

FINAL DECISION

ABOUT

**the cost-of-capital rate for MEO – Serviços de Comunicações e Multimédia,
S.A.**

(2018 financial year)

ANACOM

2019

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1. Framework

The cost-of-capital rate represents the rate of return required to offset the opportunity cost of the investment.

In the context of the electronic communications market, the determination of the cost-of-capital rate seeks: (i) to ensure the right incentives for investment; (ii) to ensure that there are no market distortions, through discriminatory and anti-competitive practices; (iii) to remove any barriers to the entry of new competitors; and (iv) to protect consumers from excessive prices, considering it essential to define a methodology that allows an appropriate establishment of the cost-of-capital rate, without any accounting and/or analytical constraints, in a suitable manner to compensate the investments of regulated companies.

The Electronic Communications Law, Law no. 5/2004, of 10 February, in its current wording, foresees, in paragraph 2 of article 74, that in imposing the obligation to amortise costs and control prices, including the obligation for cost-orientation of prices and the obligation to adopt cost accounting systems, the National Regulatory Authority (NRA) should take into account the investment made by the operator, allowing it a reasonable rate of return on the capital invested, taking into account the risks associated with it.

In addition, Commission Recommendation 98/322/EC, of 8 April (Paragraph 5.1 of its Annex) states that: “*charges for interconnection be cost-oriented, including a reasonable return on investment*” and that “*the cost of capital of operators should reflect the opportunity cost of funds invested in network components and other related assets.*”

Furthermore, according to paragraph 5.1 of the aforementioned Annex, “*The cost of capital of operators conventionally reflects the following: the (weighted) average cost of debt for the different forms of debt held by each operator; the cost of equity as measured by the returns that shareholders require in order to invest in the network given the associated risks; and the values of debt and equity.*” ***This information can then be used to determine the weighted average cost of capital (WACC) using the following formula:***

CMPC = $r_e * E/(D+E) + r_d * D/(D+E)$ where r_e is the cost of equity, r_d is the cost of debt, E is the total value of equity and D is the total value of interest-bearing debt”.

The National Communications Authority (ANACOM), since 2009¹, has established a methodology to calculate the cost-of-capital rate for *MEO - Serviços de Comunicações e Multimédia*, S.A., (hereinafter also referred to as MEO), and determine the cost-of-capital rate to be considered by this operator in its CAS, and, following a critical review of the parameters applicable to the 2016 financial year, by Determination of 15.09.2016, it carried out an updating of the list of comparable entities, and that one of the entities, PHAROL SGPS (formerly PT SGPS) ceased to be an entity with comparable activity to MEO.

In this context and so as to determine the cost-of-capital rate to be used by MEO in its CAS, for the 2018 financial year, which appropriately allows a reasonable profit to be obtained, taking account of the risk incurred in investments made, ANACOM awarded to Mazars & Associados, SROC, S.A. (henceforth Mazars) the critical revision of the current methodology and the updating of the data necessary to calculate each parameter of the capital cost rate, a matter discussed by this document and which forms part of the report “*Determining the cost-of-capital rate for MEO – Serviços de Comunicações e Multimédia, S.A. – for the 2018 financial year*”, drawn up by Mazars (Annex 1).

In this connection, the European Commission delivered its opinion on 30.04.2019 on the draft final decision, making no comments.

2. Cost of-capital rate

Since ANACOM’s determination of 2010, referred to above, that the methodology to be used by MEO in calculating the cost-of-capital rate for its cost accounting system (CAS), was defined by this Authority, and also established the methodology for determining the various parameters considered, as well as the information sources to be utilised.

¹ [ANACOM Determination of 28.06.2017](#), [ANACOM Determination of 15.09.2016](#), [ANACOM Determination of 17.12.2015](#), [ANACOM Determination of 23.05.2014](#), [ANACOM Determination of 05.12.2013](#), [ANACOM Determination of 30.08.2012](#), [ANACOM Determination of 26.08.2011](#), [ANACOM Determination of 10.02.2010](#).

2.1. Methodology

The methodology used in MEO's CAS for calculating the cost of capital is based on the weighted average cost of capital (WACC) in the variant of the nominal pre-tax formula of the WACC, resorting to the capital asset pricing model (CAPM), to calculate the cost of equity.

In addition, it is important to also mention that, as regards the parameters which are calculated based on a benchmarking methodology using comparable companies, the criteria used in the choice of these companies takes into account: (i) the income *per capita* of the respective countries; (ii) the offer of similar products; (iii) the market position; (iv) the growth rate and, (v) the value of the company.

As such, it should be noted that the revision of the eligibility of comparable entities, carried out by Mazars (see Annex I), did not identify: (i) that there were significant changes to the business model of the selected companies, or the lack of at least 80% of the observations which could imply the exclusion of any of these entities, and (ii) any other company which could be considered comparable to integrate this list, therefore concluding that the benchmark to be used should remain unchanged given ANACOM's previous determination² (see Table 1):

² [MEO's cost of capital rate for the 2017 financial year.](#)

Table 1. Benchmark of comparable companies

Comparable Company	Country
BT Group	United Kingdom
Deutsche Telekom	Germany
Elisa OYJ	Finland
Hellenic Telecommunications	Greece
KPN NV	The Netherlands
Magyar Telekom	Hungary
NOS SGPS	Portugal
Orange	France
Proximus (formerly Belgacom)	Belgium
Swisscom	Switzerland
TDC	Denmark
Telecom Italia	Italy
Telefónica	Spain
Telekom Austria	Austria
Telenor ASA	Sweden
Telia Company AB (formerly Teliasonera AB)	Norway

Moreover, it is understood that, where appropriate, the current benchmark should be revised and updated, not only on account of benchmark companies that for some reason are no longer considered to be comparable, but also to allow the inclusion of other comparable companies that may arise in the meantime, which not only meet the criteria referred to above but which also present a minimum stock listing history (two years) that may dilute any speculative changes in the value of shares in the first months on the stock market.

Notwithstanding the definition, *a priori*, of the methodology to calculate the cost-of-capital rate, and given that the current macroeconomic context advises a regular revision of parameters, it is deemed that the referred parameters require an annual revision, on the basis of the methodology in force, being incumbent on ANACOM to determine the cost-of-capital rate applicable to each financial year, up to the first half of the year concerned, on the basis of the availability of elements required for its determination.

In this respect, in the case of situations where it is not possible to use all data, and respective series, required to determine parameters considered in the calculation of the cost of capital,

either due to the absence of available information or to the occurrence of facts that call into question the continuity or validity of the series used, the calculation of the said parameters must, whenever possible, be performed in a way as close as possible to the methodology in force, only introducing the required deviations as necessary to address the absence and/or insufficiency of the information concerned.

In this sense, where it is found that databases that allow the establishment of parameters show limitations, and that the application of the defined methodology is not possible, there are grounds for the respective change/replacement (only where it is not possible to guarantee the inclusion in the calculation of at least 80% of observations or of sources of information required for the establishment of parameters, considering that all comparable companies continue to comply with the selection criteria), which may be triggered by either party, by 31 May of the year concerned and subsequently submitted to a prior hearing of stakeholders and public consultation, otherwise the calculation of the value will simply be updated for the financial year concerned.

2.1.1. Pre-tax Weighted Average Cost-of-Capital (WACC)

In methodological terms, the WACC corresponds to the weighted average of the cost of equity (K_e) and of the cost of debt capital (K_d).

The current methodology to determine the cost-of-capital, in the MEO CAS, is based on the pre-tax WACC formula, which results from the adjustment of tax in the post-tax WACC formula, the tax expense being incorporated, and allocated to the different products and/or services. The criterion of causality is thus observed in a more appropriate way, in contrast to the post-tax methodology, which allocates the tax expense via common costs.

The WACC pre-tax methodology thus results from the following formula:

$$\text{WACC}_{\text{pre-tax}} = \text{WACC}_{\text{post-tax}} \times \frac{1}{(1 - t_i)}$$

being that:

$$\text{WACC}_{\text{pre-tax}} = [K_e \times (1 - \text{Gearing}) + K_d \times \text{Gearing} \times (1 - t_i)] \times \frac{1}{(1 - t_i)}$$

where:

K_e – represents the actual cost-of-capital, calculated through the Capital Asset Pricing Model method - CAPM – (see section 2.1.2 Capital Asset Pricing Model – CAPM);

K_d – represents the rate of cost of debt capital, obtained through the sum of the risk-free interest rate and the debt premium;

Gearing – represents the weight of debt capital in the total invested capital; and

t_i – represents the (nominal) corporate income tax rate.

2.1.2. Capital Asset Pricing Model (CAPM)

The actual cost of equity rate (K_e) is based on the Capital Asset Pricing Model (CAPM) methodology, using the following formula:

$$K_e = \text{Risk-free interest rate} + \beta \times \text{Risk premium}$$

where:

Risk-free interest rate (R_f) – corresponds to the rate of return expected by an investor as a result of investments in assets with no associated risk, that is, investments free of uncertainty as to the return to be obtained.

β (Beta) – represents the covariance between a company's equity returns and the stock market as a whole, that is, it reflects the risk of equity in that company compared to the general market risk.

Market risk (R_m) – corresponds to the return expected by an investor when investing in the stock market with a diversified portfolio.

Risk premium ($R_m - R_f$) – corresponds to the differential between the risk of investing in the stock market with a diversified portfolio (R_m) and the investment made in risk-free assets (R_f) thus representing the additional return required by investors for the risk taken, by comparison to the return of the investment in an asset to which no risk is associated.

The CAPM model is the most widely used³ as it presents a clear theoretical basis and is easy to implement. The model reflects the underlying efficient portfolio theory, according to which, in a market, economic actors will invest in an efficient portfolio, that is, a portfolio that will maximize returns expected for a given level of risk, in the light of the degree of aversion to risk on the part of each actor.

2.2. Methodology to calculate parameters

2.2.1. Cost of equity capital (K_e)

2.2.1.1. Risk-free interest rate (R_f)

The risk-free interest rate (R_f) reflects the return obtained by an investor as a result of investments in risk-free assets, although a certain degree of risk, even if low, may always exist, namely:

- a) Market risk: changes in the market rate of return;

³ Graham and Harvey (2001), *The theory and practice of corporate finance: evidence from the field*, *Journal of Financial Economics*. The survey conducted with 400 Financial Directors showed that three quarters use the CAPM model.

b) Liquidity risk: risk related to the inability to sell financial instruments in the short term.

Financial and regulatory practices have generally considered government bonds (GB) to be a reliable and sound parameter to reflect the absence of risk.

The methodology determined by ANACOM establishes that the risk-free interest rate is determined based on the average of yields of 10-year Portuguese treasury bonds (historical series, based on monthly observations in the course of the two years preceding the year of the decision – source: European Central Bank).

Taking into account the calculation made by Mazars based on the methodology described above, the details of which can be consulted in Annex 1, ANACOM considers that the value to be used regarding the **risk-free interest rate** for the 2018 financial year should be **3.11%** (see Table2).

Table2. Risk-free interest rate

	Average
Risk-free rate 2016	3.17%
Risk-free rate 2017	3.05%
2016 and 2017 average	3.11%

Source: European Central Bank

2.2.1.2. Beta (β)

As mentioned earlier, the CAPM methodology is based on the determination of the risk of an asset listed on a stock exchange (share), which considers the systematic (or market) risk plus the specific (or company) risk.

The general market risk (systematic risk) corresponds to the risk related to all aspects (e.g. political, economic, etc.) that are able to change the behaviour of investors, thus representing the risk that is inherent to a portfolio which is already diversified, differing from the individual risk associated with each of the stock-listed securities.

The risk associated to the share is defined by calculating its beta (β) which in the context of the definition of the company's cost-of-capital, corresponds to the equity β , and reflects the sensitiveness of a specific asset to changes in the return of the market portfolio, that is, the company's exposure to the economic cycle.

Given that MEO's regulated activity is not individually stock listed, the methodology defined by ANACOM establishes that β should be determined based on a benchmark of companies with similar activities (see Table 1), a methodology which does not differ substantially from that used by most European countries in this regard.

In this sense, and regarding the definition of the benchmark for comparable companies and the calculation of β , the methodology used reflects the following characteristics:

- a) Definition of a set of companies based on: (i) the income *per capita* of the respective countries; (ii) the offer of similar products; (iii) the market position; (iv) the growth rate and, (v) the value of the company.
- b) The use of the Harris and Pringle⁴ model to determine the β of the equity of comparable companies. This model allows for the calculation of the unlevered β of the asset, that is, the β without the effect of capital structure, which is later leveraged with the capital structure defined as optimal for MEO;
- c) Frequency of observations: β may be estimated through daily, weekly, monthly or quarterly observations. In this scope, similar to the case of the risk-free interest rate, the defined methodology deemed monthly observations to be the most appropriate;
- d) Period of time: the use of short series could distort results and suppress relevant information, as more recent observations may involve possible effects that do not properly reflect future expectations. As such, the use of series that are long enough to allow for the correction of effects of short-term volatility are thus recommended. To that extent, the defined methodology established that the series period must accommodate relevant observations that guarantee a robust result, representative of the risks inherent to the company's current structure, and it is clear that European Regulatory Authorities prefer long periods of time. Accordingly, it is deemed appropriate to use a 5-year period

⁴ The *Harris & Pringle* calculation formula is considered to be the formula that best reflects reality β (Equity) = β (Asset) x (1 + D/E) where: D/E - capital structure.

of time, so as to allow an appropriate level of robustness and security of results obtained; and

- e) Data on β are taken from Bloomberg as they correspond to values adjusted through the Bayes formula, the so-called adjusted beta⁵, which allows the determination of a more robust estimate, that is less volatile to fluctuations.

In this context, β is determined through the simple average of the β established for the different benchmark companies (see Table 1), which correspond to their adjusted beta, from Bloomberg – historic series for the 5 years preceding the year of the decision, based on monthly observations, with each of the β extracted from the Bloomberg data unleveraged from the financial structure of the company they concern, and subsequently leveraged using the *Harris & Pringle* formula (β equity capital = β asset x (1 + D/E⁶)), using the capital structure (gearing) defined for the year concerned (see Table 7), which must take account of the accounting value of its equity.

Taking into account the calculation made by Mazars based on the methodology described above, the details of which can be consulted in Annex 1, ANACOM considers that the value to be used regarding β for the 2018 financial year should be **0.804** (see Table 3).

⁵ The beta of a company may be presented as an adjusted beta or as a raw beta. Raw (or historic) beta is based on the comparison of the asset return with the market return. The adjusted beta is an estimate of the future asset return compared to the market return. It results initially from historic data, an adjustment being performed, assuming that the asset beta taken into account will always tend towards the average return provided by the market. The calculation formula for the purpose of the determination of the adjusted beta is: adjusted beta = 0.67 x (raw beta) + 0.33 x 1 (market beta).

⁶ D/E - Debt/Equity or gearing, corresponds to the capital structure given by the ratio between debt capital and equity.

Table 3. Beta

Comparable companies	Equity Beta 5 years (Harris & Pringle Formula)
BT Group	1.023
Deutsche Telekom	0.838
Elisa OYJ	0.605
Hellenic Telecommunications	1.021
KPN NV	0.601
Magyar Telekom	0.459
NOS SGPS	0.739
Orange	0.872
Proximus	0.822
Swisscom	0.689
TDC	0.869
Telecom Italia	0.976
Telefónica	1.010
Telekom Austria	0.770
Telenor ASA	0.792
Telia Company AB (formerly Teliasonera AB)	0.770
Average	0.804

Source: Bloomberg

2.2.1.3. Risk premium ($R_m - R_f$)

By definition, the risk premium corresponds to the differential in terms of return required to invest in a given asset, in a given market, compared to the return of the investment in a risk-free asset.

$$\text{Risk premium} = R_m - R_f$$

where:

R_m – represents the expected return of an investment in the stock market in a diversified portfolio;

R_f – represents the risk-free interest rate.

It is not a consensual task, either in methodological or in conceptual terms, to determine the risk premium expected from the stock market. The analysis of its behaviour is complex, given that both the risk premium, and factors that determine it, are not directly observable, changing over time according to the behaviour of investors towards risk and to their perception of the risk of the asset concerned. As such, like other European Regulatory Authorities, ANACOM decided as part of prior determinations on the methodology to calculate the cost-of-capital that the definition of the risk premium should be based on *ex-post* methodology and based on the use of a benchmark.

The methodology defined by ANACOM favoured observations based on longer series, as supported by Damodaran in the research carried out on this subject⁷, which states that observations based on longer series (25 to 100 years) exceed the advantages of more relevant observations, associated with shorter and more recent periods, by allowing a lower standard error, their consistency tending to increase with the extension of the period considered.

In this sense the methodology determined by ANACOM for the calculation of the defined risk premium established its determination based on estimates from the *Damodaran* database⁸ (which takes into account the intrinsic risk of access to investment in the country concerned) and studies by *Pablo Fernandez* (through surveys of analysts, academics and Portuguese financial and non-financial companies), based on future expectations (*ex-ante*), with data which are publicly available and, considered as authors of reference with, from 2016, this calculation now including data from the *Dimson, Marsh and Staunton* (DMS) series, included in the *Global Investment Returns Yearbook*, published by Credit Suisse, which incorporates long series of information (the risk premium results from the series of long-term bond values from 1966-2015), thus providing stability to the methodology and aligning the determination of the risk premium with that practised by other European regulators (e.g., Spain and Ireland), and incorporating a greater number of source inputs regularly used academically and professionally.

⁷ Damodaran, Aswath, “Equity Risk Premiums”, *Stern School of Business*.

⁸ <http://www.stern.nyu.edu/~adamodar/pc/datasets/ctryprem.xls>

The risk premium is determined corresponding to a simple average between *ex-ante* data (Damodaran, Pablo Fernandez and Dimson, Marsh and Staunton - DMS), covering expectations for Portugal and calculated based on the most recent available publications in the year preceding the decision.

Taking into account the calculation made by Mazars (Annex 1), based on the methodology described above, ANACOM considers that the value to be used regarding the **risk; premium** for the 2018 financial year should be **6.22%** (see Table 4).

Table 4. Risk premium for 2018

Risk premium for 2018		Amount
<i>Damodaran</i>	<i>Portuguese market risk premium⁹</i>	7.96%
<i>Pablo Fernandez</i>	<i>Market Risk Premium and Risk rate used for 59 countries in 2018 Pablo Fernandez, Alberto Ortiz and Isabel F. Acin – IESE Business School April 4, 2018.¹⁰</i>	7.20%
<i>DMS</i>	<i>Credit Suisse Global Investment Returns Yearbook 2018</i>	3.50%
	Risk premium for 2018 (Average)	6.22%

2.2.2. Cost of debt capital (K_d)

2.2.2.1. Debt premium

The cost of debt capital rate reflects the interest rate for financing medium- and long-term debts. Taking into account the methodology defined by ANACOM, the calculation of that rate is carried out based on the risk-free interest rate added from the debt premium.

The debt premium is the additional return regarding the rate corresponding to the risk-free investment, requested by the company's creditors which reflects the company's ability (which is usually reflected by the rating given to the company) to meet debt liabilities.

⁹ <http://www.stern.nyu.edu/~adamodar/pc/datasets/ctryprem.xls>

¹⁰ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3155709

Given this, the methodology for calculating the cost-of-capital for MEO, determined by ANACOM, considers that the debt premium to be used in determining the cost of debt capital should be obtained by using the Bloomberg Value Curve tool, considering the curve “*EUR Europe Communications BBB+, BBB, BBB- BVAL Yield Curve 10Y (BVSC0007)*”, and determined based on the average of the said yields in the two years preceding the year of the decision.

Taking into account the calculation made by Mazars (Annex 1), based on the methodology described above, ANACOM considers that the value to be used regarding the **debt premium** for the 2018 financial year should be **1.363%** (see Table 5).

Table 5. Debt premium

	31.12.2016	31.12.2017	Average 2016/2017
<i>EUR Europe Communications BBB+, BBB, BBB- BVAL Yield Curve 10Y (BVSC0007)</i>	1.327%	1.398%	1.363%

Source: Bloomberg

2.2.2.2. Tax rate

In competitive markets, tax is treated as a cost that must be recovered through prices, so price control should enable the entity to generate sufficient revenue to meet its tax obligations.

The tax rate to be considered for the purpose of determining the cost of capital should be the nominal rate, since: (i) it allows frequent fluctuations resulting from the effective tax rate to be avoided, mainly due to annual corrections for the determination of the basic taxable amount, as well as changes in deferred taxes; (ii) the determination of the nominal tax rate is less complex than the determination of the effective tax rate; (iii) provides greater regulatory predictability; and, (iv) is a fixed number exogenous to the company and easily observable.

Therefore, the tax rate to be used in the calculation of the cost-of-capital rate should correspond to the sum of the values of each constituent component (currently, the tax rate on corporate income, the State surtax rate and the municipal surtax rate), obtained through the application of the methodology described below:

(i) corporate income tax rate (IRC)

The corporate income tax rate (IRC) must correspond to the rate in force for the financial year concerned, for which the cost-of-capital is being determined.

In this sense, and taking into account the methodology described above, which establishes the use of the nominal rate of IRC in force for 2018, ANACOM considers that the **(IRC) tax rate** to be considered should be **21%**.

(ii) State surtax rate

The State surtax rate, due to legislative amendments in the last few years, has been progressively determined according to the company's taxable profits, with a 3% rate being levied in 2018 on the taxable profit in excess of 1,500,000 Euros and up to 7,500,000 Euros, a 5% rate on taxable profit between 7,500,000 and 35,000,000 Euros and a 9% rate for taxable profit over 35,000,000 Euros¹¹.

As such, ANACOM understands that, given that results do not differ significantly from previous years, the State surcharge rate to be applied should correspond to the rate resulting from the application of the legislation in force for the year concerned to the average of positive taxable profits of the three-year period preceding the year of application, or the possibility that in this time period there were no taxable profits recorded, thus considering a State surcharge rate of 0%.

Therefore, and in so far as MEO's Reports and Accounts for the last three years (2015-2017) show the lack of IRC corporate taxable profits, for each of the years in this period, and consequently, it is not subject to the State surtax rate. As such, based on the methodology described above, ANACOM considers that the tax rate to be considered in calculating the cost-of-capital for the 2018 financial year should incorporate a **State surtax rate of 0%**.

¹¹ Article 87-A of Law no. 82-B/2014, of 31 December.

(iii) municipal surtax rate

As far as the municipal surtax is concerned, as this is an exogenous parameter to the company, given that it does not result from the value of its taxable profits in each financial year, the defined methodology determined that, given the variety of municipal locations with different municipal surtax rates, and for the purpose of simplifying the process of the calculation and determination of the value, the municipal surtax should correspond to the maximum value established by law for the year concerned.

As such, and based on the methodology described above, ANACOM considers that the **tax rate** to be considered in calculating the cost-of-capital rate for the 2018 financial year should be **22.50%** (see Table 6), according to the calculations made by Mazars (Annex 1).

Table 6. Tax rate

Tax rate	
Article 87 of the CIRC ¹² - Corporate Income Tax Rate IRC	21.00%
Article 87- A of the CIRC - State surtax rate	0.00%
Municipal surtax	1.50%
Tax rate	22.50%

2.2.3. Gearing

The company's financial structure (gearing), reflected by the weight of debt capital in the total of invested capital, plays an important role in the determination of WACC.

The choice of the optimal relationship between equity capital and debt capital, in order to optimise the WACC, is known as the optimum capital structure.

There are various gearing calculation methodologies that have been used by European regulators, in particular: (i) gearing; (ii) target gearing; (iii) optimal gearing; and, (iv) regulatory precedents.

In this respect, ANACOM, in previous determinations, decided that the *gearing* to be used in determining MEO's cost of capital should result from a benchmark of comparable companies (see Table 1), resulting from the average of the average gearing value of each

¹² CIRC – Corporate Income Tax Code (*Código do Imposto sobre o Rendimento das Pessoas Coletivas*).

of the companies of the said benchmarking for the 5 years preceding the year of the decision, taking into consideration their Report and Accounts as made available by Bloomberg.

Thus, taking into account the calculation made by Mazars (Annex 1), based on the methodology described above, ANACOM considers that a **gearing of 40.05%** should be used (see Table 7).

Table 7. Gearing

Comparable companies	Average Gearing (2013-2017)
BT Group	35.99%
Deutsche Telekom	41.86%
Elisa OYJ	45.55%
Hellenic Telecommunications	31.51%
KPN NV	55.66%
Magyar Telekom	35.40%
NOS SGPS	39.02%
Orange	38.06%
Proximus	28.12%
Swisscom	39.99%
TDC	41.19%
Telecom Italia	47.52%
Telefónica	46.66%
Telekom Austria	41.00%
Telenor ASA	36.72%
Telia Company AB (formerly Teliasonera AB)	36.62%
Average 2018	40.05%

Source: Calculation by Mazars on the basis of Bloomberg's financial statements

2.3. Basis of remuneration of the cost-of-capital

The cost-of-capital is calculated as the product of the WACC rate and the basis of remuneration, the latter being particularly relevant, as it must reflect the investment made by the operator in the development of its operational activity.

In this regard, the Law on Electronic Communications¹³ provides in Article 74 paragraph 2 that "*imposing the obligations the National Regulatory Authority (NRA) should: a) take into account the investment made by the operator, allowing it a reasonable rate of return on the capital invested, considering the risks associated with it (...)*"

Therefore, the methodology defined by ANACOM established that there should be a direct correspondence between the capital invested and the investment made in non-current assets required for the development of its activity, which results in a more appropriate reflection of the opportunity cost incurred by its investors.

Given that MEO's costing model is based on the methodology of fully distributed expenses, it is deemed reasonable to consider that the basis of remuneration incorporates the total value of the average non-current asset (associated with regulated and non-regulated products and services), in its financial statements, as the calculated cost-of-capital is allocated to regulated products, in the proportion and only for non-current assets involved in their provision, on the basis of the activity based costing (ABC) methodology, that aims to create a direct relation between the allocation of expenses and activities required for the sale and/or provision of a product and/or service.

Therefore, the defined methodology established that the basis of remuneration to be used in the calculation of MEO's cost-of-capital should correspond to the non-current asset, namely items of tangible assets, intangible assets and financial investments, excluding assets held for sale, reflecting a more direct remuneration of the investment made by the operator in the scope of its operational activity.

¹³ (Law no. 5/2004 of 10 February, in its current wording).

Any other asset classified by MEO to be investment and which in its view must be remunerated, should be submitted to ANACOM, duly justified, so that the grounds for its inclusion in the basis of remuneration can be validated.

2.4. Definition of the cost-of-capital rate

The prior adoption of a clear methodology and the consequent *a priori* definition of the value of the cost-of-capital rate promotes regulatory predictability and market transparency.

Therefore, and taking into consideration the parameters obtained in the previous points, applying the pre-tax weighted average cost of capital formula¹⁴, ANACOM considers that the **cost-of-capital rate** applicable for the 2018 financial year should be **8.0660%** (see Table 8).

Table 8. Cost-of-capital rate (2018)

Parameters	2018
Risk-free interest rate	3.11%
Beta	0.804
Risk premium	6.22%
Gearing	40.05%
Debt premium	1.363%
Tax rate	22.50%
Cost of equity	8.11%
Average 2018	8.0660%

3. Conclusion

Given the methodology described above and the calculation shown in the previous point, it is determined that, for the MEO CAS results for 2018, the cost-of-capital rate of **8.0660%** should be used.

¹⁴ $WACC_{pre-tax} = [Ke \times (1 - G) + Kd \times G \times (1 - ti)] \times \frac{1}{(1-ti)}$

Annex I List of acronyms and abbreviations

ABC	Activity based costing
NRA	National Regulatory Authority
CAPM	Capital asset pricing money
CIRC	Corporate income tax code
WACC	Weighted average cost-of-capital
DMS	Dimson, Marsh & Staunton
IRC	Corporation Tax
GB	Government Bonds
CAS	Cost Accounting System

Annex II: List of operators

MEO	MEO – Serviços de Comunicações e Multimédia, S.A.
PT SGPS	Portugal Telecom, SGPS, S.A.
PHAROL SGPS	PHAROL SGPS, S.A.

Annex III: List of other bodies/organisations

ANACOM	National Communications Authority
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