

CREDIT OPINION

23 May 2023

Update

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RATINGS

Scotland Gas Networks plc

Domicile	United Kingdom
Long Term Rating	Baa1
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Scotland Gas Networks plc

Regular update to credit analysis

Summary

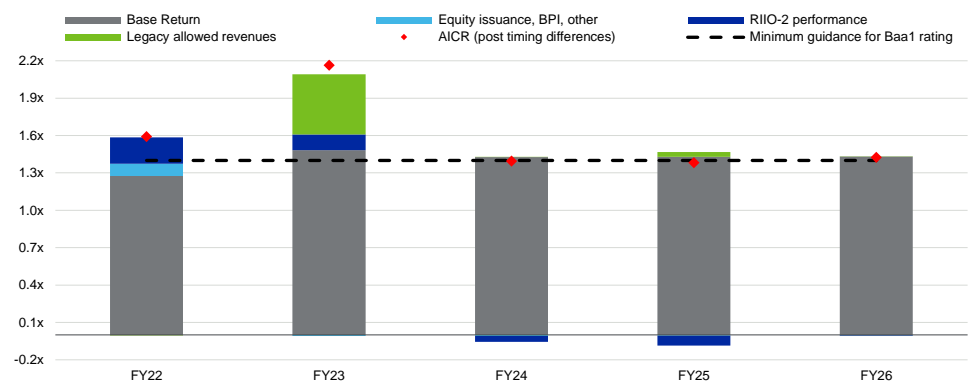
The credit quality of [Scotland Gas Networks plc](#) (Scotland GN, Baa1 stable) benefits from (1) the company's position as monopoly owner and operator of the gas distribution network in Scotland; and (2) the sector's well-established and transparent regulatory regime.

Credit quality is constrained by the company's historically high leverage relative to peers and regulatory assumptions, with net debt to regulatory asset value (RAV) slightly above 70%, although currently in the mid-60s in percentage terms as high inflation has facilitated de-gearing. Credit quality is also constrained by additional debt at the immediate parent company, SGN MidCo Limited (SGN MidCo), leading to consolidated net debt / RAV just over 70% at March 2023. However, the strength of regulatory ring-fencing provisions partially insulates the credit quality of Scotland GN from that of its parent companies.

Exhibit 1

Scotland GN will maintain limited headroom to minimum interest coverage guidance in RIIO-GD2

Breakdown of Moody's projected adjusted interest coverage ratio (AICR) with no meaningful operational outperformance of regulatory settlement



Moody's projections (proj.) are Moody's opinion and do not represent the view of the issuer, reflecting Ofgem's November 2022 PCFM, republished in January 2023. Legacy adjustments in FY 2023 relate to a true up for higher actual transmission exit capacity pass through costs in the last year of RIIO-GD1, which are recoverable with the two-year lag.

Source: Moody's Investors Service

Scotland GN also has a strong track record of operational performance. However, we see limited scope for operational outperformance to support interest cover metrics in the current regulatory period (RIIO-GD2, which began on 1 April 2021) due to regulatory efficiency targets that remain challenging, even after the modest concessions granted by the appeal body in October 2021, and some expenditure back-loading relative to regulatory allowances.

## Credit strengths

- » Well-established and transparent regulatory framework underpins stable and predictable cash flows, with visibility until March 2026
- » High inflation has facilitated de-gearing in RIIO-GD2 to-date, although leverage remains elevated

## Credit challenges

- » Interest coverage metrics are depressed by higher leverage, as measured by net debt to RAV, than other energy networks and regulatory assumptions
- » Additional leverage at Scotland GN's parent company, SGN MidCo, equivalent to around 7% of RAV
- » High environmental risks, although partially mitigated by our expectation of some regulatory support, and the potential for usage of the natural gas network to transport hydrogen, to the extent this becomes significant in the UK

## Rating outlook

The stable outlook reflects our expectation that Scotland GN will maintain financial metrics over the current regulatory period, RIIO-GD2, commensurate with the current Baa1 rating level.

## Factors that could lead to an upgrade

Upward pressure on the ratings is unlikely to arise given our expectation that Scotland GN will use its financial flexibility to increase net debt / RAV over the medium term to around 70%, with consolidated leverage of the SGN MidCo group rising towards the mid- to high-70s in percentage terms by the same measure. However, upward pressure could arise if there was a change in financial policy leading to, at both Scotland GN and SGN MidCo, net debt / RAV not above 68% and an AICR sustainably above 1.6x. Any upward rating pressure would have to be considered in the context of the long-term future of gas networks and potential alternative use options.

## Factors that could lead to a downgrade

The ratings could be downgraded if Scotland GN's net debt to RAV appeared likely to increase above 75% or AICR was expected to fall below 1.4x, on average and excluding timing differences, over RIIO-GD2. Downward rating pressure would also arise if a more aggressive financial policy was pursued at Scotland GN's immediate parent company, SGN MidCo, such that either net debt to RAV rose above 85% or AICR fell below 1.2x. However, we do not anticipate this situation arising.

## Key indicators

Exhibit 2

### Scotland Gas Networks plc

Timing differences affect year-on-year cash flows

	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	2023-proj	2024-proj
Adjusted Interest Coverage Ratio	1.9x	1.6x	1.6x	1.6x	1.7x	1.9x-2.4x	1.3x-1.4x
Net Debt / RAV	72.4%	72.6%	74.2%	73.2%	68.8%	65%-67%	65%-67%
FFO / Net Debt	11.5%	11.6%	11.4%	11.1%	8.9%	10%-12%	8%-10%
RCF / Net Debt	6.0%	9.2%	9.3%	5.6%	5.2%	8%-9%	5%-7%
Net Debt (netting off intercompany receivable) / RAB	72.4%	70.9%	70.8%	70.7%	68.5%	63%-65%	65%-67%

Timing differences (true-ups for pass through costs) significantly boosts FYE March 2023 metrics. Cash balances held by Scotland GN (and other SGN group companies) are pooled at its sister company Southern GN, but Moody's does not consider intercompany receivables within its net debt calculations. All ratios are based on 'Adjusted' financial data and incorporate [Moody's Global Standard Adjustments for Non-Financial Corporations](#). Moody's Projections (proj.) are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™

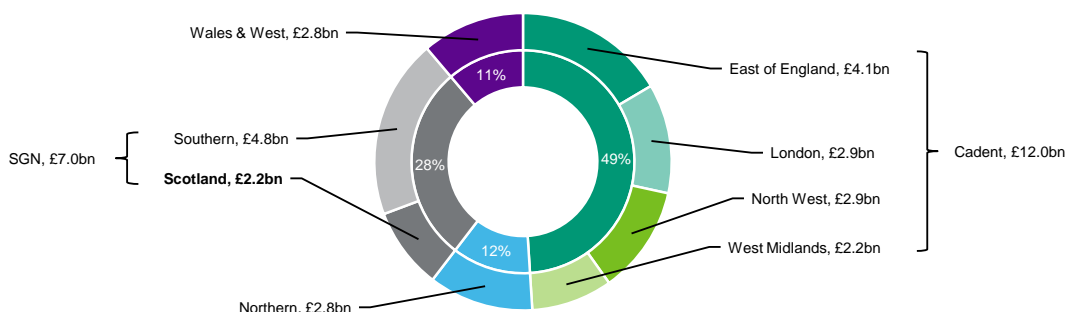
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

### Profile

Scotland GN is the second smallest of the eight gas distribution networks (GDNs) in Great Britain by RAV, £2.2 billion at March 2023. It provides gas distribution services to around 1.8 million customers through around 24,000 kilometres of gas pipelines in Scotland.

Exhibit 3

#### Regulatory Asset Value by gas distribution network operator group RAV at 31 March 2023, nominal

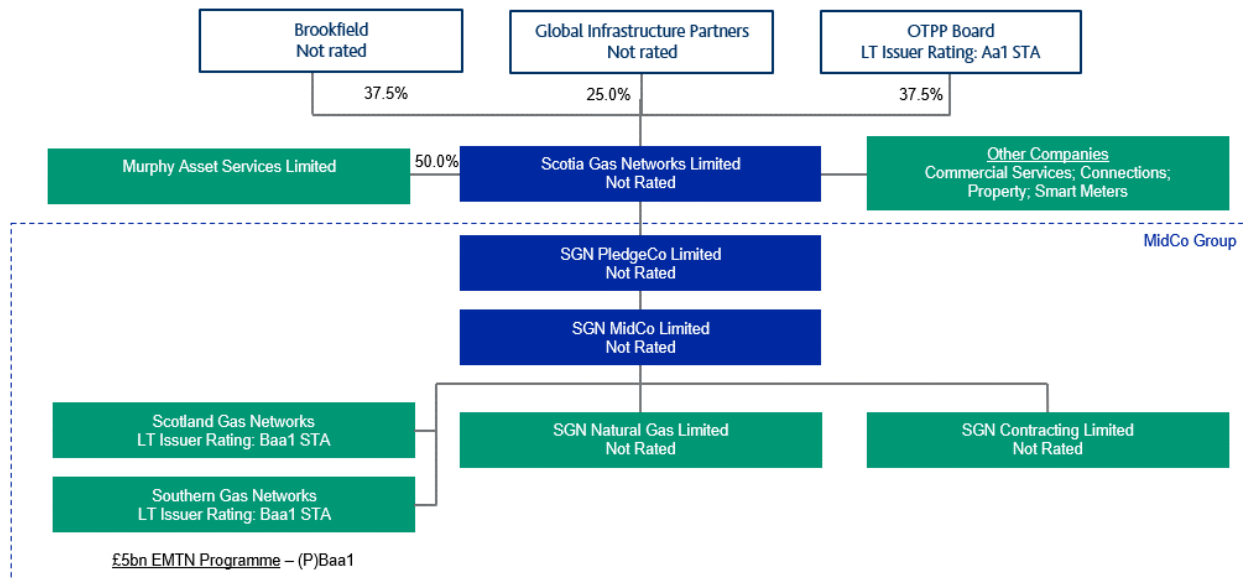


RAV as per Ofgem's republished, in January 2023, RIIO-GD2 Price Control Financial Model November 2022.  
Source: Ofgem, Moody's Investors Service

Scotland GN is a wholly owned subsidiary of Scotia Gas Networks Limited (Scotia Gas Networks) via the intermediate holding companies SGN MidCo Limited (SGN MidCo) and SGN PledgeCo Limited. Scotia Gas Networks is owned by a consortium which, since March 2022, comprises (1) [Ontario Teachers' Pension Plan Board](#) (Aa1 stable), 37.5% stake; (2) Brookfield Super-Core Infrastructure Partners (Brookfield), 37.5%; and (3) Global Infrastructure Partners (GIP), 25%. Scotia Gas Networks owns another gas distribution network in Great Britain, [Southern Gas Networks plc](#) (Southern GN, Baa1 stable) as well as SGN Natural Gas in Northern Ireland. The networks have separate regulatory licences and remain legally separate and independent of each other. Whilst they are operationally managed independently, group functions are run centrally and policies, including treasury, and processes are aligned across entities.

Exhibit 4

#### Simplified organisation structure



Source: Company reports, Moody's Investors Service

## Detailed credit considerations

### Well-established and transparent regulatory framework underpins stable and predictable cash flow; good visibility until March 2026

The GDNs in Great Britain benefit from a very transparent, stable and predictable regulatory regime based on clearly defined risk and reward principles. It is overseen by an experienced regulator, the Office of Gas and Electricity Markets (Ofgem), which has a long track record of consistent decision making. Ofgem has consulted widely with a variety of stakeholders whenever changes to the regulatory framework have been made. Scotland GN has good visibility of revenues and cash flow under the amended (post appeal) regulatory determination for the current price control for gas distribution networks (RIIO-GD2), which began on 1 April 2021 and runs until 31 March 2026.

Exhibit 5

#### Scotland GN service area



Source: Energy Networks Association

We continue to see regulation of the UK energy networks by Ofgem as among the most transparent regimes and on a par with 'best in class' globally. Social risks have, however, become evident, with the regulator seeking to reduce the rewards (and penalties) for outturn operational performance deviating from regulatory assumptions and targets in RIIO-2, which we believe is a reaction to public and political concerns about the cost of energy and profitability of utilities (see [RIIO-2 proposals support sector's business risk profile, but legitimacy in greater focus](#), 3 August 2020 for more details). With gas and electricity bills currently at record levels (£2,500 annually for a typical household until June 2023) and expected to remain elevated, network legitimacy and returns will stay in focus.

### Challenging RIIO-GD2 regulatory determination, despite CMA amendments

Like other GDNs and the onshore transmission networks, Scotland GN's regulatory determination for the current price control (RIIO-GD2) is materially tougher than the regulatory settlement for RIIO-GD1 in all key areas, notwithstanding the concessions granted by the Competition and Markets Authority (CMA) on selected aspects of the appellants' regulatory determination (see "[CMA draft ruling provides only modest concessions to tough RIIO-2 determination for more information](#)", August 2021 for more information).

Scotland GN's allowed equity returns are around a third lower in the current price control period than in RIIO-GD1, on a comparable basis, although the rising interest rate environment will increase the risk-free rate component over time. Each 100 basis point move in real risk-free rates changes allowed equity returns by around 24 basis points and overall allowed returns by around 10 basis points.

Despite the cut, allowed cash returns over the first two years of RIIO-GD2 were largely comparable to the final year of RIIO-GD1. This primarily reflects the move to a structurally lower measure of inflation (the consumer prices index adjusted for housing costs, or CPIH, rather than the retail prices index, or RPI, previously).

Exhibit 6

GB Gas Distribution	
Regulator/ Price Control	Ofgem / RIIO-GD2
Regulated Business	Scotland Gas Networks plc
Term of price control	April 2021 - March 2026
Allowed return on RAV (vanilla real, CPIH stripped)	3.00% (2022-23); 3.30% (2023-24) Forecast average <sup>1</sup> for RIIO-GD2: 3.24%
Return on regulatory equity (Real, CPIH stripped)	4.97% expected average <sup>1</sup> (Ofgem assm) (Company forecast <sup>2</sup> 48bps of operational outperformance)
RAV at March 2023	£2.2 billion

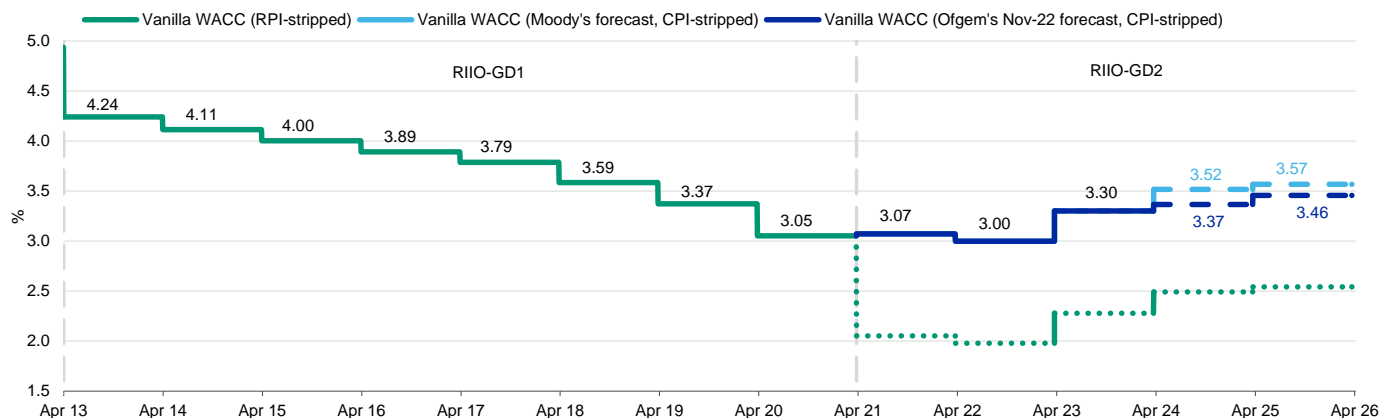
(1) The cost of debt allowance and allowed equity return are updated annually according to predefined methodologies. Forecast estimates as per Ofgem's republished, in January 2023, RIIO-GD2 Price Control Financial Model November 2022. (2) Company estimate of operational outperformance in RIIO-GD2 from Scotland GN's Regulatory Financial Performance Report (RFPR) 2021-22  
Source: Company reports; Ofgem

The sharp rise in bond yields since spring 2022 led to the first year-on-year increase, from April 2023, in the regulatory cost of debt allowance for over a decade and will drive an increase in allowed returns over the second half of RIIO-GD2. We currently expect allowed returns over the final three years of RIIO-GD2 to be in a range of 3.3-3.5% (compared with 3.75% on average over RIIO-GD1, including equity returns above 5% (compared with around 7% on comparable terms in RIIO-GD1)).

Exhibit 7

**Scotland GN's average cash allowed returns in RIIO-GD2 will be slightly above FY2021**

Evolution of allowed returns over RIIO-GD1 and RIIO-GD2



RIIO-GD2 figures reflects the amended Final Determination, i.e. the removal of the outperformance wedge in the allowed equity return which increased overall allowed returns by 10 basis points. Moody's and Ofgem estimates in RIIO-GD2 for regulatory years 2024/25 to 2025/26 inclusive are as of February 2023 and November 2022 respectively. Source: Ofgem; Moody's Investors Service

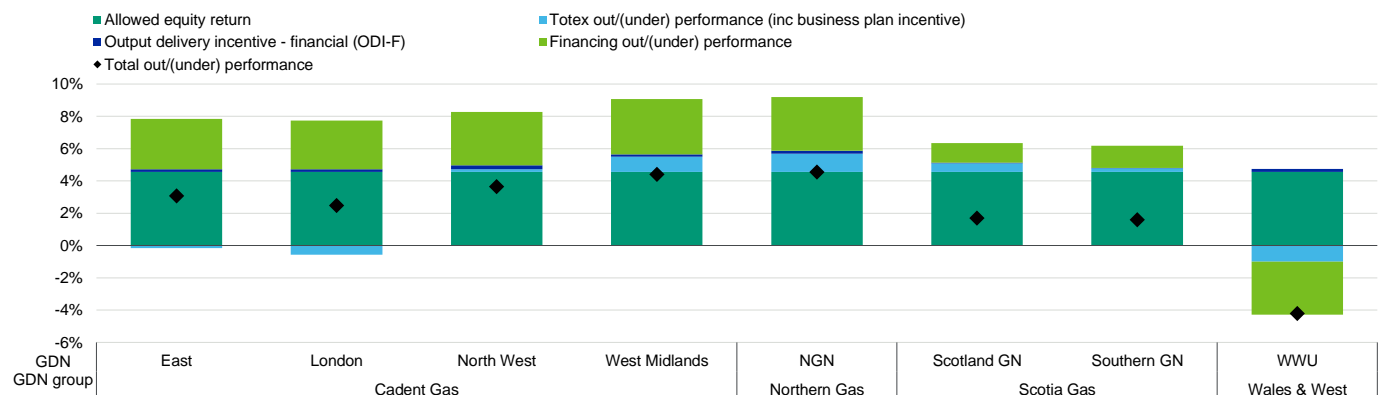
In RIIO-GD2, the scope for operational outperformance is also reduced. Output delivery incentives carrying financial rewards and penalties (ODI-Fs) are relatively modest and targets have been tightened, while totex assumptions became more challenging.<sup>1</sup>

Nevertheless, Scotland GN expected a small level of overall outperformance on the regulatory return on equity (RORE) in its last regulatory performance statement from July 2022. This was largely underpinned by financial outperformance, but did not take into account the further sharp rise in bond yields over the second half of 2022, which materially increased the cost of recent debt issuance.

Exhibit 8

**Scotland GN expects to deliver small RORE outperformance over RIIO-GD2**

Forecast RoRE over RIIO-GD2 by GDN group under regulatory gearing assumptions



The base RORE of 4.55% is the expected value at the time of the regulator's final determination under the CMA amended methodology. Source: Company's regulatory financial performance reporting, July 2022

Scotland GN refinanced the majority of its largest debt instrument, a £278.7 million bond (equivalent to almost 20% of the company's outstanding debt), in October 2022 when rates were close to a peak, at interest rates around 6.2-6.4% p.a. Around half of the

issuance volume was swapped into floating rates and is being re-fixed in three intervals at February, May and August 2023, which may slightly improve interest costs.

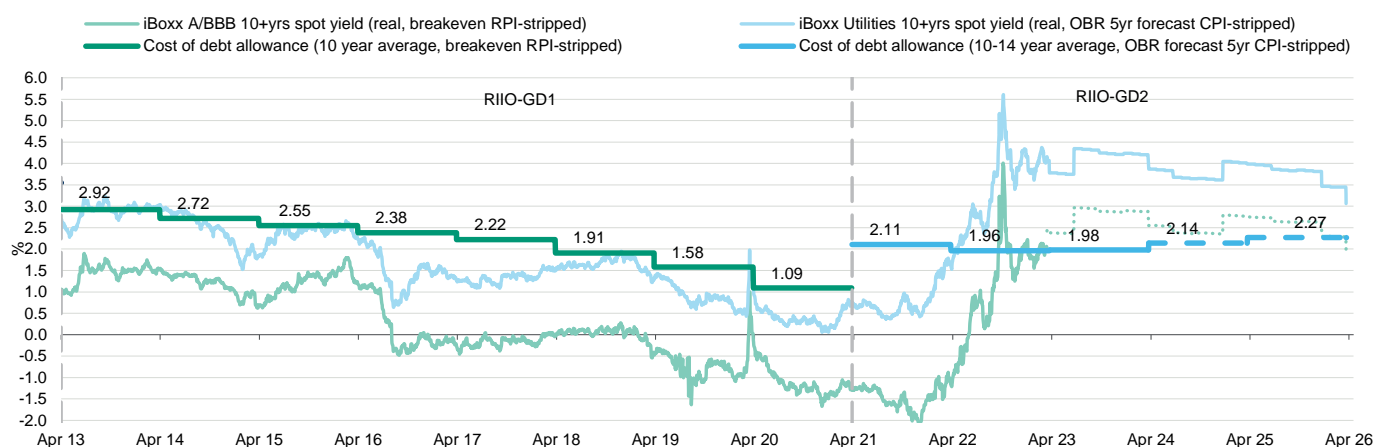
In addition, Scotland GN entered RIIO-GD2 with a higher embedded cost of debt than many of its peers and also carries higher overall leverage. The latter will likely lead to a tax clawback under the regulatory model for gearing above the notional level, which follows a glide path from 65% towards 60% over the five-year period.

However, Scotland GN has only £30 million of debt maturities over the remainder of RIIO-GD2 and limited incremental financing requirements, which reflects the slower RAV growth for gas networks than for electricity networks (Scotland GN's RAV is expected to be flat in real terms over the final three years of RIIO-GD2). The company will therefore benefit from higher rates feeding into higher return allowances over the remainder of RIIO-GD2.<sup>2</sup>

Exhibit 9

### Scotland GN's cost of debt allowance over RIIO-GD2 will remain higher than in FY2021 and rise over the coming years

#### Evolution of Scotland GN's regulatory cost of debt allowance (Moody's projections in RIIO-GD2)



Ofgem used a trailing average of the iBoxx non-financial (average of A and BBB series) and iBoxx utilities series (plus an additional costs of borrowing allowance, 31 bps for Scotland GN) to set the cost of debt allowance in RIIO-1 and RIIO-2 respectively.

Source: Regulatory data; Moody's Investors Service

During 2021, Scotland GN also executed inflation-linked swaps with an original notional of £130 million, all consumer price index (CPI)-linked. Following the swap, around 32% of Scotland GN's debt is inflation-linked, which will help reduce cash interest payments. Overall, we expect Scotland GN's average AICR (before timing differences) to remain between 1.4-1.5x over RIIO-GD2, but at comparably weak levels for the last three years of the period.

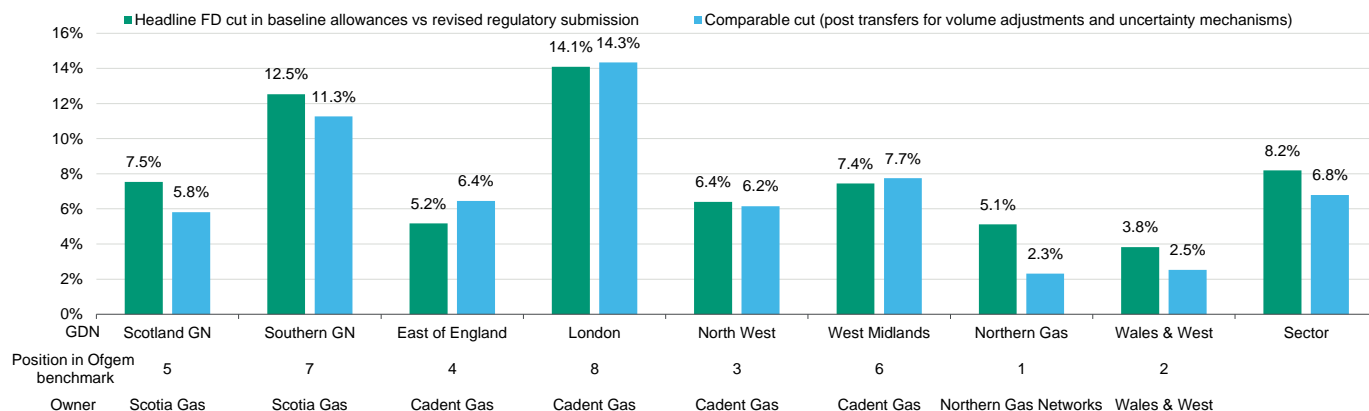
#### Limited scope for cost outperformance due to challenging regulatory efficiency targets

In RIIO-GD1, Scotland GN's return on regulatory equity was boosted by over 500 basis points from operational outperformance with the vast majority of this coming from outperformance of regulatory cost allowances, 18.6% across the four cost categories that make up total expenditure (direct opex, indirect opex, capex and replacement expenditure, repex). However, we expect Scotland GN to perform broadly in line with regulatory cost allowances and targets in RIIO-GD2 as these are materially more challenging in RIIO-GD2, with reduced rewards for outperformance.

Scotland GN's baseline total expenditure (totex) allowances for RIIO-GD2 was set at £907 million (in 2018/19 prices), around 6% below the company's revised regulatory submission, on a comparable basis and after volumes adjustments. The cuts in Scotland GN's allowances reflected a combination of (1) its positioning towards the bottom in regulatory benchmark analysis; (2) Ofgem assuming a higher level of annual productivity gains than both Scotland GN's regulatory submission and the RIIO-GD1 assumption (around 0.85%); and (3) technical adjustments. The CMA slightly moderated the cut on appeal.<sup>3</sup>

Exhibit 10

**Scotland GN had slightly smaller cut in baseline cost allowances than the sector average**



Data from revised final determination of 3 February 2021 and final GDN regulatory submission as of September 2020. The CMA concluded that Cadent's East of England and North West networks should have been ranked second and third respectively on benchmarking efficiency.

Source: Regulatory data and Moody's Investors Service

The company reported around £40 million (in 2018/19 prices) of totex underspend for the first year of RIIO-GD2, which has boosted metrics in that year but was largely related to timing and re-phasing of the investment programme and will reverse over the period. Scotland GN shares 51% of any outperformance (or underperformance) of totex allowances with customers, a higher proportion than in RIIO-GD1 (36.27%), with a two-year lag.

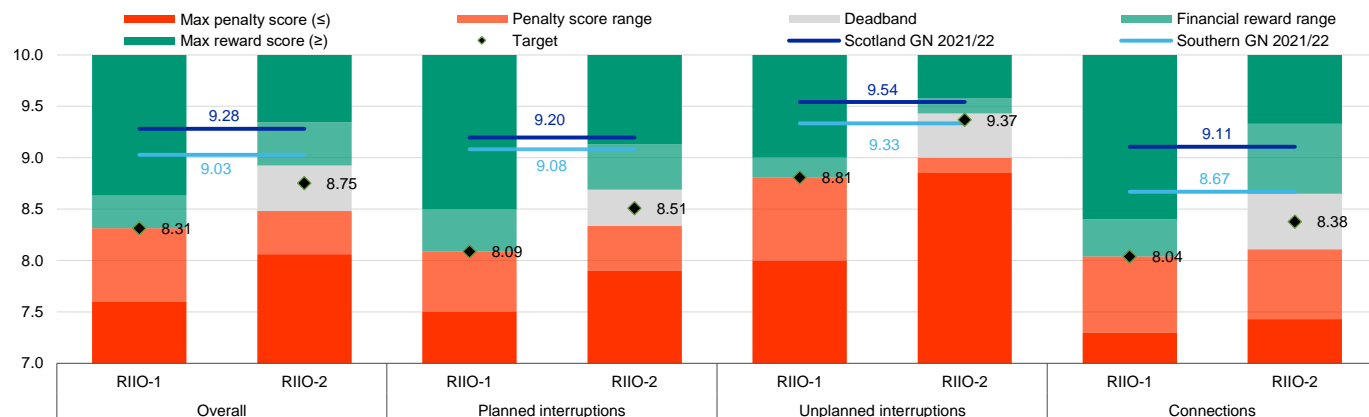
**Reward potential from output delivery incentives is limited in RIIO-GD2**

In RIIO-GD1, Scotland GN earned on average around £3.5 million per annum (in 2020/21 prices) from output delivery incentives carrying financial rewards or penalties (ODI-Fs), primarily on customer satisfaction and shrinkage and environmental emissions. Incentive income was paid with a lag during RIIO-GD1, and Scotland GN continued to benefit from earned ODI-F rewards during the first two years of RIIO-GD2.

Reward potential in RIIO-GD2 will be lower, because regulatory targets have been increased and a deadband introduced. In the first year of RIIO-GD2, the company reported a net reward of £1.3 million (in 2018/19 prices). During RIIO-GD2, companies will be able to incorporate forecast incentive income within their annual charges, so that it is earned when incurred, with a true-up for potentially diverging actual performance two years later.

Exhibit 11

**We expect Scotland GN to earn some ODI-F rewards on customer satisfaction despite the tougher regulatory targets in RIIO-GD2**  
**Comparison of customer satisfaction scores and regulatory targets by survey component**



To earn the maximum reward on the customer satisfaction survey a GDN needs to score (at least) the maximum reward on each component.

Source: Moody's Investors Service on regulatory data

### High inflation has facilitated degearing of Scotland GN and the consolidated SGN MidCo group

In recent months, inflation in the UK has been at or close to 40 year highs (8.9% CPIH and 13.5% RPI over the twelve months to March 2023) and we expect will remain elevated in the short term (see our [Global Macro Outlook 2023-24](#), published in February 2023). A sustained period of higher inflation is generally credit positive for UK regulated networks because their revenue and RAV are adjusted annually by inflation (by CPIH in RIIO-2), whilst the majority of UK energy networks' debt, including Scotland GN's, is nominal rather than inflation-linked debt. This supported degearing, as measured by net debt to RAV, of both Scotland GN and SGN Midco between March 2021 and March 2022 and we expect will lead to further reduction as of March 2023. We estimate that leverage as of March 2023 will be in the mid-60s in percentage terms for Scotland GN, and just over 70% for SGN MidCo.

Subject to inflation normalising in the medium term, we expect a gradual rebalancing of leverage towards the high-60s for the operating company and the mid-70s for the consolidated SGN Midco group (both in percentage terms).

Macroeconomic developments will also lead to some cash flow volatility, particularly in relation to the costs of shrinkage (that is the cost of gas added to the network to replace that notionally used or lost from the network) as well as bad debt. Wholesale gas prices have risen several fold over the last twelve months and, while falling substantially since August 2022, continue to be very volatile. In addition, bad debt levels increased in FY2022 due to the significant number of supplier and shippers that entered administration but any shortfall has been recovered in full in FY2023, i.e. with a one-year lag. Further adjustments may affect FY2024, but to a much lower extent.

### Uncertainty around long-term future of gas networks and potential alternative use options

In recent years, the UK has set increasingly ambitious decarbonisation objectives. In June 2019, [the UK passed legislation](#) committing to net zero greenhouse gas emissions by 2050, and, in April 2021, set in law the Climate Change Committee's recommendation of a 78% emissions reduction (from 1990 levels) by 2035. Meeting these objectives will require a substantial reduction in natural gas consumption or emissions offset through new technologies, including carbon capture and storage.

Gas consumption in Great Britain fell by around 15% between 2010 and 2021 to 782 terawatt hours (TWh) from 916 TWh, mostly driven by falling demand for gas from power generation. However, Scotland GN will need to manage its network to meet expected peak demand and this has remained relatively flat over the corresponding period.

More dramatic change could result from the replacement of gas boilers, which heat 86% of homes in England, by air- and ground-source heat pumps. The [UK government's Heat and Buildings Strategy](#) includes a target to install 600,000 heat pumps annually, and domestic gas demand falls to 200 TWh by 2030 in a scenario consistent with this target. However, it will not be until 2026 that the government will take a policy decision over the future of heat in the UK. How much hydrogen the UK can be expected to produce and the likely size of demand (e.g. its role in meeting the heat requirements of domestic and industrial customers and powering the transport sector) are two key areas of uncertainty. However, [in April 2022](#), the UK government doubled the country's hydrogen production target to up to 10 gigawatts (GW) by 2030, with at least half of this from green hydrogen.

In the short term, Scotland GN has essentially no volume exposure, as any revenue shortfalls due to faster-than-expected declines in demand can be recovered from customers with a two-year lag. In the longer term, Ofgem has a statutory obligation to "secure" that gas transportation companies "are able to finance the provision of gas supply services." However, a continued decline in demand for Scotland GN's core service may create challenges for the business which are difficult to quantify and forecast.



### Scotia Gas Networks' involvement with hydrogen

Scotia Gas Networks' flagship study is the H100 Fife project on the east coast of Scotland to demonstrate end-to-end-heating of homes with 100% renewable hydrogen. In the project's first phase, the network is expected to heat around 300 local homes using clean hydrogen produced by a dedicated electrolysis plant, powered by a nearby offshore wind turbine. The project received £28 million of funding from Ofgem in RIIO-GD2.

## Structural considerations

Our assessment of Scotland GN factors in the weaker credit quality of the SGN MidCo group that it belongs to. The weaker credit profile of the SGN MidCo group is primarily the result of the additional leverage at SGN MidCo Limited, amounting to around £464 million or up to 7% of the combined RAV of Scotia Gas Networks. With current high inflation, we expect consolidated leverage to be around the mid-70s in percentage terms over RIIO-GD2 (well below the trigger event in SGN MidCo's financing structure of 85%), compared with leverage at Scotland GN and Southern GN around the mid- to high-60s in percentage terms. Forecast consolidated leverage is commensurate with a Baa2 credit quality.

Although the weaker credit quality of SGN MidCo group would normally act as a cap on Scotland GN's rating, the operating company benefits from regulatory ring-fencing provisions, which partly insulates it from the credit quality of SGN MidCo at the current rating level (described in Appendix B, Considerations for ratings within a corporate family, of the [Regulated Electric and Gas Networks](#) rating methodology). As a result, the credit quality of Scotland GN is able to exceed that of the SGN MidCo group by one notch.

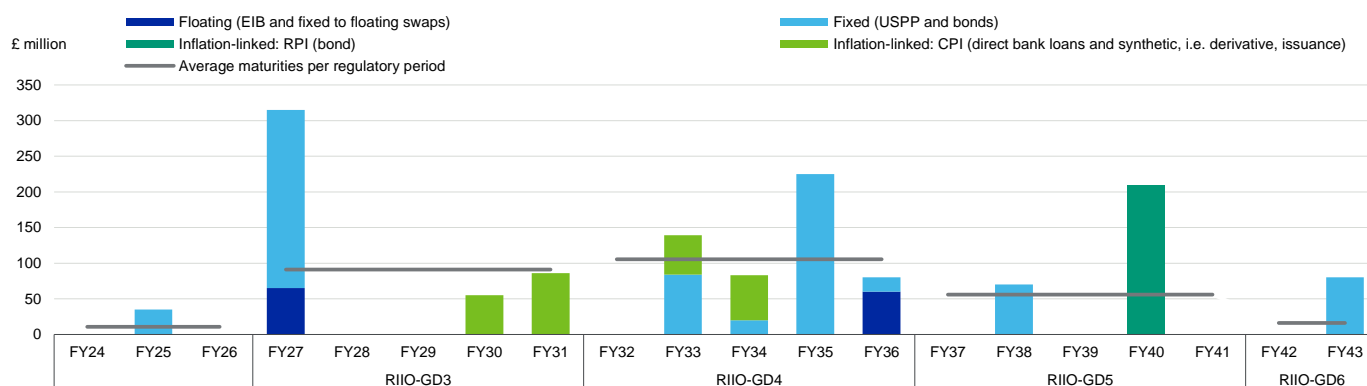
We consider that the covenant package in the SGN MidCo financing structure insulates the operating companies from shareholder loans at the ultimate holding company, Scotia Gas Networks. As a result, the debt at Scotia Gas Networks does not constrain the credit quality of the operating companies.

## Liquidity analysis

We view Scotland GN's liquidity as excellent over the next 18 months, reflecting (1) the stable and predictable cash flow generated by its regulated gas distribution business that allows it to fund the bulk of its capex and repex requirements; (2) its access to a £360 million revolving credit facility, which it shares with Southern GN, not maturing until March 2025 and being fully undrawn as of March 2023; and (3) limited remaining debt maturities during RIIO-GD2, following refinancing activity in October 2022.

Exhibit 12

### External debt maturity profile by regulatory period following recent financing activity As of March 2023 (includes accretion on CPI-linked swaps and bank loans)



(1) Assumes subsequent regulatory periods are five years. (2) Values for inflation-linked instruments are the accreted amounts as of March 2023. (3) CPI-linked instruments comprise original notional of (a) £100 million of CPI-linked loans (two £50 million tranches with a 7- and 10-year tenor that were drawn down in October 2022); and (b) £130 million of CPI-linked swaps that were overlaid to existing fixed rate USPP notes.

Source: Company; Moody's Investors Service

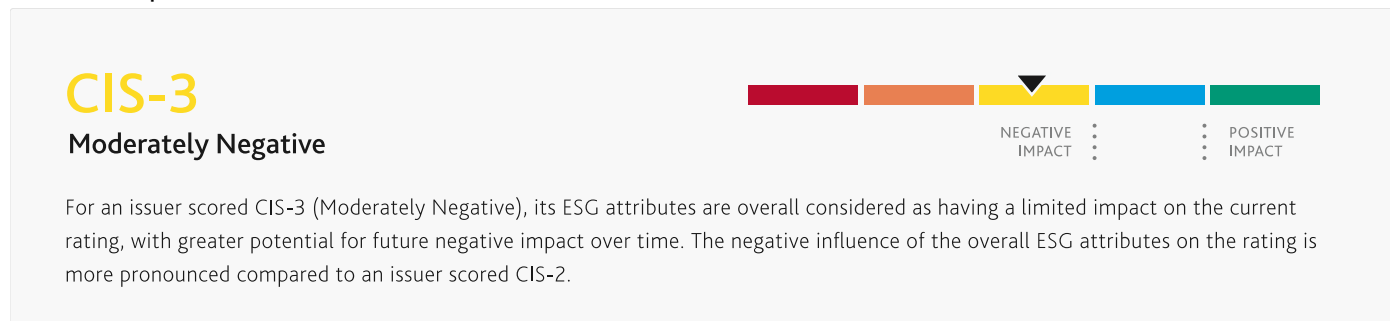
Cash balances held by Scotland GN, and other operating companies in the SGN group, are pooled into Southern GN due to efficiencies in pooling the cash. While we do not give benefit to intercompany receivables in our ratio calculations, Scotland GN held net receivables of £148 million in September 2022, associated with an intercompany loan to its sister company, Southern GN. Due to refinancing activity, we understand the cash amount deposited with Southern GN had reduced to £66 million by March 2023.

## ESG considerations

### Scotland GN's ESG Credit Impact Score is moderately negative CIS-3

Exhibit 13

#### ESG Credit Impact Score



Source: Moody's Investors Service

Scotland GN's **CIS-3** indicates that ESG considerations have a limited impact on the current credit quality with potential for greater negative impact over time. This is largely driven by high environmental risk linked to carbon transition, albeit partly mitigated by our expectation of some regulatory support, as demonstrated by a faster recovery of gas investments than of electricity investments, and the potential for usage of the natural gas network to transport hydrogen, to the extent this becomes significant in the United Kingdom.

Exhibit 14

#### ESG Issuer Profile Scores



Source: Moody's Investors Service

### Environmental

Scotland GN's high environmental risk (**E-4**) reflects its exposure to carbon transition risk. New domestic gas connections are scheduled to cease from 2025 and natural gas demand is expected to continue falling, reducing demand for Scotland GN's core service, for the UK to meet its ambitious decarbonisation objectives. Hydrogen offers a possible future: in April 2022 the UK government doubled the country's hydrogen production target to up to 10 gigawatts by 2030. Scotia Gas Networks, along with sector peers, is planning for this shift to hydrogen by utilising regulatory allowances to undertake studies exploring the ability of the gas distribution networks to transport hydrogen.

### Social

Scotland GN's **S-3** social risk score reflects the risk, common to all regulated utilities, that public concern over environmental, social or affordability issues could lead to adverse regulatory or political intervention. These risks are slightly higher for gas networks than for electricity networks due to the UK's ambitious decarbonisation objectives. The regulator has sought to materially reduce the level of achieved equity returns for energy networks in its most recent determinations. Scotland GN also carries moderate risk exposure

associated with public safety, as a gas leak or explosion, although unlikely, could have a significant negative impact on the company's reputation.

### Governance

Scotland GN's **G-3** governance risk score reflects a financial strategy where the company's leverage is above peers and regulatory assumptions, with net debt to regulatory asset value (RAV) historically above 70%, which, in turn, places downward pressure on interest coverage metrics. Scotland GN is ultimately owned by Scotia Gas Networks, which in turn is owned by a consortium of three North American institutional investors each owning a minority stake.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

## Rating methodology and scorecard factors

Our assessment of Scotland GN's credit quality is based on the rating methodology for [Regulated Electric and Gas Networks](#), published in April 2022. The scorecard-indicated outcome is Baa1, which is in line with the assigned rating.

Exhibit 15

### Rating methodology scorecard

Scotland Gas Networks plc

Regulated Electric and Gas Networks Industry Grid [1][2]	Current FY 31/03/2022		Moody's 12-18 Month Forward View As of May 2023 [3]	
	Measure	Score	Measure	Score
<b>Factor 1 : Regulatory Environment and Asset Ownership Model (40%)</b>				
a) Stability and Predictability of Regulatory Regime	Aaa	Aaa	Aaa	Aaa
b) Asset Ownership Model	Aa	Aa	Aa	Aa
c) Cost and Investment Recovery (Ability and Timeliness)	A	A	A	A
d) Revenue Risk	Aa	Aa	Aa	Aa
<b>Factor 2 : Scale and Complexity of Capital Program (10%)</b>				
a) Scale and Complexity of Capital Program	A	A	A	A
<b>Factor 3 : Financial Policy (10%)</b>				
a) Financial Policy	Ba	Ba	Ba	Ba
<b>Factor 4 : Leverage and Coverage (40%)</b>				
a) Adjusted Interest Coverage Ratio (3 Year Avg)	1.6x	Baa	1.3x-1.4x	Baa/Ba
b) Net Debt / RAB (3 Year Avg)	72.0%	Baa	65% - 67%	Baa
c) FFO / Net Debt (3 Year Avg)	10.4%	Ba	8% - 10%	Ba
d) RCF / Net Debt (3 Year Avg)	6.7%	Ba	5% - 7%	Ba
<b>Rating:</b>				
Scorecard-indicated Outcome from Grid Factors 1-4		Baa1		Baa1/2
<b>Rating Lift</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>
a) Scorecard-indicated Outcome from Grid		Baa1		Baa1
b) Actual Rating Assigned		Baa1		Baa1

(1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. (2) As of 31/03/2022. (3) This represents Moody's forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™

## Ratings

Exhibit 16

Category	Moody's Rating
<b>SCOTLAND GAS NETWORKS PLC</b>	
Outlook	Stable
Issuer Rating -Dom Curr	Baa1
Senior Unsecured -Dom Curr	Baa1

Source: Moody's Investors Service

## Appendix

Exhibit 17

### Peer comparison table Scotland Gas Networks plc

(in GBP million)	Scotland Gas Networks plc			Cadent Gas Limited			Northern Gas Networks Limited			Southern Gas Networks plc		
	Baa1 Stable			Baa1 Stable			Baa1 Stable			Baa1 Stable		
	FYE Mar-20	FYE Mar-21	FYE Mar-22	FYE Mar-20	FYE Mar-21	FYE Mar-22	FYE Mar-20	FYE Mar-21	FYE Mar-22	FYE Mar-20	FYE Mar-21	FYE Mar-22
Revenue	357	384	339	2,115	2,075	1,984	450	439	421	818	806	715
EBITDA	235	226	171	1,359	1,306	1,120	303	254	211	508	476	332
Total Debt	1,357	1,362	1,384	7,115	7,499	7,046	1,577	1,632	1,695	2,994	3,019	3,033
Net Debt	1,357	1,362	1,384	6,771	6,676	7,044	1,563	1,619	1,688	2,909	2,920	2,986
Adjusted Interest Coverage Ratio	1.6x	1.6x	1.7x	2.9x	2.2x	2.5x	2.2x	2.2x	2.4x	1.6x	1.4x	1.6x
Net Debt / Regulated Asset Base	74.2%	73.2%	68.8%	67.4%	64.7%	62.7%	67.7%	68.0%	65.6%	71.3%	70.2%	67.2%
FFO / Net Debt	11.4%	11.1%	8.9%	13.1%	12.4%	11.0%	13.2%	12.1%	10.2%	11.3%	10.5%	8.6%
RCF / Net Debt	9.3%	5.6%	5.2%	9.0%	12.4%	8.2%	7.0%	5.9%	4.8%	9.5%	7.7%	6.4%

Source: Moody's Financial Metrics™

Exhibit 18

### Moody's-adjusted net debt breakdown Scotland Gas Networks plc

(in GBP million)	FYE Mar-18	FYE Mar-19	FYE Mar-20	FYE Mar-21	FYE Mar-22
<b>As Reported Total Debt</b>	1,247	1,288	1,349	1,354	1,378
Leases	4	8	8	8	6
<b>Moody's Adjusted Total Debt</b>	1,251	1,296	1,357	1,362	1,384
Cash & Cash Equivalents	(2)	0	0	0	0
<b>Moody's Adjusted Net Debt</b>	1,249	1,296	1,357	1,362	1,384

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 19

### Moody's-adjusted funds from operations breakdown Scotland Gas Networks plc

(in GBP million)	FYE Mar-18	FYE Mar-19	FYE Mar-20	FYE Mar-21	FYE Mar-22
<b>As Reported Funds from Operations (FFO)</b>	159	153	154	161	116
Pensions	5	6	5	2	1
Leases	1	2	2	2	1
Alignment FFO	(24)	(10)	(4)	(9)	(19)
Unusual Items - Cash Flow	(8)	(8)	(9)	(9)	0
Non-Standard Adjustments	11	8	6	4	24
<b>Moody's Adjusted Funds from Operations (FFO)</b>	144	151	155	151	123

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 20

**Moody's regulatory capital charges**  
 Scotland Gas Networks plc

in GBP millions	FYE Mar-18	FYE Mar-19	FYE Mar-20	FYE Mar-21	FYE Mar-22
Repex Allowance Classed as Fast Money by the Regulator	15.9	11.0	5.0	0.0	0.0
Regulatory Depreciation	84.0	95.2	107.2	119.6	100.0
Excess Fast/(Slow) Money	9.7	18.0	12.7	3.0	-8.0
Operating Leases	0.8	1.7	1.7	1.8	0.8
<b>Moody's Regulatory Capital Charges</b>	<b>110.4</b>	<b>125.9</b>	<b>126.7</b>	<b>124.4</b>	<b>92.8</b>

Source: Moody's Investors Service

Exhibit 21

**Selected historic Moody's-adjusted financial data**  
 Scotland Gas Networks plc

(in GBP million)	FYE Mar-18	FYE Mar-19	FYE Mar-20	FYE Mar-21	FYE Mar-22
<b>INCOME STATEMENT</b>					
Revenue	336	350	357	384	339
EBITDA	210	219	235	226	171
EBITDA margin %	62.5%	62.6%	65.8%	58.9%	50.4%
EBIT	154	159	174	163	104
EBIT margin %	45.9%	45.5%	48.8%	42.5%	30.7%
Interest Expense	39	54	55	47	69
Net income	96	86	70	94	(45)
<b>BALANCE SHEET</b>					
Total Debt	1,251	1,296	1,357	1,362	1,384
Cash & Cash Equivalents	2			0	0
Net Debt	1,249	1,296	1,357	1,362	1,384
Net Property Plant and Equipment	1,918	2,007	2,083	2,127	2,165
Total Assets	2,160	2,247	2,420	2,428	2,483
<b>CASH FLOW</b>					
Funds from Operations (FFO)	144	151	155	151	123
Cash Flow From Operations (CFO)	619	93	108	178	171
Dividends	69	31	28	75	51
Retained Cash Flow (RCF)	75	120	127	76	72
Capital Expenditures	(103)	(136)	(130)	(95)	(93)
Free Cash Flow (FCF)	447	(74)	(50)	8	27
<b>INTEREST COVERAGE</b>					
Adjusted Interest Coverage Ratio	1.9x	1.6x	1.6x	1.6x	1.7x
<b>LEVERAGE</b>					
FFO / Net Debt	11.5%	11.6%	11.4%	11.1%	8.9%
RCF / Net Debt	6.0%	9.2%	9.3%	5.6%	5.2%
FCF / Net Debt	35.8%	-5.7%	-3.7%	0.6%	2.0%
Debt / EBITDA	6.0x	5.9x	5.8x	6.0x	8.1x
Net Debt / EBITDA	5.9x	5.9x	5.8x	6.0x	8.1x
Net Debt / Regulated Asset Base	72.4%	72.6%	74.2%	73.2%	68.8%

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

## Endnotes

- [1](#) For RIIO-GD2, Ofgem applied (1) a more demanding regulatory benchmark to assess cost efficiency; (2) a higher level of annual productivity gains to set regulatory cost allowances, particularly on capex and repex (0.95% compared to 0.7%); and (3) a smaller increase in allowed revenues for a high quality business plan submission.
- [2](#) See also [Regulated Electric & Gas Networks – Great Britain: Size of financing requirements drives winners and losers of higher funding costs](#), October 2022 for more information.
- [3](#) The CMA had lowered the annual cost efficiency improvement factor to 1% from 1.2% (from the value of the innovation uplift adjustment being changed to 0% from 0.2%), which increased regulatory cost allowances for the sector and by around 0.8% for SGN's networks (over £7 million for Scotland GN over RIIO-GD2).

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REPORT NUMBER

1350311