



# Statement of Funding Principles

*Pensions and Grants Fund of the Personnel of Cyprus Telecommunications Authority*

*16 July 2015*

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## Statement of Funding Principles (SFP)

### Introduction

This statement sets out the Trustee's policy for securing that the funding objective is met. The funding objective is defined in Law 208(I) 2012, which states that every fund must have sufficient and appropriate assets to cover its technical provisions.

A summary of the main provisions of Law 208(I) 2012 in relation to funding is set out in **Appendix C**.

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### Technical Provisions

The technical provisions are the amount that will be needed to pay the fund benefits that relate to service up to the valuation date, if the assumptions made are borne out in practice.

The assumptions used to calculate the technical provisions are intended to provide a prudent estimate of the future experience of the fund, with a modest allowance for the future potential outperformance over high-quality euro area central government bonds from continued investment in more risky asset sectors such as equities and property. There is an underlying assumption that the fund will continue with benefits being met from the fund as they fall due.

The method and assumptions used to calculate the technical provisions are summarised in **Appendices A and B**.

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### Employer contributions

Employer contributions are assessed by calculating the cost of future benefit accrual using the same assumptions as for the technical provisions:

reduced by

- the contributions made by members; and

adjusted by

- the amounts needed to eliminate any shortfall or surplus relative to the technical provisions.
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### Dealing with shortfalls

Where a valuation shows a funding shortfall against the technical provisions, trustees must prepare a recovery plan setting out how they plan to meet the funding objective. A recovery plan must be prepared by the trustees to satisfy the requirements of Article 34 of Law 208(I) 2012, after obtaining the advice of the Fund Actuary and after consultation with the Employer.

Any shortfall in assets compared with technical provisions identified at an actuarial valuation will be eliminated as quickly as the Employer can reasonably afford by the payment of additional contributions which will allow for the expected out-performance of the Fund's assets compared to the discount rate, in accordance with the recovery plan agreed between the Trustees and the Employer. The additional contributions will consist of single payments made towards the start of the recovery period and/or a stream of regular level/inflation-linked/salary-linked payments made over the recovery period. Furthermore, alternative financing solutions (i.e. non-cash funding) may be assessed and adopted, after obtaining the advice of relevant professionals, and after consultation of the Trustees with the Employer.

In determining the recovery period at any particular valuation the following factors will be taken into account:

- the size of the funding shortfall;
- the business plans / affordability of the Employer;
- other factors, such as the Trustee's assessment of the financial covenant of the Employer, any contingent security offered by the Employer etc.

The assumptions to be used in the shortfall elimination calculations will be the same as those for calculating the technical provisions, except from the fact that an allowance will be made for the expected out-performance of the fund's assets compared to the discount rate.

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**Dealing with surpluses**

Any funding surplus revealed by a valuation may be eliminated by:

- an Employer contribution holiday; and/or
- amending the investment strategy to invest in assets with a lower expected return but less volatility.

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**Post-valuation experience**

When dealing with shortfalls and surpluses approximate allowance may be made for the impact of experience between the valuation date and a subsequent date before the Schedule of Contributions is signed.

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**Policy on discretionary increases and funding strategy**

Under the provisions of the fund's Trust Deed and Rules, there are no discretionary powers to provide or increase benefits for, or in respect of, all or any of the members of the fund.

Therefore, there is no need to make any advance provision for increases to benefits in payment in excess of those provided for in the fund's Trust Deed and Rules.

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**Frequency of valuations**

The fund's first actuarial valuation to which this statement applies is being carried out as at 31 December 2014. Subsequent full valuations will normally be carried at least once every three years according to Law 208(I) 2012. In particular, the Law states that the calculation of technical provisions shall take place every year or every three years on the condition that the fund will provide each year, in the meantime, to the members and the Registrar a certification or report reflecting the updated development of provisions.

The Trustee may call for a full actuarial valuation when, after considering the actuary's advice, it becomes of the opinion that it is unsafe to rely on the results of the previous full valuation as a basis for future Employer contributions. However, the Trustee will consult the Employer before doing so.

**Review of this statement**

This statement will be reviewed if either the Company or the Trustees request such a review. This statement will also be reviewed at each actuarial valuation.

**Signatures**

This statement has been agreed by the Employer

Signed on behalf of Cyprus Telecommunications Authority

Signature:  Name: **Michalis Achilleos**  
Position: **Deputy CEO** Date: 25/9/2015

This statement was agreed by the Trustees at their meeting # 21/2015 held on **July 21, 2015** and is effective from that date. The Trustee has taken advice from the Fund Actuary, Philippos Mannaris FCAA.

Signed on behalf of the Trustees of the Pensions and Grants Fund of the Personnel of Cyprus Telecommunications Authority

Signature:  Name: **Christos Patsalides**  
Position: **Chairman** Date: 25/9/2015

## Appendix A: Valuation Method

### Valuation Method

Different methods affect the pace of funding, but every method should end up with sufficient assets to meet the liabilities as they fall due (provided the assumptions prove to be right and recommended contributions are paid).

For funds closed to new entrants, the Attained Age Method can be used as it calculates the cost of the benefits expected to accrue to members over their expected remaining membership of the fund expressed as a percentage of their expected pensionable pay. It also allows for projected future increases in pay through to retirement or date of leaving service. The method is based on the current membership and takes no account of the possibility of new members joining the fund. It is therefore used mainly for closed funds where no new members are admitted as in these circumstances the required contribution rate is reasonably stable.

The method used for this valuation is the Attained Age method, since the fund is closed to new entrants.

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## Appendix B: Valuation Assumptions

### Introduction

The assumptions used for assessing the long-term ongoing funding target are summarized below. Greater importance should be attached to the valuation assumptions as a whole rather than to the individual elements. More importantly, the differences between the financial assumptions have a greater effect on valuation results than the absolute levels of each item.

The financial assumptions have the most significant effect on valuation results. The approach to be used in determining each of the financial assumptions for calculating the technical provisions and the Employer contributions is set out below.

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### Price inflation

Under IFRS the assumed inflation rate should reflect the best estimate of long-term inflation. This estimate may be derived from historical inflation rates and/or looking at the long-term rates implied by the bond market where index-linked bonds are regularly traded. As a base point for the financial assumptions, we need to establish an assumption for future increases in Cypriot price inflation (CPI). Typically the assumption for price inflation is set by reference to the rate of implied inflation («breakeven inflation») derived from the difference between nominal government bonds and index linked bonds of the same term.

The primary objective of the European Central Bank's (ECB) monetary policy is to maintain price stability aiming at inflation rates of below, but close to, 2,00% over the medium term.

Pension liabilities are long term in nature and it would be unusual to make ad-hoc adjustments to inflation assumptions based on current economic conditions. Future inflation expectations are priced into the market-related measures that most companies are using and we wouldn't expect a change in the assumptions relative to those measures.

Considering all the above, the price inflation assumption is set in line with the ECB objective.

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### Discount rate

The discount rate is the valuation assumption with the widest range of choices. It is used to translate the estimated future benefit payments from the Fund into a single figure which represents the amount that the Fund needs to hold today to provide them.

As per the requirements of Law 208(I) 2012, the maximum rates of interest used shall be chosen prudently and determined in accordance with any relevant rules of the home Member State. These prudent rates of interest shall be determined by taking into account:

- the yield on the corresponding assets held by the institution and the future investment returns, and/or
- the market yields of high-quality or government bonds.

Thus, the full spectrum of choices for setting the discount rate assumption is presented in the following charts:

<p>↑ Less risk Higher technical provisions</p> <p>↓ More risk Lower technical provisions</p>	<p><b>Government bond yields</b></p> <ul style="list-style-type: none"> <li>▪ Could construct portfolio of Government bonds</li> <li>▪ Eliminate all investment risk (i.e. risk-free rate)</li> </ul>
	<p><b>Corporate bond yields</b></p> <ul style="list-style-type: none"> <li>▪ Could construct portfolio of Corporate bonds</li> <li>▪ Eliminate most investment risk, but not risk of default</li> <li>▪ Used for accounting purposes</li> </ul>
	<p><b>Bond yields plus allowance for scheme assets to outperform bonds</b></p> <ul style="list-style-type: none"> <li>▪ Allows for scheme assets to outperform bonds by investing in other assets</li> <li>▪ Allowable (depending on scheme's investment policy) but Trustees need to satisfy themselves of funding risks</li> </ul>

In assessing the level of prudence in the discount rate, it is useful for the Trustees to consider the question "What is the probability of the Fund's assets returning X% p.a. above the rate of increase in the Fund's liabilities (assuming they increase in line with government bond yields)?"

Based on all of the above, the Trustees of the Fund have decided to set the discount rate by reference to the single "spot" yield on the AAA-rated euro area central government bonds yield curve at the duration of the liabilities (i.e. 16 years), plus a margin of 125bps to allow for future expected returns of the current investment strategy, leading to a discount rate assumption of 2,45% pa (i.e. 1,2% + 1,25%). The same discount rate is to be used for both pre-retirement and post-retirement liabilities.

## Salary increases

Salary increases comprise of three elements, namely *general increases*, *increases in the COLA index* (this index increases in line with price inflation), and *promotional/merit increases*.

According to the recent legislative changes, specifically *Law 192(I)/2011* and *Law 185(I)/2012*, salary increases are structured as follows:

- The freeze of general wage increases is extended until 31 December 2016.
- The suspension of the practice of COLA is extended until 31 December 2015. Once indexation resumes and according to the Memorandum of Understanding, the system will be reformed as follows:
  - a lower frequency of adjustment, with the base period for calculating the indexation (COLA) being lengthened from the current period of six months to twelve months. Indexation would take place on 1st January each year;
  - a mechanism for automatic suspension of application and derogation procedures during adverse economic conditions, such that if in the second and third quarters of a given year negative rates of growth of seasonally adjusted real GDP are registered, no indexation would be effected for the following year; and
  - a move from full to partial indexation, with the rate of wage indexation being set at 50% of the rate of increase of the

underlying price index over the previous year.

- No promotional/merit increases will be granted for service between 31 December 2012 and 31 December 2016.

As such, given the current outlook and the recent legislative changes, as well as the Company's expectations regarding future earnings increases, the Trustees have decided to set the salary increase assumption as follows:

- 0,00% per annum for the years 2015 – 2017,
- 1,00% per annum for the year 2018,
- 1,50% per annum for the year 2019,
- 2,00% per annum for the year 2020, and
- 2,50% per annum for the years 2021 onwards allowing for COLA, general pay increases and promotional/merit increases.

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#### **Pension increases**

The rules of the Pension Fund allow for pensions in payment to increase in line with the increases granted to public sector employees. This has to date been in line with general salary increases and COLA increases (i.e. price inflation).

Given the recent changes in legislation, as well as the Company's expectations regarding future pension increases, the Trustees have decided to set the pension increase assumption as follows:

- 0,00% per annum for the years 2015 – 2017,
- 1,00% per annum for the years 2018 – 2020, and
- 1,50% per annum for the years 2021 onwards.

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#### **SIS supplementary pension increases**

The SIS supplementary pension increases in line with increases in the COLA (i.e. price inflation). Given recent legislative changes, the Trustees have decided to set this assumption as follows:

- 0,00% per annum for the years up to 2016, and
- 50% of price inflation (i.e. COLA) for the years 2017 onwards.

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#### **Increase of the Maximum Insurable Earnings Limit**

Social insurance contributions that are added for the above deduction are calculated on salaries up to the maximum insurable earnings limit.

This assumption is set at a level of 1,0% per annum above the price inflation assumption.

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**Financial assumptions  
for technical  
provisions – summary**

A summary of all the financial assumptions for calculating the technical provisions for the valuation at 31 December 2014, determined using the approach outlined above, is as follows:

Assumptions	31/12/2014
Discount Rate	2,45%
Inflation Rate	2,00%
Salary Increases	2015-2017: 0,00% 2018: 1,00% 2019: 1,50% 2020: 2,00% 2021+: 2,50%
Pension Increases	2015-2017: 0,00% 2018-2020: 1,00% 2021+: 1,50%
SIS Supplementary Pension Increases	2015-2016: 0,00% 2017+: 1,00%
Increase on MIE Limit	3,00%

**Additional  
assumptions for  
Employer  
contributions**

In determining Employer contributions the same assumptions will be used as those for calculating the technical provisions together with the additional financial assumptions described below.

**Expected return on  
assets**

Allowance will be made for the expected outperformance of the fund's assets compared to the discount rate. The expected return on assets will be derived based on the fund's strategic asset allocation (as per the SIP), the forward-looking market assumptions as at the valuation date, and an agreed projection methodology.

Based on the fund's strategic asset allocation, Aon Hewitt's "Capital Market Assumptions" at 31 December 2014 and Aon Hewitt's projection methodology, the expected return on assets is estimated to be 4,1% p.a. and has been for the purposes of calculating the additional deficit contributions.

**Mortality**

The Trustees have decided to use a general mortality table called EVK2000 at 96% level which is based on Swiss mortality. This table is used to represent expected mortality before retirement. We believe this table is a reasonable representation of expected mortality for Cypriot employees. The expected life for a male and female aged 65 under this table is 82,87 and 85,67 respectively.

**Normal Retirements**

We have assumed that all employees will retire on their Normal Retirement Date as dictated by the recent changes in Law 216(I) 2012 i.e. at age 63 increasing to age 65 by 1/1/2016.

**Other Exits from  
Service**

We have adopted a nil assumption for other pre-retirement exits (like disability, voluntary withdrawals, redundancy).

**Demographic assumptions for technical provisions – summary**

A summary of all the demographic assumptions for calculating the technical provisions for the valuation at 31 December 2014, determined using the approach outlined above, is as follows:

Assumptions	31/12/2014
Mortality	96% of EVK2000
Normal Retirement	Age 65
Other pre-retirement exits	None

## Appendix C: Regulatory Framework / Principles of Funding

**Pensions vocabulary** Law 208(I) 2012 introduced some pensions terms, including the concept of technical provisions. Here is a summary of the main terms now in use:

<b>Technical Provisions</b>	The target level of assets that the Trustees following consultation with the Employer decide is appropriate to meet promised benefits.
<b>Funding Objective</b>	To hold sufficient and appropriate assets to meet the technical provisions.
<b>Funding Principles</b>	A set of principle for meeting the Funding Objective.
<b>Recovery Plan</b>	A document summarising a plan of action for correcting a shortfall over an agreed period.
<b>Schedule of Contributions</b>	A schedule setting out what contributions are payable, and when.

**Principles of Funding** The Trustees and Company are required to agree on three principles:

**Principle 1:**

**What technical provisions to target?**

To calculate the technical provisions:

- For each year into the future, the benefits paid out by the Fund are estimated. This is generally considered in real terms for the majority of cashflows, which are linked to inflation.
- A target level of assets is agreed on, that is appropriate to meet the expected benefit payments. The conventional approach here is to 'discount back' the expected benefit payments to the valuation date, using an agreed rate of interest known as the discount rate.

These 2 steps require a chosen method and assumptions (e.g. how long members live) in order to arrive at a value for the technical provisions.

**Principle 2:**

**What contributions to pay for future benefits?**

There are several funding methods recognised by the actuarial profession. These result in different calculations of the cost of new final salary benefits.

**Principle 3:**

**How to address any shortfall?**

A decision must be taken on how any shortfall is addressed.

**Purpose of funding**

The primary purpose of funding is to provide members with more security for their pensions than if they relied on their employer to pay them directly.

## Setting the funding objective

Several factors should be taken into account to set the funding objective:

- The purpose of funding the Fund.
- An acceptable level of risk.
- The requirements of the Fund's Trust Deed and Rules.

## Legal Requirements

As per the requirements of Law 208(I) 2012:

- *The calculation of the technical provisions shall be executed and certified by an actuary or, if not by an actuary, by another specialist in this field, including an auditor, according to national legislation, on the basis of actuarial methods recognised by the competent authorities of the home Member State, according to the following principles:*
- *(a) the minimum amount of the technical provisions shall be calculated by a sufficiently prudent actuarial valuation, taking account of all commitments for benefits and for contributions in accordance with the pension arrangements of the institution. It must be sufficient both for pensions and benefits already in payment to beneficiaries to continue to be paid, and to reflect the commitments which arise out of members' accrued pension rights. The economic and actuarial assumptions chosen for the valuation of the liabilities shall also be chosen prudently taking account, if applicable, of an appropriate margin for adverse deviation;*
- *(b) the maximum rates of interest used shall be chosen prudently and determined in accordance with any relevant rules of the home Member State. These prudent rates of interest shall be determined by taking into account:*
  - *the yield on the corresponding assets held by the institution and the future investment returns and/or*
  - *the market yields of high-quality or government bonds;*

## The agreed funding target / technical provisions

Pension fund liabilities are a series of future cash payments. Other than immediate and deferred annuities provided by an insurance company, the assets that would provide the closest match to these cash flows are bonds of governments from the same area as the liability payments. Hence a funding target could be equal to the present value of the expected payments discounted at the market yields on government bonds of appropriate term. The expected payments for active members would relate to pensionable service up to the valuation date and would include an allowance for expected future increases to the Pensionable Salary.

The funding target could be calculated using the approach described above. However, it is common for funded occupational pension funds to hold assets less than the full amount of the liabilities valued in this way. Instead, the Company will set a funding target at a lower level.

The Trustees of the Fund have decided to set the discount rate by reference to the single "spot" yield on the AAA-rated euro area central government bonds yield curve at the duration of the liabilities, plus a margin of X% to allow for future expected returns of the current investment strategy.

The methodology of setting the discount rate is described in detail in **Appendix 2**.

The funding target is therefore calculated as the present value of the expected payments (as described above) discounted at the rate derived above. It should be noted that neither investing in assets with a higher expected return nor lowering the funding target reduces the cost of providing the promised benefits. Such assets bear a higher risk of under-performance which balances the higher expected returns. Other things being equal, if the funding target is lower, the Company will pay:

- Lower contributions in the short term; but
- Higher contributions (than would otherwise be payable) thereafter.

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**Speed of reaching funding target**

An adjustment to the contribution rate will be needed to eliminate a funding surplus or a funding deficit over an agreed period of time. The overall contribution rate may allow for the amortisation of any past service surplus or deficit over the future working lifetime of the current active members.

The Trustees can follow a faster method of recognizing the surplus or deficit if this is required.

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**Stability of contribution rate**

The contribution rate will remain stable before and after eliminating a funding surplus or a funding deficit if the funding objective remains unchanged and all assumptions made are borne out in practice. If the funding objective changes, then contribution rates are likely to change.

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## Appendix D: Investment Policy / Funding Risks

### Suitability of the current asset allocation

We suggest examining the appropriateness of the current asset allocation in relation to the nature and duration of the obligations:

- The Pension Plan is exposed to significant **interest rate risk** due to the mismatch of the duration of assets and liabilities.
- In addition, the Pension Plan faces **inflation risk**, since all the liabilities are either directly (through increases in pensions) or indirectly (through wage increases), exposed to inflation risks. Investments to ensure inflation-linked returns (i.e. real returns through investments such as equities, index-linked bonds and assets whose return increase with increasing inflation) could be used for better match with the expected increases in liabilities.
- Due to the recent decline in interest rates and the mismatch of the duration of assets and liabilities, the rate of increase of the liabilities has not been balanced by a corresponding growth in the assets, thus significant financing gaps (deficits) have arisen.
- Cash is usually held in deposits at very short term interest rates. Usually, pension funds hold cash either as a short term investment or as a “working balance” to enable smoothness in other transactions. Problems will arise if income (interest income and contributions) is not sufficient to meet benefit outgo. As this is not a problem currently faced by the Fund, it appears that such a high allocation of assets in cash-type investments is not necessary.
- The Trustees should ensure that their approved long-term Investment Strategic Allocation is implemented in the near future to ensure alignment of the funding and investment objectives. Further, the level of mismatching between Assets and Liabilities should be closely monitored particularly as yields start to return back to higher/“normal” levels.
- A new Asset-Liability study has been completed. We suggest that the Trustees review the results of this study at the earliest opportunity and continue the implementation of the recommended Strategic Asset Allocation.

## Contact Information

**Philippos Mannaris, FCAA, AIA**

**Actuary & Partner**

Retirement & Investment Practice

t: +357 22 458011

m: +357 99 458086

e: [philippos.mannaris@aonhewitt.com.cy](mailto:philippos.mannaris@aonhewitt.com.cy)

**Stelios Petrou, AIA**

**Actuary & Consultant**

Retirement & Investment Practice

t: +357 22 458011

m: +357 99 634932

e: [stelios.petrou@aonhewitt.com.cy](mailto:stelios.petrou@aonhewitt.com.cy)

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