National Tertiary Retirement Fund

Statement of Investment Principles

Approved by Board on 8 September 2023

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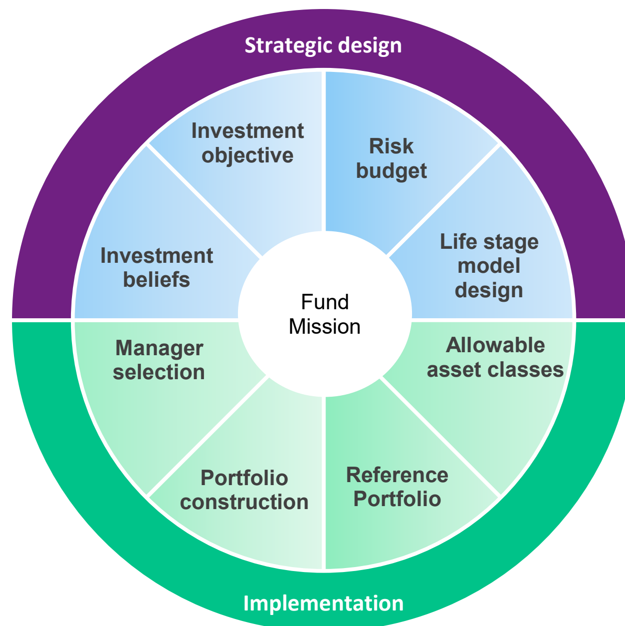
Section 1: Introduction

This document represents the Statement of Investment Principles (SIP) of the National Tertiary Retirement Fund ("the Fund") and has been adopted by the Board. The chart below sets out the investment strategy control process of the Fund. The SIP sets out the *key principles* adopted in respect of each control process.



Note the life stage model design refers to the default investment strategy for members that are either uncomfortable or unwilling to choose their own investment strategy. A separate investment objective and risk budget is set for each investment channel that makes up the life stage model.

The document is supplemented by a number of annexures which provide more detail on the derivation of the core principles and also covers the more operational aspects of the strategy.

Section 2: Fund overview

Governance

The Fund is managed and directed by the Board. The Board has appointed an Investment Committee to oversee the Fund's investment strategy, subject to the mandate set out in Annexure 1.

The Board retains control over the strategic issues related to the investment strategy and receives recommendations from the Investment Committee in relation to such strategic matters. The Investment Committee, on the other hand, has the authority to implement the strategy, including the selection of managers, and deal with operational matters.

The Board takes the view that they are not experts in the field of investments. To deal with this position the Fund has appointed external investment managers. Furthermore, to bridge the potential knowledge gap between these investment managers and the Board, the Fund appointed an investment consultant that will advise the Committee. The investment consultant holds the "trusted advisor" position and will be selected on the basis of their expertise and commitment to operate free from any conflict of interest in advising the Fund. The investment consultant is required to disclose any conflict of interest, the implications of which must be fully considered by the Investment Committee and Board.

Nature of the Fund

The Fund is a defined contribution arrangement meaning that the member's benefits depend solely on the contributions set aside as retirement savings plus investment growth thereon.

On retirement from the Fund the member may elect to receive any combination of a life pension and/or living annuity from the Fund. Some members are entitled to a conditional defined benefit at retirement, but the funding thereof is a matter dealt with in the member's employment contract. The Fund is open to new entrants and the membership consists of employees of 10 participating employers operating in the tertiary education sector. A summary of the key characteristics of the Fund's membership is set out in Annexure 2.

Section 3: Mission

Mission statement for members

A duty of the Board is to communicate to members the level of benefit that they can reasonably expect from the Fund on retirement. This level of benefit can only be set by making a number of financial and demographic assumptions. In the normal course of events the member may need to adjust his/her plan so as to maintain a reasonable expectation of receiving the targeted level of benefit on retirement.

The primary mission of the Fund is to deliver the benefit reasonably expected by the member in such a way that the member's retirement plans do not need to change materially and to provide a guided annuity strategy in retirement that meets a range of needs. The Board will adopt the following strategies in pursuit of this mission:

1. A real return (i.e. return in excess of inflation) investment objective and risk constraint will be set for each of the investment channels offered by the Fund in a manner that is consistent with the assumptions used in communicating the target benefit to the member. The objective of the Fund is to achieve (or out-perform) the stated objective by taking on less risk than the Reference Portfolio strategy.

2. Keeping the costs low – the Fund will negotiate "wholesale" prices of around half that which the member would pay if he/she implemented the same investment strategy in the retail market.

3. The Fund will provide a default investment strategy for members that are unwilling or uncomfortable to exercise investment choice - the so-called life stage model. The life stage model will be structured to have a higher return expectation whilst the member is some way off retirement tapering to a more conservative strategy as the member approaches retirement.

   The life stage model will be designed in such a manner that, under normal market conditions, a member that invests his / her retirement savings according to this model should retire with a benefit close to that which he /she could reasonably expect taking into account any previous benefits for those members who joined later in their career and that transferred their benefits to the Fund.

4. The Fund will engage with its members by providing helpful communication so that members can better understand their expected pension benefit and how their pension pot can be applied to secure an income at retirement.

5. In addition, the Board aims to direct the Fund's investment strategy in a manner that is supportive of sound environmental, social and governance (ESG) principles with motivation of securing positive financial outcomes on the basis of investment merits. In this regard the Board will also consider private market investment strategies that are supportive of impact investing and ESG. Nevertheless, the Board has outsourced the on-going ESG oversight to its appointed investment managers.

Mission statement for pensioners (also referred to as life annuitants)

The Fund currently has a pension increase policy which targets pension increases of at least 65% of inflation over the long term, subject to affordability. The Fund's mission in respect of pensioners in receipt of a life annuity is to deliver the targeted pension increases of at least 65% of inflation in a reasonably smooth manner. The same principles of seeking superior risk adjusted returns and low costs will apply to the life annuitant investment strategy.

Mission statement for living annuitants

The Fund offers a default investment strategy for living annuitants, together with engaging annually with such annuitants around an appropriate level of draw-down. The Fund's mission for living annuitants is to guide an appropriate level of draw-down (adjusted for inflation), which when applied together with the default investment strategy results in a less than an estimated 10% chance that the annuitants (and his or her spouse) will run out of money.

Living annuitants are allowed to invest in the same investment channels as in-service members and so the principles of seeking superior risk adjusted return and low costs apply.

Section 4: Model and competitive edge

Model

The Board's overarching investment model can be described as that of a diversifier and "alpha seeker", with some exposure to illiquidity. Accordingly, the Fund's investment strategy will include a wide range of asset classes. Whilst there is still a strong reliance on the equity risk premium, the portfolios will include exposure to listed and unlisted property, infrastructure assets, private equity, activist shareholder investing and credit. Consistent with its investment model, the Fund mainly uses active managers, with the exception being a passive allocation of between 15% and 25% for SA equities and so the portfolios have material exposure to skill premium.

Competitive edge

The Board believes that it has a competitive advantage compared to most other Funds in that it:

- Has a set of well-developed beliefs and has implemented an investment strategy consistent with these beliefs;
- Is prepared to consider more complex and contrarian strategies, which are avoided by most other investors.
- Has a strong focus on risk management, with investment opportunities being evaluated in terms of resilience and upside potential and downside in a probabilistic framework.
- Whilst one of the Fund's core beliefs is its ability to harvest the premium for being a long term investor, it has the flexibility to consider opportunistic strategies that may add significant value over shorter investment horizons.
- Has a robust structure for reviewing its investment decisions and learning from its mistakes and understanding whether outcomes are attributable to luck or skill. In addition, the Board considers the investment challenge through the lens of "better decision-making under the conditions of uncertainty and ignorance".
- Is able to successful manage the complexities associated with offering members an in-fund life annuity and an in-fund living annuity (or a combination thereof).

Section 5: Core Investment beliefs

As described above, the mission of the Fund is to deliver superior risk adjusted real returns for each of the investment channels it offers. The strategy to deliver such returns is underpinned by a number of key beliefs that the Board has adopted in respect of how markets work.

Investment belief 1: Markets are broadly efficient, but pockets and periods of inefficiency exist

The price of an asset reflects the collective wisdom of many market participants all of whom aim to maximise their return.[1] This means that most of the time the price of an asset is a very good estimate of its intrinsic or fair value. However, markets are characterized by complexity and subject to human decision-making.

The complexity may cause many investors to avoid certain strategies as “too difficult” which may, in turn, result is less efficient fair price discovery. Human decision making is vulnerable to behavioural biases such as over-confidence, lack of courage / boldness as failing conventionally is more acceptable than succeeding unconventionally (and where the cost of being wrong is heavy criticism), recency bias etc. At times, these biases can coalesce into a crowded trade which results in an inefficient market (e.g., Dotcom bubble of the late 1990’s).

This inefficiency in markets provides the opportunity for skilled managers to out-perform, but it is not easy to do so because the manager is taking on the collective wisdom of all market participants, which is an effective pricing machine most of the time.

Investment belief 2: The investment challenge is to be approximately right on the intrinsic value of an asset and to buy assets that trade below the assessed intrinsic value and sell these assets as they approach intrinsic value

The belief is consistent with fundamental investing which focuses on assessing the present value of future cash flows, rather than trading strategies which often are price insensitive, and which tend to be concentrated on short-term demand and supply dynamics. Nevertheless, the Board recognizes that some trading strategies can be productive. Accordingly, elements of the Fund’s investment strategy include higher turnover investment strategies, but the preponderance of its assets are invested in fundamental strategies.

Investment belief 3: The Investment Committee believes that the investment market is a complex adaptive system

The complexity arises from the multiple drivers of investment returns (e.g., interest rates, government and central bank policy, demographics, political dynamics etc), whereas the adaptive component arises from market participants aiming to earn high returns and incorporating new information into their decision-making.

Complex adaptive systems are characterised by uncertainty and ignorance rather than risk.[2]

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[1] There are exceptions such as Central Banks that have different objectives such as managing inflation or stimulating economic growth and such different objectives may create an inefficient market where more than one party can be achieve their desired outcome.

[2] Risk exists when the form of the underlying statistical distribution is known and remains stable over time.

Investment belief 4: Because markets are complex and adaptive investors should focus on what they own rather than aiming to get the macro-economic calls right.

Given complexity, the most productive approach is likely to be one that focuses on the simplest component of the system, namely the individual company. In addition, there is more information available to do in-depth analysis and research on individual companies to form proprietary insights. In contrast, predicting economic measures such as inflation and economic growth is far more difficult as the system is complex and the same information about economic measures is available to all the market participants. This characteristic of focusing on "what is owned" improves the odds of out-performing the market for skilled stock pickers.

Investment belief 5: Owning the right companies is a bigger driver of investment outcomes than getting the asset allocation decision right

This is the most controversial belief as the conventional wisdom is that asset allocation is the main driver of the return. The Brinson, Beebower study, which came to this conclusion, did not consider the wide variation in intra-asset class returns.

The later Bessembinder study showed that 80% of the stock market return over cash over long measurement periods was generated by circa 4% of companies. This research provides support for the belief that investors should focus on what is owned and that owning the right companies is central to delivering superior long term investment results. However, it is acknowledged that it is extremely difficult to find these big "winners".

Caveat to Investment beliefs 4 and 5

These beliefs work best when the investor can allocate capital to the widest opportunity set. However, South African retirement funds are limited to investing 45% of their assets outside South Africa. This means that the Investment Committee has to take a view on the future investment returns from local asset classes (and in particular the extent to which Rand hedge counters should be held) and so asset allocation remains an important determinant of outcomes.

Investment belief 6: Uncertain and ignorance describe the nature of markets rather than risk

Investment returns do not follow a known and reasonable stable statistical distribution; rather they evolve and adapt based on new information, which is uncertain and at times unknown. This means that the widely used classic "mean variance optimisation" approach does not work, and the investment puzzle is better characterised by better decision making under the conditions of uncertainty and ignorance.

In addition, the Board believes that there is a material difference between volatility and risk. Volatility is the variation of market prices because of changes of the collective wisdom of the market participants. In some cases, this variation arises for irrational reasons; the volatility may also arise because legislative requirements require some investors to be forced sellers; in other cases, the variation correctly reflects new information. The Board believes that volatility that arises for irrational reasons or because there are forced sellers in the market represents an opportunity for the Fund to buy assets at cheap prices and so should be exploited.

Risk on the other hand is overpaying for an asset – the risk may manifest itself in a partial or total loss of capital in real terms. The Board believes that one of the better ways to assess the risk of a particular asset is to consider the expectation that is implicit in the current market price. In general, the higher these expectations the greater the risk and so the Fund will have a bias to invest in a contra-cyclical manner.

Investment belief 7: Diversification and resilience are useful tools in dealing with uncertainty and risk

Diversification arises to the extent that the returns of assets classes, instruments or individual investment managers have different return drivers. In a world of uncertainty and risk it makes sense to blend asset classes and instruments that offer such diversification benefits. However, diversification must be limited to a process that contributes positively to the return and risk payoff, noting that adding to diversification inevitably adds poorer investment ideas to the portfolio. In addition, the return drivers of a particular asset class / instrument may change over time and what was once a good diversifier may no longer be so. It is thus vital to review return drivers on an on-going basis.

Resilience is the ability of the portfolio to bounce back against difficult times. Resilience is achieved by diversification, flexibility and a focus on the sustainability of entities in which the Fund invests.

Investment belief 8: Superior investment strategies reflect elements of courage and optimism

The Board believes that the natural bias of investors is to focus on what can go wrong as the social and reputational cost of being bold and wrong, is unusually high. This behaviour creates an opportunity for the investors that are courageous and optimist to earn outsize investment returns, particularly if one reflects on the fact that over time investment markets bear testament to ingenuity of mankind and its ability to improve the quality of life for society.

The Board defines courage at the ability to deal with uncertainty and ignorance in a thoughtful and considered manner, rather than speculating on positive outcomes.

Investment belief 9: The Board believes in long term investing for portfolios that have a corresponding long term investment horizon

The Board believes that adopting a long term investment horizon for the relevant portfolios represents a significant advantage compared to most other investors in that such a long term horizon allows the Fund to:

- Ride out short term fluctuations in returns (and so benefit from the value of time diversification) – as per belief 4, asset returns are noisy (or volatile) in the short term. Long term investors have the luxury of knowing there are no short term funding or liability issues and can earn risk premiums that manifest more reliably but only over longer measurement periods.

- Being able to profit from periods of elevated risk aversion or short term mispricing – over long measurement periods risk is usually reasonably stable. When prices are low, risk aversion is high and so investors bid down prices in order to receive higher future investment returns. For a long term investor, the risk aversion remains reasonably constant and so it can take advantage of periods of low prices within acceptable risk levels.

- Take advantage of illiquid investment opportunities. However, it is noted that acquiring illiquid assets comes at the cost of not being able to reduce exposure if the asset has performed well (although liquidity improves when an asset has done well because pro-cyclical investors want a part of the action) and not having “dry power” to buy distressed assets during bad times. It also limits the ability of the Fund to exit a mistake. The Fund therefore requires a relatively high illiquidity premium.

Having said the above, the Board believes that it is essential to have the flexibility to exploit short term opportunities as and when they arise and so the Board will also invest in strategies which are more opportunistic in nature.

Investment belief 10: The investment strategy must target a return which is in excess of inflation

The member needs to plan for a benefit related to his or her pensionable salary at retirement. Pensionable salary is closely correlated to inflation and therefore the liabilities of the Fund are inflation related. Accordingly, the primary objective of the various investment channels offered by the Fund must be set relative to inflation. Out-performance relative to a strategic asset allocation or peer group is an important secondary objective.

In the same vein the primary requirement of a retiree is to receive a lifetime income that retains its purchasing power. Hence the guided annuity strategy invests in products that target the provision of a real income over the lifetime of the pensioner and his or her beneficiaries.

Investment belief 11: The Board believes that investment manager skill is scarce and that a qualitative approach is needed for assessing manager skill

The Board considers investment management to be a highly competitive industry and as in all competitive environments there are relatively few consistent winners. In order to identify such skill a strong qualitative approach is required which focuses on identifying managers that have a meaningful and relatively easy to understand competitive edge to the market.

Such a competitive edge may be founded in an intellectual edge, better quality of research than other market participants and exploiting the mistakes most other investors make. The investment firm's organisational culture is also a key driver of allowing skilled managers to ply their trade successfully.

The Board further believes that it is not sufficient for the manager to have a discernible competitive edge and sound organisational culture; the firm must also strongly align their interest with that of the Fund. Finally, the Board recognises that manager skill may be more difficult to assess in the South African equity market because of the narrow opportunity set and the impact of macro-factors on stock specific returns. For these reasons, the Board will also evaluate the efficacy of passive strategies for the SA equity asset class.

Environmental Social Governance (“ESG”) beliefs

This section sets out the Board's ESG beliefs which are a subset of its core investment beliefs.

ESG matters

The Board firmly believes that we need to live in a society in which “what we take from the land is given back” and that the structure of society must promote fairness and transparency.

Investee companies whose business models don't incorporate these principles are more likely to fail. However, company management is not tone deaf and to survive almost all will adapt their models to incorporate ESG considerations. The key issue for companies that face significant ESG headwinds is whether they can transition their business models successfully to compete in a world that will scrutinise ESG practices closely.

On the other hand, there is a significant upside for companies that are able to solve climate change problems and/or whose business model leads the market on ESG factors.

Naïve ESG themed investing is unlikely to result in superior long term returns

The market is efficient, and any information related to ESG consideration is likely be imputed into the price. It also seems somewhat unlikely that an investment thesis that is easy to adopt (i.e., “invest in good”) is likely to be a source of the long term out-performance.

However, the above does not derogate the importance of ESG considerations in assessing the intrinsic value of a company. The Fund outsources this analysis to its investment managers who are expected to handicap or advantage companies on the basis of how they evaluate ESG factors to impact on intrinsic value. Consequently, investment managers are permitted to allocate capital to companies that have poor ESG characteristics on the basis that their assessed intrinsic value is well above the current market price. Nevertheless, as per the below, the manager is expected to engage with its investee companies, particularly where the manager is likely to hold the counter for a lengthy period.

Commitment to net zero (no addition to GHG (greenhouse gases) emissions) by 2050

The South African economy is heavily dependent on fossil fuel with almost all its power generation being coal based. In addition, the local investment opportunity set is small and so following the exclusion route for local fossil fuel companies would reduce this already small opportunity set further. Nevertheless, the requirement to reduce carbon emission is vital.

Whilst the Fund does not have a formal commitment to net zero by 2050, it will look to its investment managers to engage with its investee companies around what the company is doing to reducing its carbon emission and commitment to net zero. The investment manager will report on this via their stewardship report.

In addition, the Board believes that global accords on climate change will prove to be insufficient to deal with the climate change challenge. Rather history shows that to solve the problem, a combination of legislation and innovation is needed. The Board believes that there is a significant upside to being early investors in innovations that contribute to tackling the issue. The Board will actively seek to make an allocation to such strategies, be they in the public or private markets. Such investments may include investments in renewable energy developments and operating assets.

Importance of engagement

The Board believes that active engagement with company management adds value and is preferable to the exclusion route. This responsibility, together with voting on the companies that the Fund owns directly or indirectly via collective investment schemes, is delegated to the Fund’s investment managers. Active engagement includes pushing management on ESG issues as positive changes in ESG practices beyond the market consensus view is likely to translate into positive price performance. The failure to achieve positive results through engagement may also be a factor that leads to the manager selling their holding.

Most managers provide a Stewardship Report on an annual basis and this report, together with periodic manager meetings will be used to evaluate the quality of the manager’s engagement process.

Openness to invest in opportunities that offer fair risk adjusted returns and definite social benefits

The Board is receptive to investing in more complex investment strategies that have clear social benefits, but that also offer fair risk adjusted returns. The Board believes that its fiduciary responsibility precludes it from investing in strategies which may deliver positive social returns but where the financial return does not compensate the Fund fully for the risk.

Notwithstanding the above, the Board believes that it is possible to earn at least fair risk adjusted returns and deliver positive social benefits. This outcome arises because most local investors are uncomfortable or unfamiliar with investing in private market opportunities in areas such as renewable energy, commercial farming, transport, water, and digital assets. There is thus a dearth of capital of such assets, which improves the return and risk payoff.

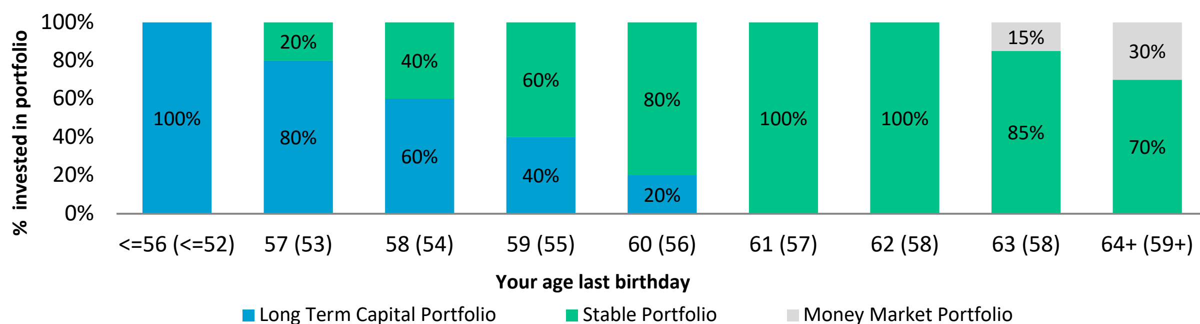
Actions matter

The Board takes the view that what it does matters, rather than what is says in however well-worded policies. In addition, as per the above, the Investment Committee will review the managers' Stewardship reports annually to assess the effectiveness and quality of investee company engagement.

Section 6: Life stage model and guided annuity strategy

The Board has designed a default investment strategy for members that are uncomfortable or unwilling to choose their own investment strategy; the so-called life stage model. This is consistent with the requirements of Regulation 37 of the Pension Funds Act. In addition, each investment channel will comply with the requirements of Regulation 28 on a look through basis.

The diagram below sets out the structure of the life stage model designed around normal retirement age 65 or 60 (figures in brackets) as nominated by the employer which was implemented effective 1 September 2022. However, for members that are within two years of normal retirement age, the pre 1 September 2022 life stage model will continue to apply. For a member aged 63 (or 58) about 50% of their money was invested in each of the Stable and Money Market Portfolios, which would transition to 100% in the Money Market Portfolio once they turned 64 (or 59). Members aged 64 (59) on 1 September 2022 would remain 100% invested in the Money Market Portfolio.



Please note that members entitled to a conditional retirement benefit underwritten by the Employer must follow the life stage model strategy.

The member will be transitioned annually from one investment channel to the next according to this model at the end of the month in which he or she has a birthday. The actual amount invested in a particular investment channel will more or less equate to the percentages set out above depending on the relative performance of the channels. The member's on-going monthly retirement savings will be invested in the same portfolio mix as per the life stage model.

Members, other than members entitled to the conditional retirement benefit, can elect a life stage 60 or 65 irrespective of their normal retirement age. The default retirement age for members where the employer did not nominate a normal retirement age is 60.

The following principles underlie the design of the life stage model:

- Most members feel that they are not equipped or alternatively not willing to make their own investment decisions; hence the need for a default investment strategy (the life stage model). This belief is backed by empirical evidence which suggests that in excess of 90% of retirement fund members in South Africa simply follow the Board default strategy.

- The Board aims to provide a reasonably balanced risk and return strategy, which under normal investment conditions, should result in satisfactory outcomes for most long serving members who retire at or around their normal retirement age. However, the Board accepts that the life stage model may not meet the financial needs of all members and hence members may exercise investment choice.

- This philosophy of a default investment strategy designed to be efficient for the majority of members, but with an "own choice" provision is called libertarian paternalism. In this instance the term "paternalism" is used in the positive sense – the Board takes actions on behalf of the member that, for the majority of members, is expected to be in his or her best interest. The libertarian principle gives the member the choice to opt out of the paternal solution and self-select an investment strategy from the range of portfolios that the Fund offers.

- The life stage model is designed on the basis that the longer the member's investment horizon, the more risk the member can take on. The six key reasons that underpin this logic are:

  (a) Whilst the member is young, he or she has relatively little money in the Fund and so the effect of a large negative return has a relatively small Rand impact on his or her retirement provision. The effect of future contributions and investment returns will swamp the effect of a large negative return whilst the member is still young.

  (b) On the other hand, when the member is close to retirement, he or she has the most money in the Fund and any negative return has a large Rand amount impact which reduces the member's retirement income. In technical terms the member's retirement benefit is determined by the money weighted return (i.e., the return taking into account the incidence of the contributions) rather than the time weighted return. Generally, this risk becomes more acute as the member approaches retirement, but the extent of this risk depends almost entirely on the form of the pension the member elects at retirement.

  (c) The life stage model is designed to be consistent with the Fund's guided annuity strategy and the pricing basis of the Fund's life annuity. The return and risk profile of the Fund's Stable Portfolio is most consistent although not a perfect match, with this pricing basis. Accordingly, the model allocates the member's money to a combination of the Stable and Income Protection Portfolios pre-retirement, with the latter portfolio considering that retirees typically take part of their benefit in cash.

  (d) The level of investment risk a member should take is related in part to the flexibility the member has. A member who is a long way from retirement can increase his or her retirement savings if he / she considers that his / her retirement provision is inadequate. Alternatively, the member can plan to work longer. On the other hand, a member closer to retirement has much less flexibility to change his / her retirement plans and therefore a more certain investment return is desirable.

  (e) The benefits of time diversification – the argument here is that over the long term "things average out" and provided that a member does not buy assets at a price far in excess of fair value, then over time the premium for a riskier asset will come through thus reducing the cost of providing for retirement.

  (f) It facilitates easier retirement planning if the member's expected investment return in the period just before retirement is more certain.

It is clear from the above that the design of the model may not be suitable for *inter alia* members that plan to secure a living annuity at retirement, members that plan to retire a number of years before normal retirement age and high income members that probably have a higher risk appetite than that embedded in the life stage model.

Investment choice

For the reasons set out above, members, other than members entitled to the conditional retirement benefit, will be given the choice to opt-out of the life stage model and construct an “own choice” portfolio from any combination of the three life stage portfolios and the Shariah compliant portfolio. Members are allowed to apply a different strategy to their Supplementary Account and their Main Account. Members may also make an own choice election for their future contributions in which case they become an “own choice” member. The member’s investment will continue to be invested according to his or her choice unless the member makes another election to invest his or her money differently.

The life stage model in respect of a member entitled to the conditional retirement benefit will be based on the retirement age nominated by his/her employer.

Guided annuity strategy in terms of Regulation 39 of the Pension Funds Act

The Fund’s guided annuity strategy is the life annuity provided by the Fund. This life annuity provides retirees with a life-long pension (for the retiree and his or her beneficiaries) at a much lower cost than the equivalent product from an Insurer. The life annuity aims to grant annual pension increases which are expected to be at least 65% of inflation.

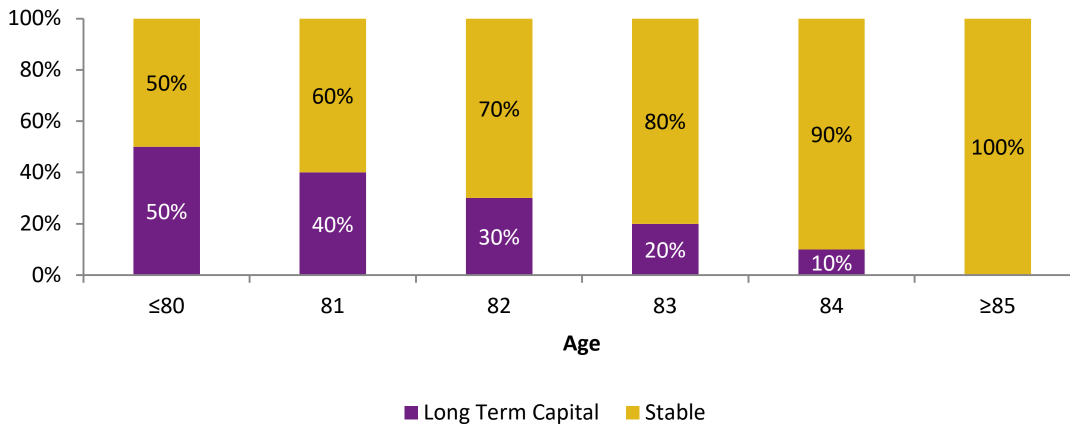
Limitation on drawdown and default investment strategy for living annuitants

The living annuity provided by the Fund does not form part of the Fund’s guided annuity strategy. Nevertheless, the Fund imposes the following limitations on the in-fund living annuity:

- The retiree must apply a minimum amount of R1.5 million (after commutation) towards a living annuity from the Fund. This R1.5 million has the effect that provided that the “hurdle” of R1.5 million is met, the member can apply his/her retirement capital to secure any combination of a life and living annuity.
- The Board has set a maximum draw-down percentage on an age related basis as set out in the living annuity policy as shown below. The purpose of doing so, is to lower the odds of the retiree (and his or her spouse if applicable) running out of money before they pass away. However, retirees can apply to the Board for a high drawdown rate, but they need to provide hard evidence that such a higher drawdown rate will not reduce the sustainability of their pension.

Age band	Maximum draw down
Up to age 60	5.0%
61 – 65	6.0%
66 – 70	7.0%
71 – 75	8.0%
76 – 80	10.0%
81 – 85	12.0%
86 – 90	14.0%
91 and older	17.5%

It is expected that most retirees that elect a living annuity will follow an own choice investment strategy. Living annuitants can select any combination of the Long Term, Stable, Money Market and Shari’ah Portfolios. Notwithstanding the Board has designed a default investment strategy for living annuitants that are unwilling to make such an investment choice. The form of this default strategy is shown in the chart below:



This approach represents a reasonable balance between growth and income and allows the retiree to manage sequencing risk better since, if markets are weak, the pensioner can fund his or her income from the less volatile Stable Portfolio and leave the capital invested in the Long Term Capital to benefit from the assumed subsequent market recovery.

Section 7: Investment return objectives

Principles

The investment return objectives and risk constraints for the Long Term Capital, Stable and Money Market Portfolios have been set with reference to the following principles:

Differentiated portfolios

The expected investment return for the investment channels offered should be sufficiently differentiated to be appropriate for members with different time horizons and risk appetite. The table below sets out the typical asset allocation and associated investment horizon for the three investment channels offered to in-service members:

Investment channel	Typical asset allocation	Investment horizon
Long Term Capital Portfolio	70% to 85% growth assets (e.g. equities and property) and 15% to 30% fixed interest assets (mainly bonds)	At least 7 years
Stable Portfolio	45% to 55% growth assets and 45% to 55% fixed interest assets being mainly cash and enhanced cash strategies	3 years
Money Market Portfolio	Invested only in cash and enhanced cash strategies	1 year or less

Return and risk objectives

The return objective and risk constraint for each investment channel is set with reference to observed long term investment returns, the associated risk and correlation matrix for the four principal asset classes being cash, bonds, equities and property, together with a subjective overlay to take due account of current market conditions. The derivation of the assumptions is detailed in Annexure 3 and are currently as follows:

Asset class	Expected real return	Volatility
SA equities	8.00%	26.0%
SA listed property	9.00%	29.0%
SA nominal bonds	4.50%	13.0%
SA inflation linked bonds	3.75%	11.0%
SA cash	1.50%	3.0%
Global equities (ZAR)	5.50%	17.0%
Global listed property (ZAR)	5.00%	16.0%
Global listed infrastructure	5.00%	15.0%

If achieved, the above investment return objectives would, for the *characteristic member*, result in a replacement ratio at normal retirement age of some 80% to 90% of the member’s pensionable salary at that time. The assumptions made regarding the characteristic member, are also detailed in Annexure 4.

In addition to the above the Fund offers the Shariah compliant portfolio to in-service members which has an allocation of some 60% to 75% to growth assets.

Finally, the assets of the pensioners in receipt of a life annuity are invested in the Pensioner Portfolio. This portfolio is managed employing a liability driven investment approach. This means that rather than consider the absolute level of investment return, the focus is on the funding level the Pensioner Portfolio. This means for example, if the assets of the Portfolio are 100 units and the liabilities are also 100 units, it is no consequence to the Fund, if the assets earn a negative return of 10%, provided that the value of the liabilities also fall by 10%.

75% of the Pensioner Portfolio assets are allocated to the Matched Portfolio (“MP”). This portfolio is invested to deliver increases 65% of inflation in March each year. However, the same 75% of the assets should aim to hedge 100% of the interest rate risk on the full pensioner liability. To illustrate the point, assume that at a time the value of the pensioner liabilities (providing for pension increases of 65% of inflation) is 100 units and the MP has assets of 75 units. Assume now that interest rates increase, and the value of the liabilities reduces to 97 units; the expectation is that the value of the MP units will fall to 72 units (by more or less the same 3 units).

Conservative yield enhancement strategies are applied to a maximum of 35% of the MP. These strategies are expected to enhance the total yield of the MP by 0.4% p.a. Of the remaining 25% assets, 20% are allocated to global growth assets (i.e. equities including infrastructure assets and property), with the remaining 5% being allocated almost entirely to SA unlisted infrastructure equity. It is assumed that these growth assets will deliver an equity risk premium (excess returns to government fixed assets) of 3% p.a., which if achieved would add 0.75% p.a. (i.e. 25% x 3%) to the portfolio’s return over the risk free government bond yields. The aggregate of the yield enhanced strategies plus the 25% allocation to growth assets represent the targeted 1% p.a. out performance of the liabilities over 10 years. Should these targets be achieved, the Fund may be able to grant pension increases of between 70% to 80% of inflation over the long term.

Long Term Capital Portfolio – objective and risk constraint

The investment return objective of the Long Term Capital Portfolio under normal market conditions is to achieve a real investment return of 5% p.a. net of all charges over a measurement period of 7 years with a standard deviation of 14.5% p.a. At this level of risk, there is about a 5% chance of a lower real return than -19% over 12 months. However, when measured over seven years, there is an estimated 5% chance of a lower real return than -4% p.a.

Stable Portfolio – objective and risk constraint

The Stable Portfolio targets, under normal market conditions, a real investment return of 3.0% p.a. net of all charges over a measurement period of 3 years with a standard deviation of 8% p.a. Furthermore, the portfolio aims, but does not guarantee, to avoid a negative nominal return over any 12 month period. This means that there is about a 5% chance of a lower real return than -8.5% over 12 months. On the basis that inflation is assumed to be 5.0% p.a. the above could be restated as 5% chance of return less than -3.5% over 12 months. When measured over three years, there is an estimated 5% chance of a lower real return than -3.5% p.a.

Money Market Portfolio – objective and risk constraint

The Money Market Portfolio aims to deliver a return that is 1% p.a. in excess of inflation net of all charges over any 12 month period with a standard deviation of 2% p.a.

The portfolio aims to provide a high degree of certainty about the return over the next 12 months and has an extremely low risk of a nominal capital loss over any 12 month period.

Pensioner Portfolio – objective and risk constraint

As per the above Pensioner Portfolio aims to out-perform the present value of the current pensions making provision for pension increases of 65% of inflation priced off the SA government bond yield curve by 1% p.a. over a 10-year period with a tracking error of less than 4% p.a. Should this objective be achieved, the Fund should be able to afford pensioner increases of close to 75% of inflation.

Shariah Portfolio – objective and risk constraint

The portfolio targets a real return of 4% p.a. over measurement periods of 7 years with a risk of 15% p.a.

Section 8: Asset classes and benchmarks

Preamble

As per section 6, the investment return objectives for the investment channels have been set with reference to the principal asset classes, namely equities, bonds, and money market instruments. These asset categories have much more granularity – for example equity type assets include *inter alia* listed and private equity, property, infrastructure assets and agriculture. Similarly, bonds consist of listed and unlisted debt of sovereigns or companies. Furthermore, categorisation by region is possible e.g., domestic, global developed world, emerging market and frontier market.

Principles for inclusion of a particular asset class

The Board has applied the following principles in deciding whether to include a particular asset class in the Strategic Asset Allocation Portfolio or not:

- The Board must have a good understanding of the asset class and in particular of the factors driving returns and the risk premiums the specific asset class offers.
- The market price of a particular asset class is driven by a number of factors. The Fund looks to invest in asset classes which prices are driven by different factors or more likely a different weighting to a specific factor so as to target good diversification benefits. Thus, asset classes which offer good diversification benefits will generally be an allowable asset class for investment. The factors driving the investment returns of the main asset classes are set out in Annexure 5.
- In addition to selecting asset classes on the basis of their returns being driven by different factors, the Board will seek to build a diversified portfolio by allocating assets to a wide range of risk premiums. The possible nature of the premium per asset class is also set out in Annexure 5.
- The allocation to a particular asset class needs to comply with the restrictions of the Pension Funds Act and in particular Regulation 28 to that Act.
- A maximum of 15.0% of the Fund will be invested in unlisted equity, property and private equity arrangements. (The Regulation 28 limit on such instruments is also 15%).
- For investments in long term themes a thorough due diligence and risk assessment needs to be undertaken

Benchmarks per asset class

In the case of listed assets, a published market capitalisation index will be available. The Board will select a market capitalisation benchmark that is a reasonable representation of the universe from which investments can be made.

In the case of unlisted assets, a suitable published benchmark may not be available. In this case the Board will set the benchmark with reference to the underlying nature of the assets (i.e., equity, bond or money market) plus an appropriate premium to reflect the specific risks taken on. Alternatively, for real asset classes such as property and infrastructure, the benchmark may be set with reference to inflation. The current asset class benchmarks adopted by the Fund are set out in Annexure 6.

Section 9: Asset allocation

The Reference Portfolio

The Fund sets as its Reference Portfolio for each of its investment channels the mix of mainstream asset classes (this being listed local and international equities, property, bonds and cash) that is expected to generate a return over the long term which is consistent with the investment objective of that investment channel. The expected risk for the Reference Portfolio also sets the risk budget for the relevant investment channel.

The Reference Portfolio reflects a “do nothing” or passive approach and the calculated investment return and risk for a particular investment channel (using the benchmark return for each asset class) represents the return that would have been earned had the Fund simply invested in accordance with its Reference Portfolio allocation.

Methodology for deriving the Reference Portfolio

In deriving the Reference Portfolio for an investment channel, the Fund has used a combination of quantitative techniques (re-sampled mean variance optimisation) and subjective judgement.

The Board believes that a quantitative technique is based on too many assumptions and therefore the results of such a model should need to be interpreted with a common-sense overlay. The Reference Portfolio allocation set for each investment channel is therefore not positioned as the optimal solution; rather it represents a sensible approach which is expected to deliver reasonable outcomes under normal market conditions over the measurement period of the channel. The Reference Portfolio per investment channel is detailed in Annexure 7.

If the Board assesses a particular asset class to be very expensive or very cheap, it could revise the Reference Portfolio materially on the basis that there is an assessed high probability that the specific asset class will move towards its fair value over a period of around three to five years. This medium term approach to asset allocation is called dynamic asset allocation.

For the Pensioner Portfolio, the Liability Benchmark Portfolio (which is the equivalent of the Reference Portfolio) is calculated based on life expectancy of the pensioners (and their beneficiaries) allowing for 65% of inflation pension increases from each 1 March and the SA government nominal and inflation linked bond curve.

Strategic asset allocation

The Strategic Asset Allocation (SAA) differs from the Reference Portfolio in that the Board may identify assets which have materially similar economic characteristics to the mainstream asset classes but with assessed superior risk and return prospects or good diversification benefits (e.g. private equity, infrastructure, absolute return strategies and SA equity activist approach which is accessed via an insurance policy. The SAA represents an adjustment to the Reference Portfolio to exploit such opportunities.

The difference in the return of the SAA and the Reference Portfolio represents the value added by strategy skill (i.e. diversifying and choosing asset classes with an assessed superior risk and return payoff profile).

Section 10: Portfolio construction

Active versus passive management

The Board believes that it, together with its Investment Committee and the investment consultant appointed, have a reasonable chance of identifying skilled investment managers, noting that identifying such managers is more difficult in a narrow market which may be driven largely by macro-considerations such as South Africa. The Fund is of the view that its governance budget allows the Board to have a reasonable chance of identifying such managers and so the Fund has appointed active managers (i.e. managers that seek to out-perform a specified benchmark net of costs) for all its mandates other than for 30% of the SA equity allocation and for a portion of its global equity exposure. The Board, will, however, monitor the performance of the various portfolios of the Fund, comparing the risk adjusted returns of these portfolio against that of the Reference Portfolio to evaluate the efficacy of following the active approach, particularly for SA equities.

The asset allocation decision

The Board recognises that if it were possible to get the asset allocation decision right, significant value can be added in the form of higher return and/or reducing risk.

The Board will seek to add value via asset allocation in the following ways:

- The Board will actively seek to identify asset classes with materially the same economic characteristics as the Reference Portfolio, but which offer superior return or specific diversifying characteristics (e.g. infrastructure, unlisted property etc.)

- The Board will review the strategic asset allocation for each investment channel on a quarterly basis with a view to identifying asset classes that are significantly mispriced (i.e. very cheap or very expensive) by long term measures. The identification of such situations may lead to a change to the Strategic Asset Allocation for a specific investment channel. This approach is called dynamic asset allocation.

- Within a particular asset class, the mandate given to the specialist manager could allow investment of a specified percentage of the assets in cash if the manager regards the asset class as expensive.

Having dealt with the asset allocation decision in the manner described above, the Board will appoint specialist asset managers for each asset class.

Given the difficulty in getting the asset allocation decision right on a consistent basis, the Board will maintain an asset allocation quite close to the Reference Portfolio (except at assessed market extremes) and as such most of the value add and risk reduction is expected to be generated from instrument selection rather than asset allocation.

Specialist asset managers

The Board believes that specialisation in a particular asset class is likely to be a competitive advantage in a field as diverse and complex as investments. Hence, as described above, the Board has appointed specialist asset class managers for all mandates, other than the Shariah Portfolio.

The Board is of the view that that specialisation is essential in the alternative asset classes that make up part of the Strategic Asset Allocation (e.g. private equity, infrastructure, unlisted property SA equity activist approach etc.). This approach is supported by empirical evidence that shows that there is greater persistency in the performance of alternative asset class managers (i.e. past performance is a reasonable predictor of future performance) than is the case for mainstream managers.

It is noted that if the amount to be invested in a particular investment channel is small (such as the Shariah Portfolio), the Board will have a preference for multi-asset class mandates on the basis that the associated implementation difficulties argue against the use of specialist mandates.

Investment approach blending

There are two principles which inform the Board's approach to blending different investment approaches, namely:

- The most robust approach to blending managers is to combine skilled managers that approach the market differently and where there is little overlap in their shareholdings. In this way, each manager can hold a portfolio that is very different from the benchmark (called a high "active share" portfolio), with the aggregate blend having a high active share but the combination of the managers being large neutral on factors such as country exposure, sector exposure and style. In this way, stock picking rather than macro factors drives the portfolio returns.

  It is possible to follow this approach in relation to global equities where there is a deep opportunity set; this is the approach that the Fund has adopted. However, in narrow markets like South Africa the efficacy of such blending is significantly reduced.

- Selecting skilled investment managers is difficult and to diversify against selection error the Fund will appointment more managers rather than fewer. The constraint on diversification is that one reaches a point where the blend represents an enhanced index strategy but at a very high cost. Accordingly, blending of active managers should be done to the extent that it keeps the active share high. Naturally, in the deep global markets the Fund can appoint more managers than in the narrow SA market.

The current combination of specialist mandates and the blending of investment approaches per investment channel are set out in Annexure 7.

Section 11: Manager selection

Qualitative assessment of managers

The Board will place a higher weighting on qualitative considerations in appointing its investment managers and so assign a lower weighting to past performance. The reason for this approach is that in a highly competitive industry only a small proportion of managers have exceptional skill and given the uncertainty in anticipating future returns, the very good observed performance by a particular investment manager could just as well be attributed to luck as opposed to skill, particularly over shorter measurement periods.[1]

The qualitative analysis must however be supplemented with a strong quantitative analysis to better understand how the manager generates its performance and to check that the manager's holdings are consistent with the investment approach the manager conveys.

Criteria for selecting managers

The Board has adopted the following criteria for the selection of an investment manager:

- The manager must comply with the Fund's minimum Black Economic Empowerment requirements as set out on the Fund's policy.
- The manager must be assessed to have a discernible competitive edge to the market. This edge could take form of *inter alia* an intellectual edge, superior research giving rise to an information advantage or avoiding the mistakes other investors routinely make (i.e. a behavioural advantage). The competitive edge should be expressed via superior idea generation and portfolio construction.
- The assessed skill of the key investment professionals together with the diversity of opinion and constructive challenge within the team. The empirical evidence suggest that different perspectives and diverse opinion improve the quality of decision-making for complex adaptive problems.
- The manager should be part of a firm that has superior investment driven culture which has at its core the objective of delivering outstanding investment results for its clients. Characteristics of a superior investment culture may include a meritocracy that is regarded as fair, the ability to work together as a team, openness, and transparency, and importantly giving power to the individuals that drive strong performance to clients as opposed to gathering assets.
- The manager must have strong portfolio construction skills which includes position sizing, buying and selling disciplines and careful management of risk to limited unintended aggregation of risks within the total portfolio.
- The firm should have an impeccable standard of ethics and should align their interest with that of the Fund.
- Where the manager adopts a long-term investment horizon, they must allocate sufficient time and thought to the consideration of ESG factors in selecting the instruments included in its portfolio.
- The investment approach of the manager must be consistent with the beliefs of the Board and add to the intended diversification characteristics of the portfolio taking into account risk and returns.

[1] Over longer measurement period the luck starts to even out and a greater weighting can be attached for past performance in assessing manager skill. There are however very few managers with a long enough track record investing with the same approach and the same key decision-makers with materially similar assets under management.

The Board accepts that it will be rare to find managers that comply with all the above criteria, but the appointed managers should meet a significant percentage of the listed criteria. Furthermore, the Board understands that assessing managers against the above criteria necessarily is somewhat subjective and therefore there is a risk that the Board could over-rate a manager's skill. In order to diversify against this risk, the Fund will appoint a number of asset managers for each asset class that constitute a significant percentage of the asset allocation of the particular investment channel.

Terminating or reducing exposure to an investment manager

The following events would lead to a review and the possible termination of the manager's appointment or the down-weighting of exposure to the manager:

- Rapid growth or decline in assets under management;
- Change in the investment philosophy and approach or a material change in the investment process;
- The manager increasing the risk profile of the portfolio significantly without being able to provide good reasons for doing so;
- Poor performance over a period if such poor performance cannot reasonably be explained by market mispricing or poor luck. Monitoring thereof will be done using the Fund's quarterly investment dashboard;
- Loss of key personnel, including a situation where a key decision-maker is "promoted" to a different role;
- Perceived loss of passion and focus by key decisionmakers;
- Material change in the shareholding structure of the manager;
- Perceived adverse changes in the manager's ethics;
- Poor policies in respect of ESG issues, especially if the manager adopts a long-term investment horizon;
- Change in market conditions or regulatory environment which has the effect that the manager's investment approach may no longer be effective;
- A significant exposure to a specific investment sector that cannot be reasonably justified.

Section 12: Governance principles

Conflicts of interest

The Board accepts that conflicts of interest, whether actual or potential, is part and parcel of any investment strategy and that such conflicts, if left unmanaged, represent a material risk to the success of the Fund's investment strategy.

The Board requires full and transparent disclosure of actual and potential conflicts of interest from all its service providers and from Board members. Any breach of this requirement of full disclosure will be regarded in a serious light and may lead to the termination of the service provider's appointment or the Board member being required to resign.

All service providers are required to receive their entire remuneration from the Fund and so may not receive any direct or indirect benefit or remuneration from any other service providers associated with the Fund. Although difficult to assess accurately the Board will evaluate what the key motivator of a service provider is – the Board is looking to appoint service providers where the staff are driven by intrinsic motivators like "doing the right thing for the client", "continuous improvement" rather than merely a financial reward.

The Board will look to appoint Investment Committee members that have the ability to challenge the advice and investment strategies of their service providers. As a further risk mitigation, the Fund will only invest in strategies which, after due consideration, the Board considers it has a reasonable understanding.

In addition. The Board and members of its sub-committees will comply with the conditions of Directive 8 which deals with gratuitous benefits. The Fund's gift policy is consistent with Directive 8 issued by the FSCA.

Manager fees

The Board has adopted the following principles in relation to investment manager fees:

- Costs are certain whereas manager out-performance is only an expectation. As such the Board aims to keep costs low, but recognises that in certain circumstances it is worth paying a premium fee in order to access high skill and alignment of interest
- The fee arrangement must reflect and promote a clear alignment between the interests of the Fund and that of the investment manager.
- The manager's fee can be structured either on a fixed fee or performance fee basis. Where a performance fee structure is used, it must be designed in such a way that option value of the performance fee to the manager is nil (or very close thereto). This would generally require the fee system to operate on a high water mark basis with the reward for out-performance measuring manager skill (and not capital market returns).
- As a general guideline the manager's fee (including any performance fee) should allocate about 75% to 80% of the expected value added by the manager to the Fund (with the manager's share being 20% to 25%). There are circumstances in which a lower sharing ratio to the Fund may be appropriate but even in these circumstances the Fund would seek to benefit from at least 65% of the expected value added by the manager.

All fee negotiations with the respective investment managers will be performed by Fund's investment consultant subject to final approval by the Investment Committee.

Manager mandates

The Investment Committee will agree a mandate with each of the investment managers it appoints. The mandate will set out the performance target, measurement period and risk constraints for the manager and will also contain specific provisions to deal with potential conflict of interest situations. The various mandate conditions per asset class are set out in Annexure 9 and form part of the Fund's risk management program.

Monitoring

The performance of the Fund's investment channels and the underlying investment managers, will be monitored on an on-going basis with a formal Investment Committee review taking place at least four times a year. The manner in which the Fund's investments will be monitored is set out in Annexure 10.

The Investment Committee will also review the managers' stewardship practices annually against the criteria on which the manager was appointed.

Registration of the Fund's assets and scrip lending

The Board is comfortable for the assets to be registered in the name of the Fund or to access investment via comingled funds (e.g. insurance policies or collective investment schemes). The use of comingled funds is however subject to the conditions set out in Annexure 11.

The Fund will not engage in scrip lending where the assets are registered in its name. The Board however recognises that where the investment is via a pooled vehicle, the investment manager may be allowed in terms of the founding documents to scrip lend – in this case scrip lending is permitted provided that the terms of such lending are disclosed to the Fund before the date of the investment manager's appointment and the manager warrants that its scrip lending programme complies with the relevant legislation.

Section 13: Review of statement

In the normal course of events the Investment Committee and Board will review the investment strategy annually or shorter time intervals where investment opportunities may also arise. The investment strategy must be reviewed within 3 months of any of the following events occurring:

- A change in exchange control regulations affecting retirement funds
- A change in the tax basis affecting the investment strategy of the Funds
- A change in Pension Funds Act or the Long Term Insurance Act that affects investments
- A change in the economic policy regarding inflation targeting or the mandate of the South African Reserve Bank
- An indication that the Funds will have significant cash flow requirements (particularly outflows)
- Any extreme market event in which case the Principal Officer may convene a special meeting of the Investment Committee

Adopted by the Board on 8 September 2023.

Chairperson: Board

Principal Officer

I have reviewed the investment strategy of the Fund and am satisfied that it is appropriate in relation to the nature of the Fund's liabilities.

Valuator

Appendix A: Checklist of compliance with legislative requirements

Compliance with Regulation 28 Principles

Clause	Requirement	Compliance	SIP /other reference
2(a)	Fund must comply with limits of Regulation 28	✓	Annexures 7 and 9
2(b)	Fund must have an SIP which is reviewed at least annually	✓	Section 13
2(c) (i)	Education of board members in relation to investments must be promoted	✓	Fund trustee training program
2(c) (ii)	Monitor compliance with Regulation 28	✓	Annexure 10
2(c) (iii)	In contracting Fund must consider the need to promote broad based black economic empowerment	✓	Section 11
2(c) (iv)	Assets must be appropriate to liabilities	✓	Signing page and Annexure 10
2(c) (v)	Fund must do proper due diligence of processes, risk control and liquidity risk when appointing a third party manager	✓	Sections 11; Fund's DD process in selecting managers
2(c) (vi)	For foreign assets the due diligence should extend to an understanding of currency and country risk	✓	As per above
2(c) (vii)	Credit ratings may be considered in assessing risk, but the Fund's investment managers should do independent credit analysis	✓	As per above
2(c) (viii)	Board must understand how the risk profile of the Fund may change over time	✓	Annexure 10 plus quarterly performance report
2(c) (ix)	Sustainability and ESG factors must be considered before making an investment	✓	Sections 5 and 11

Compliance with requirements of Regulation 37 – default investment strategy

Clause	Requirement	Compliance	SIP /other reference
37.1	The Fund must have a default investment strategy for DC members	✓	Section 6
37.2 (a)	The design of the default investment strategy must include (a) objective (b) underlying asset allocation (c) fee principles and (d) risk profile.	✓	Section 6 read with annexures
37.2 (b)	The composition of the assets and performance must be communicated to members	✓	Quarterly fact sheet
37.2 (c)	Fees and charges must be reasonable and competitively priced	✓	Section 12 read with annexure 10
37.2 (d)	Fees and charges must be disclosed	✓	Quarterly fact sheet
37.2 (e)	Passive and active strategies must be considered	✓	Section 10
37.2 (f)	No loyal bonus or other complex fee structure are permitted	✓	Section 12
37.2 (g)	Members must not be locked into the default portfolios	✓	Sections 3 and 6
37.2 (h)	Default strategy must be reviewed	✓	Done annually with SIP review

Compliance with requirements of Regulation 39 – guided annuity strategy

Clause	Requirement	Compliance	SIP / other reference
39.1 (b)	Funds that allow a member to elect an annuity must have a guided annuity strategy	✓	Section 6
39.2 (a)	Guided annuity strategy must be appropriate and suitable for membership	✓	Guided strategy is a life annuity / members can opt out and elect a living annuity
39.2 (b)	Objectives, asset class composition and performance must be communicated to members	✓	Options at retirement guide and annual pension increase
39.2 (c)	Annuities have reasonable and competitive fees	✓	Section 6, fees much lower than insurer costs
39.2 (d)	Fees and charges and impact on benefits must be disclosed	✓	Retirement guide
39.2 (e)	Members must be given access to retirement benefit counselling	✓	Retirement guide, retirement webinars
39.2 (f)	Guided annuity strategy must be reviewed	✓	Done annually with SIP review
39.3 (a)	Permits the Fund to provide a living annuity as part of the guided annuity strategy	n/a	Fund provides the option of a living annuity, but it is not the guided annuity strategy
39.3 (b)	Sustainability of drawdowns must be monitored and communicated	✓	Fund limits drawdown on an age related basis; annual review of drawdown with living annuitant

Compliance with Guidance Note 1 of 2019 (PFA) – Sustainability of investments

Please note that the provisions of clauses 5 and 6 are advisory and not a statutory requirement

Clause	Requirement	Compliance	SIP / other reference
4.1 (a)	When SIP was approved and by whom	✓	Signature page
4.1 (b)	Frequency of the SIP reviewed	✓	Section 13
4.1 (c)	SIP must set-out policy in respect of ESG including how monitoring will be done	✓	Section 5 and 11
4.1 (d)	Active ownership policy	✓	Section 11
4.3	Investment manager mandates and reporting requirements should include provisions around ESG	✓	Section 5 and 11, read with annexure 8 and 9
5.1 (a)	Make a copy of SIP or an abridged version thereof on request and at no cost to any member and the participating employer	✓	
5.1 (c)	Annual inform members that the SIP is available on the website, noting material changes	✓	
6.3	Annual financial statements should include confirmation members that have requested a copy of the SIP have received such, material changes to the SIP should be noted, which of the Fund's asset comply with this guidance note and market value of such assets	✓	

National Tertiary Retirement Fund

Annexures: Statement of Investment Principles

Approved by Board on 8 September 2023

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Annexure 1: Investment Committee mandate

Composition

The Investment Committee will comprise of a minimum of four and maximum eight Board members with voting rights including the Chairperson of the Board. A quorum constitutes of 50% plus one Board member. The Chairperson of the Committee will be elected amongst the members of the Committee. The Chairperson of the Board may not be elected as the Chairperson of the Investment Committee.

The Chairperson of the Committee has a critical role as he or she will largely determine how effectively members of the Committee interact and decide on what issues the most amount of time needs to be allocated. The Chairperson of the Committee will be chosen by the Investment Committee on the basis of firstly leadership and secondly expertise. Members will serve on the Committee for a period of five years. The Board members are, however, subject to the Rules of the Funds governing the appointment and election of the Board members and their terms of office.

See attached.

INVESTMENT COMMITTEE MANDATE

Date of current revision: May 2023
Date of previous revision: N/A

INTRODUCTION

1. The Investment Committee was established by the Board of Trustees ("the Board") of the Fund in terms of the Fund rules. The Board appoints Committee members to serve on the Committee. This is the mandate adopted by the Board in respect of the Committee.
2. The role of the Committee is to ensure that the interests of the Fund and its Stakeholders are properly protected in relation to the investment of the Fund's assets. The Committee must specifically:
   - 2.1 carry out the responsibilities delegated to it by the Board as described in this mandate;
   - 2.2 Take oversight responsibility relating to the investment administration, investment managers and investment performance of the Fund, to ensure that the Fund is able to deliver reasonable retirement outcomes for members, having regard to ~~the~~ growth, risks and costs that may be expected under the investment portfolios deemed appropriate for the Fund;
   - 2.3 identify such risks relating to the investments of the Fund assets for purposes of risk management;
   - 2.4 ensure that the assets of the Fund are invested in accordance with the Statement of Investment Principles and Investment Strategy adopted by the Board, subject to the provisions of the Act, in particular Regulation 28 thereof and other regulations~~.~~
3. The purpose of this mandate is to set out the scope, constitution, role, duties and powers of the Committee.

INTERPRETATION

4. For purposes of this document any term not specifically defined in this document shall bear the meaning assigned to it in the Rules of the Fund.

CONSTITUTION

5. The Committee shall comprise of at least 4 (four) Trustees, appointed by the Board, provided that:
   - 5.1 Additional individuals with specific experience may be invited to join the Committee, as non-voting members;
   - 5.2 The members of the Committee should have attained the standard of training as determined by the Board from time to time, to adequately fulfill the role of the Committee;
   - 5.3 The term of members of the Committee is 3(three) years, or until their resign from the Committee or from the Board. Members are eligible for reappointment to the Committee after the end of their 3(three) year term. The Board will review and approve the constitution of the Committee every 3(three) years;
   - 5.4 The Chairperson of the Board may attend all Committee meetings as an observer.
6. The Chairperson of the Committee shall be elected by the members of the Committee.
7. The members of the Committee may also elect a Deputy Chairperson.
8. The provisions in the Rules of the Funds regarding the removal of Board members apply to the members of the Committee, as per the Code of Conduct.

QUORUM AND DECISION-MAKING

9. A quorum of the Committee shall be 50% of the Committee membership +1, present in person or attending by video-/teleconference.
10. Each Committee member will have one vote and no Committee member will have a casting vote.
11. In the event that a majority decision cannot be reached by the members of the Committee, the matter shall be presented to the Board for a decision.
12. Decisions and or recommendations made by the Committee may be made at a meeting, and recorded in the minutes, or made on a round robin basis via email, to be agreed by a quorum of Committee members.

MEETING PROCEDURES

13. Formal Committee meetings should be held at least 3 (three) times in a financial year of the Fund.
14. Formal *ad hoc* meetings will be held as may be required to ensure that the Fund matters are conducted efficiently and timeously. Proceedings of the meeting will be correctly minuted.
15. Notice of Committee meetings (including an agenda prepared by the Principal Officer) must be provided to all Committee members at least 7 (seven) calendar days prior to the date on which a meeting is to be held. This requirement may be waived in the event of a special meeting, or a formal ad hoc meeting. This requirement will be 3 (three) working days in the event of a special meeting, or a formal ad hoc meeting.
16. Minutes of each Committee meeting must be maintained and submitted to the Board for noting at the first Board meeting following such Committee meeting. All Matters for discussion and approval by the Board must be submitted.

BOARD RESPONSIBILITIES DELEGATED TO THE COMMITTEE

17. The Committee shall not perform any management functions or assume management responsibilities and shall have an objective, independent role, to oversee and to carry out its responsibilities in terms of this mandate, but always being accountable to the Board in so doing.
18. The Board delegates the specific responsibilities set out in Annexure A of this mandate, to the Committee.

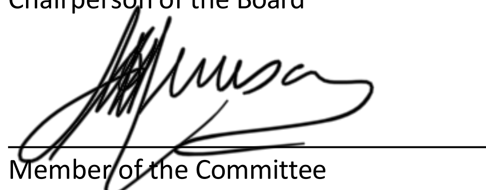
EVALUATION AND REVIEW

19. The Board will from time to time evaluate the effectiveness of the Committee and whether it has met its purposes and duties.
20. By accepting the appointment to the Committee, a member of the Committee agrees to the terms of this mandate.
21. The mandate will be reviewed every 3 (three) years.

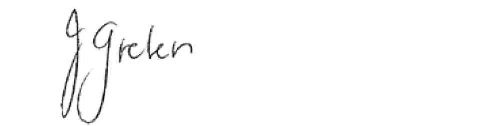
Certified that this is the Mandate of the Investment Committee, approved by the Board on 23 June 2023

Chairperson of the Board

Chairperson of the Committee



Member of the Committee



Principal Officer

	MANDATE	FREQUENCY	COMMITTEE AUTHORITY	BOARD AUTHORITY
1.	**Investment Strategy**			
The Investment Committee must consider and propose to the Board a strategy on the investment of the Fund's assets, which must be documented in the Statement of Investment Principles. In developing this strategy, the Investment Committee must consider the items listed below:				
1.1	Fund mission and Beliefs (how markets work?)	Annually	Recommendation	Decision
1.2	Review of investment portfolios offered (Life Stage model as well other portfolios)	Annually	Recommendation	Decision
1.3	Design of life stage model and its appropriateness	Annually	Recommendation	Decision
1.4	Review of the guided annuity strategy	Annually	Recommendation	Decision
1.5	Investment objective, benchmarking and risk budget per investment portfolio	Annually	Recommendation	Decision
1.6	Asset classes included in portfolios	Annually	Decision	Notification
1.7	Strategic asset allocation per investment portfolio	Ongoing	Decision	Notification
1.8	Re-balancing rules	Annually	Decision	Notification
1.9	Capital market assumptions and manager skill assumptions	Ongoing	Decision	Notification
1.10	Investment Manager configuration	Ongoing	Decision	Notification
1.11	Investment Manager investment guidelines and review of other contractual arrangements	Ongoing	Decision	Notification

	MANDATE	FREQUENCY	COMMITTEE AUTHORITY	BOARD AUTHORITY
2.	**Service Provider Selection and Assessment**			
2.1	Investment manager selection and de-selection	Ongoing	Decision	Notification
2.2	Custodian selection and de-selection	When required	Decision	Ratification
2.3	Investment Consultant selection and de-selection	Procurement policy	Recommendation	Decision
2.4	Investment Consultant performance assessment	Annually	Recommendation	Decision
3.	**Monitoring**			
3.1	Funds meeting its key performance indicators (investment channel level)	Quarterly	Reporting	Notification
3.2	Portfolio performance and risk taken relative to objective	Quarterly	Reporting	Notification
3.3	Manager performance and risk taken relative to benchmark / mandate	Quarterly	Reporting	Notification
3.4	Overall investment cost structure and contractual arrangements regarding fees	Quarterly	Reporting	Notification
3.5	Qualitative assessment of Asset Managers	Annually	Decision	Notification
3.6	Compliance with the requirements of Regulation 28	Quarterly	Reporting	Notification
3.7	Monthly unitisation and performance/returns	Monthly	Reporting	Notification
3.8	Change in valuations of assets and adjustment to market value	When required	Decision	Notification

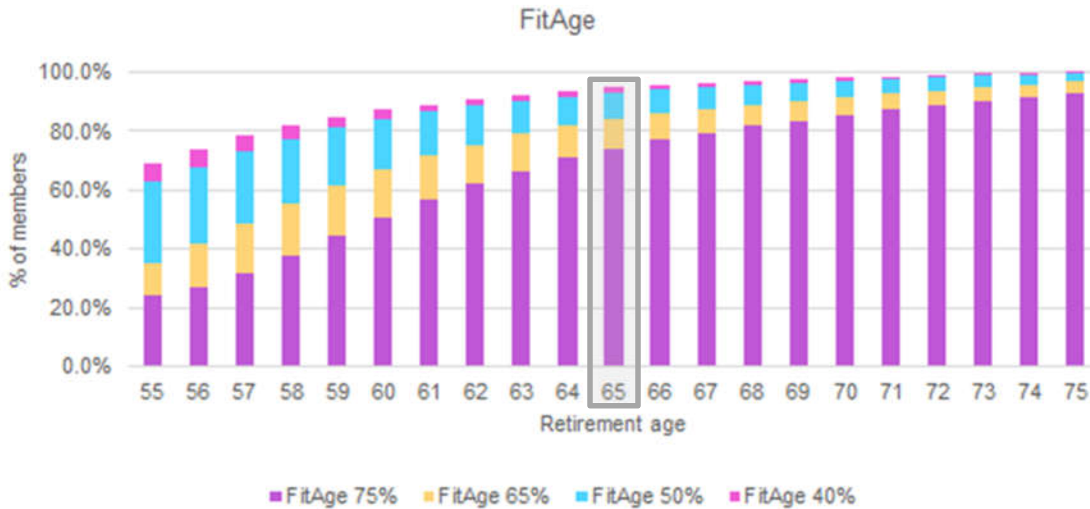
	MANDATE	FREQUENCY	COMMITTEE AUTHORITY	BOARD AUTHORITY
3.9	Review of investment information communicated to all stakeholders	When required	Decision	Communication Committee to ratify
4.	**Governance Matters**			
4.1	Script lending	When required	Decision	Notification
4.2	Report to the Audit and Risk Committee on risks identified within the Investment Committee's terms of reference	When required	Reporting	Notification
4.3	Review mandate of Investment Committee and report to Board	Every 3 years	Recommendation	Decision
4.4	Assess the performance and effectiveness of the Investment Committee	Annually	Recommendation	Decision
4.5	Approval of the Statement of Investment Principles	Annually	Recommendation	Decision
5.	**Authorisation**			
5.1	The Chairperson of the Investment Committee and the Principal Officer of the Fund (on recommendation of the Investment Consultant) may sign documents as instructed or previously approved by the Investment Committee or Board . It is the responsibility of the Principal Officer to report this to the Investment Committee on a quarterly basis.	As and when required	Notification	
6.	**Approval of Fund Expenses**	**PRICIPAL OFFICER AUTHORITY**	**COMMITTEE AUTHORITY**	**BOARD AUTHORITY**
6.1	Fees agreed by the Board in terms of a contract / service level agreement or quotation previously approved by the Board	Yes	No	No
6.2	Any request/quotation for legal advice • Committee • Board	 Yes Yes	 Yes No	 Yes Yes

	MANDATE	FREQUENCY	COMMITTEE AUTHORITY	BOARD AUTHORITY
6.3	General operational expenses			
	• R 0 to R 100 000	Yes	No	No
	• R 100 001 to R 250 000	Yes	Yes	No
	• Above R 250 000	Yes	No	Yes
6.4	Any expenses not budgeted for, that have been approved by Board	Yes	Yes	Yes

Annexure 2: Membership detail

FitAge

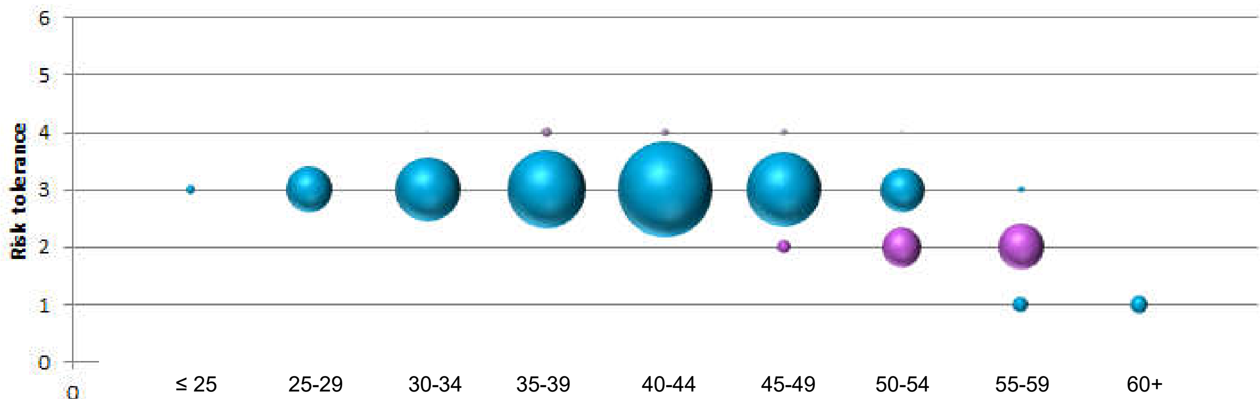
FitAge estimates that age at which a member will be able to retire with a specific level of pension. The chart below shows the estimated proportion of the membership that should be able retire with 90%, 75%, 55% and 40% of pensionable salary at various ages.



For example, using the financial and demographic assumptions as per Annexure 4, an estimated 74.1% of members will be able to retire at age 65 (normal retirement age for most members) with a pension of 90% of pensionable salary, 84% will be to do so with a pension of 75% of pensionable salary. This represents an extremely favourable picture in terms of retirement outcomes which is mainly attributable to high level of retirement saving contributions and good long term investment returns.

Risk appetite

The chart below shows the assumed composite risk appetite of the membership taking due account of the member's age, gender, pensionable salary, fund credit and the nature of any investment choice made in the past.



Based on the above analysis it is appropriate that the Board adopt a single default investment strategy in respect of members as there are relative few members with an assessed risk appetite different from the benchmark.

Annexure 3: Investment return objective setting

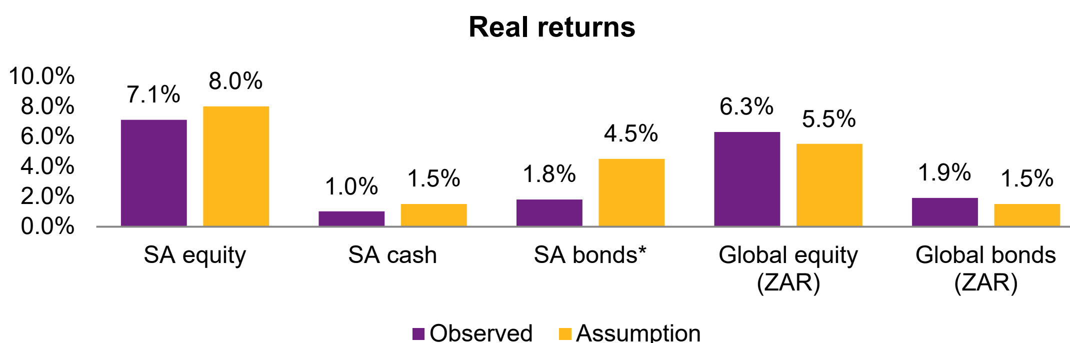
Process for setting the investment objectives

As per the Fund's Statement of Investment Principles (SIP) the return objective and risk constraint for each investment channel is set with reference to observed long term investment returns, the associated risk and correlation matrix for the main asset classes with a subjective overlay to take due account of current market conditions.

The three principal asset classes are equities, bonds, and cash. All other asset classes are a derivative of one (or more) of these asset classes together with an appropriate risk premium (which could be positive or negative depending on the riskiness of the asset class compared to its South African equivalent).

Long term investment returns

The chart below shows the 123 year history of SA cash, bonds and equity *real returns* for the period 1 January 1900 to 31 December 2021. It also includes the same statistic for global equities in local currency and shows the long term asset class assumptions that the Investment Committee has made.



* This is the assumption for nominal bonds. Data for inflation linked bonds is not available over this period and the assumption is made that such bonds will deliver a real return of 3.75% p.a. over the long term (i.e., the inflation risk premium is assumed to be 0.75% p.a.).

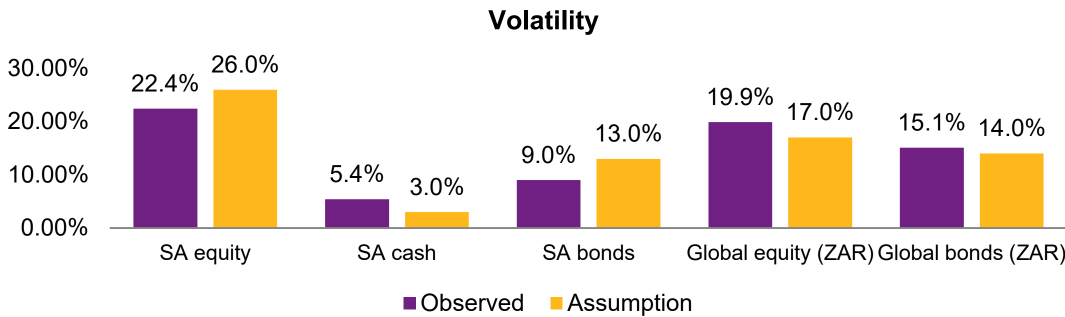
The Investment Committee has assumed that over the long term local and global equities (i.e., developed and emerging market equities excluding South Africa) will deliver a real return of some 8.0% p.a. and 5.5% p.a. respectively. The Investment Committee has taken the view that historical returns for these two asset classes, with adjustment for structural changes, are a reasonable estimate of future returns.

The Investment Committee has assumed a future higher real return of 4.5% p.a. from longer dated South African government bonds versus the historic observed real return of 1.9% p.a. This assumption reflects a view that the political and social risks inherent to South Africa are higher and investors will demand a higher sovereign risk premium for SA bonds.

The assumed future real return on SA cash at 1.5% p.a. is slightly higher than the historic observation (1% p.a.).

Volatility

The chart below shows the 123 year historical volatility of SA cash, bonds and local and global equities, as well as the assumed future level of volatility.



The Investment Committee is of view that the observed level of volatility of cash has been higher than is likely to be the case going forward. The more extensive use of monetary policy, with the concomitant application of more stable real cash returns, has resulted in greater stability of the inflation rate and this should reduce the volatility of cash returns. The observed 123 year volatility of global equities in US$ terms is 17.0% p.a. and for global bonds it is 8.0% p.a. In ZAR. The much higher observed volatility of global bonds in ZAR is caused by the volatility of the ZAR which is a significant part of the return when expressed in local currency.

Correlations

The table below sets out the 123 year historical correlations between the main asset classes:

	SA equity	SA bonds	SA cash	Global equity	Global bonds
SA equity	100.0%				
SA bonds	37.7%	100.0%			
SA cash	9.9%	44.8%	100.0%		
Global equity	35.3%	5.0%	27.5%	100.0%	
Global bonds	2.4%	15.1%	53.7%	58.3%	100.0%

The Committee has generally assumed a higher correlation between the asset classes prospectively for the following reasons:

- The quantum of financial assets (i.e. money that individuals have to invest) has increased over time and is expected to increase in future. As more money flows into public markets in search of returns the correlation between asset classes is likely to increase
- With globalisation correlations are also likely to increase as the world becomes more interconnected.

Lower correlations have been assumed to global bonds as this asset class has “flight to quality” characteristics. The assumed level of correlation between the main asset classes is set out below:

	SA equity	SA bonds	SA cash	Global equity	Global bonds
SA equity	100.0%				
SA bonds	45.0%	100.0%			
SA cash	5.0%	50.0%	100.0%		
Global equity	50.0%	10.0%	-5.0%	100.0%	
Global bonds	-15.0%	-15.0%	5.0%	45.0%	100.0%

Annexure 4: The characteristic member

The investment objectives adopted by the Fund should translate into the characteristic member receiving a retirement benefit of some 80% to 90% of his /her pensionable salary. The specific assumptions made in respect of the characteristic member are:

Retirement age:	60 or 65 years depending on the normal retirement age nominated by the respective participating employers
Service years:	35 years
Marital status:	Married with the husband being 3 years older than wife
Spouse pension:	75% of the member's pension
Retirement savings:	19% of pensionable salary (i.e. the lowest level of retirement savings a member can make)
Salary progression:	3.5% p.a. above inflation up to age 40, 2% p.a. higher than inflation ages 40 – 49 and 0.5% p.a. above inflation from age 50 onwards
Investment return used to convert retirement capital into a pension:	The yield on SA government issued nominal and inflation linked bonds making provision for future pension increases in March each year of 65% of the previous year's inflation rate

In order to have at least a 50% chance of achieving the target NRR and balance inflation risk with the pension conversion risk a real return which is some 5% p.a. above inflation is required until about 8 years before retirement thereafter it reduces gradually to a real return that is 1% p.a. above inflation in the year just before retirement. The life stage model has been designed to be consistent with the above investment return requirements.

Annexure 5: Asset class features, expected return and risk

Factors affecting asset class prices

Cash offers clear diversification benefits because of the largely non-directional nature of its return. The return on cash is determined almost entirely by government policy around stimulating economic growth and/or managing inflation.

Government bonds offer diversification benefits because of their "flight to quality status" when there are significant concerns about economic growth provided that investors have confidence in the creditworthiness of the sovereign. The return from government bonds is primarily driven around government policy in the short to medium term as firstly government, via the Reserve Bank, can print or take money out of the economic system and thus largely set the level of interest rates. Secondly, the size of the government's budget deficit (i.e. spending over taxation revenue) determines the amount of debt the country needs to raise with a higher deficit resulting in higher interest rates except in the USA (and possibly the UK and Japan) which are reserve currencies.

Over the long term interest rates are set by the economic performance of the country, with poorer performing countries having to offer higher interest rates to attract investment.

Whilst equity returns also depend on the level of interest rates, the return is more directly linked to economic growth. Economic growth is a function of government policy (e.g. taxation, labour law, ease of conducting business, competition law, etc.), natural resources, infrastructure, demographics, productivity gains and innovation. Within the equity asset class further diversification is possible because the fortunes of companies are driven by different factors (e.g. labour intensity, capital required, nature of the demand for the product and services, competition etc.) Furthermore, the equity return of a specific company will be influenced by the quality of its management.

Risk premiums

In addition to asset class prices being driven by different factors, asset class prices are affected by the premium the market offers for taking on specific risks. The various *economic risk premiums* are described in the table below:

Premium	Description
Inflation risk premium	Compensation against the risk having bought a fixed rate bond, interest rates rise as a consequence of an expectation of higher inflation
Term premium	Compensation against the risk that interest rates rise for a bond that has been issued at a fixed interest rate for reasons other than an increase in inflation expectations. In general, the longer the term of the bond, the higher the term premium required.
Sovereign risk premium	This is the extra return that needs to be offered for the risk that the government will default on its debt. The more creditworthy the government is assessed to be, the lower the sovereign risk premium
Credit premium	Compensation for the risk that the corporate counterparty who issued the bond defaults on its debt. The quantum of the credit premium depends on the security provided against the debt and the market's assessment of the ability of the corporate to repay its debt. The credit premium is also linked to economic growth – in times when economic growth is strong, company profits make it more likely that the company will repay its debt.

Premium	Description
Equity risk premium	This is the compensation that equity holders receive for standing last in line to share in the profits of the company and for being exposed to all the economic, social and legislative factors that will affect equity returns.
Illiquidity premium	If an asset is less easily traded, investors need to be compensation for the risk that if they were forced to sell the asset, it would need to be at a low price because there would be very few buyers
Insurance premium	If the Fund is prepared to provide insurance, it needs to earn an insurance premium as compensation for the risk that the claims under the insurance it provides are higher than expected.

The table below shows the risk premiums that are a function of the *"governance budget"* of the Investment Committee and so are more qualitative in nature.

Premium	Description
Long term premium	This is the compensation that investors may receive for adopting a longer term investment horizon than other investors. It is sometimes also called the discomfort premium because of the patience and fortitude the investor requires to maintain a long term focus in spite of significant short term under-performance
Complexity premium	Investors that allocate capital to more complex and/or less well known asset classes need to be compensated for greater risk of making an error
Skill premium	Investors that appoint what is assumed to be skillful investment managers need to be compensated for the risk that they assess the skill of the manager incorrectly

Allowable asset classes – factors driving returns and risk premiums

The table below sets out the allowable asset classes of the Fund, together with the factors driving the returns and the risk premiums targeted. Also shown is whether the asset class is included in the Reference Portfolio (RP):

Asset class	RP asset?	Factors driving returns	Risk premiums targeted
Cash	Yes	Government policy	Nil, as this is the risk free rate (but negative real returns are possible if government keeps interest rates low)
Sovereign index linked bonds	Yes	Government policy, creditworthiness, "flight to quality" demand	Sovereign and term premiums
Sovereign nominal debt	Yes	As per above plus inflation expectations	Sovereign, inflation and term premiums
Corporate debt (investment grade)	Yes	Creditworthiness and GDP growth	Credit and term premiums with inflation risk embedded in term premium (fixed rates). If floating rates, then no term premium. There may also be exposure to the illiquidity premium
Corporate debt (non-investment grade); mezzanine debt	No	As per the above, but these factors have greater impact	Usually floating rates so credit premium and illiquidity premium

Asset class	RP asset	Factors driving returns	Risk premiums targeted
Commodities	No	Global GDP growth	Exposure to economic growth and a hedge against inflation

Asset class	RP asset	Factors driving returns	Risk premiums targeted
Listed property	Yes	GDP growth mainly; lower risk than equities because of higher initial yield	Equity and possibly the illiquidity premium. Inflation hedging as a real asset
Listed infrastructure (global only)	Yes	GDP growth and company specific factors	Equity risk premium and inflation hedging as a real asset
Listed equities	Yes	GDP growth and company specific factors	Equity and possibly the mid/small cap and the illiquidity premiums
Private equity; early stage investing (global)	No	Company specific factors	Equity and early adopter complexity premium, together with the illiquidity premium
Unlisted global property	No	GDP growth and demand and supply dynamics	Equity, inflation hedging as a real asset and illiquidity premiums, together with the complexity premium
Unlisted infrastructure (local only)	No	Contractual take-off agreements	Equity, inflation hedging as a real asset and illiquidity premiums

Return, risk, and correlation assumptions for the Reference Portfolio

The table below sets out the expected real return and risk for the asset classes included in the Reference Portfolio:

Asset class	Expected real return	Volatility
SA equities	8.00%	25.0%
SA listed property	9.00%	27.0%
SA nominal bonds	4.50%	13.0%
SA inflation linked bonds	3.75%	11.0%
SA cash	1.50%	2.0%
Global equities (ZAR)	5.50%	17.0%
Global listed property (ZAR)	5.00%	16.0%
Global listed infrastructure (ZAR)	5.00%	14.0%

The table overleaf sets out the assumed correlation between the asset classes, based on a combination of historical correlations and a subjective overlay. In almost all cases the assumed correlation is slightly higher than the observed statistic.

	SA equity	SA property	SA bonds	SA ILB	SA cash	Global equity	Global Infra	Global property	Global bonds
SA equity	100.0%	55.0%	45.0%	25.0%	5.0%	50.0%	30.0%	40.0%	-15.0%
SA Property	55.0%	100.0%	60.0%	30.0%	10.0%	15.0%	10.0%	20.0%	-10.0%
SA bonds	45.0%	60.0%	100.0%	45.0%	50.0%	10.0%	-5.0%	-5.0%	-15.0%
SA ILB	25.0%	30.0%	45.0%	100.0%	20.0%	5.0%	-5.0%	-1.0%	-10.0%
SA cash	5.0%	10.0%	50.0%	20.0%	100.0%	-5.0%	-15.0%	-10.0%	5.0%
Global equity	50.0%	15.0%	10.0%	5.0%	-5.0%	100.0%	80.0%	80.0%	45.0%
Global Infra	30.0%	10.0%	-5.0%	-5.0%	-15.0%	80.0%	100.0%	75.0%	60.0%
Global property	40.0%	20.0%	-5.0%	-1.0%	-10.0%	80.0%	75.0%	100.0%	35.0%
Global bonds	-15.0%	-10.0%	-15.0%	-10.0%	5.0%	45.0%	60.0%	35.0%	100.0%

Return and risk assumptions for alternative asset classes [Updated to be in line with capital market assumptions]

The table below sets out the real return and risk assumptions for the alternative asset classes that will be included in the Strategic Asset Allocation:

Asset class	Expected real return	Volatility
Emerging Market Equities	8.0%	22.0%
Africa ex-SA equities (1)	11.0%	30.0%
Global private equity	8.0%	17.0%
SA private equity (non-infrastructure)	10.5%	26.0%
SA unlisted infrastructure	7.0%	14.0%
Global unlisted real estate (ZAR) (1)	2.0%	15.0%
SA credit (average credit A+)	2.0%	4.0%
High yield credit (average credit BBB)	4.0%	9.0%
Renewable energy debt	4.0%	7.0%
Mezzanine debt (1)	4.0%	16.0%

Notes

1 Expected return on assets has been reduced to reflect their impaired nature

Annexure 6: Asset class benchmarks

As per the SIP, in the case of listed assets, a published market capitalisation index which is a reasonable representation of the opportunity set will be used. In the case of unlisted assets, the benchmark will be set with reference to the underlying nature of the asset class or where there is a strong inflation linkage a real return will be assumed. The table below sets out the benchmark adopted for each allowable asset class.

Asset class	Benchmark
SA equities	FTSE / JSE Free Float Capped All Share Index (CAPI) (J303T)
SA listed property	SA listed property index ALPI) (J803T)*
SA nominal bonds	Bond Exchange South Africa: JSE ASSA All Bond Index (ALBI)
SA inflation linked bonds	Bond Exchange South Africa: JSE ASSA Total Return Government Bond Index (IGOV)
SA cash (in Money Market Portfolio)	STEFI Composite Index
Global equities	MSCI All Country World Index ND (MSCI ACWI ND) from 1 January 2013 onwards**
Emerging Market Equities	MSCI Emerging Market Index ND (MSCI EM ND)
Global listed property	FTSE EPRA/NAREIT Developed Index (Net)
Global listed infrastructure	FTSE Developed Core Infrastructure (50/50) Index (Net)
Global bonds	FTSE World Government Bond Index
SA private equity	FTSE / JSE CAPI plus 2.0% p.a.
Global private equity	Global equity index (MSCI ACWI ND) + 3% p.a.
SA infrastructure equity	Inflation plus 7% p.a.
Global unlisted property	FTSE EPRA/NAREIT Developed Index +2.0% p.a.
SA credit (average credit A^{+})	STEFI 3-month index plus 1.0% p.a.
High yield credit (average credit BBB)	STEFI 3-month index plus 2.5% p.a.
Mezzanine debt	STEFI 3-month index plus 6.5% p.a.
African ex-SA equity	MSCI EFM Africa ex-SA index ND

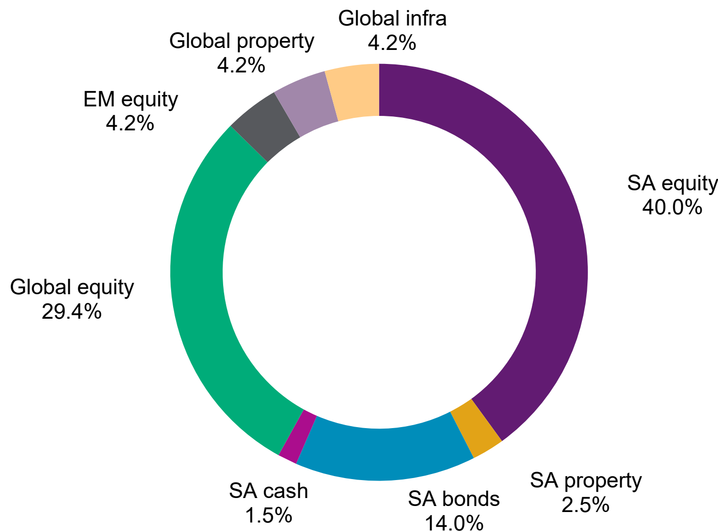
* SA listed property index (SAPY) (J253T) applied prior to this date. The effective date of change for Sesfikile is 1 July 2018 and for Meago it is 1 February 2019

** MSCI World Index (MSCI WI) applied prior to this date

Annexure 7A: Long Term Capital Portfolio

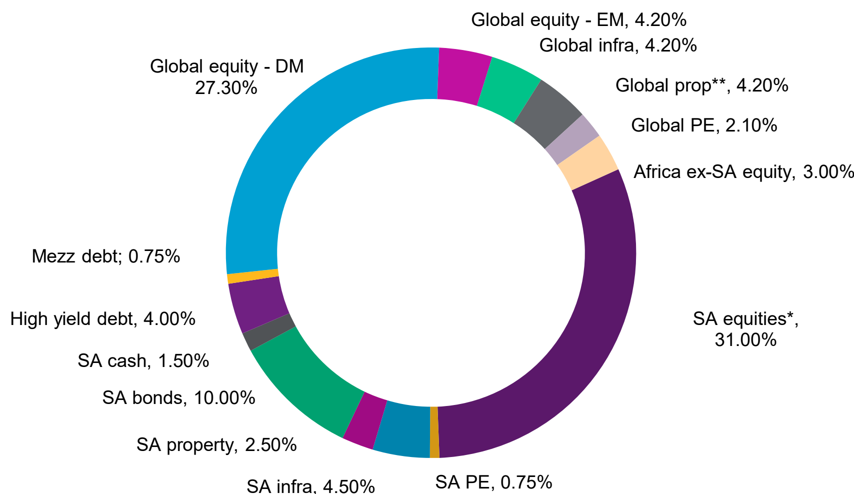
Reference Portfolio

The Reference Portfolio for the Long Term Capital Portfolio (LTCP) targets a real return of 5% p.a. over rolling 7 year periods, with volatility of 15% p.a. before any allowance for manager skill. The portfolio is derived based on the asset class assumptions set out in Annexure 5. The chart below sets out the Reference Portfolio:



Strategic asset allocation

The Board has identified unlisted South African infrastructure, development private equity, global early stage private equity, unlisted UK real estate, Africa ex-SA equities, high-yield debt and mezzanine debt strategies as asset classes that are expected to deliver a superior risk and return payoff over the long term. Taking due account of these opportunities, the *strategic asset allocation* of the Long Term Capital Portfolio is as per the chart below:



* Includes 2.5% allocation to SA equity (activist strategy) with Value Capital Partners.

**Includes 0.25% allocation UK unlisted property

Based on the return and risk assumptions set out in Annexure 5, the expected real return of the Strategic Asset Allocation is 5.5% p.a. over rolling 7 year periods with a risk of 14.0% p.a. Re-balancing rules for the Strategic Asset Allocation

Asset class	Central allocation	Allowable range
SA equity	28.50%	24.5% - 32.5%
SA equity (activist approach) *	2.50%	1.5% - 3.5%
SA property	2.50%	0.5% - 4.0%
SA bonds	10.00%	7.0% - 13.0%
SA cash	1.50%	0.0% - 3.0%
Global equity	27.30%	23.5% -31.5%
Global emerging market equity	4.20%	2.7% - 5.7%
Global listed infrastructure	4.20%	2.7% - 5.7%
Global listed property	3.95%	2.40% - 5.5%
Global unlisted UK property*	0.25%	0.0% - 0.5%
Global private equity*	2.1%	1.1% - 3.0%
SA private equity*	0.75%	0.5% - 1.0%
SA infrastructure*	4.50%	3.0% - 7.0%
High yield credit*	4.00%	2.0% - 6.0%
Mezzanine debt*	0.75%	0.5% - 1.0%
Africa ex-SA equity	3.00%	2.0% - 4.0%

* The central allocation is the commitment that the Investment Committee has made to the specific asset class – the actual allocation depends on manager drawdowns and repayments from exited investments. The actual allocation is allowed to float, as given the closed end nature of these asset classes further investment or disinvestments are generally not possible. The undrawn commitments for global private equity and SA infrastructure assets will be warehoused in global and SA equities respectively.

In terms of exchange control regulation, the global asset exposure in aggregate is limited to 45% at a Fund level although temporary breaches are allowed on account of market movements provided that they are corrected within 12 months of the breach first having occurred (unless the SARB grants an extension).

The Committee may, based on an assessment of fair value and for risk management purposes, decide to hedge part or the full amount of the global assets against the rand strengthening.

Total contribution from manager skill

Annexure 8 sets out the investment manager configuration and targeted out-performance and tracking error on a manager and asset class basis. Quantitatively the expected alpha assuming all the investment managers deliver their performance targets is 1.5% p.a. The composite tracking assuming a nil correlation in manager skill between asset classes and allowing the asset allocation and manager weighting variation is 3.5% p.a.

It is assumed that the Investment Committee will only get 65% of its manager appointments correct over the long term, with the other 35% of managers delivering performance 1% p.a. behind the benchmark. On this basis the expected alpha is 0.7% p.a. (rounded) It is also prudent to round the expected tracking error to 4% p.a. and so the targeted information ratio is close to 0.2%

Aggregate performance target

The table below summarises the build-up of real return target of the Reference Portfolio, Strategic Asset allocation and addition of manager skill:

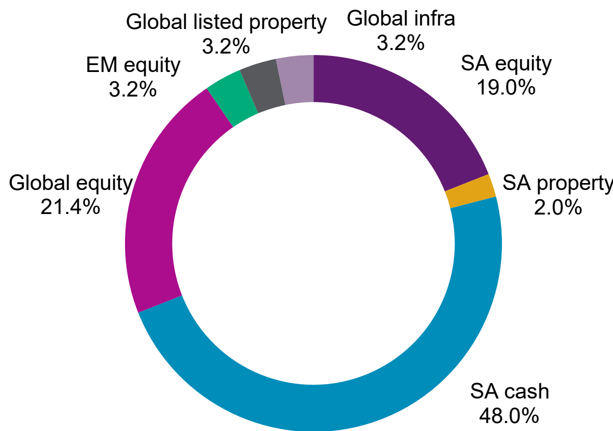
Build-up item	Expected real return	Risk
Reference Portfolio	5.0%	15.0%
Strategic Asset Allocation	5.5%	14.0%
Actual Portfolio after addition of manager skill	**6.2%**	**14.5%**

The Committee will retain a performance target of a real return of 5% p.a. for the Long Term Portfolio. However, if the portfolio is consistently able to harvest the excess return assumed for the alternative asset classes included in the SAA and benefit from manager skill, a real target of 6.2% p.a. may be possible.

Annexure 7B: Stable Portfolio

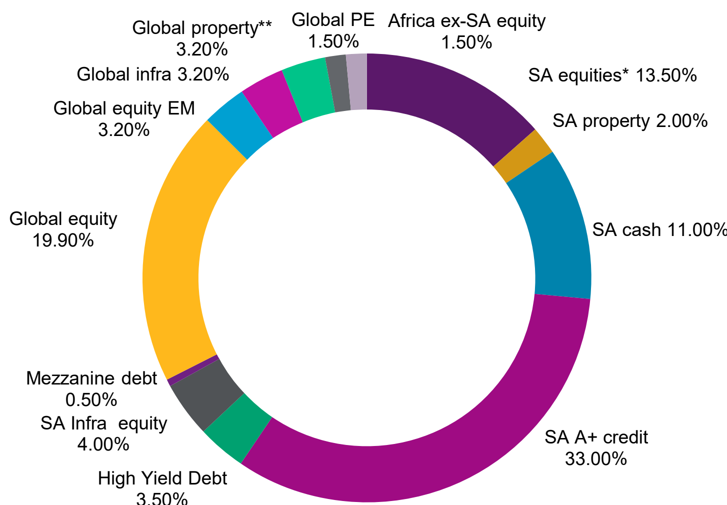
Reference Portfolio

The Reference Portfolio targets a real return of 3% p.a. over rolling 3 year periods, with volatility of 8% p.a. before any allowance for manager skill. The portfolio also aims to avoid a negative return over any 12 month period. The Reference Portfolio is determined using the asset class assumptions set out in Annexure 5 and which shown in the chart below.



Strategic asset allocation

The Committee has identified credit strategies (including high yield debt and mezzanine debt) and Africa ex-SA equities as alternative assets that are expected to have a favourable return and risk payoff for this portfolio. The *strategic asset allocation* of the portfolio is as per the chart below:



* Includes 2.0% allocation to SA equity (activist strategy) with Value Capital Partners.

**Includes 0.2% allocation UK unlisted property

Based on the return and risk assumptions set out in Annexure 5, the expected real return of the Strategic Asset Allocation is 3.5% p.a. over rolling 3 year periods with a risk of 7.5% p.a.

Rebalancing rules

Asset class	Central allocation	Allowable range
SA equity	11.50%	9.0% - 15.0%
SA equity (activist approach) *	2.00%	0.5% - 3.5%
SA property	2.00%	0.5% - 2.5%
SA cash	11.00%	8.0% - 14.0%
SA high grade credit (average A+)	33.00%	29.0% - 37.0%
High yield debt *	3.50%	1.5% - 5.5%
Global equities	19.9%	16.5% - 23.5%
Global equities – emerging markets	3.20%	1.5% - 4.5%
Global listed property	3.00%	1.25% - 4.25%
UK listed property *	0.20%	0.0% - 0.5%
Global listed infrastructure	3.20%	1.5% - 4.5%
Global PE*	1.50%	0.5% - 2.5%
SA infrastructure equity *	4.00%	2.0% - 6.0%
Mezzanine debt*	0.50%	0.0% - 1.0%
African ex-SA equities	1.50%	0.5% - 2.5%

* The central allocation is the commitment that the Investment Committee has made to the specific asset class – the actual allocation depends on manager draw-downs and repayments from exited investments. The actual allocation is allowed to float, as given the closed end nature of these asset classes further investment or disinvestments are generally not possible. The undrawn commitments for global private equity and SA infrastructure assets will be warehoused in global and SA equities respectively. The mezzanine debt fund is returning capital to investors.

In terms of exchange control regulation, the global asset exposure in aggregate is limited to 45% at a Fund level although temporary breaches are allowed on account of market movements provided that they are corrected within 12 months of the breach first having occurred (unless the SARB grants an extension). The central allocation for offshore exposure for this portfolio is set at 32.5%.

The Committee may, based on an assessment of fair value and for risk management purposes, decide to hedge part or the full amount of the global assets against the rand strengthening.

Total contribution from manager skill

Annexure 8 sets out the investment manager configuration and targeted out-performance and tracking error on a manager and asset class basis. Quantitatively the expected alpha assuming all the investment managers deliver their performance targets is 1.2% p.a. and the composite tracking assuming a nil correlation in manager skill between asset classes and allowing the asset allocation and manager weighting variation is 3.5% p.a.

It is assumed that the Investment Committee will only get 65% of its manager appointments correct over the long term, with the other 35% of managers delivering performance 1% p.a. below with the benchmark. On this basis the expected alpha is 0.5% p.a. with an expected tracking error to 3.5% p.a.

Aggregate performance target

The table below summarises the build-up of real return target of the Reference Portfolio, Strategic Asset Allocation and addition of manager skill:

Build-up item	Expected real return	Risk
Reference Portfolio	3.0%	8.0%
Strategic Asset Allocation	3.5%	7.5%
Actual Portfolio after addition of manager skill	**4.0%**	**8.0%**

The Committee will retain a performance target of a real return of 3% p.a. for the Stable Portfolio. However, if the Fund consistently benefits from the assumed higher return of the alternative asset classes included in the SAA and is able to harvest manager skill then a real return target of 4.0% p.a. may be feasible.

Annexure 7C: Money Market Portfolio

Reference Portfolio

The Reference Portfolio for the Money Market Portfolio targets a real return of 1% p.a. over 12 months with a tracking error of 2%. The RP allocation is a 100% allocation to the SteFi Composite Index, which as per the assumptions set out in Annexure 5 is expected to deliver a real return of 1.5% p.a. which is excess of the target real return. However, for prudence the real return target of the Money Market Portfolio will be set at 1% p.a.

Strategic asset allocation

The strategic asset allocation for the Money Market Portfolio includes a 40% allocation to high quality credit (average credit rating A^{+}) for which the expected real return is 2.0% p.a. As per the table below the effect of making an allocation to such an enhanced cash strategy is to increase the expected real return of the Money Market Portfolio from 1.5% p.a. to 1.7% p.a.

Asset class	Allowable range	Target real return
SA money market assets (60%)	55% - 65%	1.5% p.a.
SA high quality credit (average credit A+) (40%)	35% - 45%	2.0% p.a.
Aggregate position		1.7% p.a.

Aggregate performance target

Annexure 8 sets out the investment manager configuration and targeted out-performance and tracking error on a manager and asset class basis. Quantitatively the expected alpha assuming all the investment managers deliver their performance targets is 0.65% p.a. and the composite tracking assuming 90% correlation between the two manager returns is 1.0% p.a. A prudent approach is to assume aggregate manager skill of 0.5% p.a. together with a 1% p.a. tracking error.

Aggregate performance target

As highlighted above, the strategic asset allocation is expected to out-perform the Reference Portfolio (RP) by 0.2% p.a. Investment skill is expected to be 0.5% p.a. and so a reasonable target for the Money Market Portfolio would be 0.7% p.a. out-performance of the Reference Portfolio whilst maintaining a risk of around 2% p.a.

Annexure 7D: Pensioner Portfolio

Investment objective

The investment objective for the Pensioner Portfolio is to track the liability priced off the SA government nominal and real bond curve allowing for future pension increases on 1 March each year of 65% of inflation for the preceding calendar year with a tracking error 4% p.a.

The risk budget of 4% p.a. is used mainly to fund investments in SA unlisted infrastructure and global growth assets, with the expected additional return from these asset classes, together with yield enhancements on the Matched Portfolio, being sufficient so that the Fund can target pension increases of 75% of inflation over a 10 year period.

Liability Benchmark Portfolio

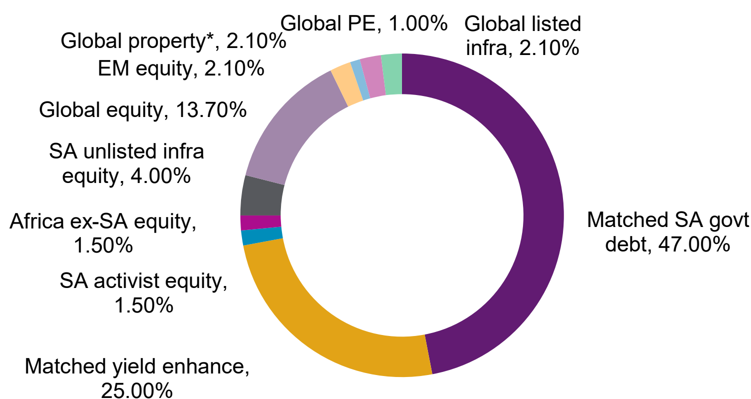
The Liability Benchmark Portfolio is the mix of SA government issued nominal and inflation linked bonds which will closely match the schedule of pensioner cash flows allowing for future pension increases of 65% of inflation on 1 March each year.

Strategic asset allocation

The Strategic Asset Allocation is apportioned 75% to the Matched Portfolio and 25% to the Growth Portfolio. However, in the near term, the Pensioner Portfolio will be invested in mezzanine debt, SA equity activist strategy and Africa equities ex-SA. The mezzanine debt fund is returning capital to investors and SA equity activist strategy and Africa equities ex-SA will be sold once these assets have recovered off their lows. These assets are properly classified as belonging to the Growth Portfolio and, in aggregate, represent about 3.5% of the Pensioner Portfolio assets. Accordingly, for an interim period the asset allocation will be 71.5% to the Matched Portfolio and 28.5% to the Growth Portfolio.

Up to 35% of the Matched Portfolio may be invested in renewable energy debt (which may be JIBAR, or inflation related) and high quality credit JIBAR linked instruments to enhance the yield. The Matched Portfolio will also include an allocation to the Ninety One high yield debt product whilst this product is in the process of returning capital to investors. The portfolio also has exposure to bank structured deposits, with these assets being collateralised by SA government issued debt.

In addition to the assets referred to above, the Growth Portfolio will include an allocation to unlisted SA infrastructure equity, developed world and emerging market equities, global private equity and global listed infrastructure and property. The chart below sets out the interim SAA.



*Includes 0.1% allocation UK unlisted property

The targeted return above the Liability Benchmark Portfolio by the above described use of the risk budget is expected to be 1.0% p.a. If achieved, the Fund should be able to grant pensioners increases that average out at some 75% of inflation over periods of 10 years.

Re-balancing rules

The various asset classes will be managed according to the manager configuration described in Annexure 6 below. In cases of over- or underweight, the allocation will be rebalanced back to the midpoint between the central allocation and upper or lower limit. The portfolio will re-balance to its strategic asset allocation according to the following rules:

Asset class*	Central allocation	Lower limit (LL)	Upper limit (UL)
Matched Portfolio – SA government bonds	47.0%	43.0%	51.0%
Matched Portfolio – yield enhancement	25.0%	21.0%	29.0%
SA activist equity	1.5%	0.0%	2.0%
Africa equity ex-SA	1.5%	0.0%	2.0%
SA unlisted infrastructure equity **	4.0%	2.0%	6.0%
Global equity	13.7%	11.7%	15.7%
Global private equity **	1.0%	0.5%	1.5%
EM equity	2.1%	1.0%	3.0%
Global listed property	2.1%	1.0%	3.0%
Global listed infrastructure	2.1%	1.0%	3.0%

** The undrawn commitments for global private equity and SA infrastructure assets will be warehoused in global equities.

The minimum allocation to the Matched Portfolio (SA government and yield enhancement) is 68.5%. The maximum exposure to global growth assets is 24%.

Key result areas for the Pensioner Portfolio

- Out-performance of the Liability Benchmark Portfolio by 1% p.a. with a tracking error of no more than 4% p.a. over a 10-year period.

Annexure 7E: Investment of Reserve Accounts

The table below sets out the investment strategy in respect of the various Reserve Accounts the Fund holds:

Reserve Account	Investment strategy*
General Reserve Account	Stable Portfolio
Risk Reserve Account	Stable Portfolio
Employer Surplus Account	Stable Portfolio
Member Surplus Account	Money Market portfolio consisting mainly or exclusively of vanilla money market instruments
Unclaimed Benefits and Pending 37C claims	Money Market portfolio
Processing Error Reserve	Money Market type investments

Annexure 8: Manager Configuration

Principles

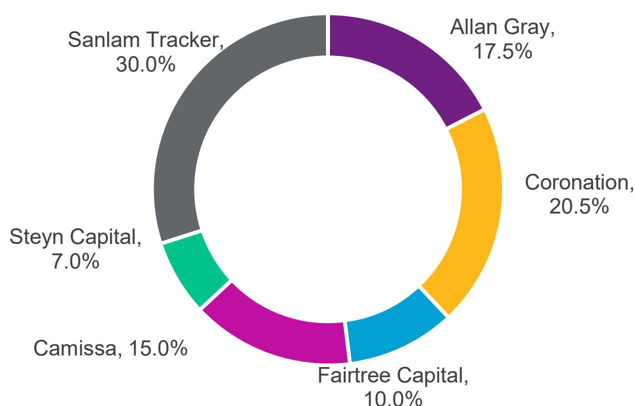
The approach of the Investment Committee is to aim to select skilful investment managers and, if possible, to achieve diversification between the investment theses of the managers. The limited opportunity set for SA equities inevitably results in a manager configuration for this asset class where there is limited differentiation in the manager approach. It is for this reason that the Fund has made a 20% allocation to passive investing for this asset class.

The extent to which the Committee will allow managers to deviate from the benchmark (i.e. take tracking error risk) depends on the extent to which the Board has confidence in the skill of the managers – high tracking error mandates will only be awarded to managers where the Board has a high degree of confidence in the manager's skill. Furthermore, the Committee will allocate less capital to managers where the tracking error is expected to be very high.

Finally, the Investment Committee recognizes that it is generally not possible to be 100% certain about the skill of the manager for asset classes such as equities and to a lesser extent bonds. To mitigate investment-manager risk the Fund will appoint more than one manager for such asset classes.

SA equities [Figures reflect the agreed manager blend]

The chart below shows the blend of the SA equity managers and the tables that follow describe the investment approach, expected out-performance of the benchmark (α) net of fees and tracking error.



In addition, the Fund as appointed a SA equity activist equity manager, Value Capital Partners (see commentary below):

Manager	Allowable range	Investment thesis	Target α (net)	Tracking error
Allan Gray (17.5%)	15.0% - 20.0%	Assessment of intrinsic value, somewhat contrarian with a value bias; low turnover	1.5%	7.0%
Coronation (20.5%)	17.0% - 23.5%	Long term investing favouring quality value shares; moderate turnover	1.5%	6.0%

Manager	Allowable range	Investment thesis	Target α (net)	Tracking error
Fairtree Capital (10%)	7.0% - 13.0%	Quality growth, but with macro overlay, which may see the manager holding significant positions in commodity shares periodically. Strategy complemented by relative value trading	1.5%	9.0%
Camissa (15.0%)	12.0% - 18.0%	Assessment of intrinsic value, with value bias and exposure to mid and small caps	1.5%	8.0%
Steyn Capital (7.0%)	4.0% - 10.0%	Quality growth with an exposure to mid and small caps. Trading around information advantage based on analysis of company financials. May include up to 10% in deep value opportunities	2.5%	9.0%
Sanlam Tracker (30%)	26.0% - 34.0%	Tracks FTSE / JSE Capped Index	0.0%	0.10%
Total (including diversification benefits) – note expected alpha is rounded down			**1.0%**	**4.0%**

The blended portfolio tracking error is lower than the weighted average of the managers tracking errors because of diversification benefits. The table below shows the assumed correlation between the managers' alpha – the assumed correlation is slightly higher than the observed data suggests.

	Allan Gray	Coronation	Fairtree	Camissa	Steyn	Sanlam
Allan Gray	100.0%					
Coronation	27.1%	100.0%				
Fairtree	31.0%	-11.0%	100.0%			
Kagiso	51.6%	47.3%	14.6%	100.0%		
Steyn	55.0%	26.9%	11.6%	48.0%	100.0%	
Sanlam	-8.7%	0.2%	5.2%	1.1%	-0.5%	100.0%

Based on the historic return distribution of the five managers the following risk statistics are assumed for the *blended structure*:

Statistic	Expected outcome
Probability of under-performance over 12 months	40.0%
Beta (β) to the benchmark	90% - 100%
Downside participation when benchmark is negative	90% - 100%
Upside participation when benchmark is positive	95% - 105%

Value Capital Partners

VCP follows a shareholder activist approach, and its performance is benchmarked against the FTSE / JSE Mid Cap Index. The portfolio is concentrated and will consist of 10 to 12 counters and as such no tracking error constraint will be imposed. The performance objective for VCP is to out-perform the FTSE / JSE Mid Cap Index by 3% p.a. net of fees. The strategy is currently accessed via a policy issued by Old Mutual.

SA listed property

The investment managers are Meago (35%) and Sesfikile (65%). Meago follows a more growth-oriented investment thesis whereas Sesfikile focuses on higher quality. The targeted alpha is 1.0% p.a. net of fees for both managers and the expected tracking error to the benchmark is 3% p.a.

Local unlisted infrastructure equity

The local unlisted infrastructure consists of:

- The Old Mutual Renewable Energy sub-fund - the investments are in specific wind and solar energy projects in South Africa. The returns from these projects have a favourable return and risk profile in that the tariffs (and escalation of these tariffs) are set by legislation, there is a Power Purchasing Agreement in place and the demand for energy is reasonably stable.

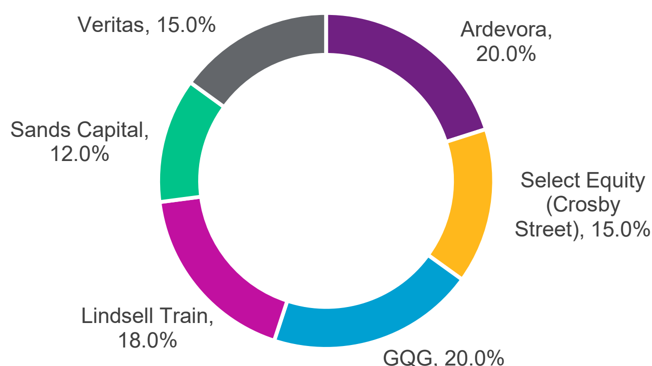
  The projects are granted on an initial 20 year concession basis and the return signature is expected to be similar to an inflation linked bond, except with a higher initial yield. The targeted investment return is inflation plus 7% p.a. The target out-performance of this inflation related benchmark is 1% p.a. with an assumed tracking error of 4% p.a. The Old Mutual Renewable Energy sub-fund is in the process of returning capital to investors.

- Stanlib Infrastructure Fund of Funds (FOF) – the fund invests primarily in operating infrastructure assets, with the main sectors being renewal energy and digital assets, with smaller allocations to toll roads and grain silos. The target is a real return of 7.0% p.a. net of fees and the target out-performance of this inflation related benchmark is 1% p.a. with an assumed tracking error of 4% p.a.

- The Old Mutual IDEAS Fund which invests in a more diversified portfolio of infrastructure assets but weighted towards the renewable energy sector. The targeted investment return is inflation plus 7% p.a. The target out-performance of this inflation related benchmark is 1% p.a. with an assumed tracking error of 4% p.a.

Global equities [Figures reflect the agreed manager blend]

The chart below shows the blend of the global equity managers and the tables that follow describe the investment approach, expected out-performance of the benchmark (α) net of fees and tracking error.



Manager	Allowable range	Investment thesis	Target α (net)	Tracking error
Select Equity* 12.5%	10.0% - 15.0%	Quality value thesis focused on buying with more predictable cash flows where short term factors are assessed to depress the price. Aim to buy companies at a 20% to 30% discount to intrinsic value	2.0%	7.0%
Veritas via Sygnia AMX (15%)	12.0% - 18.0%	Quality growth based on themes, coupled with an absolute return approach	2.0%	7.0%
Ardevora via Sygnia AMX (12.5%)	10.0% - 15.0%	Exploitation of behavioural errors (value and growth varies depending on the market)	2.0%	5.0%
GQG via Sygnia AMX (20%)	17.0% - 23.0%	Quality growth coupled with absolute return approach	2.0%	5.0%
Sands Capital (12.5%)	10.0% - 15.0%	Long term growth manager	2.0%	8.0%
Lindsell Train via Sygnia AMX (17.5%)	14.5% - 20.5%	Ultra-high quality compounders	2.0%	8.0%
State Street (7.0%)	5.0% - 9.0%	MSCI World Tracker	0.0%	0.0%
Stanlib Note (3.0%)	Fixed allocation	MSCI World Tracker	0.7%	1.0%
Total (including diversification benefits)			**1.7%**	**3.5%**

*Termination of Hosking and transition to Select Equity to be fully implemented by November 2023.

The table below sets out the assumed correlation between the above active manager's alpha – these correlations are slightly higher than the observed historic data:

	Ardevora	*Lindsell Train*	*Sands*	*Veritas*	*Select Equity*	*GQG*
Ardevora	100%					
Lindsell Train	20%	100%				
Sands	50%	15%	100%			
Veritas	0%	30%	-10%	100%		
Select Equity	50%	25%	50%	10%	100%	
GQG	-10%	35%	-5%	30%	0%	100%

Based on the historic return distribution of the six managers the following risk statistics are assumed for the *blended structure*:

Statistic	Expected outcome
Probability of under-performance over 12 months	30.0%
2.5% chance cumulative under-performance will be worse than	-10.0%
Beta (β) to the benchmark	90% - 100%
Downside participation when benchmark is negative	90% - 100%
Upside participation when benchmark is positive	95% - 105%

Blend of emerging market global equity managers

The portfolio has exposure to a diversified blend of EM equity managers via the Sygnia Life license.

Manager	Central weight	Investment thesis
Aikya Investment Management	15%	Quality
Coronation Fund Managers	15%	Quality growth
Global Quality Growth (GQG)	25%	Quality growth
Pzena	20%	Quality value
Sands Capital	25%	Growth orientated manager

The target out-performance of the MSCI EM Index is 2% p.a. net of fees and the expected tracking to the benchmark is 5.5% p.a.

Global listed property

The investment manager for the listed real estate is Resolution Capital and the target out-performance of the benchmark (FTSE EPRA/REIT Developed Index Net) is 1.0% net of fees. The manager follows an absolute return approach with a focus on investing in higher quality assets with favourable ESG and corporate governance characteristics. The expected tracking error is 5% p.a.

Global unlisted property

The investment manager for the UK unlisted real estate is Clearbell and the target performance for this investment is the FTSE EPRA/REIT Developed Index (Net) + 2.0% converted from GBP to ZAR. The manager is in the process of paying out the capital to investors. Clearbell targets a net internal rate of return of 9% p.a. in GBP.

Global listed infrastructure

Maple-Brown Abbott is the appointed manager for the global listed infrastructure allocation. The manager investment in core infrastructure assets and follows an absolute return approach with the portfolio targeting a return of OECD Total inflation + 5.5% p.a. The portfolio is benchmarked against the FTSE Global Core Infrastructure (50/50) Index Net and the targeted out-performance is 1.0% p.a. net of fees. The budgeted tracking error is 5% p.a.

Africa ex-SA equity

The investment manager for this mandate is Steyn Capital and the target level of out-performance of the benchmark (the MSCI EFM Africa ex-SA index) is 3% p.a. net of fees. The manager follows an absolute return approach with a focus on buying high quality companies. The tracking error is expected to be in the range of 10% to 12% p.a.

Private equity

The private equity investments consist of:

- Local developmental assets – these include exposure to infrastructure (toll roads and renewable energy), affordable housing, and financing of SMME's, education, farming, health care and micro-lending. The investment gives the portfolio exposure to the assumed improving prospects of the lower income groups in South Africa.

The fund is an open-ended insurance arrangement, and the assets are managed by Futuregrowth. The benchmark is CAPI plus 2% p.a., which translates to a real return of 10% p.a. The alpha (α) target is 1.0% p.a. and the assumed tracking error to the benchmark is 10% p.a.

- Global private equity – the manager is Braavos Capital which will invest in the Oxford Sciences Enterprises Fund (BC I) as well as in selected growth-stage companies commercialised by OSE (BC II). The benchmark is the MSCI ACWI Index is 3% p.a. to allow for the venture capital nature of the investment and an illiquidity premium. The alpha (α) target is 2.0% p.a. and the assumed tracking error to the benchmark is 12% p.a.

  This is high risk proposition and accordingly the Fund has only allocated 2.1%, 1.5% and 1.0% to this strategy for the Long Term, Stable and Pensioner portfolios respectively.

SA bonds (reflects new manager line-up)

The Investment Committee has appointed two managers with an equal allocation and characteristics as per the table below:

Manager	Investment thesis	Target α (net)	Expected tracking error	Allowable range
Ninety One Flexible Bonds (50%)	Variable allocation to duration, credit and relative value strategies; manager will seek to be opportunistic	1.00%	2.50%	40% - 60%
Futuregrowth Infrastructure Development Fund (50%)	Credit and illiquidity access by allocation around 50% of the portfolio to unlisted infrastructure assets.	1.50%	3.50%	40% - 60%
Blended portfolio		1.25%	2.50%	

The tracking error of the blended portfolio assumes a 40% correlation between the "alpha" of the two managers. Based on the historic return distribution of the two managers the following risk statistics are assumed for the blended structure:

Blended structure	Statistic
Beta to the ALBI	95% - 100%
Downside capture to ALBI	90% - 95%
Upside capture to ALBI	100% - 105%

Cash

The target return net of fees for the cash mandate is the STEFI Composite index plus 0.75% p.a. and the assumed tracking error is 0.5% p.a. The manager is Futuregrowth.

Enhanced cash

The Stable Portfolio has exposure to South African high quality credit money market instruments that has an average credit rating of A^{+}. The appointed investment manager is Ninety-One and the target alpha is to out-perform the benchmark (SteFi 3 month index plus 1.0% p.a.) by 0.5% p.a. with an expected tracking error of 2% p.a.

The Fund also has exposure to an amortised inflation linked bond that targets a real return of 3.0% p.a. This note expires at the end of December 2023.

High yield debt

The Fund has an exposure to high yield debt which is allocated to South African and Africa (excluding South Africa) corporate high yield debt with an expected weighted average credit of BBB. The exposure is to floating interest rates linked to the Johannesburg Inter-Bank Acceptance Rate (JIBAR)

The Fund has appointed Ninety One as the manager for this mandate. The target alpha net of fees is 1% p.a. with the benchmark being the SteFi 3 month index plus 2.5% and the expected tracking error is 4% p.a.

Power Debt Fund

The Matched Portfolio of the Pensioner Portfolio has an allocation to the Futuregrowth Power Debt Fund. The return is linked JIBAR and the expected yield-up is 2.0% p.a. net of fees and this strategy is a component of the yield enhancement programme.

Vantage Green-X Note II

The Vantage Green-X Note II which invests in the inflation-linked senior debt of Round 3 and 4 renewable energy projects targets a return of inflation plus 4.25% p.a. These assets form part of the yield enhancing strategies of the Matched Portfolio.

Mezzanine debt

The portfolio has a current asset allocation of 1.5% to mezzanine debt. This strategy is in the process of returning capital to investors. The portfolio manager is Vantage Capital. The exposure is to floating interest rates and the target internal rate of return net of fees is the STEFI 3-month index plus 6.5% p.a. (i.e. in line with the benchmark) and the assumed tracking error to the benchmark is 8% p.a.

Annexure 9: Investment manager mandates

SA equity mandates

The table below sets out the typical mandate provisions for the Fund's SA equity managers:

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable SA cash	≤ 20% with maximum term of 12 months and minimum short term credit rating as per Fitch F1
Allowable SA listed property	≤ 25%
Direct commodities (or via ETF)	≤ 10%; maximum gold 10% and other commodities 5%
Unlisted shares	≤ 5%; maximum exposure to any one company 2.5%
Other allowable asset classes	Preference shares and convertible debentures; SA activist manager exposure via Hedge structure
Tracking error per risk model	≤ 8% p.a.
Active share	≤ 70%
Use of derivatives	Effective exposure to SA equities must be maintained in the range of 80% to 100%
Investment in companies where the manager holds more than 25% of the issued share capital	≤ 7.5% with a maximum exposure to any one company of 2.5%
Investment in shares of own company or associated companies	Limited to the greater of 3% and 1.25 times the market capitalisation of the company in the FTSE / JSE ALSI, subject to an overall maximum of 7.5% for all such companies
Liquidity constraints	Weighted average time to liquidate the portfolio in full assuming a trade of R1 billion and 20% participation in the daily trade ≤ 15 days
Underwriting of issues	Allowed provided that the underwriting fees accrue to the Client; prior written permission is required to underwrite the issues of the investment manager's firm and its associated companies
Scrip lending	Not allowed
Investment in pooled vehicles	Only allowed for cash and listed property; subject to general conditions applicable to comingled funds
Regulation 28	Compliance with the issuer limits per Regulation 28

Global equity mandates (developed and emerging markets)

The Fund will be investing in the comingled (or pooled) vehicles and so the Fund would need to accept the specific terms set out in the prospectus of the applicable fund. The table overleaf sets out the maximum limits that the Fund would be prepared to accept.

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable cash	≤ 15% except Veritas is allowed up to 25% in cash
Investment in any one company	≤ 10%
Number of holdings	≥ 15 counters
Overweight / underweight to any sector	≤ 15%
Overweight / underweight to any country	≤ 20%
Exposure to emerging markets	≤ 35%
Unlisted shares	≤ 5%
Use of derivatives	Effective exposure to global equities must be maintained in the range of 85% to 100% (75% to 100% for Veritas)
Maximum % of the issued share capital of any one company	≤ 10%
Investment in shares of own company or associated company	Up to 1.25 times the market capitalisation weighting in the MSCI ACWI except for the Coronation where it will be determined based on its weighting in the MSCI EMI
Off benchmark positions (mainly cash and unlisted shares)	≤ 15%
Exchanges on which trading is allowed	Limited to regulated exchanges only

SA listed property mandate

The table below sets out the mandate provisions for the Fund's SA property managers:

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable SA cash	≤ 10% with maximum term of 12 months and minimum short term credit rating as per Fitch F1
Allowable SA listed property	90% – 100%
Unlisted shares	Not allowed
Tracking error per risk model	≤ 6% p.a.
Active share	≤ 50%
Use of derivatives	Effective exposure to SA listed property must be maintained in the range of 90% to 100%
Investment in companies where the manager holds more than 25% of the issued share capital	≤ 10.0% with a maximum exposure to any one company of 2.5%; aggregate limit of 10% of market capitalisation across all clients

Mandate provision	Restriction (% of market value of asset class where applicable)
Investment in shares of own company or associated companies	Prior written approval required from Client
Underwriting of issues	Allowed provided that the underwriting fees accrue to the Client; prior written permission is required to underwrite the issues of the investment manager's firm and its associated companies
Scrip lending	Not allowed
Investment in pooled vehicles	Allowed but subject to general conditions applicable to comingled funds

Private equity

The following restrictions apply to the investment in the Futuregrowth Development Equity Fund

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable asset classes	The product will invest primarily in unlisted equity, but it may also invest in listed equity and unlisted or listed senior, mezzanine or subordinated debt and hybrid securities. Cash may be held to provide liquidity and in anticipation of funding an investment
Allocation to debt instruments	≤ 20% excluding cash (see below)
Allowable cash	≤ 20%; limit may be exceeded in anticipation of funding a new investment
Investment in any one issuer	≤ 20% (unless breached due to market movement or client withdrawals)
Regional restrictions	≥ 80% must be invested in South African projects; balance can be invested in Africa, but no more than 10% can be invested outside the SADC region
Maximum exposure to any one sector	≤ 50%

Unlisted SA renewable energy equity

The following restrictions apply to the investment in the Old Mutual IDEAS Renewable Energy sub-fund.

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable asset classes	Cash (see restriction below), unlisted equity, mezzanine debt and preference shares
Target return to include any project in the portfolio (return not guaranteed)	≥ 10% p.a. real return
Allowable cash	≤ 20% during the growth phase; ≤ 10% once invested
Investment in any one project	≤ 20% (unless breached due to market movement or client withdrawals)
Regional restrictions	≥ 75% must be invested in South African projects; balance may be invested in renewable energy projects in the SADC region

Unlisted SA operating infrastructure equity

The following restrictions apply to the investment in the Stanlib Infrastructure Fund of Funds

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable asset classes	Post construction infrastructure projects with a limited carve out of up to 25% of net assets being invested in greenfield projects
Target return (return not guaranteed)	7% - 8% p.a. real return net of fees; Partnership expenses paid from cash reserves and not from capital commitments
Term	15 years extendable by two consecutive periods of up to 5 years (i.e. 25 years in total after which the final exit date is reached)
Investment diversification	Maximum of 20% in any one project
Regional restrictions	South Africa
Leverage	Partnership borrowings in aggregate must be < 30% of the asset value, noting this may increase to 40% subject to approval by Advisory Board

SA bond mandate

The table below sets out the mandate provisions for the Fund's SA bond managers:

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable SA cash	≤ 50% subject to a minimum short term credit rating of F1 per Fitch
Allowable SA listed property	≤ 10%
Other allowable asset classes	Preference shares
Duration deviation	± 2 years from the benchmark under normal market conditions
Credit limits for bonds	Minimum long term credit rating per Fitch of any instrument in the portfolio BBB. Weighted average credit rating to be at least AA-
Issuer limits	Government or government guaranteed: Unlimited AAA band: 20% AA band: 10% A band: 7.5% BBB band: 2.5% Below BBB: Nil
Issuer limits subordinated debt assigned to company	Maximum of 10% in sub-ordinated debt Government or government guaranteed: Unlimited AAA and AA band: 5.0% A and BBB band: 2.5% Below BBB-: Nil
Investment in parent or associated company	Maximum exposure to any issuer of 5%. Aggregate exposure to the bonds of the parent and associated companies limited to 7.5%

Mandate provision	Restriction (% of market value of asset class where applicable)
Underwriting of issues	Allowed provided that the underwriting fees accrue to the Client; prior written permission is required to underwrite the issues of the investment manager's parent and its associated companies
Scrip lending	Not allowed
Investment in pooled vehicles	Only allowed for cash and listed property; subject to general conditions applicable to comingled funds
Regulation 28	Compliance with the issuer limits per Regulation 28

High yield credit mandate

The table below sets out the mandate provisions for the Fund's high yield credit manager Ninety One

Mandate provision	Restriction (% of market value of asset class where applicable)
Base return	Floating interest rates
Allowable instruments	Listed and unlisted African debt instruments – minimum long term credit rating per Fitch better than CCC
Maximum exposure to debt outside South Africa	≤ 40%; African debt (excluding South Africa) should be denominated in US dollars or Euros on a best endeavours basis
Currency hedging	Non South African debt should be hedged back into ZAR on a best endeavours basis
Weighted average credit rating	BBB-
Number of debt instruments in the portfolio	≥ 20 instruments
Exposure to banks with a minimum international credit rating of A	≤ 5%
Maximum exposure to a single entity (other than banks referred to above)	≤ 10%
Investment in parent or associated company	Allowed provided transaction is done on arms-length basis

Global unlisted property

The following restrictions apply to the investment in Clearbell:

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable asset classes	The product will invest in United Kingdom unlisted property. Cash may be held to provide liquidity and in anticipation of funding an investment
Allowable cash	Only to be held in anticipation of funding a new investment
Investment in any one project	≤ 20% (unless breached due to market movement or client withdrawals)
Regional restrictions	Unlisted UK real estate

Global listed property and infrastructure

The Fund will be investing in the comingled (or pooled) vehicles and so the Fund would need to accept the specific terms set out in the prospectus of the applicable fund. The table below sets out the maximum limits that the Fund would be prepared to accept.

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable cash	≤ 15%
Investment in any one company	≤ 10%
Number of holdings	≥ 15 counters
Overweight / underweight to any country	≤ 20%
Exposure to emerging markets	≤ 20%
Unlisted shares	≤ 5%
Use of derivatives	Effective exposure to global equities must be maintained in the range of 85% to 100%
Maximum % of the issued share capital of any one company	≤ 10%
Investment in shares of own company or associated company	Up to 1.25 times the market capitalisation weighting in the FTSE/EPRA NAREIT Developed Index
Off benchmark positions (mainly cash and unlisted shares)	≤ 15%
Exchanges on which trading is allowed	Limited to regulated exchanges only

Africa ex-SA equity mandate

The Fund will be investing in the comingled (or pooled) vehicles and so the Fund would need to accept the specific terms set out in the prospectus of the applicable fund. The table below sets out the maximum limits that the Fund would be prepared to accept.

Mandate provision	Restriction (% of market value of asset class where applicable)
Allowable cash	≤ 10%
Investment in any one company	≤ 15%
Number of holdings	≥ 15 counters
Overweight / underweight to any country	≤ 20%
Unlisted shares	≤ 5%
Off benchmark positions (mainly cash and unlisted shares)	≤ 15%

Enhanced cash mandate

The table below sets out the mandate provisions for the Fund's enhanced cash high quality credit manager:

Mandate provision	Restriction (% of market value of asset class where applicable)
Base return	Floating interest rates
Allowable instruments	Listed and unlisted South African debt instruments – up to 25% of the portfolio may be invested in the foreign debt of South African companies
Average credit rating	A+
Currency hedging	Any offshore debt must be hedged back into ZAR on a best endeavours basis
Minimum cash holding	≥ 7.5%
Number of debt instruments in the portfolio	≥ 20 instruments
Regulation 28 issuer limits	No more than twice the Regulation 28 issuer limits
Scrip lending	Not allowed
Investment in parent or associated company	Allowed provided transaction is done on arms-length basis

Annexure 10: Monitoring process

Asset allocation and risk management

The Investment Committee will review the strategic asset allocation of each investment channel at each meeting. The Committee will receive the following reports to assist it in its deliberations in this regard:

The Willis Towers Watson "Capital Market Assumptions" report which sets out the expected return for the allowable asset classes for the next 10 years relative to the long term assumed position. The Committee may decide to change the strategic asset allocation for an investment channel if it identifies an asset class that is very cheap or expensive. The Willis Towers Watson report will also set out any long term structural changes that may affect future market prices.

Qualitative assessment of investment managers

Willis Towers Watson will provide their qualitative rating of the Fund's investment managers at each meeting. The rating covers the assessed skill of the manager, soft risk issues (i.e. organisational or personal issues which may affect future performance) and the expected deviation of the manager from the benchmark.

The Investment Committee will review the appointment of any manager or the allocation to the manager where Willis Towers Watson has downgraded its assessed skill of the manager.

Performance reporting

Willis Towers Watson produces a quarterly report covering the following matters:

- Performance of each investment channel relative to its primary investment objective and strategic asset allocation
- Key risk statistics for each of the investment channels (upside and downside capture, downside deviation, tracking error, Sortino ratio and information ratio)
- Assessment of investment manager performance relative to their benchmarks together with key risk statistics

Expense monitoring

Willis Towers Watson prepares an annual report showing the manager fees, estimated trading costs and statutory fees. This information is converted into a total expense ratio (TER) for each investment channel.

Compliance monitoring

Willis Towers Watson is responsible for monitoring compliance with Regulation 28 at a Fund level on a quarterly basis. Momentum Retirement Administrators prepares and submits the D490 submission to the South African Reserve Bank which sets out the Fund's offshore exposure.

Matching of asset and liabilities

Willis Towers Watson and Momentum Retirement Administrators do a monthly matching of assets and liabilities. Willis Towers Watson monitors the actual asset allocation and manager mix remains within the allowable range for all asset classes and will provide the necessary instructions to Momentum Retirement Administrators should re-balancing be required.

Board Training

Each year the Board will consider the areas in which they need training on investment matters and will engage with a suitable trainer to provide the necessary training in this regard.

Annexure 11: Co-mingled vehicles

Conditions applicable

The following conditions are applicable to any investment in a comingled vehicle (e.g. collective investment scheme or insurance policy)

- The comingled fund must be registered in a jurisdiction where there is strong regulatory oversight of such arrangements.
- The firm in whose pooled fund the Fund's assets are invested is one of high reputation and acceptable credit standing, and who is expected to stand behind the pool.
- Independent reporting, at least on a yearly basis, by a reputable auditing firm that the pool holds the said assets and the market value thereof is fairly reflected.
- To the extent that the pooled vehicle holds unlisted instruments these must be valued by an independent expert who has the necessary experience and qualifications to perform such a valuation. Alternatively, the instruments may be valued in accordance with a documented valuation policy provided that the managers' external auditor verifies that the assets have indeed been valued in accordance with this policy. A copy of the valuation policy must be made available to the Funds on request.
- There are sufficient protections in place to protect investors from large inflows and outflows – specifically there is a requirement that the future investment returns of the remaining investors should not be.