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KOMPANIA KOSOVARE PËR DISTRIBUIM DHE FURNIZIM ME ENERGJI ELEKTRIKE SH.A
KOSOVO ELECTRICITY DISTRIBUTION AND SUPPLY COMPANY J.S.C.
KOSOVSKO PREDUZEĆE ZA DISTRIBUCIJU I SNABDEVANJE ELEKTRIČNOM ENERGIJOM D.D.
KEDS - SH.A.
Nr. 81 Dt. 28.09.2022
HQ 1

Ymer Fejzullahu
Chairman of ERO Board

Alpin Dogan
Chief Executive Officer
KEDS j.s.c

28 September 2022

Subject: Comments of the Distribution system operator to ERO Consultative Reports on input values for the period 2023-2027

Dear Mr. Fejzullahu,

This document summarizes the comments of the Distribution System Operator to the Consultative Reports of the Energy Regulatory Office (ERO) on input values for the period 2023-2027.

DSO has prepared comments for input values such as:

- The weighted average of the Cost of Capital;
- The allowed level of losses and losses sharing factor; and
- Efficiency factor;

Due to the great importance of this process, DSO is open and ready for further discussions whenever necessary.

Best Regards,

Alpin Dogan
Chief Executive Officer

Appendix:
Comments of DSO to the ERO Consultative report on the weighted average cost of capital (WACC),
Comments of DSO to the ERO Consultative report on the Loss reduction target,
Comments of DSO to the ERO Consultative report on the Efficiency factor.

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Comments of Distribution System Operator to the ERO Consultative Report on the Weighted Average Cost of Capital (WACC)

September 2022

1. Introduction

On 13 September 2022, the Energy Regulatory Office (ERO) published the Consultative Report on the Weighted Average Cost of Capital (WACC). In this consultative report published by ERO is presented the initial assessment for WACC for the transmission and distribution system for the period 2023-2027.

DSO has carefully analyzed the consultative report and ERO assessments presented in this report. WACC is the discount rate that represents the investor's preferred rate of return and is generally considered to be the investor's opportunity cost of capital. The assessment of ERO significantly endangers the financial stability of the company. The parameters estimated for WACC do not provide free monetary funds for the shareholders after servicing the obligations from the point of view of mismatch of amortization and maturity of loans.

In following this document, DSO will present its stand regarding ERO's proposal for the WACC for the regulatory period 2023-2027 and the reasons for all issues for which it does not agree with ERO's stand, together with supporting arguments.

In the following, DSO has summarized its arguments as follows:

- Leverage
- Cost of debt
- Cost of equity

KEDS, as a licensed Distribution System Operator is available to meet with ERO at any time to discuss the all raised issues in ERO's consultative report and the counterarguments provided in this document.

2. Gearing

According to Energy Regulator Office the appropriate gearing level for regulated licensees lies between 0.40 and 0.70. Since KEDS (DSO) gearing falls outside the range (less than 0.40), ERO proposes that the applied gearing ratio to be 0.40 representing the end of this range.

However, as indicated in DSO's Proposal for WACC, the best approach in estimating the capital structure is by considering the structure of comparable companies which operate in the electricity distribution service, with similar activities, and characteristics. The approach implicitly assumes that the group of similar companies together represents an efficient investor.

The approach suggested by ERO, based on the gearing ratio used by other regulatory office of neighboring countries with similar condition as Kosova, is applicable by considering the purpose of WACC (for tariff estimation). However, in order to derive a range of the cost of equity capital and to properly assess the impact of the capital structure, a minimum and maximum value of the debt/equity ratio has been considered. In the methodology used by DSO, the leverage ratio of the sector varies from 36.62% to 40%.

Considering a capital structure of 40.0% in both the upper and lower range, the impact would be immaterial, lowering the lower bound of our proposed WACC range by only 0.3, DSO proposes that the leverage level of remains according to the proposal 36.62%.

3. Cost of Debt

ERO proposes to continue calculating the Cost of Debt as an estimated Risk-Free Rate ("RFR") plus the debt premium. To determine the debt premium, ERO is based on the average interest rates of investment loans with maturity 5-10-years issued in Kosova, from second level banks for non-financial corporations. The average rate of investment loans with maturity 5 to 10-Years during 2020-2022 is considered as minimum, while the same average rate during 2016-2022 is used as a maximum. Therefore, the concluded range is 1.72% - 2.12%, resulting by subtracting the average Kosova Government securities yield of 7- and 10-years maturity during 2017-2022 (which is considered by ERO as a Risk-Free Rate for Kosova). Considering the above, Cost of Debt calculated by ERO ranges from 5.37% to 5.74%.

Based on Kosova National Bank latest publication (close to WACC estimation date), the interest rate of the new loans for investment purposes with a maturity of 5 to 10 years, results in 5.61% in July 2022. ERO considers the average of the last 6 years in their calculations which equalizes 5.37%. However, to reflect the actual economic conditions, we deem reasonable to account for the applicable interest rate as of estimation date (July-22). Furthermore, the consideration of the second level banks interest rate is not fully representative, when analyzing the energy sector financing needs. The amount of loans provided by second level banks is rather small compared to DSO financing requirements for a new investment. Also, the maturity of an investment loan in energy sector is longer than 5 to 10 years due to its capital expenditure time horizon, which would result in a higher interest rate applicable.

The European Central Bank[1] and the American State Reserve[2], as a result of the continuous increase in inflation, predict an increase in loan rates up to 5% at the end of 2022, which means that the possibility of securing loans with the rate proposed by ERO for the third period regulatory is not applicable, therefore we request that the analysis include the expected impacts from the monetary policies of the World Central Banks.

Taking into consideration the abovementioned, we deem reasonable our cost of debt range from 7.4%, as we account for corporate credit spread in its calculation, which represents a comparable basis for DSO in terms of credit risk, loan amount and maturity.

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[1] European Central Bank 2022, Monetary policy Decisions" https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220908~c1b6839378.en.html#:~:text=Key%20ECB%20interest%20rates,The%20Governing%20Council&text=Accordingly%2C%20the%20interest%20rate%20on,effect%20from%2014%20September%202022. (Last visited 28.09.2022)

[2] CNBC 2022, "The Fed just made a 'jumbo' interest rate hike of 75 basis points" https://www.cnbc.com/2022/09/21/fed-raises-interest-rates-what-will-be-more-expensive.html (Last visited 28.09.2022)

4. Cost of Equity

4.1. Risk- Free Rate

ERO in the consulting report has proposed a RFR at 3.65%, considering the average rate Kosova Government securities with a maturity of 7 and 10 years during 2017-2022.

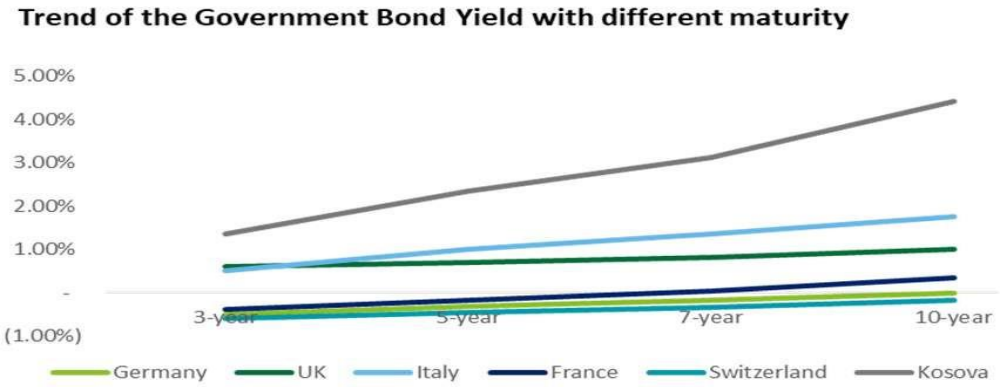
As indicated by ERO Consultation Report, also referring to the National Bank of Kosova publications, Kosova Government has issued only 16 securities with maturity of 7-years and 10-years during 2017-2022, which displays a low emission frequency. Moreover, considering the energy sector specifics, the capital expenditure applied in the energy industry requires a minimum time horizon of around 20 years.

Therefore, a risk-free rate of 7-years or 10-years maturity is deemed as non representative for the sector, as the selected risk- free rate should match the duration of the economic life of underlying investments.

Kosova Government has not issued any security with longer maturity than 10 years until now. Therefore, to account for the time horizon required in the sector and to be consistent with ERO Methodology as well, we have performed a detailed analysis to estimate the Implied 20-year Kosova Government Bonds Yield, by taking as a starting point the 10-year Government Bonds Yield.

Below is presented the detailed analysis step-by-step.

1. Firstly, we extracted from Capital IQ Platform the Bond Yields of the European countries for each bond type by maturity. To remain consistent with ERO methodology, we have considered the average yield from 2017 to 2022 for each European country and compared it with Kosova for each bond type. As presented in the graph, the Government Bond Yield displays an increasing trend as the bond maturity expands from 3 years to 5 years, 7 years and 10 years, which reflects the positive correlation that exists between maturity risk and return. Kosova Government Bond shows a sharper growth compared to other countries due to its economic conditions and lower financial stability.



Source: Capital IQ, Deloitte Analysis

2. To identify the additional increase in bond risk rate due to maturity incremental, we have identified the compound growth in bond yield (on annual basis) for each additional year in increase in the maturity (3-year to 5-year, 5-year to 7-year and 7-year to 10-year) for the European countries and Kosova (presented in the table below). As can be seen in the analysis presented above, the average

compound growth of the European countries tends to stabilize with the increase in the maturity periods, reflecting a higher rate during the first periods (3-year to 5-year), and gradually decreasing afterwards. Furthermore, the resulting average compound growth of the European countries is compared to Kosova annual compound growth to observe the trend when the bond maturity increases. The obtained results display divergences between Kosova and European countries compound growth, where Kosova claims a higher compound growth for each maturity period. This is attributed to Kosova's higher investing risk compared to the selected European developed countries.

Yearly Compound Growth Rate

	5-year	7-year	10-year
Germany	16.7%	9.2%	6.4%
UK	8.1 %	6.7%	7.4%
Italy	39.7%	16.5%	9.2%
France	15.4%	12.4%	9.0%
Switzerland	15.9%	10.8%	8.3%
Avg. compound growth rate	**19.2%**	**11.1%**	**8.0%**
Compound growth rate for Kosova	30.8%	15.3%	12.3%
% change of Kosova compared to European Countries	61.0%	37.6%	52.8%

Source: Capital IQ, Deloitte Analysis

3. As indicated above, in the absence of long-term Government Bonds for Kosova, our analysis was based on the last 5 years average yields of Germany, United Kingdom, Italy, France, Switzerland (hereafter "the European countries") which emit longer maturity bonds (15-year, 20-year and 30-year), by also displaying a large volume of bonds traded. After calculating the Compound Growth of the long-term (10-year to 15-year, 10-year to 20-year and 10-year to 30-year) maturity bonds yield of the European countries, we concluded in an average compound rate ranging from 4.5% to 2.2%, for the 15-year to 30-year maturity, respectively, decreasing as the maturity expands. To estimate the additional risk incremental associated with the increase in the maturity period of Kosova compared to other European countries (as explained in point 2), we performed an exponential regression considering the Compound Growth trend of Kosova compared to European countries, observed in bond yields with up to 10-year maturity, by concluding in an adjustment factor (Kosova growth compared to European countries) to account for the additional risk associated with Kosova economy and investment risk, compared to the selected developed European countries. After applying the resulted adjustment to the average Compound Growth of other European countries, it is concluded in a Compound Growth in Kosova ranging from 6.4% to 2.9%, for 15-year to 30-year maturity, respectively, (averaging at 4.6%), decreasing as the maturity increases as explained in point 2.

Yearly Compound Growth Rate

	15-vjet	20-vjet	30-vjet
Germany	4.2%	3.0%	2.2%
UK	5.1 %	3.5%	1.9%
Italy	4.0%		2.6%
France	4.4%		2.4%
Switzerland	4.8%		1.7%
Avg. compound growth rate	**4.5%**	**3.3%**	**2.2%**
Implied adj. factor to convert European Countries compound growth to Kosova	42.6%	40.3%	37.2%
Implied compound growth for Kosova	**6.4%**	**4.6%**	**2.9%**

Source: Capital IQ, Deloitte Analysis

4. The Implied 20-year Kosova Government Bonds Yield is calculated by applying the concluded Compound Growth (which converted in a 10-year growth equalizes 57.4%) to the average Yield of 10-year maturity Kosova Government Bond during 2017-2022. It results in 7.0%.

Implied 20 year Kosova Government Bond Yield

10-year Kosova Government Bond Yield	4.4%
Yearly Compound Growth	4.6%
Acc. 10-year Growth increase in maturity	57.4%
20-Year Kosova Government Bond	7.0%

Source: Deloitte Analysis

5. The implied 20-year Kosova Risk Free Rate calculated above is in the Bond Market basis. Equity markets are riskier than the Bond markets. In order to convert the risk-free rate (expressed as the yield of 20-year government bond) in an Equity Market Risk-Free Rate, we adjusted it for default spread and Volatility Factor as per Damodaran, 2022. The Volatility Factor is a coefficient higher than 1, reflecting the higher volatility that equity market has in comparison to the bond market. It is regularly calculated by Damodaran and referred to by most of valuation practitioners globally. Due to the absence of Kosova credit rating, the average Rating-based default spread of Albania, Bosnia & Herzegovina, North Macedonia, Montenegro, and Serbia was considered assuming that Kosova has similar political, economic and financial issues compared to these countries. The Kosova RiskFree Rate after the adjustment ranges between 7.9% to 8.0%, which falls within our previous range estimated by applying the 20-year German Bond Yield.

Kosova implied Risk-Free Rate

	Rajoni*	B1-B3**
20-year Kosova Gov. Bond	7.0%	7.0%
Default Spread	5.3%	6.2%
20-year Kosova Gov. Bond net of CDS	**1.7%**	**0.8%**
Volatility Factor	1.17	1.17
Adj. Default Spread	6.2%	7.3%
Kosova RFR	**7.9%**	**8.0%**

*Note: *Region include Albania, B&H, North Macedonia, Montenegro & Serbia, while ** B1-B3 includes B&H, North Macedonia and Montenegro*
Source: Damodaran, Deloitte Analysis

Therefore, we consider the norm of 8.5% in WACC calculation for the third regulatory period 2023-2027

4.2. Equity Risk Premium

Regarding ERP, ERO based its proposed ERP in the report of CEER considering the average of a list of countries (Albania, North Macedonia, Montenegro, Greece, Georgia, Latvia, Czech Republic, Slovakia). To conclude in a range, ERO removes Georgia ERP due to its outlier WACC, and results in a minimum of 5.04%, while accounts for all the comparable countries to result in a maximum of 5.18%.

Based on DSO analysis, several inconsistencies have been identified as elaborated below.

- After conducting a detailed market research, it is identified that the methodology of calculating the ERP used by Regulatory agencies of each country differs, as some of them include the Country Risk Premium in the calculation, which should be excluded.
- Moreover, ambiguities arise when it comes to the approval year (period) of ERP for each country. CEER Report 2021 represents the applicable ERP during 2021, however the regulatory period differs from one country to another. Therefore, we deem the ERP based on CEER Report non-representative as it does not reflect the actual economic conditions (inflation, war impact, etc).
- It should be noted that North Macedonia calculates its ERP by subtracting Risk-Free Rate from Debt Premium (resulting in a significant lower ERP of 3.8%), which appears to be inconsistent compared to the other countries and not applicable as per valuation perspective. Therefore, we consider the North Macedonia ERP an outlier to be excluded from the calculation.

Furthermore, we have considered also other reliable and recent sources, such as Damodaran, which has estimated an Equity Risk Premium of 6.01% as of 1st July 2022. Therefore, we conclude the estimation of ERP from DSO is correct.

4.3. Equity Beta

ERO in the consultation report is based on the Council of European Energy Regulators ("CEER") report to determine the applicable equity beta. Moreover, the average equity beta of the same countries as in the ERP evaluation, which are deemed as comparable with Kosova, is considered. The resulting beta (0.46) has been unlevered to remove the effect of debt and taxes, and is relevered using Kosova parameters, to conclude in an equity beta of 0.88.

As per valuation perspective, the industry comparable companies' beta is deemed as more representative as it accounts specifically for energy distribution peers on the market.

Moreover, taking into account the recent turbulence in the capital markets and the unstable performance of the resulting prices and indices, it is estimated that it is more appropriate to use long-term average coefficients instead of actual betas to combat the irregularities that have appeared recently and to enable the evaluation of the sustainable future. As a conclusion, the beta used for the purpose of calculating the WACC should be 1.

4.4. Size Risk

Based on ERO, the proposal for DSO's cost of equity includes a small company premium, which represents a proposed addition to the CAPM, included with little explanation as to why it represents systemic risk that cannot be diversified away. The premiums of small companies are included in cases where only the interest rates of loans of non-comparable companies are taken as a reference in determining the cost of debt, which based on ERO is not relevant for DSO.

However, based on the best practice and methodology, it is commonly accepted that small companies tend to have higher return compared to large companies, and it is not related to the Cost of Debt, as stated in ERO Consultation Report.

In selecting the size risk premium, we have considered a conservative approach, since if we had considered the market capitalization criteria, the applied rate for DSO would result around 6.25%.

Given the importance of the company in the context of Kosova market (KEDS is the only licensed Energy Distribution company), DSO should be classified as micro-company with low-capital, by applying a size risk ranging from 3.25%.

5. DSO Proposal WACC

Based on the data presented above, we reiterate that our WACC estimate for the third regulatory period 2023-2027 is reasonable.

Definition	Value
Risk – free rate	8.45%
Gearing	36.62%
Premium of small company	3.25%
Cost of debt	7.40%
Premium risk	6.25%
Beta	1
Cost of equity (post –tax)	17.95%
Corporate tax rate	10.00%
Cost of equity (pre-tax)	19.94%
WACC real (Pre-tax)	**15.35%**

DSO proposal for WACC

It is a well-known fact that the economic crisis, price increases and inflation, are expected to have a negative impact in the coming years and to ensure financial stability and stability, as well as efficient operation, DSO requires from ERO to set WACC at the level of 15.35%. Failure to properly assess and define regulatory parameters will create a vicious circle and inappropriate consequences for the entire electricity sector.