) Medium - long term loan repayment reserves and special investments, and
c) Medium - long term superannuation, employee benefit and insurance funds.

Short term working capital mainly represents temporary cash surpluses from operations. Loan repayment reserves are sinking funds (required by statute) accumulated for the future repayment of borrowings. Large amounts of these funds are invested by Authorities in their own non-marketable paper. Most of the medium-long term funds are held by the three large investors mentioned earlier.

Of the total investment funds held by Public Authorities at 30 June, 1984 approximately 12% or 1.3 billion dollars was invested short term being represented by assets with under 12 months to maturity. This should be considered as a broad estimate only, as variations in the accounting practices of the Authorities do not allow an accurate figure to be determined.

A majority of Public Authorities undertake the investment of their own funds; however a number of the larger service Authorities are required to lodge their funds with the New South Wales Treasury which holds the funds on their behalf.

The investment powers of those Authorities undertaking their own investment are defined by their respective Acts, by the Public Authorities (Financial Accommodation) Act, 1981, or by administrative convention. This legislation typically limits the smaller Authorities to investment in Government securities and Treasury and bank deposits.In the case of superannuation funds investment powers are defined in the State Superannuation Act 1916.

The investment performance of the Public Authorities has become particularly significant due to the substantial level of funds held within the Public sector and the recognition of the magnitude of the consequences of varying levels of efficiency in funds management.

The importance of obtaining the highest possible level of interest earnings is illustrated by the figures in Table 3.1.

TABLE 3.1 Significance of Higher Investment Earnings

Marginal Return on Funds % p.a.	Potential Earnings Forgone on an Investment of $9.7 billion[1] $M
0.25	24.25
0.50	48.50
0.75	72.75
1.00	97.00
1.50	145.50
2.00	194.00

Lower earnings of just 0.25% per annum on an investment of $9.7 billion represents a significant $24,250,000 per annum forgone. Lower earnings of 1.0 to 2.0% per annum would cost $97,000,000 to $194,000,000 per annum.

It is the high potential cost of inefficient fund management which has led in the private sector to the emphasis on measurement of investment performance and accountability. A major survey of superannuation funds has shown a difference of 3½% per annum in the return achieved over five years by the top 10% of managers and the bottom 10%. For investments in government securities the difference was 2½% per annum. Larger variations occur over shorter periods.

The increasing complexity of investment markets has resulted in fund management becoming a highly specialised function requiring expertise of a high order.

In view of the above an examination of past investment performance of Public Authorities was considered warranted.

[1] Total investments of N.S.W. Statutory Authorities excluding the State Bank.

3.2. Measurement of Investment Performance

The importance of investment performance having been established, the appropriate basis for assessing or measuring that performance needs to be determined. Assessment of investment performance can be made on a quantitative and/or qualitative basis.

The quantitative measurement of the investment performance of a manager only becomes meaningful where proper comparisons can be made with the performance of other managers or with appropriate market indices. Such measurement of performance must therefore:

- be made on a common and consistent basis,
- realistically reflect actual investment performance,
- be independent of the timing of cash flows and
- be considered in the light of the investment objectives and management constraints.

The consideration of investment performance in isolation is meaningless since only when performance can be reasonably compared to a standard or the performance of other investors does its measurement become useful.

Investment performance is usually expressed as a rate of investment return being the ratio of investment income to the average value of investment assets expressed as a percentage i.e.

$$\text{Rate of return \%} = \frac{\text{investment income}}{\text{average value of investment assets}}$$

To ensure a common basis of measurement, strict definitions of "investment income" and the "average value of assets" need to be consistently adopted.

The measurement of investment performance must take changes in market values of assets into account in addition to income actually received. To achieve this assets are included at market values, and investment income includes realised and unrealised capital gains and losses in addition to income received.

A fair comparison of investment performance is only obtained if the measurement is independent of the timing of cash flows since these are not within the control of the manager. (A manager who receives funds for investment when assets are inexpensive will have an advantage over a manager who receives the same funds when assets are more expensive.) Time-weighted rates of return (TWRR) represent performance indices which are uninfluenced by the timing of cash flows and are hence ideal for the comparison of manager performance (TWRR do not represent actual rates of return on investment; these are dependent on the timing of cash flows. Hence TWRR do not reflect relative fund performance - see Appendix 2 for further explanation).

TWRR, calculated using market values of assets and including unrealised capital gains and losses as income, represent the most realistic measurement of investment management performance for comparative purposes.

A broad qualitative assessment of investment performance may be made by studying the investment policies and strategies adopted by individual managers, taking into account their investment objectives and management constraints.

3.3. Comparison of Investment Performance

Valid conclusions as to relative investment performance of managers may only be drawn by making comparisons between fund managers who have **common investment objectives** and are subject to the same **management constraints.**

Investment policy depends on the reason why the funds are held. Regular and substantially risk-free high income sought by some funds required different investment policies from funds which look for

higher levels of return of a capital nature. Such factors may limit the freedom with which management may pursue maximum returns and need to be taken into account where comparisons are made.

Other factors which may hinder performance and which need to be taken into consideration in comparisons include:

- limited investment powers
- the volatility of net cash flow
- size of the fund

3.4. Monitoring of Performance

It is important that the investment performance of a fund is monitored on a continuous basis from the point of view of both the management and the contributors.

Periodic comparisons of performance with others in the market helps management gauge the success of their current strategies and may alert them to some deficiencies in their portfolio which may otherwise go undetected.

Fund managers are ultimately accountable for their investment performance to the Fund's contributors just as trustees are to their beneficiaries. This accountability can only be achieved if a continuous monitoring of performance is carried out.

These reasons for monitoring performance, which have long been accepted in the private sector, apply equally to the public sector. Comparisons may be made between the performance of public sector and private sector funds, but the factors mentioned earlier need to be taken into account.

3.5. Investment Performance Surveys

Recognition by the private sector of the importance of investment performance has led to the establishment of a number of investment performance surveys. These surveys measure the investment

performance of each participating fund and enable that performance to be compared with the investment performance achieved by other fund managers.

One of these surveys, conducted by Investment Measurement Services Pty Limited is known as the **IMS Survey.** This survey, which is restricted to superannuation funds, calculates approximate TWRR for each fund participating in the survey and for all funds combined. Of the two hundred and sixty two (262) superannuation funds which participated in the June 1984 IMS Survey, there were fifty two (52) where the manager did not have full discretion as to category of investments. TWRR are calculated for the total funds, for separate investment sectors (shares, Government fixed interest assets, property and other assets), for funds of different size and separately for fund where the manager has full discretion as to investments.

The actual calculation of the approximate TWRR by I.M.S. involves the calculation of quarterly rates of return which are compounded (given equal weight) to obtain an annual rate of return. The quarterly rates of return are calculated on the basis of quarterly or monthly cash flow data and quarterly market values of assets. (See Appendix 3 for a summary of the IMS System).

The method of approximating TWRR adopted by IMS is adopted by a majority of investment measurement services.

In this Report figures from the IMS Survey have been used by the Committee's consultants and therefore it is the IMS System which has been outlined. Campbell and Cook produce a similar survey which is also published regularly. Other surveys which are either limited in extent or not generally published are those of Noble Loundes, Frank Russell International in conjunction with Palmer Gould and Evans, and Primer produced by the Government Insurance Office for public sector funds. The results produced by any of these surveys would not have differed significantly from the corresponding results from the IMS Survey.

Section 4

Investment Performance of Service Authorities

(Note: Subsections 4.2 to 4.3 inclusive deal in some detail with the performance of individual Authorities. Readers interested only in an overview should proceed directly from subsection 4.1 to subsection 4.4.)

4.1. A survey of the investment performance of selected New South Wales public authorities was conducted for the Committee by E.S. Knight & Co. This involved the calculation of rates of investment return achieved on their investment portfolios over the three year period to 30 June 1984. Comparisons were made with the rates achieved on professionally managed portfolios in the private sector, although it is recognised that these may have different objectives and may not be subject to the same legislative restrictions.

In addition, Bain & Company carried out a brief examination of the investment operations of the sample Authorities.

The six Authorities selected were major 'service' authorities whose primary function is service oriented. They are listed in Table 4.1 with their assets brought in at market value.

The investment rates of return of the selected Authorities over a three-year period are compared with

a) the average rates of return achieved by professionally managed private sector superannuation funds participating in the IMS Survey of investment performance,

b) the levels of short term interest rates prevailing in the domestic money market, and

c) the results of a model portfolio based on a simple investment strategy taking advantage of known annual interest rate cycles.

These comparisons appear in Table 4.2.

TABLE 4.1 Investment Funds Held by Service Authorities[2]

Authority	Funds Held (Market Value in $ Millions)			
	30/6/81	30/6/82	30/6/83	30/6/84
Department of Main Roads[3]	25.6	24.8	34.8	33.0
- Reserve for Loan Repayments	(14.7)	(22.7)	(27.5)	(43.3)
Electricity Commission of New South Wales[2]	74.2	53.3	95.7	201.4
- Reserve for Loan Repayments	(25.6)	(49.5)	(85.2)	(87.5)
Maritime Services Board	53.1	28.2	51.1	82.5
- Operations Portfolio				
Metropolitan Water Sewerage and Drainage Board[2,4]	N/A	201.1	176.2	201.1
		(297.6)	(428.9)	(572.3)
Public Trust Office	135.1	155.7	194.5	237.3
- Common Fund				
Totalizator Agency Board of New South Wales	38.8	42.6	48.0	57.2
- Operations Portfolio				

[2]The funds held by these Authorities are held for a variety of purposes. These include funds for operations, funds to meet loan repayments and a fund for estates and damages trusts.
[3]Total funds held are shown net of investments in the Authorities' own non transferable stock (shown in brackets) which represent funds not available for investment in the markets.
[4]Assets shown at face value.

TABLE 4.2 Returns of Selected Authorities Compared to Private Sector

	Rates of Return % per annum			
	Year ended 30 June			3 Years ended 30 June 1984
	1982	1983	1984	
Department of Main Roads[5]	8.2	19.6	13.5	13.7
Electricity Commission[4]	3.1	21.2	17.0	13.5
Public Trust Office	13.1	21.3	17.6	17.4
Totalisator Agency Board	17.8	13.5	11.5	14.2
Maritime Services Board	17.7	16.3	12.9	15.6
Metropolitan Water Sewerage and Drainage Board[4,6]	16.0	14.4	11.5	14.0
IMS Investment Sector Averages				
. All Assets	-2.9	26.3	14.2	12.0
. Government fixed interest	8.2	22.7	20.1	16.8
. Other fixed interest	13.5	20.3	14.8	16.2
Short term interest rates				
. Fixed Deposits $50,000	15.0	13.9	11.4	13.4
. Certificates of deposit	16.7	14.4	11.7	14.2
. Bank Bills (average rates)				
90 days	17.0	14.0	11.9	14.3
180 days	17.1	14.3	12.0	14.4
. Bank Bills (model managed portfolio - refer Appendix 5)	16.6	16.0	12.4	15.0

The basis of calculation of the time weighted rates of return for the IMS Funds and the sample authorities are not identical. The IMS figures are derived using quarterly asset valuations and monthly cash flow figures while those for the authorities are based on annual

[5]The rates of return have been calculated on investment assets excluding each Authority's investment in its own non-transferable stock.

[6]The rates of return for the Metropolitan Water Sewerage and Drainage Board were calculated and provided by the Board and while they are not derived on an identical basis to those for the other five Authorities, E. S. Knight & Co. have confirmed that they may reasonably be compared with the average short term interest rates included in the above table.

asset valuations and quarterly (and sometimes monthly) cash flow data. However, the figures do allow the level of analysis considered in this report.

It is not appropriate to use the returns in Table 4.2 as a measure of relative performance between the various authorities as the portfolios do not all have the same investment objectives and the same management constraints. Because of these differences each is considered separately under the following headings:

- nature of the funds,
- management objectives,
- management constraints, and
- adopted investment policy and strategies.

4.2.1. Department of Main Roads, N.S.W. - Reserve for Loan Repayments

(a) Nature and Objectives of the Fund

This portfolio is maintained to meet future loan repayment commitments of the Department. The appropriate investments for this portfolio are debt assets which should initially be considered to match, as closely as possible, the amount and term of the liabilities. Whilst matching should be the initial policy consideration, departure from this principle should be made where alternative strategies would indicate the achievement of increased returns.

(b) Management Constraints

Investments of the fund are restricted under the Public Authorities (Financial Accommodation) Act, 1981 to

- Commonwealth Government, New South Wales local and semi Government fixed interest securities (including those issued by the Authority itself), and
- Since 1984, bank accepted/endorsed bills of exchange, bank and New South Wales Treasury Corporation deposits.

Current government policy requires the Department to use the Reserve to finance its own works programmes. All available funds, including those from maturing investments, are invested short term until required for works. When required, the funds are lent internally from the Reserve and the internal loans are represented by non-transferable securities issued by the Department.

(c) Investment Policy

Whilst the Department retains the power to invest its loan repayment reserves, it had chosen to surrender this power to Treasury and simply lodge its funds with Treasury's Funds Management Section specifying only the date when the funds will be required to be redeemed.

The requirement that these funds be used to finance the Department's works programms has resulted in the percentage of funds being held in the Department's non-transferable securities rising from 36% in 1981 to 57% in 1984. The policy is a restraint on the investment management of the Reserve since the securities are non-marketable. Even the marketable assets are in the main held to maturity indicating an absence of active investment management.

The asset distribution for the Department's portfolio is set out in Table 4.3.

TABLE 4.3 Distribution of DMR assets by market value at 30 June

Assets	1981		1982		1983		1984	
	$M	%	$M	%	$M	%	$M	%
Commonwealth Govt.	7.4	18	6.4	13	4.2	7	2.1	3
Semi-government	9.3	23	8.1	17	9.4	15	24.8	33
Interest Bearing Deposits	8.7	22	-	-	-	-	-	-
Promissory Notes	-	-	10.3	22	21.2	34	-	-
Term Deposits	-	-	-	-	-	-	6.0	8
Cash	.2	1	-	-	-	-	-	-
DMR Non-Transferable	14.7	36	22.7	48	27.5	44	43.3	57
Total	40.3	100	47.5	100	62.3	100	76.2	100

(d) Investment Performance

The calculated investment returns, together with the corresponding IMS Survey sector averages are set out in Table 4.4.

TABLE 4.4 Return on DMR assets versus IMS (% p.a.)

	Year to 30 June			3 Years to
	1982	1983	1984	30 June 1984
Reserve (excluding non-Transferable Stock)	8.2	19.6	13.5	13.7
IMS Government Fixed Interest	8.2	22.7	20.1	16.8

The Reserve's results for 1982 are consistent with comparable IMS sector results.

The poorer results for 1983 and 1984 were partly due to a relative increase in the proportion of short term investment undertaken during this period when interest rates were falling. It would have been appropriate to increase the holding of longer term investments, but such action was limited by Treasury policy, outlined in paragraph 4.2.1.(b).

The investment of the Department's loan repayment reserves over this period was primarily limited to Government backed fixed interest securities by legislation and accordingly, comparison has been made with the average IMS Government fixed interest sector results. Higher yields could have been obtained by investing in bank accepted/endorsed or prime commercial bills of exchange. (See Appendix 6 for historic return differentials.)

4.2.2. The Electricity Commission of New South Wales - Reserve for Loan Repayments

(a) Nature and Objectives

The portfolio is maintained to meet future debt liability commitments and thus substantial debt investment is warranted. This investment should match the loan maturity pattern unless favourable strategic opportunities suggest a departure from this policy.

(b) Management Constraints

As with the Department of Main Roads (See 4.2.1.(b)), investments of the fund are restricted under the Public Authorities (Financial Accommodation) Act, 1981 and by government policy to use these funds to finance its works programme via reinvestment in the Commission's own securities.

(c) Investment Policy

The Commission adopts a policy of active management having due regard for loan repayment maturity patterns, cash requirements and interest rate outlooks. The Commission has stated that it

"....has recently taken initiative to streamline its approval process for the sale of securities to enable it to react flexibly where advantage can be taken of a restructuring of its portfolio".

The asset distribution of the Commission's portfolio is set out in Table 4.5.

As with the Department of Main Roads, Treasury policy regarding the internal use of loan repayment reserves has limited the Commission's ability to match the amount and term of liabilities with equivalent investment and has restricted its ability to adopt an active investment policy.

(d) Investment Performance

The investment returns for the Commission's portfolio and the corresponding IMS Survey sector averages are set out in Table 4.6.

The results for the Commission's portfolio do not compare favourably with appropriate IMS Survey sector results.

Firstly, the results of the Commission's portfolio have been depressed by instances where the Commission's securities have been repurchased from lenders at above market prices in accordance with predetermined loan repayment terms. Such purchases do not represent freely negotiated investment.

The investment long-term of a relatively high proportion of funds in 1982 when interest rates were rising and the reverse in 1984 when interest rates were falling contributed to the poorer result. The former mistiming of investments may have been due to a lack of expertise; the latter was at least in part due to Treasury's policy as to the use of these reserves.

Legislation for most of the period under review denied management the ability of increasing investment returns by investing in higher yielding assets and thus also limited the extent to which the Commission was able to maximise the returns by active investment.

TABLE 4.5 Distribution of Elcom assets by market value at 30 June

Assets	1981		1982		1983		1984	
	$M	%	$M	%	$M	%	$M	%
Commonwealth government stock	32.1	32	26.8	26	29.7	16	90.2	31
Other government	0.5	1	-	-	-	-	2.3	1
Short Term Fixed interest and cash	18.6	19	1.1	1	32.3	18	65.0	22
Electricity Commission of N.S.W. stock -[7]								
marketable	23.0	23	25.5	25	33.7	19	43.9	15
non-marketable	25.5	26	49.5	48	85.2	47	87.5	30
Total	99.7	100	102.8	100	180.9	100	288.9	100

TABLE 4.6 Return on Elcom assets versus IMS (% p.a.)

	Year to 30 June			3 Years to 30 June 1984
	1982	1983	1984	
Fund (excluding Non-Transferable stock)	3.1	21.2	17.0	13.5
IMS Government Fixed Interest	8.2	22.7	20.1	16.8

[7] The marketable stock of the Commission represents securities originally issued to lenders to the Commission which have been repurchased in accordance with loan agreements to effect periodic loan repayments. These purchases do not represent freely negotiated "investment" in the open market and instead reflect the fulfilment of borrowing requirements. The non-marketable stock represents funds lent internally to finance capital works and which are not available for investment on the open market or to meet the future liability commitments of the Commission.

4.2.3. Metropolitan Water Sewerage and Drainage Board

(a) Nature and Objectives

The Board maintains investment funds for specific reserves, and holds temporary cash surpluses to meet operational expenditure.

At 30 June, 1984 approximately 70% of reserve funds represented loan repayment reserves warranting substantial debt asset investment. The remaining 30% represented provisions for employee benefits which, being salary-related liabilities, have a growth component, and the appropriate investment mix would therefore include equity and debt assets.

The temporary cash surpluses are short term in nature and hence it is appropriate that they are invested in highly marketable and liquid debt assets.

(b) Management Constraints

The Board's investment of its loan repayment reserves is limited as with Elcom by legislation and government policy re financing of works. (See 4.2.1.(b)).

Employee benefit provisions and other cash surpluses are not subject to the above investment restrictions.

The Board's cash flow profile has necessitated a very high proportion of funds to be invested short term.

(c) Investment Policy

The Board has adopted a policy of passive investment management and has stated that

> "....trading in securities is not the essence of the Board's investment strategy".

In addition, it has been the Board's policy to invest virtually all funds held (including employee benefit provisions and temporary cash surpluses, together totalling $332 million at 30 June, 1984) as though also restricted by the legislation which limits the investment of loan repayment reserves. This policy has been adopted for

"financial security and administrative convenience".

The convenience referred to arises from administrative benefits from pooling all investment funds and treating them equally.

A professional investment approach would have included active funds management and the selection of appropriate assets for the employee benefit provisions and temporary cash surpluses.

The asset distribution for the Board's investment funds is set out in Table 4.7.

As in the case of the Department of Main Roads and the Electricity Commission, the ability of the Board to match the amount and term of liabilities with equivalent investment has been restricted by Treasury's policy in respect of the internal use of reserves.

Total equity asset holding is represented by a single property, being an investment of the provision for superannuation. Further equity investment of the employee benefit provisions would appear to be both desirable and within the investment powers of the Board.

TABLE 4.7. Distribution of M.W.S. & D.B. assets by face value at 30 June

Asset	1982 $M	1983 $M	1984 $M
(i) Specific Reserves- Loan repayment, long service and annual leave, superannuation			
Commonwealth Government Inscribed Stock	.940	.150	.150
Semi-Government Inscribed Stock	2.974	.253	.226
Interest Bearing Deposits	104.865	20.488	30.500
Bank Accepted Bills of Exchange	11.677	55.681	23.813
Property (acquisition cost)	-	7.555	7.555
	120.456	84.127	62.244
Non-Transferable M.W.S. & Drainage Board Inscribed Stock[8]	297.587	428.901	572.311
	418.043	513.028	634.555
(ii) Temporary Surplus Cash			
Interest Bearing Deposits	65.535	71.262	78.400
Bank Accepted Bills of Exchange	15.100	20.795	60.479
	80.635	92.057	138.879

(d) Investment Performance

The Investment returns of the Board (calculated by the Board) and the appropriate average market interest rates are set out in Table 4.8

[8]Non-transferable stock represents internal loans for capital works.

TABLE 4.8 Return on M.W.S. & D.B. Assets versus comparable private sector investments

Year to	Board's rate	Trading Bank		Buying rates Bank accepted Commercial Bills		
		Fixed Deposits over $50,000	Certificates of Deposit	90-Day	180-Day	Model 180 day Bank Bill Portfolio
	%	%	%	%	%	%
30/6/82	16.0	15.0	16.7	17.0	17.1	16.6
30/6/83	14.4	13.9	14.4	14.0	14.3	16.0
30/6/84	11.5	11.4	11.7	11.9	12.0	12.4
Average	14.0	13.4	14.2	14.3	14.4	15.0

To enable cash flow requirements to be satisfied virtually all the funds of the Board have been invested in bank accepted bills of exchange and interest bearing deposits and, as expected, the Board's results are consistent with the average interest rates available from these assets in the market during the period in question. However, in terms of a model portfolio with an investment strategy of lengthening the portfolio in March/April (the classic tax run-down period) with a further roll-over in September/October for 180 days, which over the same time period would have yielded 15% per annum - the Board's returns are below those which could be anticipated from active management.

As with other Authorities, the ability of management to improve returns by investing in higher yielding assets was limited over the 3 years by the legislative restrictions placed on their investment powers and by Treasury's internal funding requirements. The use of an active investment policy could also have increased returns.

4.2.4. Totalizator Agency Board of New South Wales - Operations Investment Portfolio

(a) Nature and Objectives

Funds maintained may be divided into three (3) categories:

(i) surplus funds to be distributed annually to race clubs and the Racecourse Development Fund,

(ii) betting and security deposits held and unpaid dividends, and

(iii) reserves and provisions for depreciation, capital replacement and employee benefits.

Liquidity requirements should limit the investment of (i) and (ii) to short term debt assets. The appropriate investment for (iii) would include a mix of debt and equity investment given that future employee benefit liabilities are related to real wage levels.

(b) Management Constraints

Investment powers of the Board are defined in the Totalizator (Off-course Betting) Act. Funds in respect of (i) and (ii) in (a) are limited to investment in authorised trustee securities. Investment of (iii) is similarly restricted but with the additional power to invest in bank bills.

Management is limited by the nature of the fund's cash flow which is subject to a large net cash outflow in the first quarter of each year when surplus funds are distributed.

(c) Investment Policy

The Board has adopted passive investment policy. Due mainly to the nature of the Board's cash flow all funds have been invested in short term assets. This is despite the fact that funds in respect of (iii), including provisions for capital replacement and employee benefits, are of a longer term nature. It is the Board's stated policy that these funds

> "... are usually invested short term because of their use in meeting the Board's commitments of a capital nature and also to repay depositors or pay dividends from time to time".

A professional investment approach would involve an active investment policy and a matching of longer term liabilities with longer term assets.

The asset distribution of the Board's portfolio is set out in Table 4.9.

There has been no investment in equity assets. Although a limited level of equity investment would have been desirable, such investment is beyond the powers of the Board.

(d) Investment Performance

The rates of return for the Board and the average market interest rates appropriate for comparison are set out in Table 4.10.

To meet cash flow requirements a majority of the Board's investments were in interest bearing deposits and bank accepted bills of exchange and the portfolio's results are consistent with average interest rates obtainable on these assets during the period.

TABLE 4.9 Distribution of TAB assets by market value at 30 June

Assets	1981		1982		1983		1984	
	$M	%	$M	%	$M	%	$M	%
Short term Commonwealth Government secured stock	5.6	14	6.0	14	3.1	6	-	-
Interest Bearing Short Fixed Term Deposits	4.7	12	13.0	30	19.0	40	8.3	15
Certificates of Convertible Deposits, Bank Bills, Elcom Notes	20.0	52	15.2	36	19.6	41	42.4	74
Official Market	3.5	9	1.8	4	1.3	3	3.8	7
Cash	5.0	13	6.7	16	5.1	11	2.7	5
Total	38.8	100	42.6	100	48.0	100	57.2	100

TABLE 4.10 Return on TAB assets versus comparable private sector investments

Year to	TAB	Trading Bank		Bank accepted Commercial Bills		
		Fixed Deposits over $50,000	Certificates of Deposit	90-Day	180-Day	180 day model Portfolio
	%	%	%	%	%	%
30/6/82	17.8	15.0	16.7	17.0	17.1	16.6
30/6/83	13.5	13.9	14.4	14.0	14.3	16.0
30/6/84	11.5	11.4	11.7	11.9	12.0	12.4
3 years to 30/6/84	14.2	13.4	14.2	14.3	14.4	15.0

However, as pointed out in 4.2.3 (d) active management could have raised yields by approximately 0.8% per annum. Returns could also have been increased had longer term investment been undertaken in the two years to 30 June, 1984 when interest rates fell. Some longer term assets to match longer term liabilities would have been appropriate. Although some such investments are possible with the legislative restrictions, equity investments are ruled out.

4.2.5. Maritime Services Board of New South Wales - Operations Portfolio

(a) Nature and Objectives

Portfolio funds may be divided into three categories:

(i) working capital (operational funds),

(ii) loan repayment reserves, and

(iii) employee benefit provisions.

Investment in (i) and (ii) would be expected to be in debt assets with maturity structure planned to match cash flow and loan repayment requirements while the nature of (iii) would warrant both debt and equity investment.

(b) Management Constraints

The Board's investment powers are limited by the Maritime Services (Amendment) Act, 1981 to

- Commonwealth and semi Government securities
- Australian Industry Development Corporation bills,
- Australian Resources Development Bank, transferable, certificates of deposit,
- Bank accepted/endorsed bills of exchange,

- Bank -
  - interest bearing deposits
  - convertible certificates of deposit
  - negotiable certificates of deposit, and
- other authorised trustee securities (Trustee Act, 1925).

The nature of the Board's cash flow necessitates a significant level of shorter term investment.

(c) Investment Policy

The Board has chosen to invest all funds in short term assets notwithstanding that a proportion of the liabilities are of a longer term nature. Board representatives in providing evidence to the Committee, stated that employee benefits had not been matched with longer term investment as an actuarial assessment of the size and likely timing of future commitments had not been made for these liabilities and hence the appropriate maturity structure of investments could not be determined. In discussions with the Committee's advisors, representatives of the Board have confirmed that it is their policy to provide for longer term capital commitments with funds invested in short term assets.

The asset distribution of the Board's portfolio is set out in Table 4.11.

The Board's ability to match equity related liabilities (i.e. employee provisions) with equity investment has been denied by legislation, although a limited level of such investment would have been desirable.

(d) Investment Performance

The rates of return for the Board together with the average market rates of interest appropriate for comparison are shown in Table 4.12.

TABLE 4.11 Distribution of M.S.B. assets at market value on 30 June

Assets	1981		1982		1983		1984	
	$M	%	$M	%	$M	%	$M	%
Interest Bearing & Short Fixed Term Deposits	49.2	93	17.8	63	49.2	96	66.6	81
Certificates of Convertible Deposits, Bank Bills	-	-	-	-	0.6	1	13.7	17
Cash	3.9	7	10.5	37	1.3	3	2.2	3
Total	53.1	100	28.2	100	51.1	100	82.5	100

TABLE 4.12 Return on M.S.B. assets versus comparable private sector investments.

Year to	Board	Trading Bank		Bank accepted Commercial Bills		
		Fixed Deposits over $50,000	Certificates of Deposit	90-Day	180-Day	Model Portfolio (180 day Bank Bills)
	%	%	%	%	%	%
30/6/82	17.7	15.0	16.7	17.0	17.1	16.6
30/6/83	16.3	13.9	14.4	14.0	14.3	16.0
30/6/84	12.9	11.4	11.7	11.9	12.0	12.4
3 years to 30/6/84	15.6	13.4	14.2	14.3	14.4	15.0

Returns on the Board's portfolio exceed both the short term interest rates obtainable and the returns on the proposed model portfolio for short term funds.

Higher returns might have been obtained if some longer term investment had been made, matching the longer term liabilities.

Investment returns could have been improved during the two (2) years to 30 June, 1984 if a level of longer term investment was undertaken taking advantage of the fall in the level of interest rates.

4.2.6. The Public Trust Office - Common Fund

(a) Nature and Objectives

This portfolio operates as a pooled fund for assets of deceased estates, agencies and damages trusts. These individual trust funds effectively expect a capital guarantee on their balances and credited income. Income is credited to these funds or "accounts" at varying rates. However, income does not include realised capital appreciation which, instead of being credited to accounts, is required to be transferred to a reserve to offset realised depreciation.

In light of the expected capital guarantee and the limitations of the income declaration, fixed interest investment offering relatively high "income" and relative stable capital value, is appropriate.

(b) Management Constraints

The Office's investment powers are defined in the Public Trustee Act and investments are limited to authorised trustee investments.

Cash flow of the fund features large individual payouts which occur from time to time and hence a certain proportion of funds are required to be maintained in a relatively liquid form.

(c) Investment Policy

A policy of passive investment management has been adopted with all assets being held to maturity. The restrictions on the distribution of realised capital gains and the expected capital guarantee justify this policy.

The asset distribution of the Office's portfolio is set out in Table 4.13.

TABLE 4.13 Distribution of PTO assets at market value on 30 June.

Assets	1981		1982		1983		1984	
	$M	%	$M	%	$M	%	$M	%
Commonwealth, local and semi-government securities	44.2	33	52.2	34	68.6	35	91.9	39
Mortages (N.S.W. Real Estate)	87.4	65	94.8	61	114.8	59	122.5	52
Short term fixed interest	3.5	3	8.7	6	11.1	6	22.9	10
Total	135.1	100	155.7	100	194.5	100	237.3	100

Investment has been exclusively in fixed interest securities which are considered appropriate in view of the restrictions on the distribution of capital gains and the objectives of the fund.

(d) Investment Performance

The rates of return for the Office and the corresponding IMS Survey sector averages are set out in Table 4.14

TABLE 4.14 Return on PTO assets versus IMS sector returns (% p.a.)

	Year to 30 June			3 Years to 30 June 1984
	1982	1983	1984	
Common Fund	13.1	21.3	17.6	17.4
IMS Government Fixed Interest	8.2	22.7	20.1	16.8
IMS Other Fixed Interest Assets	13.5	20.3	14.8	16.2

The returns on the Fund each year are broadly consistent with the corresponding average IMS Survey sector results and the average achieved by the whole Fund over the three (3) year period in question compares favourably with the IMS averages.

The limitations placed on income distribution make investment in higher yielding growth assets (precluded in any case by legislation) inappropriate.

4.3. Smaller Authorities

A brief assessment of the investment operations of a number of smaller service Authorities was made by Bain & Company drawing on information provided by these Authorities. This information included details of investment policy and practices, composition of investments over three (3) years to 30th June, 1984, nature of liabilities and cash flow and levels of investment powers. The Authorities and the funds held by each of them are set out in Table 4.15.

TABLE 4.15 Funds held by some Smaller Authorities

Authority	$ Million
Department of Environment and Planning	24.3
New South Wales Dairy Corporation	14.5
New South Wales Institute of Technology	13.0
The Department of Industrial Development and Decentralisation (Macarthur Growth Area)	10.1
New South Wales State Cancer Council	8.8
New South Wales Film Corporation	1.0

The funds held by these Authorities were for a variety of purposes including loan repayment reserves, deferred superannuation and other employee benefits, provisions for future research and development, miscellaneous provisions and short term working capital.

Consultants to the Committee report an inappropriate matching of liabilities with investments, a lack of active funds management and returns affected by the legislative restrictions imposed on investment powers and the constraints of Treasury policy. Although not rigorously determined the Committee believes that the investment performance of these authorities is substantially lower than that of the larger authorities.

This is to be expected as the low level of investment funds held does not justify the allocation of higher levels of resources to their investment operations.

4.4. Overview of Performance

Over the three year period to 30 June, 1984 the performance of two Authorities (DMR and Elcom) has been below, that of the PTO has been above, and that of the other Authorities studied has been consistent with the comparable rates of return obtained on similar assets by funds in the IMS Survey.

It should be stressed that even where an Authority's performance has been shown in previous paragraphs to be consistent with IMS Survey results, this does not indicate that there is no opportunity for the Authority to increase its investment return.

Firstly, the comparison has only been made with average IMS fund performance. Many funds show returns well above this average. More importantly, however, the comparison has only been made with the IMS average returns achieved in those investment sectors which most closely match the Authorities' particular asset holdings. Some Authorities had the power to invest some of their funds in higher yielding equity assets but chose not to do so; others were prohibited by legislation. Few adopted an active investment policy (see Appendices 11(b) and 12).

A change in policy or legislation or investment practices should result in higher returns. The Committee believes an additional 0.5% per annum could reasonably be expected.

4.5. Legislative Restrictions on Investment Powers

The restrictions relating to each authority are outlined in Section 4.2. Information provided by Treasury suggests that these restrictions are based on four considerations

- security
- the recognition that there are varying levels of investment expertise within Authorities
- the need for a slow introduction of wider investment powers
- support for government and semi-government borrowings.

The restrictions have virtually eliminated any risk of capital loss. They have resulted in most of the funds being placed in government or semi-government securities or deposits with Treasury or major trading banks. They have ensured support for government or semi-government borrowing programmes, which might be considered socially desirable.

However the restrictions have prevented Authorities from investing some of their funds in higher yielding assets with a very low, and certainly acceptable, level of risk. The legislative restrictions, which are intended to reduce risk, in fact increase the risk of a lower rate of return.

Alternative investments include prime commercial bills of exchange and promissory notes which offer higher rates of return at marginally higher risk levels. An indication of the higher returns available may be drawn from the historical margin between the interest rates obtainable on Commonwealth Government securities, bank accepted commercial bills, and bills of exchange accepted by a member of the Australian Merchant Bankers' Association (i.e. prime commercial bills). (See Appendix 6). Additional investments which should also be considered include Telecom bonds and securities issued by Authorities of other States and Territories.

The limited range of possible investment has also restricted the ability of Authorities to actively manage their funds and to match fund liabilities with appropriate investments.

The Committee agrees that wider investment powers should not be granted to persons who do not have the investment expertise (see Appendix 13) to use them properly. Nevertheless it considers that appropriate investments must be made permissible, and an appropriate machinery sought for which will ensure that the necessary investment expertise is available.

4.6. Treasury Policy Regarding Loan Repayment Reserves

Treasury policy requiring these funds to be used to finance capital works has resulted in a number of Authorities having

- a proportion of funds originally set aside to meet future liabilities no longer available to meet those liabilities, and
- increased levels of short term investment made necessary as funds are pooled pending internal application to funding capital works.

Consequently there has been a limitation of the Authorities' ability to match liabilities with assets of the appropriate amount and term, and their ability to undertake longer term investment when interest rates are expected to fall.

This restrictive policy has also been a disincentive: to active funds management; to Authorities utilising their full investment powers; to devoting resources to their investment operation; and to developing the investment expertise needed to maximise investment returns on funds held.

4.7. Investment Expertise

Instances have been cited earlier of mismatching the term of assets with the liabilities they are intended to cover, lack of utilization of investment powers and the absence of active funds management.

It has become apparent that a number of Authorities have chosen not to actively manage their funds as this often involves the realisation (and recording) of capital losses. More specifically this aversion to recording capital losses has led to a reluctance to selling low yielding debt assets which have fallen in value notwithstanding that this would enable the funds to be reinvested in higher yielding assets allowing the overall level of investment return to be increased in the longer term.

In addition, some Authorities appear to hold the misconception that if all debt assets are held to maturity (and hence no capital losses are actually realised) that no loss at all is experienced on the funds invested.

Clearly, the notion that losses will not be sustained on debt assets held to maturity is incorrect as interest gains and losses must also be considered. There will not be a capital loss recorded for funds invested in a five year debt asset yielding 4.0% per annum which is held to maturity. However, if those funds could have been reinvested after two years in debt assets yielding 11.5% per annum, the level of interest forgone must be considered in determining the overall gain or loss in investment return achieved during the five year period.

The original reasons for the employment of a limited level of investment resources by the service Authorities were:

(a) the relatively low levels of investment funds held, and;
(b) the primary role of most "service" Authorities being unrelated to investment.

Some of the smaller Authorities still cannot justify the employment of the necessary investment skills. Some of the major Authorities, however, now have very large funds for investment.

The Committee accepts that there are problems with the recruitment of expert investment staff. The ability to compete with the private sector in obtaining such staff is discussed in Section 5 of this report. The restricted investment environment in which the service Authorities operate does not attract investment personnel with higher levels of expertise.

4.8. Performance Monitoring and Reporting

The extent to which service Authorities monitor and report their investment performance is extremely limited. This applies even to Authorities responsible for the investment of substantial funds.

The levels of performance monitoring undertaken by a number of the service Authorities has been severely inhibited by a lack of computerised information systems with the financial records of a number of Authorities having been maintained manually.

There is also a reluctance by some Authorities to publish rates of return which could have appeared unfavourable when directly compared with rates published for private sector fund managers who did not face the equivalent investment management constraints. The prospect of being unfairly judged is a valid concern; however it does not justify the absence of performance reporting. The various management constraints imposed upon the Authorities actually provide further cause for having investment performance properly measured (at total fund and individual investment sector level) and compared to discretionary funds so that the effects of the constraints in terms of performance may be assessed and better understood by management and contributors alike.

The Committee is firmly of the view that service Authorities, particularly the larger service Authorities, should establish investment performance measures for comparison with the private sector. These are essential to allow management to gauge the merits of their current investment policies, to identify opportunities for improving overall performance and also to permit regular reporting of performance to those to whom management is ultimately accountable.

These reviews should be carried out quarterly by techniques which are now quite well established, and which enable comparisons to be made with other fund managers. The performance measurement should be made for each asset sector as well as for the fund as a whole. Assets, for this purpose, must be measured at market values.

The Committee recommends that the larger service Authorities (those holding in excess of $100 million) be compelled to participate in a common investment performance survey to be used as a benchmark. The reporting and valuation requirements for the Authorities should be determined by the survey organisors. Public sector entities should be clearly distinguished from other fund managers and comparative analysis should only be conducted with appropriately selected market indicators identified by the organisors.

Fund rates of return should be published in the Authorities' annual reports in a separate section devoted to reporting on the investment activities of the organisation.

Section 5

Investment Performance of Investment Authorities

(Note: Subsection 5.2 deals with the IMS Survey; subsection 5.3 deals in some detail with the performance of individual investment authorities. Readers interested only in an overview should proceed directly from subsection 5.1 to subsection 5.4.)

5.1. A review of the investment performance and operations of the following major New South Wales public sector fund managers has been conducted.

- The New South Wales State Superannuation Board. (5.3.1.)
- The (former) Local Government Superannuation Board. (5.3.2.)
- The (former) New South Wales Retirement Board. (5.3.3.)
- The Building and Construction Industry Long Service Payments Corporation. (5.3.4.)
- The Coal and Oil Shale Mine Workers Superannuation Tribunal. (5.3.5.)
- Government Insurance Office of New South Wales (Motor Vehicles) Third Party) Insurance Fund. (5.3.6.)

The above organisations are all major public sector fund managers whose primary function is the investment of superannuation, employee benefit and insurance funds.

E.S. Knight & Co. have completed a report on the recent investment performance of these Authorities. This report was originally intended to include time weighted rates of return for each Authority for the five (5) year period to 30 June, 1984. However, as the necessary data could not be made available by these organisations various total fund and individual investment sector rates of return have been calculated on an approximate basis. The report examines the significance of the equity/debt ratio (i.e. the proportion of equity investment in relation to debt investment) to the past performance of professionally managed superannuation funds participating in the IMS Survey (the IMS Funds). Using this information in conjunction with the known past equity/debt ratios of the Authorities, certain conclusions can be drawn regarding their past investment performance.

5.2. Investment Performance of the IMS Funds and the Significance of the Equity/Debt Ratio

Table 5.1 shows the average rates of return achieved by the IMS Funds for the ten (10) years ending 30 June, 1984 in each investment sector. (See Appendix 7 for complete ten year history).

TABLE 5.1: Rates of return (% p.a) of IMS Funds

Investment Sector	Year to 30/6/84	30/6/83	30/6/82	3 Years ending 30/6/84	5 Years ending 30/6/84	7 Years ending 30/6/84	10 Years ending 30/6/84
	%	%	%	%	%	%	%
All assets	14.2	26.3	-2.9	12.0	17.8	16.6	15.4
Ordinary shares	6.6	37.6	-27.3	2.6	19.6	19.4	17.5
Property	20.8	18.4	16.1	17.1	18.9	18.0	n/a
Government fixed interest	20.1	22.7	8.2	16.8	12.4	11.8	10.9
Other assets (including corporate fixed interest, short term deposits and cash)	14.8	20.3	13.5	16.2	14.9	14.2	n/a

It has been established that, in the long term, different investment asset sectors achieve different rates of return, and that one of the major factors leading to different levels of performance of superannuation fund managers is the different portfolio mix adopted by different managers from time to time.

It may be observed from Table 5.1 that over the longer five (5), seven (7) and ten (10) year periods equity assets (shares and property) have shown higher rates of return than debt assets.

This suggests that the performance of managers electing over a long period to invest a higher proportion of their fund in equity assets in preference to debt assets would exceed that of managers choosing a lower equity/debt asset ratio.

To illustrate the effect of choosing alternative investment sector distributions, model five year rates of return for various equity/debt ratios have been calculated combining the five year average rates of return displayed in Table 5.1 and the following model portfolio asset distributions:

(a) High Equity/Debt ratio 70%/30% being

40% Shares
30% Property
30% Government fixed interest

(b) Mid Equity/debt ratio 50%/50% being

25% Shares
25% Property
40% Government fixed interest
10% Other fixed interest

(c) Low Equity/Debt ratio 30%/70% being

10% Shares
20% Property
60% Government
10% Other fixed interest

The results (% per annum) for the model portfolios are set out in Table 5.2.

TABLE 5.2 Variation in 5 year rates of return with different equity/debt ratios

Equity/Debt ratio	% p.a.
High - 70%/30%	17.4
Mid - 50%/50%	16.3
Low - 30%/70%	14.8

The model portfolio results vary with the equity/debt ratio and are consistent with the widely held view that, in the longer term, a portfolio's rate of return will be increased by a higher equity/debt ratio. It is important to note that it is the average rates of return achieved by the IMS Funds within the various investment asset sectors which have been assumed in Table 5.2. Thus high equity/debt portfolios with average sector performance are likely to achieve above the average overall results.

It follows that portfolios with low equity/debt ratios will require superior individual sector performance merely to achieve average overall results. With average sector performance they are likely to produce below average results.

The actual average portfolio asset distributions and equity/debt ratios of the IMS Funds are set out in Tables 5.3 and 5.4. These tables show the average distributions and ratios for the five years to 30th June, 1984 for IMS Fund managers with full discretion in determining sector distribution (subject to the now defunct 30/20 rule requiring a minimum of 30% of investment in Government securities).

TABLE 5.3: Sector Mix of IMS Pooled Funds - Discretionary Holdings

As at 30 June	Shares (and Resources)	Property	Government fixed interest	Other fixed interest	Total Market value
	%	%	%	%	$M
1979	34	32	25	9	793.5
1980	39	30	22	9	1347.0
1981	45	27	22	6	1979.1
1982	28	36	22	14	2513.5
1983	41	31	24	4	2781.2
1984	36	32	27	5	3339.3

Note: The distribution of assets held by large fund managers has a major effect in determining the above investment proportions.

TABLE 5.4: Equity/debt mix of IMS Pooled Funds at market value - discretionary holdings

As at 30 June	Equity %	Debt %
1979	66	34
1980	69	31
1981	72	28
1982	64	36
1983	72	28
1984	68	32

Table 5.4 shows that discretionary IMS Pooled Fund Managers have high levels of investment in equity assets (shares and property) in preference to debt assets. The equity/debt ratio is approximately 70/30 over the period. This compares with an equity/debt ratio of approximately 55/45 for all IMS Fund managers (including non-discretionary fund managers) over the same five year period.

It should be pointed out that IMS Funds are all superannuation funds and that the 30/20 rule was in operation over this period. IMS Funds have thus had mid to high equity/debt ratios and, as expected, their average rate of return of 17.8% per annum over the same five year period (Table 5.1) exceeds that of the average for the low equity/debt model portfolio (14.8% per annum) and is broadly consistent with the average results for the high and mid equity/debt model portfolios (17.4% and 16.3% per annum respectively).

It is appropriate to point out that the largest private sector fund manager, the AMP Society, with its discretionary superannuation funds aims for a 70/30 equity debt ratio made up of:

Shares (including up to 10% in natural resources)	40%
Property	30%
Government and other fixed interest	30%

The investment performance of IMS superannuation funds showed that:

- Over the three year period to 30th June, 1984 the average returns from shares was less than that from debt assets.

- Yet over the longer five, seven and ten year periods the average returns on equity assets exceeded by a considerable margin the average returns from debt assets, showing that short term performance can be misleading.

- Average results for the model portfolios based on the performance of the IMS funds over the longer five year period vary in accordance with the equity to debt ratio and are consistent with the view that in the long term a portfolio's return will be increased by a higher equity to debt ratio.

- In comparing the investment performance of one fund with another it is essential that due consideration be given to the impact of, and the reasons for, imposed or self imposed equity/debt ratios.

5.3. Review of Individual Investment Authorities

The major public sector investment Authorities control funds with different investment objectives and management constraints. It is therefore appropriate to consider separately the performance of each.

5.3.1. The New South Wales State Superannuation Board

(a) Nature of Funds

The fund provides superannuation benefits for salaried employees of the New South Wales Public Service, Teaching Service and of various Statutory Authorities of the State. The liabilities of the fund (i.e. benefits) are related to the employee's future final salary and certain fixed monetary amounts and hence a "mid" equity/debt ratio would be considered appropriate in the long term. In 1973 an additional major liability was introduced which is related to the Consumer Price Index. The growth of this liability will warrant increasing levels of equity investment.

(b) Investment Objectives

The structure of the liabilities of the fund are complex. Certain portions of the fund's liabilities are ultimately guaranteed by employers and in essence the fund is required to earn sufficient income (investment income received including realised capital gains less administrative expenses) in excess of 5.5% per annum to cover various emerging charges to avoid a call upon employers.

A certain level of fixed interest investment, providing relatively high fixed coupon returns (i.e. interest) would be considered appropriate to assist in maximising income (as defined above) in the short term, while expected future growth normally experienced in share and property returns (i.e. dividend and rental payments) make these equity investment avenues more appropriate in maximising income in the longer term. Thus, to accomplish return objectives, a blend of debt and equity would be required with the proportions depending upon the relative emphasis on short and long term returns.

The fundamental objectives of the Board have historically included a "social" element with significant levels of investment in semi government and local government securities having been undertaken. In excess of 32% of the Board's portfolio was invested in this area at 30 June, 1984. In addition, the Board has allocated funds to be lent to co-operative housing societies as a means of providing housing loans to the members of the fund. Investment in this area represented 9.7% of the total portfolio at 30 June, 1984. Investment supporting the borrowing programmes of government bodies and assisting with housing for fund members has been justified on social grounds.

(c) Management Constraints

Until 1 July, 1985 the investment powers of the Board (and the other superannuation Authorities) are defined by the Superannuation Act, 1916, and are subject to significant restrictions in specific areas. The new investment powers are discussed later in this Section.

The major restrictions which have existed on the investment operations of the Board may be summarised as

(a) Overseas investment is not permitted,

(b) Investment in company share and debt securities is limited to 25% of the total fund,

(c) Investment in company share and debt securities is subject to individual companies satisfying prerequisites relating to historic five year earning rates and interest cover levels,

(d) Property investment is limited to New South Wales and is subject to restrictive valuation parameters.

These restrictions have limited the extent to which the Board has been able to invest in equity assets and corporate fixed interest securities.

The flexibility for investment management is restricted by significant holdings of less marketable and non marketable assets represented primarily by loans to local government bodies and co-operative housing societies.

The investment staff of the Board (except those employed directly to manage real property assets) are employed under the provisions of the Public Service Act, 1979. The Board has expressed concern at the difficulty it has faced in attracting the required investment expertise. In its 1984 Annual Report it stated:

> "The difficulty of recruiting and retaining experienced investment officers at middle and senior levels has been a major concern for some time".

Representatives of the Board have alluded to the need for additional investment staff in stating before the Committee that:

"We lose people continually"

and

"... the Board is seeking to improve its ability to obtain and retain staff".

The backgrounds of the members of the Board of Directors of the State Superannuation Board include superannuation administration, economics, teaching and industry. The Government Actuary is also a member of the Board. The President of the State Superannuation Board has confirmed that none of the members of the Board has a specific background in investment.

(d) Investment Policy and Strategy

The investment sector distribution of the Fund at book value is set out in Table 5.5.

TABLE 5.5: NSW Superannuation Board Investment Sector Distribution at Market Value.

As at	Shares %	Property %	Government Fixed Interest and others %	Total Value $M
30/6/82	8	21	71	1964
30/6/83	14	22	64	2393
30/6/84	13	25	62	2942

The equity/debt ratio based on assets at book value has increased over the last ten (10) years from approximately 16/84 to 30/70 due mainly to increased investment in property. Compared with private sector funds the equity/debt ratio is still low. The introduction of the Consumer Price Index related liability in 1973 has clearly increased the desirability of increased equity investment.

Debt investment is primarily in government backed securities and should be more widely diversified both to increase returns and reduce risk.

The ability of the Board to match equity related liabilities with equivalent investment and diversify its total portfolio has been limited by legislative restrictions imposed on its investment powers. It has only been with the gradual lifting of these restrictions in recent times that the Board has been able to increase the levels of its property and share investment to the current levels.

Shortages in investment personnel may also have restricted the capacity for expansion of the share and property portfolios, as such investment requires greater management time and expertise than investment in fixed interest markets.

The Board recognises the need for increased equity investment and to this end it stated in its 1984 Annual Report:

> "... the Board has established broad strategies which seek to lift the Board's equity investment over a five year period nearer to 50% of fund assets. Achievement of the increased equity investment will be sought through additional share and property investment and also through the purchase of direct equity, as in resource developments and joint venture operations".

The ability of the Board to increase equity investment is now greatly increased by the removal of most legislative restrictions, although it will be hampered by the excessive holdings of non marketable assets.

(e) Investment Performance

A rigorous assessment of the past investment management performance of the Board has not been possible as the necessary data required to calculate time-weighted rates of return is not readily available. Rates of return for some investment sectors for a number of years (and for the total fund for one year) have been derived by the Board using annual (rather than quarterly) asset valuations and assuming an even annual cash flow distribution, and thus not accounting for the

actual timing of cash flows. (See Appendix 8 for formulae). These rates are shown in Table 5.6 together with IMS average rates for large funds.

TABLE 5.6 NSW Superannuation Board and IMS Large Funds investment returns (% p.a.)

Investment Sector	3 years to 30/6/84		5 years to 30/6/84	
	Board	IMS Large Funds Average	Board	IMS Large Funds Average
Shares	2.4	1.4	16.8	17.4
Property	18.7	17.2	17.2	16.6

The results for the Board are consistent with the IMS average for large funds.

Market valuation data for all sectors is only available for 30 June, 1983 and 1984 thus enabling the calculation of a total fund rate of return only for the single year ending 30 June, 1984. The Board's total fund and sector rates, together with the IMS all funds averages, are set out in Table 5.7.

TABLE 5.7: NSW Superannuation Board and IMS Funds sector returns for the year to 30 June, 1984 (% p.a.)

Sector	Board	IMS all funds average
Shares	10.5	6.6
Property	22.8	20.8
Government Fixed Interest	25.0	20.1
Other Fixed Interest	14.7	14.8
Total Fund	19.4	14.2

The Board's total fund rate of return exceeds by a considerable margin that of the IMS average, and most sector results compare favourably.

The sector distributions of the Board's investments and those of the IMS Funds are set out in Table 5.8.

TABLE 5.8: NSW Superannuation Board and IMS sector distributions at market value at 30 June, 1983

Sector	Board (%)	IMS all funds average (%)
Shares	14	35
Property	22	20
Government Fixed Interest	30	30
Other Fixed Interest	34	15
Total Fund	100	100

1983 was a bad year for shares and it was therefore an assistance to performance to hold only a small percentage of the portfolio in shares. Over the longer term the reverse is true. As only one year's returns are available for the Board, to obtain information about the more important longer term investment performance the Board's equity/debt ratios need to be studied.

In the light of the Board's equity/debt ratio having been consistently substantially below that of IMS Funds, it is reasonable to conclude that over the longer periods the investment performance of the Board is likely to have been below the average of the IMS Funds. This observation is based on probability and is not conclusive. Confirmation could only be made if the necessary rates of return for the Board were calculated to allow realistic comparison.

The Board is clearly moving rapidly to increase its equity/debt ratio. At 30 June, 1982, on market values it was 29/71; a year later 36/64 and at 30 June, 1984 38/62. The recent broadening of its investment powers (effective from 1 July, 1985) should assist the Board further to increase this ratio.

The Board's investment powers are now limited only by the requirements that:

(a) a minimum of 30% of funds (at cost) are invested in government securities, and

(b) no one asset (excluding government securities) may represent more than 5% of total funds.

5.3.2. The (former) Local Government Superannuation Board

The Board was replaced by the Public Authorities Superannuation Board from 1st April, 1984.

(a) Nature of Funds

The Board was responsible, inter alia, for the administration and investment management of the Pension Fund (established 1 April, 1977), the Provident Fund and the Benefits Fund, the latter two funds being closed to new members. The funds provide superannuation benefits for employees of councils, public hospitals and other local and semi government authorities of New South Wales.

The Pension Fund provides benefits which are a combination of an accumulation of employee contributions with interest and an employer financed pension and/or lump sum which are defined multiples of final average salary. The closed Provident and Benefits Fund provide benefits based on the accumulation of employee and employer contributions with interest and do not provide benefits related to future salary levels.

On 1 April, 1977, the Board's Joint Investment Pool was established and the investments held by the various funds were transferred to this Pool. The split-up of funds in the Pool as shown in the Annual Reports is set out in Table 5.9.

TABLE 5.9: Split-up of funds in the LGSB Joint investment pool as at 31 March each year ($m)

Fund	1978 (1)	1979 (1)	1980 (1)	1981 (2)	1982 (2)	1983 (2)	1984 (2)
Pension Fund	45	104	153	200	385	498	638
Benefits Fund	214	232	269	297	233	268	312
Provident Fund	11	17	24	71	72	76	81
Total	270	353	446	568	690	842	1031

(1) market value (2) cost value

Since commencement in 1977 the Pension Fund has grown to become the major fund of the three. In line with this change it would be expected that the Investment Pool would have been invested with an increasing proportion in equity assets due to the Pension Fund benefit being salary related. This has in fact taken place.

(b) Investment Objectives

The investment objective of the former Board is stated in its 1984 Annual Report:

> "The investment objective of the Board ... has been directed at maximising the effective interest distribution rate to contributors within the framework of a balanced investment portfolio and having regard to acceptable risk limits".
>
> "As the Board is not permitted to distribute unrealised capital profits, it is necessary in the interest of contributors, to adopt an ongoing policy of realising capital profits to improve the interest return to contributors".

To maximise "distributable" income credited to contributors' accumulation accounts in the short term, investment in high income fixed interest assets is appropriate while in the longer term income credits are also enhanced by dividend and rental growth and realised capital profits from equity investments.

An objective of the former Board was to support loan raisings which may be considered socially worthwhile, and partly with this justification substantial funds were lent to semi government and local Authorities. In addition, funds were made available to the Local Government Superannuation Co-operative Housing Society for the ultimate benefit of the contributors. A significant proportion of these assets are less marketable or non marketable.

(c) Management Constraints

The investment powers of the former Board were restricted in the same manner as those of the State Superannuation Board and limited the Board's ability to invest in corporate debt securities, shares and property. The sector distribution of assets (at cost) is shown in Table 5.10.

TABLE 5.10: Sector distribution of LGSF assets valued at cost

As at 31 March	Shares	Property	Government Fixed Interest and others	Assets at costs
	%	%	%	$M
1978[1]	9.1	11.2	79.7	308
1981[1]	11.9	20.7	67.4	561
1984[1]	10.7	30.1	59.2	1013

1. a minor portion is at market value for these years.

The equity/debt ratio based on cost of assets has increased since 1978 from approximately 20/80 to 40/60, due mainly to increased investment in property. This is consistent with the change in the mix of benefit liabilities. The equity/debt ratio remains relatively low in comparison with the IMS Fund averages but the need for high income yielding fixed interest securities to maximise distributable income in the short term must be taken into account.

Legislative restrictions and the excess holdings of less marketable and non-marketable assets have limited the Board's capacity to freely undertake investment in shares and property and to actively manage its portfolio.

The diversification of investment remains inadequate with an excessive level of loans to semi and local government bodies within the debt market.

With reference to investment expertise at Board level the President of the Public Authorities Superannuation Board, Mr A. Henderson stated in evidence before the Committee:

> "The other Board members (in addition to himself) have not been appointed for their investment expertise".

Representatives of the Board have acknowledged the general problem, at management and lower levels, of attracting and retaining investment personnel.

(d) Investment Performance

A detailed analysis of the past investment performance of the Board has not been possible as the necessary cash flow and asset valuation data is not available.

The Board has calculated approximate rates of return using the methods described in Appendix 8 and from these sector results have been derived for the three (3) and five (5) year periods ending 31 March, 1984. These rates, together with the IMS all funds averages, are set out in Table 5.11.

TABLE 5.11 Rates of return for LGSF and IMS Funds (% p.a.)

Asset Sector	3 years to 31 March, 1984		5 years to 31 March, 1984	
	Board	IMS All Funds Average	Board	IMS All Funds Average
Shares	15.2	6.8	32.0	22.7
Property	20.8	17.1	17.7	19.2
Marketable Government fixed interest securities	14.2	16.2	10.7	11.1
Other Marketable fixed interest securities	17.7	16.2	15.4	14.5

The Board's share sector performance compares very favourably with the IMS averages and the Committee is advised that for the five (5) year period the Board's result ranks with the top performing private sector managers. The Board's results in the remaining sectors are consistent with the IMS average.

Market values of total assets are available only for the two years to 31 March, 1984 enabling total fund rates of return to be estimated for these two years. These rates are compared with IMS rates in Table 5.12.

TABLE 5.12: Rates of return for 1983 and 1984 for LGSF and IMS Funds (%p.a)

Sector	Year to 31 March, 1983		Year to 31 March, 1984	
	Board	IMS All Funds Average	Board	IMS All Funds Average
Shares		24.4		38.9
Property		18.4		24.0
Government Fixed Interest		21.7		20.8
Other Fixed Interest		20.0		16.3
All Assets	21.6	21.5	25.0	26.8

The results for 1983 vary little between sectors and so similar overall results will emerge for funds with different equity/debt ratios. The Board's result of 21.6% is similar to the All Assets IMS average of 21.5%. The 1984 IMS result for shares was significantly higher than those of the other sectors. The Board's overall result of 25.0% is slightly lower than the IMS average of 26.8%. However, it should be noted that the Board has a relatively low portion of funds in shares, and it was only its above average performance within that sector that brought the overall result to near the IMS average. If on the other hand the Board had held a higher proportion of its funds in shares (say 30% - in accordance with the AMP Society's long term policy - instead of 10% - 11%) it would be expected that the Board's 1984 overall result would have exceeded the IMS average.

No information is available concerning the Board's longer term performance. As noted previously, the Fund's equity/debt ratio, which has recently risen significantly to 45/55 (based on market values), remains below that of the IMS Funds and given the significance of a higher equity/debt ratio to longer term performance, it is likely that the Board's performance may have

been below the IMS average over the longer five (5), seven (7) and ten (10) year periods ending 30 June, 1984. This statement is based on the assumption of sector performance similar to the IMS average, and it represents an observation based on probability and could only be confirmed if the necessary rates of return actually achieved could be calculated.

Legislative restrictions and the excess holdings of less marketable and non marketable assets have prevented a properly balanced portfolio approach to investment management.

The restrictions imposed on the investment powers of the Board (now effectively the Public Authorities Superannuation Board) have largely been removed. Its new powers are to be the same as the new powers of the NSW Superannuation Board.

5.3.3. The (former) New South Wales Retirement Board

The Board was replaced by the Public Authorities Superannuation Board on 1 April, 1984.

(a) Nature of Funds

The Board was responsible for the administration and investment management of the New South Wales Retirement Fund (established 1972) and the Transport Retirement Fund (established 1967), the latter being closed for new members since 30 June, 1973. These funds provide superannuation benefits for employees of the State Rail Authority, the Urban Transit Authority and the Department of Motor Transport and those full time employees of other State departments and Authorities who are not entitled to membership of other government superannuation schemes. The funds provide benefits comprising accumulated employee contributions and credited interest, and do not provide benefits related to future salary levels. These benefits do not have specific debt or equity related growth factors and hence the nature of the funds warrants the adoption of an equity/debt asset mix which allows the maximisation of "credited interest".

(b) Investment Objectives

Prior to 4 May. 1983 the New South Wales Retirement Fund and the Transport Retirement Fund were required to credit interest to contributors' accounts at the rates of 5.5% and 4.25% per annum respectively in terms of their constituting legislation. Amounts earned by each fund in excess of the guaranteed interest credits were placed in a reserve and were only available to meet deficiencies should earnings fall below the guaranteed levels and were not allocated to contributors. Consequently it was appropriate to invest a high proportion of funds in low risk high income debt assets. As a result share investment was virtually negligible.

On 4 May, 1983, the funds held on behalf of the contributors to each fund were combined with all contributors sharing equally in the earnings of the common fund. The respective interest guarantees were abolished and the interest credits became related to the declared earnings of the fund each year. This allowed the investment objectives of the Board to be broadened with an increasing emphasis on the maximisation of investment returns in the longer term. The removal of the interest guarantees allows management greater scope to place funds in equity markets creating a more balanced investment portfolio and enhancing longer term earnings with the prospect of dividend and rental growth and realised capital profits.

The investment objectives of the Board have in the past included a "social" element with a substantial level of funds being invested in loans to government and statutory bodies, a significant proportion of which are non transferable credit foncier loans. At 31 March, 1984 loans to government and statutory bodies represented 43.3% of the total fund.

(c) Management Constraints

The investment powers of the former Board were equivalent to those of the State Superannuation Board and their investment activities in overseas, corporate (debt and equity) and property markets were restricted in the same manner.

(d) Investment Policy and Strategy

The approximate investment sector distribution by market value, using values in the Board's recent Annual Reports, is set out in Table 5.13.

TABLE 5.13. Investment sector distribution of the NSW Retirement Fund at market value.

As at	Shares %	Property %	Government Fixed Interest and others %	Total Value $M
30/6/82	1	23	76	288
30/6/83	1	23	76	356
30/6/84	1	24	75	446

The Board's 1984 equity/debt ratio by market value is 25/75. This is significantly below the IMS Fund average but the different investment objectives related to the interest guarantees need to be taken into consideration.

The Board adopted a policy of essentially passive management with its large holding of fixed interest securities primarily being held to maturity. The abolition of the interest credit guarantees has made equity investment increasingly desirable and it is noteworthy that in the 8 months since the amalgamation to form the Public Authorities Superannuation Board on 1 April, 1984 share investments have increased from about $3 million to $21 million.

(e) Investment Performance

An assessment of the past investment performance of the Board has not been possible as the necessary cash flow and asset valuation data are not available. The Board did not calculate market value based rates of return since it was a passive investor primarily concerned with the meeting of the guaranteed interest credits. The earning rates used in the interest allocation process are not appropriate as measures of investment management performance.

From the low equity/debt ratio of the Board and the high returns available from equities over the previous 5 to 10 years, it is reasonable to expect that its average investment returns would have been below the IMS average for these periods.

As with the NSW Retirement Fund and the NSW Superannuation Fund the restrictions imposed on the investment powers of the Board (now effectively the Public Authorities Superannuation Board) have recently been amended and wide investment powers are now available.

5.3.4. The Building and Construction Industry Long Service Payments Corporation

(a) Nature of Funds

The Corporation conducts an investment fund to meet future wage-related long service leave payments which are normally payable after fifteen or more years of service as an industry employee. The future liabilities of the fund may be expected to grow in line with inflation in the longer term and hence it is appropriate they be matched with a significant level of equity investment in addition to debt investment.

(b) Investment Objectives

The investment objectives of the fund have been subject to certain social and political pressures.

In the past the Corporation (and previously the Builders Licensing Board up until 31 July, 1982) maintained a policy of investing approximately 20% of the fund in loans to the industry. These were represented by unmarketable loans to local councils, made on the condition that the funds were expended within the building and construction industry.

Significant investment in ten year mortgages in connection with the government's supplementary housing scheme has also been undertaken at the request of Treasury. These assets, representing in excess of 20% of the total fund as at 30 June, 1984, are also unmarketable.

The investment in local council loans and housing scheme mortgages are unlikely to have been undertaken on strictly commercial grounds in view of the lack of marketability of these assets.

(c) Management Constraints

The investment powers of the Corporation are set out in its governing Act and are similar to those previously granted to the State Superannuation Board and are subject to similar but more severe restrictions.

Management of the total portfolio has been severely limited by holdings of less marketable and non marketable assets which have been purchased partly on the basis of social and political considerations. A representative of the Corporation has advised that, as a result of a deficiency in internal investment expertise, an external investment advisory group has recently been commissioned to enable the effective pursuit of maximum investment returns.

(d) Investment Policy and Strategy

Overall investment policy was set by the Builders Licensing Board in 1978 when it adopted an asset distribution with equity/debt ratio of 52/48 (shares 12%, property 40%, Council loans 25%, other fixed interest 23%).

The distribution of assets by market value at 30 June, 1981 and 30 June, 1984, is set out in Table 5.14.

TABLE 5.14: Asset distribution of the Building and Construction Industry Long Service Payments Corporation at market value on 30 June.

Asset	1981		1984	
	$M	%	$M	%
Commonwealth, local and semi-government securities	11.7	23	19.7	18
Debentures and mortgages	8.4	16	36.9	33
Short term fixed interest and cash	8.7	17	24.1	22
Shares and convertible notes	6.5	13	6.5	6
Property	16.0	31	23.6	21
Total	51.3	100	110.7	100

The equity/debt ratio has fallen from 44/56 in 1981 to 27/73 at 30 June, 1984 which is significantly below the IMS averages.

The conditions on company fixed interest and share investments imposed on the Corporation and the high level of "social" and political" loans limit the Corporation's ability to build an appropriate portfolio.

Engaging outside advisors is a positive step but these restrictions will make their contribution less effective.

(e) Investment Performance

Rates of return achieved by the Corporation have been calculated for the three (3) year period to 30 June, 1984, using the formulae approximating time-weighted rates of return set out in Appendix 4. The Corporation's portfolio includes a relatively wide range of investments and it is thus considered useful to show for comparison the IMF results for each sector. These appear in Table 5.15.

TABLE 5.15: Rates of return (% p.a.) for the Building and Construction Industry Long Service Payments Corporation and for IMS Funds

	Year ended 30 June			3 years to 30 June 1984
	1982	1983	1984	
Corporation	7.4	21.6	20.7	16.4
IMS averages:				
All assets	-2.9	26.3	14.2	12.0
Government (fixed interest)	8.2	22.7	20.1	16.8
Shares	-27.3	37.6	6.6	2.6
Property	16.1	18.4	20.8	17.1
Other assets	13.5	20.3	14.8	16.2

Over the three years the Corporation achieved a much better return than the average IMS fund. This was largely due to the Corporation's relatively small share investments which returned a mere 1.6% to the average IMS fund over the period and a drastic minus 27% in 1982.

As pointed out earlier, although share returns fluctuate widely, they have performed well over longer periods. In the absence of figures for the earlier years it is likely that, because of its lower equity/debt ratios, the Corporation may then have produced below average IMS returns.

5.3.5. The Coal and Oil Shale Mine Workers Superannuation Tribunal

(a) Nature of Funds

The Tribunal maintains a fund for the payment of superannuation benefits to employees within the coal mining industry. The fund's major benefits are based on years of service and a prescribed amount which increases from time to time by some measure of indexation. The appropriate investment asset mix for this fund will comprise a balanced proportion of equity and debt investment.

(b) Investment Objectives

Investment objectives of the fund are based on the maximisation of investment returns.

(c) Management Constraints

The investment powers of the Tribunal in relation to the fund were restricted by legislation to authorised trustee investments which primarily include Government guaranteed debt securities, mortgages of New South Wales property and Bank and Building Society deposits.

Since 23 December, 1983 the Tribunal's investment powers were substantially freed from restriction subject to 30% (at cost) of the fund being invested in public securities and a limitation that at no time should the portfolio include any one particular asset (other than a public security), the cost of which was more than 5% of the cost of the total portfolio. In addition, the Tribunal is now able to appoint an independent investment manager.

Investment management has been undertaken by the Tribunal's accountant in conjunction with the Registrar. The absence of special investment expertise originated in the relatively low level of investment funds held (i.e. 30 June, 1981 $17.9 million) which could not justify the employment of advanced levels of expertise. In any case the severely limited investment powers of the Tribunal left little scope for active management of funds.

(d) Investment Policy and Strategy

During the three (3) years to 30 June, 1984, fund assets were invested in fixed interest securities. The distribution at market value was as set out in Table 5.16.

TABLE 5.16: Distribution of assets of the Coal and Oil Shale Mine Workers Superannuation Tribunal at market values at 30 June

Asset	1981		1984	
	$M	%	$M	%
Securities of Public Authorities	8.9	50	31.3	72
Term Deposits	2.5	14	3.0	7
Deposits and cash	6.5	36	9.2	21
Total	17.9	100	43.5	100

The Tribunal's portfolio exhibits a minimal level of diversification and reflects the limitations imposed on the investment powers of the Tribunal prior to 23 December, 1983. These have caused it to adopt a passive investment policy.

Although a significant level of equity investment would have been considered commercially desirable given the nature of the funds, no amount of equity investment has been undertaken. Prior to

23 December, 1983 it was prohibited by legislation. Subsequent to 23 December, 1983 the Tribunal held the power to place funds in the equity markets. However, it has not yet done so as it has not obtained the necessary investment expertise.

(e) Investment Performance

Rates of return achieved by the Tribunal over the three year period to 30 June, 1984, using the approximate formulae in Appendix 8, are set out in Table 5.17. As the Tribunal's investments have been confined primarily to government backed fixed interest securities, comparison has been made with the average IMS "Government fixed interest" sector performance.

TABLE 5.17: Rates of return of The Coal and Oil Shale Mine Workers Superannuation Tribunal compared with IMS Fund ratios (% p.a.)

	Year ended 30 June			3 years to 30 June 1984
	1982	1983	1984	
Tribunal	9.0	20.6	22.8	17.3
IMS Government fixed interest	8.2	22.7	20.1	16.8

The Tribunal's results are broadly consistent with the IMS Government fixed interest sector average during the period.

The three years 1982-84 are thought to be an unusual investment period with high fixed interest returns and low share returns. The average IMS fund showed negative returns on shares in the calendar years 1982 and 1984 but a positive 57% return in 1983. With the share market now at record levels, another high return on share investments can be anticipated for 1985.

It can be seen from IMS figures in Appendix 7 that in the seven years to 30 June, 1984 shares and property returned 19.4% and 18% compared with only 11.8% for Government fixed interest. As the Tribunal's investments have been largely in Government fixed interest securities, and have matched the returns in the IMS Government fixed interest sector,it must be expected that the Tribunal's results over the longer term would have been below the average obtained by IMS funds on all their assets.

The Tribunal would no doubt have performed better in the longer term had it not been restricted in its investment powers, and if it had had access to the necessary investment skills. However the powers have now been broadened and the Committee has been advised that the Tribunal now intends to appoint two professional investment management groups to manage its portfolio from 1 July, 1985.

5.3.6. Government Insurance Office of New South Wales - Motor Vehicles (Third Party) Insurance Fund

(a) Nature of Funds

The Motor Vehicles (Third Party) Insurance Fund is maintained to satisfy future third party motor vehicle insurance claims of the owners of motor vehicles registered in New South Wales. The assets of the fund have in the past been required to match by maturity date the future estimated claim payments. These have had a mean term of four to five years with only approximately 20% of liabilities being longer term. (This is in contrast to a superannuation fund which has predominantly long term liabilities).

There is some doubt about the future growth of the fund as premium rates have been set on social/political as well as commercial grounds. Inadequate premium levels may cause the fund to be run down. It is therefore necessary to invest a high proportion of funds in assets that are short term or highly marketable with a portion of funds in equity investments to hedge against the effects of inflation on the longer term liabilities.

(b) Investment Objectives

Apart from maximising the value of the fund, it has been acknowledged that there have existed certain social objectives which have been pursued by the Office through its investment activities. This has only recently been clarified, and the Office stated that in the early 1980's:

> "Fund investment objectives were unclear, although it was understood that, like G.I.O. itself, it had both social and commercial objectives".

During 1984 the social component of the fund was identified and the fund was divided into separate "commercial" and "social" investment portfolios representing approximately 65% and 35% of the total fund respectively. The social investment portfolio includes direct and indirect housing loans, together with long term loans to government Authorities. The majority of these assets are not marketable.

(c) Management Constraints

Unlike most government Authorities, the Office does not have severe legislative restrictions imposed on its investment powers. However, the flexibility of management is limited by the large holdings of unmarketable assets representing the social investment portfolio and by the potential liquidity requirements of the fund arising from the grounds upon which premiums are set.

The Office has acknowledged deficiencies in the levels of investment expertise held during the last five years stating with reference to the early 1980's that:

> "Internally, investment management skills were limited, ..."

and

> "... low staff morale reflected many ... environmental factors and with salaries substantially below market rates, staff turnover was high".

Limited levels of investment expertise at management level allowed little authority to be delegated from Board level thus detracting from the efficiency of the decision making process. In this respect the Office has stated that:

> "The investment decision making process was time consuming and cumbersome with virtually all matters of consequence required to be submitted to the Investment Committee of the Board, or if the issue fell outside established guidelines, to Treasury".

(d) Investment Policy and Strategy

The distribution by sector of fund assets at market value is set out in Table 5.18.

TABLE 5.18. Distribution of assets of GIO Motor Vehicle by Market Value at 30 June

Year	Shares %	Property %	Government Fixed Interest and others %	Total Value $M
1982	1	2	97	1120
1983	1	2	97	1378
1984	3	2	95	1525

As previously outlined 35% of the total fund represents the social investment portfolio comprising primarily unmarketable direct and indirect housing loans (45%) and long term loans to government Authorities (55%). This social portion of the total fund is necessarily subject to passive management.

The commercial portfolio (65%) has been represented by marketable government and corporate fixed interest securities, together with nominal but increasing levels of share and property assets. A policy of active management has been adopted for this portfolio.

The funding of the liabilities changed from 1 July, 1984 to a "pay-as-you-go" basis whereby current claims will be met from the current investment income and premium receipts. The need for the fund to match claim payment liabilities ceased and the new long-term policy is to eventually attain "an approximately equal balance of fixed interest and equity (including property) investments".

(e) Investment Performance

The necessary data was not available to enable an accurate assessment of the past investment performance of the Office to be made.

The G.I.O. has calculated the following rates of return for the fund using annual market valuations and the approximate method described in Appendix 8.

As a result the rates are only roughly comparable.

TABLE 5.19 Rates of Return of G.I.O. Third Party Fund and IMS rates (% p.a.)

Year to 30 June	Third Party Fund % p.a.	IMS Government Fixed Interest Average % p.a.
1980	3.4	5.0
1981	5.0	7.2
1982	5.9	8.2
1983	24.2	22.7
1984	18.9	20.1
5 years average	11.2	12.4

The results of the Office are marginally lower than the IMS "Government fixed interest" sector average as might be expected with the restrictions imposed by the social portfolio.

Recently the office has

(a) strengthened its Investment Committee (responsible for policy and strategic issues) by the addition of senior management and non-executive directors;

(b) increased delegation so that decisions are taken by specialist managers with close market contact; and

(c) established management systems so that investment performance is monitored, investments reviewed on a regular basis and cash flow projections considered in the investment process.

These changes combined with a long term objective of a 50/50 equity/debt ratio should improve investment performance significantly.

5.4. Overview of performance

If the investment authorities had subscribed for some years to one of the investment performance surveys or if they had taken steps to monitor their own performance as a guide to management, any deficiencies in performance would have been detected some time ago and traced back to the ultimate cause e.g. investment policy, legislative restrictions, lack of investment expertise. Some idea of the cost to the fund of these problems might have been obtained and used to effect changes. In fact, in no case was this effective monitoring carried out, despite in many cases very large funds being involved. It is not possible to reconstruct past cash flows and past market values of assets, and accordingly the Committee was not able to get a precise picture of the long term performance of funds; yet it is in most cases the long term performance which is of importance.

In subsection 5.3 such information as was available was commented on for each authority separately. The following is a brief summary of what appears to have been the recent performance.

N.S.W. Superannuation Fund	Over 5 years consistent with IMS average performance of large funds. Exceeded IMS average performance in the year to 30 June, 1984 by a considerable margin.
Local Government Superannuation Fund	Share investment results very favourable over last 5 years. Other sectors consistent with IMS average.
N.S.W. Retirement Board	No results available.
Building and Construction Industry Long Service Payments Corporation	Better than IMS average over the last 3 years.
Coal and Oil Shale Mine Workers Superannuation Fund	Consistent with IMS Government Fixed Interest.
GIO Third Party Fund	Marginally lower than IMS Government Fixed Interest.

As pointed out earlier, the period 1982-1984, for which most information was available, was an unusual period for investment. It was a period during which private sector funds, with what has proved in the long term to be a good distribution of assets, did relatively poorly, and funds with a conservative risk-free portfolio did relatively well. It is not surprising then that the public sector funds, which by their asset distributions would be placed in the conservative category, have performed over this short period more or less in line with average IMS funds.

All funds have held what might be considered to be a low percentage of their assets in equity type investments. Since these have been shown to have been the best performing sectors over the long term (see Appendix 7) it must be assumed that the past performance of the public sector investment authorities over the long term would have been improved by holding a higher proportion of equity investments.

The Committee makes this conclusion despite the fact that in some cases the performance has been in line with the average IMS fund and occasionally better.

There is evidence to suggest that in the last year or two public sector funds have become aware of the importance of investment performance and of the factors which impair that performance. For example,

- there has been some relaxation of restrictions on investment
- funds have deliberately increased their equity/debt ratios
- the cost of "social" investment is increasingly being recognised
- some funds have taken steps to monitor their investment performance
- there is a new awareness of the importance of investment expertise, indicated by some small funds employing private sector consultants, the G.I.O. strengthening its Investment Committee and the large funds recognising that they have a staff problem.

These are all favourable trends, but there is still a fair way to go if public sector funds are to establish a level of long term performance equal to the private sector. It can be seen from Table 5.20 that, despite their increase in equity/debt ratios in the last couple of years, public sector funds are still heavily weighted with government and other fixed interest securities and light on shares. Although the equity/debt ratio of some funds should not match that of superannuation funds because of the different nature of their liabilities, it is still generally true that share holdings - at the appropriate time - should be increased.

TABLE 5.20 Sector asset distributions of selected Authorities and IMS funds at 30 June 1984 at market values

Authority	Equity/debt ratio	Shares %	Property %	Govt. Fixed Interest & Others %
Coal & Oil Shale Super-annuation Tribunal	0/100	0	0	100
NSWRB	25/75	1	24	75
G.I.O. Motor Vehicle Third Party	5/95	3	2	95
Building & Construction LSP Corp	27/73	6	21	73
SSB	38/62	13	25	62
LGSB	45/55	14	31	55
IMS-Pooled Funds (discretionary)	68/32	36	32	32

5.5. Legislative Restrictions on Investment Powers

These restrictions have limited the ability of fund managers to build and actively manage a properly diversified portfolio of assets.

The Committee notes the changes in the restrictions placed on the investment powers of the Coal and Oil Shale Mine Workers Superannuation Tribunal (23 December, 1983), the Public Authorities Superannuation Board (1 May, 1985) and those to become effective for the State Superannuation Board (1 July, 1985).

The restrictions which remain should receive close scrutiny to see if they are still justified.

The above three funds are still required to invest 30% of funds in government securities. The Committee considers this restriction to be inappropriate, particularly since the 30/20 rule applying to private sector funds has been abolished.

Suggestions were made earlier in this report for some relaxations in the case of service authorities. The Building and Construction Industry Long Service Payments Corporation is limited in its share and company debenture investments to companies which have satisfied certain profit, dividend and earning rate criteria over the past 5 or 10 years. Other authorities not studied by the Committee may be subject to restrictions not now necessary.

5.6. Investment Objectives

The investment policy of some authorities has included significant levels of investment with social/political objectives. These include a high level of support for government borrowings, private loans to semi-government bodies, councils and hospitals and housing loans.

These are largely less marketable or non-marketable; they reduce returns, reduce investment flexibility and reduce the managers ability to match liabilities with appropriate assets. They make it more difficult to achieve the desired equity/debt ratio.

The pursuit of social and political objectives through investment support involves a sacrifice of investment returns. It is not the role of the Committee to comment on the merits or demerits of such a policy. It should point out however, that it is very difficult, if not impossible, to assess the full effect such a policy has on investment returns, and it does place such fund managers in a less competitive position when comparing their performance with private sector managers.

5.7. Investment Expertise

Evidence provided at hearings before the Committee indicated a lack of investment expertise within the superannuation fund managers at Board level. This has been attributable to the absence of a requirement for investment expertise being incorporated into the framework for the appointment and election of Board members.

The members of the Board ultimately determine investment policy and it is essential that a fundamental level of investment expertise is held at Board level. (Refer to Appendix 11(1) and (r). Although Boards in determining policy usually rely to a significant extent on the recommendations of senior investment management personnel, they undertake the ultimate responsibility for their organisation's operations and hence it is essential that they are in a position to consciously control the destiny of their investment activities.

Specialisation has proceeded in the investment sphere as it has with athletics. Just as no athletes are top performers in both sprints and long-distance races and the pentathlon, so the investment sphere is staffed by persons who because of their personal qualities or experience specialise in specific areas. This matter is discussed in Appendix 13 where it is pointed out that in a large multi-investment corporation there are usually specialist staff in each of the following areas of investment:

- Ordinary shares (usually with separate experts for stock market investments from those engaged in the analysis of major resource projects)
- Property (usually separate experts for rural property and perhaps other property areas)
- Leveraged Leasing
- Private sector fixed interest lending
- Government securities
- Short-term money market

Further specialist staff are required to cover the areas of economic forecasting and marketing investment services to, and discussing investment policy with, clients.

The demand for experts in some of these areas has greatly increased due to the increased availability of superannuation, the growth in the number of fund managers, the introduction of investment performance surveys and the granting of new banking licenses to 16 overseas banks.

Evidence provided to the Committee by public sector Investment Authorities has identified the need for more expert investment staff in certain areas. In this regard the President of the State Superannuation Board stated in evidence before the Committee

> "We need to be able to improve our ability to recruit and retain staff if we are going to be able to maintain our investment operations at their present level. So much has changed over the past few years, at an accelerating rate, that we are getting more money to invest; the investment arena is becoming far more sophisticated and complex."

The difficulty experienced in attracting and retaining the necessary investment personnel is in part due to an inability to offer competitive remuneration packages and partly to the relatively restrictive working environment characteristic of the public sector.

The recent development of the investment markets has resulted in the creation of attractive remuneration packages for quality investment personnel which generally include fringe benefits (in addition to salary) in the form of expense accounts, motor vehicle allowances, overseas travel opportunities and finance at concessional rates. The authorities are not in a position to offer equivalent or competitive alternative packages as their staffing arrangements are under the control of the Public Service Board.

The president of the Public Authorities Superannuation Board stated in reference to this aspect

> "Our difficulty is not so much the level of salary we are able to offer but the lack of ability to offer fringe benefits, such as private use of a motor vehicle and low cost housing loans, which are more or less par for the course in private organisations."

The President of the State Superannuation Board in alluding to this factor stated before the Committee

> "The people are becoming far more expensive because they are being bid up by all new operators that have come into the market. So whereas in the past we might have been able to get along with the restrictions that have been on us in that area, just to be able to do as well as we have been doing on a recruitment basis in the past, in the future we are going to have to have greater facilities to be able to offer them remuneration packages. The higher cost of that

> is insignificant compared with the sort of returns that we are looking at on the funds that we have got. If our ability to improve our recruitment of staff were such that it increased the return from the funds, that would be justified."

A broad indication of the relative remuneration levels offered within the private and public sectors may be derived from the following comparison. The Presidents of the public sector superannuation boards each currently receive * $72,127 per annum, of which 2.5% represents an expense allowance. In the private sector, Principal Portfolio Managers currently receive ** on average $91,626 per annum of which approximately 30 to 40% may be received as benefits and allowances (including superannuation). The two figures are not strictly comparable as the large superannuation component of the public sector has not been included.

The relatively restrictive working environment of the authorities' investment areas is a further deterrent to potential staff members. The factors limiting the scope for active investment management restrict the opportunities for investment personnel to exercise and develop their expertise. The prospect of working with an investment operation which is restricted by legislation and non commercial investment objectives does not appeal to the investment personnel wishing to advance their own position within the industry.

In commenting on the main problem faced by his organisation in attracting the necessary investment staff, a representative of the Government Insurance Office stated

> "The apparent stumbling block is the level of remuneration, but the biggest one (problem) has been the inactivity in the past which one cannot go back and undo."

This was a direct reference to the past lack of emphasis on the investment operations of the organisation. The representative went on to say that originally

> "There was not sufficient commercial purpose for the organisation to want to create a strong investment organisation."

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* N.S.W. Government Gazette No. 170 1984.
** Cullen Egan Dell Australia Pty Limited.

It has become apparent to the Committee that the inadequacies of the public sector investment operations have been born from this original lack of commercial purpose and that the resulting lack of development is a major deterrent to potential investment personnel.

An additional deterrent is the lack of autonomy given to investment personnel at relatively senior levels. This aspect adds to their frustration when attempting to operate in the market place on a competitive basis.

The authorities' investment personnel also endure certain internal practical restrictions not experienced by those in the private sector. An example is provided by the bundy (or time clock) installed at the offices of the State Superannuation Board. Personnel at senior levels are required to explain non adherence to the 9am - 5pm working day. This is totally impractical in an industry which requires extensive marketing activity within business hours and considerable work outside these hours.

5.8. Delegation of Authority

While it is essential for authority for decisions relating to investment policy to be retained at Board level, the power to implement strategy decisions should ideally be delegated to senior investment personnel holding the required expertise who are constantly in touch with the markets and face market-imposed time restrictions in making investment decisions. Discussions between the Committee's advisors and representatives of some fund managers have revealed an inadequate delegation of authority, with limited autonomy.

Senior investment personnel are unable swiftly to implement strategies and may lose to the private sector opportunities for especially attractive investments.

5.9. Performance Monitoring and Reporting

Fund managers have reported "earning rates" in their Annual Reports. These rates are calculated in accordance with legislation specific to each fund. The rates are generally based on book values, do not take unrealised capital gains into account, and ignore cash flows during the year. They are therefore not suitable as a measure of investment performance.

The G.I.O. and the State Superannuation Board both published for the first time their total fund rate of return based on market values in their 1984 annual reports. They are the only public fund managers to do so. No sector rates of return based on market values have been published.

For internal purposes rates of return have been calculated for the last five years by the State Superannuation Board, the Local Government Superannuation Board and the G.I.O., using annual market values and simplified cash flow assumptions. These are useful approximations to the IMS method. More accurate calculations have been made for the State Superannuation Board for 1984 and for the Local Government Superannuation Board for 1983 and 1984.

It is considered essential that the major superannuation funds adopt a common basis of performance measurement. It must allow realistic comparisons with the market; it must serve as a tool to guide management in their decision-making; and it must be suitable for use by fund managers in accounting to those whose funds they are managing.

In this respect the Committee acknowledges the intentions of the public superannuation fund managers to participate in the IMS Survey and considers this will ensure that performance monitoring will be improved and that reporting requirements will be satisfied provided that the IMS sector and total fund results, together with appropriate comparisons, are published in the annual reports of the public fund managers on a duly qualified basis.

The Committee further acknowledges the progress of the Government Insurance Office in monitoring and reporting the investment performance of its Third Party fund. However, it considers that individual sector, in addition to total fund performance, should be published annually on an equivalent basis to the superannuation fund managers which are now to participate in the IMS Survey. The Committee understands that the Government Insurance Office is now in a position to comply, having established its own investment performance measurement service known as PRIMER which employs measurement standards which are fundamentally equivalent to those of the IMS Survey.

The Committee is most critical of the public sector investment authorities for not adequately measuring and reporting their investment performance.

Section 6

Discussion of General Issues and Proposals for Change

6.1. The need for an investment service

Statutory authorities in N.S.W. have large funds for investment. The size of these funds makes it imperative that the best investment advice is made available with efficient systems being developed to enable authorities to gain access to that advice.

The problem is complicated by the fact that many authorities are involved, 10 or so with funds exceeding $100m and many more than that with funds of the order of $10m. Those with funds nearing $1 billion or more can clearly justify the cost of setting up investment departments. However, if their long-term liabilities (superannuation, long service leave) are only a small proportion of the total, the cost of setting up a short term investment operation may well be warranted, but not the cost of setting up share and property departments.

If such complete investment departments are established by a number of the large authorities, this proliferation of investment operations within the public sector will add to the competition which already exists for expert staff, and exacerbate the staff problem which now exists for the major public sector investment authorities.

In any case there are many authorities with comparatively small funds for investment which cannot justify the cost of employing investment experts and for whom some efficient system for obtaining access to expert investment advice needs to be established.

In an earlier report (Public Accounts Committee Report Number 10 - Report on Superannuation Liabilities of Statutory Authorities), the Committee made recommendations to the effect that the level of funding of the superannuation liabilities of statutory authorities should be increased. It is likely that both large and small authorities will be setting aside funds to meet these liabilities. Being of a long term nature the appropriate investments are to a

large extent shares and property, investments requiring special expertise not generally available within the authorities themselves. It is therefore urgent that an efficient system for providing them with that expertise be established.

The funds requiring investment may be divided into two broad categories, namely:

- funds requiring investment in short term assets such as government securities, bank and Treasury deposits, bank accepted/endorsed bills, commercial bills etc.

- funds requiring investment in long-term assets such as shares and property.

Because these two categories of investment require investment expertise of quite a different type it is possible that the solution for providing expertise to deal with the former way not be appropriate for the latter.

6.2. Matters requiring attention

The Committee has identified the following matters which it considers require attention:

(a) **Restrictions on investment powers imposed by legislation, by the pursuit of social objectives, or by Treasury directives.** These restrictions have limited the ability of some Authorities to invest in the appropriate assets, have reduced their capacity to follow an active investment policy, and have reduced the investment returns which could be achieved. The Committee notes that there have recently been major relaxations of the restrictions on the investment powers of the major investment authorities. Nevertheless it considers that the need for the remaining restrictions, and the restrictions applying to other authorities, particularly the smaller authorities, needs to be established.

(b) **The monitoring and reporting of investment performance.**
The extent to which both service and investment Authorities monitor and report their investment performance is extremely limited. In the case of some service authorities manual rather than computerised information systems has been an inhibiting factor. Appropriate monitoring of performance would have detected any deficiencies some time ago. A high priority must be given immediately to the setting up of systems for monitoring and reporting investment performance.

(c) **The difficulty experienced by the major Investment Authorities in recruiting and retaining investment experts, and the need of other authorities for access to investment expertise.**

All major Investment Authorities have stressed the staffing problems they have encountered in major areas. Smaller Authorities who do not have and who should not be expected to have their own investment experts, have in most cases not sought outside advice. The absence of the best investment advice must affect performance.

(d) **The absence of competition for the investment of authorities' funds.**

Experience in the private sector has shown that competition between fund managers for the investment of clients' funds has been a major stimulus to better investment performance. Compulsion (i.e. the absence of choice as to who is to manage funds, as is now the case with the investment of public sector superannuation contributions) tends to generate inefficiency.

These matters are interrelated and will be considered in an overall context.

6.3. Treasurer's Investment Advisory Committee

It is recommended that a committee be established to provide investment advice on a continuing basis to the Treasurer of New South Wales. This Committee should comprise representatives from Treasury

and other areas of the public sector and persons from the private sector selected on the basis of a high level of expertise in the funds management area in Australia. The functions of this Committee would include the following:

(a) **To review the investment powers of every authority and recommend appropriate investment charters.** The Committee recognises that if an authority has inadequate investment expertise, its powers to invest need to be limited. However, if recommendations later in this report are adopted and access to appropriate investment expertise is made available, the investment powers of many authorities may need to be widened. The Committee is particularly concerned that funds set aside to meet superannuation liabilities should not be invested in inappropriate short-term securities because of restrictions on investment powers.

(b) **To advise on use of external consultants by individual authorities.** Some smaller authorities have already engaged outside consultants. Later in this report the Committee encourages their wider use by authorities. Another role for the proposed committee would be to advise authorities in the choice of consultants or perhaps to establish a panel of approved consultants. The committee would need to be satisfied as to the quality of investment advice being obtained before granting an authority a wider investment charter.

(c) **To advise on performance monitoring and reporting.** The Committee has already expressed its view that a consistent system of measuring authorities' investment performance should be established and that there should be annual public reporting of that performance. The proposed committee should advise on the technical aspects of any suggested system of monitoring and reporting.

6.4. Monitoring and reporting of investment performance

The steps already taken in this regard by some of the investment authorities were noted in paragraph 5.9. The need for an accurate and consistent measurement formula both as a guide to management and for public reporting was also dealt with in detail in paragraph 4.8 and 5.9 and therefore is not repeated here. The proposed committee to advise the Treasurer should approve the final arrangements.

The Committee recommends that regulations be gazetted under the Annual Reports Act requiring all authorities to report on their investment performance, measured on an appropriate market valuation basis, in their annual reports including appropriate comparisons drawn from both the public and private sector.

6.5. Access by service authorities to investment expertise

The Committee recognises that the primary role of the service authorities is to provide service to the community (i.e. sewerage treatment, electricity supply, road building, etc.) and not to be experts in all areas of investment. It would not be possible to match the private sector by acquiring such experts, nor would it be desirable for even the larger authorities to seek to build up investment departments and thus add to the competition within the public sector for such staff.

The Committee recommends that authorities be given the power to use, and be encouraged to use, private sector consultants and/or private sector fund managers in the investment of both their short-term and their long-term funds. The number of such professionals available, and the high level of competition which exists, should enable authorities to obtain good returns on their funds. With monitoring of performance an authority could always change advisors and/or fund managers if it considered higher returns would be obtained by doing so.

Because private sector fund managers already have a number of clients and therefore established systems, computer facilities, expert staff, office premises etc., the extra costs which they incur with an

additional client are marginal. The charges for funds management are therefore not excessive and certainly less than the extra returns likely to be achieved by their use. It is interesting in this connection to note that one well-known long-established life office (M.L.C. Ltd) with funds of about $2 billion has recently decided to disband its investment department and use outside professional fund managers.

The question of whether a further alternative should be provided, namely some form of organisation within the public sector, will be considered later in this section.

6.6. Staff problems of large investment authorities

The problems faced by the larger investment authorities in recruiting and retaining specialist staff were detailed in paragraph 5.7. The view was strongly put to the Committee that key investment personnel of the public sector should be excluded from the parameters of the Public Service Board and remunerated at market levels with competitive remuneration packages which include a wide range of fringe benefits. It was suggested that they might act in a consulting capacity under separate management contracts.

The Committee does not favour this proposal. It ignores the practical realities of the working environment of a multi-function statutory authority. A situation where investment experts receive greater remuneration than the chief executive seems not to be tenable. Similar arguments for special treatment, when private sector demand forces remuneration up, have applied to other groups in the past (e.g. computer specialists, actuaries) and will no doubt apply in the future. The Committee considers the problem has to be handled within the Public Service structure. A possible solution involving the centralisation of investment operations will be considered later.

The Committee is of the view that the major deterrent to investment staff is the working environment. The legislative restrictions and non-commercial investment objectives have limited the scope for active investment management and hence restricted the scope for

investment personnel to exercise and develop their expertise. The fact that these investment authorities do not have to compete for their investment funds, and the fact that there has been negligible performance reporting has led to a lack of commercial purpose. A further deterrent is the limited authority given to investment personnel at relatively senior levels preventing them from operating effectively in the market place on a competitive basis. Also, investment staff like to work in an environment where it is possible for them to develop the full range of investment skills. These are other problems which need to be tackled and the Committee suggests later that they may be more easily solved by a centralisation within the public sector of investment operations.

6.7. Alternative Investment facilities within the public sector

The Committee believes that the investment performance of service authority funds will be improved if the investment powers of service authorities are appropriately broadened, if they are authorised and encouraged to use private sector consultants and/or fund managers and thus take advantage of competition, if they are required regularly to monitor and report their investment performance, and if an appropriate committee is set up to advise the Treasurer on these operations.

However, the question remains as to whether there is a case for setting up some central facility for handling short-term and/or long-term funds for both service and/or investment authorities. There are several possibilities to be discussed.

6.7.1. Use of New South Wales Treasury Corporation for short-term funds

The N.S.W. Treasury Corporation, in addition to its borrowing function, currently offers a short-term investment facility to authorities for the investment of undrawn loan funds and cash flow surpluses. The actual investment of these funds is carried out by the Funds Management Section of the N.S.W. Treasury. The Corporation thus has the necessary experience, personnel, computer

and other equipment and should be able to take over the management of short-term funds with a minimum of delay and with few complications.

As compared with the setting up of a new and separate organisation for the management of short-term funds, the use of the Corporation would have economies of scale, would avoid unnecessary duplication of effort, and would provide a more efficient use of limited public sector investment resources.

This proposal should only be considered however if the facility is established as an entity quite distinct from Treasury. It would need to be free from legislative restrictions and "social" objectives and have its investment operation completely separated from its central borrowing function.

Even if Treasury Corporation were to be available as a manager of short-term funds, the Committee considers the option to use private sector managers should still be available to the authorities. Compulsion tends to generate inefficiency. However, the authorities could be compelled to seek quotations from the Corporation when seeking to place funds or purchase securities.

There are some problems with this proposal. One is that the basic purpose of the Corporation is to centralise public sector borrowing activities within New South Wales. It therefore seeks to minimise the costs of borrowing. In the proposed investment function it would seek to maximise the return on the investment of funds. The investment function would have to be at arms length from the borrowing function, and to minimise the conflicts which could arise in dealings with the public, the two operations would need to be quite separate. Whether adequate separation can be achieved within the one organisation is subject to question.

With the high level of competition which exists between the private sector fund managers with which the Corporation would have to compete, it remains to be seen to what extent authorities would chose to use the Corporation's services. Much would depend on its ability to perform.

Staffing could be a problem. The staff required for such an operation must be dealer oriented. These are not the kind of people who look to the public service as a career. Also, the limited investment environment as compared with (say) a merchant bank might deter staff who wish to develop a full range of investment expertise.

6.7.2. A Central Investment Authority for short-term funds

Because of the possible conflicts which could arise with the use of the Treasury Corporation, a proposal was put to the Committee that an independent Central Investment Authority for the investment of short-term funds be set up within the public sector. The creation of a new body would require the identification of a suitable location, the recruitment of investment resources and expertise of the highest order, and the implementation of an appropriate management structure. It would need to be able to operate on a strictly commercial basis within the market place and have appropriate investment powers.

The costs for establishing a new body created to manage short term funds have been estimated at approximately $700,000 and the annual operational cost $380,000 plus rent. (See Appendix 9). This is based on the assumption that $260,000,000, representing 20% of the estimated short term public sector funds of $1.3 billion, came under the management of the new body.

As demonstrated in Section 4 incremental returns of 0.5% p.a. can reasonably be expected from active management. The additional return on a fund of $260,000,000 on this basis amounts to $1,300,000 which is clearly in excess of initial establishment and annual operational cost.

The costs of setting up an establishment within Treasury Corporation would of course be less. The Committee believes that costs would also be less if private sector fund managers were used.

The reason the private sector is able to perform the functions at a low cost is that they already have the necessary staff, computer facilities, space, systems, etc and the marginal cost of providing service for another client is quite small, the overhead costs having been covered.

The amount of business likely to flow to the proposed authority rather than to the private sector is unknown. Staffing with dealer oriented staff could again be a problem, and the proposal would add to the competition for investment experts within the public sector.

Considered alone the Committee does not believe that the contribution which would be made by such a Central Investment Authority justifies its establishment.

6.7.3. A Central Investment Authority for long-term funds

A number of statutory authorities have long service leave funds, superannuation funds and other funds requiring substantial investment in long term assets such as property and shares. The increased funding of superannuation liabilities is likely to increase the size of such funds.

It might be thought that a possible solution could be to place such funds with one of the major investment authorities such as the State Superannuation Board who already have the necessary expertise, and should therefore be able to invest them at minimum cost.

The Committee does not support this solution because of the possible conflicts which could arise. Investment proposals which come before major institutions are not all of equal attraction. If it were to be managing its own fund (the State Superannuation Fund) and other funds as well, the Board would find a conflict in deciding to which fund a particularly attractive investment should be allocated. Also, it would also be subjected to criticism, however unwarranted, if some investment which subsequently failed had turned out to be held by an outside fund and none of it by the

State Superannuation Fund itself. There would be charges of preference. There would certainly be some funds under its care which, when their performance was monitored, turned out to be performing less well than the State Superannuation Fund.

The Committee therefore rejects the use of the major investment authorities as a possible manager of these long-term funds.

In fact, in view of the importance of competition to performance and the tendency for compulsion to generate inefficiency, the Committee is concerned that employers are compelled by legislation to fund a part of their superannuation liability with a specific investment authority. Not only does the Committee not favour other authorities placing their long-term funds with the major investment authorities, but it considers the legislation should be amended to permit authorities a choice of manager of the superannuation funds set aside to meet the employers' share of the superannuation liability. In other words the public sector superannuation fund managers should be made to compete with the private sector for the management of employers' funds. The superannuation fund managers would retain 100% of the employees' contributions to invest.

If then a facility for investment of long-term funds is to be provided within the public sector, the merits of establishing a Central Investment Authority for that purpose need to be considered. It would require staff to handle the full range of long-term investments, including shares, property, resource projects, debentures, convertible notes and the many specialist types of investment. The setting up problems would be great. It would be many years before it could develop a full range of expertise. It would compete with other public sector managers for specialist staff which are in short supply. There could well be a reluctance to use it in preference to private sector managers with a good track record, and there would therefore be some doubt as to whether it would grow to a viable size within a reasonable period.

The Committee therefore favours the approach outlined in the next paragraph.

6.7.4. State Investment Authority

The Committee recommends the setting up of a State Investment Authority to provide a complete investment service for all Statutory Authorities. It would be formed by separating the investment operations of the State Superannuation Board and the Public Authorities Superannuation Board from their other activities and combining these with the Central Investment Authority for short term funds discussed in paragraph 6.7.2 to form an investment authority providing a full range of investment services. All Authorities (including the Superannuation Authorities in respect of employees' contributions), would be its clients. It is expected that the G.I.O. and the State Bank would not choose to avail themselves of this facility given their special investment roles. It would act like any private sector fund manager and would compete with them.

Funds under control would probably be of the order of $5 billion. This is less than one half those of the AMP Society, less than the assets of the National Mutual Life (over $6 billion) but more than the Colonial Mutual Life (over $3 billion) and the Mutual Life and Citizens (over $2 billion). Australian Guarantee Corporation has assets of about $6 billion. The State Investment Authority would thus be an investment institution of some standing. It would not have the marketing activities of the life offices; it would be limited to N.S.W. and would not have branch networks to control. It would be a specialist investment house of some standing and should therefore attract major investment opportunities.

The Chairman and the members of the Board would be selected for their investment expertise. The senior management would be at a high level in the public service, and it should be possible to compete effectively with the private sector to fill senior positions in such an authority. With all avenues of investment

covered, both short-term and long-term, it should provide a good training ground for young officers aiming to become investment experts.

The staff problems now experienced by the public sector superannuation funds are only exacerbated by having to compete with one another. This proposal would not only eliminate this competition; it would eliminate unnecessary duplication.

With staff of this calibre the necessary delegation of authority should be possible providing effective competition with the private sector. The development of the necessary commercial environment should be possible.

A facility for the investment of short term funds, while not recommended as a separate entity for reasons given earlier, would be a useful section of an institution providing the full range of investment services and would fulfill an existing need.

Having to compete with the private sector for employer funds will encourage better investment performance.

The Treasurer's Investment Advisory Committee recommended in paragraph 6.3 would give guidance in the steps involved in setting up the State Investment Authority.

6.8. Split Funding

Statutory Authorities would have the choice of using one or more managers and the choice of the public or private sector or both. There are advantages too in split funding i.e. dividing the responsibility for investment of funds between two or more managers. Advantages of split funding include

- The Fund does not depend on the performance of one manager,
- the trustees can use different managers thought to have special expertise in particular investment sectors (i.e. one with superior property investment expertise and another specialising in share market investment),

- it places pressure on each manager for good performance, and
- it enables the technique and expertise of the two or more managers to be compared.

6.9. Overall Conclusion

The Committee is of the opinion that Statutory Authorities, given the necessary investment powers, and with the choice of private sector managers and/or the proposed State Investment Authority, should be able responsibly to invest their large funds most effectively.

APPENDIX 1

New South Wales Public Authorities Holding in Excess Of $10,000,000 of Investment Funds As At 30th June, 1984 or at the balance dates of Authorities immediately preceding that date

		$000's
1.	State Superannuation Board	2,722,564
2.	Government Insurance Office	2,456,140
3.	State Bank	1,201,510
4.	Public Authorities Superannuation Board -	
	. Local Government Superannuation Board*	1,013,500
	. New South Wales Retirement Fund*	411,565
5.	Metropolitan Water Sewerage and Drainage Board	774,989
6.	Electricity Commission	597,181
7.	New South Wales Treasury Corporation	251,042
8.	Public Trust Office	240,238
9.	University of Sydney	145,581
10.	Rental Bond Board	127,893
11.	Building and Construction Industry Long Service Payments Corporation	93,178
12.	Maritime Services Board	91,027
13.	State Rail Authority	86,923
14.	Hunter District Water Board	83,770
15.	Department of Main Road	74,884
16.	University of New South Wales	68,313
17.	Insurance Premiums Committee	54,700
18.	Totalizator Agency Board	52,492
19.	Grain Handling Authority	44,938
20.	Coal and Oil Shale Mine Workers Superannuation Tribunal	42,122

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*At 1st April, 1984 the operations of the Local Government Superannuation Board and the New South Wales Retirement Board were merged to form the Public Authorities Superannuation Board.

21.	Council of Auctioneers & Agents	37,731
22.	Department of Environment & Planning	24,263
23.	Macquarie University	23,408
24.	Land Commission of New South Wales	21,878
25.	Metropolitan Waste Disposal Authority	21,829
26.	University of New England	21,491
27.	Workers' Compensation Commission	19,509
28.	Builders Licensing Board	18,785
29.	Housing Commission of New South Wales	16,261
30.	Sydney Cove Redevelopment Authority	15,720
31.	University of Newcastle	15,297
32.	Parliamentary Contributory Superannuation Fund	14,680
33.	New South Wales Dairy Corporation	14,501
34.	Mine Subsidence Board	13,300
35.	New South Wales Institute of Technology	12,967
36.	University of Wollongong	11,503
37.	Sydney College of Advanced Education	11,466
38.	Macarthur Growth Area	10,089
	TOTAL	10,959,228

Distribution of investment funds held as at 30 June, 1984 or at the balance dates of Authorities immediately proceding that date.

Funds held by each Authority ($ Mill)	Number of Authorities
In excess of 1000	4
100 - 1000	6
10 - 100	28
	38

Comparing rates of return and the need for investment performance measurement to be independent of the timing of cash flows.

For the purpose of comparing investment performance between funds, a rate of return should be as far as possible independent of the timing of cash flows. This is because these are usually not within the control of the investment manager. To consider a simple example, suppose that over the same year two investment managers (A and B) invest only in the same security. The price of the security is $1 per unit at the commencement of the period. At the end of the first half-year the price has not altered but in the second half-year the price increased to $1.10 per unit. The security is one where income is accumulated, i.e. there is no dividend during the year.

We have said that the two managers have each invested only in the one security. So if their rates of return over the year are measured, the same results should be obtained. But consider a simple form of "rate of Return" formula:

$$\frac{\text{income}}{\text{capital invested}}$$

If a manager A has had no cash flow over the year his/her "income" is 10% of the invested capital at the beginning of the year. His/her rate of return is plainly 10%.

However, suppose manager B had an initial $100,000 invested at the beginning of the year and received a further $100,000 invested at the end of the first six months. His/her "income" is 10% of $200,000 = $20,000 and the average amount of his/her invested capital is $150,000 ($100,000 for a full year, plus a further $100,000 for a half-year). Thus manager B's rate of return by the "simple" formula comes out at 20,000/150,000 = 13 1/3%. A comparison of the rates of return calculated by the formula given above would therefore suggest that manager B had out-performed manager A but this conclusion is invalid. Manager B happened to have had a cash sum to invest at a favourable time for investment (i.e., at the commencement of a period where the price of the security commenced to appreciate). Manager A did not.

Rate of Return Formulae

In the above example "rate of return" was merely expressed as the ratio of investment income to the average value of the assets of the fund over the period. The rate of return is usually calculated by the formula:

$$R = I - \tfrac{1}{2}(M_1 + M_2 - I) \quad \ldots\ldots\ldots\ldots (1)$$

Where R is the rate of return for the period

I is the investment income over the period

M_1 is the market value of the assets of the fund at the beginning of the period

M_2 is the market value at the end

This formula assumes that cash flow occurs evenly over the period, that interest does not compound within the period and that the rate of return is constant within the period. "I" is not normally easy to determine from the data available, but it can readily be calculated from the relationship

$$M_2 = M_1 + C = I$$

where C is the net cash flow available for investment

$$\text{i.e. } I = M_2 - M_1 - C$$

substituting in formula (1) given in this paragraph leads to the formula

$$R = (M_2 - M_1 - C) - (M_1 + \tfrac{1}{2}C) \text{.....(2)}$$

Period of Calculation

Formulae (1) and (2) should only be used to calculate rates of return for short periods. Over long periods the implicit assumption of a constant rate of return during the period is likely to be quite inaccurate, leading to significant errors in comparisons between investment managers.

In practice, therefore, the period used is as short as possible, limited only by the convenience of producing the necessary data and, more importantly, by the expense of calculating market values of the investments at frequent intervals. The most common frequency of measurement is probably quarterly, but in this case, a refinement is often introduced into formula (2) by obtaining separate values of C for each month of the quarter. The demoninator of formula (2) then becomes

$$M_1 + 5/6\ C_1 + \tfrac{1}{2}\ C_2 + 1/6\ C_3$$

where C_1 = cash flow in first month

C_2 = cash flow in second month

C_3 = cash flow in third month

It is important to note that this refinement deals with only one inaccuracy in formula (2). The other two, noted in Rate of Return Formulae, remain.

In previous paragraphs, formulae were given for the calculation of rates of return for short periods, such as quarter-years. For purposes of comparison of rates of return with objective standards, or with the rates of return earned in other funds, values of rates of return over longer periods are required. To calculate such values, the rates for the several shorter periods (called "sub-periods" in what follows) must be linked and (normally) converted to an equivalent annual rate. The constituent rates may be linked geometrically and the resulting overall rate is referred to as the "time-weighted rate of return".

Time-Weighted Rate of Return (TWRR)

An "ideal" definition of the TWRR is the weighted average of rates of return for the sub-periods between each cash flow with each weight being only the length of the corresponding sub-period. A strictly accurate calculation of the TWRR therefore requires a valuation of the assets of the fund on each occasion the investment manager receives cash for investment and each time he/she needs to realise an investment to obtain the cash for a benefit payment. In practice, compromises must be made in the interests of economy and the TWRR over a period is usually approximated by first obtaining the rate of return for suitable sub-periods (usually quarter-years) and then linking the results giving the rate of each sub-period equal weight.

The method of linking almost universally adopted is to multiply together the values of $(1 + r)$ for each of the n sub-periods concerned and then to take the nth root of the product. If the sub-periods are quarters, the nth root gives the average per quarter. The $(n/4)$th root gives the average annual figure.

As an example of this process consider the following series of quarterly rates of return per cent:

1.3, 8.5, 2.6, -0.4

The product 1.013 x 1.085 x 1.026 x .996 is 1.123, so the equivalent annual rate is 12.3%.

Source: "Investment Performance Measurement" (No. 9 July, 1977)
- issued by the Association of Superannuation Funds of Australia

Summary of the IMS System

The IMS System calculates, for each fund, performance indexes known as "time-weighted" rates of return. Quarterly rates are calculated taking the ratio of investment income (including realised and unrealised capital appreciation and depreciation) to the starting value of the fund plus cash flow during the period, allowing for the average period for which the cash flow is invested. Over longer periods the "time-weighted" rates are calculated by compounding together the quarterly rates, giving each quarter equal weight. The quarterly data provided by participating portfolio funds is generally as follows:-

M_1 = Market value of the assets of the fund at the beginning of the quarter of the year

C_1 = cash flow in first month

C_2 = cash flow in second month

C_3 = cash flow in third month

M_2 = Market value of the assets of the fund at the end of the quarter year

The IMS calculation of the rate of return for each quarter is

$$Q = \frac{M_2 - M_1 - (C_1 + C_2 + C_3)}{M_1 + 5/6\ C_1 + \frac{1}{2}\ C_2 + 1/6\ C_3}$$

The rates of return for periods of one (1) year of more as shown in the IMS Survey Report are calculated by the time-weighted method from quarterly rates, which are not shown in the Report. That is, the rate for one (1) year is calculated by the formula:-

$$(1 + Y) = (1 + Q1) \times (1 + Q2) \times (1 + Q3) \times (1 + Q4)$$

Where Y is the rate of return for the year, and

Q1, Q2 etc. are the rates of return for the first, second, etc. quarters (these rates are not published).

The rates of return for longer than one (1) year are calculated by the formula:

$$(1 + I)^n = (1 + Y^1) \times (1 + Y^2) \times \ldots (1 + Y^n)$$

Where I is the annual (quarter year based) time-weighted rate of return over the whole period of n years, and

Y1, Y2,..., Yn are the rates of return for the first, second, ... nth years, calculated from the quarterly rates as described in the previous paragraph.

This process is satisfactory for funds with cash flows which are uniform during a month. More accurate time weighting of cash flow by days should be used when dealing with funds with large non-uniform cash flows.

Technical Aspects of the Calculations of the Rates of Return for the Sample Service Authorities

This Appendix describes the technical basis of the results set out in the accompanying report and explains assumptions used in the calculations.

Method for calculating yields

Annual rates of return have been calculated as the ratio of investment income (including unrealised capital value changes) to the starting assessed market value of the fund or portfolio plus cash flow during the year allowing for the estimated average period over which the cash flow is invested. Estimated 3-year "time-weighted" rates have been calculated by compounding together these annual rates, giving each year equal weight and taking the cub-root.

In most cases, the weighted cash flows have been calculated as:

$$7/8\ C_1 + 5/8\ C_2 + 3/8\ C_3 + 1/8\ C_4 = TWCF$$

where C_1, C_2, C_3 and C_4 are the amounts of net cash flow each respective quarter of the year and TWCF is the time-weighted cash flow.

For the TAB whose accounting year is split into four (4) week periods, the following was adopted:

$$TWCF = \frac{11.5}{13} C_1 + \frac{8.5}{13} C_2 + \frac{5.5}{13} C_3 + \frac{2}{13} C_4.$$

For the Electricity Commission, where dates of cash flow transactions were advised, time exposure by days was used. For the Maritime Services Board, monthly cash flows were employed.

The aggregate investment return (income plus capital change) will be the amount by which market value at the end of the period exceeds the sum of the opening market value and net cash flow, i.e.

$$I = M_2 - (M_1 + C)$$

where I = total investment return

M_2 = market value at the end of the period

M_1 = market value at the beginning of the period

$C = C_1 + C_2 + C_3 + C_4$

The calculation of the rate of return for the Year (R) is

$$R = \frac{I}{M_1 + TWCF}$$

The rate of return(i) for the 3-year periods was calculated by the formula:

$$(1 + i)^3 = (1 + R1)(1 + R2)(1 + R3).$$

Calculation of market values

The following paragraphs describe the methods for determining market values where these were not provided by Authorities.

Listed shares and convertible notes were valued by multiplying the number of units held at the valuation date by the price at which the final sale at Sydney Stock Exchange on that date was made. In two (2) instances where final sale price was unavailable an approximation was made based on the previous month's trading prices. (Source: Australian Stock Exchange Journal July 1984, July 1982, July 1983; Personal Investment July 1984).

Interest bearing deposits and fixed term deposits were valued at par with allowance for interest accrued at the investment's earning rate for the period since the previous interest payment date.

Bank bills, promissory notes and certificates of deposit were valued by discounting the redemption value at the valuation rate of interest for the number of days between the valuation date and the redemption date.

Fixed interest securities were valued by the discounted cash flow method. This method discounts to the valuation date at the valuation rate of interest the future coupon interest payments to be received and the redemption value.

Property was adjusted for the period between the valuation date and the date at which the market appraisal was carried out, by reference to the estimated capital growth component of the IMS Survey property return average for self-managed funds.

Cash in hand at the valuation date was valued at face value.

APPENDIX 5

180 DAY BILL YIELDS - SAMPLE PORTFOLIO RETURNS

INVESTING AT AVERAGE RATES*

	1981/2	1982/3	1983/4
July	15.80	16.85	12.30
August	15.60	17.40	12.05
September	15.30	14.10	10.90
October	14.85	15.25	11.20
November	15.00	14.70	10.65
December	16.45	11.50	10.65
January	18.00	12.00	11.35
February	18.40	15.20	12.60
March	20.05	15.75	13.15
April	20.30	12.75	13.15
May	17.75	12.95	13.20
June	18.35	13.50	12.50
Average	17.15	14.33	11.98

Three year average: 14.50

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*Source: Reserve Bank of Australia Bulletin

180 DAY BILL YIELDS - SAMPLE PORTFOLIO RETURNS

INVESTING WITH SIMPLE PORTFOLIO STRATEGY**

	1981/2	1982/3	1983/4
July	16.10	20.18	14.25
August	16.10	20.18	14.25
September	16.10	20.18	14.25
October	15.08	14.72	11.05
November	15.08	14.72	11.05
December	15.08	14.72	11.05
January	15.08	14.72	11.05
February	15.08	14.72	11.05
March	15.08	14.72	11.05
April	20.18	14.25	13.15
May	20.18	14.25	13.15
June	20.18	14.25	13.15
Average	16.61	15.97	12.38

Three year average: 15.00

** Strategy:

(a) Historically, Bill Rates peak in Australia in March/April ahead of provisional tax collection and final corporate tax collection. Therefore, go long at 180 days in March/April.

(b) Roll bills for further 180 days in September.

APPENDIX 6

Average ruling interest rates and interest rate differentials for the 1983/1984 financial year for:

(A) 13 week Treasury notes (Commonwealth Government Securities).

(B) 90 day commercial bills accepted/endorsed by a major trading bank (Bank Bills)

(C) 90 day commercial bills accepted/endorsed by a member of the Australian Merchant Banks Association (prime commercial bills)

	Interest Rates			Interest Rate Differentials		
	A*	B**	C**	B-A	C-A	C-B
1983						
July	10.59	11.95	12.75	1.36	2.16	0.80
August	10.96	12.10	12.81	1.14	1.85	0.71
September	9.47	10.70	11.46	1.23	1.99	0.76
October	10.08	11.10	11.84	1.02	1.76	0.74
November	9.32	10.35	11.06	1.03	1.74	0.71
December	8.54	9.05	9.74	0.51	1.20	0.69
1984						
January	9.43	10.00	10.72	0.57	1.29	0.72
February	10.35	12.80	13.49	2.45	3.14	0.69
March	13.11	14.00	14.69	0.89	1.58	0.69
April	11.79	14.20	14.78	2.41	2.99	0.58
May	11.81	13.75	14.43	1.94	2.62	0.68
June	11.24	12.80	13.44	1.56	2.20	0.64
Average				1.34	2.04	0.70

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*Weighted average yield of notes allotted at last tender of the month.

**Average of daily market yields for the week ended last Wednesday of the month.

IMS Survey Average Rates of Return

Period	Rates of Return % per annum				
	Shares	Property	Government	Other Fixed Interest	All Assets
	%	%	%	%	%
Year to 30th June					
1975	5.1		11.0		8.2
1976	36.7		7.2		21.2
1977	0.9		7.9		7.3
1978	12.8	14.3	19.4	15.4	15.5
1979	24.6	14.2	2.8	9.6	13.9
1980	89.0	18.8	4.3	12.0	37.5
1981	22.0	24.4	7.2	14.1	17.1
1982	-27.3	16.1	8.2	13.5	-2.9
1983	37.6	18.4	22.7	20.3	26.3
1984	6.6	20.8	20.1	14.8	14.2
3-years to 30/6/84	2.6	17.1	16.8	16.2	12.0
5-years to 30/6/84	19.6	18.9	12.4	14.9	17.8
7-years to 30/6/84	19.4	18.0	11.8	14.2	16.6
10-years to 30/6/84	17.5	-	10.9	-	15.4
5-years to 30th June					
1979	15.1	-	9.1	-	13.0
1980	29.9	-	8.0	-	18.6
1981	26.5	-	8.1	-	17.5
1982	18.2	18.3	8.1	12.4	15.2
1983	23.7	18.5	8.8	13.5	17.7
1984	19.6	18.9	12.4	14.9	17.8

Approximate Rate of Return

The following formulae represent those used by the State Superannuation Board the former Local Government Superannuation Board and the Government Insurance Office in calculating investment sector and total fund rates of return.

Approximate annual returns are usually calculated as:

$$I = \frac{M_2 - M_1 - C}{M_1 + \frac{1}{2}C}$$

where

M1 = market value of assets at year beginning

C = cash flow for the year assumed to occur at mid-year

M2 = market value of assets at year end

An alternative formula which gives the same result is:

$$I = \frac{2R}{M_2 + M_1 - R}$$

where

R = income plus realised and unrealised capital change during the year

The above formulae are widely used and, in normal circumstances, provide a satisfactory means of assessing rates of return.

Estimated costs of the establishment and operation of a central investment fund to manage short term funds.

Assume $260,000,000 (i.e. 20% of estimated short term public sector funds).

Estimated costs		$	$
Computer			220,000
Telephone equipment			100,000
Furniture			20,000
Total			340,000
Annual Operational Costs			
Staff -	Manager	80,000	
	Dealers (3)	140,000	
	Accounting and settlements	75,000	
			295,000
	Reuters Monitors (3)		62,520
	Maintenance/stationery etc		25,000
	Total		382,520 *
Total Establishment and Initial Annual Operational Costs			$722,520

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*Does not include the rental of floorspace.

Public Borrowing	Lending/Investment
Western Australia	
Central Borrowing Authority of Western Aust. . Mandatory for most Authorities . No investment function State Electricity Commission	Western Australian Development Corporation . Considering role of managing funds of most Authorities held by Treasury on a mandatory basis. State Electricity Commission of Western Australia
Northern Territory	
Treasury - Borrowing Division* . Mandatory for most Authorities . No investment function Electricity Commission	Treasury - Investment Division* . Manages surplus funds of most Authorities on mandatory basis . No borrowing function Electricity Commission
South Australia	
South Australian Govt. Financing Authority . Optional for Authorities subject to the direction of the Treasurer as authorised by Regulations. Electricity Trust of South Australia	Authorities undertake investment of own funds, however they may be directed to lodge surpluses with South Australian Government Financing Authority by Treasurer subject to Regulations.
Queensland	
Queensland Government Development Authority . Mandatory for most Authorities Brisbane City Council Queensland Electricity Commission	Treasury . Manages funds of State Superannuation funds. Authorities undertake investment of their own funds with - Option to lodge with the Queensland Government Development Authority - Ability to seek delegation of specific investment powers of Queensland Government Development Authority
Victoria	
Victorian Transport Borrowing Authority . Mandatory for transport and certain other Authorities . No investment function Victorian Public Authorities Finance Agency . optional for most other Authorities State Electricity Commission Board of Works	Victorian Development Fund - State Development Account . Optional for all Authorities . Accepts deposits of longer term funds for on lending to Treasury to assist funding of capital works (i.e. is effectively a Government borrower rather than commercially orientated investor). Victorian Development Fund - Cash Management Account . Optional for all Authorities . Accepts deposits of short term funds and reinvests in the market place Municipal Association of Victoria Investment Service . Caters for Local Government Authorities . Accepts deposits of shorter term funds and reinvests in the market place. Authorities also have the option of leaving undrawn loan funds and surplus funds with the Victorian Public Authorities Finance Agency.
New South Wales	
New South Wales Treasury Corporation . Mandatory for most Authorities Electricity Commission of New South Wales	Treasury . A number of Authorities are required to lodge surplus funds with Treasury. Authorities undertake their own investments with an option of lodging surplus funds (or leaving unused loan funds) with Treasury Corporation who, through Treasury, manage funds on a short term basis.

*Borrowing and Investment functions are almost entirely separated.

APPENDIX 11

Investment Policy, Strategies and Selection

- the Decision Making Process

a) The management of an investment portfolio involves decisions at three levels: Investment Policy, Investment Strategy and Investment Selection.

i) Investment Policy

Investment policy determines the basic **long term** composition of the portfolio as to asset type and asset term.

Funds may be invested in markets for two fundamental **types** of investment assets; **equity** assets and **debt** assets. Equity assets confer ownership of tangible property and primarily include shares in companies and real property. Debt assets represent legally enforceable rights to specific income flows (in the form of interest) and mainly comprise fixed interest securities issued by government and corporate bodies.

Within the scope of the various types of investment, funds may be invested in assets of varying life spans. Basically investments may be categorised as either **short term** (maturing within 12 months) or **long term** (maturing after 12 months).

The two major policy decisions therefore concern in the **long term:**

(1) the proportion of funds to be invested in the markets for each **type** of investment (portfolio asset mix) and

(2) the proportion of funds to be invested in either **short term** or **long term** assets (portfolio maturity structure

Investment policy should be determined and reviewed by the Board on the basis of recommendations of senior investment personnel.

ii) Investment Strategy

Investment strategy determines the direction of investment in the **shorter term** in light of current market conditions. Strategic decisions may involve temporary departure from the basic policy asset mix and maturity structure to take advantage of expected higher returns offered from a particular investment market. Strategy reviews should be conducted regularly by the senior investment management executives.

Investment strategy is determined within the framework of the overall investment policy

iii) Investment Selection

Selection involves the choice of individual investment to buy, hold or sell within the various investment categories to facilitate investment strategy. Selection reviews should be made on a continuous basis by specialist investment officers subject to guidelines for referral to senior officers.

Investment management decisions involving policy, strategies and selection must be made with due consideration given to the nature of the investment entity's liability and cash flow characteristics. Only after the constraints arising from the nature of the entity's liabilities and cash flow have been considered can the ultimate objective of maximising the investment return be pursued.

b) **Active and Passive Investment Funds Management**

The objectives of investment management may be pursued on either a passive or active basis.

Passive Management is limited to investing funds as they become available (i.e. via net operating cash inflows or the maturity of previously undertaken investments) in accordance with investment strategies and policy. All debt assets are held to maturity and equity assets are held indefinitely. The actual management of funds ceases when they are used to purchase investment assets and is only considered again, in the case of debt assets, when funds are redeemed as those assets mature. Management in this fashion is therefore totally reliant upon the timing of operating cash flows and the maturity of investments held.

Whilst basic investment policy may be adhered to on this basis with the predetermined proportions of funds being directed into each market as they become available, investment strategies involving departure from policy cannot be implemented swiftly and effectively under passive management. For example, in light of current market conditions total returns may be increased by holding a higher proportion of funds in short term investments. The speed with which a strategy under passive management could achieve this would be limited to the rate at which funds naturally became available for investment. Similarly, a strategy to increase the proportion of funds invested in a particular investment market which is expected to provide relatively higher returns would be limited in the same way. On a more specific basis funds within a particular market could not be effectively redirected to investments which have become relatively more attractive under passive management.

Alternatively **active management** involves the efficient execution of investment strategies through the sale of investments when required. Having been purchased, investments may then be resold at any time (debt assets may be sold prior to maturity) thus allowing funds to be redeemed and efficiently redirected in accordance with current strategy. If it is desirable to have a higher proportion of funds invested in shorter term assets then long term assets may be sold and the funds reinvested accordingly. Funds may also be taken out of one market and placed in another more attractive market via the sale of

assets in the less attractive market. Further, the sale of particular assets within a market allows funds to be reinvested in more attractive assets within the same market. The reinvestment of funds between different markets and assets if often referred to as "switching".

The advantages of active management are centred on the use of **current information** generated from a dynamic market place. Funds can only be placed in the markets in accordance with decisions based on information available at the time. As changes in the markets occur over time the original investment decisions may become inappropriate in the light of new information and hence it may become imperative that different decisions are made and the funds reinvested if market conditions so dictate to allow returns to be maximised. **Funds can only be efficiently reinvested as required under active management.**

The benefits of active management are sometimes disguised as the decision to sell a particular investment to purchase another may involve the realisation of an initial capital loss on the original investment. Confusion on this basis is particularly evident in regard to trading in debt assets. A further explanation and comparison of active and passive management is made with reference to an example in Appendix 12.

Active management involves a higher level of costs which arises from increased volumes of investment transactions and the requirement for higher levels of investment expertise, improved information and communication systems and more extensive research facilities. The higher level of costs must be put into context with the potential gains in the form of increased investment returns that are expected from active management. Cost/benefit analysis is necessary to assess the feasibility of active management for relatively small portfolios. However, for larger funds (in excess of $100,000,000) expected incremental returns are considered sufficient to justify the additional cost associated with active funds management.

In summary, passive management merely allows the steady adherence to investment policy, while active management enables investment strategies determined in the light of current market conditions to be efficiently executed allowing the maximisation of returns to be actively pursued.

c) **Risk Management**

Investment management includes the monitoring and control of risk involved in undertaking investment operations.

It is beyond the scope of this report to detail the theory and practice of risk analysis and management, however a basic understanding of risk and contemporary risk management is essential in considering a key issue of this inquiry.

The "risk" associated with all investments refers to the perceived levels of uncertainty attached to achieving expected levels of return. The risk attached to a specific investment may be equated with the variability of its return. A wide range of returns

considered possible around an expected return reflects a high level of risk while a narrow range of possible returns provides a lower level of risk.

In considering potential investments an investor is required to consider risk as well as return. It is sufficient to say that an investment manager looks to maximise returns within commercially acceptable overall levels of risk. Investment managers in the past set specific prerequisites for each investment in attempting to limit the overall level of risk to which their investments were exposed. This proved to be unsuccessful as it was found that no specific rules could be applied which effectively limited the risk associated with any **specific investment.**

It has since been recognised that overall levels of risk are minimised when funds are placed in different types of investment markets and are applied to purchasing a wide range of investments within those markets.

This lead to risk management focusing on the overall level of risk attached to a collection or "portfolio" of investments rather than attempting to limit the risk associated with individual investments.

The portfolio approach to risk management is based on the diversification of investments providing a properly balanced portfolio of lower and higher risk/return investments. This approach to risk management allows higher risk investments (with higher expected returns) to be selected which may not have satisfied the prudential prerequisites for individual investments previously set by managers.

Investment decisions concerning policy, strategies and selection should be made in the context of effective risk management through proper diversification of investments.

d) **Short term investment**

Due to their nature short term investments are essentially required to be represented by highly transferable assets offering a reasonably assured rate of return over the short term with only negligible establishment and maintenance costs. These requirements exclude property and, to a lesser extent, shares and leave the short term fixed interest market as the most appropriate avenue for short term investment.

e) **Investment policy** in regard to short term investment is determined after considering

(i) cash flow requirements
(ii) term of liabilities
(iii) long term market trends

Firstly it is important that sufficient funds are always available to meet an investor's minimum day to day cash flow requirements. This avoids the need for either unplanned borrowings at interest rate levels unknown to the investor in advance or forced sales of

investment assets. The minimum daily cash requirement having been determined, equivalent funds should be set aside and invested on terms where they may be retrieved at minimum notice (i.e. "at call").

To allow provision for future cash requirements an investor should prepare and maintain detailed cash flow forecasts drawing on historic data, current information concerning future revenue (cash inflows) and plans for future expenditure (cash outflows). With forecasting in place, sufficient funds should be invested short term to match future net cash outflows, thus limiting the necessity for unplanned borrowings or forced sales of investment assets.

As an overall policy the term of investments should initially be considered to match the amount and term of liabilities. This policy ensures funds will be available for the settling of liabilities as required and avoid the need to "refinance" them at interest rates unknown in advance. Therefore the proportion of total funds to be invested in short term assets should be determined with regard to levels of short term liabilities.

Cash flow and liability characteristics having been provided for, consideration of historic market trends may be made. Traditionally higher rate of interest have been available to investors in longer term assets while shorter term investments have provided relatively lower returns. The premium attached to longer term investments represents, inter alia, compensation to the investor for the risk attached to "locking in" funds and possible foregoing the opportunity to reinvest those funds at higher rates of interest which may become available during the term of the investment. The past correlation between interest rates and term has not been stable with the relationship often being reversed due to changes within debt markets.

In light of the traditional trend initial consideration should be given to investing funds not required to meet short term cash requirements and liability repayment in longer rather than shorter term assets.

f) Short term **investment strategy** is determined in the light of the latest available information relevant to the short term market and may involve initiatives which represent temporary departures from the fundamental short term policy.

The general level of interest rates is the primary factor determining market values of fixed interest assets. As interest rates rise the market value of held fixed interest securities falls while the reverse is the case when interest rates fall. It is the value of longer term assets which is more sensitive to interest rate fluctuations, falling further than shorter term asset values in periods of rising interest rates and rising further when interest rates fall. It is therefore the expectations of future interest rate levels which determines short term strategy with respect to the proportion of total funds which are to be invested short term.

In times of rising interest rates it would be expected that a higher proportion of funds would be invested short term to allow prompt reinvestment at the even higher rates expected. Under passive funds

management this would involve directing funds becoming available for investment (through positive net operating cash flow and naturally maturing investments) into the short term market whilst under active funds management funds may also be switched out of longer term investment (via the sale of long term assets) into the short term market. If interest rates were falling the opposite strategy would be expected with a smaller proportion of funds being invested short term.

When interest rates are continually fluctuating and an investor is unable to form a view as to the future trend in interest rates a strategy of investing in short term assets until a firm view was formed would be appropriate

This would effectively decrease the risk to the value of the total portfolio in the event of a significant adverse movement in interest rates which would diminish the value of the longer term assets held to a greater extent.

g) Assuming short term investment is confined to the fixed interest markets **investment selection** is limited to the range of debt securities offered in those markets. Individual investments are selected with appropriate consideration given to risk, return and marketability. Investments must provide an adequate level of return at a commercially acceptable level of risk (considered in the context of the total portfolio) and be highly marketable allowing sales to be effected at short notice to facilitate investment strategy when required.

Within the fixed interest markets interest rates offered by the various assets may vary and given acceptable levels of risk and marketability funds should be invested in the assets offering the highest returns.

Under active funds management opportunities may arise where return may be increased by switching from one investment to another following variations in relative rates. Passive funds management would only allow funds becoming available for investment to be invested in the higher yielding asset and only if and when such funds became available.

h) The **investment expertise** essential to allow the effective operation of the decision making process relating to short term investment is required at three levels.

Decisions concerning short term investment policy require a complete understanding of the fund's cash flow requirements and liability structure. This allows for the accurate determination of minimum short term investment requirements A fundamental understanding of the economic variables affecting both the short term fixed interest markets and the domestic economy is required to enable assessment of the appropriate level of short term investment to be maintained in the long term. Decision makers at this level, therefore, would ideally have backgrounds in accounting and economics with at least one individual having direct experience in the debt investment markets.

The level of expertise required in determining short term investment strategy is much higher and more specialised. Complete and detailed comprehension of the short term fixed interest markets and the variables affecting them is absolutely necessary. A particular understanding of the determinants of interest rate levels based on the domestic and international liquidity (money) flows is essential. Strategists require the skills necessary to swiftly identify and interpret relevant market information and assess the viability of current strategies and explore the opportunities for different strategies in the light of that information. Decision makers at this level are required to be highly experienced in the fixed interest markets and ideally they should have a minimum of 5 years experience trading the various securities in the markets.

Short term stock selection requires the ability to swiftly identify the comparative rates of return being offered and accepted in the market for different fixed interest securities and make immediate decisions to either buy, hold or sell at current market prices.

i) The appropriate distribution of investment authority held by personnel involved at the various decision making levels is vital to the effectiveness of management. Ultimate authority lies with the Board of Directors. However, to allow an organisation to participate in the investment markets it is necessary for levels of authority to be delegated to investment personnel who hold the appropriate expertise and are required by the market to make investment decisions within limited time intervals.

Authority for short term policy decisions is retained at Board level although decisions may be based on recommendations from senior investment management.

Short term strategy decisions are required to be taken and acted upon swiftly as the success of particular strategies for an organisation is often dependent upon that organisation being ahead of other market participants in implementing the strategy. It is necessary for authority for short term strategy decisions to be delegated to an investment committee comprising senior investment executives including those particularly involved in the short term fixed interest market.

Decisions concerning short term stock selection in the fixed interest markets are required to be made within very short time intervals (i.e. in a matter of minutes or even seconds) and hence the investment officers interfacing with the market require the authority to make these decisions. The officers concerned usually operate within individual market investment sectors (defined by specific investment assets) and their delegated authority is subject to asset and sector exposure limits.

j) **Long Term Investment**

Long term investments are not required to be as highly transferable and marketable as short term investments and require a reasonably assured rate of return over the **long term** and hence the three fundamental markets for fixed interest securities, shares and property are all practical avenues for long term investment.

k) Long term **investment policy** is considered in the light of the

i) required level of short term investments, and
ii) amount and term of investor's liabilities

The initial consideration in determining the proportion of funds to be invested long term is the minimum level of short term investment required to satisfy short term cash flow and liability requirements as discussed in h). The minimum level of short term investment having been determined, an investor should consider investing the balance of the funds in longer term assets in light of the higher levels of return traditionally obtainable in that market.

The structuring of the long term portion of an investment portfolio should be made with reference to the amount and term of the long term liabilities.

As outlined in n) it is considered commercially prudent to initially plan to match the amount and term of investments with the amount and term of outstanding and future liabilities where possible, thus ensuring the availability of funds to repay the majority of liabilities as they fall due. Matching investments with liabilities limits the risk associated with having to either refinance (or finance) liabilities at interest rate levels unknown in advance.

To enable this matching to be effected the **nature** of the liability must be considered. Liabilities in the form of borrowings (principal **and interest**) represent commitments debt in nature and their growth (and hence ultimate amount) will often be fixed and the debt liabilities would thus be best matched by debt assets (fixed interest securities) or equivalent amount and term.

Liabilities in the form of provisions for future payments, such as superannuation and employee benefits, are less easily matched as their amount and term may only be estimated. The growth of these liabilities are linked to wage levels and hence it would be appropriate that they be matched to some degree with investment in equity assets (shares and property) the values of which would be expected to increase over the long run in line with inflation. The estimation of the term of these liabilities would involve actuarial assessment

The size and asset mix of the long term investment portfolio should be determined in the light of minimum short term investment requirements and the nature of long term liabilities. Initial consideration is given to the fundamental matching principle in determining long term asset mix and maturity structure, however, departures from this principle should be made where favourable market opportunities assist to allow the pursuit of maximum investment returns.

l) Long term investment strategies are based on the latest available information concerning the markets for long term assets.

Strategic decisions aimed at maximising returns basically involve temporary variations in the proportion of funds invested long term and the proportions of long term funds invested in each of the fixed interest, share and property markets.

Opportunities to increase returns by switching between long and short term investment have been discussed in light of the implications of interest rates for short and long term fixed interest assets. The prospects for the three markets are continually changing and opportunities arise for returns to be increased by switching between these markets according to the returns obtainable.

Switching between long and short term investment and the different investment markets involve departures from policy based on the matching of investments and liabilities and the unmatched portion of liabilities should always be monitored closely.

m) Long term **investment selection** is made with due consideration to risk, return and marketability. However, its very nature does not required long term investment to be represented by the highly transferable assets essential for short term investment and hence the investment field is widened from the fixed interest market to also include those for shares and property.

The much broader range of investments available for long term investment requires the principles of risk management to be adhered to and hence individual investment selection must be made to allow proper diversification to be maintained within each market.

n) The range and depth of **investment expertise** essential for decisions concerning **long term** investment is much greater than that for short term investment decisions. This is firstly due to wider selection of investment markets available with the inclusion of those for shares and property. Secondly, longer term investments are less marketable and hence the consequence of decisions concerning long term assets are of a more "permanent" nature.

The formulation of long term investment policy requires a complete understanding of the **nature** and **structure** of the funds liabilities. This enables due consideration to be given to the appropriate matching of liabilities and investments.

In addition, fundamental knowledge and understanding of the following is considered essential:

- Characteristics of each of the fixed interest, share and property markets.
- Relationship between the three markets.
- The Australian and major western economies

Decision makers at this level include personnel with accounting and economic backgrounds with at least two individuals having had direct experience in managing investment funds.

Strategic decisions require much higher levels of expertise. In addition to the broad knowledge and comprehension of the markets and economies required of policy makers, strategists require a detailed understanding of each market at a specialist level including and acute awareness of the economic, political, legal and other variables which may directly or indirectly affect the three (3) basic markets. An ability to identify and interpret relevant market information and assess the viability of current strategies and explore the opportunities for new strategies in light of that information is essential.

The initiators of strategy require extensive experience within all the investment markets and typically expertise at this level is assembled in the form of an investment committee which includes the senior investment managers in charge of the funds investment activities in each market.

Long term investment stock selection requires a variety of skills unique to each market.

As outlined in h) the expertise in this area in the fixed interest market is based on the swift identification of comparative market rates of return resulting in decisive action in the market place.

The stock selection process within the share market requires a more detailed analysis and assessment of the levels risk and return attached to each investment. The timing constraints for decision making are not as severe as those faced in the fixed interest market. Investment officers involved in this process typically specialise in particular market segments (defined by investment asset groups) require advanced numerative and analytical skills and detailed knowledge of the environment affecting the investment asset group under their scrutiny.

Investment in the property market is typified by a relatively small number of transactions of relatively large amounts of money and each investment opportunity is subject to a thorough investigation and detailed assessment. The necessary expertise in this area includes highly developed analytical skills pertaining to property valuation.

o) The authority of the Board to make long term investment decisions is delegated to the appropriate investment personnel with due consideration given to the distribution of expertise, time constraints imposed on the decision making process by the market and the significance of investment decisions.

The Board of Directors retains the authority for the formulation of overall policy and usually acts upon the recommendations of senior investment personnel in reaching policy decisions.

As previously discussed, the effectiveness of investment strategy is largely dependent on its prompt implementation and authority for strategic decisions is delegated to an investment committee which holds the appropriate level of expertise and whose representatives are constantly involved in their respective markets.

The nature and significance of the stock selection process varies between the three markets under consideration.

The level of delegated authority required for stock selection in relation to long term fixed interest investment is less than that required or justified for the short term market. The time constraints for longer term investments are not quite as severe while the significance of the decisions is greater due to the reduced marketability of longer term assets. The authority held by investment officers is usually limited in terms of maximum total investment (expressed in dollars) with specific limits on investment in different asset categories. Reference to senior investment personnel is required prior to the limits being exceeded.

Decision making within the share market is not subject to the timing constraints faced in the fixed interest markets. The significance of decisions varies with the level of funds involved and the marketability of the amount (or "parcel") of stock selected. The marketability of a parcel of shares is dependent upon, inter alia, the nature of the issuing company and the proportion that the parcel represents of the total of the shares issued by the company. The level of authority delegated to investment officers to invest in the shares of a company is often subject to a maximum percentage limit of the company's capital (say 10%) in addition to dollar amount delegation bands at which approval of increases at a higher level is required.

Due to the typical size and significance of property investments, and the relatively insignificant time constraints imposed on the decision making process, ultimate authority for stock selection decisions is retained by the Board of Directors although Board members will act upon the recommendations of the senior property investment personnel.

Active and Passive Investment Funds Management

The advantages of active funds management may be demonstrated with the use of a simple example.

Example

Assume there are two investment managers A and P who adopt policies of active and passive funds management respectively. A and P are provided with $10,000,000 to invest in the share market over a two (2) year period. No additional cash flow is received by either manager. At the beginning of the period industrial shares may appear the most attractive given an outlook of economic growth, low interest rate levels land increasing profitability within the industrial sector. In the light of current market information both managers invest their funds in a range of industrial shares.

During the first year the outlook for industrial shares deteriorates in the face of rising wage costs, industrial disputes and increased competition from overseas. During the same period it also becomes apparent that world metal and mineral prices are likely to increase in light of the reported run down of major stock piles. As a result the prices of industrial shares fall by 10%.

At the beginning of year two (2) manager P under a passive policy retains his/her portfolio of industrial shares.

Manager A adopting a policy of active management is able to take advantage of updated market information and switch his/her funds into more attractive mining stocks by selling his/her industrial stocks.

During the second year, shortage in supply forces metal prices up resulting in mining stock prices advancing by 30%. A slight improvement in the outlook for the industrial sector sees industrial share prices increase by 5% over the same period.

Assuming no dividends are received, the rates of return achieved by each manager will have been:

	Rates of Return % per annum		
	Year 1	Year 2	Geometric Average 2 years
Manager A	-10	+30	+8.17%
Manager P	-10	+ 5	-2.79%

Manager A was able to record a higher overall return over the two year period by taking advantage of updated market information. The improved longer term return was able to be achieved although a shorter term loss was actually realised.

Manager P recorded a lower overall rate of return due to his/her lack of response to changed market conditions.

The benefits of active management illustrated in the Example can be utilised via switching between different investment markets and different assets within markets.

Investment Expertise

Specialisation has proceeded in the investment area as it has in athletics. Just as no athletes are top performers in both sprints and long distance races and the pentathlon, so the investment sphere is staffed by persons who because of their personal qualities or experience specialise in specific areas.

Authorities responsible for the investment of large long term funds such as the State Superannuation Board or the proposed State Investment Authority, or a large life office invest their funds in a range of assets with quite different characteristics. Examples are ordinary shares and convertible notes, resource developments, ownership of real property (including city office buildings, retail shopping centres, housing and home unit developments, rural properties), fixed interest loans to business and industry, leveraged leases, and loans to government at Federal State or Local level. It is usual for such institutions to hold also large liquid funds. These arise because the time may not be considered opportune to invest on the share market, or the funds may be required over a period of years for a major city property development or a large resource project. They are therefore also concerned with investment in short term assets including investment in the short term money market.

The range of knowledge and experience required is so wide that specialisation has reached an advanced level. Persons skilled in one area may have had no experience in another. Expertise in one area may require different basic skills from those required in other areas. The particular personal qualities required for certain jobs also lead to specialisation.

It would be normal in such a multi-investment authority to have separate sections for, and separate investment experts in, each of the following areas:

- short term money market
- ordinary shares (usually with separate experts for stock market investments from those engaged in the analysis of major resource projects)
- property (usually with separate experts for rural property, and perhaps other property areas)
- leveraged leasing
- fixed interest lending to the private sector
- government securities

The ordinary share analyst must be able to analyse company accounts, be able to make a judgement about company management, be aware of trends in the particular industry and of prices in overseas markets. He or she must "keep their ear to the ground" for what is happening in each company and in each industry. The rewards go to the analyst who is first to forecast correctly a significant improvement or deterioration in a

company's performance. By the time such a change has been made public, it is generally too late to buy or to sell. Some individuals have a flair for this activity However a judgement can only be made concerning the possession of this "flair" when the person has an established track record.

The property expert must have a quite different background. He must be aware of the potential of, and problems with, the ownership of and the development of city office blocks, retail shopping centres, home unit blocks, housing developments, etc. Property markets differ from State to State, from one part of a major city to another and are quite different in different country towns. A through knowledge of these markets and a judgement as to their potential is essential. As with ordinary shares the whole portfolio of properties has to be kept under review to ensure that properties which should not continue to be held are sold.

The short term money market operator needs to be a person who can work under conditions of stress, can size up the merits of a proposition and make decisions quickly. The person needs to have extensive delegated authority and have a dealer oriented outlook. He or she must be familiar with the annual cycle of short term interest rates related to the tax run down period and the likely effect of Australia's balance of trade and capital inflow on interest rates.

Operators in the government security markets have to make decisions as to expected changes in interest rates which can result in large profits or losses, and decide when to make switches in their holdings. These usually have tax implications. With the new bond tender system they need to be expert judges of the market in order to place tenders at the right level.

Similar comments could be made about other investment areas. The point being stressed is that the areas are so different in background and in their requirements that the term "investment expertise" refers not simply to a top investment person, but to a team of persons all with different specialities.

Very often the decision when to invest is as important as the decision to invest in a given asset. Likewise when to sell a given asset may be of major importance. This involves such judgements as whether the share market is likely to rise or fall, whether interest rates are likely to rise or fall, whether the Australian dollar is likely to rise or fall etc. Because of the importance of these matters to investment performance, it is essential to have available expert economic advice. Such institutions usually have their own economist and a small economics department.

Where marketing of an institution's investment services is required it is necessary to employ persons who have both marketing skills and a broad knowledge of investment. Similar support staff are required for discussions with clients concerning the performance achieved with their portfolio and concerning the investment policy which should be adopted in the future.

The great increase in recent years in the population covered by superannuation has led to a large increase in superannuation fund monies becoming available for investment. This in turn has caused the number of

private sector fund managers to increase with a consequent rise in the demand for investment experts. The advent of investment performance surveys has led to very attractive remuneration packages being offered to investment personnel who have established a good track record. The recent granting of licences to 16 overseas banks has further increased the demand for good operators in some of these areas.