30.09.2022

Comments related to: ERO Consultation Paper on the Weighted Average Cost of Capital (WACC)

Issue for comment:

Response to the issues raised by ERO in the Consultation Paper regarding the Weighted Average Cost of Capital (WACC)

The comment:

1.0 INTRODUCTION

This document presents the response of KOSTT to the issues raised by ERO in its Consultation Paper concerning the Weighted Average Cost of Capital (WACC) dated 13 September 2022.

KOSTT would like to thank ERO for acknowledging and responding to the issues raised by KOSTT in its 29 July 2022 WACC Recommendation Report.

In developing the recommendations for its 29 July report, KOSTT relied on information that was available from various consultation reports and responses to consultations that it had available concerning the manner in which ERO determined the WACC for MYT2. As KOSTT discovered upon reading the 13 September Consultation Paper, the information we used in our initial recommendation was different from the data ERO used in its tariff model to determine the final WACC for MYT2, which was provided to KOSTT. The differences were as follows:

For example:

- KOSTT assumed that in MYT2 ERO based the risk-free rate on 10-year Hungarian Government bonds. We now realize that ERO actually used the rates on 7 to 10-year Kosovo Government Bonds.
- KOSTT assumed that in MYT2 ERO used a Debt Premium of 2.8%. We now realize that ERO used a value of 3.5%
- KOSTT assumed that ERO used an Equity Beta value of 0.75. ERO actually used a value of 1.0.

Since KOSTT attempted to use methodologies and data sources that ERO used in MYT2 in determining its initial recommendation, we are revising our recommendation for WACC in light

of the information contained in the Consultation Report. We apologize for the confusion that was caused.

During the tariff review process, there are multiple positions presented during several rounds of the consultation process. In order to provide a clear record of the final methods and data that are used to arrive at the components of Allowed Revenues, KOSTT recommends that future decisions on tariffs be documented and disclosed in a tariff decision document, including the data, assumptions, and calculations used to determine each component of Allowed Revenue.

Virtually all the input parameters for WACC are based on "soft" data and academic exercises, as opposed to hard data specific to Kosovo. In a regulatory environment, the cost of capital should be based on the cost of debt and cost of equity of the licensee. ERO has commented over time in consultation papers that CAPM is difficult to apply in Kosovo since KOSTT does not have access to commercial debt. In addition, the Capital Asset Pricing Model (CAPM) was developed to analyse security prices and determine the cost of equity to entities operating in the capital markets. Given the fact that there are no functioning capital markets in Kosovo, the use of this model is tenuous.

With the above considerations in mind, KOSTT submits its responses to the Consultation Paper and its revised recommendation for WACC in this document.

2.0 RESPONSES TO ISSUES RAISED BY ERO IN THE CONSULTATION PAPER

In this section, KOSTT will analyze the issues and methods used by ERO to arrive at its conclusions in the Consultation Report.

A. Cost of Debt

ERO based its recommendation for the cost of debt on a risk-free rate plus a debt premium. This is intended to serve as a proxy for what KOSTT would pay for intermediate term (7-10 year) commercial debt. It is not clear why intermediate debt costs (which are generally lower than long-term debt costs based on a normal yield curve) would be used since transmission assets have composite average lives exceeding 30 years, however, KOSTT will not debate this point, especially at this time when yield curves throughout the world are in such flux.

Looking first at ERO's derivation of the risk-free rate, we note that ERO referenced the yields on 7-10 year Kosovo Government Debt over the last five years. Figure 2 of the Consultation Report shows rates at selected monthly periods during the past 5 years. It is not clear if those are the costs of new borrowings during those months or composite debt costs at the end of those months. In any event, it is not clear why the rates have not been increasing over the recent months, as they have been throughout the world. ERO then used the average of those 16 monthly values to arrive at a nominal interest rate of 3.65%. ERO recognizes that this is a nominal rate, however, they make the leap to asserting that this will be used as a real rate, given global economic uncertainty and a flight to quality in these uncertain times. As discussed in section I, virtually all the determinants of WACC are based on soft data and, therefore, **KOSTT will not object to the use of a real risk-free rate of 3.65% for MYT3.**

To determine the cost of debt to a commercial entity, a "Debt Premium" must be added to the risk-free rate of Government borrowings to serve as a proxy for the cost of debt used in the WACC calculation. The debt premium used for MYT1 was 2.8% and for MYT2 it was 3.5%. ERO proposes to use a value between 1.72% and 2.12% for MYT3 based on interest rates of 5-10 year loans shown in Figure 4 of the Consultation Report. The source of this data was the Central Bank of Kosovo (CBK), however, the graph shows a downward trend in loan rates over the past 6 years which does not agree with the trends of interest rates in most other countries over this period, especially recently. Also, as previously mentioned, transmission assets would generally be financed over 20 to 30-year periods, not 5 to 10 years as shown in Figure 4. KOSTT referred to the July 2022 Monthly Statistics Bulletin of CBK which indicates that the current interest rate on new loans to industry is 6.26%. Subtracting the risk-free rate of 3.65, would imply a Debt Premium of 2.61%. As a reference point, the current spread between high quality 10-year corporate bonds and 10-year US Treasuries is over 2% (for 20-year duration, the spread is 2.7%). It is obvious that spreads in Kosovo would be higher than those. **KOSTT recommends that the Debt Premium of 2.8% that it recommended be used for MYT3**. That value is

significantly lower than the 3.5% value used in MYT2 and more in line with what a spread would be in Kosovo if there were a market for corporate debt.

The KOSTT recommended cost of debt is, therefore 6.45% (3.65% + 2.80%)

B. Cost of Equity

In accordance with the tariff methodology, the Capital Asset Pricing Model (CAPM) is to be used to determine the cost of equity (rEi) as follows:

$$rEi = rf + \beta i * ERPm$$

where: **rf** is the risk-free rate

β is the covariance between the returns on the individual equity asset and those of the market as a whole (the equity beta)

ERPm is the equity risk premium applicable to the market as a whole

We will discuss each of the variables in the following paragraphs.

As discussed in section A above, KOSTT does not object to the risk-free rate of 3.65% proposed by ERO.

KOSTT proposed a beta value of 1.0, the same as that used for MYT2. In its 29 July submission, KOSTT justified the use of a beta value of at least 1.0 since the situation with KOSTT indicates that it is much riskier than the average firm due to:

- The inability to recover the cost of energy provided free to consumers in North Kosovo.
- Inability of KEDS and KESCO to pay the required Transmission Use of System (TUOS) and Market Operator (MO) obligations to KOSTT, due to their extreme financial situations.
- The inability to recover (on a timely basis) the rapidly increasing energy cost related to system losses, which are required to be procured on regional energy markets during this severe energy crisis.
- The transition from fossil fuels to renewables which impact the transmission system with respect to stability and the need to add capital and operating costs to accommodate the transition.
- Worldwide Inflation levels, material shortages, and supply chain issues, which hit smaller countries such as Kosovo and smaller TSOs such as KOSTT especially hard.
- The average annual Return on Equity (ROE) for KOSTT for the past 5 years was 2.6%, far lower than the authorized value. In addition, risk is measured by uncertainty. Significant uncertainty is evident from the wild fluctuations in the ROE values from year to year. This is indicative of a firm with a beta value much greater than 1.0.

ERO did not perform an analysis of beta values used for TSOs. It did compile information on DSO equity betas used in European countries in prior tariff decisions, which averaged 0.88. Of course, those decisions were made prior to the current crisis in the energy sector, which is expected to continue for some time.

Given the fact that KOSTT is far riskier than the majority of DSOs listed (as supported above) **KOSTT recommends a beta value of at least 1.0.**

The Equity Risk Premium (ERP), also referred to as a Market Risk Premium, is the final variable needed for the CAPM. KOSTT recommended a minimum value of 5.5% based on four credible recent studies by international organizations, which include significant European data that support the 5.5% value. ERO ignored that data and instead used data from 28 prior DSO regulatory decisions. Although the data showed an average value of 5.3% - very close to KOSTT's recommendation of 5.5%, ERO decided to select only 8 countries, some of which were not included in the CEER study, to produce a value of 5.18% or by eliminating one of those it arrived at 5.04%. This does not indicate a representative sample. In addition, the data is not for TSOs.

Given that KOSTT's sources are more credible and the selective DSO data is lower than European averages, **KOSTT recommends an Equity Risk Premium of 5.5%.**

The resulting Return on Equity is $rEi = rf + \beta i * ERPm = 3.65\% + (1.0 * 5.5\%) = 9.15\%$

C. Weighted Average Cost of Capital

The formula for WACC specified in the tariff methodology is:

$$WACC = (1 - g) * (rE) / \{1 - t) + g * (rD)$$

Where: WACC is the Weighted Average Cost of Capital

g = gearing (debt: debt + equity ratio)

rEi = real cost of equity (expressed as a %)

rD = real cost debt (expressed as a %)

t = Kosovo corporate income tax rate

KOSTT agrees with ERO that the appropriate gearing value is 40%.

The recommended real cost of equity is 9.15% and the recommended real cost of debt is 6.45%. Given that the Kosovo tax rate is 10%, the WACC recommendation of KOSTT is:

$WACC = [(1-.4) * (9.15\% / (1-10\%)] + [.4 * 6.45\%] = 8.68\%$

3.0 SUMMARY OF THE PROPOSED WEIGHTED AVERAGE COST OF CAPITAL FOR MYT3

The following table documents the positions of KOSTT and ERO with respect to WACC.

Positions on Weighted Average Cost of Capital for the TSO

COMPONENT	KOSTT	ERO
Risk Free Rate Real rf	3.65%	3.65%
Debt Premium	2.80%	2.12%
Debt Cost, Real (rD)	6.45%	5.77%
Market Risk Premium (ERPm)	5.50%	5.30%
Equity Beta (B)	1.00	0.88
Equity Cost Post Tax Real	9.15%	8.31%
Tax Rate (t)	10%	10%
Equity Cost Pre-Tax Real	10.17%	9.24%
Gearing (g)	40%	40%
WACC - Pre-Tax, Real	**8.68%**	**7.85%**

For simplicity and clarity, the higher values of the ERO position were used for debt premium and market risk premium.

KOSTT recommends that future decisions on tariffs be documented and disclosed in a formal tariff decision, including all data, assumptions, and calculations used to determine each component of Allowed Revenue. A table such as the above is suggested as a summary of the positions on WACC.