22 September 2023

Sovereign and Public Sector

# City of Trondheim
## Rating Report

SCOPE AAA STABLE OUTLOOK

### Credit strengths

- Ample liquidity
- Resilient budgetary performance
- Robust governance quality
- Wealthy, resilient local economy
- Favourable debt profile
- Integrated institutional framework

### Credit weaknesses

- High debt stock, though backed by own investment fund
- Limited revenue flexibility and expenditure flexibility

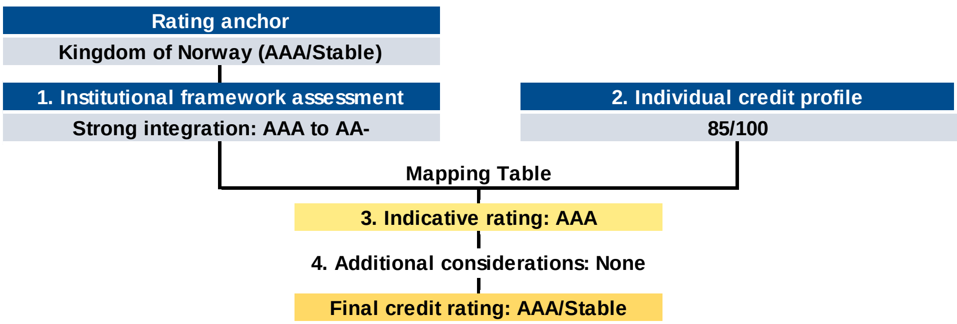
**Rating rationale and Outlook:**

The City of Trondheim's AAA ratings are attributed to the following key factors:

- **A well-integrated institutional framework for Norwegian municipalities.** Norwegian municipalities benefit from comprehensive fiscal equalisation schemes, robust funding support and effective policy coordination between different government tiers. Our evaluation of the framework leads to an indicative rating range for Norwegian municipalities spanning from AAA to AA-.
- **Trondheim's strong individual credit profile.** Trondheim benefits from ample liquidity and a favourable debt profile, resilient budgetary performance, high wealth levels and economic resilience, and robust governance quality. Low transition risks and ambitious climate policies also support the rating. Credit challenges relate to high debt, limited revenue flexibility and limited expenditure flexibility.

The Stable Outlook reflects our assessment that the risks Trondheim faces over the next 12 to 18 months are balanced.

**Figure 1: Our rating approach for City of Trondheim**




For further details, see Scope's Sub-sovereigns Rating Methodology. Source: Scope Ratings

### Positive rating-change drivers

- Not applicable

### Negative rating-change drivers

- Downgrade of Norway's sovereign rating
- Reforms to framework, materially weakening municipalities' integration in institutional arrangements
- Individual credit profile weakening significantly and structurally

### Ratings & Outlook

**Foreign and local currency**

| | |
|---|---|
| Long-term issuer rating | AAA/Stable |
| Senior unsecured debt | AAA/Stable |
| Short-term issuer rating | S-1+/Stable |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## Step 1: Institutional framework

**Range from AAA to AA- for Norwegian municipalities**

Our evaluation of the institutional framework for Norwegian municipalities leads to an indicative rating range for the sector spanning from AAA to AA- (**Figure 2 and Annex I**). This assessment underscores their strong integration and coherence within Norway's sub-sovereign institutional arrangements. A well-structured framework for financial support, comprehensive fiscal equalisation systems, and municipallities' engagement in national policymaking foster a stable governance structure, ensuring effective crisis response and well-balanced decision-making across government tiers.

**Figure 2: Institutional framework assessment: Norwegian municipalities**

| Analytical component | Assessment | Analytical rationale |
|---|---|---|
| **Extraordinary support and bail-out practices** | Strong integration (75) | The Norwegian framework for extraordinary sub-sovereign support is well structured and predictable. Norwegian municipalities cannot become insolvent; in financial difficulties, the central government proactively takes control of financial management through the supervisory board to ensure obligations are met. Formal procedures for pre-emptive intervention and a credible history of support during crises enhance this supportive framework. The central government's demonstrated support during recent crises, with adapted grants and full cost compensation, underpins the stability of the sector. |
| **Ordinary budgetary support and fiscal equalisation** | Full integration (100) | A comprehensive and predictable fiscal equalisation system mitigates disparities in municipal fiscal capacities and costs. It deploys tax revenue redistribution and general grants for income and cost equalisation. Income equalisation symmetrically compensates 60% of tax revenue gaps, plus top-ups for entities below 90% of the national average. Cost equalisation considers demographics, social factors and population density. Discretionary and regional policy grants further complement this to address special conditions and support policy goals. |
| **Funding practices** | Strong integration (75) | Norwegian local governments possess considerable financial autonomy. They source independent funding through banks, bonds and the state-owned Kommunalbanken (KBN), which provides financing at favourable rates under central government policy. KBN is a major debt financier and holds about a 50% market share, bolstering local governments' robust financial base. |
| **Fiscal rules and oversight** | Strong integration (75) | The Local Government Act mandates broad financial rules for counties and municipalities, including budget goals, accounting norms and reporting mandates. It emphasises maintaining an operational budget balance and requires deficit correction within two years. Additional financial risk rules, although self-imposed, align with central policy objectives while maintaining sub-sovereign autonomy. Entities facing imbalances are closely monitored and included in ROBEK, a public registry. |
| **Revenue and spending powers** | Strong integration (75) | Municipalities share tax authority with the central government, coordinating tax-sharing and rate-setting. While parliament annually sets maximum income tax rates, municipalities can choose lower rates. They also have flexibility with secondary tax revenue sources and fees. |
| **Political coherence and multilevel governance** | Strong integration (75) | In Norway's integrated multilevel governance, sub-sovereigns impact national policymaking. Despite central government legislative dominance, a dedicated standing committee, effective communication via KS (Norwegian Association of Local and Regional Authorities), and decentralised administration bolster coordination. Extensive inter-municipal and inter-regional cooperation fosters policy coordination, efficient decisions and a balanced, stable governance structure. |

| Institutional framework score | 100 > x≥ 90 | 90 > x≥ 80 | 80 > x≥ 70 | 70 > x≥ 60 | 60 > x≥ 50 | 50 > x≥ 40 | 40 > x≥ 30 | 30 > x≥ 20 | 20 > x≥ 10 | 10 > x≥ 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| Indicative rating range | 0-1 | 0-2 | 0-3 | 0-4 | 0-5 | 0-6 | 0-7 | 0-8 | 0-9 | 0-10 |

## Step 2: Individual credit profile – City of Trondheim

**Strong individual credit profile**

Trondheim's individual credit profile is assessed at 85 out of 100 (**Annex II**), resulting in the city's 'AAA' credit rating.

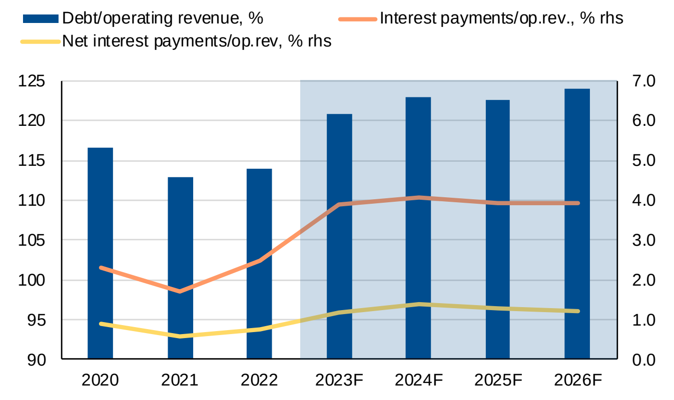
- **Debt and liquidity:** Trondheim displays strong debt affordability, supported by substantial liquidity reserves and financial assets via its investment fund, a low interest payment burden and a low risk of contingent liabilities. Compared to other municipalities, Trondheim's higher debt stock compares less favourably.
- **Budget performance:** It also demonstrates resilient budget performance with high operating margins. In terms of revenue and expenditure flexibility, the municipality aligns with the Norwegian average, relying significantly on transfers and grants while having a limited portion of adjustable revenue.
- **Economy and governance:** Trondheim benefits from a diversified economy with favourable growth prospects and positive demographics and upholds strong governance quality.
- **Environmental and social factors**: In addition, Trondheim exhibits low exposure to environmental risks and sets out ambitious climate policies. Compared to the Norwegian average, Trondheim excels in social aspects like ageing and healthcare but faces challenges in income inequality and poverty.

### Debt burden and liquidity profile

**High debt stock**

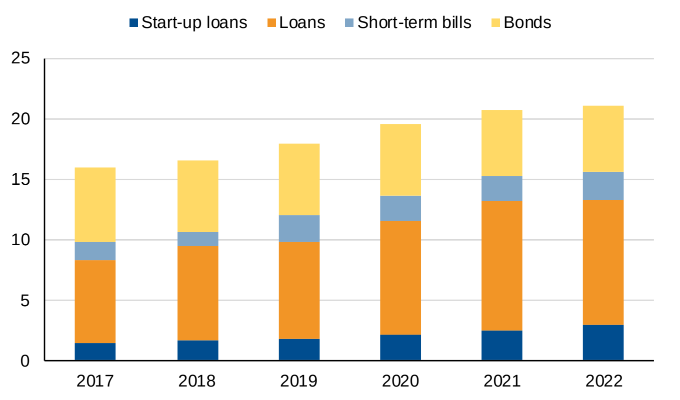
Trondheim's debt level stood at 113.9% of operating revenue in 2022 (**Figure 3**), which is comparable to 2021 (112.9%) and lower than 2020 (116.7%). This is high compared to other municipalities but manageable within Trondheim's operating revenue and backed by the financial assets of the city's own investment fund. We expect the debt-to-operating revenue ratio to rise moderately in 2023-24 due to an expected narrowing of operating margins and then stabilise at around 125% by 2026.

**Figure 3: Debt and interest burden**
%




Source: Trondheim Kommune, KOSTRA database, Scope Ratings

**Figure 4: Debt by instrument**
NOK bn




Source: Trondheim Kommune, Scope Ratings

**Strong debt affordability**

A significant portion of the debt service is underpinned by fees, on-lending arrangements, or financing from the central government. This robust support structure enhances debt affordability and effectively mitigates exposure to interest rate risks. Trondheim's gross interest payment burden was 2.5% of operating revenue in 2022, which is comparable to other large municipalities in Norway. We project an increase in gross interest payments to around 4.0% of operating revenue in the coming years. However, net interest payments are expected to remain low, at 1.2% of operating revenue, up from 0.7% in 2022 (**Figure 3**). Trondheim's low net interest payments are supported by substantial liquidity reserves and financial assets via its income-generating investment fund, TKK. The fund was established in 2002 after the city sold its energy plant, and it is contributing significantly to support the city's investment agenda and policy priorities.

**Ample liquidity**

Trondheim's average total liquidity in 2022, encompassing both the treasury and the investment fund, surged to NOK 2.8bn, up from NOK 2.1bn in 2021. As of 31 March 2023, the municipality held around NOK 2.2bn in bank deposits, providing ample liquidity 2023 and effectively covering current short-term payment obligations. In addition, the city treasury has access to the investment fund's bank deposits and a NOK 500m withdrawal right with its main bank, effectively mitigating certain liquidity risks. Trondheim's strong liquidity profile is well aligned with its strategic objective of maintaining a buffer to cover expenses for 60 days without resorting to new borrowings including refinancing maturing loans.

**Favourable debt profile**

Total debt increased from NOK 16.5bn in 2018 to NOK 21.1bn in 2022, comprising NOK 13.3bn in bank loans, NOK 5.5bn in bonds, and NOK 2.4bn in short-term notes (**Figure 4**). NOK 6bn of Trondheim's debt is financed through the central government or supported by housing rents and water/waste management fees. NOK 3.3bn of Trondheim's debt serves on-lending purposes, aiding housing access for individuals ("start-up loans") or supporting investments. Despite a seven-year average debt maturity, a significant portion requires yearly rollovers, about NOK 4bn in 2023, given the use of short-term notes that are typically bought by a robust domestic investor base via certificates. To manage refinancing risks, the city's regulations limit debt maturing within a year to 30% of the total, which is a high yearly refinancing share. But associated refinancing risks are mitigated by Trondheim's substantial liquidity reserves and the city's demonstrated practice of accelerating loan amortisations during periods of improved budgetary performance. Trondheim has well-established access to diversified external funding sources, with regular bond issuances on the Oslo Stock Exchange, coupled with frequent issuance of short-term notes. Trondheim also benefits from state-owned funding sources, including Kommunalbanken, further enhancing its financial stability. Trondheim's debt is exclusively in Norwegian krone, with almost half of borrowings fully serviced by the city's treasury featuring fixed-term interest rates borrowings.

**Limited contingent liabilities**

Trondheim's pension accounts are financially stable, with NOK 700m in net assets (3.6% of total pension assets). Financial debt within primary shareholdings is minimal. Municipality guarantees to external entities have increased to NOK 890m but related materialisation risks remain moderate.

### Budgetary performance and flexibility

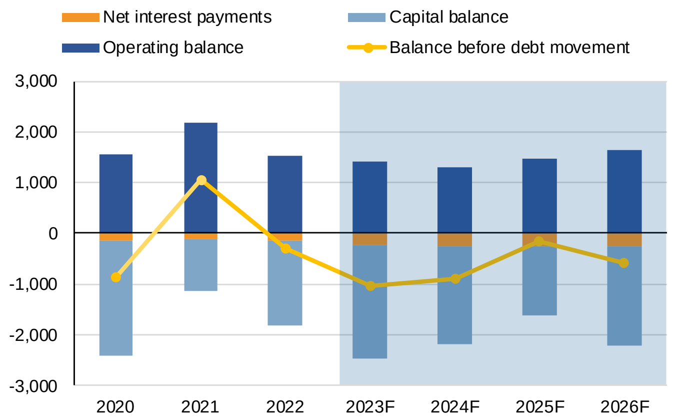
**Solid budgetary performance**

Trondheim consistently outperforms other large municipalities with robust budgetary performance. Even amid pandemic-related challenges and cost-of-living pressures, the city has maintained an average operating margin of nearly 10% of operating revenue over the past three years and moderate deficits in its balance before debt movement (**Figure 5**). In 2022, Trondheim's performance exceeded initial budget expectations, although margins were below those in 2021, with the operating balance declining to 8.3% from 11.9%. Operating revenue grew by 0.7%, underpinned by very strong tax revenue growth of over 12% YoY. On the other hand, revenues from alternative sources such as grants and returns from the investment fund experienced a decline. Operating expenses surged by nearly 5% due to high inflation and rising demand for social services. Investment funds were underutilised at about NOK 850m below budget due to project delays.

**Resilient budget outlook**

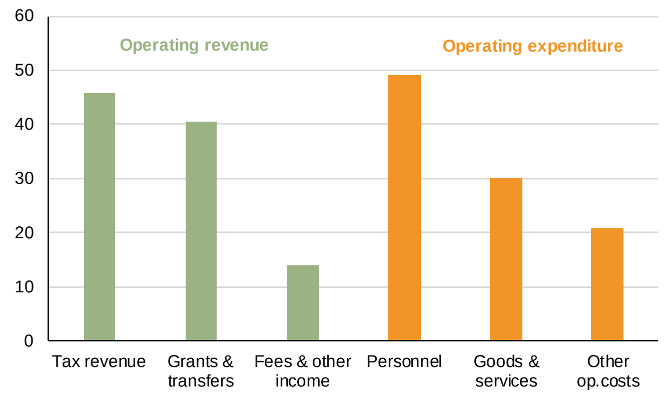
We expect moderated but robust operating margins of 7.7% in 2023 and 6.7% in 2024 due to the knock-on effects of high inflation and normalised tax growth post-2021 gains. Trondheim's budgetary outlook is supported by tax revenue growth above budgeted figures, central government flexibility in ensuring compensation of extraordinary costs to the municipal sector, and improved investment fund returns. However, despite higher early-year revenue, multiple service areas are overspending compared to the 2023 budget, with impacts on child and family services, healthcare, and housing programmes. Prudent cost control is evidenced in restrained spending growth over three years, aligned with the 2023-26 financial plan. The city's overall financial results are likely to post contained deficits before debt movement of around 5% of revenues, requiring continued recourse to new borrowings to fund the city's investment agenda of NOK 12.3bn over 2023-26.

**Figure 5: Budgetary performance**
NOK m (LHS), % (RHS)




Source: Trondheim Kommune, KOSTRA database, Scope Ratings

**Figure 6: Operating revenue and expenditure composition**
% of total operating revenue and expenditure respectively




Source: Trondheim Kommune, KOSTRA database, Scope Ratings

**Moderate revenue flexibility**

In line with all Norwegian municipalities, Trondheim's revenue flexibility is constrained by its substantial reliance on transfers. Government grants to Trondheim make up about 40% of revenue (**Figure 6**). These grants allow some budget adjustment due to their largely unearmarked nature. The central government controls the sector's overall income dynamics by moderating grants in response to strong tax growth. This stabilises overall revenue but curbs direct fiscal gains from higher taxes. Like all Norwegian municipalities, Trondheim follows parliamentary tax limits. Ensuring financial sustainability, Trondheim applies top tax rates on income and wealth, and it recently raised fees for water and waste disposal. A 2025 revenue system review might impact Trondheim's revenue structure.

**Moderate expenditure flexibility**

Trondheim's expenditure flexibility is constrained by significant civil servant salary allocations and a focus on social welfare spending. Civil servant salaries comprise almost half of operating spending (**Figure 6**), in line with other Norwegian municipalities. Social welfare spending, including health, education, and social services, forms around 80% of operating spending net of service fees. While prioritising critical areas, this high share of social welfare spending limits room for expenditure reductions. For capital expenses, Trondheim aligns with peers, allocating around 15% of total spending on average.

## Economy

**High wealth levels**

Trondheim benefits from favourable economic fundamentals thanks to its wealth, economic resilience and role as Norway's third-largest municipality, with around 210,000 residents. High wealth levels and good economic dynamism contribute to Trondheim's consistent population growth of 2,000-3,000 annually, fuelled by both immigration and a birth surplus. This trend, coupled with a strong local labour market, further strengthens its economic outlook.

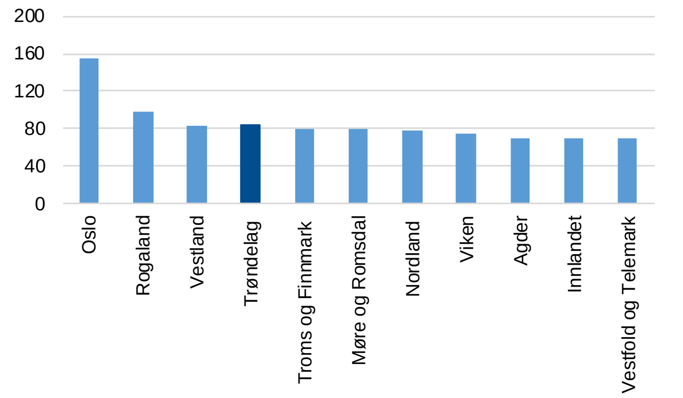
**Strategically important economy**

Serving as a crucial land and sea transport link in Norway, Trondheim's strategic importance is evident. Trondheim connects the populated south with the north, boosting its economic importance for trade and market access. Trondheim's diverse economic activities include manufacturing, encompassing metal and paper products, bricks, tiles, textiles; and food processing, particularly in the fish industry. This diversified industrial landscape contributes to both economic resilience and steady revenue.

Trondheim also benefits from its status as Norway's Innovation and Technology capital, being home to institutions like the Norwegian University of Science and Technology, the largest university in Norway. This strong research environment enhances the city's economic adaptability.

**Figure 7: GDP per capita, by county**

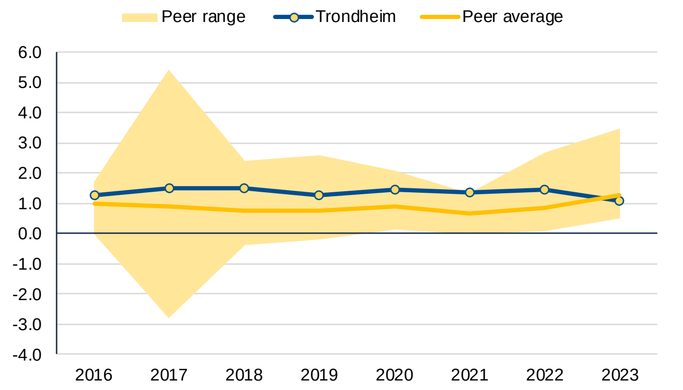
% of national average




Source: Statistics Norway, Scope Ratings

**Figure 8: Working-age population growth**

%




Source: Statistics Norway, Scope Ratings

## Governance

**Robust governance quality**

Trondheim benefits from robust governance, characterised by transparent, effective policymaking and a stable political environment. Municipalities are required to adhere to clear accounting rules, and there is ready access to centralised and harmonised data. Trondheim's track record of executing effective financial plans while achieving fiscal objectives, a history of compliance with fiscal regulations, and the establishment of a strategic investment fund that significantly contributes to the city's investment agenda and policy priorities all underscore Trondheim's effective resource management and internal controls. This is further accentuated by prudent debt management strategies.

Norway's 2023 local elections took place on 11 September 2023. In contrast to the 2019 elections that favoured centre-left parties, the 2023 elections saw the centre-right bloc securing around 46% of the municipal vote, compared to approximately 44% for the red-green parties. We deem Trondheim's governance framework to be resilient to the fluctuations of political change.

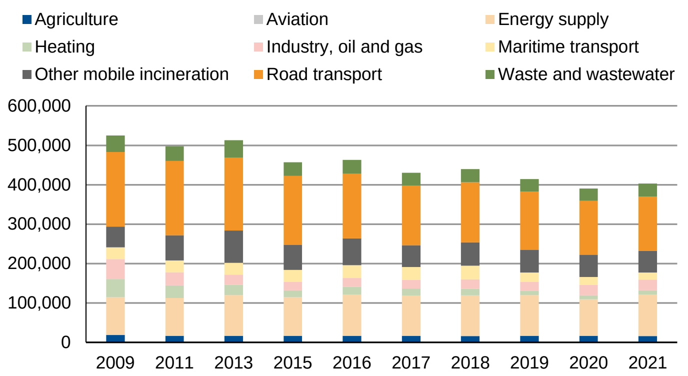
## Environmental factors

**Minimal environmental risks**

Trondheim excels in climate-transition readiness among Norwegian municipalities. In 2021, it emitted just over 400,000 metric tonnes of carbon dioxide equivalents (**Figure 1**), mainly from road transport (34%) and energy supply (26%). Trondheim's GHG emissions per capita are only around two tonnes of carbon dioxide equivalents, putting it in the top 10 least carbon-intensive municipalities in Norway. Trøndelag county, where Trondheim is located, has moderate vulnerability to physical climate risks as assessed by the EPSON climate risk index, and its strong adaptive capacity aligns with most Norwegian counties.

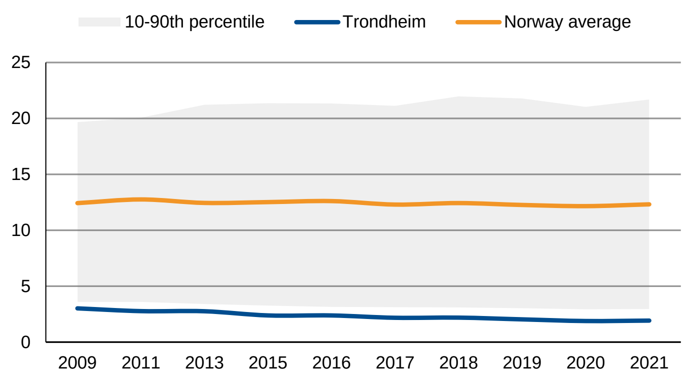
Trondheim has ambitious climate policies and strategies and has been a pioneer in integrating the UN Sustainable Development Goals in its action plan, as highlighted by the Norwegian Association of Local and Regional Authorities[1]. The city's climate strategy is a vital component in its primary management document, which guides its actions and financial plans. Trondheim aims to achieve an 80% reduction in GHG emissions by 2030 compared to 2009 levels, surpassing the national target of 60%[2]. The city has already reduced emissions by 23% since 2009, placing it in the top 15% of Norwegian municipalities and exceeding the 4% average reduction across all Norwegian municipalities.

**Figure 9: GHG emissions per sector**
tCO2e




Source: Norwegian Environment Agency, Scope Ratings

**Figure 10: Carbon intensity per capita vs Norwegian peers**
tCO2e




Source: Norwegian Environment Agency, Statistics Norway, Scope Ratings

Important climate measures include emission-free construction sites, transitioning from fossil fuels to waste incineration for heating, and fossil-free public transport. The multi-year climate budget aims to mobilise NOK 347m for climate goals from 2022-25. However, faster emissions reductions are needed to meet the 2030 target.

An important environmental responsibility is water supply and management. Trondheim's water pipeline infrastructure is comparable to other major cities in Norway but somewhat older, with an average age of 43 years (versus the national average of 33 years) and leakage rates of 28% (versus a national average of 26%). Water quality is excellent, with 100% of the population having access to safe drinking water. Relatively low spending on water management per capita, at around EUR 5,000 (versus a national average of around EUR 10,000) indicates potential longer-term risks associated with investments needed to upgrade the city's ageing infrastructure.

### Social factors

**Positive demographics**

Trondheim performs strongly in several social dimensions compared to other Norwegian municipalities, particularly in population ageing, kindergarten access, primary and lower secondary education outcomes, and healthcare services (**Figure 11**). However, it faces challenges in income inequality, poverty rates, and primary and lower secondary education resources.

The city's demographics are very favourable, with a lower old age dependency ratio (23% in 2020) than the national average (39%). Projected population ageing is also less severe in Trondheim, with a projected 16 pp increase in the old age dependency ratio from 2020-

[1] Kommunesektorens Organisasjon (2021), Voluntary Subnational Review – Norway
[2] We calculated this adjusted target based on Norway's national emissions reduction target of -55% versus 1990 levels.

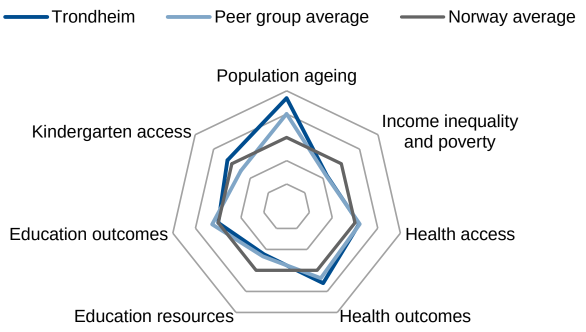
50, versus a national average of 26 pp. However, like other major Norwegian cities, Trondheim is also challenged by social issues, including above-average income inequality (Gini coefficient of 0.27 compared to a national average of 0.24) and moderately elevated low-income levels (around 11% versus a national average of 9%).

Access to health and care professionals in Trondheim aligns with other Norwegian municipalities. Access to education resources in primary and lower secondary education is somewhat below the national average, although it is similar to the country's other large municipalities. This is due to larger class sizes, resulting in more limited teaching hours per pupil.

**Favourable health outcomes**

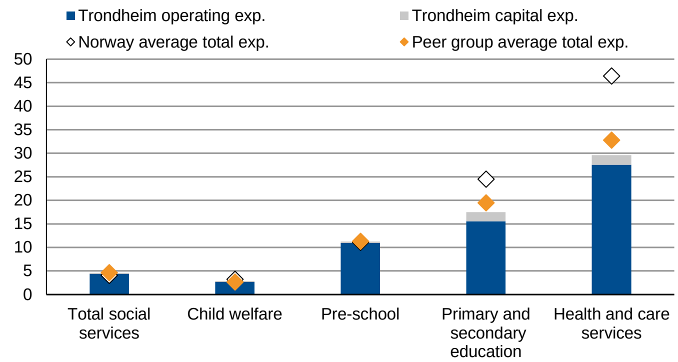
Trondheim's health outcomes are favourable, with a sick leave absence ratio averaging 6.3% in the year to Q1 2023 and a life expectancy of 85.3 years, both surpassing national averages. Similarly, primary and lower secondary education outcomes are above average, with a higher percentage of pupils mastering intermediate and advanced skills in reading (75%) and math (71%), along with above-average scores on national tests across schools.

**Figure 11: Trondheim's social profile**[3]
Standardised index scores




Source: Scope Ratings

**Figure 12: Spending per capita on social policy priorities**
NOK thousands




Source: Statistics Norway, Scope Ratings

**Cost-effective social systems**

Trondheim's education and health services benefit from significant economies of scale compared to smaller Norwegian municipalities. Although per capita municipal spending on health and care is relatively low in Trondheim, it has been increasing, reaching NOK 27,546 in 2022 (a 27% increase since 2018). However, this remains below the national average of NOK 44,597 (**Figure 12**). While this reflects cost-effective social systems, it may also indicate potential underinvestment, which could adversely impact service access and outcomes in the long term. Nonetheless, Trondheim's performance in its major social responsibilities remains robust.

[3] See the appendix for an overview of the social scorecard approach used to benchmark the performance of Trondheim to the rest of the Norwegian municipal sector.

## Appendix I: Institutional framework assessment

*Step 1: We evaluate the institutional framework using our Qualitative Scorecard 1 (QS1), which has six components. Each component is assessed on a five-point scale, from 'low' to 'full' integration. The resulting institutional score, ranging from 0 to 100, is an average of these assessments. This score establishes a rating range from the anchor level, where the sub-sovereign's rating can be placed.*

The framework assessment indicates that ratings for Norwegian sub-sovereigns lie within an indicative downward rating range of up to three notches from the Norwegian sovereign's AAA/Stable rating.

**Institutional framework scorecard (QS1)**

| Analytical components | Full integration (100) | Strong integration (75) | Medium integration (50) | Some integration (25) | Low integration (0) |
|---|---|---|---|---|---|
| Extraordinary support and bailout practices | ○ | ◉ | ○ | ○ | ○ |
| Ordinary budgetary support and fiscal equalisation | ◉ | ○ | ○ | ○ | ○ |
| Funding practices | ○ | ◉ | ○ | ○ | ○ |
| Fiscal rules and oversight | ○ | ◉ | ○ | ○ | ○ |
| Revenue and spending powers | ○ | ◉ | ○ | ○ | ○ |
| Political coherence and multi-level governance | ○ | ◉ | ○ | ○ | ○ |

| | |
|---|---|
| *Integration score* | *79* |
| ***Downward rating range*** | ***0-3*** |

| Institutional framework score | 100 > x≥ 90 | 90 > x≥ 80 | 80 > x≥ 70 | 70 > x≥ 60 | 60 > x≥ 50 | 50 > x≥ 40 | 40 > x≥ 30 | 30 > x≥ 20 | 20 > x≥ 10 | 10 > x≥ 0 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Indicative rating range** | 0-1 | 0-2 | 0-3 | 0-4 | 0-5 | 0-6 | 0-7 | 0-8 | 0-9 | 0-10 |

## Appendix II: Individual credit profile (ICP)

*Step 2: For the ICP assessment, we employ the Qualitative Scorecard 2 (QS2), focusing on 10 components with quantitative metrics as support. Each component is evaluated on a three-point scale compared to peers, with scores of 0 for 'weaker', 50 for 'mid-range', and 100 for 'stronger'. The credit profile score, ranging from 0 to 100, is an average of these assessments. Environmental and social factor assessments, which can adjust the ICP by up to +/- 10 points, are also considered.*

We evaluate the City of Trondheim's individual credit profile with a score of 85 out of 100.

**Individual credit profile scorecard (QS2)**

| Risk pillar | | Analytical components | Stronger (100) | Mid-range (50) | Weaker (0) |
|---|---|---|---|---|---|
| Debt and liquidity | 40% | Debt burden & trajectory | ○ | ○ | ● |
| | | Debt profile & affordability | ● | ○ | ○ |
| | | Contingent liabilities | ● | ○ | ○ |
| | | Liquidity position & funding flexibility | ● | ○ | ○ |
| Budget | 30% | Budgetary performance & outlook | ● | ○ | ○ |
| | | Revenue flexibility | ○ | ● | ○ |
| | | Expenditure flexibility | ○ | ● | ○ |
| Economy | 20% | Wealth levels & economic resilience | ● | ○ | ○ |
| | | Economic sustainability | ● | ○ | ○ |
| Governance | 10% | Governance & financial management quality | ● | ○ | ○ |

| Additional environmental and social factors | Positive impact (+5) | No impact (0) | Negative impact (-5) |
|---|---|---|---|
| Environmental factors and resilience | ● | ○ | ○ |
| Social factors and resilience | ○ | ● | ○ |

| | |
|---|---|
| *ICP score* | 85 |
| ***Indicative notching*** | ***0*** |

## Appendix III: Mapping Table

*We determine the indicative rating by mapping the downward range from the framework assessment with the issuer's ICP score.*

In the case of Trondheim, this leads to an indicative rating at the sovereign level, specifically an AAA rating.

| Rating anchor | Institutional framework assessment | | Individual credit profile score | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Kingdom of Norway | Score | Downward rating range | **100 > x ≥ 80** | 80 > x ≥ 70 | 70 > x ≥ 60 | 60 > x ≥ 50 | 50 > x ≥ 40 | 40 > x ≥ 30 | 30 > x ≥ 20 | 20 > x ≥ 0 |
| AAA/Stable | 100 > x ≥ 90 | 0-1 | AAA | AAA | AAA | AAA | AAA | AAA | AA+ | AA+ |
| | 90 > x ≥ 80 | 0-2 | AAA | AAA | AA+ | AA+ | AA+ | AA+ | AA | AA |
| | **80 > x ≥ 70** | **0-3** | AAA | AA+ | AA+ | AA+ | AA | AA | AA- | AA- |
| | 70 > x ≥ 60 | 0-4 | AAA | AA+ | AA+ | AA | AA | AA- | AA- | A+ |
| | 60 > x ≥ 50 | 0-5 | AAA | AA+ | AA+ | AA | AA | AA- | A+ | A |
| | 50 > x ≥ 40 | 0-6 | AAA | AA+ | AA+/ AA | AA/ AA- | AA/ AA- | AA-/ A+ | A+/ A | A- |
| | 40 > x ≥ 30 | 0-7 | AAA | AA+/ AA | AA+/ AA | AA/ AA- | AA-/ A+ | A+/ A | A/ A- | BBB+ |
| | 30 > x ≥ 20 | 0-8 | AAA | AA+/ AA | AA/ AA- | AA-/ A+ | A+/ A | A/ A- | A-/ BBB+ | BBB |
| | 20 > x ≥ 10 | 0-9 | AAA | AA+/ AA | AA/ AA- | AA-/ A+ | A+/ A | A/ A- | BBB+/ BBB | BBB- |
| | 10 > x ≥ 0 | 0-10 | AAA | AA+/ AA | AA/ AA- | AA-/ A+ | A/ A- | BBB+/ BBB | BBB-/ BB+ | BB+ |

Note: Mapping table under section 4 of Scope's Sub-sovereigns Rating Methodology, as applied to the rating anchor's AAA ratings.

No other factors impact Trondheim's ratings. Therefore, the ultimate rating aligns with the indicative AAA rating.

## Appendix IV: Statistical table

| | 2020 | 2021 | 2022 | 2023F | 2024F | 2025F | 2026F |
|---|---|---|---|---|---|---|---|
| Financials (NOK m) | | | | | | | |
| Operating revenue | 16,784 | 18,390 | 18,513 | *18,656* | *19,377* | *19,895* | *20,428* |
| Operating expenditure | 15,233 | 16,198 | 16,983 | *17,225* | *18,079* | *18,431* | *18,791* |
| Operating balance | 1,552 | 2,192 | 1,530 | *1,431* | *1,299* | *1,464* | *1,637* |
| Interest revenue | 235 | 208 | 324 | *505* | *525* | *525* | *558* |
| Interest payments | 385 | 313 | 460 | *723* | *790* | *781* | *804* |
| Current balance | 1,402 | 2,087 | 1,393 | *1,213* | *1,034* | *1,208* | *1,390* |
| Capital balance | -2,258 | -1,018 | -1,690 | *-2,254* | *-1,932* | *-1,374* | *-1,964* |
| Balance before debt movement | -856 | 1,068 | -297 | *-1,041* | *-899* | *-166* | *-573* |
| Financial debt | 19,582 | 20,765 | 21,084 | *22,534* | *23,830* | *24,384* | *25,331* |
| Bank loans | 11,598 | 13,211 | 13,291 | | | | |
| Bonds | 6,000 | 5,500 | 5,500 | | | | |
| Certificates | 1,984 | 2,054 | 2,293 | | | | |
| Quantitative ratios (%) | | | | | | | |
| Debt/operating revenue, % | 116.7 | 112.9 | 113.9 | *120.8* | *123.0* | *122.6* | *124.0* |
| Debt/operating balance, years* | 12.6 | 9.5 | 13.8 | *15.8* | *18.3* | *16.7* | *15.5* |
| Interest payments/operating revenue, % | 2.3 | 1.7 | 2.5 | *3.9* | *4.1* | *3.9* | *3.9* |
| Implicit interest rate, % | 2.0 | 1.5 | 2.2 | *3.2* | *3.3* | *3.2* | *3.2* |
| Operating balance/operating revenue, % | 9.2 | 11.9 | 8.3 | *7.7* | *6.7* | *7.4* | *8.0* |
| Balance before debt movement/total revenue, % | -4.7 | 5.3 | -1.5 | *-5.1* | *-4.4* | *-0.8* | *-2.6* |
| Transfers and grants/operating revenue, % | 43.3 | 40.6 | 37.5 | *38.3* | *38.5* | *38.7* | *39.0* |
| Personnel costs/operating expenditure, % | 49.9 | 48.7 | 48.9 | *50.8* | *50.9* | *50.8* | *50.7* |
| Capital expenditure/total expenditure, % | 17.7 | 13.1 | 12.7 | *16.0* | *12.4* | *11.1* | *12.5* |

* Capped at 100 years; n/a in case of operating deficits

We refer to consolidated accounts as per the KOSTRA database, and then we remove depreciation and repayment instalments from operating expenditure.

Source: KOSTRA, Trondheim Kommune, Scope Ratings

## Appendix V: Peer benchmarking charts (larger municipalities in Norway)

**Figure 13a: Debt – Debt to operating revenue, %**

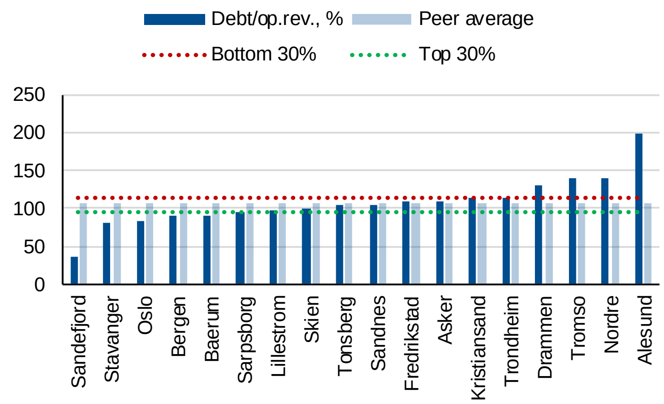



**Figure 13b: Debt – Interest payments to op. revenue %**

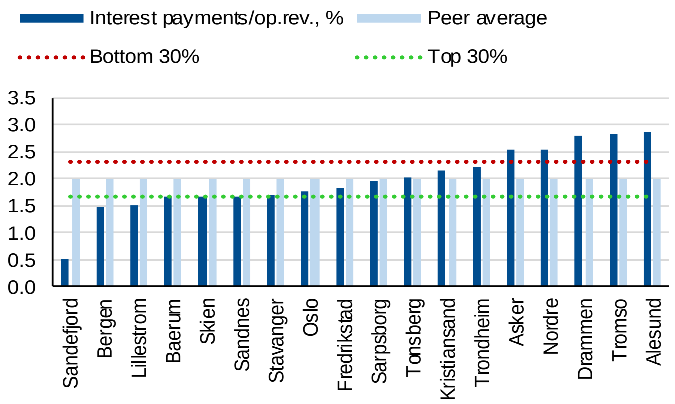



**Figure 13c: Budget – Operating balance to operating revenue, %**

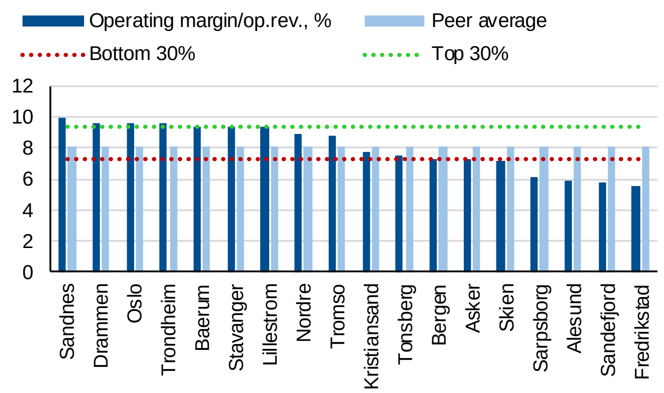
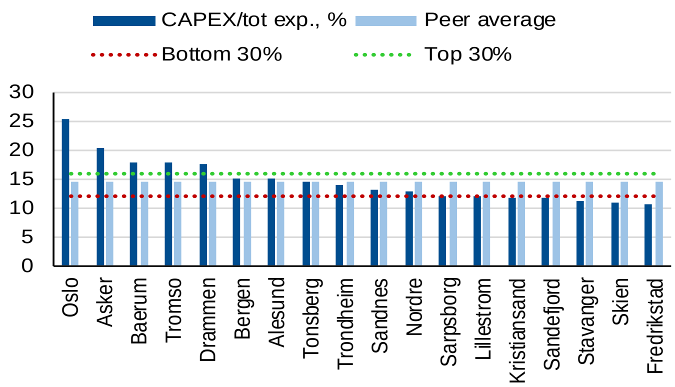



**Figure 13d: Budget – Capital expenditure to operating revenue, %**



## Appendix VI. Norwegian municipalities social scorecard overview

The social scorecard presented in Figure 11 summarises the benchmarking exercise that maps Trondheim's performance relative to other Norwegian municipalities across important social dimensions. On aggregate, Norwegian municipalities spend on healthcare (30% of total expenditure), primary and lower secondary education (17%), and preschool (10%), while demographic trends, income inequality and poverty are important overarching social policy challenges.

As a result, we select several key metrics as a basis for our benchmarking exercise. We calculate standardised z-scores, measuring the distance to the Norwegian municipal average, expressed in standard deviations, across all metrics as follows:

$$Z\text{-}score_{Trondheim} = \frac{X_{Trondheim} - Mean(X)}{Standard\ deviation\ (X)}$$

We then average the z-scores across the various metrics per the social pillar as the table below shows:

| Social pillar | Metrics (relationship to score) |
|---|---|
| **Income inequality and poverty** | Gini coefficient (-)<br>Persistent low-income rates (-) |
| **Old age dependency** | Old age dependency ratio, 2020 (-)<br>Change in old age dependency ratio, 2020-50 (-) |
| **Health access** | Man-years in health and care services per capita (+)<br>Man-years of physicians per capita (+)<br>Man-years of nursing and care services per user (+)<br>Man-years of physiotherapists per capita (+)<br>Man-years in the health centre and school health services per capita (+) |
| **Health outcomes** | Life expectancy (+)<br>Sick leave absence rates per worker (-) |
| **Education resources (primary and lower secondary)** | Teacher hours per pupil in native language education (+)<br>Teacher hours per pupil in special training (+)<br>Class sizes (-) |
| **Education outcomes (primary and lower secondary)** | Share of pupils mastering level 3-5 in reading (+)<br>Share of pupils mastering level 3-5 in maths (+)<br>Average school scores (+) |
| **Kindergarten coverage** | Share of children aged 1-5 in kindergarten (+)<br>Children in public kindergarten as share of total children in kindergarten (+) |

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