The significance of imputed return on equity for German electricity and gas network operators - a survey

12 June 2020

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Management Summary

The German Federal Network Agency [*Bundesnetzagentur, BNetzA*] is expected to set the imputed return on equity ("EK I" rate, hereinafter simply "RoE") for the German gas and electricity networks in 2021, in order to determine the limits for regulated returns in the upcoming 4th regulatory period (RegP). Due to the continued drop of the risk-free return on German government bonds since the last time the RoE was set, there are concerns that the return on equity could be set considerably below the rate for the current regulatory period of 6.91% before and 5.64% after corporate taxes for new investments (from 1 January 2006 onwards), in case the BNetzA leaves the calculation methodology, in particular the combination of the current base rate and historical market risk premiums, unchanged.

In order to learn about investors' assessment of the risks and the return requirements in network operations and of possible reactions to a continued reduction of the RoE, the German Association of Energy and Water Industries (BDEW) commissioned Prof. Dr. Bernhard Schwetzler, Chair of Financial Management at the HHL Leipzig Graduate School of Management, to conduct a survey among existing and potential investors.[1] The survey was carried out by way of an online questionnaire from 18 November 2019 to 31 January 2020.

204 existing and potential investors in gas and electricity operators took part in this study. The following key findings were generated:

- The survey, among existing and potential investors in the German energy networks, shows that a majority views the current RoE as already insufficient and that on average, across all respondents, a future RoE must not be significantly below 7% before or 6% after corporate taxes. The survey revealed only minor differences between the types of investor - municipalities, industrial owners and financial investors. Only eight out of 204 respondents (3.9%) gave return requirements of below 5% before or 4% after corporate taxes.
- The vast majority of respondents expects increasing investment in the networks due to the *Energiewende* [German energy transition] (>90%), but also increasing risks for investors (87%). In addition to the operative commercial risks and political risks resulting from the *Energiewende*, regulatory risks were also frequently mentioned. The significance of these regulatory risks can be observed from the numerous court actions brought by the network operators against the BNetzA's setting of the RoE and productivity factors for the third regulatory period. In addition, changes to the regulatory frameworks through repeated legislative amendments with considerable impact on the return on network investments are raised as a concern in the respondents' answers.
- A further reduction in the RoE by the BNetzA will, in the opinion of the overwhelming majority of respondents, have a negative (>90%)[2] or even very negative (52%) impact. The most important consequence and reaction to a further reduction in RoE mentioned by the participants was a reduction in future investment. Due to the fact that the network operators have an obligation to prioritise their supply mandate, a slowdown and reduction in investment would, according to respondents, heavily affect the expansion of the networks. This could yield as a consequence that the network expansion, considered as a necessity for the *Energiewende* might fall significantly behind. A further possible consequence mentioned by respondents was

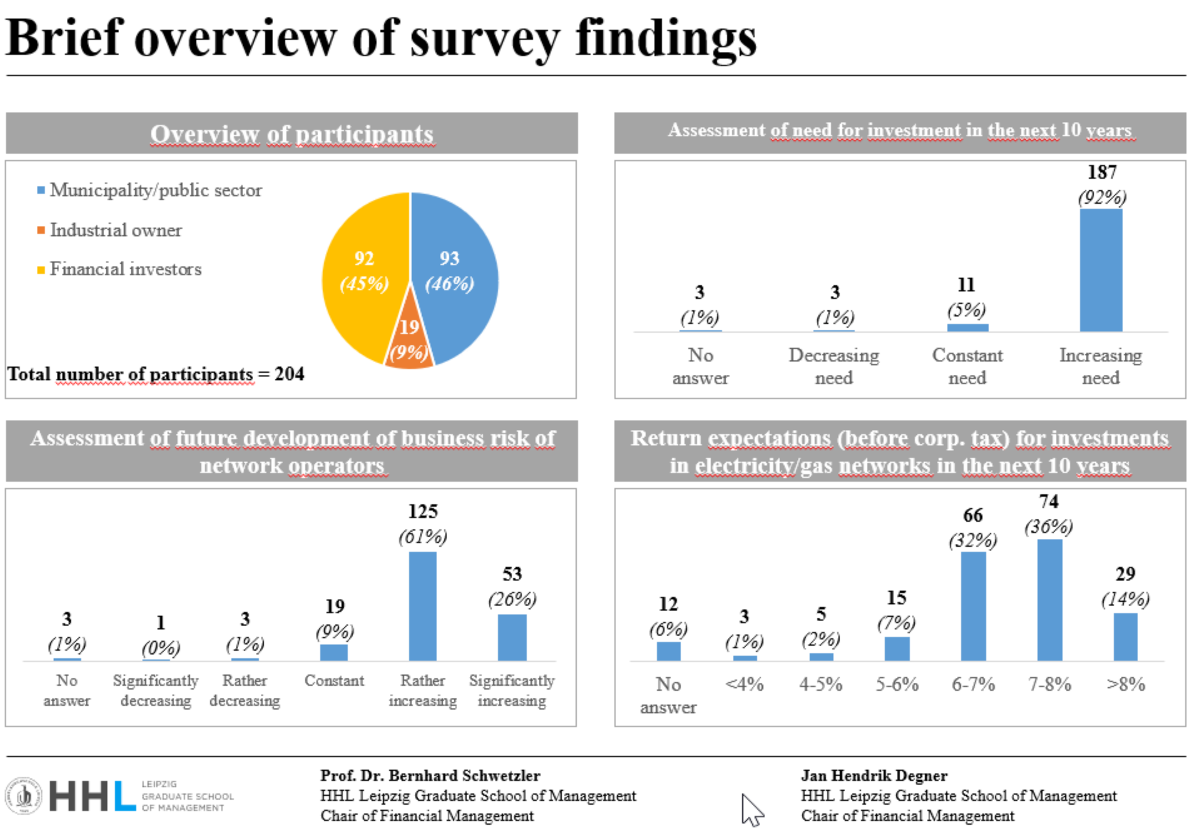
1 Regulators in other countries also rely on, among other things, the findings of surveys when setting imputed cost of capital. In Sweden, for example, the market risk premium used was determined via surveys among investors. See Energimarknadsinspektionen (2019): Kalkylränta för elnätsföretag för tillsynsperioden 2020-2023 – Bilaga 7.

2 As a sum of the two responses "rather negative impact" and "very negative impact".

the need for a higher debt financing of investments, associated with worsened ratings, higher borrowing costs and increased risk of default.

- To validate the survey results, the answers of 15 investors who had not yet made an investment were analysed separately. Since those respondents did not yet have any interests associated with existing network investments, it was unlikely that their answers to the questions would be affected by any conflict of interest. These respondents' answers showed a similar picture to those of the other participants. The majority judged a further reduction in the RoE to be negative; the most likely reaction to such a reduction given was again a reduction in investment. Among those respondents, the stated RoE required to cover the risks was, at an average of 6.6% before and 5.4% after corporate taxes, only slightly lower than that of investors who already had made an investment. Only one respondent stated a required return of below 5% before and 4% after corporate taxes.

The following graphic representation provides an overview of the composition of the sample and the survey's most important findings:



The following conclusions can be drawn from the survey's findings:

1. **According to the vastly predominant opinion of the respondents the risks for the network operators and therefore also for their owners and investors will significantly increase in the coming years.**

2. **The BNetzA should reflect this assessment by investors and take it into account when setting the RoE. That is particularly true with regard to the application of updated estimates for the market risk premium in the RoE equation reflecting its recent increase.**
3. **If the risks are not taken into account adequately, there is a danger that the financial attractiveness of network investments is significantly reduced by the RoE being set too low. In light of the increasing investment needs in the future this would be clearly counterproductive.**