NERA

Impact of GDNs' Reduced Debt Tenor on Additional Cost of Borrowing at RIIO-3

4 March 2024

© NERA

Summary (1): In a report for all energy networks[1], we estimated an additional cost of borrowing of 57 bps p.a. over RIIO-3. In this report for GDNs, we estimate a higher cost of 67 bps p.a., assuming GDNs issue debt with tenor of around 10-years as per current market evidence.[2] This is driven by investors' preference for shorter tenor debt given increasing risks around future role of gas networks

Units: bps p.a.	Ofgem RIIO -2	NERA (Feb 2024, all networks)	NERA (Feb 2024, GDNs/ reduced tenor of 10 years)	Comment on GDN specific cost relative to NERA industry-wide estimate
Transaction Costs	6	6	8.5	• Analysis of GDN data shows reduced tenor increases costs from 6 to 8.5 bps, given amortisation of up-front fees over shorter life
Liquidity/RCF Costs	4	13	13	• No change to industry wide estimate
Cost of Carry	10	12	12-27 (19)	• Cost-of-carry increases as pre-financing costs amortised over shorter bond tenor
CPIH Premium	5	18-23 (21)	18-23 (21)	• No change to industry wide-estimate
New Issue Premium (NIP)	0	5	5*	• Not addressed as part of this report, although we would expect concerns around future use of gas networks to impact NIP
Additional Cost of Borrowing	25	54-59 (57)	57-77* (67)	• Excludes any increase in NIP to reflect heightened risk from decarbonisation of heat
Small Company/Infrequent Issuer Premia	6	10-18 (14)	10-18 (14)	• Assuming tenor of 10 years, Scotland, NGN, WWU, and three Cadent networks (London, North West, West Midlands) qualify, whereas Southern and Cadent East do not
Total	31	64-77 (71)	67-95 (81)	

Note 1: NERA (22 Feb 2024), Additional Cost of Borrowing for the RIIO-3 Price Control.

Note 2: Our assumption of GDNs' debt tenor at issuance of around 10 years reflects current market data and investors' preference for short tenor debt. Investors' preference may continue to change in light of further Ofgem policy decisions and changing market conditions, e.g. investors may prefer even shorter tenor debt for GDNs.

Note 3: This report estimates the additional cost of borrowing common to the GDNs. It does not incorporate company-specific costs, and therefore should be viewed as a minimum allowance

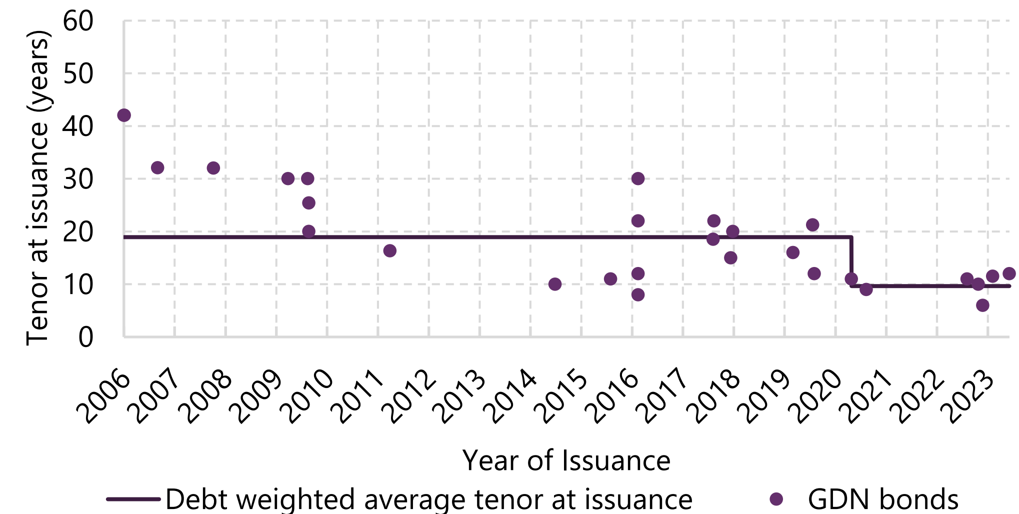
Summary (2): In our report for all energy networks[1], our estimate of the additional cost of borrowing reflected the average tenor at issuance for the wider sector of 15-20 years. In this report, we set out the cost if GDNs were to issue shorter tenor debt over RIIO-3 in response to increasing risks around future role of gas networks

- In our industry-wide report for the ENA dated 22 February 2024, we estimated additional cost of borrowing of 57bps p.a. for RIIO-3, and an infrequent issuer premia of 14 bps p.a. We explained that:
  - the estimate would need to be revisited, e.g. in light of Ofgem's decisions on financial resilience measures and notional assumptions, updated for changes to financial market conditions
  - the estimate excluded sector or company specific factors
- GDNs face higher risks over RIIO-3 than historically, given concerns about future role of gas networks from decarbonisation of heat
  - In response to an increasingly uncertain future, we expect debt investors to prefer shorter tenor debt relative to historical issues. Indeed, recent evidence shows GDNs' debt tenor at issuance has shortened to around 10 years, and shorter than the debt tenor assumption underpinning our industry wide additional cost of borrowing of approximately 15-20 years
- The implication of shorter tenor debt is that GDN's RIIO-3 transaction cost and cost-of-carry will increase, as the costs will need to be recovered over a shorter period.
  - Overall, we estimate an additional cost of borrowing of **67 bps** p.a. for GDNs relative to our industry wide estimate of **57 bps** p.a. (see previous slide)
- By contrast, a shorter tenor implies more frequent and larger nominal debt issuance and more networks will achieve minimum scale of £250m. Our analysis shows Scotland, NGN, WWU, and three Cadent networks (London, North West, West Midlands) qualify for infrequent issuer premium, whereas Southern and Cadent East would not. In our earlier ENA study, all GDNs qualify bar Southern
- This report does not address potential higher New Issue Premium (NIP) for GDNs over RIIO-3, although we would expect the same concerns around future role of gas to impact NIP

In response to an increasingly uncertain future, we would expect debt investors to prefer short tenor debt relative to historical issues. Indeed, recent GDN debt tenors around 10 years are shorter than historical average tenor of 15-20 years

- GDNs face greater risk at RIIO-3 relative to previous controls given increasing concerns about future role of gas networks from decarbonisation of heat as well as smaller investor pool because of ESG constraints
- In response to an increasing uncertain future, we would expect debt investors to prefer shorter tenor debt
  - Recent GDN bond issuances after 2020 have tenors of around 10 years, lower than the average tenor at issuance for GDNs for before the end of 2020 (See Figure)
- Also, academic studies show firms with higher ESG risk face shorter debt maturity (See Newton et al, 2022; Chava, 2014; Hauptmann, 2017)[1]
- The implication is that the allowed cost of borrowing for GDNs at RIIO-3 should be based on a shorter tenor (of say 10 years) rather than the industry wide historical tenor at issuance of around 15-20 years, as per our industry-wide study

Average tenor at issuance of GDNs' bonds has reduced to around 10 years after 2020



Note: Analysis based on all fixed-rate outstanding public bonds including nominal and ILD identified from public sources. Cut-off date is 28 Feb 2024.

Footnote 1: Newton, David, et al. "Firm ESG Reputation Risk and Debt Choice." Swiss Finance Institute Research Paper 22-22 (2022). Chava, Sudheer. "Environmental externalities and cost of capital." Management science 60.9 (2014): 2223-2247. Hauptmann, Clarissa. "Corporate sustainability performance and bank loan pricing: It pays to be good, but only when banks are too." Saïd Business School WP 20 (2017).

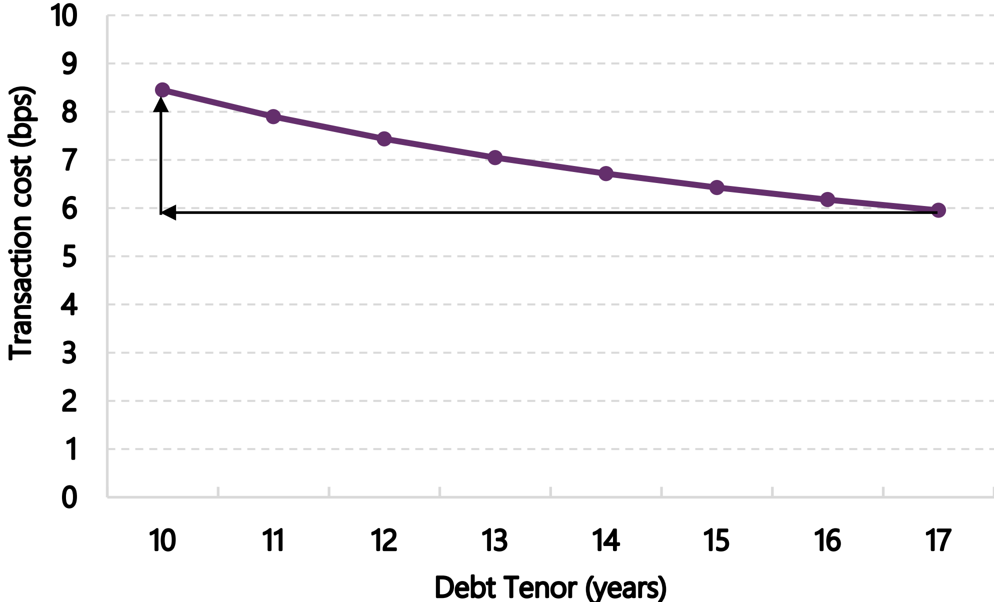
For transaction costs, assuming a shorter tenor of 10yrs instead of ca 17yrs based on historical transaction cost data would increase the transaction cost for GDNs from **6bps** to **8.5bps** p.a.

- In our industry-wide ENA study, we estimated a transaction cost of 6 bps p.a. based on companies' historical transaction cost data, which reflected an average tenor of around 17 years for the sample of bond instruments provided by companies[1]
- As the tenor of bond decreases, the annuitised upfront fee increases, as follows:

$$\text{Transaction cost (per annum)} = \frac{\text{Upfront fees}}{\textbf{Tenor of the debt instrument}} + \text{Per annum/ on-going cost}$$

- As shown in Figure below, transaction costs of 6 bps p.a. based on industry-wide historical transaction cost data increases to 8.5bps p.a., assuming a shorter debt tenor of 10 years

Transaction costs increase from ca 6bps to 8.5bps p.a. for shorter tenor of 10 years

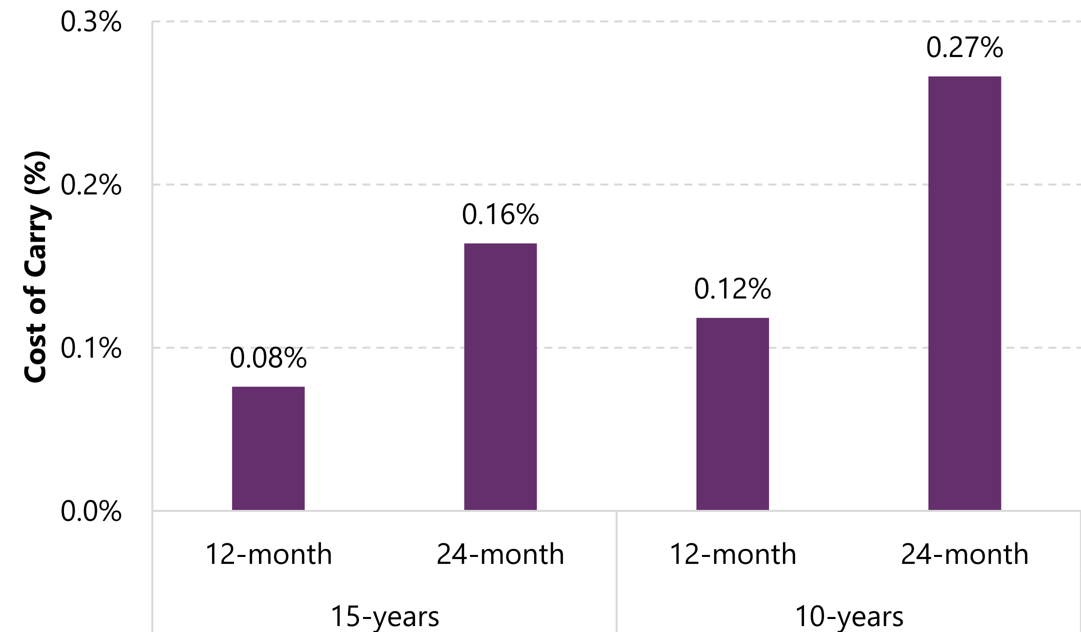


Footnote 1: NERA (22 Feb 2024), Additional Cost of Borrowing for the RIIO-3 Price Control, p.6.

Source: We model the relationship between tenor and transaction cost drawing on GDN data

For cost of carry, assuming a shorter tenor of 10 years instead of 15 years increases costs from **12bps** to **19bps** p.a.

- Cost of carry is defined as the requirement to issue debt ahead of maturing debt to meet sufficiency of resources requirement, rating agency and debt covenant requirements etc.
- In our industry-wide ENA study, we calculated the notional cost-of-carry of 8-16bps p.a. assuming[1]:
  - Pre-financing needs half met by issuing debt ahead of maturity, and half by RCF
  - Pre-financing period of 12-24 months as required by licence condition/rating criteria, and debt tenor of 15 years (refinancing 1/15 of debt each year)
  - Net carry cost equals the five-year average iBoxx Utilities index less SONIA on cash-deposits
- Our mid-point estimate of 12 bps was corroborated by our analysis of cash held by companies
- For GDNs at RIIO-3, assuming carry costs are amortised over a 10-year instead of a 15-year bond tenor, the cost of carry increases from 8-16 bps p.a. (mid point 12bps) to 12-27bps p.a. (mid point 19 bps), as shown in Figure
  - 12-27bps p.a. cost of carry estimate is based on existing licence requirements, and may still understate GDNs' cost of carry at RIIO-3, if Ofgem implements proposed financial resilience measures



Source: NERA analysis

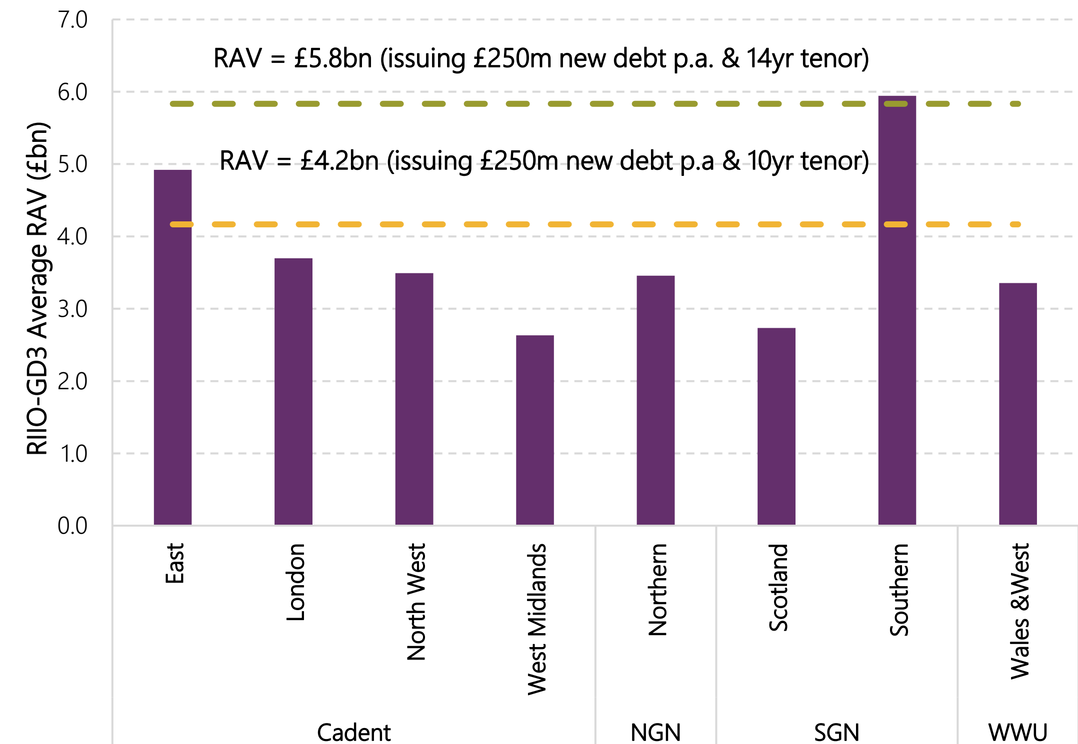
Footnote 1: NERA (22 Feb 2024), Additional Cost of Borrowing for the RIIO-3 Price Control, p.8.

For infrequent issuer premium, assuming a shorter tenor of 10yrs, Scotland, NGN, WWU, and three Cadent networks (London, North West, West Midlands) qualify, whereas Southern and Cadent East would not

- At RIIO-2, Ofgem allowed 6 bps p.a. for notional licensees expected to issue smaller size or less frequently than other networks due to their lower RAV size, assuming minimum efficient size of £250 million
- In our industry-wide ENA report, we identified networks[1,2] that qualify for the infrequent or small issuer premium by comparing:
  - i) RAV implied by the minimum new debt issuance, e.g. for GDNs calculated as £250m*debt tenor of 14 years/60% or £5.8bn, i.e. assuming that 1/14th of debt RAV is refinanced each year, and that annual RAV growth is funded 60% by debt
  - ii) company's expected RAV in RIIO-3, based on RIIO-2 RAV and 5% annual nominal growth
    - As set out in Figure, all GDNs qualified bar Southern, if assuming a debt tenor of 14 years (see green dashed line)
- If we assume a shorter tenor of 10 years, the frequency and nominal value of debt increases and potentially fewer GDNs qualify for the premium
- The RAV-implied by the minimum new debt issuance would be £250m*10/60% or £4.2bn, i.e. assuming that 1/10th notional debt is refinanced each year
  - As set out in Figure, Scotland, NGN, WWU, and three Cadent networks (London, North West, West Midlands) continue to qualify, whereas Southern and Cadent East would not (see orange dashed line)

Note 1: NERA (22 Feb 2024), Additional Cost of Borrowing for the RIIO-3 Price Control, p.22.
Note 2: At RIIO-2, Ofgem assessed infrequent issuer premium at the licensee level rather than at the individual network level. For consistency across ownership groups, we undertake our analysis at the network level, as opposed to the licensee level.
Note 3: The assessment of which networks qualify for the infrequent issuer premium will need to be updated during the RIIO-3 process, in line with updates to the forecast RAV.

Impact of shorter tenor for infrequent issuer premium



Source: NERA analysis

CONFIDENTIALITY

Our clients' industries are extremely competitive, and the maintenance of confidentiality with respect to our clients' plans and data is critical. NERA rigorously applies internal confidentiality practices to protect the confidentiality of all client information.

Similarly, our industry is very competitive. We view our approaches and insights as proprietary and therefore look to our clients to protect our interests in our proposals, presentations, methodologies, and analytical techniques. Under no circumstances should this material be shared with any third party without the prior written consent of NERA.

© NERA

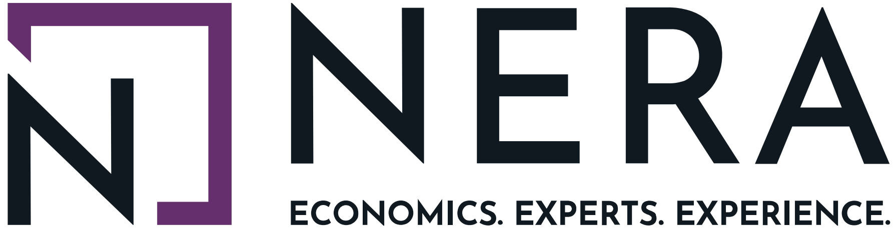
QUALIFICATIONS, ASSUMPTIONS, AND LIMITING CONDITIONS

This report is for the exclusive use of the NERA client named herein. This report is not intended for general circulation or publication, nor is it to be reproduced, quoted, or distributed for any purpose without the prior written permission of NERA. There are no third-party beneficiaries with respect to this report, and NERA does not accept any liability to any third party.

Information furnished by others, upon which all or portions of this report are based, is believed to be reliable but has not been independently verified, unless otherwise expressly indicated. Public information and industry and statistical data are from sources we deem to be reliable; however, we make no representation as to the accuracy or completeness of such information. The findings contained in this report may contain predictions based on current data and historical trends. Any such predictions are subject to inherent risks and uncertainties. NERA accepts no responsibility for actual results or future events.

The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligation is assumed to revise this report to reflect changes, events, or conditions, which occur subsequent to the date hereof.

All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the client. This report does not represent investment advice nor does it provide an opinion regarding the fairness of any transaction to any and all parties. In addition, this report does not represent legal, medical, accounting, safety, or other specialized advice. For any such advice, NERA recommends seeking and obtaining advice from a qualified professional.


NERA
ECONOMICS. EXPERTS. EXPERIENCE.