

THE FINANCIAL IMPLICATIONS OF VARIOUS OPTIONS FOR RETIREMENT
PROVISION IN SOUTHERN AFRICA

Summary

The publication of the Meiring Report in May 1987 should result in further actuarial activities, particularly because of the report's open-ended approach which in effect says: "Pensions is a very complicated matter, we must involve the experts in the development of the 'new' system". This paper seeks to provide a few first faltering steps in this direction.

After the preparation of the paper "THE REALITIES OF SOCIAL SECURITY IN SOUTH AFRICA" which was presented to the 1986 Convention further work has been done attempting to quantify some of the financial implications of some of the solutions that have been proposed for the provision of financial resources for old age.

This paper draws on the statistical data presented in the above paper and quantifies the likely costs of the following solutions:

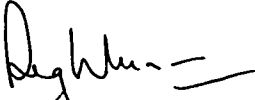
- a) individually financed minimum provision
- b) a national pay-as-you go scheme providing minimum levels of provision

It further suggests and explores some variations and combinations of the above two basic options.

The author urges further discussion and debate within the Actuarial Society in order that the Society can better fulfill its role as financial advisors to South Africa in this area. It is also suggested that attempting to consider social security in a mainly financial sense may be in itself a serious misstatement of the problem. He hopes that continued discussion and debate will result in creative solutions being developed for Southern Africa's broad needs.

The conclusion reached by the author is that existing first world type "pensions" solutions are not entirely appropriate to South Africa's challenging needs and that fairly radical changes in our approach towards "social security issues" are going to be needed.

As Actuaries, we may not have the genius to create all the ideal solutions needed, but we do have the skills to quantify the financial implications of the various alternate solutions that are proposed. As a society we must ensure we play at least this small part.



REG MUNRO

SOME PRACTICAL AND FINANCIAL IMPLICATIONS OF THE VARIOUS OPTIONS
FOR ADVANCE FINANCIAL PROVISION FOR RETIREMENT IN SOUTH AFRICA

1. Introduction

Throughout the 1970's and the 1980's, South Africa has lurched from one attempt to resolve its pensions problems to the next. Unfortunately, these attempts to "solve" the problems have almost certainly taken the country even further from a solution than it was early in the 1970's.

The purpose of this paper is to encourage debate on this topic within the Actuarial Society of South Africa. It is unlikely that actuaries will "suddenly" be able to produce an ideal solution that satisfies everybody, but the debate will hopefully help to develop a string of alternative possible solutions and to clarify the advantages, disadvantages and to produce an estimate of the cost implications of each of them.

As the profession that should have the greatest ability to wrestle with "pensions" problems, actuaries need to form, maybe even a consensus view on some of the most important related issues. If this paper makes a small contribution towards the formation of such a consensus view - it will have been highly successful.

2. South African Background Information

Although the general thrust of the two paragraphs that follow was included in THE REALITIES OF SOCIAL SECURITY IN SOUTH AFRICA and is therefore well known to most actuaries in South Africa the facts are restated here to provide the numerical base for developing the costs of some of the options considered later.

2.1 Demographic Features

Although many of us, particularly those living inside white skins, think of South Africa as a "nearly first-world" country, the following demographic features clearly exhibit typical third-world patterns.

a) Population Growth Rate

The Institute of Futures Research at the University of Stellenbosch projects an annual growth rate of 2,1% over the period from 1980 to 2015. This is in spite of an assumed reduction in the birth rate.

This compares to United Nations statistics for other countries as follows :

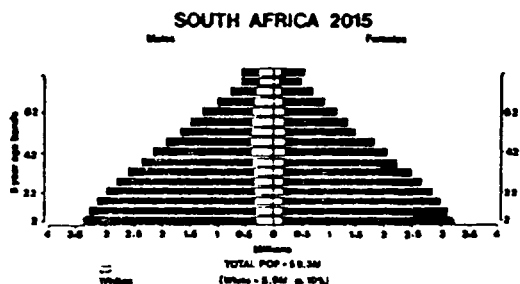
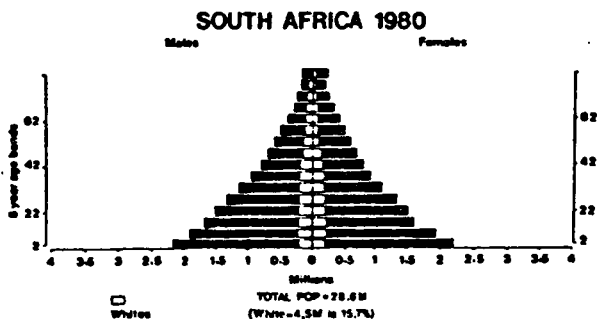
Yearly Population Growth

<u>Country</u>	<u>Actual 1950 - 80</u>	<u>Projected 1980 - 2000</u>
Southern Africa	2,68%	3,12%
Rest of Africa	2,62%	3,32%
Latin America	2,79%	2,11%
Northern America	1,36%	1,01%
Western Europe	0,78%	0,10%

Note : Further detail is provided in Annexure A

b) A Young Population

The youthfulness of South Africa's population is clearly demonstrated by the population pyramids below.



Note : The 2015 pyramid has slipped towards the Male side. Sorry !!

c) Total Dependency Ratios

Using a very broad definition of the dependency ratio, i.e. total under 20 or over 64 divided by those between 20 and 65, gives dependency ratios of 120% for 1980 reducing to 86% for 2015.

The reduction over the period is due to a combination of two features, Firstly, a reduced proportion of under 20's i.e. 50,7% to 41,1% and an increase in the proportion aged between 20 and 64, i.e. from 45,5% to 53,8%.

d) Relatively Low "Elderly" Dependency Ratios

Although this ratio rises from 3,8% in 1980 to only 5,1% in 2015 this represents an almost tripling of the absolute number of over 65's over the period.

The major aging is occurring in the white population and the government is clearly alarmed at the prospect of a significantly increased bill for Social Old Age Pensions by the end of the century.

It is suspected that this fact has played a major role in motivating the government to look for possible solutions to their "pensions provision problem".

The features that sound a clear warning for the longer term aging of the population are the combination of :

- * a reducing proportion of under 20's
- * an increasing proportion of 20 - 64's

Beyond 2015 it is clear that the population will age significantly.

e) A less developed country

Statistics published by the United Nations in 1982 clearly indicate that South Africa's population shows dependency patterns very similar to the "less developed regions" in the world.

<u>1980 Statistics</u>	% 0-14	%15-64	%65+
World	35,1	59,1	5,8
Developed Regions	23,0	65,6	11,4
Less Developed Regions	39,1	56,9	3,9
(South Africa)	38	58	3,8)

Note : Annexure B gives more detail of these United Nations numbers.

Note : Annexure C gives more detail of the South African population projections referred to in this section.

2.2 Distribution of Income

South Africa is a land of great differences in incomes.

For example, based on 1985 "household incomes", only 11% of the population live in households where the monthly income exceeds R1 400 per month. Over 90% of these people are white.

At the other end of the scale some 56% nearly all Black, live in households where the monthly income is less than R400. Just over 30% of the total population live in households with income less than R200 per month.

The "retirement provision" implications of these vast numbers of families with very little income are clearly important in the consideration of the various alternative solutions proposed later.

Note : The above income distribution might give an interesting insight as to why the "black" and "white" perceptions of the advantages of our so-called "free enterprise" economic system can be expected to be radically different ! Annexure D gives further background data relating to this paragraph.

3. The Question of Priorities

Before considering some of the options for making advance provision for retirement it is vital that the whole question of retirement provision be put into its proper perspective in the broad economic and social context that can be expected in South Africa during the coming years. At least the following five issues need to be considered :

3.1 The Need for Sustainable Long-term Growth and Job Creation

Demographic projections (see Annexure C for details) indicate that by the year 2015 South Africa will need to have two and a half times as many jobs available as there were in 1980, i.e. a compound annual growth in the number of jobs of 2,7% for the whole period is required.

ANY CHANGES IN PENSION PROVISION SYSTEMS MUST THEREFORE NOT IMPOSE ANY CONDITIONS THAT WOULD MILITATE AGAINST THE COUNTRY'S LONG-TERM ABILITY TO GROW ECONOMICALLY.

3.2 Changing Racial Mix in the Population

Over the coming 30 years, as everyone expects, the white proportion of the population will decrease quite significantly.

In the working population, i.e. that section which can contribute towards advance retirement provision, a significant rise in the non-white percentage is expected, from 80,8% in 1980 to 88,4% in 2015.

THE ACCEPTABILITY TO THIS GROUP OF NON-WHITES OF ANY PROPOSED CHANGES WILL THEREFORE BE PARTICULARLY IMPORTANT TO THEIR SUCCESSFUL IMPLEMENTATION.

3.3 The New Political and Labour Realities

Because the broadest possible acceptance of any solution will be required to ensure a successful implementation of any changes, it is vitally important that all significant groups whether they be political, labour, employer or pensions professionals should be involved in the process of developing the new systems. Failure in this area could easily politicize the issue and result in unnecessary delays.

3.4 The Hierarchy of Personal Financial Needs

Some years ago Maslow produced an hierarchy of needs which he proposed were hierarchical in the sense that the "higher" "motivators" have no effect until the "lower" or "hygiene" factors have been satisfied.

In much the same way it is suggested that there is a hierarchy of financial needs. Retirement provision clearly constitutes one of the higher needs that enjoys little attention until all the "lower" or "hygiene" financial needs have been satisfied. It is clear that for a great proportion of South Africa's population all their ingenuity is required to make their very limited financial means stretch to ensure they survive, and provision for old age is of little interest to them until they reach that stage.

Note : Annexure E gives greater detail concerning these two "hierarchies" of needs.

3.5 The Differing Needs of Different Sections of the Population

Although the population can be segmented in many different ways, for purposes of this section only, an economic division into three sections based on household income will be considered :

- a) the top economic group, i.e. the 11% of the population with household income in excess of R1 400 per month,
- b) the middle economic group, i.e. the 33% of the population with household income between R1 400 and R400 per month, and
- c) the bottom economic group, i.e. the 56% of the population with household income less than R400 per month.

These figures imply that some 40% of all South Africans live in households where the total monthly income is less than the minimum subsistence level - estimated in 1986 to be some R280.

Note : Annexure D gives income information in greater detail.

Working through the three sub-groups it is possible to define the major needs of each :

i) Bottom Group

For this group the priority is to earn enough to live now, i.e. to feed, clothe and house the family. At most, any saving that is possible is seen as being for the purpose of tiding the household over against what could be called "working life crises" such as unemployment, sickness and death. Making financial provision for post-retirement needs is virtually impossible for members of this group - and clearly someone else will have to "pay for" their retirement needs.

ii) Middle Group

This group's major need may be to make advance provision for the "working life crises" that may occur. Provision for post-retirement income is probably considered to be of lesser importance.

iii) Top Group

The upper group can probably afford to make full financial provision, either on their own account or through employer sponsored plans, both for working life crises and for post retirement income.

3.6 Summary

To summarize this paragraph then. Any system of provision for old age must fit in with the national priorities for financial resource allocation, and, in addition, must fit in with the personal financial priorities of the individuals concerned - in all three economic sub-groups.

4. Major Shortcomings of Existing Pensions Provision Systems

For a near third-world country, South Africa already has a remarkably well developed pensions industry.

There are however, several very real and serious shortcomings in the industry, each of which needs to be addressed.

4.1 Coverage

The 1981 Registrar's Pensions Report puts the number of members of pension and retirement annuity funds at 5,5 million.

Comparing this to the total 1980 population aged 20 - 64 of 13 million gives a total coverage of some 42%. There is an unknown amount of double counting in the official figures which implies that this figure is overstated to some extent. Judging by internal Old Mutual statistics for dual counting of holders of retirement annuity policies, this overstatement may be quite considerable, even pushing the coverage figure down to some 30%.

Assuming that associated with most members of funds is at least one "dependent" adult, pushes coverage back up to some 55 to 60%. This figure is not inconsistent with what would be expected from the income distribution discussed earlier.

4.2 "Unmatured" Pension Fund Membership

Many existing pensioners receive lower than targeted pensions simply because when they started working there was no pension fund to join. The pension fund industry has, in this sense, still not matured.

High job mobility combined with inadequate practices of transferability and preservation have also contributed, to the prevention of the maturing of individuals pension entitlement.

Unless this aspect is addressed and corrected by pensions professionals, the pensions industry may never be allowed to mature, i.e. their failure may lead to the State taking over more of the responsibility for pensions.

4.3 Flat Pensions

There is plenty anecdotal evidence concerning how the purchasing power of flat pensions which became payable say 15 to 20 years ago has been eroded by inflation.

Many pension funds have already recognized this. The 1985 Sanlam Pensions Survey indicates that already some 90% of pension plans include the regular reviewing of pensions being paid as part of their standard practice. The average increase over the period 1981 to 1984 was about 8.5% per annum compared to inflation of some 12.7% for the same period i.e. increases granted, were about two-thirds of the inflation rate.

In contrast almost all retirement annuities are marketed on the implicit assumption that a flat pension is the most appropriate post retirement arrangement !

Although the trend is clearly towards post retirement increases, buyers of voluntary retirement annuities are not yet being advised about the perils of flat pensions.

4.4 Level of Understanding by the Membership

Somehow we actuaries, together with the other pensions professionals, have managed to confuse members to the extent that there is widespread ignorance concerning the benefits of pension fund membership.

A recent private (and probably rather unscientific) survey of some 1 000 members claims to have revealed that :

- * 97% did not understand the details of their pension fund
- * 30% were not happy with their company pension fund
- * 23% would not participate if they had the choice
- * 16% felt the pension fund was a rip off
- * 6% were happy that their employers were doing their best for them.

Although the above results may not have been very scientifically obtained, there is a disturbing ring of truth to the conclusions reached.

4.5 Level of Understanding by "Sales Intermediaries"

In the Life Insurance industry many sales of, for example, retirement annuities and money purchase pension funds, are made largely on the basis of sets of "telephone" numbers - called benefit illustrations.

One of the most interesting results of this practice is the total inability of most sales people to make meaningful comparisons between the projected benefits of a money purchase scheme and a defined benefit pension plan. Some of the so-called comparisons produced are laughable, but the fact that there is such widespread ignorance amongst the people marketing pensions instruments to the public must surely be a cause of great concern to our profession.

Unfortunately, our professional body has done very little (at time of writing) to get to grips with this and the related issues. We have certainly not made any kind of public stand.

It was interesting to hear Mr. Maurice Oldfield from the UK state during the Association of Pension and Provident Funds 1986 Annual Meeting that they had a similar problem there in ensuring people were adequately advised when considering the choice between the portable personal pension option and membership of a defined benefit plan.

4.6 Purpose of these criticisms

Some of the issues raised above, and my comments, may be regarded as being controversial, but this is deliberate. Each shortcoming is real, and not one will disappear if it is simply ignored. Thought, analysis and action is required if any are to be successfully resolved.

5. Approach Adopted for the Financial Aspects

Because of the enormity of the coverage problem and the limited financial resources available, the only options considered in this paper are those officially proposed by either the Actuarial Society or by the Association of Consulting Actuaries together with three others that relate to the provision of a minimum level of retirement benefits.

The major objective is to demonstrate some of the advantages and disadvantages of each option - and in addition, to attempt to start developing an indication (or gut-feel) of the overall costs that might be entailed by each option.

Actuaries should be among those best able to grasp the macro cost and other implications of the various alternatives considered. It is suggested that the Society should be working towards the formation of a professional consensus on some of the key issues which should be made public as part of actuaries' contributions to developing a uniquely appropriate South African system of making advance provision for post retirement needs (IF SUCH MAKING OF ADVANCE PROVISION IS DEEMED TO BE APPROPRIATE).

The paragraphs that follow are presented in a manner that will hopefully stimulate a fruitful discussion of some of these key issues.

6. Option No. 1 : The Actuarial Society 1984 Proposal

In 1984 the Society submitted written evidence to the Select Parliamentary Committee on Pension Benefits.

Although no specific detailed recommendations were included, the basic framework proposed, including an element of compulsion on industry and commerce, but maintaining the principle of voluntary provision for others contains elements very similar to those set out in this paper. The cost explorations that follow in paragraphs 8 to 11 below can therefore be regarded as a further development of these 1984 proposals.

Note : Part II of this submission dealing with a suggested approach to the provision of pensions is reproduced as Annexure F.

7. Option No. 2 : The Association of Consulting Actuaries 1984 Proposal

The heading "Evidence for a simple beginning for a national pensions arrangement" gives a clear indication of the major thrust of the evidence given in 1984 to the Select Committee on Pensions.

The proposal is for a national scheme giving money purchase benefits based on a contribution rate of 10% of salary (with a maximum).

Again, in the very nature of the evidence, the benefits to emerge from such a scheme were not explored, and again the cost explorations that follow may be regarded as a further development of this 1984 proposal.

Note : Annexure G is a reproduction of the first four pages of the Association's representation to the Select Committee dated 28th June 1984.

8. Option No. 3 : Individual Voluntary Provision

Although purely voluntary provision is clearly unlikely to prove to be a satisfactory system, it is included so as to provide an initial "feel" for the cost implications of the options that follow.

8.1 Description of Retirement Provision Contract Considered

- a) a lump sum at retirement is provided - the sum is sufficient to purchase a monthly pension of CR 150 (CR is used to refer to a "Current Rand" i.e. equivalent to a Rand in today's purchasing power) i.e. a pension escalating at the rate of inflation, both before and after retiral age.
- b) the contributions will similarly be made monthly and will be indexed i.e. also increasing at the rate of inflation.

8.2 Assumptions made in Costing

The key assumptions are :

- a) index linked investments bearing 3% (real) interest per annum are available.
- b) retirement is assumed to be at age 65
- c) the life tables derived from the 1980 Census have been used.

8.3 Emerging Costs

Assuming that everyone will have contributed for 30 years before reaching retirement at age 65, the following minimum contribution rates, for CR 150 per month pension emerge (assuming an unbroken 30 year term for calculation purposes)

		<u>Monthly Contribution Required</u>	<u>As % of Monthly Pension</u>
White	- Male	CR22	15%
	- Female	CR32	21%
Coloured	- Male	CR16	11%
	- Female	CR25	17%
Asian	- Male	CR18	12%
	- Female	CR23	15%

8.4 Comments

- a) a purely voluntary contributory system will not work in South Africa - provision for retirement is just not high enough on individual's financial priorities soon enough.
- b) it is suggested that the bulk of South Africa's population would not be able to afford even the lowest levels of contribution.
- c) Annexure H gives an expanded set of these benchmark costs for making advance provision for increasing post-retirement income.

9. Option No. 4 : A State Pay-As-You-Go Scheme

Although this option will not be favoured by many of the protagonists of capitalism among our profession, it must be given consideration. It is important that both the advantages and the disadvantages be clarified, explored and quantified wherever this is possible.

9.1 Description of Retirement Provision

The main features assumed are to be that :

- a) every individual over the age of 65 will be entitled to a monthly pension equivalent to CR150. i.e. the pension will be inflation-linked, and
- b) the contributions required will be raised by the State from year to year, and will be set so as to meet the cost of the benefits from time to time.

9.2 Assumptions made in Costing

The key assumptions are :

- a) the scheme is fully implemented from the outset, i.e. all individuals over the age of 65 are paid the pension immediately, and
- b) the scheme applies to all persons living in South Africa (including the TBVC countries but not Lesotho or Swaziland) irrespective of citizenship, race or sex

9.3 Current Costs (1986 figures)

Rough estimates show that the immediate cost of implementing this scheme would result in the following increases in tax for every R150 pension per month payable from the age of 65.

- a) 21% of individual tax, or
- b) 26% of company tax, or
- c) 26% of GST i.e. an additional 3% in the rate of GST, or
- d) 8% of the total of all the above taxes.

Clearly the cost of introducing these pensions would be reduced by the saving that would arise because the current Social Old Age Pensions would be absorbed. The current cost of paying these pensions amounts to some 47% of the costs quoted above i.e. the initial additional cost would be just half what is quoted above. Nevertheless, it is very clear that the introduction of even a low level of pension would have a major impact on taxes in one form or another.

Note : Annexure I sets out the numbers leading to these cost estimates.

9.4 Future Costs

Over the past few years, i.e. since 1980, it is interesting to note that :

- a) the cost of the Social Old Age Pensions has increased from 5,0% to 5,5% of the total taxes considered in 9.3 above,
- b) the cost of providing the proposed CR150 per month pension has varied between 10,8% and 12,6% of these same taxes,
- c) the net additional cost of this latter pension has varied between 7,0% and 5,4% of these taxes

Annexure J gives year by year figures

These trends are being driven by the following underlying increases over the same period :

- d) inflation resulted in 100 becoming 230
- e) tax income went from 100 to 256
- f) cost of social old age pensions went from 100 to 281
- g) the cost of CR150 p.m. pensions went from 100 to 256

Clearly the apparent cost of pensions has been deflated by the rapid increase in taxable income over this period.

With the expected rapid growth in the economically "active" population it is projected that in the period from 1980 to 2015 the number of elderly persons will increase at only some 0,4% per annum faster than the number of those between 20 and 65 i.e. an annual growth rate of 3,0% compared to 2,6% per annum.

This would seem to imply that costs could remain relatively stable over this period. However, IT IS MOST UNLIKELY THAT THE FUTURE AVERAGE INCOMES (AND TAX PAYING) LEVELS BY AGE WILL REMAIN AT CURRENT LEVELS WITH THE GREATER POPULATION GROWTH EXPECTED AMONG THE LOWER INCOME GROUPS. It is thus quite likely that a steeply increasing cost curve will emerge.

9.5 Comments

a) A major advantage of the Pay-as-you-go method

The major undisputed advantage of pay-as-you-go is that it could be implemented immediately, i.e. a special tax (or pension fund contribution) could be imposed sufficient to provide all existing retired persons with the defined pension immediately.

b) Disadvantages of the Pay-as-you-go method

The major disadvantage of pay-as-you-go is that the cost is very sensitive to demographic changes in the population - especially to a general aging, which results in an increasing burden being placed on the working population. The continuing success of these schemes therefore depends on the continuing willingness of the working age population to continue funding the retired populations' promised pensions.

c) Political "football"

Other problems arise when the issue becomes politicized.

d) Major danger with all Pay-as-you-go schemes

As has been proved by the UK experience the major potential danger with pay-as-you-go schemes is that the politicians fall for the temptation to phase in the benefit entitlement. In this way the cost of providing the benefits (which sound and look good in projections) can be very significantly delayed.

The UK has already experienced aging of the population to a very significant degree. The cost per person of working age of providing a pension to all over age 65 tripled in the eighty year period from 1901 to 1981 and is projected to further increase by more than 50% by 2021. (See Annexure K for statistics produced by Dr. B. Benjamin).

9.6 Plea to the profession

The South African actuarial profession must do whatever it can to ensure that this country does not repeat the fatal mistake of phasing in a P-A-Y-G State pension scheme .

10. Option No. 5 : Another Straw-doll

10.1 Introduction

This combination of the previous two options is proposed as one potentially practical option available to South Africa, in so far as that part of our population that is part of the cash economy is concerned.

The major reason for proposing this alternative is to seek to build some consensus within the profession as to, at level of provision, a scheme of arrangement becomes impossibly expensive.

It is hoped that this particular straw-doll will be given a thorough working over so that either :

- a) it will be destroyed because it is inappropriate for even the economically active portion of South Africa's population, or
- b) an improved estimate of potential costs will emerge, or more hope-fully
- c) another improved proposal will emerge

10.2 Description of the Target System

Despite the fact that there does currently appear to be a preference by certain groups of the population (mainly blacks) for lump sum retirement provision, in the longer term it may be more appropriate to insist that a minimum level of retirement provision be made.

Although this section refers to pensions, there is no reason why lump sum provision should not be made implementing the same principles. Actuarially the two systems are financially equivalent (except for income tax issues).

Because the full implementation of any modified retirement provision system comes only many years after its initiation the desirable minimum benefits will often not be attainable in the short-term. For this reason the term **TARGET MINIMUM** is used in what follows.

In the longer term, i.e. once fully implemented, the system could comprise the following components :

- a) a **TARGET MINIMUM PENSION** (expressed in Rand and adjusted at least once a year in line with the increase in the consumer price index), and
- b) a **TARGET MINIMUM CONTRIBUTION** of 10 - 15% of earnings with a maximum contribution expressed in Rand and adjusted as described in (a) above, and
- c) it be compulsory that, at least the stipulated **TARGET MINIMUM CONTRIBUTION** be contributed towards retirement provision in respect of every person, and
- d) it be compulsory that, at least the stipulated **TARGET MINIMUM CONTRIBUTIONS** plus accumulated interest (giving a real return thereon) be preserved or transferred on changing or interrupting employment.

The practical issues of just exactly how the "compulsory" aspects of the plan could be implemented and monitored is beyond the scope of this paper, but clearly allowance will have to be made for both self-employed individuals to contribute, and for the new system to coexist as the bottom layer of employer sponsored group plans and for provision for adult dependents to be made.

10.3 Further Practical Issues

The description above is oversimplified in that there are many issues that it fails to address. Annexure L lists just a few further practical issues that will require resolution before even this straw-doll would become practical.

10.4 Costs and Costing Assumptions

These are the same as for the individual voluntary provision systems considered in paragraph 8 above as set out in 8.1 and 8.2 above.

10.5 Advantages and Disadvantages of Funding

a) Major disadvantage of the funded method

The major disadvantage is that the full implementation of the method takes a very long time, for example, it will take something like thirty years before all retiring persons will have built up the full TARGET MINIMUM PENSION.

This means that during the implementation phasing-in period additional funds will have to be applied to assist those who have not built up a sufficient pension. These additional funds will be required, not only for the thirty odd years referred to above, but throughout the post-retirement lifetimes of all persons retiring during those thirty years.

b) Advantages of the funded method

As South Africa faces the major challenge of providing meaningful employment opportunities for its growing population the funded method might provide a very significant source of development capital with which to finance industry and commerce.

Note : As I know some economists have argued that the above argument is actually spurious I look forward to adding to my knowledge about that debate.

The funded method also provides private enterprise with a major opportunity (and the challenge) of developing both the infrastructure and financial instruments needed to make the method work.

The funded method also avoids the major disadvantages of the pay-as-you-go method outlined in 9.5 (b) and (c) above.

10.6 Appropriateness to the various economic levels

It is necessary to consider each of the conceptual levels of the population individually.

a) The Bottom Economic Level

The immediate need for food, clothing and accommodation are such that even if the income indicated by the survey is only half what they actually earn it is very unlikely that this group (then earning less than R800 per month per household) will be able to provide for more than their immediate needs.

Some members of this group may be able to make some provision for potential working life crises, but even this provision will almost certainly have to come from the State's Social Security Systems.

Hence, when it comes to making provision for retirement it is highly unlikely, even in the very long term, that people falling in this category will be able either, to afford the monthly contributions required themselves or that they will have employers who will be prepared to contribute these amounts directly on their behalf.

It is thus almost certain that the State, and indirectly the taxpayers, will have to continue to provide social old age pensions for this group.

Note :

Although for illustrative purposes the pension has been set as low as CR150 per month per person, if the income distribution referred to in paragraph 2.2 is accepted as reasonably true, and assuming only two adults per family, we have to face the disturbing fact that 45% of the total population share a household income which amounts to less than R150 per adult person per month.

This raises the question as to whether a target pension greater than current income is really appropriate.

It also emphasizes just how important it is that South Africa generates economic growth that can result in increased income for especially the members of this bottom economic level.

b) The Middle Economic Level

The major perceived need of this group is to make provision for "working life crises", i.e. unemployment, sickness and death.

Both Trade Unions and Pension Funds should be encouraged to assist members make financial provision for these crises. (Pension Funds are currently prohibited from making provision for some of these contingencies).

Once these major needs have been addressed, it is submitted that progress will be possible in encouraging this group to make provision for at least part of the TARGET MINIMUM PENSION.

Once again, doubling the survey income figures gives incomes for this group of between R800 and R2 800 per month. It is clear that the cost of providing for at least part of the TARGET MINIMUM pension could be within the reach of a good proportion of this group, provided that they start making provision at an early enough age.

It is in this sector that the private sector could make a major contribution towards reducing the cost to the State of Old Age Pensions.

c) The Top Economic Level

The Private Sector is already providing fairly satisfactorily for the minimum retirement needs of this segment, although, in principle, a minimum level of compulsion could be imposed even here. In addition, it may be necessary to provide incentives for extended preservation in this segment so that more people would eventually qualify for pensions that constitute a reasonable percentage of their final earnings.

11. A Possible Retirement Provision Strategy for the Future

The following combination of underlying principles, applicable only to those persons in the cash economy, is a personal view that may have elements with both merit and practicality.

- a) first, a continuing, but restricted role for the State, including :
- means tested social pensions for those unable to make provision for themselves, plus
 - a minimum level of compulsory pension provision, either preserved or transferrable.
- b) second, a wide range of options for voluntary retirement provision - provided and sold by the private sector.

With these principles must go a full recognition of the fact that in South Africa, over the coming decades, much higher economic priority must be given to the removal of poverty.

The implications of this poverty for pensions provision are significant - and radically different solutions may be called for, particularly in the current rural areas, but later in the informal urban communities as well.

12. Some Suggestions for the Role of the Actuarial Society in the Future

The following are some random thoughts as to the possible role of the role of the profession during the coming critically important years.

The profession should :

- a) ensure it plays a vital role in the work of the "committee of pensions experts" proposed in the Meiring Report
- b) ensure that legislators and important opinion leaders throughout South Africa are made, and kept aware that providing meaningful pensions for everybody is an extremely costly business,
- c) take a leading role in insisting that any changes to the current retirement related systems result in simplification and not further complication,
- d) take a leading role in talking about pensions related issues in terms that the man in the street can easily understand.

Note :

"The difference between an actuary and the Mafia is that while the Mafia make you an offer you cannot refuse, actuaries make an offer you cannot understand."

- e) together with demographers and economists undertake studies of likely future cost trends of various alternative systems especially comparing the pluses and minuses of pay-as-you-go and funded systems.
- f) ensure that the legislators and relevant government departments are fully aware of the fact that regardless of what is done now, the net pensions outflow from State Coffers is going to continue rising for some time yet.
- g) ensure that awareness exists that the results of changes to funded pensions provision systems take a long time to work through to the benefits stage.

- h) ensure that politicians are kept vitally aware of the longer term hazards of phasing in the benefits under any pay-as-you-go scheme, especially because of the distortion this gives to the apparent emerging costs.
- i) start taking a higher profile in public media debate about pensions related topics.

13. An Overseas Observation

After reading the paper "The Realities of Social Security in South Africa", Roy R. Anderson a retired senior United States actuary commented :

"I was somewhat overwhelmed upon reading your report "The Realities of Social Security in South Africa". It struck me that even the term "social security" is a contradiction in terms under the circumstances that the report describes. Under those conditions, there can be no "security" for anyone - either financially, politically, socially, or any other way."

Another comment on the above paper that would certainly also apply to this one was :

"My hunch is that you have been approaching the subject of "social security" on the basis of invalid premises. You are thinking of it in the terms of the traditional, actuarial approach - and from a largely economic perspective. I think you have to begin with a realistic definition and understanding of what you mean by "security". And, perhaps, what you mean by "social". My sense is that our English language doesn't easily lend itself to identifying and understanding the "problems" that obtain in South Africa !"

His response to my request for assistance with this matter included :

"You have reinforced my understanding that I do not know the circumstances that exist in South Africa - and that individuals such as I should keep our mouths shut. However, I will try to offer some ideas for what help they may be.

"First, I would not look to "futurists" - or to strategic planners - or to trend analysts - or to issues managers - or to any other of those esoteric disciplines that have been spawned in recent years. If there is anything that I have learned as I have dabbled in all these disciplines in recent years, it

is that there is no way anyone can forecast the future. The best we can do is to try to prepare ourselves for the future. And the best way we can do this is to try to perceive the realities of the present - and we should do this from the viewpoint of general systems theory.

"(Actuaries could be very good at this - but few are.)"

"I would also offer a thought that was expressed several years ago by Pierre Wack when he was describing the planning process of Royal Dutch / Shell. He said that the single most valuable asset they had found in this process was the counsel of "remarkable men". These are those persons who are capable of seeing things as they really are - and not as all the "experts" would tell you they are. I believe such remarkable men (and women as well !), have the capacity of understanding, probably intuitively, "systems" - especially organic systems. My guess is that Jan Smuts was such a person."

His closing remarks were :

"I wish you and your people the best of good fortune. Look among yourselves for those rare and remarkable "remarkable men". Seek their counsel ! Unfortunately, they are not easy to find - and are hard to recognize".

The Author believes that there are several of these elusive people among the members of our Society and looks forward to their positive reaction to one or more of the suggestions listed in paragraph 12 (or additions to that list).

14. Note :

The author would like to acknowledge that many of the better ideas expressed in this paper have been borrowed from one or other of the many people he has heard discussing these matters. He also expresses special thanks to Graham Browne for the many detailed suggestions he has made. Nevertheless, he must accept responsibility for the views expressed in it.

REG MUNRO

AUGUST 1987

COMPARATIVE INCREASES IN THE WORLD POPULATION, 1950 - 1980, WITH FORECASTS TO 2025

Region	1950	1980	2000		2025		
	Million	Million	% Yearly Growth 1950-1980	Million	% Yearly Growth 1980-2000	Million	% Yearly Growth 1980-2025
World(1)	2 513	4 415	1,94	6 127	1,70	8 177	1,20
Developed	832	1 131	1,06	1 276	0,63	1 397	0,38
Less Developed	1 681	3 284	2,31	4 851	2,05	6 780	1,39
Latin America	164	368	2,79	550	2,11	787	1,49
Northern America(2)	166	246	1,36	298	1,01	347	0,63
Eastern Europe(3)	88	110	0,77	121	0,50	131	0,33
Northern Europe(4)	72	82	0,45	83	0,06	84	0,05
Southern Europe(5)	108	139	0,87	153	0,51	163	0,26
Western Europe(6)	122	153	0,78	156	0,10	149	-0,19
East Asia(7)	673	1 136	1,81	1 470	1,36	1 696	0,60
South Asia(8)	706	1 422	2,41	2 074	2,00	2 771	1,21
Oceania(9)	12	23	2,24	30	1,40	40	1,20
Southern Africa(10)	29	63	2,68	114	3,12	211	2,57
Rest of Africa	190	406	2,62	763	3,32	1 432	2,62

TABLE A-1

SOURCES :- United Nations. Department of International Economic and Social Affairs. 1982. Demographic indicators of countries : estimates and projections as assessed in 1980. New York: United Nations.

- United Nations world population chart. 1984

- Notes :
- 1) Totals will not add up because of rounding off
 - 2) Bermuda, Canada, Greenland, St Pierre and Miquillon, Us (Latin America incorporates the residual of Americas).
 - 3) Bulgaria, Czechoslovakia, German DR., Hungary, Poland, Romania.
 - 4) Channel Islands, Faeroe Islands, Finland, Iceland, Ireland, United Kingdom, Isle of Man, Denmark, Norway, Sweden.
 - 5) Andorra, Albania, Gibraltar, Greece, Holy See, Italy, Malta, Portugal, San Marino, Spain, Yugoslavia.
 - 6) Austria, France, West Germany, The Benelux countries, Monaco, Switzerland.
 - 7) China and Japan.
 - 8) The rest of Asia including Arab countries and Israel.
 - 9) Australia, New Zealand, Melanesia, Micronesia, Polynesia.
 - 10) South Africa (1910-boundary)

CHANGES IN THE AGE-STRUCTURE OF THE WORLD POPULATION

THE PERCENTAGE DISTRIBUTION OF THE WORLD POPULATION WITHIN THREE AGE-GROUPS, 1950-2000

YEAR	WORLD			DEVELOPED REGIONS			LESS DEVELOPED REGIONS		
	0-14	15-64	65+	0-14	15-64	65+	0-14	15-64	65+
1950	34,7	60,2	5,1	27,8	64,6	7,6	38,1	58,1	3,8
1960	37,1	57,1	5,2	28,6	62,9	8,5	40,9	55,3	3,7
1970	37,3	57,2	5,4	26,5	63,8	9,7	41,6	54,6	3,7
1980	35,1	59,1	5,8	23,0	65,6	11,4	39,1	56,9	3,9
1990	33,5	60,6	5,9	21,9	66,3	11,8	36,9	58,9	4,2
2000	31,6	62,0	6,4	21,5	65,3	13,1	34,2	61,2	4,6

SOURCE : - United Nations. department of International Economic and Social Affairs. 1982. Demographic indicators of countries : estimates and projections as assessed in 1980. New York : United Nations.

TABLE B-1

SOUTH AFRICAN COMPARATIVE RATIOS

	Percentage 0 - 14	Population 15 - 64	Aged 65+
1951	39	58	3
1960	40	56	4
1970	42	54	4
1980	40	56	4
1990	38	58	4
2000	36	60	4

SOURCE : Grobbelaar, J.A. 1983 Projections and analysis of the South African population for the period 1980-2011. Stellenbosch : Unit for Futures Research, University of Stellenbosch.

South Africa. Department of Statistics. 1976. Report no. 02-05-05, Single ages 1941 to 1970. Pretoria : Government Printer.

SOUTH AFRICAN DEMOGRAPHIC PROJECTIONS

C1. 1980 Population Pyramid

FIGURE C-1 shows the age spread of the total SA population (including independent Black States) as at 1980. At that time whites numbered 4,5 million, representing 15,7% of the total population of 28,6 million.

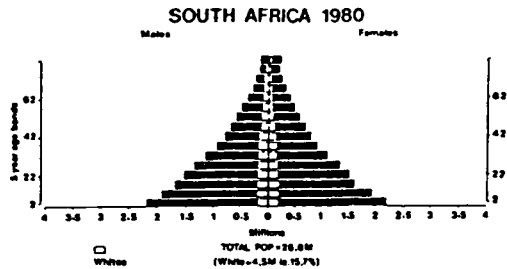


FIGURE C-1

The shape of the "pyramid" which narrows towards the older ages illustrates that the 1980 population was young in the sense that there were many more younger than older members of the population. The ratios in TABLE C-1 further illustrate this feature.

C3. Percentage of Total Population in age Groups1980 Population

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
over 64	3,3%	4,3%	3,8%
20 - 64	45,5%	45,5%	45,5%
under 20	<u>51,2%</u>	<u>50,2%</u>	<u>50,2%</u>
	<u>100,0%</u>	<u>100,0%</u>	<u>100,0%</u>

TABLE C-12015 Population

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
over 64	4,5%	5,7%	5,1%
20 - 64	53,7%	54,0%	53,8%
under 20	<u>41,8%</u>	<u>50,3%</u>	<u>41,1%</u>
	<u>100,0%</u>	<u>100,0%</u>	<u>100,0%</u>

TABLE C-2Dependency Ratios for Total PopulationC4.1 1980 Population

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
Elderly over 64 as a %			
20 - 64	7,3%	9,5%	8,4%
Young under 20 as %			
20 - 64	112,5%	110,3%	111,4%
Total Young and Elderly	119,8%	119,8%	119,8%

C4.2 2015 Population

<u>Age Group</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
Elderly over 64 as a % 20 - 64	8,4%	10,6%	9,5%
Young under 20 as % 20 - 64	77,8%	74,6%	76,4%
Total Young and Elderly	86,2%	85,2%	85,9%

TABLE C-3

C5. Changes in Total Population Between 1980 and 2015

The Table C-II below summarizes some significant changes that are projected for the total population.

	<u>1980</u>	<u>2015</u>	<u>Increase</u>	<u>Growth Rate p.a.</u>
	Million	Million		
Total Population	28,6	59,3	107%	2,1%
Number over 64	1,1	3,0	179%	3,0%
Number aged 20-64				
Males	6,4	15,7	145%	2,6%
Female	6,6	16,3	147%	2,6%
Total	13,0	32,0	146%	2,6%
Number under 20	14,5	24,3	68%	1,5%

TABLE C-4

C6. Changes in the racial mix of the population between 1980 & 2015SOUTH AFRICAN POPULATION

	<u>1980</u>	<u>2015</u>	<u>Increase</u>	<u>Growth Rate p.a.</u>
	Million	Million		
<u>Total Population</u>	28,6	59,3	107%	2,1%
White population	4,5	5,9	31%	0,8%
% White	15,7%	10,0%		
<u>Working Population</u>	13,0	32,0	146%	2,6%
Whites	2,5	3,7	48%	1,1%
% White	19,2%	11,6%		
<u>Population over 64</u>	1,1	3,0	179%	3,0%
Whites	0,4	0,8	115%	2,2%
% White	33%	25%		
<u>Under 20's</u>	14,5	24,3	68%	1,5%
Whites	1,7	1,5	- 12%	-0,4%
% White	11,4%	6,0%		

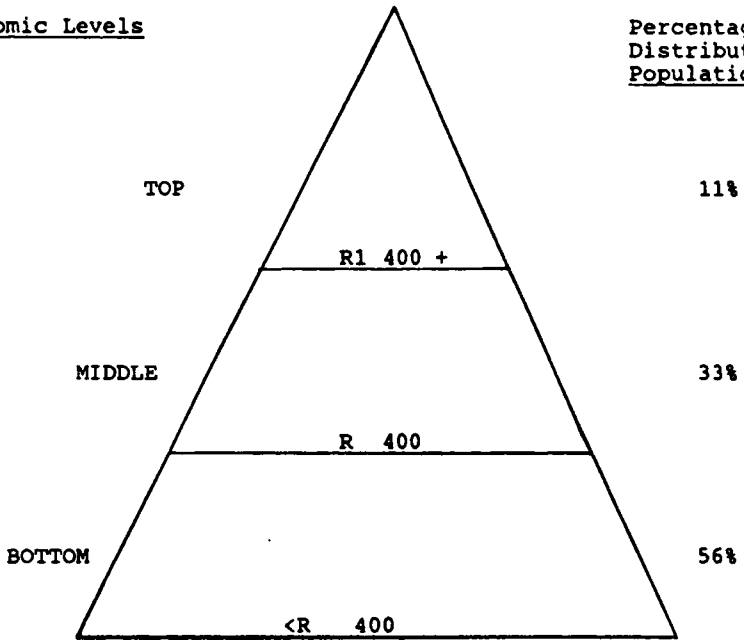
TABLE C-5

D. DISTRIBUTION OF INCOME

D1. Graphic Illustration

Economic Levels

Percentage
Distribution of
Population



Range of monthly household income (1985)

FIGURE D-1

D2. Tabular form of data

The table below comes from the All Media and Products Survey of 1985

PERCENTAGE OF HOUSEHOLDS EARNING LESS THAN STATED MONTHLY INCOME

Household income per month	Percentage of Households				Percentage of total population (see note)
	<u>White</u>	<u>Coloured</u>	<u>Asian</u>	<u>Black</u>	
Less than:					
R 50	0.1	1.3	0.0	7.0	5.4
R 100	0.3	7.2	0.3	22.5	17.6
R 150	0.7	14.9	1.5	32.8	26.0
R 200	1.4	20.4	2.8	39.3	31.5
R 250	2.1	26.5	5.7	49.9	40.1
R 300	2.5	30.9	8.2	56.4	45.5
R 400	4.1	38.8	14.6	66.6	54.2
R 500	6.3	46.7	22.4	76.2	62.5
R 600	8.7	53.8	30.4	83.5	69.1
R 700	10.8	60.3	37.1	88.3	73.7
R 800	13.6	67.4	44.4	92.0	77.6
R 900	17.0	74.0	51.3	94.2	80.5
R1 000	20.1	78.8	56.8	95.8	82.6
R1 100	25.7	84.2	65.7	97.7	85.5
R1 200	29.3	87.0	69.9	98.1	86.6
R1 300	33.7	89.2	74.4	98.5	87.9
R1 400	38.0	91.2	78.0	98.8	88.9
R1 600	46.2	93.6	82.8	99.1	90.7
R2 000	57.1	96.7	88.1	99.3	92.7
R2 500	71.3	98.2	94.5	99.7	95.4
R3 000	80.2	98.9	96.9	99.8	96.8
over R3 000	100.0	100.0	100.0	100.0	100.0
No. of people 000's	4 755	2 575	795	24 876	33 001
No. of households 000's	1 486	444	150	4 146	6 226
Av. no. in household	3.2	5.8	5.3	6.0	5.3

Source : AMPS 1985

Note : In calculating this percentage it has been assumed that the size of households varies by racial grouping, but not by income level.

TABLE D-1

E. HIERARCHIES OF NEEDS

E1. Maslow's hierarchy of needs

Model of Herzberg and Maslow cast in one frame

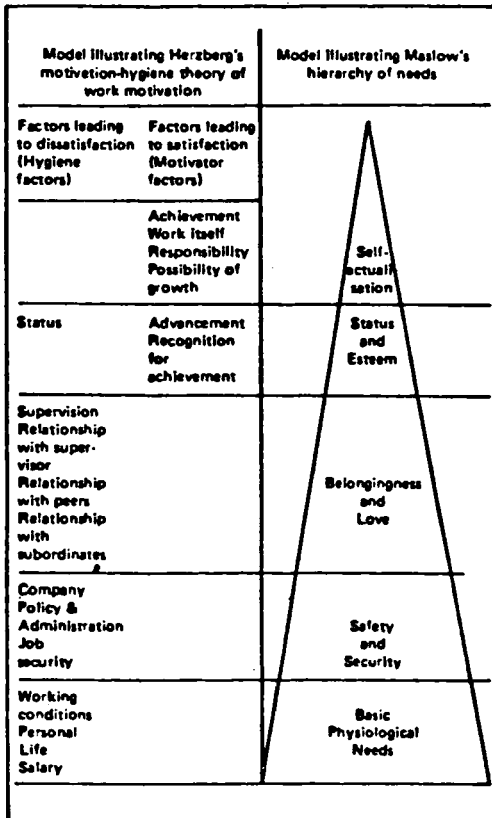
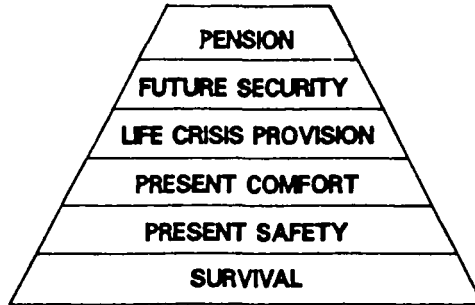


FIGURE E-1

In broad terms Herzberg claimed that until the lowest needs in Maslow's hierarchy have been met, addressing the higher needs has no motivational impact on the individual concerned.

E2. Munro's hierarchy of financial needs



**MUNRO HIERARCHY
OF FINANCIAL NEEDS**

FIGURE E-2

In terms similar to those used by Herzberg it can be argued that until finance has been allocated to satisfy the lower needs it is totally unreasonable to expect individuals to be interested in making advance financial provision for the "higher" needs.

E3. Examples of Future Financial Needs

- a) FUTURE "POST WORKING LIFE" NEEDS (INDIRECTLY PROVIDED FOR)

Peace of mind regarding :

- * maintenance of standard of living
- * comfort
- * physical safety
- * survival

- b) FUTURE "LIFE CRISIS" NEEDS (INDIRECTLY PROVIDED FOR)

- * maintenance of standard of living
- * comfort
- * physical safety
- * survival

AN EXTRACT FROM THE ACTUARIAL SOCIETY OF SOUTH AFRICA'S SUBMISSION, DATED JULY 9, 1984, TO THE SELECT PARLIAMENTARY COMMITTEE ON PENSION BENEFITS.

3. PART II - A SUGGESTED APPROACH TO THE PROVISION OF PENSIONS FOR THE PUBLIC

This part of the report develops a possible basic framework within which provision for pensions for the community as a whole could be made. It divides between arrangements for employees and for persons who are not employees. The role of the State in the provision of pensions is also considered.

3.1 The provision of pensions for employees

- 3.1.1 Pension funds - and to a lesser extent provident funds - which operate on a funded basis are efficient vehicles for providing pension benefits.

It is recommended that it should be a statutory requirement that all corporate bodies (and as far as practicable, all other employers) establish pension funds for their employees and that the contribution payable thereto in respect of each employee should be not less than a stipulated percentage of the employee's earnings.

Virtually all employees should be included irrespective of race, sex, age or job category. It is however, reasonable that casual or temporary employees be excluded.

- 3.1.2 The case for some form of preservation of pension entitlement for employees changing jobs is indisputable. On the resignation or dismissal of a member of a pension fund, an amount should be preserved and accumulated to secure a pension for the member on his retirement. The amount to be preserved should be prescribed by statute as not less than the minimum stipulated contributions payable over the period of membership accumulated at a reasonable rate of interest.

ANNEXURE F (cont.)

3.1.3

The adoption of the measures proposed would of course lead to a significant element of compulsion in the provision of pensions by commerce and industry. Relevant factors are :

- i) The change would involve acceptance by employers and employees that employment automatically carries with it the build-up of pension entitlement which cannot be dissipated.
- ii) Because of uncertainties about the future, either the scale of benefits or the contributions payable under a pension fund can be fixed, but not both in conjunction. If the benefits are defined, employers are faced with uncertain future costs; if the contributions are defined, the members are faced with uncertain future benefits.

On grounds of simplicity and practicability, it is recommended that the minimum stipulated contribution be defined as a percentage of each employee's earnings, which percentage should be fixed at a moderate level.

Employers should however, be encouraged to provide benefits according to a benefit scale, subject to the requirement that the benefits secured are not less than those under the proposed minimum statutory bases.

- iii) It is recommended that any new legislation should not extend beyond the minimum proposed. Employers should be able to retain the maximum possible degree of freedom to design their pension funds consistent with compliance with the minimum statutory requirements.

As is well know, previous proposals for preservation of pension entitlement on changing jobs which involved restrictions on the payment of cash refunds to members met with strong opposition from trade unions and lower income earners; in this area, in

particular, employers should be able to adopt flexibility of treatment. The fact is that strong pressure from some sectors of the workforce for cash refunds on withdrawal will continue if the proposed measure for pension preservation are implemented. It is recommended that it be left to the discretion of employers to determine the extent to which cash refunds will be payable on withdrawal (but subject to compliance with the minimum statutory requirements applicable to pension preservation) having regard to their particular financial circumstances and the nature and attitudes of their workforces.

3.2 The provision of pensions for persons who are not in pensioned employment

It has been previously proposed that persons not in pensioned employment who are financially able to make provision for their retirement should be statutorily required to contribute at a minimum stipulated level to retirement annuity funds (or special frozen savings accounts). Such a measure would represent a radical change from the current voluntary approach and would probably be strongly opposed, at least by lower income earners in the sector. Further, a compulsory system would be very difficult to control and administer effectively.

It is recommended that the present voluntary system should continue and that some change to the applicable tax provisions be considered to encourage lower income earners to make provision for their retirement through approved pension instruments. Over the last two decades, the number of persons saving through retirement annuity funds has increased very substantially. Although no reliable statistics are available, it is probable that a large proportion of high income earners contribute and a relatively small proportion of low income earners. High income earners clearly have a greater ability to save. In addition, however, the tax advantages gained by high income earners on contributions paid are greater than those gained by lower income earners because of the progressive tax system.

Suggestions are :

- i) a change in the tax provisions applicable to persons not in pensioned employment in respect of contributions to retirement annuity funds from a deduction system to a rebate system for the first slice of such contributions.
- ii) A further change of a more general nature would be to allow some increase in the current maximum levels of contributions to retirement annuity funds qualifying for tax relief on a graduated scale according to age; this would enable persons approaching retirement to "top-up" their pensions.

Note : It is assumed that these suggestions would also apply to special frozen savings accounts.

3.3 The role of the State in pension provision

If "adequate" pensions for the economically handicapped were to be provided through the medium of Social old age pensions or some other State scheme, the financing of the arrangements could in practical terms be effected only on a pay-as-you-go basis through additional levies on taxpayers.

Retirement provisions cannot be considered in isolation from other more immediate social welfare needs in the areas of unemployment relief, health and child care, housing and education - or indeed without due regard to all the conflicting claims on State revenues. The experience of the commitments assumed by governments since the 1939/45 War are imposing, and will increasingly impose, very severe strains on national economies. The income distribution of the population in the RSA is such that the economy would be particularly vulnerable in this regard.

There is inevitably a gap between what is desirable and what can be afforded, having regard to overall priorities. If the measures proposed in Part II of this report were to be adopted, the number of persons claiming old age pension would reduce after a number of years (although it is not possible to quantify the extent at this stage) and it is to be hoped that there would be scope for increases in Social old age pensions in real terms and for a relaxation in the provisions of the Means Test. However, it is submitted that the

Social old age pension should essentially be no more than a "backstop" designed to provide for the basic needs of those who, for whatever reason, have made little or no provision for retirement.

3.4 Summary

Substantial changes to the present framework for providing pensions for the community as a whole could have unforeseeable and far reaching effects on society and the economy. Hence the Actuarial Society recommend an evolutionary approach which may be summarized as follows :

- a) the superimposition of an element of compulsion on industry and commerce to provide almost universal pension coverage for their workforces. The consequential increases in costs to employers should be kept within moderate limits and the maximum possible freedom of choice as to the design of pension funds should be retained.
- b) for persons not in pensioned employment, a voluntary approach should be retained; "self-help" by lower income earners should be encouraged through a change in applicable tax provisions.
- c) it is submitted that the underlying objective should be to establish a framework for pension provision of which approved pension instruments form the major part and social old age pensions a minor residual part. It is further submitted that there should be clarity as to the framework to be adopted before addressing other aspects such as the kinds of approved instruments to be included and the commutation provisions to be applied.

JULY 9, 1984

AN EXTRACT FROM THE SOUTH AFRICAN ASSOCIATION OF CONSULTING
ACTUARIES SUBMISSION DATED 28 JUNE 1984 TO THE SELECT
PARLIAMENTARY COMMITTEE ON PENSION BENEFITS

EVIDENCE FOR A SIMPLE BEGINNING FOR A NATIONAL PENSION ARRANGEMENT

1. In a Christian Society - indeed in any civilized society - provision should be made that no member of the society starve to death. In a country in which there is a steadily increasing proportion of elderly citizens, a solution to the problem becomes very difficult. In a western country, whether so-called capitalist or socialist, the Government makes provision, to a greater or lesser extent, for pensions for all those who, for some reason, are not working. Many of the provisions are extremely complicated.
2. In South Africa provision for pensions is not compulsory for individual citizens or for employers on behalf of their employees, but certain aged and disabled persons are entitled to Social Pensions paid out of State's revenue. Projections show that such pensions will grow substantially and an increasing burden will be placed on the State's revenue if the current practice is to continue.
3. Parliament has made the first term of reference of the Committee the provision of satisfactory pension benefits for those who have no or insufficient pension cover.
4. We believe that this problem poses the most difficulties and that matters not directly related thereto should be considered as secondary.
5. Some citizens have no pension cover because their employers have not established pension funds or have not established pension funds for all their workers and do not participate in industrial funds. Others have no cover because they live in rural areas and expect to depend on their children for support in their old age.
6. Those citizens who have insufficient cover may be members of funds providing poor benefits, or may have low earnings or may, through illness or lack of opportunity, have only intermittent work.
7. It is possible for employers to provide adequate schemes of benefits through their funds, by improving benefits where they are inadequate; but it will be necessary for the State to introduce a compulsory National Pension Arrangement requiring minimum provisions for all citizens, which can be supplemented by private funds if the employers agree or by the self-employed.

8. There are several ways open to the national Pension Arrangement of providing benefits by a combination of a national Pension Fund and private pension funds and, whatever is adopted, it will have many attendant problems. It is essential that the National Pension Arrangement be kept, especially in the initial stages, as simple as possible; otherwise sections of the population will find the arrangement difficult to understand and will therefore be suspicious and reluctant to participate.
9. If a more sophisticated arrangement is introduced the following problems will require consideration.
 - a) There is a shortage of People in South Africa with sufficient skills to administer a complicated scheme and extreme pressure will, in any case, be put on the civil service and the private sector, with resulting unsatisfactory service and public dissatisfaction.
 - b) There will be a temptation for politicians to try to offer improved benefits above the subsistence level without considering proper funding methods.
 - c) Lack of adequate actuarial control may cause the arrangement to degenerate into a "pay as you go" system.
10. At various times members of the Association and of the actuarial profession have prepared papers on schemes designed to provide pensions for the old and disabled and widows and orphans and for transferability. Those papers have covered the subjects at considerable length.
11. We consider, however, that such schemes, however desirable, may not be immediately practicable. We therefore suggest that the initial requirement should be for every employee to contribute an amount equal to 10% of his taxable earnings up to the given level.
12. The rate of interest will not be less than a rate prescribed from time to time by the Government. Ideally the rate will give a positive return on the contributions: that is, it will be greater than the rate of inflation - perhaps that disclosed by the Consumer Price Index. If the rate of inflation is 10% (say), the rate of interest after expenses should be 14% (say). That may be difficult to achieve; but if it is not achieved, citizens will be forced to "save" on a losing basis.
13. The use of an accumulation rate of the order of 14% may make some institutions unwilling to establish special accounts and the Government must have a savings Medium ready.

14. When a citizen retires, his Accumulation will be applied to provide a pension for him and, if he so elects, for his spouse after his death.
15. If a citizen dies before retiring, his Accumulation will be applied to provide a pension for his spouse and possibly other dependents.
16. If a citizen leaves his employment, except on retirement or death, his Accumulation will remain in his existing Medium or be transferred to another Medium.
17. It follows that the State will, in addition to the provisions under the existing unemployment legislation and workmen's compensation, have to provide additional benefits on disability before reaching retirement age and possibly on death.
18. It follows that an employer who operates his own Pension Fund will have to provide at least the minimum under the National Pension Arrangement, and supplement the benefits so provided by whatever arrangements are agreed with his employees. In that connection, it is noted that some of the provisions of the Income Tax Act and Pension Funds Act require improvement. An annual certificate will be required that the Pension Fund has assets at market value at least sufficient to cover the Accumulations stipulated.
19. It also follows that, until the National Pension Arrangement has been in force for up to forty-five years, the service for which benefits on the bases specified has not been covered will have to be covered by the State in one way or another. The pension flowing from the compulsory Accumulation will fall short of the Social Pension in many cases, and the shortfall will have to be met by the State.
20. It is also noted that adequate pension provision for those who live in rural areas may lessen their dependence on their children and therefore help to decelerate the increase in population.

28 JUNE 1984

NOTE :

See next page that contains Appendix C to the above submission which is a summary of the benefits envisaged.

APPENDIX C

A comprehensive scheme will, when mature, comprise benefits on lines similar to the following :

- i) a pension from age 65 of two-thirds of final average earnings (say average over the best three years);
- ii) a disability pension of two-thirds of final average earnings;
- iii) a widow's or widower's pension of one-third of final average earnings, whenever death occurs;
- iv) a pension of one-tenth of final average earnings for the first three children, whenever death occurs; and
- v) escalation of all those pensions at about half the rate of the increase in the Consumer Price Index.

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H. Monthly Contributions required to provide an inflation linked pension of CR150 per month payable from age 65.

H1. Assuming Mortality for "White" Males (SALT No. 8)

Assumed real rate of return : 3% 2% 1% 0%

Lump Sums

required at age 65 CR18 258 CR19 558 CR21 038 CR22 730

Monthly Contributions

required from :

Age 55	CR108,8	CR123,5	CR140,7	CR160,9
Age 45	CR 42,2	CR 50,7	CR 61,1	CR 73,8
Age 35	CR 22,2	CR 28,7	CR 36,7	CR 46,8
Age 25	CR 13,7	CR 18,6	CR 25,2	CR 34,0

TABLE H-1

H2. Assuming Mortality for "White" Females (SALT No. 8)

Assumed real rate of return : 3% 2% 1% 0%

Lump Sums

required at age 65 CR22 415 R24 336 CR26 561 CR29 152

Monthly Contributions

required from :

Age 55	CR145,1	CR166,8	CR192,6	CR223,6
Age 45	CR 59,1	CR 71,8	CR 87,6	CR107,2
Age 35	CR 32,4	CR 41,8	CR 53,9	CR 69,6
Age 25	CR 20,0	CR 27,6	CR 37,7	CR 51,4

TABLE H-2

H3. Assuming Mortality for "White" Males (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR17 870	CR19 171	CR20 662	CR22 382
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Monthly Contributions

required from :

Age 55	CR102,2	CR115,8	CR131,8	CR150,6
Age 45	CR 39,2	CR 47,1	CR 56,7	CR 68,4
Age 35	CR 20,7	CR 26,4	CR 33,7	CR 43,0
Age 25	CR 12,5	CR 17,0	CR 23,1	CR 31,1

TABLE H-3H4. Assuming Mortality for "White" Females (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR21 431	R23 202	CR25 249	CR27 628
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Monthly Contributions

required from :

Age 55	CR137,8	CR157,9	CR181,8	CR210,4
Age 45	CR 55,7	CR 67,5	CR 82,1	CR100,2
Age 35	CR 30,3	CR 39,1	CR 50,3	CR 64,8
Age 25	CR 18,7	CR 25,7	CR 35,1	CR 47,7

TABLE H-4

H5. Assuming Mortality for "Coloured" Males (SALT No. 8)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR16 077	CR17 130	CR18 323	CR19 682
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Monthly Contributions

required from :

Age 55	CR 87,2	CR 98,6	CR111,8	CR127,3
Age 45	CR 31,2	CR 37,4	CR 45,0	CR 54,3
Age 35	CR 15,6	CR 20,0	CR 25,5	CR 32,6
Age 25	CR 9,0	CR 12,4	CR 16,8	CR 22,8

TABLE H-5H6. Assuming Mortality for "Coloured" Females (SALT No. 8)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR19 916	R21 525	CR23 390	CR25 566
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Monthly Contributions

required from :

Age 55	CR120,6	CR138,1	CR158,9	CR183,9
Age 45	CR 46,8	CR 56,8	CR 69,1	CR 84,4
Age 35	CR 24,7	CR 31,8	CR 41,1	CR 53,1
Age 25	CR 14,8	CR 20,4	CR 28,0	CR 38,3

TABLE H-6

H7. Assuming Mortality for "Coloured" Males (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
<u>Lump Sums</u>				
required at age 65	CR16 051	CR17 124	CR18 348	CR19 753
<u>Monthly Contributions</u>				
required from :				
Age 55	CR 86,5	CR 97,9	CR 112,2	CR127,0
Age 45	CR 30,7	CR 36,9	CR 44,5	CR 53,9
Age 35	CR 15,2	CR 19,6	CR 25,1	CR 32,1
Age 25	CR 8,8	CR 12,0	CR 16,4	CR 22,3

TABLE H-7H8. Assuming Mortality for "Coloured" Females (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
<u>Lump Sums</u>				
required at age 65	CR18 802	CR20 251	CR21 924	CR23 870
<u>Monthly Contributions</u>				
required from :				
Age 55	CR112,9	CR128,8	CR147,6	CR170,2
Age 45	CR 43,3	CR 52,4	CR 63,6	CR 77,4
Age 35	CR 22,7	CR 29,2	CR 37,6	CR 48,4
Age 25	CR 13,5	CR 18,6	CR 25,5	CR 34,7

TABLE H-8

H9. Assuming Mortality for "Asian" Males (SALT No. 8)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR16 543	CR17 635	CR18 870	CR20 276
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Monthly Contributions

required from :

Age 55	CR 93,1	CR105,2	CR119,3	CR135,9
Age 45	CR 34,3	CR 41,1	CR 49,4	CR 59,5
Age 35	CR 17,6	CR 22,4	CR 28,7	CR 36,5
Age 25	CR 10,4	CR 14,2	CR 19,3	CR 26,0

TABLE H-9

H10. Assuming Mortality for "Asian" Females (SALT No. 8)

Assumed real rate of return :	3%	2%	1%	0%
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Lump Sums

required at age 65	CR18 304	R19 663	CR21 223	CR23 025
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Monthly Contributions

required from :

Age 55	CR110,1	CR125,3	CR143,2	CR164,5
Age 45	CR 43,1	CR 52,0	CR 62,8	CR 76,1
Age 35	CR 23,2	CR 29,7	CR 38,0	CR 48,6
Age 25	CR 14,2	CR 19,4	CR 26,3	CR 35,6

TABLE H-10

H11. Assuming Mortality for "Asian" Males (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
<u>Lump Sums</u>				
required at age 65	CR14 757	CR15 634	CR16 623	CR17 745
<u>Monthly Contributions</u>				
required from :				
Age 55	CR 79,2	CR 89,0	CR100,4	CR113,6
Age 45	CR 28,7	CR 34,3	CR 40,9	CR 49,0
Age 35	CR 14,6	CR 18,5	CR 23,5	CR 29,8
Age 25	CR 8,6	CR 11,7	CR 15,7	CR 21,1

TABLE H-11H12. Assuming Mortality for "Asian" Females (SALT No. 7)

Assumed real rate of return :	3%	2%	1%	0%
<u>Lump Sums</u>				
required at age 65	CR15 361	CR16 317	CR17 397	CR18 626
<u>Monthly Contributions</u>				
required from :				
Age 55	CR 86,8	CR 97,7	CR110,4	CR125,2
Age 45	CR 33,0	CR 39,3	CR 47,0	CR 56,4
Age 35	CR 17,4	CR 22,1	CR 28,0	CR 35,4
Age 25	CR 10,5	CR 14,3	CR 19,2	CR 25,7

TABLE H-12

H13. Note :

- a) SALT No. 7 and No. 8 are the Life Tables derived from deaths during the periods 1969 to 1971 and 1979 to 1981 and the population statistics gathered in the 1970 and 1980 general censuses.
- b) The published tables have been extended using "my own" estimates for ages above the maximum published age.
- c) The contribution rates above have not been checked by anyone. E and O.E.
- d) It has been assumed that no payment is made on death prior to attaining retirement age.

I. PAY-AS-YOU-GO COST ESTIMATES

11. 1986 Data Estimates

	Million
Number of persons aged 65 or over :	1,25
Cost of paying Social Old Age Pensions:	R 1 069
Individuals Tax :	R10 638
Company Tax :	R 8 681
General Sales Tax :	R 8 832
Total of above taxes :	R28 151
Annual Cost of paying R150 per month to every person over age 64 :	R 2 250

12. 1986 Costs

These estimates show that the immediate cost of implementing a pay-as-you-go system would have resulted in the following increases in tax for every R150 (in current Rands) pension per month payable from the age of 65.

- a) 21% of individual tax, or
- b) 26% of company tax, or
- c) 26% of GST, or
- d) 8% of the total of all the above taxes.

13. 1986 Once Off Savings

Stopping the payment of the current OAP would have resulted in a once off saving of :

- a) 10% of individual tax, or
- b) 12% of company tax, or
- c) 12% of GST, or
- d) 4% of the total of all the above taxes.

14. Trends in Pay-as-you-go Costs until 2015

In addition it must be noted that the gradual aging of the SA population would require further **real** increases in contributions as the number of over 64's increase as follows :

- a) 32% by 1995
- b) a further 36% by 2005
- c) a further 40% by 2015

i.e. a **real** increase of some 150% over the period.

Over the same period i.e. to 2015 the Institute for Futures's Research study indicates that the total population will approximately double with whites decreasing from some 15% to 10% of the total over the same period.

Comparing 1980 with 2015 we therefore find the dependency ratio i.e. the proportion of the total population that is over 65, increases from 3,8% to 5,1%. Over this same period however, the expected drop in the birth rate will decrease the proportion of the population that is younger than 20. Recalculating the dependency ratio, but excluding the junior dependents from the base, shows the over 65's constitute 8,4% in 1980 and 9,5% in 2015 i.e. a much less significant increase.

Interestingly, for whites, this last dependency ratio increases from 14,0% to 20,4% much as has already occurred in many developed countries.

Comment

The maintenance of reasonably developed pay-as-you-go costs over this period would therefore, depend on an equalization of the average taxes paid by whites and non-whites. As this requirement is highly unlikely to be realized over the period being considered the pay-as-you-go cost can be expected to rise !

15. Pay-as-you-go Costs after 2015

These trends will clearly be impacted by changes in the birth rate, now and over the coming few years. Already there is some evidence that the birth rate is reducing.

This trend, if it continues, and especially if it accelerates in the future, will have future expensive implications for any pay-as-you-go pension system.

SOME NATIONAL STATISTICS

	1980	1981	1982	1983	1984	1985	1986
J3. Cost of Funding above pensions on a P.A.Y.G. basis RM	858	1 021	1 790	1 366	1 544	1 799	2 196
As a percentage of Individual Tax	34,4	31,4	27,4	24,5	19,5	19,1	20,6
As a percentage of Company Tax	17,0	20,0	23,2	22,4	29,3	24,6	25,3
As a percentage of G.S.T.	55,3	51,7	41,0	36,8	28,9	24,2	24,9
As a percentage Total of above taxes	11,4	12,2	12,6	11,7	11,7	10,8	11,4
J4. Cost of Social Old Age Pensions							
R Millions	380	443	528	630	752	896	1 069
% Increase		16,6	19,3	19,3	19,3	19,3	19,3
As a percentage of Individual Tax	15,3	13,6	12,2	11,3	9,5	9,5	10,0
As a percentage of Company Tax	7,5	8,7	10,3	10,4	14,2	12,2	12,3
As a percentage of G.S.T.	24,5	22,4	18,2	17,0	14,1	12,0	12,1
As a percentage Total of above taxes	5,0	5,3	5,6	5,4	5,7	5,4	5,5
J5. Net cost i.e. New minus Social Old Age Pension cost RM	480	578	662	736	792	903	1 127
As a percentage of Individual Tax	19,2	17,8	15,3	13,2	10,0	9,6	10,6
As a percentage of Company Tax	9,5	11,3	12,9	12,1	15,0	12,3	13,0
As a percentage of G.S.T.	30,8	29,3	22,8	19,8	14,8	12,1	12,8
As a percentage Total of above taxes	6,3	6,9	7,0	6,3	6,0	5,4	5,8

THE IMPACT ON PAYG PENSION COSTS OF
POPULATION CHANGES IN THE UNITED KINGDOM

K1.

Numbers of People				
	1871	1901	1981	2021
Total	27,4 m	38,2 m	56,3 m	63,3 m
Increase per annum		1,1%	0,5%	0,3%
Over 65	1,3 m	1,8 m	8,5 m	14,2 m
Increase per annum		1,0%	2,0%	1,3%
Under 20	12,4 m	16,2 m	16,0 m	14,9 m
Increase per annum		0,9%	0,0%	- 0,2%
21 - 64	13,7 m	20,2 m	31,8 m	34,3 m
Increase per annum		1,3%	0,6%	- 0,2%

K2. Pay-as-you-go Costing of f100 Pension

If the cost of f100 per month pension payable to every person over the age of 65 were funded by the working population (i.e. aged 21 - 64) only, the costs would have progressed as follows :

1871	f 9,80 per person per month
1901	f 8,90 per person per month
1981	f26,70 per person per month
2021	f41,40 per person per month

f = pound sterling

K3. Source of Data

The population statistics above were provided in a paper entitled "THE DEMOGRAPHIC OUTLOOK" presented by Dr. B. Benjamin to the Seminar on Pensions held at Staple Inn Hall, London on 30th November 1983.

L. OTHER "BENEFIT NEED" ISSUES THAT MUST BE RESOLVED

L1. Employed Persons Provision during Periods of Unemployment

The system proposed will work reasonably well for members of the population who are fully employed from the age of 25 to 65, but, periods of unemployment have not been dealt with and these produce difficult questions unless the unemployment benefit paid by the UIF is increased to provide for contributions during periods of unemployment.

L2. Dependent Adults' Provision

Provision must also be made for spouses who leave the "working force" in order to raise families, and who therefore have no cash income from which to make provision for their own retirement.

The traditional solution to this "problem" has been the inclusion of widows' pensions paid for the working husbands.

This traditional solution, based as is on the nuclear family, may need re-examination and adjustment because :

- * divorce and remarriage are becoming more common
- * common-law wives need to be provided for
- * multiple wives are still common among parts of the SA Population

It is suggested that maybe a system based on the individual rather than the nuclear family as the basic unit may be more appropriate to the needs of the future.

For example - husbands or working wives (or their employers) could be compelled to make contributions on behalf of adult dependents.

L3. Disability Pensions

Significant numbers of people become disabled prior to the age of 65 and are no longer able to earn a living.

Pension Funds typically include provision either for continuation of a proportion of income until pension age or for a reduced pension to become payable from the date of disablement.

It is suggested, in return for an increased contribution the pension could become payable from the date of disablement should this occur before age 65.

L4. Dependent's Support on Death or Disability

Dependent families have a need for support if the breadwinner (or one of them) becomes or dies - particularly when this occurs before retirement age.

Again, in return for an increase in the contribution provision for a minimum level of support could be provided.

For example, a fixed (in real terms) contribution could be paid for each dependent child until age 18 (or 21) and pension becoming payable could be paid to the surviving spouse or guardian for a suitably defined number of years.

L5. Other Details

There are doubtless also many other practical problems to be solved.