Request IR-1:

References:

On page 69 (lines 1-2) of the NS Power General Rate (GRA) Application, NS Power:

> **forecasts that the S&P and DBRS metrics would deteriorate and be below the minimum 10 percent cash flow to debt threshold by 2027.**

Question:

(a) Please provide all source data and workpapers (including all assumptions made regarding the data point estimates) used to come to the conclusion in the statement above regarding the deterioration of NS Power's metrics below 10%, as well as the data and workpapers that were used to estimate the S&P metrics reported in Figure 10-2, and the DBRS metrics reported in Figure 10-3 on page 69 of the Application.

(b) Please report all actual and forecasts for the following additional two S&P metrics and two DBRS metrics over the 2017-2027 period. Provide all source data and workpapers used to provide these figures.

- **(i) S&P – Debt/EBITDA**
- **(ii) S&P – FFO/Cash Interest**
- **(iii) DBRS – Total Debt (%)**
- **(iv) DBRS – EBIT Interest Coverage**

Response IR-1:

(a-b) Please see Confidential Attachment 1 for NS Power's forecast credit metrics calculations for 2025-2027. The figures are based upon NS Power's forecast of 2026 and 2027 financial

results at current rates. NS Power's credit metrics are evaluated by credit rating agencies on a legal entity basis. As a result, the figures in Attachment 1 will not match the forecast figures in NS Power's forecast of regulated financial results. Please refer to Attachments 2 through 16 for credit rating agency annual reports from S&P and DBRS on NS Power, with reported credit metrics.

2026-2027 GRA Cleary IR-01 Confidential Attachment 1 has been removed due to confidentiality.

S&P Global
Ratings

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Summary:

Nova Scotia Power Inc.

Primary Credit Analyst:
Vinod Makkar, CFA, Toronto 416-507-3271; vinod.makkar@spglobal.com

Research Contributor:
Swapnil Bhosale, CRISIL Global Analytical Center, an S&P Global Ratings affiliate, Mumbai

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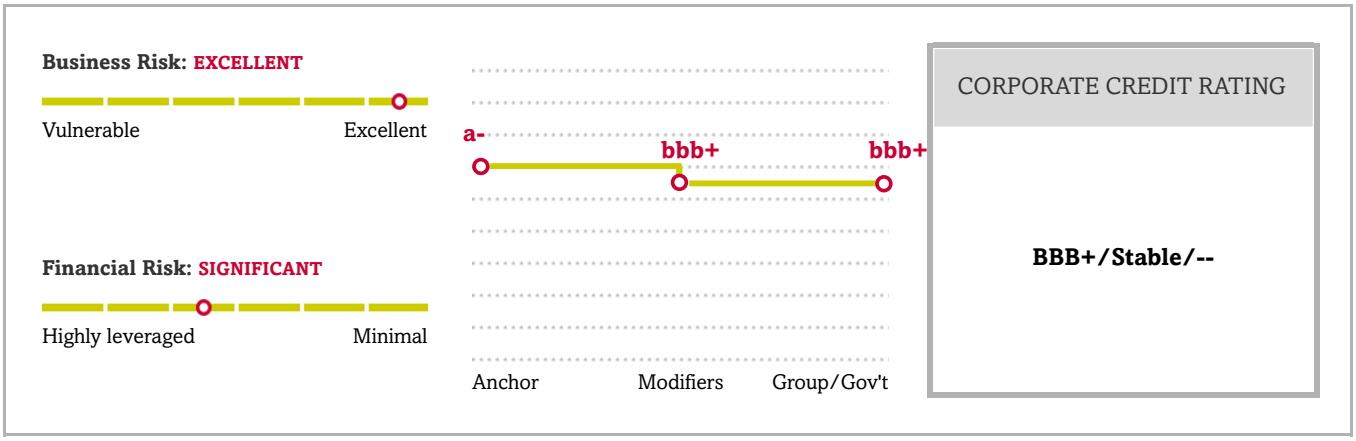
Issue Ratings--Subordination Risk Analysis

Related Criteria

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Summary:

Nova Scotia Power Inc.



Rationale

Business Risk: Excellent	Financial Risk: Significant
• Vertically integrated regulated electric utility providing almost 95% of the generation, transmission and distribution of electricity in Nova Scotia • Nearly 2,490 megawatts (MW) of generation capacity with fairly diversified generation fleet. Electricity comes from various fuels such as coal, natural gas, oil and renewable such as hydro, wind, and biomass • Large and diverse customer base, with about 80% of the revenues coming from residential and commercial customers, who are less susceptible to macroeconomic stresses and business cycles. This results in stable cash flows	• Stable regulated cash flows • Stable financial measures in line with a significant financial risk profile • Transparent financial polices

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Outlook: Stable

The stable outlook on Nova Scotia Power Inc. (NSPI) reflects that on Emera Inc. because S&P Global Ratings view NSPI to be a core entity to Emera under its group rating methodology. The stable outlook on Emera reflects S&P Global Ratings' expectation that the company's cash flows will begin to improve in 2018 and beyond. Moreover, we base the outlook on Emera's financial policy. The company has a strong commitment to maintaining credit quality.

Downside scenario

Because NSPI is core to Emera, there will be no change to our rating on NSPI unless we lower the group credit profile(GCP) on Emera. We could take a negative rating action if Emera does not achieve a funds from operations (FFO)-to-debt ratio of about 13% by 2019. This could follow lower forecast cash flow and the company's unwillingness to support credit metrics with credit-supportive actions such as equity issuance or the sale of noncore assets.

Upside scenario

Because NSPI is core to Emera, there will be no change to our rating on NSPI unless we upgrade the GCP. Although unlikely during the outlook period, we could take a positive rating action if we believe forecast FFO-to-debt will be above 16%. This could occur if Emera were to generate higher cash flow or delever its balance sheet beyond what we forecast.

Our Base-Case Scenario

Assumptions

- Stable economic conditions in the service territory, with a modest increase in the customer base
- Continued use of regulatory cost recovery mechanisms. The utility will not experience any adverse material regulatory decisions
- NSPI will maintain its regulatory capital structure and earned returns will remain at or near authorized levels
- Average annual capital expenditures will remain at about C$355 million
- Average annual dividends of C$105 million in the forecast period
- Discretionary cash flows will be negative

Key Metrics

	2016A	2017E	2018E
FFO/total debt (%)	13.1%	13.0-13.5%	13.0-14.0%
Debt/debt and equity	5.10x	5.25x-5.75x	5.0x-5.5x

Note: Fiscal year-end is Dec. 31. FFO--Funds from operations. A--Actual. E--Estimate.

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Company Description

NSPI is a vertically integrated regulated electric utility and the primary electricity supplier in the Province of Nova Scotia.

NSPI owns and operates 5,000 kilometers (km) of transmission facilities and 27,000 km of distribution facilities. The company also provides services to 515,000 customers. NSPI generates most of the power in Nova Scotia. It has about 2,490 MW of generating capacity. Of that, 43% is coal-fired; 29% is natural gas or oil and 19% hydro and wind; 7% is pet-coke; and 2% is biomass-fueled.

NSPI is a wholly owned subsidiary of Emera.

Business Risk: Excellent

We assess NSPI's business risk profile as excellent, reflecting our assessment of the regulated accounting for company's operations being in low-risk country such as Canada, are rate-regulated. NSPI's business risk profile reflects our assessment of the Nova Scotia Utility and Review Board's (UARB) regulatory framework.

We view the UARB regulatory process as transparent, consistent, and predictable. The board publishes details of all hearings, and the rationale supporting its decisions. NSPI has a UARB-approved fuel adjustment mechanism that allows the utility to recover fluctuating fuel expenses from customers through annual fuel rate adjustments. NSPI is regulated under a cost-of-service model; rates are typically determined in a timely fashion and allow for the recovery of prudently incurred costs and the opportunity to earn a modest return. On Nov. 16, 2017, UARB approved amended rates, which results in an average annual rate increase of 1.5% for 2017-2019.

Because NSPI earns the majority of its revenues from regulated operations, its competitive position incorporates the strengths of a fully regulated electric utility operation that serves a large customer base of about 515,000 in Nova Scotia. The company delivers about 95% of the total electricity in the Province. We expect NSPI's customer profile to be stable, with about 80% of revenues coming from inelastic residential and commercial customers, who are less sensitive to macroeconomic stresses and business cycles. This further supports the company's credit quality.

Financial Risk: Significant

We assess NSPI's financial risk profile as significant using more relaxed financial benchmarks compared to the typical corporate issuer. This assessment primarily reflects regulated cash flows from NSPI's generation operations, which we believe is at the higher end of the utility risk spectrum compared with that of other transmission and distribution companies.

In our base-case scenario, we expect NSPI's core credit ratio in the 13%-15% range. Furthermore, we expect annual capital spending for the next few years to be about C$355.0 million annually, primarily from increased spending on information technology projects, Maritime Link-related transmission projects, and a dividend payments, which will

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result in negative discretionary cash flows for the forecasted period.

Liquidity: Adequate

We assess NSPI's liquidity as adequate to cover its needs over the next 12 months. Based on our criteria, we expect that liquidity sources will be sufficient to cover uses more than 1.1x in the next 12 months. We expect that, in the event of a 10% decline in EBITDA, the company's sources of funds would still exceed its uses. In our view, NSPI has well-established and solid bank relationships, the ability to absorb high impact, low probability events without the need for refinancing, and a satisfactory standing in credit markets also support our assessment of its liquidity as adequate.

Principal Liquidity Sources	Principal Liquidity Uses
• FFO of C$350 million-C$400 million over the next 12 months • Available credit facility of about C$342 million over the next 12 months	• Capital spending of C$350-C$400 million over the next 12 months. • Dividend payments of about C$105 million in that time • Working capital outflows of about C$28 million over the next 12 months

Other Credit Considerations

We apply a negative one-notch adjustment to the anchor score based on our comparative rating analysis because we are forecasting NSPI's financial metrics, specifically its FFO-to-debt, to be at the lower end of the range (13%-23%) for the significant financial risk profile assessment. As a result, the SACP is 'bbb+'.

Group Influence

We base our ratings on NSPI on our view that the subsidiary is core to the ultimate parent, Emera. We believe that NSPI is unlikely to be sold, and that it operates in regulated distribution that is integral to Emera's overall group strategy. We believe that Emera's senior management has demonstrated long-term commitment to NSPI. The subsidiary is successful, it has been operating for more than five years (so there is no startup risk), and we are not aware of any ongoing performance problems that could result in underperformance against the group management earnings targets. As such, we equalize the ratings on NSPI with those on Emera's GCP, at 'BBB+'.

Ratings Score Snapshot

Corporate Credit Rating

BBB+/Stable/--

Business risk: Excellent

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- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/Leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Negative (-1 notch)

Stand-alone credit profile : bbb+

- **Group credit profile:** bbb+
- **Entity status within group:** Core (no impact)

Issue Ratings--Subordination Risk Analysis

Capital structure	Analytical conclusions
NSPI's capital structure consist of about $2.3 billion of unsecured debt and all the debt is at the NSPI level.	NSPI issues its debt at the same company and there is only one tranche of debt, the senior unsecured. Based on the structural subordination analysis, there is no notching for the debt rating. We rate the senior unsecured debt at the NSPI level 'BBB+', the same as the long-term corporate credit rating on the company in accordance with our criteria.

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, Sept. 21, 2017
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Guarantee Criteria, Oct. 21, 2016
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014

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- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Timeliness Of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings, Oct. 24, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Business And Financial Risk Matrix

	Financial Risk Profile					
Business Risk Profile	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

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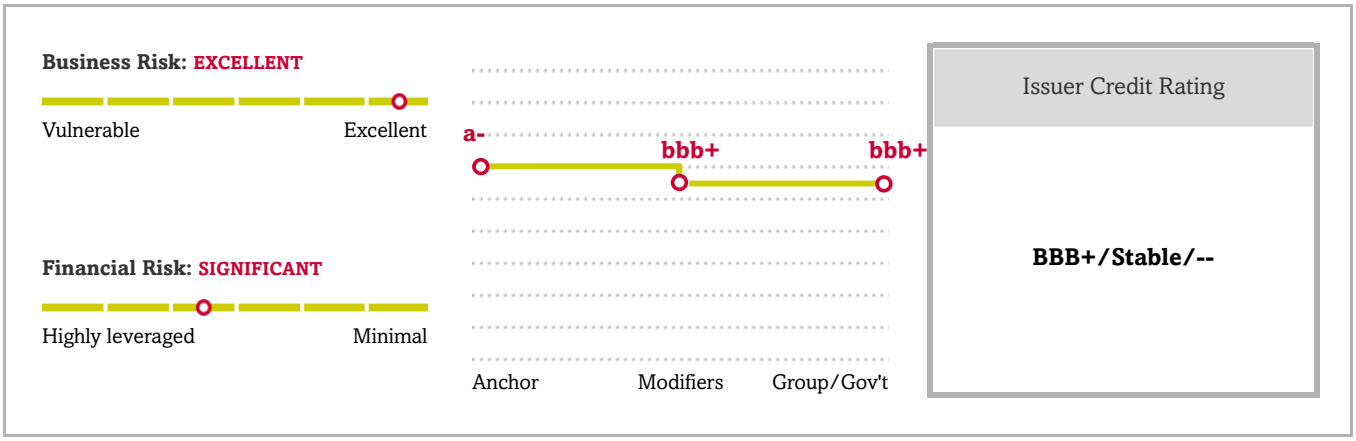
Issue Ratings - Subordination Risk Analysis

Reconciliation

Ratings Score Snapshot

Related Criteria

Nova Scotia Power Inc.



Credit Highlights

Overview

Key Strengths	Key Risks
Nova Scotia Power Inc. (NSPI) is a low-risk, vertically integrated regulated electric utility with no exposure to non-utility operations.	High reliance on riskier coal-based generation.
Generally credit-supportive regulatory framework with forward test year, cost of service methodology, and fuel adjustment mechanism to pass through commodity costs to customers.	Limited geographic and regulatory diversity.
We consider NSPI an insulated entity with ratings of up to one-notch higher than the group credit profile of parent Emera Inc.	Financial metrics in the lower end of the financial risk profile category with limited cushion.
	Negative discretionary cash flow, indicating external funding needs.

NSPI has sufficient liquidity sources to cover its uses over the next 6-12 months. As of Dec. 31, 2019, NSPI had a C$600 million committed credit facility, mostly undrawn, that matures in 2024. The company also has a commercial paper (CP) program, with about C$310 million outstanding, which is backstopped by the credit facility. Furthermore, NSPI had no long-term debt maturities over the next 12 months. As a result, we expect NSPI to have sufficient liquidity over the next six-12 months. Furthermore, we expect the utility to scale back on capital spending or dividends to the parent group if needed.

NSPI's fuel stability plan approved by the Nova Scotia Utility and Review Board (UARB) in Dec. 2019 covers only the fuel component with an average base rate increase of about 1.5% each year through 2022. The increase in base rates do not cover the non-fuel component. NSPI plans to file and establish new base rates for the non-fuel component by the beginning of 2023. As a result, this will pressure NSPI's credit metrics over our outlook period until new rates are established, especially given that capital spending exceeds depreciation by about 1.50x.

NSPI lacks geographic and regulatory diversity. NSPI serves only the Province of Nova Scotia with a relatively small customer base of about 523,000, albeit mostly residential and small commercial segments that are less sensitive to economic cycles. However, when compared with other utility peers, NSPI lacks geographic and regulatory diversity, making NSPI dependent on the UARB to sustain credit quality.

Outlook: Stable

The stable outlook on NSPI in part reflects our outlook on Emera. In addition, the outlook reflects our view that NSPI will continue to generate stable cash flow and maintain funds from operations (FFO) to debt of about 13% during our two-year outlook period. Furthermore, the stable outlook on NSPI assumes no change to the current insulation between NSPI and Emera.

Downside scenario

We could lower the ratings on NSPI over the next 12 to 24 months if the utility's financial measures deteriorate with FFO to debt consistently below 12%. We could also lower the rating on NSPI if we lower our ratings on Emera.

Upside scenario

Although unlikely, we could raise our ratings on NSPI over our outlook period if we raise our rating on Emera and if, at the same time, NSPI's FFO to debt is consistently above 15%.

Our Base-Case Scenario

Assumptions

- No material persistent impact from the COVID-19 pandemic;
- Stable regulatory regime in Nova Scotia with no material adverse regulatory decisions;
- Base rate increase averaging at about 1.5% per year from 2020 to 2022, consistent with the regulator approved fuel stability plan in Dec. 2019;
- Capital spending averaging about C$350 million in each of 2020 and 2021;
- Dividend payments averaging about C$175 million in each of 2020 and 2021; and
- Commodity costs remains pass through to customers

Key Metrics

	2019a	2020e	2021f
FFO to debt (%)	13.4	13-14	~13
FFO cash interest coverage (x)	3.8	~4.0	~4.0

A--Actual. E--Estimate. FFO--Funds from operations.

Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes about 25% of parent Emera's consolidated net income. NSPI has a generation capacity of about 2,441 megawatts (MW), largely derived from coal and natural gas.

Business Risk: Excellent

Our assessment of NSPI's business risk reflects the utility's lower-risk, rate-regulated, and vertically integrated electric utility business as well as its management of regulatory risk, which we view as consistent with that of its peers.

In our view, the regulatory process is generally credit supportive. Tariff framework is based on a forward test-year basis under a cost of service methodology. In addition, commodity costs flow through to customers under the fuel adjustment mechanism (FAM). Further supporting our business risk is about 80% of NSPI's customers are in the residential and commercial segments that are less sensitive to economic cycles.

Offsetting factors to NSPI's business risk include a moderate-sized customer base with about 520,000 customers. In addition, there is no regulatory or geographical diversity because the utility operates only in the Province of Nova Scotia.

Peer comparison

Table 1

Nova Scotia Power Inc. -- Peer Comparison

Industry Sector: Electric

	Nova Scotia Power Inc.	Maritime Electric Co. Ltd.	Tucson Electric Power Co.	Hawaiian Electric Industries Inc.
Ratings as of April 6, 2020	BBB+/Stable/(A-2)	BBB+/Stable/--	A-/Negative/NR	BBB-/Positive/A-3
	--Fiscal year ended Dec. 31, 2019--			
(Mil. Mix curr.)	C$	C$	$	$
Revenue	1,430.0	210.7	1,418.3	2,860.8
EBITDA	513.0	69.1	486.3	660.7
Funds from operations (FFO)	381.4	51.6	413.5	485.9
Interest expense	153.6	17.3	90.8	118.8
Cash interest paid	135.6	17.5	86.8	136.7
Cash flow from operations	169.4	54.1	408.5	528.2
Capital expenditure	340.0	51.4	653.5	559.4
Free operating cash flow (FOCF)	(170.6)	2.7	(245.1)	(31.2)
Discretionary cash flow (DCF)	(170.6)	(5.8)	(320.1)	(166.2)
Cash and short-term investments	0.0	0.0	9.8	169.2
Debt	2,854.9	291.2	2,041.8	2,757.4

Table 1

Nova Scotia Power Inc. -- Peer Comparison (cont.)

Industry Sector: Electric

	Nova Scotia Power Inc.	Maritime Electric Co. Ltd.	Tucson Electric Power Co.	Hawaiian Electric Industries Inc.
Equity	1,443.0	155.3	1,978.2	2,179.4
Adjusted ratios				
EBITDA margin (%)	35.9	32.8	34.3	23.1
Return on capital (%)	6.7	7.9	8.0	7.7
EBITDA interest coverage (x)	3.3	4.0	5.4	5.6
FFO cash interest coverage (x)	3.8	3.9	5.8	4.6
Debt/EBITDA (x)	5.6	4.2	4.2	4.2
FFO/debt (%)	13.4	17.7	20.3	17.6
Cash flow from operations/debt (%)	5.9	18.6	20.0	19.2
FOCF/debt (%)	(6.0)	0.9	(12.0)	(1.1)
DCF/debt (%)	(6.0)	(2.0)	(15.7)	(6.0)

Financial Risk: Significant

We assess NSPI's financial risk profile using our medial volatility financial benchmark tables rather than the financial benchmarks we use for a typical corporate issuer, which reflects the company's lower-risk regulated utility operations and effective management of regulatory risk. NSPI has a relatively large capital program--about 1.5x that of depreciation expense--that will result in negative discretionary cash flow and rely on external financing to fund its capital programs.

Under our base-case scenario, which includes capital spending of about C$350 million in each of 2020 and 2021 and dividend payments averaging at about C$175 million in each of 2020 and 2021, we forecast NSPI's FFO to debt at about 13% for 2020 and 2021 period. Our base-case scenario also includes the approved three-year fuel stability plan that results in an average annual overall rate increase of 1.5% to recover fuel costs for the period of 2020 through 2022.

NSPI's financial measures include FFO to debt at the low end of the financial risk category; as a result, we ascribed a negative comparable rating analysis modifier to reflect this.

Financial summary

Table 2

Nova Scotia Power Inc. -- Financial Summary

Industry Sector: Electric

	--Fiscal year ended Dec. 31--				
	2019	**2018**	**2017**	**2016**	**2015**
(Mil. C$)					
Revenue	1,430.0	1,440.0	1,338.0	1,356.0	1,417.3
EBITDA	513.0	549.8	554.2	510.3	549.0
Funds from operations (FFO)	381.4	408.2	367.1	344.4	355.1
Interest expense	153.6	154.6	163.2	132.9	137.3
Cash interest paid	135.6	134.6	159.2	127.9	129.8
Cash flow from operations	169.4	300.2	511.1	539.4	338.1
Capital expenditure	340.0	326.9	373.9	293.0	250.7
Free operating cash flow (FOCF)	(170.6)	(26.7)	137.2	246.4	87.4
Discretionary cash flow (DCF)	(170.6)	(203.7)	(67.8)	101.4	(155.5)
Cash and short-term investments	0.0	0.0	0.0	0.0	0.0
Gross available cash	0.0	0.0	0.0	0.0	0.0
Debt	2,854.9	2,820.8	3,076.3	2,539.3	2,661.4
Equity	1,443.0	1,137.0	1,077.0	1,108.0	1,113.1
Adjusted ratios					
EBITDA margin (%)	35.9	38.2	41.4	37.6	38.7
Return on capital (%)	6.7	7.6	8.1	8.2	9.1
EBITDA interest coverage (x)	3.3	3.6	3.4	3.8	4.0
FFO cash interest coverage (x)	3.8	4.0	3.3	3.7	3.7
Debt/EBITDA (x)	5.6	5.1	5.6	5.0	4.8
FFO/debt (%)	13.4	14.5	11.9	13.6	13.3
Cash flow from operations/debt (%)	5.9	10.6	16.6	21.2	12.7
FOCF/debt (%)	(6.0)	(0.9)	4.5	9.7	3.3
DCF/debt (%)	(6.0)	(7.2)	(2.2)	4.0	(5.8)

Liquidity: Adequate

We assess the company's liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. The assessment also reflects the company's generally prudent risk management, sound relationship with banks, and a generally satisfactory standing in credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Credit facility availability of about C$600 million as of Dec. 31, 2019; and	• Debt maturities of C$300 million, including outstanding commercial paper;

- Cash FFO of about C$300 million
- Capital spending of about C$340 million; and
- Dividend payments of about C$220 million

Debt maturities

- NSPI does not have any long-term debt maturities over the next five years.

Environmental, Social, And Governance

NSPI's main environmental exposure relates to greenhouse gas (GHG) emissions because about 80% of NSPI's owned generation capacity are carbon based, including coal, gas, and petroleum coke (petcoke), with the remaining 20% from renewable energy, including wind, hydro, and biomass. However, NSPI participates in Nova Scotia's cap-and-trade program to offset its GHG footprint. In addition, NSPI has been making significant investment in renewable energy sources and purchasing third-party renewable energy. NSPI supplements its own generation capacity with 545 MW of renewable energy purchases through independent power producers and the community feed in tariff program. Furthermore, NSPI will have an increase in renewable electricity supply upon delivery of the Nova Scotia block (NS Block), from which NSPI will receive 20% of the output from the Muskrat Falls hydroelectric project, an 824 MW hydroelectric generating facility. We expect delivery of the NS Block to commence in mid-2020.

From a social perspective, NSPI has a history of providing safe and reliable electricity to its customers, which should enable it to maintain social cohesion. Governance factors are neutral. In our view, NSPI's board is capably engaged in risk oversight on behalf of all stakeholders.

Group Influence

We view NSPI as an insulated subsidiary within the Emera group, incorporated as a separate legal entity with financial performance and funding that are highly independent from the group, including issuing long- and short-term debt. The company maintains its own separate credit facilities, and does not commingle its funds, assets, or cash flows with the rest of the group. In addition, there is a strong economic basis for Emera to preserve NSPI's credit strength, and we do not expect a default of the other group entities within Emera to directly lead to a default at NSPI.

Issue Ratings - Subordination Risk Analysis

Capital structure

As of Dec. 31, 2019, NSPI's capital structure consists of about C$2.1 billion of senior unsecured debt and about C$310 million of short-term debt, including outstanding commercial paper.

Analytical conclusions

We rate the senior unsecured debt at NSPI the same as the issuer credit rating because it is unsecured debt of a qualifying investment-grade regulated utility. The rating of the CP program is 'A-1(Low)' on the Canada National Scale Commercial Paper.

Reconciliation

Table 3

Reconciliation Of Nova Scotia Power Inc. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. C$)

	--Fiscal year ended Dec. 31, 2019--						
Nova Scotia Power Inc. reported amounts							
	Debt	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
	2,666.0	503.0	272.0	143.0	513.0	172.0	343.0
S&P Global Ratings' adjustments							
Cash taxes paid	--	--	--	--	4.0	--	--
Cash taxes paid: Other	--	--	--	--	--	--	--
Cash interest paid	--	--	--	--	(132.0)	--	--
Reported lease liabilities	15.0	--	--	--	--	--	--
Operating leases	--	1.0	0.6	0.6	(0.6)	0.4	--
Postretirement benefit obligations/deferred compensation	100.1	--	--	--	--	--	--
Capitalized interest	--	--	--	3.0	(3.0)	(3.0)	(3.0)
Share-based compensation expense	--	2.0	--	--	--	--	--
Asset retirement obligations	73.8	7.0	7.0	7.0	--	--	--
Nonoperating income (expense)	--	--	(3.0)	--	--	--	--
Total adjustments	188.9	10.0	4.6	10.6	(131.6)	(2.6)	(3.0)
S&P Global Ratings' adjusted amounts							
	Debt	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
	2,854.9	513.0	276.6	153.6	381.4	169.4	340.0

Ratings Score Snapshot

Issuer Credit Rating

BBB+/Stable/--

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (-1 notch)

Stand-alone credit profile : bbb+

- **Group credit profile:** bbb
- **Entity status within group:** Insulated (no impact)

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of April 9, 2020)*

Nova Scotia Power Inc.	
Issuer Credit Rating	BBB+/Stable/--
Commercial Paper	
Canada National Scale Commercial Paper	A-1(LOW)
Senior Unsecured	BBB+
Issuer Credit Ratings History	
24-Mar-2020	BBB+/Stable/--
05-Dec-2018	BBB+/Negative/--
04-Dec-2017	BBB+/Stable/--
08-Sep-2015	BBB+/Negative/--
Related Entities	
Emera Inc.	
Issuer Credit Rating	BBB/Stable/--
Preferred Stock	
Canada National Scale Preferred Share	P-3(High)
Preferred Stock	BB+
Senior Unsecured	BBB-
Subordinated	BB+
Tampa Electric Co.	
Issuer Credit Rating	BBB+/Stable/A-2
Senior Unsecured	BBB+
TECO Energy Inc.	
Issuer Credit Rating	BBB/Stable/NR
Teco Finance Inc.	
Issuer Credit Rating	BBB/Stable/NR

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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S&P Global
Ratings

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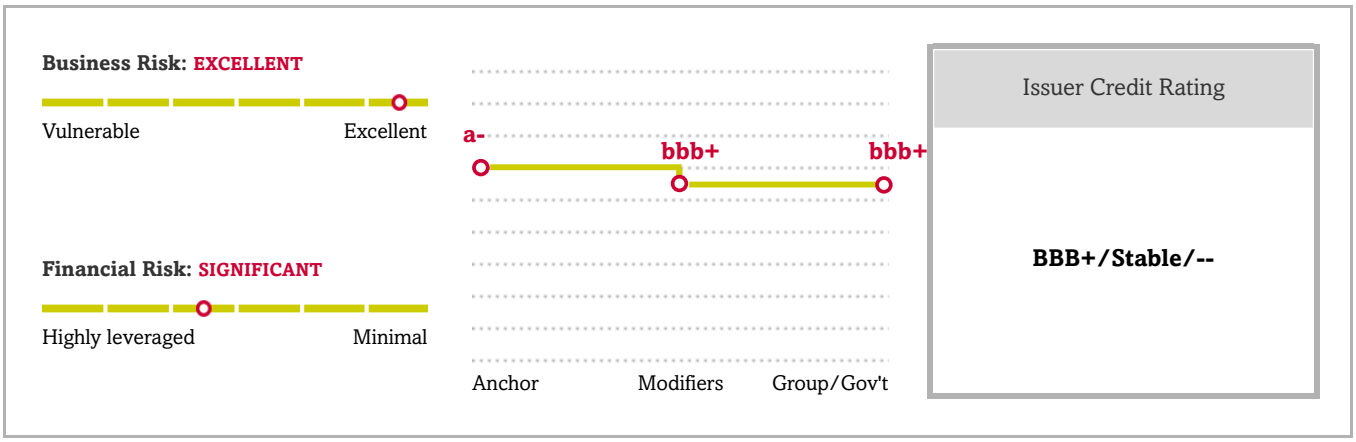
Group Influence

Issue Ratings - Subordination Risk Analysis

Ratings Score Snapshot

Related Criteria

Nova Scotia Power Inc.



Credit Highlights

Overview

Key strengths	Key risks
Low-risk, vertically integrated regulated electric utility with no exposure to nonutility operations.	High reliance on riskier coal-based generation.
Generally credit-supportive regulatory framework with forward test years, cost of service methodology, and fuel adjustment mechanism to pass through commodity costs to customers.	Limited geographic and regulatory diversity.
We consider Nova Scotia Power an insulated entity with ratings of up to one-notch higher than the group credit profile of parent Emera Inc.	Financial metrics in the lower end of the financial risk profile category with limited cushion.

Nova Scotia Power Inc. (NSPI) operates under the fuel stability plan established in 2020 that covers only the fuel component with an average base rate increase of about 1.5% each year through 2022. The increase in base rates covers only the fuel component, with any variances between the approved and actual amount to be recovered after 2022, which can result in higher regulatory lag. In addition, NSPI's capital spending continues to outpace depreciation expense at about 1.5x and we expect the company to file and establish new base rates for the nonfuel component by the beginning of 2023. As a result, we forecast NSPI's credit metrics to be under pressure until new rates are established, with funds from operation (FFO) to debt of about 12%-13%, reflecting the lower end of the financial risk category.

NSPI lacks geographic and regulatory diversity. NSPI serves only the Province of Nova Scotia, with a relatively modest customer base of about 529,000, albeit mostly residential and small commercial segments that are less sensitive to macroeconomic stress and business cycles. Nonetheless, the residential customer base has some sensitivity to volume fluctuations, primarily weather driven. Compared with other utility peers, NSPI lacks geographic and regulatory diversity, making it dependent on the Nova Scotia Utility and Review Board (UARB), the regulator of Nova Scotia, to sustain credit quality.

Outlook: Stable

The stable outlook on NSPI in part reflects our outlook on parent Emera. In addition, the outlook reflects our view that NSPI will continue to generate stable cash flow and maintain FFO to debt of about 12%-13% during our two-year outlook period. Furthermore, the stable outlook on NSPI assumes no change to the current insulation between NSPI and Emera.

Downside scenario

We could lower the rating on NSPI over the next 12-24 months if:

- Financial measures deteriorate, with FFO to debt consistently below 12%; or
- We lower our rating on parent Emera.

Upside scenario

We could raise our rating on NSPI over our outlook period if:

- We raise our rating on Emera; and
- NSPI's FFO to debt is consistently above 15%.

Our Base-Case Scenario

Assumptions

- No material persistent impact from the COVID-19 pandemic;
- Normalized weather with no material impact on electricity consumption and sales;
- Stable regulatory regime in Nova Scotia with no material adverse regulatory decisions;
- Base rate increase averaging at about 1.5% per year through 2022, consistent with the fuel stability plan;
- Capital spending averaging about C$370 million in 2021 and 2022;
- Dividend payments averaging about C$115 million in 2021 and 2022; and
- Commodity costs remains pass through to customers.

Key Metrics

Table 1

Nova Scotia Power Inc.--Key Metrics

	2020a	2021e	2022f
FFO to debt (%)	12.0	12-13	~13

Table 1

Nova Scotia Power Inc.--Key Metrics (cont.)

	2020a	2021e	2022f
FFO cash interest coverage (x)	3.8	~4.0	~4.0

a--Actual. e--Estimate. f--Forecast. FFO--Funds from operations.

Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes about 25% of parent Emera's consolidated net income. NSPI has a generation capacity of about 2,433 megawatts (MW), largely derived from coal and natural gas.

Peer Comparison

Table 2

Nova Scotia Power Inc. -- Peer Comparison

Industry sector: electric

	Nova Scotia Power Inc.	Tucson Electric Power Co.	Caribbean Utilities Co. Ltd.	Hawaiian Electric Co. Inc.
Ratings as of May 6, 2021	BBB+/Stable/--	A-/Stable/NR	BBB+/Negative/--	BBB/Stable/A-2
	--Fiscal year ended Dec. 31, 2020--			
(Mil.)	**C$**	**$**	**$**	**$**
Revenue	1,494.0	1,424.7	177.5	2,265.3
EBITDA	529.0	507.9	67.5	549.8
FFO	380.2	429.8	53.2	434.1
Interest expense	149.8	92.5	15.4	77.9
Cash interest paid	136.8	92.1	14.4	77.6
Cash flow from operations	325.2	451.0	59.4	346.5
Capital expenditure	318.9	884.0	50.2	359.1
FOCF	6.3	(433.0)	9.2	(12.7)
DCF	(251.7)	(508.0)	(15.9)	(120.8)
Cash and short-term investments	0.0	61.0	45.6	47.4
Debt	3,169.6	2,218.6	265.2	2,204.2
Equity	1,311.0	2,341.4	289.2	2,159.1
Adjusted ratios				
EBITDA margin (%)	35.4	35.6	38.1	24.3
Return on capital (%)	6.4	7.2	5.9	6.4
EBITDA interest coverage (x)	3.5	5.5	4.4	7.1
FFO cash interest coverage (x)	3.8	5.7	4.7	6.6
Debt/EBITDA (x)	6.0	4.4	3.9	4.0
FFO/debt (%)	12.0	19.4	20.0	19.7

Table 2

Nova Scotia Power Inc. -- Peer Comparison (cont.)				
Cash flow from operations/debt (%)	10.3	20.3	22.4	15.7
FOCF/debt (%)	0.2	(19.5)	3.5	(0.6)
DCF/debt (%)	(7.9)	(22.9)	(6.0)	(5.5)

FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Business Risk: Excellent

Our assessment of NSPI's business risk reflects its lower-risk, rate-regulated, and vertically integrated electric utility business, as well as its management of regulatory risk, which we view as consistent with that of its peers. In our view, the regulatory process is generally credit supportive. The tariff framework is based on a forward test-year basis under a cost of service methodology. In addition, commodity costs flow through to customers under the fuel adjustment mechanism (FAM). About 80% of NSPI's customers are in the residential and commercial segments, which are less sensitive to economic cycles.

Offsetting factors to NSPI's business risk include a moderate-sized customer base with about 529,000 customers. In addition, there is no regulatory or geographical diversity because the utility operates only in Nova Scotia.

Financial Risk: Significant

We assess NSPI's financial risk profile using our medial volatility financial benchmark tables rather than the financial benchmarks we use for a typical corporate issuer, which reflects the company's lower-risk regulated utility operations and effective management of regulatory risk. For 2020, NSPI underperformed against our base-case forecast, with FFO to debt of about 12%. This was primarily due to a warmer winter than normal that led to lower electric consumption and sales of about C$32 million. In addition, the pandemic moderately affected electric consumption and sales in 2020. NSPI experienced lower electricity consumption and sales from the commercial and industrial segment, offset by the higher-margin residential segment. With the roll out of the vaccine and gradual economic recovery, we expect electricity sales and financial measures to stabilize.

NSPI currently operates under the fuel stability plan through 2022, with an average annual rate increase of 1.5% that covers only the fuel component. Although the utility can pass through all fuel costs to customers through the FAM, any variances will not be reconciled until after 2022, which can lead to longer regulatory lag. In addition, NSPI has a relatively large capital program--about 1.5x that of depreciation expense--that will result in negative discretionary cash flow and rely on external financing for funding. We expect the company to file and establish new base rates for the nonfuel component by the beginning of 2023. As a result, we expect NSPI's credit metrics to be pressured in 2021 and 2022 while operating under the fuel stability plan and with a large capital program.

Under our base-case scenario, which includes no persistent impact from the pandemic, the fuel stability plan with average annual fuel increases of 1.5%, capital spending of about C$370 million and dividend payments averaging about C$115 million in each of 2021 and 2022, and continued group support from Emera to support the regulated

capital structure, we forecast NSPI's FFO to debt at about 12%-13% for 2021 and 2022. NSPI's financial measures include FFO to debt at the low end of the financial risk category; as a result, we ascribed a negative comparable rating analysis modifier.

Financial summary

Table 3

Nova Scotia Power Inc. -- Financial Summary

Industry sector: electric

	--Fiscal year ended Dec. 31--				
	2020	**2019**	**2018**	**2017**	**2016**
(Mil. C$)					
Revenue	1,494.0	1,430.0	1,440.0	1,338.0	1,356.0
EBITDA	529.0	513.0	549.8	554.2	510.3
FFO	380.2	381.4	408.2	367.1	344.4
Interest expense	149.8	153.6	154.6	163.2	132.9
Cash interest paid	136.8	135.6	134.6	159.2	127.9
Cash flow from operations	325.2	169.4	300.2	511.1	539.4
Capital expenditure	318.9	340.0	326.9	373.9	293.0
FOCF	6.3	(170.6)	(26.7)	137.2	246.4
DCF	(251.7)	(170.6)	(203.7)	(67.8)	101.4
Cash and short-term investments	0.0	0.0	0.0	0.0	0.0
Gross available cash	0.0	0.0	0.0	0.0	0.0
Debt	3,169.6	2,854.9	2,820.8	3,076.3	2,539.3
Equity	1,311.0	1,443.0	1,137.0	1,077.0	1,108.0
Adjusted ratios					
EBITDA margin (%)	35.4	35.9	38.2	41.4	37.6
Return on capital (%)	6.4	6.7	7.6	8.1	8.2
EBITDA interest coverage (x)	3.5	3.3	3.6	3.4	3.8
FFO cash interest coverage (x)	3.8	3.8	4.0	3.3	3.7
Debt/EBITDA (x)	6.0	5.6	5.1	5.6	5.0
FFO/debt (%)	12.0	13.4	14.5	11.9	13.6
Cash flow from operations/debt (%)	10.3	5.9	10.6	16.6	21.2
FOCF/debt (%)	0.2	(6.0)	(0.9)	4.5	9.7
DCF/debt (%)	(7.9)	(6.0)	(7.2)	(2.2)	4.0

FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Reconciliation

Table 4

Nova Scotia Power Inc.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts

	--Fiscal year ended Dec. 31, 2020--						
Nova Scotia Power Inc. reported amounts (mil. C$)							
	Debt	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
	2,942.0	517.0	275.0	140.0	529.0	325.0	319.0
S&P Global Ratings' adjustments							
Cash taxes paid	--	--	--	--	(12.0)	--	--
Cash interest paid	--	--	--	--	(133.0)	--	--
Reported lease liabilities	22.0	--	--	--	--	--	--
Operating leases	--	1.0	0.7	0.7	(0.7)	0.3	--
Postretirement benefit obligations/deferred compensation	96.6	--	--	--	--	--	--
Capitalized interest	--	--	--	2.0	(2.0)	(2.0)	(2.0)
Share-based compensation expense	--	2.0	--	--	--	--	--
Power purchase agreements	30.0	3.0	1.1	1.1	(1.1)	1.9	1.9
Asset-retirement obligations	79.0	6.0	6.0	6.0	--	--	--
Nonoperating income (expense)	--	--	(3.0)	--	--	--	--
Total adjustments	227.6	12.0	4.8	9.8	(148.8)	0.2	(0.1)
S&P Global Ratings' adjusted amounts							
	Debt	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
	3,169.6	529.0	279.8	149.8	380.2	325.2	318.9

Liquidity: Adequate

We assess the company's liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. The assessment also reflects the company's generally prudent risk management, sound relationships with banks, and generally satisfactory standing in the credit markets.

Principal liquidity sources	Principal liquidity uses
• Credit facility availability of about C$590 million as of Dec. 31, 2020; and • Cash FFO of about C$315 million.	• Debt maturities of C$290 million, including outstanding commercial paper; and • Capital spending of about C$380 million.

Debt maturities

NSPI does not have any long-term debt maturities over the next five years.

Environmental, Social, And Governance

NSPI's main environmental exposure relates to greenhouse gas (GHG) emissions because about 70% of its owned generation capacity is carbon based, including coal, gas, and petroleum coke (petcoke), with the remaining 30% from renewable energy, including wind, hydro, and biomass. However, NSPI participates in Nova Scotia's cap-and-trade program to offset its GHG footprint. In addition, NSPI has been making significant investments in renewable energy sources and purchasing third-party renewable energy. NSPI supplements its own generation capacity with 545 MW of renewable energy purchases through independent power producers and the community feed-in tariff program. Furthermore, NSPI's renewable electricity supply will increase to about 60% upon delivery of the Nova Scotia block (NS Block), from which it will receive 20% of the output from the Muskrat Falls hydroelectric project, an 824-MW hydroelectric generating facility. We expect delivery of the NS Block to commence in 2021.

From a social perspective, NSPI has historically provided safe and reliable electricity to its customers, which should enable it to maintain social cohesion. Governance factors are neutral. In our view, NSPI's board is capably engaged in risk oversight on behalf of all stakeholders.

Group Influence

We view NSPI as an insulated subsidiary within the Emera group, incorporated as a separate legal entity with financial performance and funding that are highly independent from the group, including issuing long- and short-term debt. The company maintains its own separate credit facilities, and does not commingle its funds, assets, or cash flows with the rest of the group. In addition, there is a strong economic basis for Emera to preserve NSPI's credit strength, and we do not expect a default of the other group entities within Emera to directly lead to a default at NSPI.

Issue Ratings - Subordination Risk Analysis

Capital structure

As of Dec. 31, 2020, NSPI's capital structure consisted of about C$2.67 billion of senior unsecured debt and about C$290 million of outstanding commercial paper.

Analytical conclusions

We rate the senior unsecured debt at NSPI the same as the issuer credit rating because it is unsecured debt of a qualifying investment-grade regulated utility. The rating on the commercial paper program is 'A-1(Low)' on the Canada National Scale.

Ratings Score Snapshot

Issuer Credit Rating

BBB+/Stable/--

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Negative (-1 notch)

Stand-alone credit profile : bbb+

- **Group credit profile:** bbb
- **Entity status within group:** Insulated (no impact)

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
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- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of May 11, 2021)*

Nova Scotia Power Inc.	
Issuer Credit Rating	BBB+/Stable/--
Commercial Paper	
Canada National Scale Commercial Paper	A-1(LOW)
Senior Unsecured	BBB+
Issuer Credit Ratings History	
24-Mar-2020	BBB+/Stable/--
05-Dec-2018	BBB+/Negative/--
04-Dec-2017	BBB+/Stable/--
Related Entities	
Emera Inc.	
Issuer Credit Rating	BBB/Stable/--
Preference Stock *Canada National Scale Preferred Share*	P-3(High)
Preference Stock	BB+
Preferred Stock *Canada National Scale Preferred Share*	P-3(High)
Preferred Stock	BB+
Senior Unsecured	BBB-
Subordinated	BB+
Tampa Electric Co.	
Issuer Credit Rating	BBB+/Stable/A-2
Senior Unsecured	BBB+
TECO Energy Inc.	
Issuer Credit Rating	BBB/Stable/NR
Teco Finance Inc.	
Issuer Credit Rating	BBB/Stable/NR

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable

Ratings Detail (As Of May 11, 2021)*(cont.)

across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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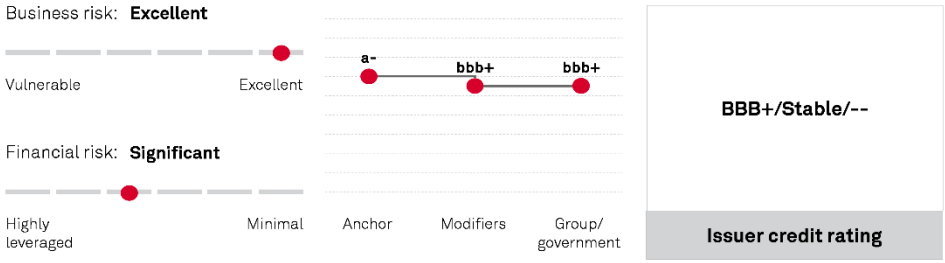
S&P Global
Ratings

RatingsDirect®

Nova Scotia Power Inc.

June 10, 2022

Ratings Score Snapshot



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Credit Highlights

Overview

Key strengths	Key risks
Low-risk, vertically integrated regulated electric utility with no exposure to nonutility operations.	Energy transition risks through its operations in electric generation, which are primarily coal, natural gas, and oil.
Generally, credit-supportive regulatory framework with forward test years, cost of service methodology, and fuel-adjustment mechanism to pass through commodity costs to customers.	Lack of regulatory or geographical diversity since it only serves customers in Nova Scotia.
We consider Nova Scotia Power Inc. (NSPI) an insulated entity which allows for an issuer credit rating (ICR) of up to one-notch higher than the group credit profile of its parent, Emera Inc.	Financial metrics are at the lower end of the financial risk profile category with limited cushion and our base case assumes negative discretionary cash flows for the next few years, which indicates a need for external funding.

We expect NSPI to maintain its financial performance throughout our two-year outlook period. Our base-case scenario assumes modest sales growth, the implementation of the utility's most recent rate-case proposals and annual capital spending averaging about $510 million over the forecast period. Overall, we forecast that NSPI will maintain funds from operations (FFO) to debt of about 12%-15% through the 2022-2024 outlook period.

NSPI is a lower-risk, regulated, vertically integrated utility that operates under a generally supportive framework. The utility derives most of its operations and cash flow from its low-risk, regulated utility operations under constructive regulatory mechanisms that support the timely recovery of its cash flow, such as the fuel adjustment mechanism (FAM), which helps NSPI recover its commodity costs.

NSPI recently filed an update to its fuel stability plan, which covers an average base rate increase of about 2.9% each year through 2024. The increase in base rates covers only the fuel component, with any variances between the approved and actual amount to be recovered after year-end. In addition, NSPI's capital spending continues to outpace depreciation expense at about 2x and would likely result in negative discretionary cash flow.

NSPI lacks geographic and regulatory diversity. NSPI serves only the Province of Nova Scotia, with a relatively modest customer base of about 536,000, albeit mostly residential and small commercial segments that are less sensitive to macroeconomic stress and business cycles. Nonetheless, the residential customer base has some sensitivity to volume fluctuations, primarily weather driven. Compared with other utility peers, NSPI lacks geographic and regulatory diversity, making it dependent on the utility and review board (UARB), the regulator of Nova Scotia, to sustain credit quality.

Outlook

The stable outlook on NSPI in part reflects our outlook on parent Emera. In addition, the outlook reflects our view that NSPI will continue to generate stable cash flow and maintain FFO to debt of about 12%-15% during our two-year outlook period. Furthermore, the stable outlook on NSPI assumes no change to the current insulation between NSPI and Emera.

Downside scenario

We could lower the rating on NSPI within the next 12-24 months if:

- Financial measures deteriorate, with FFO to debt consistently below 12%; or
- We lower our rating on parent Emera.

Upside scenario

We could raise our rating on NSPI within our outlook period if:

- We raise our rating on Emera; and
- NSPI's FFO to debt is consistently above 15%.

Our Base-Case Scenario

Assumptions

- The present-market inflation and commodity price dynamics will not have a persistent effect on NSPI's cash flow or operations;
- Normalized weather with no material impact on electricity consumption and sales;
- Stable regulatory regime in Nova Scotia with no material adverse regulatory decisions;
- Base rate increase averaging at about 2.9% per year through 2022 to 2024, consistent with the currently proposed fuel stability plan;
- Capital spending averaging about C$510 million over the 2022-2024 outlook period;
- No dividend payments over the 2022-2024 outlook period; and
- Commodity costs remain passed through to customers.

Key metrics

Company Name--Key Metrics*

Mil. $	2021a	2022e	2023f
FFO to debt (%)	11.9	12.0-13.0	12.0-14.0
FFO interest coverage (x)	3.7	About 4.0	4.0-5.0
Debt/EBITDA	5.9	5.5-6.0	5.0-6.0

*All figures adjusted by S&P Global Ratings. a--Actual. e--Estimate. EBITDA – Earnings before interest, taxes, depreciation, amortization f--Forecast.

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Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes about 25% of parent Emera's consolidated net income. NSPI has $6.1 billion of assets and provides electricity generation, transmission, and distribution services to approximately 536,000 customers. NSPI owns generation capacity of about 2,420 megawatts (MW), largely derived from coal (44% of total) and natural gas (28% of total).

Peer Comparison

Nova Scotia Power Inc.--Peer Comparisons

	Nova Scotia Power Inc.	Tucson Electric Power Co.	Caribbean Utilities Co. Ltd.	Hawaiian Electric Co. Inc.
Foreign currency issuer credit rating	BBB+/Stable/--	A-/Stable/NR	BBB+/Stable/--	BBB/Stable/A-2
Local currency issuer credit rating	BBB+/Stable/--	A-/Stable/NR	BBB+/Stable/--	BBB/Stable/A-2
Period	Annual	Annual	Annual	Annual
Period ending	2021-12-31	2021-12-31	2021-12-31	2021-12-31
Mil.	C$	C$	C$	C$
Revenue	1,501	2,015	251	3,214
EBITDA	535	679	88	710
Funds from operations (FFO)	378	569	72	557
Interest	145	115	18	101
Cash interest paid	139	110	17	103
Operating cash flow (OCF)	367	529	68	367
Capital expenditure	336	694	70	383
Free operating cash flow (FOCF)	31	(165)	(1)	(16)
Discretionary cash flow (DCF)	(49)	(244)	(33)	(158)

Nova Scotia Power Inc.--Peer Comparisons

Cash and short-term investments	0	13	9	66
Gross available cash	0	13	9	66
Debt	3,173	2,979	365	2,643
Equity	1,488	3,203	377	2,884
EBITDA margin (%)	35.6	33.7	35.2	22.1
Return on capital (%)	6.2	6.4	5.9	6.8
EBITDA interest coverage (x)	3.7	5.9	5.0	7.0
FFO cash interest coverage (x)	3.7	6.1	5.3	6.4
Debt/EBITDA (x)	5.9	4.4	4.1	3.7
FFO/debt (%)	11.9	19.1	19.7	21.1
OCF/debt (%)	11.6	17.7	18.7	13.9
FOCF/debt (%)	1.0	(5.5)	(0.4)	(0.6)
DCF/debt (%)	(1.5)	(8.2)	(8.9)	(6.0)

Business Risk

Our assessment of NSPI's business risk reflects its lower-risk, rate-regulated, and vertically integrated electric utility business, as well as its management of regulatory risk, which we view as consistent with that of its peers. In our view, the regulatory process is generally supportive of credit quality. The tariff framework is based on a forward test-year basis under a cost-of-service methodology. In addition, commodity costs flow through to customers under the FAM.

About 82% of NSPI's 536,000 customers are in the residential and commercial segments, which are less sensitive to economic cycles. That said, NSPI's lack of regulatory or geographical diversity since it only serves a customer base in Nova Scotia somewhat offsets business risk strengths.

Financial Risk

We assess NSPI's financial risk profile using our medial volatility financial benchmark tables rather than the financial benchmarks we use for a typical corporate issuer, which reflects the company's lower-risk regulated utility operations and effective management of regulatory risk.

NSPI recently filed a rate application proposing an update to its rate stability plan for 2022 through 2024. This proposed update would result in average base rate increases of 2.9 % per year. Also, the utility can pass through higher-than-expected fuel costs to customers through its FAM; however, any variances will not be reconciled until after year-end of that given year, which may lead to longer regulatory lag. Additionally, NSPI has a relatively large capital program--about 2x that of depreciation expense--that will result in negative discretionary cash flow and a reliance on external financing for funding.

Under our base-case scenario, which includes no persistent impact from rising commodity prices and inflation levels, capital spending of about C$510 million and no dividend payments through 2022 to 2024, and ongoing group support from Emera to support the regulated capital structure, we forecast NSPI's FFO to debt at about 12%-15% during the outlook period. NSPI's financial measures include its FFO to debt at the low end of the financial risk category; which we ascribe a negative comparable rating analysis modifier as a result.

Debt maturities

- 2025: $125 million; and
- 2026: $40 million.

Nova Scotia Power Inc.--Financial Summary

Period ending	Dec-31-2016	Dec-31-2017	Dec-31-2018	Dec-31-2019	Dec-31-2020	Dec-31-2021
Reporting period	2016a	2017a	2018a	2019a	2020a	2021a
Display currency (mil.)	C$	C$	C$	C$	C$	C$
Revenues	1,356	1,338	1,440	1,430	1,494	1,501
EBITDA	510	554	550	513	529	535
Funds from operations (FFO)	344	367	408	381	380	378
Interest expense	133	163	155	154	150	145
Cash interest paid	128	159	135	136	137	139
Operating cash flow (OCF)	539	511	300	169	325	367
Capital expenditure	293	374	327	340	319	336
Free operating cash flow (FOCF)	246	137	(27)	(171)	6	31
Discretionary cash flow (DCF)	101	(68)	(204)	(171)	(252)	(49)
Cash and short-term investments	0	0	0	0	0	0
Gross available cash	0	0	0	0	0	0
Debt	2,539	3,076	2,821	2,855	3,170	3,173
Common equity	1,108	1,077	1,137	1,443	1,311	1,488
Adjusted ratios						
EBITDA margin (%)	37.6	41.4	38.2	35.9	35.4	35.6
Return on capital (%)	8.2	8.1	7.6	6.7	6.4	6.2
EBITDA interest coverage (x)	3.8	3.4	3.6	3.3	3.5	3.7
FFO cash interest coverage (x)	3.7	3.3	4.0	3.8	3.8	3.7
Debt/EBITDA (x)	5.0	5.6	5.1	5.6	6.0	5.9
FFO/debt (%)	13.6	11.9	14.5	13.4	12.0	11.9
OCF/debt (%)	21.2	16.6	10.6	5.9	10.3	11.6
FOCF/debt (%)	9.7	4.5	(0.9)	(6.0)	0.2	1.0
DCF/debt (%)	4.0	(2.2)	(7.2)	(6.0)	(7.9)	(1.5)

Reconciliation Of Nova Scotia Power Inc. Reported Amounts With S&P Global Adjusted Amounts (Mil. C$)

	Debt	Shareholder Equity	Revenue	EBITDA	Operating income	Interest expense	S&PGR adjusted EBITDA	Operating cash flow	Dividends	Capital expenditure
Financial year	Dec-31-2021									

Nova Scotia Power Inc.

Reconciliation Of Nova Scotia Power Inc. Reported Amounts With S&P Global Adjusted Amounts (Mil. C$)

	Debt	Shareholder Equity	Revenue	EBITDA	Operating income	Interest expense	S&PGR adjusted EBITDA	Operating cash flow	Dividends	Capital expenditure
Company reported amounts	3,027	1,488	1,501	520	272	131	535	369	80	338
Cash taxes paid	-	-	-	-	-	-	(18)	-	-	-
Cash interest paid	-	-	-	-	-	-	(133)	-	-	-
Lease liabilities	22	-	-	-	-	-	-	-	-	-
Operating leases	-	-	-	1	1	1	(1)	0	-	-
Postretirement benefit obligations/ deferred compensation	10	-	-	-	-	-	-	-	-	-
Capitalized interest	-	-	-	-	-	4	(4)	(4)	-	(4)
Share-based compensation expense	-	-	-	3	-	-	-	-	-	-
Power purchase agreements	30	-	-	3	1	1	(1)	2	-	2
Asset-retirement obligations	84	-	-	8	8	8	-	-	-	-
Nonoperating income (expense)	-	-	-	-	2	-	-	-	-	-
Total adjustments	146	-	-	15	12	14	(157)	(2)	-	(2)
S&P Global Ratings adjusted	**Debt**	**Equity**	**Revenue**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from Operations**	**Operating cash flow**	**Dividends**	**Capital expenditure**
	3,173	1,488	1,501	535	284	145	378	367	80	336

Liquidity

We assess the company's liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x for the next 12 months and meet cash outflows even if EBITDA declines 10%. The assessment also reflects the company's generally prudent risk management, sound relationships with banks, and generally satisfactory standing in the credit markets.

Nova Scotia Power Inc.

Principal liquidity sources

- Total credit facility availability of about C$600 million as of Dec. 31, 2021; and
- Cash FFO of about C$380 million.

Principal liquidity uses

- No debt maturities within the next 12 months;
- C$377 million of drawn outstanding commercial paper; and
- Maintenance capital spending of about C$420 million over the next 12 months.

Environmental, Social, And Governance

ESG Credit Indicators

E-1	E-2	**E-3**	E-4	E-5	S-1	**S-2**	S-3	S-4	S-5	G-1	**G-2**	G-3	G-4	G-5
- Climate transaction risks					- N/A					- N/A				

N/A—Not applicable. ESG credit indicators provide additional disclosure and transparency at the entity level and reflect S&P Global Ratings' opinion of the influence that environmental, social, and governance factors have on our credit rating analysis. They are not a sustainability rating or an S&P Global Ratings ESG Evaluation. The extent of the influence of these factors is reflected on an alphanumerical 1-5 scale where 1 = positive, 2 = neutral, 3 = moderately negative, 4 = negative, and 5 = very negative. For more information, see our commentary "ESG Credit Indicator Definitions And Applications," published Oct. 13, 2021.

Environmental factors are a moderately negative consideration in our credit rating analysis of Nova Scotia Power Inc., reflecting energy transition risks through its operations in electric generation that are primarily coal, natural gas, and oil. Relative to peers, greenhouse gas exposure to coal and fossil-fuel-emitting forms of generation is considerable and exposes the company to potentially more stringent environmental regulations in Canada. This exposure is somewhat mitigated by the company's position and growth strategy in renewable energy, particularly in hydro and wind.

Group Influence

We view NSPI as a core subsidiary of Emera because we think NSPI is integral to Emera's strategy and is unlikely to be sold. NSPI is also likely to receive the long-term group support from its parent. We view NSPI as an insulated subsidiary within the Emera group, incorporated as a separate legal entity with financial performance and funding that are highly independent from the group, including issuing long- and short-term debt. The company maintains its own separate credit facilities, and does not commingle its funds, assets, or cash flows with the rest of the group. In addition, there is a strong economic basis for Emera to preserve NSPI's credit strength, and we do not expect a default of the other group entities within Emera to directly lead to a default at NSPI.

Issue Ratings--Subordination Risk Analysis

Capital structure

As of Dec. 31, 2021, NSPI's capital structure consisted of about C$3.04 billion of senior unsecured debt.

Analytical conclusions

We rate the senior unsecured debt at NSPI the same as the issuer credit rating because we view it as debt issued by a qualifying investment-grade regulated utility.

Rating Component Scores

Foreign currency issuer credit rating	**BBB+/Stable/--**
Local currency issuer credit rating	**BBB+/Stable/--**
Business risk	**Excellent**
Country risk	Very Low
Industry risk	Very Low
Competitive position	Excellent
Financial risk	**Significant**
Cash flow/leverage	Significant
Anchor	**a-**
Diversification/portfolio effect	Neutral (no impact)
Capital structure	Neutral (no impact)
Financial policy	Neutral (no impact)
Liquidity	Adequate (no impact)
Management and governance	Satisfactory (no impact)
Comparable rating analysis	Negative (-1 notch)
Stand-alone credit profile	**bbb+**

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

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Canada National Scale Commercial Paper	A-1(LOW)
Senior Unsecured	BBB+

Nova Scotia Power Inc.

Ratings Detail (as of June 10, 2022)*

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Preference Stock	BB+
Preferred Stock	
Canada National Scale Preferred Share	P-3(High)
Preferred Stock	BB+
Senior Unsecured	BBB-
Subordinated	BB+
Tampa Electric Co.	
Issuer Credit Rating	BBB+/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Unsecured	BBB+
TECO Energy Inc.	
Issuer Credit Rating	BBB/Stable/NR
Teco Finance Inc.	
Issuer Credit Rating	BBB/Stable/NR

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Research Update:

Nova Scotia Power Inc. Ratings Affirmed On Reduced Concerns Over Political Interference, Outlook Negative

February 13, 2023

Rating Action Overview

- On Feb. 4, 2023, Nova Scotia's Premier, Tim Houston, announced that the Nova Scotia Utility and Review Board (NSUARB) is an independent body and that if Nova Scotians have questions about its decisions, they are encouraged to reach out directly to the board.
- We view these comments as supportive of the NSUARB's regulatory independence, reducing the risk of further political interference during the next two years.
- Therefore, we affirmed all of our ratings on Nova Scotia Power Inc. (NSPI), including our 'BBB-' long-term issuer credit rating, 'BBB-' issue-level rating on its senior unsecured debt, and 'A-3(Cdn)' Canadian scale rating on its commercial paper program.
- The negative outlook on NSPI reflects our negative outlook on its parent, Emera Inc.

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Rating Action Rationale

On Feb. 2, 2023, the NSUARB issued a rate order that was generally consistent with NSPI's settlement agreement. Prior to the NSUARB's order, the company reached a settlement agreement with various stakeholders aligned with the parameters of Bill 212. The NSUARB's rate order limited NSPI's non-fuel rate increase to 1.8% through 2024 but also allowed for the recovery of demand side management (DSM) and deferred fuel costs. As such, the company's total annual electricity rates will increase by about 6.9% each for 2023 and 2024.

Bill 212 limited non-fuel rate increases to 1.8% through 2024. We viewed the enactment of Bill 212 as political interference because it undermined the NSUARB's regulatory construct, materially weakened the jurisdiction's regulatory predictability, and increased the uncertainty for its utilities and stakeholders. We view the political interference as breaching the regulator's independence because it limits the NSUARB's ability to protect the credit quality of its utilities. We view regulatory independence as one of the key attributes that underpins the credit quality of the

utility industry. In general, we expect that utilities operate under a regulatory construct that is sufficiently insulated from political intervention to protect their credit risk profiles, even during periods of economic stress. We viewed this unprecedented political intervention as significantly detrimental to NSPI's credit quality because it impaired its regulator's ability to act independently to protect the utility's credit quality, undermining the regulatory construct and the utility's cash flow predictability.

While government officials opposed the NSPI's settlement, their comments following the NSUARB's rate order were generally supportive of the board's independent regulatory process. We assess such constructive comments as reducing the risk of further political intervention over the next two years. We will continue to actively monitor further regulatory developments in Nova Scotia.

We assess NSPI's business risk profile as strong. Our assessment reflects its lower-risk, rate-regulated, and vertically integrated monopolistic electric utility business. This credit strength is somewhat offset by its relatively smaller size, lack of regulatory or geographic diversity, weakening regulatory construct because of Bill 212, rising physical risks, and reliance on coal-fired generation.

NSPI's 540,000 customers are all based in Nova Scotia, limiting its regulatory and geographic diversity. Hurricane Fiona, which was the most destructive storm to ever make landfall in Nova Scotia, resulted in an estimated C$115 million of storm restoration costs, demonstrating the company's exposure to physical risks. Additionally, NSPI relies on high-cost coal-based generation (about 44%), which increases its exposure to environmental risk.

We assess NSPI's financial risk profile as aggressive. The NSUARB's rate order allows NSPI to raise its electricity rates by an average of 6.9% annually through 2024. In 2023, the rate increase primarily comprises non-fuel rate increases (1.8%) and the recovery of DSM costs (3.6%). For 2024, the increase primarily reflects the recovery of deferred fuel costs (6.6%). The settlement also includes the approval of a storm cost recovery rider. Under our base-case assumptions for average annual capital spending of about $375 million through 2024 and average annual dividends of about $70 million, we expect funds from operations (FFO) to debt of 10%-12% through 2025, which is consistent with the middle of range for the aggressive financial risk profile category.

We assess NSPI as a strategically important subsidiary of Emera. Our assessment reflects our view that NSPI is unlikely to be sold and is still important to Emera. However, because of Bill 212, we believe NSPI's ability to operate at a consistent financial level, in-line with that of its peers, has declined. Furthermore, Emera's announcement that it will materially reduce its capital investment in NSPI, at least through 2024, and maintain only the minimum required equity in its capital structure weakens our view of the parent's long-term support for NSPI. However, our strategically important assessment of NSPI's group status raises our long-term ICR by one notch above our stand-alone credit profile.

Outlook

The negative outlook on NSPI reflects our negative outlook on its parent Emera. We expect that NSPI's stand-alone financial measures will reflect FFO to debt of 10%-12% through 2025.

Downside scenario

We could lower our ratings on NSPI over the next 12 months if:

- We downgrade Emera; or
- NSPI's group status further weakens and its stand-alone financial measures consistently decline below our base case such that its FFO to debt falls below 10%.

Upside scenario

We could affirm our ratings on NSPI and revise our outlook to stable over the next 12 months if we affirm our ratings on Emera and revise our outlook to stable. Alternatively, we could revise our outlook on NSPI to stable if its stand-alone FFO to debt improves consistently above 12% absent an increase in its business risk.

Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes about 15%-20% of its parent's consolidated net income. NSPI has C$6.1 billion of assets and provides electricity generation, transmission, and distribution services to approximately 540,000 customers. NSPI owns generation capacity of about 2,420 megawatts (MW), which it largely derives from coal (44% of total) and natural gas (28% of total).

Our Base-Case Scenario

- Average electricity rates increase by 6.9% annually until 2024;
- Capital expenditure in the C$350 million-C$400 million range annually until 2025; and
- No further political intervention, at least until 2024.

Liquidity

We assess NSPI's liquidity as adequate and anticipate its sources of cash will be 1.1x its uses over the coming 12 months. Furthermore, we project its net sources will remain positive even if its forecast consolidated EBITDA declines by 10%. We believe NSPI's predictable regulatory framework provides it with a manageable level of cash flow stability, even in times of economic stress, which supports our use of slightly lower thresholds to assess its liquidity. In addition, we believe NSPI has the ability to absorb high-impact, low-probability events with limited need for refinancing, which reflects that it maintains about C$600 million in committed credit facilities through 2026, as well as our belief it can lower its high capital spending (averaging about C$350 million annually) during stressful periods. Our assessment also reflects the company's generally prudent risk management, sound relationships with its banking group (which includes over 10 well-established banks), and satisfactory standing in the credit markets (credit default swap spreads are in line with those of its investment-grade peer utilities). Overall, we believe that the company will likely be able to withstand adverse market circumstances over the next 12 months with sufficient liquidity to meet its obligations. NSPI's next large long-term debt maturity is in 2025, when about C$125 million comes due, and we expect it will proactively address this maturity

well in advance of its scheduled due date, similar to the handling of its other issuances.

Principal liquidity sources:

- Credit facility availability of about $480 million; and
- Cash FFO of about C$430 million.

Principal liquidity uses:

- Assumed maintenance capital spending of about C$375 million;
- Debt maturities, including outstanding commercial paper, of about C$108 million; and
- Dividend payments of about C$80 million.

Issue Ratings - Subordination Risk Analysis

Capital structure

- As of Sept. 30, 2022, NSPI's capital structure comprised about C$3.15 billion of senior unsecured debt.

Analytical conclusions

- We rate NSPI's senior unsecured debt at the same level as our long-term issuer credit rating because we view it as debt issued by a qualifying investment-grade regulated utility. Further, we rate NSPI's commercial paper 'A-3(Cdn)'.

Ratings Score Snapshot

Issuer credit rating: BBB-/Negative/--

Business risk: Strong

- Country risk: Very low
- Industry risk: Very low
- Competitive position: Satisfactory

Financial risk: Aggressive

- Cash flow/leverage: Aggressive

Anchor: bb+

Modifiers

- Diversification/portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)

- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: bb+

- Group credit profile: bbb
- Entity status within group: Strategically Important (+1 notch from SACP)

ESG credit indicators: E-3, S-2, G-2

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, March 2, 2022
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings List

Ratings Affirmed

Nova Scotia Power Inc.	
Issuer Credit Rating	BBB-/Negative/--
Senior Unsecured	BBB-
Commercial Paper	A-3(Cdn)

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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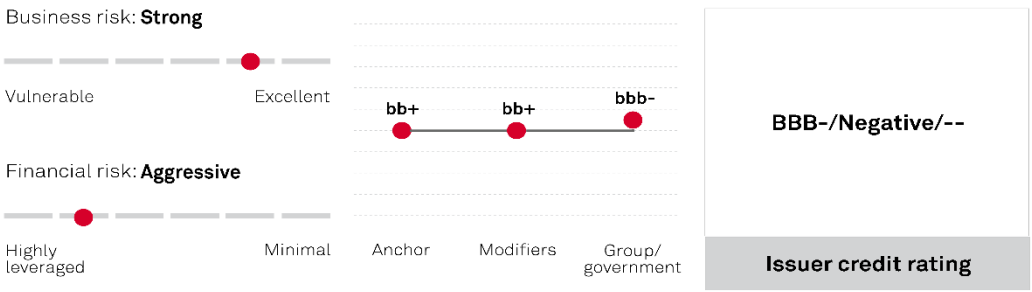
S&P Global
Ratings

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Nova Scotia Power Inc.

February 12, 2024

Ratings Score Snapshot



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Credit Highlights

The provincial government of Nova Scotia recently proposed to compensate Nova Scotia Power Inc. (NSPI) about $117 million to offset the deferred fuel cost liability. NSPI generally recovers the incurred fuel cost from customers through annual fuel rate adjustments. The differences between the incurred fuel costs and amounts recovered from customers through electricity rates each year are deferred to a fuel adjustment mechanism (FAM) regulatory asset or liability and recovered from or returned to customers in subsequent years. In 2020-2022, NSPI operated under a three-year fuel stability plan with no fuel rate adjustments related to the under-recovery of fuel costs. In 2023, the Utility and Review Board (UARB) approved the general rate application that allowed NSPI to increase its revenue by 6.9% each for 2023 and 2024. 6.6% of the 2024 6.9% increase largely reflects the recovery of the incurred fuel cost.

Because any further recovery of fuel costs would have significantly pressured customer bills in Nova Scotia, the provincial government proposed to pay NSPI $117 million up front and recover the amount from customers over the next 10 years, which reduces the pressure on customer bills related to the deferred fuel cost recovery The $117 million compensation to NSPI from the provincial government indicates their willingness to extend support under challenging circumstances, thereby modestly improving the operating environment for NSPI. However, we expect NSPI to recover the remaining balance of deferred fuel cost of about $278 million from customers by adjusting rates through future rate applications, further pressuring customer bills.

NSPI was fined $10 million for failing to remain compliant under the Renewable Electricity Regulations (RER). Under the provincially legislated RER and alternative compliance plan, NSPI was required to derive 40% of its average electricity generation from renewable sources for 2020-2022. As per NSPI, the company was unable to achieve the requirements of the alternative compliance plan, largely driven by factors beyond their control including the delay in completion of the Muskrat Falls hydroelectric project and further interruptions in supply due to delays in the Labrador Island Link. NSPI appealed the penalty with the UARB, and we continue to monitor the proceedings.

Furthermore, the RER also requires NSPI to retire coal generation and mandates 80% of electricity supply from renewable generation sources by 2030. To achieve this target, NSPI would require significant capital investments in addition to continued imports of hydroelectricity supply from Muskrat Falls, incorporation of grid scale batteries and, a new transmission line from Nova Scotia to New Brunswick to facilitate the flow of renewable electricity. We continue to monitor NSPI's capital investment strategy, the management of regulatory risk, and potential government support as the company seeks to recover the prudently incurred costs amid the challenging macroeconomic environment of inflationary pressure and higher interest rates.

Outlook

The negative outlook on NSPI reflects our negative outlook on its parent Emera. We expect NSPI's stand-alone financial measures will reflect funds from operations (FFO) to debt of 10%-12% through 2025.

Downside scenario

We could lower our ratings on NSPI over the next 12 months if:

- We downgrade Emera; or
- NSPI's group status further weakens and its stand-alone financial measures consistently decline below our base case such that its FFO to debt falls below 10%.

Upside scenario

We could affirm our ratings on NSPI and revise our outlook to stable over the next 12 months if we affirm our ratings on Emera and revise our outlook to stable. Alternatively, we could revise our outlook on NSPI to stable if its stand-alone FFO to debt improves to consistently above 12% absent an increase in its business risk.

Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes 15%-20% of its parent's consolidated net income. NSPI has C$6.1 billion of assets and provides electricity generation, transmission, and distribution services to approximately 540,000 customers. NSPI owns generation capacity of about 2,420 megawatts, which it largely derives from coal (44% of total) and natural gas (28% of total).

Rating Component Scores	
Foreign currency issuer credit rating	**BBB-/Negative/--**
Local currency issuer credit rating	**BBB-/Negative/--**
Business risk	**Strong**
Country risk	Very Low
Industry risk	Very Low
Competitive position	Satisfactory
Financial risk	**Aggressive**
Cash flow/leverage	Aggressive
Anchor	**bb+**
Diversification/portfolio effect	Neutral (no impact)
Capital structure	Neutral (no impact)
Financial policy	Neutral (no impact)
Liquidity	Adequate (no impact)
Management and governance	Neutral (no impact)
Comparable rating analysis	Neutral (no impact)
Stand-alone credit profile	**bb+**
Group credit profile	**bbb**
Entity status within group	Strategically Important (+1 notch from SACP

Related Criteria

- Criteria | Corporates | General: Corporate Methodology, Jan. 7, 2024
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Jan. 7, 2024
- General Criteria: Hybrid Capital: Methodology And Assumptions, March 2, 2022
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
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Nova Scotia Power Inc.

- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings Detail (as of February 12, 2024)*

Nova Scotia Power Inc.	
Issuer Credit Rating	BBB-/Negative/--
Commercial Paper	
Canada National Scale Commercial Paper	A-3(Cdn)
Senior Unsecured	BBB-
Issuer Credit Ratings History	
21-Nov-2022	BBB-/Negative/--
24-Oct-2022	BBB+/Negative/--
24-Mar-2020	BBB+/Stable/--
Related Entities	
Emera Inc.	
Issuer Credit Rating	BBB/Negative/--
Preference Stock	
Canada National Scale Preferred Share	P-3(High)
Preference Stock	BB+
Preferred Stock	
Canada National Scale Preferred Share	P-3(High)
Preferred Stock	BB+
Senior Unsecured	BBB-
Subordinated	BB+
Tampa Electric Co.	
Issuer Credit Rating	BBB+/Negative/A-2
Commercial Paper	
Local Currency	A-2
Senior Unsecured	BBB+
TECO Energy Inc.	
Issuer Credit Rating	BBB/Negative/NR
Teco Finance Inc.	
Issuer Credit Rating	BBB/Negative/NR

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings credit ratings on the global scale are comparable across countries. S&P Global Ratings credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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Tear Sheet:

Nova Scotia Power Inc.

January 28, 2025

What's new: Nova Scotia Power Inc. (NSPI) recently received a Canadian federal loan guarantee to securitize C$500 million of current and future fuel balances at NSPI; the company used proceeds toward reducing debt at NSPI. This follows the C$117 million NSPI received from the provincial government earlier in 2024 toward the deferred fuel cost recovery. S&P Global Ratings views these favorably because they reduced debt at NSPI while also reducing the regulatory lag associated with recovery of higher fuel costs in Nova Scotia, which in recent years pressured NSPI's credit measures. Furthermore, the government support also decreases the rate impact on customers by spreading out the recovery over a longer period (10 years for the provincial funding and 28 years for the federal loan).

Why it matters: In our view, securitization of the deferred fuel costs and debt reduction will improve NSPI's credit measures, with funds from operations (FFO) to debt estimated to average in the 10%-11% area over our forecast period. Combined with the recently approved multi-year rate case adjustment for Tampa Electric Co. and several initiatives executed by parent Emera Inc. (non-core asset sales, hybrid issuance), we believe these should allow Emera to improve its credit measures on a consolidated basis. Specifically, we project Emera to sustain FFO to debt comfortably above 10% in 2025 and 2026. Accordingly, on Jan 22, 2025, we revised the outlook on Emera and its subsidiaries, including NSPI, to stable from negative.

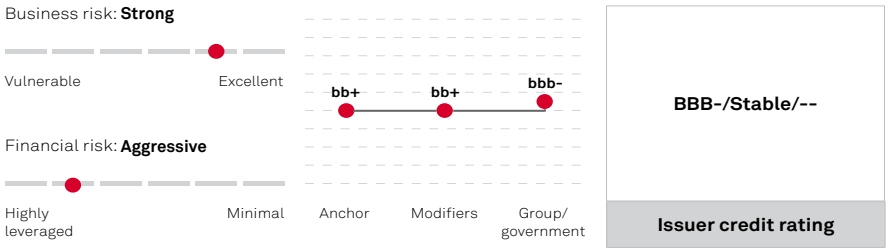
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Ratings Score Snapshot



Recent Research

- Research Update: Emera Inc. And Subsidiaries Outlook Revised To Stable From Negative On Improving Credit Strength, Ratings Affirmed, Jan 22, 2025
- Research Update: Emera Inc. And Subsidiaries Outlook Remains Negative On Weak Financial Performance; Ratings Affirmed, March 11, 2024
- Nova Scotia Power Inc., Feb. 12, 2024

Company Description

NSPI is a vertically integrated electric utility operating in Nova Scotia that contributes about 20% of its parent's consolidated net income. NSPI provides electricity generation, transmission, and distribution services to approximately 550,000 customers. NSPI owns generation capacity of about 2,420 megawatts, which it largely derives from coal (44% of total), natural gas (28%) and renewables (21%).

Outlook

The stable outlook on NSPI reflects the stable outlook of its parent Emera, as well as our expectation that NSPI's FFO to debt will average about 10%-11% through 2026. The improvement in credit measures from recent years is largely driven by the securitization of deferred fuel costs and corresponding debt reduction.

Downside scenario

We could lower our ratings on NSPI over the next 12-24 months if:

- Financial measures deteriorated, with FFO to debt consistently below 10%, or
- We lowered our rating on parent Emera.

Upside scenario

We could raise our rating on NSPI within our outlook period if:

- We raised our rating on Emera, or
- The company's business risk strengthened while FFO to debt remained above 10%.

Key Metrics

Nova Scotia Power Inc.--Forecast summary

Period ending	Dec-31-2020	Dec-31-2021	Dec-31-2022	Dec-31-2023	Dec-31-2024	Dec-31-2025	Dec-31-2026
(Mil. CAD)	2020a	2021a	2022a	2023a	2024e	2025f	2026f
Adjusted ratios							
Debt/EBITDA (x)	6.0	5.9	7.2	7.0	5.5-6.5	6.0-7.0	6.0-6.5
FFO/debt (%)	12.0	11.9	8.3	9.3	10.0-11.0	10.0-11.0	10.5-11.5
FFO cash interest coverage (x)	3.8	3.7	3.0	2.9	2.5-3.0	3.0-3.5	3.0-3.5

Financial Summary

Nova Scotia Power Inc.--Financial Summary

Period ending	Dec-31-2018	Dec-31-2019	Dec-31-2020	Dec-31-2021	Dec-31-2022	Dec-31-2023
Reporting period	2018a	2019a	2020a	2021a	2022a	2023a
Display currency (mil.)	C$	C$	C$	C$	C$	C$
Revenues	1,440	1,430	1,494	1,501	1,675	1,671
EBITDA	550	513	529	535	509	557
Funds from operations (FFO)	408	381	380	378	305	363
Interest expense	155	154	150	145	150	183
Cash interest paid	135	136	137	139	149	194
Operating cash flow (OCF)	300	169	325	367	164	(121)
Capital expenditure	327	340	319	336	461	421
Free operating cash flow (FOCF)	(27)	(171)	6	31	(297)	(542)
Discretionary cash flow (DCF)	(204)	(171)	(252)	(49)	(447)	(542)
Cash and short-term investments	0	0	0	0	2	78
Gross available cash	0	0	0	0	2	78
Debt	2,821	2,855	3,170	3,173	3,660	3,906
Common equity	1,137	1,443	1,311	1,488	1,492	1,900
Adjusted ratios						
EBITDA margin (%)	38.2	35.9	35.4	35.6	30.4	33.3
Return on capital (%)	7.6	6.7	6.4	6.2	5.1	5.2
EBITDA interest coverage (x)	3.6	3.3	3.5	3.7	3.4	3.0
FFO cash interest coverage (x)	4.0	3.8	3.8	3.7	3.0	2.9
Debt/EBITDA (x)	5.1	5.6	6.0	5.9	7.2	7.0
FFO/debt (%)	14.5	13.4	12.0	11.9	8.3	9.3
OCF/debt (%)	10.6	5.9	10.3	11.6	4.5	(3.1)
FOCF/debt (%)	(0.9)	(6.0)	0.2	1.0	(8.1)	(13.9)
DCF/debt (%)	(7.2)	(6.0)	(7.9)	(1.5)	(12.2)	(13.9)

Peer Comparison

Nova Scotia Power Inc.--Peer Comparisons

	Nova Scotia Power Inc.	Tucson Electric Power Co.	Caribbean Utilities Co. Ltd.	Hawaiian Electric Co. Inc.
Foreign currency issuer credit rating	BBB-/Stable/--	A-/Negative/NR	BBB+/Negative/--	B-/Negative/B
Local currency issuer credit rating	BBB-/Stable/--	A-/Negative/NR	BBB+/Negative/--	B-/Negative/B
Period	Annual	Annual	Annual	Annual
Period ending	2023-12-31	2023-12-31	2023-12-31	2023-12-31
Mil.	C$	C$	C$	C$

Nova Scotia Power Inc.--Peer Comparisons

Revenue	1,671	2,477	379	4,318
EBITDA	557	811	107	799
Funds from operations (FFO)	363	686	83	637
Interest	183	130	26	123
Cash interest paid	194	124	24	113
Operating cash flow (OCF)	(121)	727	91	649
Capital expenditure	421	839	118	585
Free operating cash flow (FOCF)	(542)	(112)	(27)	64
Discretionary cash flow (DCF)	(542)	(197)	(60)	(108)
Cash and short-term investments	78	11	5	140
Gross available cash	78	11	5	140
Debt	3,906	3,368	524	2,676
Equity	1,900	3,763	429	3,204
EBITDA margin (%)	33.3	32.7	28.2	18.5
Return on capital (%)	5.2	7.6	6.2	7.5
EBITDA interest coverage (x)	3.0	6.2	4.2	6.5
FFO cash interest coverage (x)	2.9	6.5	4.4	6.6
Debt/EBITDA (x)	7.0	4.2	4.9	3.4
FFO/debt (%)	9.3	20.4	15.8	23.8
OCF/debt (%)	(3.1)	21.6	17.4	24.3
FOCF/debt (%)	(13.9)	(3.3)	(5.2)	2.4
DCF/debt (%)	(13.9)	(5.8)	(11.5)	(4.0)

Environmental, Social, And Governance

Environmental factors are a negative consideration in our credit rating analysis of Nova Scotia Power Inc., reflecting energy transition risks through its operations in electric generation that are primarily coal, natural gas, and oil. Relative to peers, greenhouse gas exposure to coal and fossil-fuel-emitting forms of generation is considerable and exposes the company to potentially more stringent environmental regulations in Canada. This exposure is somewhat mitigated by the company's position and growth strategy in renewable energy, particularly in hydro and wind.

Rating Component Scores	
Foreign currency issuer credit rating	**BBB-/Stable/--**
Local currency issuer credit rating	**BBB-/Stable/--**
Business risk	**Strong**
Country risk	Very Low
Industry risk	Very Low
Competitive position	Satisfactory
Financial risk	**Aggressive**
Cash flow/leverage	Aggressive
Anchor	**bb+**
Diversification/portfolio effect	Neutral (no impact)
Capital structure	Neutral (no impact)
Financial policy	Neutral (no impact)
Liquidity	Adequate (no impact)
Management and governance	Neutral (no impact)
Comparable rating analysis	Neutral (no impact)
Stand-alone credit profile	**bb+**
Group credit profile	bbb
Entity status within group	Strategically Important (+1 notch from SACP)

Related Criteria

- Criteria | Corporates | General: Sector-Specific Corporate Methodology, April 4, 2024
- Criteria | Corporates | General: Methodology: Management And Governance Credit Factors For Corporate Entities, Jan. 7, 2024
- Criteria | Corporates | General: Corporate Methodology, Jan. 7, 2024
- General Criteria: Hybrid Capital: Methodology And Assumptions, March 2, 2022
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Guarantee Criteria, Oct. 21, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013

- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

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Rating Report

Nova Scotia Power Inc.

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Insight beyond the rating.

Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (low)	Confirmed	Stable
Unsecured Debentures & Medium-Term Notes	A (low)	Confirmed	Stable
Commercial Paper	R-1 (low)	Confirmed	Stable
Cumulative Preferred Shares	Disc./repaid	Disc./repaid	-

Rating Update

On December 22, 2017, DBRS Limited (DBRS) confirmed the Issuer Rating of Nova Scotia Power Inc. (NSPI or the Company) at A (low) and the ratings on NSPI's Unsecured Debentures & Medium-Term Notes and Commercial Paper at A (low) and R-1 (low), respectively. All trends are Stable. DBRS also discontinued the Cumulative Preferred Shares rating of the Company since they have been repaid. NSPI's business risk profile continues to be stable and is underpinned by the reasonable regulatory environment in the Province of Nova Scotia (the Province; rated A (high) with a Stable trend by DBRS) with no material regulatory or operational changes over the last year to its cost-of-service (COS) model and good franchise strength. NSPI's financial risk profile also continues to be stable with key credit metrics commensurate with the current rating category. The Stable trends underscore DBRS's expectation that NSPI's credit quality will remain intact through the three-year rate stability period (2017 to 2019). While incremental renewable power purchase costs will likely result in an average rate increase higher than the projected rate increase during the rate stability period (1.0% to 1.5% yearly through 2017 to 2019), DBRS expects NSPI's rate increase in 2020 to be manageable.

NSPI continues to operate under a reasonable regulatory system that allows the Company to earn a return on equity (ROE) in the range of 8.75% to 9.25%, based on an equity thickness of up to 40%. NSPI's deemed ROE band and equity thickness are in line with those of other comparable provinces including British Columbia, Alberta, Ontario, Québec and Newfoundland and Labrador. The Company has a proven track record of sustaining profitability in line with its regulatory return parameters, earning at or near the top of the regulated ROE band over the past ten years. DBRS expects NSPI to continue to achieve its actual regulated ROE within the target range in 2017 and 2018, partly benefitting from the Company's focus on improving operating efficiency. DBRS also notes that in September 2017, the Nova Scotia Utility and Review Board (NSUARB) approved NSPI's interim assessment payment to NSP Maritime Link Inc. (NSPML) of the costs associated with the Maritime Link Project (excluding depreciation and amortization expenses) despite a delay in timing of energy delivery from the Muskrat Falls Project.

NSPI's business risk assessment (BRA) of A (low), which is one notch below that of the DBRS industry risk rating of "A," factors in the Company's below-average regulatory lag compared with domestic peers, particularly related to its fuel cost recovery

Continued on P.2

Financial Information

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CAD millions)	2017	2016	2017	2016	2015	2014	2013
EBIT gross interest coverage	2.21	2.15	2.19	2.14	2.27	2.19	2.25
Total debt in capital structure 1	62.9%	62.4%	62.9%	62.6%	63.6%	61.2%	60.6%
Cash flow/Total debt 2	18.9%	17.5%	18.5%	17.5%	16.2%	15.3%	15.5%
Net income before non-recurring items	106	96	140	130	139	133	134
Cash flow from operations	327	305	426	404	395	354	349

1 Including adjustments for accumulated other comprehensive income. 2 Nine-month ratios have been annualized.

Issuer Description

NSPI is a fully integrated, regulated electricity utility that generates, transmits and distributes electricity in the Province. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Update (CONTINUED)

mechanism. Fuel costs are also subject to an independent audit by the NSUARB that could potentially disallow a portion of the fuel-related costs. The Company's BRA also reflects the challenges associated with NSPI's high electricity rates that could make it increasingly challenging for the Company to fully pass costs onto the ratepayers in a timely manner if generation costs rise faster than anticipated. In addition, NSPI could face a long-term challenge to adhere to the federal government's accelerated plan to phase out the use of coal-fired electricity by 2030. Operating cash flow should sufficiently support the Company's capital expenditure (capex) program over the next two years. NSPI is expected to continue to manage its dividend payout to its parent company Emera Inc. (Emera) in order to maintain its debt-to-capital ratio within regulatory parameters. DBRS will continue to view the Company on a stand-alone basis, assuming NSPI adheres to the current flexible dividend distribution strategy.

Rating Considerations

Strengths

1. Low-risk regulated electricity business
The current regulatory framework is based on a COS methodology, in which the Company is allowed to recover all prudently estimated operating expenses and to earn a reasonable return on approved capital investments. NSPI's target ROE range of 8.75% to 9.25% is viewed as reasonable and in line with its Canadian peers. NSPI is also allowed the use of a fuel adjustment mechanism (FAM), which lets the Company mitigate the risk arising from fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from, or refunded to, customers in subsequent years.

2. Reasonable financial profile
Overall key credit metrics for the last 12 months ended September 30, 2017, remained within DBRS's "A" rating category.

3. Good franchise strength
NSPI is the primary electricity supplier for the Province, providing over 95% of its electricity generation, transmission and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers, under established tariffs, DBRS does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2017, there were no retail suppliers operating under the renewable-to-retail tariffs.

Challenges

1. Unfavourable generation mix
As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This, combined with continued investments in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to the ratepayers in a timely manner.

2. Regulatory lag
NSPI faces some regulatory risk (albeit lower than when the FAM was not in place) with respect to the timeliness of full cost recovery. Although FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to approval from the NSUARB. For the years 2017 to 2019, differences between actual fuel costs and amounts recovered from customers will be recovered or returned to customers after 2019. NSPI had a planned liability FAM balance as at September 30, 2017. DBRS also expects the impact of fluctuating fuel prices to reduce once the Maritime Link Project is in service as it will increase the contribution of renewable energy supply to the Company's overall generation mix.

3. Limited access to equity markets
NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, DBRS expects Emera to continue to support NSPI's capex program with its flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CAD millions)	2017	2016	2017	2016	2015	2014	2013
Net revenues	647	650	863	866	875	837	778
Fuel cost 1	336	354	472	490	543	512	557
Operating costs	284	300	383	399	378	359	269
EBITDA	363	350	480	467	496	478	509
EBIT	208	202	276	270	290	274	295
Gross interest expense	94	94	126	126	128	125	131
Net income before non-recurring items	106	96	140	130	139	133	134
Reported net income	106	96	140	130	139	133	134
Return on avg. equity 2, 3	10.2%	9.1%	10.1%	9.3%	9.7%	9.1%	9.2%
Regulated rate base	3,678	3,810	3,678	3,678	3,810	3,746	3,682
Actual regulated return on equity (%)	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.24%

1 Before fuel adjustment. 2 Includes adjustments for accumulated other comprehensive income. 3 Nine-month ratios have been annualized.

Summary

- NSPI's earnings remained stable. The Company operates under a COS model wherein NSPI is allowed to recover all prudently incurred costs from providing electricity and earnings are primarily impacted by the range of ROE and capital structure approved by the NSUARB.
- Earnings during the nine months ended September 30, 2017 (9M 2017), were moderately higher compared with 9M 2016, as the Company benefited from lower operating expenses and fuel costs.
- Average fuel costs continued to decrease as a result of favourable solid fuel pricing and increased hydro and wind production, which have no associated fuel costs. DBRS notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- NSPI continued to earn its maximum allowed ROE of 9.25% over the past several years based on the NSUARB's regulatory calculations (not based on DBRS-adjusted calculations.) The NSUARB's ROE calculations are based on five-quarter average-regulated common equity thickness and exclusion of unregulated amounts, such as the unregulated portion of executive compensation and donations/sponsorships.
- In accordance with the *Electricity Plan Implementation (2015) Act* (Electricity Plan Act) enacted on December 18, 2015, the Company will apply earnings above the approved ROE band to the FAM for the years 2017 through 2019.

Outlook

- DBRS expects NSPI to achieve its actual regulated ROE within the target range (of 8.75% to 9.25%) over 2017 to 2018, partly benefitting from the Company's focus on improving operating efficiency.

Financial Profile

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CAD millions)	2017	2016	2017	2016	2015	2014	2013
Net income before non-recurring items	106	96	140	130	139	133	134
Depreciation & amortization	160	153	211	204	214	212	225
Deferred income taxes and other	61	56	75	70	43	9	(11)
Cash Flow from Operations	**327**	**305**	**426**	**404**	**395**	**354**	**349**
Dividends paid	(125)	(90)	(180)	(145)	(108)	(128)	(108)
Capital expenditures	(249)	(215)	(330)	(296)	(264)	(267)	(194)
Free Cash Flow (Bef. Working Cap. Changes)	**(47)**	**0**	**(84)**	**(37)**	**23**	**(41)**	**47**
Changes in non-cash work. cap. items	78	114	101	137	(55)	(19)	(23)
Adjustment for regulated assets and liabilities	0	0	0	0	0	0	0
Net Free Cash Flow	**31**	**114**	**17**	**100**	**(32)**	**(59)**	**24**
Acquisitions & long-term investments	0	0	0	0	0	0	0
Proceeds on asset sales	0	0	0	1	1	8	0
Net equity/preferred change	1	1	1	1	(96)	1	0
Net debt change	(9)	(106)	(23)	(120)	139	62	(10)
Other	(23)	(9)	4	18	(12)	(11)	(14)
Change in Cash	**0**	**0**	**0**	**0**	**(0)**	**0**	**0**
Total debt (CAD million)	2,307	2,330	2,307	2,315	2,446	2,308	2,246
Total debt in capital structure 1	62.9%	62.4%	62.9%	62.6%	63.6%	61.2%	60.6%
Cash flow/Total debt 2	18.9%	17.5%	18.5%	17.5%	16.2%	15.3%	15.5%
EBIT gross interest coverage (times)	2.21	2.15	2.19	2.14	2.27	2.19	2.25
Dividend payout ratio	117.9%	93.8%	128.6%	111.5%	77.8%	96.3%	80.6%

1 Including adjustments for accumulated other comprehensive income. 2 Nine-month ratios have been annualized.

Summary

- NSPI's key credit metrics remained reasonable for the current rating.
- Operating cash flow saw a modest increase in 9M 2017 versus 9M 2016, as the Company benefited from higher earnings.
- NSPI's capex during 9M 2017 was higher compared with 9M 2016, primarily as a result of higher capital spending on information technology and the Maritime Link Project-related transmission projects.
- The Company manages its annual dividend payout to stay within its regulatory capital structure. NSPI is expected to maintain its debt-to-capital ratio within the current rating range.

Outlook

- DBRS expects the Company's key credit metrics to continue to support the current rating in the foreseeable future.
- Cash flow from operations for YE2018 is expected to reduce as a result of the change in the FAM balance but sufficient to support the Company's Capex program. Capex for YE2018 is expected to be lower than YE2017, following the completion of the Maritime Link Project-related transmission projects.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute with respect to the timing of certain tax deductions for its 2006 to 2010 taxation years. NSPI prepaid $22.7 million of the $62.3 million amount in the dispute, as required by the CRA. Should NSPI be unsuccessful in defending any portion of its position, operating cash flow could be negatively affected. DBRS expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within the regulatory parameter.

Debt and Liquidity

Liquidity

(CAD Million – As at September 30, 2017)	Amount	Drawn	Available
Cash & Cash equivalents	0	0	0
Committed Revolving Facilities	600	258	342
Total	**600**	**258**	**342**

- DBRS deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2017, the Company had a Credit Facility of $600 million, of which $342 million was available.
- The Credit Facility is used to back stop the Company's $500 million commercial paper program and to partially fund its working capital requirements and capex requirements. The amount of commercial paper issued results in an equal amount of NSPI's Credit Facility being considered drawn and unavailable.
- On June 28, 2017, NSPI amended its Credit Facility to extend the maturity to October 2021, from October 2020. In addition, the terms on the debt-to-capital ratio were changed to 0.70:1, from 0.65:1. The Company is in compliance with the debt covenant as at September 30, 2017.

Long-term Debt Maturities

(CAD Million – As at September 30, 2017)	2017	2018	2019	2020	2021	Thereafter	Total
Total Long-term Debt	-	-	95	-	257	1,965	2,317
% of Total	**0%**	**0%**	**4%**	**0%**	**11%**	**85%**	**100%**

Summary of Debt

- NSPI's long-term debt maturities are well spread out, with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI will not incur funded debt if its funded debt would be in excess of 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under a reasonable regulatory environment of the NSUARB, using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on the approved capital investments.
- NSPI is not subject to an annual rate review process but, instead, participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% to 9.25%, based on an actual five-quarter average-regulated common equity component of up to 40.0%.
  - The Company historically achieved actual ROE in the upper end of the target range and DBRS expects the Company's actual ROE to continue to be within the target range in 2017 and 2018.
  - NSPI's 2017 rates are based on a 9.0% ROE and an equity component of 37.5%.
- NSPI also files an annual capital expenditure (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets above $250,000 is subject to approval from the NSUARB. NSPI's ACE plan for 2017 was filed in November 2016 and approved by the NSUARB in April 2017.
- In December 2013, the Province approved the Electricity Reform (2013) Act, allowing licensed renewable generators to sell directly to retail customers in the Province.
- DBRS does not expect this act to result in a significant increase in competition (as at September 30, 2017, there were no retail electricity suppliers operating under this tariff) or have a material impact on NSPI's credit quality. It will likely be challenging for new entrants to successfully compete against NSPI, the Province's incumbent utility. In addition, NSPI will still receive related tariffs for its distribution and transmission services.

Regulation (CONTINUED)

- On December 18, 2015, the Province enacted the Electricity Plan Act with the primary purpose to stabilize energy rates until the end of 2019. In accordance with the Electricity Plan Act, NSPI was required to file a three-year stability plan for fuel costs and a General Rate Application (GRA) for non-fuel costs if required by April 30, 2016.
  - NSPI decided not to file a GRA related to non-fuel costs for the 2017 to 2019 period.
  - The Company filed a three-year stability plan for fuel costs in March 2016, and in November 2016, the NSUARB approved an average annual rate increase of 1.5% for 2017 through 2019.
  - While incremental renewable power purchase costs will likely result in an average rate increase that is higher than the projected rate increase during the rate stability period (1.0% to 1.5% yearly through 2017 to 2019), DBRS expects NSPI's rate increase in 2020 to be manageable.
- NSPI has a FAM in place which, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned liability position as at September 30, 2017. This mitigates future fuel cost increases.

FAM Regulatory Liability – Balance as at January 1, 2017 (CAD million)	**(94)**
Net over-recovery of current period fuel costs	(66)
Impact of the Maritime Link interim assessment decision	(12)
Application of non-fuel revenues	(13)
Interest on FAM balance	(6)
One-time refund to customers of 2016 fuel costs	36
FAM Regulatory Liability – Balance as at September 30, 2017	**(155)**

- In December 2016, the NSUARB approved NSPI's application to refund over-recovered fuel costs from 2016 to customers; as a result, a one-time refund of $36 million was issued, as recorded above in the FAM regulatory liability.
- In September 2017, the NSUARB approved an interim assessment payment to NSPML of the costs associated with the Maritime Link Project, starting from its expected service date of January 2018. The NSUARB approved annual payments of $110 million in 2018 and $111 million in 2019.
  - Because of the delayed energy delivery from the Muskrat Falls Project, the approved interim assessment payment reflects NSPML's proposal to reduce the assessment by deferring $53 million in 2018 and 2019, which is related to the depreciation expense.
  - However, these costs are being recovered by NSPI, as part of the 2017 to 2019 fuel rates; therefore, NSPI will provide a credit to customers of $18 million in 2018, $36 million in 2019 and $53 million in 2020. As at September 30, 2017, NSPI collected $12 million, which is recorded above as part of the FAM regulatory liability.
  - NSPI is required to withhold $10 million from the interim assessment payment each year. The release is subject to providing evidence to the NSUARB that, at least, the amount of benefit from the Maritime Link Project has been realized for NSPI customers each year.
- In October 2017, the Province passed amendments to the *Environment Act* for the development of a cap-and-trade program for carbon emissions. At this time, future impact on earnings is unknown; however, NSPI anticipates that any costs prudently incurred to achieve the carbon emission reduction will be recoverable from customers under the regulatory framework.
- The chart below reflects DBRS's assessment of the regulatory environment for NSPI, which is based on eight separate factors. For further details, please refer to Appendix 1 in the DBRS methodology, *Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry.*

Regulatory Environment Assessment

Criteria	Score	Analysis
1. Deemed Equity Ratio	Excellent Good Satisfactory **Below Average** Poor	NSPI's target regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the upper end of the target range.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed through to the customers through the FAM and rates change annually to account for variances between forecast and actual fuel costs. However, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2017 through 2019 will be deferred to a FAM regulatory asset or liability, which is then recovered from or returned to customers after 2019. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recoveries	Excellent **Good** Satisfactory Below Average Poor	Capital costs over $250,000 are generally pre-approved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns its rate of return during the construction period (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Regulation Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory **Below Average** Poor	The Province's introduction of the *Electricity Reform (2013) Act*, the Nova Scotia Electricity Plan and the Electricity Plan Act reflects some of its direct, but modest, impact on NSPI.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The recovery of some fuel-related costs were disallowed by the NSUARB; however, the amount has not been material.
8. Rate Freeze	Excellent **Good** Satisfactory Below Average Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner. However, rates have never been frozen in the past and are not expected to be frozen in the foreseeable future.

Nova Scotia Power Inc.

Balance Sheet (CAD millions)	Sep. 30 2017	Dec. 31 2016	Dec. 31 2015	Dec. 31 2014
Assets				
Cash & equivalents	0	0	0	0
Accounts receivable	205	243	252	238
Inventories	106	136	200	199
Prepaid expenses & other	108	118	150	128
Total Current Assets	**419**	**497**	**601**	**565**
Net fixed assets	3,777	3,661	3,366	3,276
Future income tax assets	0	0	0	0
Goodwill & intangibles	0	0	85	79
Investments & others	616	618	589	398
Total Assets	**4,812**	**4,776**	**4,642**	**4,318**

	Sep. 30 2017	Dec. 31 2016	Dec. 31 2015	Dec. 31 2014
Liabilities & Equity				
S.T. borrowings	0	1	16	2
Accounts payable	198	182	114	125
Current portion L.T.D.	0	0	0	71
Deferred tax	0	0	0	0
Other current liab.	207	238	206	150
Total Current Liab.	**405**	**421**	**337**	**347**
Long-term debt	2,307	2,314	2,430	2,235
Provisions	306	308	293	341
Other L.T. liab.	680	625	469	310
Preferred shares	0	0	0	132
Common equity	1,114	1,108	1,113	953
Total Liab. & SE	**4,812**	**4,776**	**4,642**	**4,318**

Balance Sheet & Liquidity & Capital Ratios	9 mos. September 30 2017	9 mos. September 30 2016	12 mos. September 30 2017	For the year ended December 31 2016	2015	2014	2013
Current ratio	1.03	1.40	1.03	1.18	1.79	1.63	1.85
Total debt in capital structure 1	62.9%	62.4%	62.9%	62.6%	63.6%	61.2%	60.6%
Cash flow/Total debt 2	18.9%	17.5%	18.5%	17.5%	16.2%	15.3%	15.5%
(Cash flow-dividends)/Capex	0.81	1.00	0.75	0.88	1.09	0.85	1.24
Dividend payout ratio	117.9%	93.8%	128.6%	111.5%	77.8%	96.3%	80.6%
Coverage Ratios (times)							
EBIT gross interest coverage	2.21	2.15	2.19	2.14	2.27	2.19	2.25
EBITDA gross interest coverage	3.86	3.72	3.81	3.71	3.89	3.81	3.88
Fixed-charge coverage	2.14	2.13	2.12	2.11	2.06	2.02	2.09
Profitability Ratios							
EBITDA margin	56.1%	53.8%	55.6%	53.9%	56.8%	57.1%	65.4%
EBIT margin	32.1%	31.1%	32.0%	31.2%	33.1%	32.8%	37.9%
Profit margin	16.4%	14.8%	16.2%	15.0%	15.8%	15.9%	17.2%
Return on avg. equity 1, 2	10.2%	9.1%	10.1%	9.3%	9.7%	9.1%	9.2%
Return on avg. capital 1, 2	6.1%	5.6%	6.0%	5.8%	6.0%	6.0%	6.3%

1 Includes adjustments for accumulated other comprehensive income. 2 Nine-month ratios have been annualized.

		For the year ended December 31						
Electricity Sold		**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
Residential	43%	4,318	4,484	4,370	4,394	4,186	4,275	4,147
Commercial	30%	3,062	3,134	3,092	3,148	3,099	3,102	3,089
IndustrialC	24%	2,445	2,457	2,513	2,605	2,167	3,516	3,908
Other (including exports)	3%	293	337	312	320	337	313	312
Total (GWh Sold)		**10,118**	**10,412**	**10,287**	**10,467**	**9,789**	**11,206**	**11,455**
Energy Sales Growth		**-3%**	**1%**	**-2%**	**7%**	**-13%**	**-2%**	**1%**
Installed Generation Capacity								
Coal	50%	1,243	1,243	1,243	1,243	1,243	1,243	1,243
Hydro	16%	393	395	395	395	395	395	395
Dual fuel	14%	350	350	350	350	350	350	350
Gas turbine	14%	359	353	353	353	353	304	304
Wind	3%	82	82	82	82	82	82	76
Biomass	2%	60	60	60	60	0	0	0
Installed Capacity (MW)		**2,487**	**2,483**	**2,483**	**2,483**	**2,423**	**2,374**	**2,368**
Long-term IPP Contracts (MW)		**530**	**496**	**314**	**273**	**265**	**229**	**186**
Energy generated GWh								
Coal 1	54%	4,810	6,364	6,609	7,098	6,223	6,848	7,839
Natural gas	14%	1,244	1,302	1,468	1,317	2,158	2,430	2,275
Oil and Petcoke	17%	1,499	265	153	89	12	35	36
Hydro, wind and biomass	15%	1,295	1,481	1,615	1,364	1,084	1,335	1,017
Gross energy generated		8,848	9,412	9,845	9,868	9,477	10,648	11,167
Plus: purchases		1,991	1,717	1,202	1,337	1,032	1,269	997
Energy generated + purchased		10,839	11,129	11,047	11,205	10,509	11,917	12,164
Less: transmission losses & internal use		721	717	760	737	720	711	709
Total (GWh Sold)		**10,118**	**10,412**	**10,287**	**10,467**	**9,789**	**11,206**	**11,455**

1 Prior to 2016, petcoke figures were part of Coal. Starting 2016, petcoke figures are part of Oil.

	For the year ended December 31						
Earnings Quality/Operating Efficiency	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
Fuel for generation and purchase power/Revenues	36.1%	38.3%	38.0%	41.7%	40.0%	44.4%	49.2%
EBIT margin	31.2%	33.1%	32.8%	37.9%	30.0%	29.1%	38.0%
Profit margin	15.0%	15.8%	15.9%	17.2%	18.0%	19.3%	23.0%
Return on average equity 1	9.3%	9.7%	9.1%	9.2%	9.2%	9.5%	10.8%
Approved ROE – mid-point	9.00%	9.00%	9.00%	9.00%	9.00%	9.35%	9.35%
Customers/Employee	281	293	294	289	261	262	258
Growth in customer base	0.8%	0.6%	0.6%	0.7%	0.9%	0.8%	0.8%
GWh sold/Employee	5.56	6.03	6.01	6.03	5.14	5.95	6.03
Cost Structure (¢/kWh) – Including Purchased Electricity							
OM&A	2.71	2.53	2.66	2.60	2.65	2.40	2.15
Fuel for generation and purchased power	4.84	5.21	4.97	5.32	5.06	4.88	5.12
Variable Costs	**7.55**	**7.74**	**7.63**	**7.92**	**7.71**	**7.28**	**7.27**
Government levies	0.39	0.37	0.37	0.36	0.39	0.35	0.35
Gross interest expense	1.25	1.23	1.22	1.25	1.30	1.07	0.98
Total Cash Costs	**9.18**	**9.34**	**9.23**	**9.53**	**9.39**	**8.70**	**8.60**
Non-cash financial charges	(0.03)	0.02	0.02	0.04	(0.04)	0.01	0.04
Depreciation & amortization	1.95	1.98	1.98	2.04	2.17	1.67	1.64
Total Costs (Excl. Income Taxes)	**11.10**	**11.34**	**11.23**	**11.62**	**11.52**	**10.38**	**10.28**
Number of Customer Accounts							
Residential	462,810	458,950	456,285	453,460	450,366	446,379	442,824
Commercial	35,912	35,693	35,560	35,402	35,169	34,998	34,864
Industrial	2,372	2,379	2,395	2,426	2,449	2,462	2,485
Other	9,428	9,430	9,436	9,430	9,394	9,344	9,256
Total	**510,522**	**506,452**	**503,676**	**500,718**	**497,378**	**493,183**	**489,429**
Employees	1,819	1,727	1,713	1,735	1,906	1,883	1,900
Rate Base (CAD millions)	3,678	3,810	3,746	3,682	3,659	3,470	3,299
Net Energy Sold (GWh)							
Net generated electricity	8,127	8,695	9,085	9,130	8,757	9,937	10,458
Net purchased electricity	1,991	1,717	1,202	1,337	1,032	1,269	997

1 Including adjustments for accumulated other comprehensive income.

Rating History

	Current	2016	2015	2014	2013	2012
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	NR
Unsecured Debentures & Medium-Term Notes	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Cumulative Preferred Shares	Disc.-Repaid	Pfd-2 (low)	Pfd-2 (low)	Pfd-2 (low)	Pfd-2 (low)	Pfd-2 (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- "DBRS Confirms Nova Scotia Power Inc. at A (low), Stable trend," December 6, 2016.

Commercial Paper Limit

- CAD 500 million.

Previous Report

- Nova Scotia Power Inc.: Rating Report, December 13, 2016.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrs.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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Rating Report

Nova Scotia Power Inc.

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Insight beyond the rating.

Ratings

Debt	Rating Action	Rating	Trend
Issuer Rating	Confirmed	A (low)	Stable
Unsecured Debentures & Medium Term Notes	Confirmed	A (low)	Stable
Commercial Paper	Confirmed	R-1 (low)	Stable

Rating Update

On December 21, 2018, DBRS Limited (DBRS) confirmed the ratings of Nova Scotia Power Inc. (NSPI or the Company) as listed above. All trends are Stable. The ratings reflect the stable operations of the Company's regulated utilities in Nova Scotia (the Province; rated A (high), Stable) and its robust key credit metrics. The Stable trends reflect DBRS's expectation that NSPI's key ratios will remain stable through the three-year rate stability period until 2019. DBRS notes that, post 2019, average rate increase will likely be higher primarily driven by increased renewable power purchase costs; nevertheless, DBRS expects NSPI's rate increase in 2020 to be manageable.

The regulatory environment for NSPI has remained relatively unchanged. NSPI operates under a reasonable regulatory system that allows the Company to earn a return on equity (ROE) in the range of 8.75% to 9.25%, based on an equity thickness of up to 40%. The Company continues to focus on improving operating efficiency, which has allowed NSPI to consistently earn an ROE at or near the top of the regulator approved range. DBRS expects this trend to continue in 2018 and 2019. The Provinces' carbon cap-and-trade program is poised to take effect from January 2019 with an initial compliance period of four years; NSPI has been granted carbon dioxide allowances of 22 million tonnes through the period. The Company's emission levels are expected to decline through the compliance period as renewable energy will form a materially larger part of its generation mix when the Muskrat Falls project starts producing full power (expected in early 2020). NSPI expects to recover prudently incurred costs associated with the program through the regulatory framework.

NSPI's business risk assessment (BRA) of A (low), which is one notch below that of the DBRS industry risk rating of "A," factors in the Company's below-average regulatory lag compared with domestic peers, particularly related to its fuel cost recovery mechanism. Fuel costs are also subject to an independent audit by the Nova Scotia Utility and Review Board (NSUARB) that could potentially disallow a portion of the fuel-related costs. The Company's BRA also reflects the challenges associated with NSPI's high electricity rates that could make it increasingly challenging to fully pass costs onto the ratepayers in a timely manner if generation costs rise faster than anticipated.

The Company is expected to generate adequate operating cash flow to meet its capital expenditure (capex) program over the next two years. NSPI has demonstrated flexible dividend payout policy to its parent company Emera Inc. (Emera) in order to maintain its debt-to-capital ratio within regulatory parameters and DBRS expects the Company to continue to do the same. As such, DBRS will continue to view the Company on a stand-alone basis.

Financial Information

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CA$ millions)	**2018**	**2017**	**2018**	**2017**	**2016**	**2015**	**2014**
EBIT gross interest coverage	2.17	2.28	2.01	2.09	2.14	2.27	2.19
Total debt in capital structure 1	63.7%	62.7%	63.7%	64.8%	62.5%	63.5%	61.1%
Cash flow/Total debt	15.0%	18.9%	15.5%	17.8%	17.4%	16.2%	15.3%
Net income before non-recurring items	103	106	126	129	130	139	133
Cash flow from operations	273	327	377	431	404	395	354

1 Including operating leases and adjustments for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated electricity utility that generates, transmits and distributes electricity in the Province. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

1. Low-risk regulated electricity business

The current regulatory framework is based on a cost-of-service (COS) methodology, in which the Company is allowed to recover all prudently estimated operating expenses and to earn a reasonable return on approved capital investments. NSPI's target ROE range of 8.75% and 9.25% is viewed as reasonable and in line with its Canadian peers. NSPI is also allowed the use of a fuel adjustment mechanism (FAM), which lets the Company mitigate the risk arising from fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from, or refunded to, customers in subsequent years.

2. Reasonable financial profile

Overall key credit metrics for the last 12 months ended September 30, 2018, remained within DBRS's "A" rating category.

3. Good franchise strength

NSPI is the primary electricity supplier for the Province, providing over 95% of its electricity generation, transmission and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers, under established tariffs, DBRS does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2018, there were no retail suppliers operating under the renewable-to-retail tariffs.

Challenges

1. Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This, combined with continued investments in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to the ratepayers in a timely manner.

2. Regulatory lag

NSPI faces some regulatory risk (albeit lower than when the FAM was not in place) with respect to the timeliness of full cost recovery. Although FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to approval from the NSUARB. For the years 2017 to 2019, differences between actual fuel costs and amounts recovered from customers will be recovered or returned to customers after 2019. NSPI had a planned liability FAM balance as at September 30, 2018. DBRS also expects the impact of fluctuating fuel prices to reduce once the Maritime Link Project is in service as it will increase the contribution of renewable energy supply to the Company's overall generation mix.

3. Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, DBRS expects Emera to continue to support NSPI's capex program with its flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CA$ millions)	2018	2017	2018	2017	2016	2015	2014
Net revenues	595	647	809	861	866	875	837
Fuel cost 1	460	336	601	477	490	543	512
Operating costs	206	264	335	393	399	378	359
EBITDA	389	383	474	468	467	496	478
EBIT	226	228	259	261	270	290	274
Gross interest expense	104	100	129	125	126	128	125
Net income before non-recurring items	103	106	126	129	130	139	133
Reported net income	103	106	126	129	130	139	133
Return on avg. equity 2	10.2%	10.2%	9.1%	9.5%	9.3%	9.7%	9.1%
Regulated rate base	3,686	3,678	3,686	3,686	3,678	3,810	3,746
Actual regulated return on equity (%)	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%

1 Before fuel adjustment. 2 Includes adjustments for accumulated other comprehensive income.

Summary

- The Company operates under a COS model wherein NSPI is allowed to recover all prudently incurred costs from providing electricity and earnings are primarily impacted by the range of ROE and capital structure approved by the NSUARB.
- Fuel cost increased during the nine months ended September 30, 2018 (9M 2018) due to increased commodity pricing, higher amount of purchased power in the generation mix and the interim assessment payments to NSP Maritime Link Inc (NSPML). DBRS notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- Net income has remained relatively stable. NSPI continued to earn its maximum allowed ROE of 9.25% over the past several years based on the NSUARB's regulatory calculations (not based on DBRS-adjusted calculations.) The NSUARB's ROE calculations are based on five-quarter average-regulated common equity thickness and exclusion of unregulated amounts, such as the unregulated portion of executive compensation and donations/sponsorships.
- In accordance with the *Electricity Plan Implementation (2015) Act* (Electricity Plan Act) enacted on December 18, 2015, the Company will apply earnings above the approved ROE band to the FAM for the years 2017 through 2019.

Outlook

- DBRS expects NSPI to achieve its actual regulated ROE within the target range (8.75% to 9.25%) over 2018 to 2019, partly benefitting from the Company's focus on improving operating efficiency and modest rate base growth.

Financial Profile

	9 mos. September 30		12 mos. September 30	For the year ended December 31			
(CA$ millions)	2018	2017	2018	2017	2016	2015	2014
Net income before non-recurring items	103	106	126	129	130	139	133
Depreciation & amortization	168	160	222	214	204	214	212
Deferred income taxes and other	2	61	29	88	70	43	9
Cash flow from operations 1	**273**	**327**	**377**	**431**	**404**	**395**	**354**
Dividends paid	(127)	(125)	(207)	(205)	(145)	(108)	(128)
Capital expenditures	(247)	(269)	(363)	(385)	(305)	(272)	(274)
Free cash flow (bef. working cap. changes)	**(101)**	**(67)**	**(193)**	**(159)**	**(46)**	**15**	**(48)**
Changes in non-cash work. cap. items	(3)	78	(16)	65	137	(55)	(19)
Adjustment for regulated assets and liabilities	0	0	0	0	0	0	0
Net Free Cash Flow	**(104)**	**11**	**(209)**	**(94)**	**91**	**(40)**	**(66)**
Acquisitions & long-term investments	0	0	0	0	0	0	0
Proceeds on asset sales	0	0	0	0	1	1	8
Net equity/preferred change	91	1	91	1	1	(96)	1
Net debt change	17	(8)	124	99	(120)	139	62
Other 1	(4)	(4)	(6)	(6)	27	(4)	(4)
Change in cash	**0**	**0**	**0**	**0**	**0**	**(0)**	**0**
Total debt (CA$ million)	2,432	2,307	2,432	2,419	2,319	2,446	2,308
Total debt in capital structure 2	63.7%	62.7%	63.7%	64.8%	62.5%	63.5%	61.1%
Cash flow/Total debt	15.0%	18.9%	15.5%	17.8%	17.4%	16.2%	15.3%
EBIT gross interest coverage (times)	2.17	2.28	2.01	2.09	2.14	2.27	2.19
Dividend payout ratio	123.3%	117.9%	164.3%	158.9%	111.5%	77.8%	96.3%

1 Adjusted for a one-time voluntary $90M pension contribution in 2012. 2 Including operating leases and adjustments for accumulated other comprehensive income.

Summary

- NSPI's key credit metrics remained reasonable for the current rating.
- Operating cash flow decreased during 9M 2018 compared to 9M 2017, primarily due to higher fuel costs as outlined in Earnings and Outlook section.
- During 9M 2018, the Company recorded free cash flow deficit (after accounting for working capital). The deficit was primarily funded by $91 million in common stock issuance and net borrowing under committed credit facility.
- The Company manages its annual dividend payout to stay within its regulatory capital structure. NSPI is expected to maintain its debt-to-capital ratio within the current rating range.

Outlook

- DBRS expects the Company's key credit metrics to continue to support the current rating in the foreseeable future.
- Cash flow from operations for YE2019 is expected to reduce as a result of the change in the FAM balance but sufficient to support the Company's Capex program.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute with respect to the timing of certain tax deductions for its 2006 to 2010 taxation years. NSPI prepaid $22.7 million of the $62.3 million amount in the dispute, as required by the CRA. Should NSPI be unsuccessful in defending any portion of its position, operating cash flow could be negatively affected. DBRS expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within the regulatory parameter.

Debt and Liquidity

Liquidity

(CAD Million – As at September 30, 2018)	Amount	Drawn	Available
Cash & Cash equivalents	0	0	0
Committed Revolving Facilities	600	383	217
Total	**600**	**383**	**217**

- DBRS deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2018, the Company had a Credit Facility of $600 million, of which $217 million was available.
- The Credit Facility is used to back stop the Company's $500 million commercial paper program and to partially fund its working capital requirements and capex requirements. The amount of commercial paper issued results in an equal amount of NSPI's Credit Facility being considered drawn and unavailable.
- On October 31, 2018, NSPI amended its Credit Facility to extend the maturity to October 2023, from October 2021. All other terms of the agreement remain the same and the Company is in compliance with the debt convenant as at September 30, 2018.

Long-term Debt Maturities

(CAD Million – As at September 30, 2018)	2018	2019	2020	2021	2022	Thereafter	Total
Total Long-term Debt	-	95	-	382	-	1,965	2,442
% of Total	**0%**	**4%**	**0%**	**16%**	**0%**	**80%**	**100%**

Summary of Debt

- NSPI's long-term debt maturities are well spread out, with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI will not incur funded debt if its funded debt would be in excess of 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under a reasonable regulatory environment of the NSUARB, using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on the approved capital investments.
- NSPI is not subject to an annual rate review process but, instead, participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% to 9.25%, based on an actual five-quarter average-regulated common equity component of up to 40.0%.
  - The Company historically achieved actual ROE in the upper end of the target range and DBRS expects the Company's actual ROE to continue to be within the target range in 2018 and 2019.
  - NSPI's 2018 rates are based on a 9.0% ROE and an equity component of 37.5%.
- NSPI also files an annual capital expenditure (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets above $250,000 is subject to approval from the NSUARB. NSPI's ACE plan for 2019 was filed in November 2018.
- In December 2013, the Province approved the *Electricity Reform (2013) Act*, allowing licensed renewable generators to sell directly to retail customers in the Province.
- DBRS does not expect this act to result in a significant increase in competition (as at September 30, 2018, there were no retail electricity suppliers operating under this tariff) or have a material impact on NSPI's credit quality. It will likely be challenging for new entrants to successfully compete against NSPI, the Province's incumbent utility. In addition, NSPI will still receive related tariffs for its distribution and transmission services.
- On December 18, 2015, the Province enacted the Electricity Plan Act with the primary purpose to stabilize energy rates until the end of 2019. In accordance with the Electricity Plan Act, NSPI was required to file a three-year stability plan for fuel costs and a General Rate Application (GRA) for non-fuel costs if required by April 30, 2016.
  - NSPI decided not to file a GRA related to non-fuel costs for the 2017 to 2019 period.
  - The Company filed a three-year stability plan for fuel costs in March 2016, and in November 2016, the NSUARB approved an average annual rate increase of 1.5% for 2017 through 2019.
  - While incremental renewable power purchase costs will likely result in an average rate increase that is higher than the projected rate increase during the rate stability period (1.0% to 1.5% yearly through 2017 to 2019), DBRS expects NSPI's rate increase in 2020 to be manageable.
- NSPI has a FAM in place which, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned liability position as at September 30, 2018. This may mitigate future fuel cost increases.

	2018
FAM regulatory liability - Balance as at January 1, 2018 ($ million)	**177**
Net under-recovery of current period Fuel Costs	(28)
Impact of the Maritime Link interim assessment decision	25
Interest on FAM balance	8
Benefit of tax treatment on South Canoe and Sable wind farms	2
Recovery from customers of prior years' Fuel Costs	(17)
FAM regulatory liability - Balance as at September 30, 2018	**167**

- In December 2016, the NSUARB approved NSPI's application to refund over-recovered fuel costs from 2016 to customers; as a result, a one-time refund of $36 million was issued, as recorded above in the FAM regulatory liability.
- In September 2017, the NSUARB approved an interim assessment payment to NSPML of the costs associated with the Maritime Link Project which entered into service on January 15, 2018. The NSUARB approved annual payments of $110 million in 2018 and $111 million in 2019. As of September 30, 2018, $71 million has been paid to NSPML.
  - Because of the delayed energy delivery from the Muskrat Falls Project, the approved interim assessment payment reflects NSPML's proposal to reduce the assessment by deferring $53 million in 2018 and 2019, which is related to the depreciation expense.
  - However, these costs are being recovered by NSPI, as part of the 2017 to 2019 fuel rates; therefore, NSPI will provide a credit to customers of $17 million in 2018, $36 million in 2019 and $53 million in 2020. As at September 30, 2018, NSPI collected $25 million, which is recorded above as part of the FAM regulatory liability.

Regulation (CONTINUED)

  - NSPI is required to withhold $10 million from the interim assessment payment each year. The release is subject to providing evidence to the NSUARB that, at least, the amount of benefit from the Maritime Link Project has been realized for NSPI customers each year.

- In October 2017, the Province passed amendments to the *Environment Act* for the development of a cap-and-trade program for carbon emissions, which is slated to begin January 1, 2019 with initial compliance period of 2019 – 2022. NSPI anticipates that any costs prudently incurred to achieve the carbon emission reduction will be recoverable from customers under the regulatory framework.
- The chart below reflects DBRS's assessment of the regulatory environment for NSPI, which is based on eight separate factors. For further details, please refer to Appendix 1 in the DBRS methodology, *Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry.*

Regulatory Environment Assessment

Criteria	Score	Analysis
1. Deemed Equity Ratio	Excellent Good Satisfactory **Below Average** Poor	NSPI's target regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the upper end of the target range.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed through to the customers through the FAM and rates change annually to account for variances between forecast and actual fuel costs. However, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2017 through 2019 will be deferred to a FAM regulatory asset or liability, which is then recovered from or returned to customers after 2019. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recoveries	Excellent **Good** Satisfactory Below Average Poor	Capital costs over $250,000 are generally pre-approved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns its rate of return during the construction period (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Regulation Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory **Below Average** Poor	The Province's introduction of the *Electricity Reform (2013) Act*, the Nova Scotia Electricity Plan and the Electricity Plan Act reflects some of its direct, but modest, impact on NSPI.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The recovery of some fuel-related costs were disallowed by the NSUARB; however, the amount has not been material.
8. Rate Freeze	Excellent **Good** Satisfactory Below Average Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner. However, rates have never been frozen in the past and are not expected to be frozen in the foreseeable future.

Nova Scotia Power Inc.

Balance Sheet (CAD Millions)	Sept. 30 2018	Dec. 31 2017	Dec. 31 2016	Dec. 31 2015
Assets				
Cash & equivalents	0	0	0	0
Accounts receivable	230	251	243	252
Inventories	114	105	136	200
Prepaid expenses & other	159	129	118	150
Total Current Assets	**503**	**485**	**497**	**601**
Net fixed assets	3,916	3,839	3,661	3,366
Future income tax assets	0	0	0	0
Goodwill & intangibles	0	0	0	85
Investments & others	653	652	618	589
Total Assets	**5,072**	**4,976**	**4,776**	**4,642**

	Sept. 30 2018	Dec. 31 2017	Dec. 31 2016	Dec. 31 2015
Liabilities & Equity				
S.T. borrowings	0	1	1	16
Accounts payable	223	234	182	114
Current portion L.T.D.	95	4	4	0
Deferred tax	0	0	0	0
Other current liab.	267	235	234	206
Total Current Liab.	**585**	**474**	**421**	**337**
Long-term debt	2,337	2,414	2,314	2,430
Provisions	281	289	308	293
Other L.T. liab.	699	722	625	469
Preferred shares	0	0	0	0
Common equity	1,170	1,077	1,108	1,113
Total Liab. & SE	**5,072**	**4,976**	**4,776**	**4,642**

Balance Sheet & Liquidity & Capital Ratios	9 mos. September 30 2018	9 mos. September 30 2017	12 mos. September 30 2018	For the year ended December 31 2017	2016	2015	2014
Current ratio	0.86	1.03	0.86	1.02	1.18	1.79	1.63
Total debt in capital structure 1, 2	63.7%	62.7%	63.7%	64.8%	62.5%	63.5%	61.1%
Cash flow/Total debt	15.0%	18.9%	15.5%	17.8%	17.4%	16.2%	15.3%
(Cash flow-dividends)/Capex	0.59	0.75	0.47	0.59	0.85	1.06	0.83
Dividend payout ratio	123.3%	117.9%	164.3%	158.9%	111.5%	77.8%	96.3%
Coverage Ratios (times)							
EBIT gross interest coverage	2.17	2.28	2.01	2.09	2.14	2.27	2.19
EBITDA gross interest coverage	3.74	3.83	3.67	3.74	3.71	3.89	3.81
Fixed-charge coverage	2.01	2.07	1.97	2.02	2.11	2.06	2.02
Profitability Ratios							
EBITDA margin	65.4%	59.2%	58.6%	54.4%	53.9%	56.8%	57.1%
EBIT margin	38.0%	35.2%	32.0%	30.3%	31.2%	33.1%	32.8%
Profit margin	17.3%	16.4%	15.6%	15.0%	15.0%	15.8%	15.9%
Return on avg. equity 2	10.2%	10.2%	9.1%	9.5%	9.3%	9.7%	9.1%
Return on avg. capital 1, 2	6.1%	6.2%	5.7%	5.7%	5.7%	5.9%	5.8%

1 Including operating leases. 2 Includes adjustments for accumulated other comprehensive income.

		For the year ended December 31					
Electricity Sold		**2017**	**2016**	**2015**	**2014**	**2013**	**2012**
Residential	43%	4,374	4,318	4,484	4,370	4,394	4,186
Commercial	30%	3,060	3,062	3,134	3,092	3,148	3,099
Industrial	24%	2,466	2,445	2,457	2,513	2,605	2,167
Other (including exports)	3%	345	293	337	312	320	337
Total (GWh sold)		**10,245**	**10,118**	**10,412**	**10,287**	**10,467**	**9,789**
Energy sales growth		1%	-3%	1%	-2%	7%	-13%
Installed Generation Capacity							
Coal	50%	1,246	1,243	1,243	1,243	1,243	1,243
Hydro	16%	396	393	395	395	395	395
Dual fuel	14%	351	350	350	350	350	350
Gas turbine	14%	354	359	353	353	353	353
Wind	3%	82	82	82	82	82	82
Biomass	2%	60	60	60	60	60	0
Installed capacity (megawatts)		**2,488**	**2,487**	**2,483**	**2,483**	**2,483**	**2,423**
Long-term IPP contracts (MW)		544	530	496	314	273	265
Energy generated – GWh							
Coal 1	54%	4,839	4,810	6,364	6,609	7,098	6,223
Natural gas	14%	1,444	1,244	1,302	1,468	1,317	2,158
Oil and Petcoke	17%	1,169	1,499	265	153	89	12
Hydro, wind and biomass	15%	1,274	1,295	1,481	1,615	1,364	1,084
Gross energy generated		**8,726**	**8,848**	**9,412**	**9,845**	**9,868**	**9,477**
Plus: purchases		2,252	1,991	1,717	1,202	1,337	1,032
Energy generated + purchased		**10,978**	**10,839**	**11,129**	**11,047**	**11,205**	**10,509**
Less: transmission losses & internal use		732	721	717	760	737	720
Total (GWh sold)		**10,246**	**10,118**	**10,412**	**10,287**	**10,467**	**9,789**

1 Prior to 2016, petcoke figures were part of Coal. Starting 2016, petcoke figures are part of Oil.

	For the year ended December 31					
Earnings Quality/Operating Efficiency	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**
Fuel for generation and purchase power/Revenues	35.7%	36.1%	38.3%	38.0%	41.7%	40.0%
EBIT margin	30.3%	31.2%	33.1%	32.8%	37.9%	30.0%
Profit margin	15.0%	15.0%	15.8%	15.9%	17.2%	18.0%
Return on avg. equity 1	9.5%	9.3%	9.7%	9.1%	9.2%	9.2%
Approved ROE – mid-point	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Customers/Employee	269	281	293	294	289	261
Growth in customer base	0.8%	0.8%	0.6%	0.6%	0.7%	0.9%
GWh sold/Employee	5.35	5.56	6.03	6.01	6.03	5.14
Self-Generation (Cost Structure)						
OM&A	3.34	3.37	3.03	3.01	2.98	2.97
Fuel for generation and purchased power	5.97	6.03	6.24	5.63	6.10	5.65
Variable costs	**9.31**	**9.40**	**9.27**	**8.64**	**9.08**	**8.62**
Government levies	0.50	0.48	0.44	0.42	0.41	0.43
Gross interest expense	1.56	1.55	1.47	1.38	1.43	1.45
Total cash costs	**11.37**	**11.43**	**11.18**	**10.45**	**10.93**	**10.50**
Non-cash financial charges	(0.05)	(0.04)	0.03	0.02	0.04	(0.04)
Depreciation & amortization	2.59	2.42	2.37	2.25	2.34	2.42
Total costs (Excl. income taxes)	**13.91**	**13.82**	**13.58**	**12.71**	**13.32**	**12.88**
Number of Customer Accounts						
Residential	466,778	462,810	458,950	456,285	453,460	450,366
Commercial	36,176	35,912	35,693	35,560	35,402	35,169
Industrial	2,368	2,372	2,379	2,395	2,426	2,449
Other	9,487	9,428	9,430	9,436	9,430	9,394
Total	**514,809**	**510,522**	**506,452**	**503,676**	**500,718**	**497,378**
Employees	1,916	1,819	1,727	1,713	1,735	1,906
Rate Base ($ millions)	3,686	3,678	3,810	3,746	3,682	3,659
Total fixed costs						
Net generated electricity	7,993	8,127	8,695	9,085	9,130	8,757
Net purchased electricity	2,252	1,991	1,717	1,202	1,337	1,032

1 Including adjustments for accumulated other comprehensive income.

Rating History

	Current	2017	2016	2015	2014	2013
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- "DBRS Confirms Nova Scotia Power Inc. at A (low), Stable trend," December 22, 2017.

Commercial Paper Limit

- CAD 500 million.

Previous Report

- Nova Scotia Power Inc.: Rating Report, January 5, 2018.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrs.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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RATING REPORT

Nova Scotia Power Inc.

Ratings

Debt	Rating Action	Rating	Trend
Issuer Rating	Confirmed	A (low)	Stable
Unsecured Debentures & Medium-Term Notes	Confirmed	A (low)	Stable
Commercial Paper	Confirmed	R-1 (low)	Stable

Rating Update

On November 29, 2019, DBRS Limited (DBRS Morningstar) confirmed the ratings of Nova Scotia Power Inc. (NSPI or the Company) as listed above. All trends are Stable. The ratings reflect stable operations in the Company's regulated utilities in the Province of Nova Scotia (the Province; rated A (high) with a Stable trend by DBRS Morningstar) and robust key credit metrics. The Stable trends reflect DBRS Morningstar's expectation that NSPI's key credit metrics will continue to remain supportive of the ratings.

NPSI's regulatory environment remains relatively unchanged. The Company operates under a reasonable regulatory system that enables it to earn a return on equity (ROE) in the range of 8.75% to 9.25% based on an equity thickness of up to 40.00%. NSPI's continued focus on improving operating efficiency has allowed it to consistently earn a ROE at or near the top of the regulator-approved range. DBRS Morningstar expects this trend to continue in 2019 and 2020. NSPI's business risk assessment (BRA) of A (low) considers the Company's below-average regulatory lag compared with domestic peers, particularly related to its fuel cost-recovery mechanism. NSPI's BRA also reflects the challenges associated with its high electricity rates, which could make it increasingly challenging to fully pass costs onto the ratepayers in a timely manner if costs rise more quickly than anticipated.

In June 2019, NSPI filed a new three-year fuel stability plan (FSP) requesting an average annual fuel rate increase of 1.9% from 2020 to 2022. The Company expects the Nova Scotia Utility and Review Board's decision on this matter by year-end (YE) 2019. The Province's carbon cap-and-trade program took effect on January 1, 2019, with an initial compliance period of four years. NSPI's emission levels will likely decline through the compliance period as non-emitting energy will form a materially larger part of its generation mix when the Muskrat Falls project begins producing full power, which is expected in 2020. The Company expects to recover the cost of emission allowances (credits) under the program as part of its FSP. The Province and the Government of Canada (rated AAA with a Stable trend by DBRS Morningstar) have renewed the Canada-Nova Scotia Equivalency Agreement (Equivalency Agreement), which will allow NSPI to achieve compliance with federal emission regulations through 2029 by complying with provincial regulations. The Equivalency Agreement will likely come into effect in January 2020.

DBRS Morningstar expects NSPI to generate adequate operating cash flow to meet its capex requirements over the next two years. NSPI has a flexible dividend payout policy to its parent company, Emera Inc., which allows the Company to maintain a debt-to-capital ratio within regulatory parameters. DBRS Morningstar expects the Company to maintain this policy and, as such, DBRS Morningstar will continue to rate NSPI on a stand-alone basis.

Financial Information

	9 months September 30		12 months September 30	For the year ended December 31				
(CAD millions)	**2019**	**2018**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Cash flow/Total debt	14.2%	15.5%	14.3%	14.8%	14.3%	14.6%	13.0%	13.5%
Total debt in capital structure[1]	63.4%	63.7%	63.4%	65.4%	64.8%	62.5%	63.5%	61.1%
EBIT gross interest coverage	1.89	2.22	2.07	2.33	2.30	2.14	2.27	2.19
Net income before non-recurring items	103	103	131	131	129	130	139	133
Cash flow from operations[2]	280	283	377	380	347	338	319	312

1. Including operating leases and adjustments for accumulated other comprehensive income. 2. Net of fuel adjustment mechanism changes.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

1. Low-risk regulated electricity business

The Company's current regulatory framework is based on a cost-of-service (COS) methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. DBRS Morningstar views NSPI's target ROE range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a fuel adjustment mechanism (FAM), which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years.

2. Reasonable financial profile

NSPI's overall key credit metrics for the last 12 months ended September 30, 2019, remained within DBRS Morningstar's "A" rating category.

3. Good franchise strength

NSPI is the primary electricity supplier for the Province, providing over 95% of its electricity generation, transmission and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers under established tariffs (renewable-to-retail tariffs), DBRS Morningstar does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2019, no retail suppliers were operating under these renewable-to-retail tariffs.

Challenges

1. Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. The majority of NSPI's energy is currently generated from coal-based assets. Energy delivery from the Muskrat Falls hydroelectric project, which is expected to begin in 2020, will reduce the contribution of coal-based assets; however, they are still expected to constitute a part of the generation mix beyond 2029. The renewal of the Equivalency Agreement should allow NSPI to remain compliant with federal emission regulations through 2029; however, existing federal regulations mandate the closure of all coal-based power plants by 2030 and NSPI will likely need an Equivalency Agreement for 2030 and beyond to continue operating coal-based assets.

2. Regulatory lag

NSPI faces some regulatory risk with respect to the timeliness of full cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. As per the FSP filed with the NSUARB for the 2020–2022 period, the differences between actual fuel costs and amounts recovered from customers should be recovered or returned to customers after 2022. DBRS Morningstar expects the impact of fluctuating fuel prices to lessen when energy delivery from the Muskrat Falls hydroelectric project begins as this will increase the contribution of non-emitting energy supply to the Company's overall generation mix.

3. Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow (FCF) deficits. As such, DBRS Morningstar expects Emera to continue to support the Company's capex program with flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	9 months September 30		12 months September 30	For the year ended December 31				
(CAD millions)	**2019**	**2018**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Revenues	1,066	1,055	1,451	1,440	1,338	1,356	1,417	1,348
Fuel cost[1]	(480)	(460)	(659)	(639)	(477)	(490)	(543)	(512)
Net revenues	586	595	792	801	861	866	875	837
Fuel adjustment mechanism and cost deferrals	49	29	66	46	(59)	(61)	(77)	(47)
Operating costs	(262)	(235)	(354)	(327)	(308)	(338)	(302)	(312)
EBITDA	373	389	504	520	494	467	496	478
Depreciation and amortization	(171)	(163)	(227)	(219)	(207)	(197)	(207)	(204)
EBIT	202	226	277	301	287	270	290	274
Interest expense	(107)	(102)	(131)	(126)	(121)	(123)	(125)	(122)
Net income before non-recurring items	103	103	131	131	129	130	139	133
Reported net income	103	103	131	131	129	130	139	133
Return on avg. equity[2]	9.7%	9.9%	9.0%	9.8%	9.5%	9.3%	9.7%	9.1%
Regulated rate base	4,082	3,678	4,082	3,863	3,686	3,678	3,810	3,746
Actual regulated return on equity (%)	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%

1. Before fuel adjustment changes. 2. Includes adjustments for accumulated other comprehensive income.

Summary

- The Company operates under a COS model wherein NSPI can recover all prudently incurred costs from providing electricity and earnings are primarily affected by the NSUARB-approved range of ROE and capital structure.
- Fuel cost increased in 2018 because of increased commodity pricing, higher amount of purchased power in the generation mix and the interim assessment payments to NSP Maritime Link Inc. (NSPML). DBRS Morningstar notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- Net income in 2018 remained relatively stable. NSPI continued to earn its maximum allowed ROE of 9.25% over the past several years based on the NSUARB's regulatory calculations (not based on DBRS Morningstar-adjusted calculations.) The NSUARB's ROE calculations are based on five-quarter average-regulated common equity thickness, excluding unregulated amounts (e.g., the unregulated portion of executive compensation and donations/sponsorships).
- Operating costs for the first nine months of 2019 (9M 2019) were higher than the first nine months of 2018 because of restoration costs associated with Hurricane Dorian; however, Hurricane Dorian's impact on net income was offset by excess non-fuel revenues recorded in the period.
- In accordance with the *Electricity Plan Implementation* (2015) Act (Electricity Plan Act) enacted on December 18, 2015, the Company will apply earnings above the approved ROE band to the FAM for 2017 through 2019.

Outlook

- While NSPI has not proposed an increase to its non-fuel rates in 2020, DBRS Morningstar expects net income to grow modestly over the medium term because of the Company's focus on improving operating efficiency and modest rate base growth. DBRS Morningstar also expects NSPI to achieve its actual target regulated ROE of 8.75% to 9.25%.

Financial Profile

	9 months September 30		12 months September 30	For the year ended December 31				
(CAD millions)	**2019**	**2018**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Net income before non-recurring items	103	103	131	131	129	130	139	133
Depreciation & amortization	177	168	234	225	214	204	214	212
Deferred income taxes and other	0	12	12	24	4	4	(34)	(34)
Cash flow from operations[1]	**280**	**283**	**377**	**380**	**347**	**338**	**319**	**312**
Dividends paid	0	(127)	(50)	(177)	(205)	(145)	(108)	(128)
Capital expenditures	(259)	(247)	(357)	(345)	(385)	(305)	(272)	(274)
Free cash flow (bef. working cap. changes)	**21**	**(91)**	**(30)**	**(142)**	**(243)**	**(112)**	**(61)**	**(90)**
Changes in non-cash work. cap. items	(109)	(3)	(183)	(77)	65	137	(55)	(19)
Adjustment for regulated assets and liabilities	(20)	(10)	(26)	(16)	84	66	76	42
Net free cash flow	**(108)**	**(104)**	**(239)**	**(235)**	**(94)**	**91**	**(40)**	**(66)**
Acquisitions & long-term investments	0	0	0	0	0	0	0	0
Proceeds on asset sales	0	0	0	0	0	1	1	8
Net equity/preferred change	51	91	51	91	1	1	(96)	1
Net debt change	65	17	199	151	99	(120)	139	62
Other[1]	(8)	(4)	(11)	(7)	(6)	27	(4)	(4)
Change in cash	**0**	**0**	**0**	**0**	**0**	**0**	**(0)**	**0**
Total debt	2,628	2,432	2,628	2,571	2,419	2,319	2,446	2,308
Cash and equivalents	0	0	0	0	0	0	0	0
Cash flow/Total debt	14.2%	15.5%	14.3%	14.8%	14.3%	14.6%	13.0%	13.5%
Total debt in capital structure[2]	63.4%	63.7%	63.4%	65.4%	64.8%	62.5%	63.5%	61.1%
EBIT gross interest coverage (times)	1.89	2.22	2.07	2.33	2.30	2.14	2.27	2.19
Dividend payout ratio	0.0%	123.3%	38.2%	135.1%	158.9%	111.5%	77.8%	96.3%

1. Net of fuel adjustment mechanism changes. 2. Including operating leases and adjustments for accumulated other comprehensive income.

Summary

- NSPI's key credit metrics remained reasonable for the current rating.
- OCF increased in 2018 compared with 2017, primarily because of lower cash taxes.
- In 2018 and 9M 2019, the Company recorded FCF deficits (after working capital and regulatory changes), which were primarily funded by common stock issuance and incremental borrowing.
- In April 2019, NSPI completed a MTN issuance of $400.0 million, some proceeds of which repaid scheduled debt repayments ($95.0 million) and reduced borrowing under the Company's committed credit facility.
- The Company manages its annual dividend payout to stay within its regulatory capital structure. NSPI is expected to maintain its debt-to-capital ratio within the range for the current rating.

Outlook

- DBRS Morningstar expects OCF to grow modestly because of rate-base growth and to be sufficient to cover capex requirements.
- Total debt is expected to increase because of rate-base growth, but remain in line with regulatory parameters. DBRS Morningstar expects the Company's key credit metrics to continue to support the current rating in the foreseeable future.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute about the timing of certain tax deductions for the 2006 to 2010 taxation years. The Company prepaid $22.7 million of the $62.3 million in dispute as required by the CRA. If NSPI cannot successfully defend any portion of its position, OCF could be negatively affected. DBRS Morningstar expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within regulatory parameters.

Debt and Liquidity

Liquidity

(CAD millions as at Sept. 30, 2019)	Amount	Drawn	Available
Cash & Cash equivalents	0	-	0
Committed Revolving Facilities	600	270	330
Total	**600**	**270**	**330**

- DBRS Morningstar deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2019, NSPI had a Credit Facility of $600 million, $330 million of which was available. The Credit Facility matures in October 2024.
- The Credit Facility is used to backstop the Company's $500 million CP program and to partially fund its working capital and capex requirements. Availability under the Credit Facility is reduced by the amount of CP issued. The Credit Facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%) and NSPI is compliant with the covenant as at September 30, 2019.

Long-Term Debt Maturities

(CAD millions as at Sept. 30, 2019)	2019	2020	2021	2022	2023	Thereafter	Total
Total Long-Term Debt	0	0	0	0	0	2,633	2,633
% of Total	**0%**	**0%**	**0%**	**0%**	**0%**	**100%**	**100%**

Summary of Debt

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI will not incur debt if its funded debt would be over 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under the NSUARB's reasonable regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.
  - The Company historically achieved actual ROE in the higher end of the target range and DBRS Morningstar expects NSPI to maintain its actual ROE within the target range in 2019 and 2020.
  - NSPI's 2019 rates are based on a ROE of 9.0% and an equity component of 37.5%.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request. NSPI filed its last General Rate Application (GRA) in 2014 and has not raised non-fuel rates for customers since that time.
- In 2015, the Province enacted the Electricity Plan Act with the primary purpose of stabilizing energy rates until the end of 2019. In accordance with the Electricity Plan Act, NSPI is currently operating under a three-year stability plan for fuel costs, which provides for an average annual rate increase of 1.5% for 2017 through 2019.
- In June 2019, NSPI filed a new three-year FSP requesting an average annual fuel rate increase of 1.9% for 2020 to 2022. The NSUARB's decision on the matter is expected by YE2019.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets above $1,000,000 is subject to the NSUARB's approval. NSPI's ACE plan for 2020 is expected to be filed in Q4 2019.
- In December 2013, the Province approved the *Electricity Reform* (2013) Act, allowing licensed renewable generators to sell directly to retail customers in the Province. DBRS Morningstar does not expect this to have a material impact on NSPI's credit quality or to result in a significant increase in competition. As at September 30, 2019, no retail electricity suppliers were operating under this tariff. New entrants will likely find it challenging to successfully compete against NSPI, the Province's incumbent utility. In addition, the Company will still receive related tariffs for its distribution and transmission services.

Regulation (CONTINUED)

- NSPI has a FAM in place which, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned liability position as at September 30, 2019. As part of the FSP filed with the NSUARB, NSPI proposes to use the FAM balance to offset the increase in fuel costs over the 2020 to 2022 period.

	2019
FAM regulatory liability – Balance as at January 1, 2019 (CAD millions)	**161**
Net under-recovery of current period fuel costs	(49)
Application of non-fuel revenues	2
Impact of the Maritime Link interim assessment decision	39
Interest on FAM balance	8
DSM refund to be returned to customers in subsequent periods	15
Refund to customers of the reduced Maritime Link assessment recovered in prior year	(35)
FAM regulatory liability – Balance as at September 30, 2019	**141**

- In September 2017, the NSUARB approved an interim assessment payment to NSPML of the costs associated with the Maritime Link Project, which entered into service on January 15, 2018. The NSUARB approved annual payments of $110.0 million in 2018 and $111.0 million in 2019.
  - Because of the delayed energy delivery from the Muskrat Falls Project, the approved interim assessment payment reflects NSPML's proposal to reduce the assessment by deferring $53.0 million in 2018 and 2019, which is related to the depreciation expense.
  - NSPI is recovering these costs as part of the 2017 to 2019 fuel rates; therefore, the Company provided a credit of $17.0 million to customers in 2018. NSPI proposes to provide credits of $35.0 million and $53.0 million to customers in 2019 and 2020, respectively. The Company is recording amounts recovered from customers toward NSPML payments as part of the FAM regulatory liability. As part of the FSP, NSPI has asked that the credit of $53.0 million, payable to customers in 2020, be returned through the FAM balance to offset the increase in fuel costs from 2020 to 2022.
  - NSPI is required to withhold $10.0 million from the interim assessment payment each year, the release of which depends on the Company providing evidence to the NSUARB that, at minimum, the amount of benefit from the Maritime Link Project is realized for NSPI customers each year.
  - In June 2019, NSPML filed an application with the NSUARB requesting an interim cost assessment of $140.0 million in 2020. The interim cost assessment assumes receipt of power from Muskrat Falls to commence on June 1, 2020, and does not include depreciation expenses prior to commencement. The NSUARB's decision is expected by YE2019.
- In October 2017, the Province passed amendments to the *Environment Act* for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019, with an initial compliance period of four years (2019–2022). NSPI has been granted carbon dioxide allowances of 22 million tonnes through the compliance period and expects to recover the cost of emission allowances (credits) under the program as part of its three-year FSP filed with the NSUARB.
- In November 2014, the Province and the Government of Canada entered into an Equivalency Agreement regarding greenhouse gas emissions (GHG) from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015 and will terminate on December 31, 2019.
- In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants:
  - Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour of electricity generated will have to be closed by (1) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2019, if commissioned before 1975; or (2) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2029, if commissioned after 1974.
- The Province and the Government of Canada have renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying with provincial regulations. The Equivalency Agreement is expected to come into force on January 1, 2020, and expire on December 31, 2024; however, it may be renewed until December 31, 2029.
- The chart below reflects DBRS Morningstar's assessment of the regulatory environment for NSPI, which is based on eight factors. For further detail, please refer to Appendix 1 of the DBRS Morningstar *Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry* methodology.

Regulatory Environment Assessment

Criteria	Score	Analysis
1. Deemed Equity Ratio	Excellent Good Satisfactory **Below Average** Poor	NSPI's target regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the higher end of this target range.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed through to the customers through the FAM and rates change annually to account for variances between forecast and actual fuel costs; however, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2017 through 2019 will be deferred to a FAM regulatory asset or liability and will be recovered from or returned to customers after 2019. On June 27, 2019, NSPI filed an application for a new three-year FSP with the NSUARB which, if approved, will result in an average annual fuel rate increase of 1.9% from 2020 through 2022 to recover fuel costs through the FAM. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recoveries	Excellent **Good** Satisfactory Below Average Poor	Capital costs over $1,000,000 are generally pre-approved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Regulation Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory **Below Average** Poor	The Province's introduction of the *Electricity Reform (2013) Act* and the Electricity Plan Act reflects some of Nova Scotia's direct actions, but the overall impact on NSPI has been modest.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent **Good** Satisfactory Below Average Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner; however, rates have never been frozen in the past and are not expected to be frozen in the foreseeable future.

Nova Scotia Power Inc.

Balance Sheet (CAD millions)	September 30	December 31			September 30	December 31	
Assets	**2019**	**2018**	**2017**	**Liabilities & Equity**	**2019**	**2018**	**2017**
Cash & equivalents	0	0	0	S.T. borrowings	7	0	1
Accounts receivable	267	290	251	Accounts payable	163	205	234
Inventories	176	130	105	Current portion L.T.D.	0	100	4
Prepaid expenses & other	107	145	129	Deferred tax	0	0	0
				Other current liab.	308	275	235
Total Current Assets	**550**	**565**	**485**	**Total Current Liab.**	**478**	**580**	**474**
Net fixed assets	4,059	3,958	3,839	Long-term debt	2,621	2,471	2,414
Future income tax assets	0	0	0	Provisions	294	298	289
Goodwill & intangibles	0	0	0	Other L.T. liab.	648	657	722
Investments & others	734	620	652	Preferred shares	0	0	0
				Common equity	1,302	1,137	1,077
Total Assets	**5,343**	**5,143**	**4,976**	**Total Liab. & SE**	**5,343**	**5,143**	**4,976**

	9 months September 30		12 months September 30	For the year ended December 31				
Financial Ratios	**2019**	**2018**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Current ratio	1.15	0.86	1.15	0.97	1.02	1.18	1.79	1.63
Total debt in capital structure[1, 2]	63.4%	63.7%	63.4%	65.4%	64.8%	62.5%	63.5%	61.1%
Cash flow/Total debt	14.2%	15.5%	14.3%	14.8%	14.3%	14.6%	13.0%	13.5%
(Cash flow-dividends)/Capex	1.08	0.63	0.92	0.59	0.37	0.63	0.78	0.67
Dividend payout ratio	0.0%	123.3%	38.2%	135.1%	158.9%	111.5%	77.8%	96.3%
Coverage Ratios (times)								
EBIT gross interest coverage	1.89	2.22	2.07	2.33	2.30	2.14	2.27	2.19
EBITDA gross interest coverage	3.49	3.81	3.76	4.03	3.95	3.71	3.89	3.81
Fixed-charge coverage	1.88	2.05	1.96	2.09	2.02	2.11	2.06	2.02
Profitability Ratios								
EBITDA margin	63.7%	65.4%	63.6%	64.9%	57.4%	53.9%	56.8%	57.1%
EBIT margin	34.5%	38.0%	35.0%	37.6%	33.3%	31.2%	33.1%	32.8%
Profit margin	17.6%	17.3%	16.5%	16.4%	15.0%	15.0%	15.8%	15.9%
Return on avg. equity[2]	9.7%	9.9%	9.0%	9.8%	9.5%	9.3%	9.7%	9.1%
Return on avg. capital[1, 2]	6.0%	6.1%	5.5%	5.7%	5.7%	5.7%	5.9%	5.8%

1. Including operating leases. 2. Includes adjustments for accumulated other comprehensive income.

		For the year ended December 31				
Electricity Sold		**2018**	**2017**	**2016**	**2015**	**2014**
Residential	43%	4,581	4,374	4,318	4,484	4,370
Commercial	30%	3,102	3,060	3,062	3,134	3,092
Industrial	24%	2,611	2,466	2,445	2,457	2,513
Other (including exports)	3%	323	345	293	337	312
Total (GWh sold)		**10,617**	**10,245**	**10,118**	**10,412**	**10,287**
Energy sales growth		4%	1%	-3%	1%	-2%
Installed Generation Capacity						
Coal	50%	1,229	1,246	1,243	1,243	1,243
Hydro	16%	395	396	393	395	395
Dual fuel	13%	318	351	350	350	350
Gas turbine	15%	375	354	359	353	353
Wind	3%	81	82	82	82	82
Biomass	2%	43	60	60	60	60
Installed capacity (megawatts)		**2,441**	**2,488**	**2,487**	**2,483**	**2,483**
Long-term IPP contracts (MW)		546	544	530	496	314
Energy Generated – GWh						
Coal[1]	55%	4,930	4,839	4,810	6,364	6,609
Natural gas	14%	1,427	1,444	1,244	1,302	1,468
Oil and Petcoke	17%	1,246	1,169	1,499	265	153
Hydro, wind and biomass	15%	1,391	1,274	1,295	1,481	1,615
Gross energy generated		**8,994**	**8,726**	**8,848**	**9,412**	**9,845**
Plus: purchases		2,368	2,252	1,991	1,717	1,202
Energy generated + purchased		**11,362**	**10,978**	**10,839**	**11,129**	**11,047**
Less: transmission losses & internal use		745	732	721	717	760
Total (GWh sold)		**10,617**	**10,246**	**10,118**	**10,412**	**10,287**

1. Prior to 2016, petcoke figures were part of Coal. Starting 2016, petcoke figures are part of Oil.

	For the year ended December 31				
Earnings Quality/Operating Efficiency	**2018**	**2017**	**2016**	**2015**	**2014**
Fuel for generation and purchase power/Revenues	44.4%	35.7%	36.1%	38.3%	38.0%
EBIT margin	37.6%	33.3%	31.2%	33.1%	32.8%
Profit margin	16.4%	15.0%	15.0%	15.8%	15.9%
Return on avg. equity[1]	9.8%	9.5%	9.3%	9.7%	9.1%
Approved ROE – mid-point	9.00%	9.00%	9.00%	9.00%	9.00%
Customers/Employee	289	269	281	293	294
Growth in customer base	0.9%	0.8%	0.8%	0.6%	0.6%
GWh sold/Employee	5.90	5.35	5.56	6.03	6.01
Self-Generation (Cost Structure)					
OM&A	3.05	3.02	3.37	3.03	3.01
Fuel for generation and purchased power	7.75	5.97	6.03	6.24	5.63
Variable costs	**10.80**	**8.98**	**9.40**	**9.27**	**8.64**
Government levies	0.48	0.50	0.48	0.44	0.42
Gross interest expense	1.56	1.56	1.55	1.47	1.38
Total cash costs	**12.85**	**11.05**	**11.43**	**11.18**	**10.45**
Non-cash financial charges	(0.04)	(0.05)	(0.04)	0.03	0.02
Depreciation & amortization	2.65	2.59	2.42	2.37	2.25
Total costs (Excl. income taxes)	**15.47**	**13.59**	**13.82**	**13.58**	**12.71**
Number of Customer Accounts					
Residential	471,017	466,778	462,810	458,950	456,285
Commercial	36,455	36,176	35,912	35,693	35,560
Industrial	2,359	2,368	2,372	2,379	2,395
Other	9,537	9,487	9,428	9,430	9,436
Total	**519,368**	**514,809**	**510,522**	**506,452**	**503,676**
Employees	1,800	1,916	1,819	1,727	1,713
Rate Base (CAD millions)	3,863	3,686	3,678	3,810	3,746
Total Fixed Costs					
Net generated electricity	8,249	7,993	8,127	8,695	9,085
Net purchased electricity	2,368	2,252	1,991	1,717	1,202

1. Including adjustments for accumulated other comprehensive income. 2. Before fuel adjustment.

Rating History

Debt	Current	2018	2017	2016	2015	2014
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Report

- Nova Scotia Power Inc.: Rating Report, January 4, 2019.

Notes:
All figures are in Canadian dollars unless otherwise noted.

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Rating Report
Nova Scotia Power Inc.

DBRS Morningstar
December 9, 2020

Commercial Paper Limit
$500 million

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Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (low)	Confirmed	Stable
Unsecured Debentures & Medium-Term Notes	A (low)	Confirmed	Stable
Commercial Paper	R-1 (low)	Confirmed	Stable

Rating Update

On December 2, 2020, DBRS Limited (DBRS Morningstar) confirmed Nova Scotia Power Inc.'s (NSPI or the Company) Issuer Rating and Unsecured Debentures & Medium-Term Notes rating at A (low). DBRS Morningstar also confirmed NSPI's Commercial Paper rating at R-1 (low). All trends are Stable. The ratings of NSPI are based on its regulated electricity distribution, transmission, and generation business, which operate under a reasonable regulatory framework by the Nova Scotia Utility and Review Board (NSUARB). The Stable trends reflect the Company's key credit metrics, which DBRS Morningstar expects to remain supportive of the current ratings.

There were no material changes to NSPI's regulatory framework in 2020. The Company continues to be regulated by the NSUARB under cost-of-service (COS) where it can recover all prudent expenditures and have the opportunity to earn a reasonable return on equity (ROE) of 8.75% to 9.25%. In December 2019, the NSUARB approved NSPI's 2020 to 2022 fuel stability plan (FSP) for average annual fuel rate increases of 1.5%. DBRS Morningstar considers it negative that while the Company can pass through all fuel purchase costs through a fuel adjustment mechanism (FAM), any undercollection or overcollection will not be recovered until after 2022, leading to higher regulatory lag. In December 2019, the Government of Canada and the Province of Nova Scotia (the Province) renewed the Canada-Nova Scotia Equivalency Agreement (Equivalency Agreement), which will allow NSPI to achieve compliance with federal emission regulations through 2029 by complying with provincial regulations. DBRS Morningstar notes that a long-term challenge for the Company will be its transition from reliance on coal-based generation (50% of 2019 installed generation capacity) to lower emitting sources. This is expected to be achieved through increasing contributions from renewable energy, including from the Muskrat Falls Project.

NSPI's key credit metrics have been supportive of the current A (low) rating. DBRS Morningstar does not expect the ongoing Coronavirus Disease (COVID-19) pandemic to have a material impact on the Company's results. While industrial and commercial usage have decreased, this has been largely offset by higher residential usage. Additionally, NSPI has noted that it has not experienced any significant customer defaults and allowances for credit losses. Overall, DBRS Morningstar expects the Company to

continue to maintain its key credit metrics in line with the current rating category through prudent dividend and debt management. NSPI has demonstrated flexible dividend payout policy to its parent company, Emera Inc. (Emera), in order to maintain its debt-to-capital ratio within regulatory parameters. DBRS Morningstar considers a positive rating action as unlikely in the medium term given the current regulatory framework. A negative rating action is also unlikely, but could occur if the metrics weaken to a level no longer commensurate with the current rating category.

Financial Information

	12 mos. ended September 30	For the year ended December 31				
	2020	**2019**	**2018**	**2017**	**2016**	**2015**
Cash flow/Total debt (%)[1]	13.9	14.4	14.8	14.3	14.5	13.0
Total debt in capital structure (%)[1, 2]	62.9	62.4	65.4	64.9	62.7	63.6
EBIT gross interest coverage (times)[1]	2.03	2.00	2.33	2.29	2.13	2.27

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits, and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

1. *Low-risk regulated electricity business*

   The Company's current regulatory framework is based on a COS methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. DBRS Morningstar views NSPI's target ROE range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a FAM, which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years.

2. *Reasonable financial profile*

   NSPI's overall key credit metrics for the last 12 months ended September 30, 2020 (LTM 2020) remained within DBRS Morningstar's "A" rating category.

3. *Good franchise strength*

   NSPI is the primary electricity supplier for the Province, providing over 95% of its electricity generation, transmission, and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers under established tariffs (renewable-to-retail tariffs), DBRS Morningstar does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2020, no retail suppliers were operating under these renewable-to-retail tariffs.

Challenges

1. *Unfavourable generation mix*

   As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. The majority of NSPI's energy is currently generated from coal-based assets. Energy delivery from the Muskrat Falls hydroelectric project, which is expected to begin in 2021, will reduce the contribution of coal-based assets; however, they are still expected to constitute a part of the generation mix beyond 2029. The Equivalency Agreement should allow NSPI to remain compliant with federal emission regulations through 2029; however, existing federal regulations mandate the closure of all coal-based power plants by 2030 and NSPI will likely need an Equivalency Agreement for 2030 and beyond to continue operating coal-based assets.

2. *Regulatory lag*

   NSPI faces some regulatory risk with respect to the timeliness of full cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. As per the 2020–22 FSP, the differences between actual fuel costs and amounts recovered from customers should be recovered or returned to customers after 2022. DBRS Morningstar expects the impact of fluctuating fuel prices to lessen when energy delivery from the Muskrat Falls hydroelectric project begins as this will increase the contribution of renewable energy supply to the Company's overall generation mix.

3. *Limited access to equity markets*

   NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, DBRS Morningstar expects Emera to continue to support the Company's capital expenditure (capex) program with flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	12 mos. ended September 30	For the year ended December 31				
(CAD millions where applicable)	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**
Revenues	1,481	1,430	1,440	1,338	1,356	1,417
Fuel cost[1]	(685)	(663)	(639)	(477)	(490)	(543)
Net revenues	**796**	**767**	**801**	**861**	**866**	**875**
EBITDA	509	503	520	494	467	496
EBIT	274	272	301	287	270	290
Gross interest expense	(132)	(133)	(126)	(121)	(123)	(125)
Earnings before taxes	136	128	139	129	142	162
Net income before nonrecurring items	124	138	131	129	130	139
Reported net income	124	138	131	129	130	139
Return on equity (%)[2]	8.1	9.3	9.8	9.5	9.3	9.7
Regulated rate base	N/A	4,225	3,863	3,686	3,678	3,810
Actual regulated return on equity (%)	N/A	9.25	9.25	9.25	9.25	9.25

1 Before fuel adjustment changes.
2 Adjusted for accumulated other comprehensive income.

2019 Summary

- Earnings for NSPI have been relatively stable, reflecting the regulated nature of its operations.
    - DBRS Morningstar notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- EBITDA and EBIT decreased in 2019 because of (1) lower industrial and commercial sales volumes and (2) higher depreciation from the growing asset base. This was partly offset by favourable weather for the year.
- Net income for the Company increased, benefitting from an income tax recovery of $13 million for a change in tax deductions related to a specific clean energy equipment.
    - NSPI continued to earn its maximum allowed ROE of 9.25% over the past several years based on the NSUARB's regulatory calculations (not based on DBRS Morningstar-adjusted calculations). The NSUARB's ROE calculations are based on five-quarter average-regulated common equity thickness, excluding unregulated amounts (e.g., the unregulated portion of executive compensation and donations/sponsorships).
    - In accordance with the *Electricity Plan Implementation (2015) Act* (Electricity Plan Act) enacted on December 18, 2015, the Company applied earnings above the approved ROE band to the FAM for 2017 through 2019.

2020 Summary/Outlook

- EBITDA and EBIT for the LTM 2020 remained relatively stable compared with 2019.
    - Net income before nonrecurring items decreased, however, because of higher income taxes for the period.
- The ongoing coronavirus pandemic has not had a material impact on NSPI's financial results.
    - Although revenues from commercial and industrial customers have decreased, this has been largely offset by higher residential usage. The Company has also noted that it has not experienced any significant customer defaults and allowances for credit losses have not had a significant impact on earnings.

- Overall, DBRS Morningstar expects NSPI's earnings to grow modestly year-over-year from growth in the rate base as well as through operating efficiencies.
    - DBRS Morningstar also expects NSPI to continue to achieve its actual target regulated ROE of 8.75% to 9.25%.

Financial Profile

	12 mos. ended September 30	For the year ended December 31				
(CAD millions where applicable)	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**
Net income before nonrecurring items	124	138	131	129	130	139
Depreciation & amortization	241	238	225	214	204	214
Other noncash operating items	4	9	24	4	4	(34)
Cash flow from operations[1]	**369**	**385**	**380**	**347**	**338**	**319**
Dividends paid	0	0	(177)	(205)	(145)	(108)
Capital expenditures	(373)	(383)	(345)	(385)	(305)	(272)
Free cash flow (before working capital changes)	**(4)**	**2**	**(142)**	**(243)**	**(112)**	**(61)**
Changes in noncash working capital items	(2)	(167)	(77)	65	137	(55)
Adjustment for regulated assets and liabilities	(59)	(46)	(16)	84	66	76
Net free cash flow	**(65)**	**(211)**	**(235)**	**(94)**	**91**	**(40)**
Acquisitions & long-term investments	0	0	0	0	0	0
Proceeds on asset sales	0	0	0	0	1	1
Net equity change	70	119	91	1	1	(96)
Net debt change	23	103	151	99	(120)	139
Other investing & financing[1]	(11)	(11)	(7)	(6)	27	(4)
Change in cash	**17**	**0**	**0**	**0**	**0**	**(0)**
Total debt	2,650	2,681	2,566	2,419	2,319	2,446
Cash flow/Total debt (%)[2]	13.9	14.4	14.8	14.3	14.5	13.0
Total debt in capital structure (%)[2,3]	62.9	62.4	65.4	64.9	62.7	63.6
EBIT gross interest coverage (times)[2]	2.03	2.00	2.33	2.29	2.13	2.27
Dividend payout ratio (%)	0.0	0.0	135.1	158.9	111.5	77.8

1 Net of fuel adjustment mechanism changes.
2 Adjusted for operating leases.
3 Adjusted for accumulated other comprehensive income.

2019 Summary

- NSPI's key credit metrics have been in line with the A (low) rating.
    - The Company's cash flow-to-debt and EBIT-interest coverage both weakened modestly in 2019 because of the lower earnings and higher debt load for the year.
    - Debt-to-capital decreased because of a $119 million common stock issuance to Emera.
- Cash flow from operations increased reflecting the higher net income for the year.
- NSPI generated a net free cash flow deficit for the year because of its ongoing capex program. This deficit was funded through the above-mentioned common stock issuance and through commercial paper (CP) issuances.
- The Company manages its annual dividend payout to stay within its regulatory capital structure (nil for 2019). NSPI has maintained its debt-to-capital ratio within the range for the current rating.

2020 Summary/Outlook

- DBRS Morningstar expects NSPI's key credit metrics to remain stable over the medium term.

- The Company has forecast capex to be at around $310 million for 2020, with the decrease largely because of measures taken in response to the coronavirus pandemic.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute about the timing of certain tax deductions for the 2006 to 2010 taxation years. The Company prepaid $22.7 million of the $62.3 million in dispute as required by the CRA. If NSPI cannot successfully defend any portion of its position, operating cash flow could be negatively affected.
- DBRS Morningstar expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within regulatory parameters.
    - The Company has declared a dividend of $145 million for the year.

Liquidity and Debt Profile

Liquidity

(CAD millions as at September 30, 2020)	Amount	Drawn/Letter of Credit	Available	Expiry
Cash & Cash equivalents	17	-	**17**	N/A
Committed Revolving Facilities	600	4	**596**	
Total	**617**	**4**	**613**	

- DBRS Morningstar deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2020, NSPI had a Credit Facility of $600 million, $596 million of which was available. The Credit Facility matures in October 2024.
    - The Credit Facility is used to backstop the Company's $500 million CP program and to partially fund its working capital and capex requirements. Availability under the Credit Facility is reduced by the amount of CP issued. The Credit Facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%) and NSPI is compliant with the covenant as at September 30, 2020.

Long-Term Debt

(CAD millions as at September 30, 2020)	2020	2021	2022	2023	2024	Thereafter	Total
Total long-term debt	0	0	0	0	0	2,665	**2,665**
%	0	0	0	0	0	100	**100**

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI will not incur debt if its funded debt would be over 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under the NSUARB's reasonable regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.

    - The Company historically achieved actual ROE in the higher end of the target range and DBRS Morningstar expects NSPI to maintain its actual ROE within the target range in 2020 and 2021.
    - NSPI's 2020 rates are based on a ROE of 9.0% and an equity component of 37.5%.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request. NSPI filed its last General Rate Application (GRA) in 2014 and has not raised non-fuel rates for customers since that time.
- In 2015, the Province enacted the Electricity Plan Act with the primary purpose of stabilizing energy rates until the end of 2019. In accordance with the Electricity Plan Act, NSPI operated under a three-year stability plan for fuel costs, which provided for an average annual rate increase of 1.5% for 2017 through 2019.
    - In December 2019, the NSUARB approved NSPI's three-year FSP for average annual fuel rate increases of 1.5% for 2020 to 2022.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets above $1,000,000 is subject to the NSUARB's approval.
    - In June 2020, the NSUARB approved the 2020 ACE plan of $167.4 million.
- In December 2013, the Province approved the Electricity Reform (2013) Act, allowing licensed renewable generators to sell directly to retail customers in the Province. DBRS Morningstar does not expect this to have a material impact on NSPI's credit quality or to result in a significant increase in competition. As at September 30, 2019, no retail electricity suppliers were operating under this tariff. New entrants will likely find it challenging to successfully compete against NSPI, the Province's incumbent utility. In addition, the Company will still receive related tariffs for its distribution and transmission services.
- NSPI has a FAM in place that, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned liability position as at September 30, 2020. As part of the FSP filed with the NSUARB, NSPI proposes to use the FAM balance to offset the increase in fuel costs over the 2020 to 2022 period.

FAM Balance

(CAD millions)	2020
FAM regulatory liability - Balance as at January 1	**115**
Net under-recovery of current period fuel costs	64
Interest on FAM balance	6
Refund to customers of the reduced Maritime Link assessment recovered in prior year	(106)
Other	3
FAM regulatory liability - Balance as at September 30	**82**

- In September 2017, the NSUARB approved an interim assessment payment to NSP Maritime Link Incorporated (NSPML) of the costs associated with the Maritime Link Project, which entered into service on January 15, 2018. The NSUARB approved annual payments of $110.0 million in 2018 and $111.0 million in 2019.
    - Because of the delayed energy delivery from the Muskrat Falls Project, the approved interim assessment payment reflected NSPML's proposal to reduce the assessment related to the depreciation expense.
    - As NSPI recovered these costs as part of its fuel rates, the Company provided credits of $17.0 million, $35 million, and $40 million to customers in 2018, 2019, and 2020, respectively.
    - NSPI is required to withhold $10.0 million from the interim assessment payment each year, the release of which depends on the Company providing evidence to the NSUARB that, at minimum, the amount of benefit from the Maritime Link Project is realized for NSPI customers each year.
    - In November 2019, the NSUARB approved NSLML's 2020 interim assessment of $145 million to be recovered from NSPI.
- In October 2017, the Province passed amendments to the Environment Act for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019, with an initial compliance period of four years (2019–22). NSPI has been granted carbon dioxide allowances of 22 million tonnes through the compliance period and expects to recover the cost of emission allowances (credits) under the program as part of its three-year FSP filed with the NSUARB.
- In November 2014, the Province and the Government of Canada entered into an Equivalency Agreement regarding greenhouse gas emissions (GHG) from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015, and terminated on December 31, 2019.
- In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants:
    - Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour of electricity generated will have to be closed by (1) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2019, if commissioned before 1975; or (2) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2029, if commissioned after 1974.
- In December 2019, the Province and the Government of Canada renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying

with provincial regulations. The renewed Equivalency Agreement came into force on January 1, 2020, and will expire on December 31, 2024; however, it may be renewed until December 31, 2029.

- As a result of the coronavirus pandemic, there was a delay to the in-service to the Muskrat Falls Project, delaying the delivery of power to NSPI; the Utility would thus be unable to achieve the provincially legislated target of 40% of electric sales generated from renewable sources in 2020.
- In May 2020, the Province provided an alternative compliance plan, where NSPI would have to meet the 40% target over a three-year period of 2020 to 2022.

Assessment of Regulatory Framework

Criteria	Score	Analysis
1. Deemed Equity	Excellent Good Satisfactory **Below Average** Poor	NSPI's target regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the higher end of this target range.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed through to the customers through the FAM and rates change annually to account for variances between forecast and actual fuel costs; however, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2020 through 2022 will be deferred to a FAM regulatory asset or liability and will be recovered from or returned to customers after 2022. The FSP will result in annual fuel rate increases averaging 1.5% for 2020 to 2022. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	Capital costs over $1,000,000 are generally pre-approved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Rate Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory **Below Average** Poor	The Province's introduction of the Electricity Reform (2013) Act and the Electricity Plan Act reflects some of Nova Scotia's direct actions, but the overall impact on NSPI has been modest.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent **Good** Satisfactory Below Average Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner; however, rates have never been frozen in the past and are not expected to be frozen in the foreseeable future.

Balance Sheet							
(CAD millions)	**Sep. 30**	**Dec. 31**	**Dec. 31**		**Sep. 30**	**Dec. 31**	**Dec. 31**
Assets	**2020**	**2019**	**2018**	**Liabilities & Equity**	**2020**	**2019**	**2018**
Cash & equivalents	17	0	0	Short-term borrowings	0	6	0
Accounts receivable	280	336	290	Accounts payable	125	162	210
Inventories	167	179	130	Current portion long-term debt.	0	1	95
Other current assets	79	97	145	Other current liabilities	352	316	275
Total current assets	**543**	**612**	**565**	**Total current liabilities**	**477**	**485**	**580**
Net fixed assets	4,173	4,112	3,958	Long-term debt	2,650	2,674	2,471
Other long-term assets	741	786	620	Provisions	256	257	298
				Other long-term liabilities	684	651	657
				Shareholders' equity	1,390	1,443	1,137
Total assets	**5,457**	**5,510**	**5,143**	**Total liabilities & equity**	**5,457**	**5,510**	**5,143**

Ratios	12 mos. ended September 30	For the year ended December 31				
Balance Sheet & Liquidity & Capital Ratios	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**
Current ratio (x)	1.14	1.26	0.97	1.02	1.18	1.79
Total debt in capital structure (%)	65.6	65.0	69.3	69.2	67.7	68.7
Total debt in capital structure (%)[1, 2]	62.9	62.4	65.4	64.9	62.7	63.6
Cash flow/Total debt (%)	13.9	14.4	14.8	14.3	14.6	13.0
Cash flow/Total debt (%)[1]	13.9	14.4	14.8	14.3	14.5	13.0
(Cash flow-dividends)/Capex (x)	0.99	1.01	0.59	0.37	0.63	0.78
Dividend payout ratio (%)	0.0	0.0	135.1	158.9	111.5	77.8
Coverage Ratios (x)						
EBIT gross interest coverage	2.03	2.00	2.33	2.30	2.14	2.27
EBIT gross interest coverage[1]	2.03	2.00	2.33	2.29	2.13	2.27
EBITDA gross interest coverage	3.77	3.70	4.03	3.95	3.71	3.89
Fixed-charge coverage	1.99	1.92	2.05	2.00	2.10	2.05
Profitability Ratios (%)						
EBITDA margin	63.9	65.6	64.9	57.4	53.9	56.8
EBIT margin	34.4	35.5	37.6	33.3	31.2	33.1
Profit margin	15.6	18.0	16.4	15.0	15.0	15.8
Return on average equity[2]	8.1	9.3	9.8	9.5	9.3	9.7
Return on average capital[2]	5.1	5.6	5.7	5.7	5.7	5.9

1 Adjusted for operating leases.

2 Adjusted for accumulated other comprehensive income.

Operating Statistics		For the year ended December 31				
Electricity Sold (GWh)		**2019**	**2018**	**2017**	**2016**	**2015**
Residential	45%	4,664	4,581	4,374	4,318	4,484
Commercial	29%	3,068	3,102	3,060	3,062	3,134
Industrial	23%	2,388	2,611	2,466	2,445	2,457
Other (including exports)	3%	350	323	345	293	337
Total		**10,470**	**10,617**	**10,245**	**10,118**	**10,412**
Energy sales growth (%)		-1.4	3.6	1.3	-2.8	1.2
Installed Generation Capacity (MW)						
Coal	50%	1,229	1,229	1,246	1,243	1,243
Hydro	16%	395	395	396	393	395
Dual fuel	13%	318	318	351	350	350
Gas turbine	15%	375	375	354	359	353
Wind	3%	81	81	82	82	82
Biomass	2%	43	43	60	60	60
Installed capacity		**2,441**	**2,441**	**2,488**	**2,487**	**2,483**
Long-term IPP contracts		545	546	544	530	496
Energy Generated (GWh)						
Coal[1]	57%	4,949	4,930	4,839	4,810	6,364
Natural gas	16%	1,369	1,427	1,444	1,244	1,302
Oil and Petcoke	11%	981	1,246	1,169	1,499	265
Hydro, wind and biomass	16%	1,362	1,391	1,274	1,295	1,481
Gross energy generated		**8,661**	**8,994**	**8,726**	**8,848**	**9,412**
Plus: purchases		2,540	2,368	2,252	1,991	1,717
Energy generated + purchased		**11,201**	**11,362**	**10,978**	**10,839**	**11,129**
Less: transmission losses & internal use		(731)	(745)	(732)	(721)	(717)
Total		**10,470**	**10,617**	**10,246**	**10,118**	**10,412**

1 Prior to 2016, Petcoke figures were part of Coal. Starting 2016, Petcoke figures are part of Oil.

Operating Statistics	For the year ended December 31				
Earnings Quality/Operating Efficiency	**2019**	**2018**	**2017**	**2016**	**2015**
Fuel for generation and purchase power/Revenues (%)	46.4	44.4	35.7	36.1	38.3
Approved ROE (mid-point) (%)	9.00	9.00	9.00	9.00	9.00
Customers/Employee	281	289	269	281	293
Growth in customer base (%)	0.8	0.9	0.8	0.8	0.6
GWh sold/Employee	5.24	5.90	5.35	5.56	6.03
Self-Generation (Cost Structure)					
OM&A	3.52	3.05	3.02	3.37	3.03
Fuel for generation and purchased power	8.36	7.75	5.97	6.03	6.24
Variable costs	**11.88**	**10.80**	**8.98**	**9.40**	**9.27**
Government levies	0.52	0.48	0.50	0.48	0.44
Gross interest expense	1.72	1.56	1.56	1.55	1.47
Total cash costs	**14.11**	**12.85**	**11.05**	**11.43**	**11.18**
Non-cash financial charges	(0.04)	(0.04)	(0.05)	(0.04)	0.03
Depreciation & amortization	2.91	2.65	2.59	2.42	2.37
Total costs (excluding income taxes)	**16.99**	**15.47**	**13.59**	**13.82**	**13.58**
Customer Accounts					
Residential	474,622	471,017	466,778	462,810	458,950
Commercial	36,661	36,455	36,176	35,912	35,693
Industrial	2,363	2,359	2,368	2,372	2,379
Other	9,646	9,537	9,487	9,428	9,430
Total	**523,292**	**519,368**	**514,809**	**510,522**	**506,452**
Employees	1,863	1,773	1,916	1,819	1,727
Rate base (CAD millions)	4,225	3,863	3,686	3,678	3,810
Total Fixed Costs (GWh)					
Net generated electricity	7,930	8,249	7,993	8,127	8,695
Net purchased electricity	2,540	2,368	2,252	1,991	1,717

Rating History

	Current	2019	2018	2017	2016	2015
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Actions

- "DBRS Morningstar Assigns Rating of A (low) with a Stable Trend to Nova Scotia Power Inc.'s $300.0 Million Unsecured Notes Offering," April 24, 2020.
- "DBRS Morningstar Confirms Ratings on Nova Scotia Power Inc. at A (low), Stable Trends," November 29, 2019.

Previous Report

- Nova Scotia Inc.: Rating Report, December 9, 2019.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrsmorningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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Rating Report
Nova Scotia Power Inc.

DBRS Morningstar
January 4, 2022

Commercial Paper Limit
$500 million

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Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (low)	Confirmed	Stable
Unsecured Debentures & Medium-Term Notes	A (low)	Confirmed	Stable
Commercial Paper	R-1 (low)	Confirmed	Stable

Rating Update

On December 20, 2021, DBRS Limited (DBRS Morningstar) confirmed Nova Scotia Power Inc.'s (NSPI or the Company) Issuer Rating and Unsecured Debentures & Medium-Term Notes rating at A (low) and the Commercial Paper rating at R-1 (low). All trends are Stable. The confirmations reflect the stability of the Company's regulated electricity operations and key credit metrics that are in line with the current rating.

NSPI's business risk assessment was steady in 2020 and 2021, with no material changes to its regulatory framework. The Company continues to operate under a reasonable regulatory framework by the Nova Scotia Utility and Review Board (NSUARB) where it can recover all prudent expenditures and have the opportunity to earn a return on equity (ROE) of 8.75% to 9.25%. DBRS Morningstar continues to consider the Company's transition from reliance on coal-based generation (50% of 2020 installed generation capacity) to lower-emitting sources to be a long-term challenge. In 2021, the Province enacted several pieces of environmental legislation, including a mandate that by 2030, coal-fired generation be phased out and 80% of electricity sales be from renewable sources. For 2022, NSPI expects to reach its 60% renewable requirement partly through contributions from the Muskrat Falls Project. The Company will likely need to fulfill the remaining 20% requirement through investments in renewable generation projects. DBRS Morningstar expects NSPI to finance in a prudent manner any projects that may arise to maintain its key credit metrics in line with the "A" rating category. However, DBRS Morningstar could take a negative rating action should these capital expenditures (capex) lead to a substantial increase in debt and result in the Company's credit metrics weakening to a level no longer in line with the current ratings. DBRS Morningstar could also take a negative rating action should the retirement of the coal-fired generation plants by 2030 lead to stranded costs for NSPI that significantly pressure its balance sheet.

NSPI's key credit metrics have remained supportive of the current A (low) rating. Overall, DBRS Morningstar expects the Company to continue to maintain its key credit metrics in line with the current rating category through prudent dividend and debt management. NSPI has demonstrated a flexible dividend payout policy to its parent company, Emera Inc. (Emera), in order to maintain its debt-to-capital

ratio within regulatory parameters. DBRS Morningstar considers a positive rating action as unlikely in the medium term given the current regulatory framework. A negative rating action is also unlikely, but could occur if the metrics weaken to a level no longer commensurate with the current rating category.

Financial Information

	12 mos. ended September 30	For the year ended December 31				
	2021	**2020**	**2019**	**2018**	**2017**	**2016**
Cash flow/Total debt (%)[1]	14.0	12.6	14.4	14.8	14.3	14.5
Total debt in capital structure (%)[1, 2]	65.3	66.6	62.4	65.4	64.9	62.7
EBIT gross interest coverage (times)[1]	2.03	2.02	2.00	2.33	2.29	2.13

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits, and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

(1) Low-risk regulated electricity business

The Company's current regulatory framework is based on a cost-of-service (COS) methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. DBRS Morningstar views NSPI's target ROE range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a fuel-adjustment mechanism (FAM), which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years.

(2) Reasonable financial profile

NSPI's overall key credit metrics for the last 12 months ended September 30, 2021 (the last 12 months (LTM) 2021), remained within DBRS Morningstar's "A" rating category.

(3) Good franchise strength

NSPI is the primary electricity supplier for the Province, providing over 95% of its electricity generation, transmission, and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers under established tariffs (renewable-to-retail tariffs), DBRS Morningstar does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2021, no retail suppliers were operating under these renewable-to-retail tariffs.

Challenges

(1) Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. The majority of NSPI's energy is currently generated from coal-based assets. Energy delivery from the Muskrat Falls hydroelectric project, which begun in 2021, will reduce the contribution of coal-based assets; however, they are still expected to constitute a part of the generation mix beyond 2029. The Canada-Nova Scotia Equivalency Agreement (the Equivalency Agreement) should allow NSPI to remain compliant with federal emission regulations through 2029; however, federal and provincial regulations mandate the closure of all coal-based power plants by 2030 and significant investments will be needed to replace coal-generating capacity.

(2) Regulatory lag

NSPI faces some regulatory risk with respect to the timeliness of full cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. As per the 2020–22 fuel stability plan (FSP), the differences between actual fuel costs and amounts recovered from customers should be recovered or returned to customers after 2022. DBRS Morningstar expects the impact of fluctuating fuel prices to lessen when energy delivery from the Muskrat Falls hydroelectric project begins as this will increase the contribution of renewable energy supply to the Company's overall generation mix.

(3) Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, DBRS Morningstar expects Emera to continue to support the Company's capex program with a flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	12 mos. September 30	For the year ended December 31				
(CAD millions where applicable)	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**
Revenues	1,489	1,494	1,430	1,440	1,338	1,356
Fuel cost[1]	(773)	(721)	(663)	(639)	(477)	(490)
Net revenues	**716**	**773**	**767**	**801**	**861**	**866**
EBITDA	509	511	503	520	494	467
EBIT	264	275	272	301	287	270
Gross interest expense	(128)	(134)	(133)	(126)	(121)	(123)
Earnings before taxes	142	142	128	139	129	142
Net income before nonrecurring items	134	125	138	131	129	130
Reported net income	134	125	138	131	129	130
Return on equity (%)[2]	8.7	8.1	9.3	9.8	9.5	9.3
Regulated rate base	N/A	4,274	4,225	3,863	3,686	3,678
Actual regulated return on equity (%)	N/A	9.25	9.25	9.25	9.25	9.25

1 Before fuel adjustment changes.
2 Adjusted for accumulated other comprehensive income.

2020 Summary

- Earnings for NSPI have been relatively stable, reflecting the regulated nature of its operations.
    - DBRS Morningstar notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- EBITDA and EBIT increased modestly for the year because of (1) higher residential sales, and (2) lower labour, storm restoration, and vegetation management costs.
    - Net income before nonrecurring items decreased, however, because of higher income taxes for the year.

2021 Summary/Outlook

- EBITDA and EBIT decreased for LTM 2021 because of less favourable weather and higher depreciation.
    - Net income before nonrecurring items was in line with expectations.
- Overall, DBRS Morningstar expects NSPI's earnings to grow modestly year over year from growth in the rate base as well as through operating efficiencies.
    - DBRS Morningstar also expects NSPI to continue to achieve its actual target regulated ROE of 8.75% to 9.25%.

Financial Profile

	12 mos. ended September 30	For the year ended December 31				
(CAD millions where applicable)	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**
Net income before nonrecurring items	134	125	138	131	129	130
Depreciation & amortization	248	242	238	225	214	204
Other noncash operating items	16	6	9	24	4	4
Cash flow from operations[1]	**398**	**373**	**385**	**380**	**347**	**338**
Dividends paid	(338)	(258)	0	(177)	(205)	(145)
Capital expenditures	(332)	(338)	(383)	(345)	(385)	(305)
Free cash flow (before working capital changes)	**(272)**	**(223)**	**2**	**(142)**	**(243)**	**(112)**
Changes in noncash working capital items	205	46	(167)	(77)	65	137
Adjustment for regulated assets and liabilities	(132)	(94)	(46)	(16)	84	66
Net free cash flow	**(199)**	**(271)**	**(211)**	**(235)**	**(94)**	**91**
Acquisitions & long-term investments	0	0	0	0	0	0
Proceeds on asset sales	0	0	0	0	0	1
Net equity change	0	2	119	91	1	1
Net debt change	189	278	103	151	99	(120)
Other investing & financing[1]	(6)	(9)	(11)	(7)	(6)	27
Change in cash	**(16)**	**0**	**0**	**0**	**0**	**0**
Total debt	2,838	2,964	2,681	2,566	2,419	2,319
Cash flow/Total debt (%)[2]	14.0	12.6	14.4	14.8	14.3	14.5
Total debt in capital structure (%)[2,3]	65.3	66.6	62.4	65.4	64.9	62.7
EBIT gross interest coverage (times)[2]	2.03	2.02	2.00	2.33	2.29	2.13
Dividend payout ratio (%)	252.2	206.4	0.0	135.1	158.9	111.5

1 Net of fuel adjustment mechanism changes.
2 Adjusted for operating leases.
3 Adjusted for accumulated other comprehensive income.

2020 Summary

- NSPI's key credit metrics weakened in 2020 but remained in line with the A (low) rating.
    - The Company's cash flow-to-debt and debt-to-capital both weakened in 2020 because of the lower cash flows and higher debt load for the year.
- Cash flow from operations decreased, reflecting the lower net income for the year.
- NSPI generated a net free cash flow deficit for the year because of its ongoing capex program. This deficit was funded through a $300 million notes issuance.
- The Company manages its annual dividend payout to stay within its regulatory capital structure ($258 million for 2020). NSPI has maintained its debt-to-capital ratio within the range for the current rating.

2021 Summary/Outlook

- DBRS Morningstar expects NSPI's key credit metrics to remain stable over the medium term.
    - The Company's cash flow-to-debt and debt-to-capital ratios both recovered to more historical levels because of the higher cash flows for the period.

- The Company has forecast capex to be at around $415 million for 2021.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute about the timing of certain tax deductions for the 2006 to 2010 taxation years. The Company prepaid $22.7 million of the $62.3 million in dispute as required by the CRA. If NSPI cannot successfully defend any portion of its position, operating cash flow could be negatively affected.
- DBRS Morningstar expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within regulatory parameters.
    - The Company expects to pay a dividend in 2021 of $115 million.

Liquidity and Debt Profile

Liquidity

(CAD millions as at September 30, 2021)	Amount	Drawn/Letter of Credit	Available	Expiry
Cash & Cash equivalents	2	-	**2**	N/A
Committed Revolving Facilities	600	198	**402**	October 2024
Total	**602**	**198**	**404**	

- DBRS Morningstar deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2021, NSPI had a Credit Facility of $600 million, $402 million of which was available. The Credit Facility matures in October 2024.
    - The Credit Facility is used to backstop the Company's $500 million CP program and to partially fund its working capital and capex requirements. Availability under the Credit Facility is reduced by the amount of CP issued. The Credit Facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%), and NSPI has been compliant with the covenant as at September 30, 2021.

Long-Term Debt

(CAD millions as at September 30, 2021)	2021	2022	2023	2024	2025	Thereafter	Total
Total long-term debt	0	0	0	189	125	2,540	**2,854**
%	0%	0%	0%	7%	4%	89%	**100%**

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI would not incur debt if its funded debt would be over 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under the NSUARB's reasonable regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.

  - The Company historically achieved actual ROE in the higher end of the target range, and DBRS Morningstar expects NSPI to maintain its actual ROE within the target range in 2021 and 2022.
  - NSPI's 2021 rates are based on a ROE of 9.0% and an equity component of 37.5%.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request. NSPI filed its last General Rate Application (GRA) in 2012 for rates effective January 1, 2014, and has not raised nonfuel rates for customers since that time.
- In 2015, the Province enacted the Electricity Plan Act with the primary purpose of stabilizing energy rates until the end of 2019.
  - In December 2019, the NSUARB approved NSPI's three-year FSP for average annual fuel rate increases of 1.5% for 2020 to 2022.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets above $1,000,000 is subject to the NSUARB's approval.
  - In June 2021, the NSUARB approved the 2020 ACE plan of $147.1 million.
- In December 2013, the Province approved the Electricity Reform (2013) Act, allowing licensed renewable generators to sell directly to retail customers in the Province. DBRS Morningstar does not expect this to have a material impact on NSPI's credit quality or to result in a significant increase in competition. As at September 30, 2021, no retail electricity suppliers were operating under this tariff. New entrants will likely find it challenging to successfully compete against NSPI, the Province's incumbent utility. In addition, the Company will still receive related tariffs for its distribution and transmission services.
- NSPI has a FAM in place that, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned asset position as at September 30, 2021.

FAM Balance

(CAD millions)	**2021**
FAM regulatory liability - Balance as at January 1	**21**
Net under-recovery of current period fuel costs	(69)
Interest on FAM balance	(1)
Refund to customers of the reduced Maritime Link assessment recovered in prior year	(1)
Other	0
FAM regulatory asset - Balance as at September 30	**50**

- In September 2017, the NSUARB approved an interim assessment payment to NSP Maritime Link Incorporated of the costs associated with the Maritime Link Project, which entered into service on January 15, 2018. The NSUARB approved annual payments of $145.0 million in 2020, $164.0 million in 2021, and $162.0 million for 2022.
  - NSPI is required to withhold $10.0 million from the assessment payment each year, the release of which depends on the Company providing evidence to the NSUARB that, at minimum, the amount of benefit from the Maritime Link Project is realized for NSPI customers each year.

- In October 2017, the Province passed amendments to the Environment Act for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019, with an initial compliance period of four years (2019–22). NSPI has been granted carbon dioxide allowances of 22 million tonnes through the compliance period and expects to recover the cost of emission allowances (credits) under the program as part of its three-year FSP filed with the NSUARB.
    - In July 2021, the Province amended the Renewable Electricity Regulations to mandate that 80% of electricity sales should to be from renewable sources by 2030.
    - In November 2021, the Province passed the Environmental Goals and Climate Change Reduction Act, which mandated the phasing out of coal-fired generation by 2030.
- In November 2014, the Province and the Government of Canada entered into an Equivalency Agreement regarding greenhouse gas emissions (GHG) from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015, and terminated on December 31, 2019.
- In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants:
    - Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour of electricity generated will have to be closed by (1) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2019, if commissioned before 1975; or (2) the earlier of (a) December 31 of the calendar year 50 years after the commissioning date and (b) December 31, 2029, if commissioned after 1974.
- In December 2019, the Province and the Government of Canada renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying with provincial regulations. The renewed Equivalency Agreement came into force on January 1, 2020, and will expire on December 31, 2024; however, it may be renewed until December 31, 2029.
    - As a result of the coronavirus pandemic, there was a delay to the in-service to the Muskrat Falls Project, delaying the delivery of power to NSPI; the Utility would thus be unable to achieve the provincially legislated target of 40% of electric sales generated from renewable sources in 2020.
    - In May 2020, the Province provided an alternative compliance plan, where NSPI would have to meet the 40% target over a three-year period of 2020 to 2022.

Assessment of Regulatory Framework

Criteria	Score	Analysis
1. Deemed Equity	Excellent Good Satisfactory **Below Average** Poor	NSPI's target-regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the higher end of this target range.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed through to the customers through the FAM, and rates change annually to account for variances between forecast and actual fuel costs; however, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2020 through 2022 will be deferred to a FAM regulatory asset or liability and will be recovered from or returned to customers after 2022. The FSP will result in annual fuel rate increases averaging 1.5% for 2020 to 2022. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	Capital costs over $1,000,000 are generally preapproved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Rate Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory **Below Average** Poor	The Province's introduction of the Electricity Reform (2013) Act and the Electricity Plan Act reflects some of Nova Scotia's direct actions, but the overall impact on NSPI has been modest.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent **Good** Satisfactory Below Average Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner; however, rates have never been frozen in the past and are not expected to be frozen in the foreseeable future.

Balance Sheet

(CAD millions)	Sep. 30	Dec. 31	Dec. 31		Sep. 30	Dec. 31	Dec. 31
Assets	**2021**	**2020**	**2019**	**Liabilities & Equity**	**2021**	**2020**	**2019**
Cash & equivalents	2	0	0	Short-term borrowings	0	1	6
Accounts receivable	231	300	336	Accounts payable	304	149	162
Inventories	189	174	179	Current portion long-term debt.	0	1	1
Other current assets	206	76	97	Other current liabilities	306	165	316
Total current assets	**628**	**550**	**612**	**Total current liabilities**	**610**	**316**	**485**
Net fixed assets	4,279	4,200	4,112	Long-term debt	2,838	2,962	2,674
Other long-term assets	874	743	786	Provisions	246	256	257
				Other long-term liabilities	745	648	651
				Shareholders' equity	1,342	1,311	1,443
Total assets	**5,781**	**5,493**	**5,510**	**Total liabilities & equity**	**5,781**	**5,493**	**5,510**

Ratios

	12 mos. ended September 30	For the year ended December 31				
Balance Sheet & Liquidity & Capital Ratios	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**
Current ratio (x)	1.03	1.74	1.26	0.97	1.02	1.18
Total debt in capital structure (%)	67.9	69.3	65.0	69.3	69.2	67.7
Total debt in capital structure (%)[1, 2]	65.3	66.6	62.4	65.4	64.9	62.7
Cash flow/Total debt (%)	14.0	12.6	14.4	14.8	14.3	14.6
Cash flow/Total debt (%)[1]	14.0	12.6	14.4	14.8	14.3	14.5
(Cash flow-dividends)/Capex (x)	0.18	0.34	1.01	0.59	0.37	0.63
Dividend payout ratio (%)	252.2	206.4	0.0	135.1	158.9	111.5
Coverage Ratios (x)						
EBIT gross interest coverage	2.03	2.02	2.00	2.33	2.30	2.14
EBIT gross interest coverage[1]	2.03	2.02	2.00	2.33	2.29	2.13
EBITDA gross interest coverage	3.92	3.76	3.70	4.03	3.95	3.71
Fixed-charge coverage	2.08	2.03	1.92	2.05	2.00	2.10
Profitability Ratios (%)						
EBITDA margin	71.1	66.1	65.6	64.9	57.4	53.9
EBIT margin	36.9	35.6	35.5	37.6	33.3	31.2
Profit margin	18.7	16.2	18.0	16.4	15.0	15.0
Return on average equity[2]	8.7	8.1	9.3	9.8	9.5	9.3
Return on average capital[2]	5.2	5.0	5.6	5.7	5.7	5.7

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Operating Statistics		For the year ended December 31				
Electricity Sold (GWh)		**2020**	**2019**	**2018**	**2017**	**2016**
Residential	46%	4,652	4,664	4,581	4,374	4,318
Commercial	28%	2,850	3,068	3,102	3,060	3,062
Industrial	23%	2,341	2,388	2,611	2,466	2,445
Other (including exports)	2%	185	350	323	345	293
Total		**10,028**	**10,470**	**10,617**	**10,245**	**10,118**
Energy sales growth (%)		-4.2	-1.4	3.6	1.3	-2.8
Installed Generation Capacity (MW)						
Coal	50%	1,221	1,229	1,229	1,246	1,243
Hydro	16%	395	395	395	396	393
Dual fuel	13%	318	318	318	351	350
Gas turbine	15%	375	375	375	354	359
Wind	3%	81	81	81	82	82
Biomass	2%	43	43	43	60	60
Installed capacity		**2,433**	**2,441**	**2,441**	**2,488**	**2,487**
Long-term IPP contracts		546	545	546	544	530
Energy Generated (GWh)						
Coal	52%	4,342	4,949	4,930	4,839	4,810
Natural gas	23%	1,872	1,369	1,427	1,444	1,244
Oil and Petcoke	12%	967	981	1,246	1,169	1,499
Hydro, wind and biomass	13%	1,107	1,362	1,391	1,274	1,295
Gross energy generated		**8,288**	**8,661**	**8,994**	**8,726**	**8,848**
Plus: purchases		2,471	2,540	2,368	2,252	1,991
Energy generated + purchased		**10,759**	**11,201**	**11,362**	**10,978**	**10,839**
Less: transmission losses & internal use		731	731	745	732	721
Total		**10,028**	**10,470**	**10,617**	**10,246**	**10,118**

Operating Statistics	For the year ended December 31				
Earnings Quality/Operating Efficiency	**2020**	**2019**	**2018**	**2017**	**2016**
Fuel for generation and purchase power/Revenues (%)	48.3	46.4	44.4	35.7	36.1
Approved ROE (mid-point) (%)	9.00	9.00	9.00	9.00	9.00
Customers/Employee	257	281	293	269	281
Growth in customer base (%)	1.0	0.8	0.9	0.8	0.8
GWh sold/Employee	4.88	5.62	5.99	5.35	5.56
Self-Generation (Cost Structure)					
OM&A	3.37	3.52	3.05	3.02	3.37
Fuel for generation and purchased power	9.54	8.36	7.75	5.97	6.03
Variable costs	**12.92**	**11.88**	**10.80**	**8.98**	**9.40**
Government levies	0.56	0.52	0.48	0.50	0.48
Gross interest expense	1.80	1.72	1.56	1.56	1.55
Total cash costs	**15.27**	**14.11**	**12.85**	**11.05**	**11.43**
Non-cash financial charges	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)
Depreciation & amortization	3.12	2.91	2.65	2.59	2.42
Total costs (excluding income taxes)	**18.37**	**16.99**	**15.47**	**13.59**	**13.82**
Customer Accounts					
Residential	479,581	474,622	471,017	466,778	462,810
Commercial	36,761	36,661	36,455	36,176	35,912
Industrial	2,333	2,363	2,359	2,368	2,372
Other	9,710	9,646	9,537	9,487	9,428
Total	**528,385**	**523,292**	**519,368**	**514,809**	**510,522**
Employees	2,054	1,863	1,773	1,916	1,819
Rate base (CAD millions)	4,400	4,225	3,863	4,400	4,225
Total Fixed Costs (GWh)					
Net generated electricity	7,557	7,930	8,249	7,557	7,930
Net purchased electricity	2,471	2,540	2,368	2,471	2,540

Rating History

	Current	2020	2019	2018	2017	2016
Issuer Rating	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Actions

- "DBRS Morningstar Confirms Ratings on Nova Scotia Power Inc. at A (low), Stable Trends," December 2, 2020.
- "DBRS Morningstar Assigns Rating of A (low) with a Stable Trend to Nova Scotia Power Inc.'s $300.0 Million Unsecured Notes Offering," April 24, 2020.

Previous Report

- Nova Scotia Power Inc.: Rating Report, December 9, 2020.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrsmorningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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Rating Report
Nova Scotia Power Inc.

DBRS Morningstar
January 19, 2023

Commercial Paper Limit
$500 million

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Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	BBB (high)	Downgraded	Stable
Unsecured Debentures & Medium-Term Notes	BBB (high)	Downgraded	Stable
Commercial Paper	R-2 (high)	Downgraded	Stable

Rating Update

On December 20, 2022, DBRS Limited (DBRS Morningstar) downgraded Nova Scotia Power Inc.'s (NSPI or the Company) Issuer Rating and Unsecured Debentures & Medium-Term Notes rating to BBB (high) from A (low) and its Commercial Paper rating to R-2 (high) from R-1 (low). All trends are Stable. The downgrades follow DBRS Morningstar's review of the deterioration in the regulatory environment for NSPI and discussions with management as to the Company's plan after the Province of Nova Scotia's (the Province; rated A (high) with a Stable trend by DBRS Morningstar) intervention during the ongoing General Rate Application (GRA) process under the Nova Scotia Utility and Review Board (NSUARB), and greater uncertainty on NSPI's plans and ability to meet renewable generation targets and to shut down its coal-fired generation plants.

On November 8, 2022, the Province passed an amendment to the Public Utilities Act directing the NSUARB to, for the ongoing NSPI GRA, (1) cap base rate increases, excluding fuel and purchase power costs and demand side management (DSM), at 1.8% over the 2022 to 2024 period; and (2) limit the allowed return on equity (ROE) and deemed equity to, respectively, 9.25% and 40.0%. At the time, DBRS Morningstar considered the proposed legislation to be negative for the Company's credit profile as the heightened and adverse political interference would reduce the predictability and stability of the regulatory framework as well as potentially negatively affect NSPI's financial performance (see the DBRS Morningstar press release "DBRS Morningstar Comments on Impact on Nova Scotia Power Following the Province's Proposed Legislation on Rate Increases," dated October 20, 2022, for more details). Given the increased regulatory and political risk, DBRS Morningstar no longer considers the regulatory environment for the Company to be supportive of the A (low) rating, especially considering the significant investment needed in the Province for NSPI to phase out its coal-fired generation plants (51% of 2021 installed generation capacity) by the provincially mandated deadline of 2030 and the need to build out renewable sources of generation. DBRS Morningstar believes meeting the provincially mandated renewable generation targets will be challenging given the financial restraints on NSPI over the near term, as well as the heightened regulatory risk on the Company's ability to receive rate increases to recover and earn a reasonable return on any new investments.

Given this precedent, DBRS Morningstar is concerned about any potential additional government interventions that could further destabilize the regulatory construct for NSPI. While DBRS Morningstar is encouraged by the Company and the intervenors filing a negotiated settlement for the GRA, DBRS Morningstar expects NSPI's earnings and key credit metrics to be moderately weaker over the near term but to be supportive of the BBB (high) ratings. DBRS Morningstar notes that NSPI will need to find operational efficiencies and has committed to focus its planned capital expenditures (capex) on only reliability and safety projects in order to preserve its key credit metrics. NSPI's parent company, Emera Inc. (Emera), has also historically been supportive of the Company by maintaining a flexible dividend payout policy and providing equity injections to maintain the debt-to-capital ratio within regulatory parameters. As such, DBRS Morningstar does not consider further negative rating actions on NSPI to be likely at this time unless there is additional political intervention in the ratemaking process that results in even higher volatility and uncertainty for the Company or leads to key credit metrics that are no longer in line with the BBB rating category. A positive rating action may occur if DBRS Morningstar sees (1) the regulatory process for the next GRA conducted free of any interference and with the NSUARB's full independence on the determination of rates, (2) meaningful progress on the replacement of coal-fired plants with renewable sources in order to meet the mandated targets, and (3) key credit metrics return to be in line with the "A" rating category.

Financial Information

	12 mos. ended September 30	For the year ended December 31				
	2022	**2021**	**2020**	**2019**	**2018**	**2017**
Cash flow/total debt (%)[1]	12.3	12.9	12.6	14.4	14.8	14.3
Total debt in capital structure (%)[1, 2]	67.8	66.3	66.6	62.4	65.4	64.9
EBIT gross interest coverage (times)[1]	1.89	1.97	2.02	2.00	2.33	2.29

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits, and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

1. Low-risk regulated electricity business

The Company's current regulatory framework is based on a cost-of-service (COS) methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. DBRS Morningstar views NSPI's target ROE range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a fuel-adjustment mechanism (FAM), which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years. DBRS Morningstar

notes, however, the recent intervention by the Province in the GRA process has heightened regulatory risk and introduced volatility and instability for the Company.

2. Reasonable financial profile

NSPI's overall key credit metrics for the last 12 months ended September 30, 2022 (LTM 2022), were supportive of the BBB (high) rating.

3. Good franchise strength

NSPI is the primary electricity supplier for the Province, providing more than 95% of its electricity generation, transmission, and distribution. Although the Electricity Reform (2013) Act permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers under established tariffs (renewable-to-retail tariffs), DBRS Morningstar does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2022, no retail suppliers were operating under these renewable-to-retail tariffs.

Challenges

1. Political intervention in the ratemaking process

In November 2022, the Province passed Bill 212, which amended the Public Utilities Act to cap the base rate increase for NSPI's ongoing GRA at 1.8% during the 2022 to 2024 period, excluding DSM and fuel and purchase power costs, and to limit the allowed ROE and deemed equity to 9.25% and 40.0%, respectively. DBRS Morningstar considers any political interference in the ratemaking process as credit negative because it introduces instability and unpredictability in the regulatory framework, and it impairs the independence of the regulator in determining the appropriate ROE and deemed equity ratio. As such, DBRS Morningstar no longer considers the regulatory environment for NSPI to be supportive of the "A" rating category.

2. Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. The majority of NSPI's energy is currently generated from coal-based assets. Energy delivery from the Muskrat Falls hydroelectric project, which begun in 2021, will reduce the contribution of coal-based assets; however, these assets are still expected to constitute a part of the generation mix beyond 2029. The Canada-Nova Scotia Equivalency Agreement (the Equivalency Agreement) should allow NSPI to remain compliant with federal emission regulations through 2029; however, federal and provincial regulations mandate the closure of all coal-based power plants by 2030 and significant investments will be needed to replace coal-generating capacity.

3. Regulatory lag

NSPI faces some regulatory risk with respect to the timeliness of full cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover

fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. As per the 2020–22 fuel stability plan (FSP), the differences between actual fuel costs and amounts recovered from customers should be recovered or returned to customers after 2022. DBRS Morningstar expects the impact of fluctuating fuel prices to lessen when energy delivery from the Muskrat Falls hydroelectric project begins as this will increase the contribution of renewable energy supply to the Company's overall generation mix.

4. Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, DBRS Morningstar expects Emera to continue to support the Company's capex program with a flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	12 mos. September 30	For the year ended December 31				
(CAD millions where applicable)	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Revenues	1,643	1,501	1,494	1,430	1,440	1,338
Fuel cost[1]	(1,040)	(817)	(721)	(663)	(639)	(477)
Net revenues	**603**	**684**	**773**	**767**	**801**	**861**
EBITDA	515	518	511	503	520	494
EBIT	261	272	275	272	301	287
Gross interest expense	(138)	(138)	(136)	(136)	(129)	(125)
Earnings before taxes	151	152	142	128	139	129
Net income before nonrecurring items	151	141	125	138	131	129
Reported net income	151	141	125	138	131	129
Return on equity (%)[2]	10.0	9.3	8.1	9.3	9.8	9.5
Regulated rate base	N/A	4,404	4,274	4,225	3,863	3,686
Approved regulated return on equity (%)	N/A	9.25	9.25	9.25	9.25	9.25

1 Before fuel adjustment changes.
2 Adjusted for accumulated other comprehensive income.

2021 Summary

- Earnings for NSPI have been relatively stable, reflecting the regulated nature of its operations.
    - DBRS Morningstar notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- EBITDA and EBIT were steady in 2021, with higher sales volumes offset by higher depreciation from the growing rate base. NSPI has not experienced material inflationary pressure on its earnings.
    - Net income before nonrecurring items increased because of higher other income and lower income taxes for the year.

2022 Summary/Outlook

- EBIT decreased for LTM 2022 because of higher depreciation.
    - Net income before nonrecurring items increased though because of higher other income.

- DBRS Morningstar expects the Company will request the recovery of storm costs related to Hurricane Fiona.

- Overall, DBRS Morningstar expects NSPI's earnings to be pressured for the year.
  - The Company's earnings for 2023 and 2024 will be based on approval of the settlement agreement filed with the NSUARB.
  - While NSPI's base rates will be limited to a 1.8% increase for 2023, the settlement agreement provides for additional DSM of 3.6% and a fuel rate increase of 1.5%.
  - The Company will need to find operational efficiencies and significantly reduce its previously planned capex in order to reach its allowed ROE of 9.0% in 2023 and 2024.

Financial Profile

	12 mos. ended September 30	For the year ended December 31				
(CAD millions where applicable)	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Net income before nonrecurring items	151	141	125	138	131	129
Depreciation & amortization	255	248	242	238	225	214
Other noncash operating items	(17)	5	6	9	24	4
Cash flow from operations[1]	**389**	**394**	**373**	**385**	**380**	**347**
Dividends paid	(150)	(80)	(258)	0	(177)	(205)
Capital expenditures	(426)	(366)	(338)	(383)	(345)	(385)
Free cash flow (before working capital changes)	**(187)**	**(52)**	**(223)**	**2**	**(142)**	**(243)**
Changes in noncash working capital items	(38)	103	46	(167)	(77)	65
Adjustment for regulated assets and liabilities	(93)	(128)	(94)	(46)	(16)	84
Net free cash flow	**(318)**	**(77)**	**(271)**	**(211)**	**(235)**	**(94)**
Acquisitions & long-term investments	0	0	0	0	0	0
Proceeds on asset sales	0	1	0	0	0	0
Net equity change	0	0	2	119	91	1
Net debt change	327	85	278	103	151	99
Other investing & financing[1]	(11)	(9)	(9)	(11)	(7)	(6)
Change in cash	**(2)**	**0**	**0**	**0**	**0**	**0**
Total debt	3,165	3,049	2,964	2,681	2,566	2,419
Cash flow/total debt (%)[2]	12.3	12.9	12.6	14.4	14.8	14.3
Total debt in capital structure (%)[2,3]	67.8	66.3	66.6	62.4	65.4	64.9
EBIT gross interest coverage (times)[2]	1.89	1.97	2.02	2.00	2.33	2.29
Dividend payout ratio (%)	99.3	56.7	206.4	0.0	135.1	158.9

1 Net of fuel adjustment mechanism changes.
2 Adjusted for operating leases.
3 Adjusted for accumulated other comprehensive income.

2021 Summary

- NSPI's key credit metrics were in line with the A (low) rating in 2021.
  - The Company's cash flow-to-debt ratio improved modestly because of the stronger cash flows for the year.

- Cash flow from operations increased, tracking the higher net income in 2021.
- NSPI generated a net free cash flow deficit for the year because of its ongoing capex program. This deficit was funded through commercial paper issuances.
- The Company manages its annual dividend payout to stay within its regulatory capital structure ($80 million for 2021).

2022 Summary/Outlook

- DBRS Morningstar expects NSPI's key credit metrics to weaken in the near term because base rate increases are capped at 1.8% over 2022 to 2024.
- The Company has forecast capex to be at around $525 million for 2022.
    - As Bill 212 directs that the 1.8% base rate increase can be used only to improve the reliability of services to customers, NSPI has significantly reduced its previous capex plan to focus only on the reliability and safety of its systems. As such, capex is expected to decrease to around the $350 million range for at least the next two years.
- NSPI and the Canada Revenue Agency (CRA) are currently in a dispute about the timing of certain tax deductions for the 2006 to 2010 taxation years. The Company prepaid $55 million of the $126 million in the dispute as required by the CRA. If NSPI cannot successfully defend any portion of its position, operating cash flow could be negatively affected.
- DBRS Morningstar expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within regulatory parameters.
    - As of September 30, 2022, the Company has paid dividends of $150 million.

Liquidity and Debt Profile

Liquidity

(CAD millions as at September 30, 2022)	Amount	Drawn/Letter of Credit	Available	Expiry
Cash & cash equivalents	0	-	**0**	N/A
Committed revolving facilities	600	120	**480**	December 2026
Total	**600**	**120**	**480**	

- DBRS Morningstar deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility (Credit Facility) to support operating requirements.
- As at September 30, 2022, NSPI had a Credit Facility of $600 million, $480 million of which was available. The Credit Facility matures in December 2026.
    - In December 2022, the Company increased the size of its credit facility to $800 million and extended the maturity of the Credit Facility to December 2027.
    - The Credit Facility is used to backstop the Company's $500 million CP program and to partially fund its working capital and capex requirements. Availability under the Credit Facility is reduced by the amount of CP issued. The Credit Facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%), and NSPI has been compliant with the covenant as at September 30, 2022.

Long-Term Debt

(CAD millions as at September 30, 2022)	2021	2022	2023	2024	2025	Thereafter	Total
Total long-term debt	0	0	399	125	148	2,500	**3,172**
%	0	0	13	4	5	79	**100**

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI would not incur debt if its funded debt would be more than 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under the NSUARB's regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.
    - The Company historically achieved actual ROE in the higher end of the target range.
    - NSPI's 2022 rates are based on a ROE of 9.0% and an equity component of 37.5%.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request.
- In January 2022, NSPI filed its first GRA with the NSUARB since 2012, for rates effective from 2022 to 2024.
    - The Company requested average base rate increases of 2.9% per year and average fuel rate increases of 0.8% per year.
    - On November 9, 2022, the Province amended the Public Utilities Act through Bill 212 to cap base rate increases for NSPI at 1.8% during the 2022 to 2024 period and limit the ROE and deemed equity to, respectively, 9.25% and 40.0%. Bill 212 also requires that the base rate increase can be used only for the improvement of reliability of services to customers.
        - DBRS Morningstar considers this political intervention to be negative to the regulatory assessment of NSPI as it interferes with the stability and predictability of the ratemaking process as well as the independence of the NSUARB in determining the appropriate ROE and deemed equity for the Company.
    - On November 24, 2022, NSPI filed a negotiated settlement with the NSUARB that provides the following:
        - An average rate increase of 6.9% for each 2023 and 2024 composing of a base rate increase of 1.8%, a DSM increase of 3.6%, and a fuel increase of 1.5% for 2023, and a DSM increase of 0.3% and a fuel increase of 6.6% in 2024;
        - ROE unchanged at 9.0% based on an earnings band of 8.75% to 9.25%;
        - Maximum allowed equity unchanged at 40%;
        - A decarbonization deferral account to recover undepreciated thermal asset value and unrecovered decommissioning costs;

    - Storm rider for NSPI to have the option to apply for the recovery of storm restoration expenses exceeding $10.2 million, $10.4 million, and $10.4 million for 2023, 2024, and 2025, respectively; and
    - A decision on the GRA expected in January 2023.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets more than $1,000,000 is subject to the NSUARB's approval.
    - In June 2022, the NSUARB approved the 2022 ACE plan of $181.1 million.
- In December 2013, the Province approved the Electricity Reform (2013) Act, allowing licensed renewable generators to sell directly to retail customers in the Province. DBRS Morningstar does not expect this to have a material impact on NSPI's credit quality or to result in a significant increase in competition. As at September 30, 2022, no retail electricity suppliers were operating under this tariff. New entrants will likely find it challenging to successfully compete against NSPI, the Province's incumbent utility. In addition, the Company will still receive related tariffs for its distribution and transmission services.
- NSPI has a FAM in place that, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned asset position as at September 30, 2022.

FAM Balance

(CAD millions)	2022
FAM regulatory asset - balance as at January 1	**145**
Net under-recovery of current period fuel costs	174
Interest on FAM balance	11
Refund to customers of the reduced Maritime Link assessment recovered in prior year	0
FAM regulatory asset - balance as at September 30	**330**

- The FAM regulatory asset balance as of September 30, 2022, includes around $190 million of non-cash greenhouse gas emissions (GHG) credits associated with the Nova Scotia Cap and Trade program ($38 million as of January 1, 2022).
    - DBRS Morningstar notes, the Province has indicated the GHG costs accrued will be forgiven.
- In September 2017, the NSUARB approved an interim assessment payment to NSP Maritime Link Incorporated of the costs associated with the Maritime Link Project, which entered into service on January 15, 2018. The NSUARB approved annual payments of $145.0 million in 2020, $164.0 million in 2021, and $162.0 million for 2022.
    - NSPI is required to withhold $2.0 million from the assessment payment each month, the release of which depends on the Company receiving 90% of its contracted power.

Environmental Regulation

- In October 2017, the Province passed amendments to the Environment Act for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019, with an initial compliance period of four years (2019–22). NSPI has been granted carbon dioxide allowances of 22

million tonnes through the compliance period and expects to recover the cost of emission allowances (credits) under the program as part of its three-year FSP filed with the NSUARB.

    - In July 2021, the Province amended the Renewable Electricity Regulations to mandate that 80% of electricity sales should be from renewable sources by 2030.
    - In November 2021, the Province passed the Environmental Goals and Climate Change Reduction Act, which mandated the phasing out of coal-fired generation by 2030.

- In November 2014, the Province and the Government of Canada (rated AAA with a Stable trend by DBRS Morningstar) entered into an Equivalency Agreement regarding GHG from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015, and was terminated on December 31, 2019.
- In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants:
    - Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour (GWh) of electricity generated will have to be closed by (1) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2019, if commissioned before 1975; or (2) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2029, if commissioned after 1974.
- In December 2019, the Province and the Government of Canada renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying with provincial regulations. The renewed Equivalency Agreement came into force on January 1, 2020, and will expire on December 31, 2024; however, it may be renewed until December 31, 2029.
    - As a result of the Coronavirus Disease (COVID-19) pandemic, there was a delay to the in-service date for the Muskrat Falls Project, delaying the delivery of power to NSPI; the Company would thus be unable to achieve the provincially legislated target of 40% of electric sales generated from renewable sources in 2020.
    - In May 2020, the Province provided an alternative compliance plan, where NSPI would have to meet the 40% target over a three-year period of 2020 to 2022.

Assessment of Regulatory Framework

Criteria	Score	Analysis
1. Deemed Equity	Excellent Good Satisfactory **Below Average** Poor	NSPI's target-regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. The common equity ratio of 37.5% is used for rate-setting purposes. DBRS Morningstar notes that under Bill 212, the Company's deemed equity is capped at 40.0% for 2022 to 2024.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE has historically been in the higher end of this target range. DBRS Morningstar notes that under Bill 212, the Company's ROE is capped at 9.25% for 2022 to 2024.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed to customers through the FAM, and rates change annually to account for variances between forecast and actual fuel costs; however, as part of the Electricity Plan Act, any variance between actual fuel costs and amounts recovered from customers through electricity rates during 2020 through 2022 is deferred to a FAM regulatory asset or liability, and will be recovered from or returned to customers after 2022. The FSP was expected to result in annual fuel rate increases averaging 1.5% for 2020 to 2022. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	Capital costs of more than $1,000,000 are generally preapproved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS Versus Incentive Rate Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory Below Average **Poor**	In November 2022, the Province passed Bill 212, which amended the Public Utilities Act and directly interfered with the ongoing GRA for NSPI's 2022 to 2024 rates. DBRS Morningstar considers this adverse intervention to be negative for the Company's regulatory environment as it injected volatility and heightens uncertainty with the regulatory process.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent Good Satisfactory **Below Average** Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner. As part of Bill 212, the Province is capping rate increases for the Company's 2022 to 2024 GRA at 1.8% for base rates, excluding DSM and fuel and purchase power costs.

Environmental, Social, and Governance (ESG) Credit Risk Considerations

Environmental

Carbon and GHG costs had a relevant effect on the credit analysis of NSPI. DBRS Morningstar considers the Company's transition from reliance on coal-based generation (51% of 2021 installed generation capacity) to lower-emitting sources to be a challenge, as coal-fired generation is mandated to be phased out and 80% of electricity sales are to be from renewable sources by 2030. Significant investments are needed in the Province but, given the financial constraints on NSPI in the near term from the political intervention in the 2022 to 2024 GRA, it will be challenging for the Company and the Province to meet these goals.

This environmental factor is new and was not present in the prior rating disclosure as NSPI had planned significant capex to address this challenge before the political intervention by the Province.

Social

There were no social factors that had a relevant or significant effect on the credit analysis. For more details about which social factors could have an effect on the credit, please refer to the following checklist.

Governance

There were no governance factors that had a relevant or significant effect on the credit analysis. For more details about which governance factors could have an effect on the credit analysis, please refer to the following checklist.

A description of how DBRS Morningstar considers ESG factors within the DBRS Morningstar analytical framework can be found in *DBRS Morningstar Criteria: Approach to Environmental, Social, and Governance Risk Factors in Credit Ratings* at https://www.dbrsmorningstar.com/research/396929.

ESG Factor		ESG Credit Consideration Applicable to the Credit Analysis: Y/N		Extent of the Effect on the ESG Factor on the Credit Analysis: Relevant (R) or Significant (S)*
Environmental		**Overall:**	**Y**	**R**
	Emissions,Effluents, and Waste	Do we consider the costs or risks result, or could result in changes to an issuer's financial, operational, and/or reputational standing?	**N**	**N**
	Carbon and GHG Costs	Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs?	**Y**	**R**
	Resource and Energy Management	Does the scarcity of sourcing key resources hinder the production or operations of the issuer, resulting in lower productivity and therefore revenues?	**N**	**N**
	Land Impact and Biodiversity	Is there a financial risk to the issuer for failing to effectively manage land conversion, rehabilitation, land impact, or biodiversity activities?	**N**	**N**
	Climate and Weather Risks	Will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact?	**N**	**N**
Social		**Overall:**	**N**	**N**
	Social Impact of Products and Services	Do we consider that the social impact of the issuer's products and services could pose a financial or regulatory risk to the issuer?	**N**	**N**
	Human Capital and Human Rights	Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts that could result in a material financial or operational impact?	**N**	**N**
		Do violations of rights create a potential liability that can negatively affect the issue's financial wellbeing or reputation?	**N**	**N**
		Human Capital and Human Rights:	**N**	**N**
	Product Governance	Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability?	**N**	**N**
	Data Privacy and Security	Has misuse or negligence in maintaining private client or stakeholder data resulted, or could result, in financial penalties or client attrition to the issuer?	**N**	**N**
	Occupational Health and Safety	Would the failure to address workplace hazards have a negative financial impact on the issuer?	**N**	**N**
	Community Relations	Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer?	**N**	**N**
	Access to Basic Services	Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer?	**N**	**N**
Governance		**Overall:**	**N**	**N**
	Bribery, Corruption, and Political Risks	Do alleged or actual illicit payments pose a financial or reputational risk to the issuer?	**N**	**N**
		Are there any political risks that could impact the issuer's financial position or its reputation?	**N**	**N**
		Bribery, Corruption, and Political Risks:	**N**	**N**
	Business Ethics	Do general professional ethics pose a financial or reputational risk to the issuer?	**N**	**N**
	Corporate / Transaction Governance	Does the issuer's corporate structure limit appropriate board and audit independence?	**N**	**N**
		Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation?	**N**	**N**
		Corporate / Transaction Governance:	**N**	**N**
	Institutional Strength, Governance, and Transparency (Governments Only)s	Compared with other governments, do institutional arrangements provide a higher or lesser degree of accountability, transparency, and effectiveness?	**N**	**N**
		Are regulatory and oversight bodies insufficiently protected from inappropriate political influence?	**N**	**N**
		Are government officials insufficiently exposed to public scrutiny or held to insufficiently high ethical standards of conduct?	**N**	**N**
		Institutional Strength, Governance, and Transparency (Governments Only)s:	**N**	**N**
		Consolidated ESG Criteria Output:	**Y**	**R**

Balance Sheet

(CAD millions)	Sep. 30	Dec. 31	Dec. 31		Sep. 30	Dec. 31	Dec. 31
Assets	**2022**	**2021**	**2020**	**Liabilities & Equity**	**2022**	**2021**	**2020**
Cash & equivalents	0	0	0	Short-term borrowings	9	1	1
Accounts receivable	303	280	300	Accounts payable	450	250	149
Inventories	228	201	174	Current portion long-term debt.	0	1	1
Other current assets	399	170	76	Other current liabilities	499	280	165
Total current assets	**930**	**651**	**550**	**Total current liabilities**	**958**	**532**	**316**
Net fixed assets	4,498	4,345	4,200	Long-term debt	3,156	3,047	2,962
Other long-term assets	1,366	1,091	743	Provisions	188	196	256
				Other long-term liabilities	1,052	824	648
				Shareholders' equity	1,440	1,488	1,311
Total assets	**6,794**	**6,087**	**5,493**	**Total liabilities & equity**	**6,794**	**6,087**	**5,493**

Ratios

	12 mos. ended September 30	For the year ended December 31				
Balance Sheet & Liquidity & Capital Ratios	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Current ratio (x)	0.97	1.22	1.74	1.26	0.97	1.02
Total debt in capital structure (%)	68.7	67.2	69.3	65.0	69.3	69.2
Total debt in capital structure (%)[1, 2]	67.8	66.3	66.6	62.4	65.4	64.9
Cash flow/total debt (%)	12.3	12.9	12.6	14.4	14.8	14.3
Cash flow/total debt (%)[1]	12.3	12.9	12.6	14.4	14.8	14.3
(Cash flow-dividends)/capex (x)	0.56	0.86	0.34	1.01	0.59	0.37
Dividend payout ratio (%)	99.3	56.7	206.4	0.0	135.1	158.9
Coverage Ratios (x)						
EBIT gross interest coverage	1.89	1.97	2.02	2.00	2.33	2.30
EBIT gross interest coverage[1]	1.89	1.97	2.02	2.00	2.33	2.29
EBITDA gross interest coverage	3.73	3.75	3.76	3.70	4.03	3.95
Fixed-charge coverage	2.06	2.07	2.03	1.92	2.05	2.00
Profitability Ratios (%)						
EBITDA margin	85.4	75.7	66.1	65.6	64.9	57.4
EBIT margin	43.3	39.8	35.6	35.5	37.6	33.3
Profit margin	25.0	20.6	16.2	18.0	16.4	15.0
Return on average equity[2]	10.0	9.3	8.1	9.3	9.8	9.5
Return on average capital[2]	5.4	5.2	5.0	5.6	5.7	5.7

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Operating Statistics		For the year ended December 31				
Electricity Sold (GWh)	**%**	**2021**	**2020**	**2019**	**2018**	**2017**
Residential	46	4,661	4,652	4,664	4,581	4,374
Commercial	28	2,902	2,850	3,068	3,102	3,060
Industrial	24	2,480	2,341	2,388	2,611	2,466
Other (including exports)	2	153	185	350	323	345
Total		**10,196**	**10,028**	**10,470**	**10,617**	**10,245**
Energy sales growth (%)		1.7%	-4.2%	-1.4%	3.6%	1.3%
Installed Generation Capacity (MW)						
Coal	51	1,229	1,221	1,229	1,229	1,246
Hydro	15	374	395	395	395	396
Dual fuel	13	318	318	318	318	351
Gas turbine	15	375	375	375	375	354
Wind	3	81	81	81	81	82
Biomass	2	43	43	43	43	60
Installed capacity		**2,420**	**2,433**	**2,441**	**2,441**	**2,488**
Long-term IPP contracts		546	546	545	546	544
Energy Generated (GWh)						
Coal	57	4,623	4,342	4,949	4,930	4,839
Natural gas	21	1,673	1,872	1,369	1,427	1,444
Oil and petroleum coke	7	600	967	981	1,246	1,169
Hydro, wind, and biomass	14	1,167	1,107	1,362	1,391	1,274
Gross energy generated		**8,063**	**8,288**	**8,661**	**8,994**	**8,726**
Plus: purchases		2,842	2,471	2,540	2,368	2,252
Energy generated + purchased		**10,905**	**10,759**	**11,201**	**11,362**	**10,978**
Less: transmission losses & internal use		709	731	731	745	732
Total		**10,196**	**10,028**	**10,470**	**10,617**	**10,246**

Operating Statistics	For the year ended December 31				
Earnings Quality/Operating Efficiency	**2021**	**2020**	**2019**	**2018**	**2017**
Fuel for generation and purchase power/revenues (%)	54.4	48.3	46.4	44.4	35.7
Approved ROE (mid-point) (%)	9.00	9.00	9.00	9.00	9.00
Customers/employee	255	257	281	293	269
Growth in customer base (%)	1.4	1.0	0.8	0.9	0.8
GWh sold/employee	4.84	4.88	5.62	5.99	5.35
Self-Generation (Cost Structure)					
OM&A	3.43	3.37	3.52	3.05	3.02
Fuel for generation and purchased power	11.11	9.54	8.36	7.75	5.97
Variable costs	**14.54**	**12.92**	**11.88**	**10.80**	**8.98**
Government levies	0.57	0.56	0.52	0.48	0.50
Gross interest expense	1.88	1.80	1.72	1.56	1.56
Total cash costs	**16.98**	**15.27**	**14.11**	**12.85**	**11.05**
Noncash financial charges	(0.05)	(0.03)	(0.04)	(0.04)	(0.05)
Depreciation & amortization	3.35	3.12	2.91	2.65	2.59
Total costs (excluding income taxes)	**20.27**	**18.37**	**16.99**	**15.47**	**13.59**
Customer Accounts					
Residential	486,535	479,581	474,622	471,017	466,778
Commercial	37,160	36,761	36,661	36,455	36,176
Industrial	2,334	2,333	2,363	2,359	2,368
Other	9,772	9,710	9,646	9,537	9,487
Total	**535,801**	**528,385**	**523,292**	**519,368**	**514,809**
Employees	2,105	2,054	1,863	1,773	1,916
Rate base (CAD millions)	4,404	4,274	4,225	3,863	3,686
Total Fixed Costs (GWh)					
Net generated electricity	7,354	7,557	7,930	8,249	7,993
Net purchased electricity	2,842	2,471	2,540	2,368	2,252

Rating History

	Current	2021	2020	2019	2018	2017
Issuer Rating	BBB (high)	A (low)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	BBB (high)	A (low)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-2 (high)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- "DBRS Morningstar Confirms Ratings on Nova Scotia Power Inc. at A (low), Stable Trends," December 20, 2021.

Previous Report

- Nova Scotia Power Inc.: Rating Report, January 4, 2022.

Related Research

- "DBRS Morningstar Comments on Impact on Nova Scotia Power Following the Province's Proposed Legislation on Rate Increases," October 20, 2022.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrsmorningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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We rate more than 3,000 issuers and nearly 60,000 securities worldwide, providing independent credit ratings for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Market innovators choose to work with us because of our agility, transparency, and tech-forward approach.

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Rating Report
Nova Scotia Power Inc.

Morningstar DBRS
January 12, 2024

Commercial Paper Limit
$800 million

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Credit Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	BBB (high)	Confirmed	Stable
Unsecured Debentures & Medium-Term Notes	BBB (high)	Confirmed	Stable
Commercial Paper	R-2 (high)	Confirmed	Stable

Credit Rating Update

On December 20, 2023, DBRS Limited (Morningstar DBRS) confirmed the Issuer Rating and Unsecured Debentures & Medium-Term Notes rating of Nova Scotia Power Inc. (NSPI or the Company) at BBB (high), and its Commercial Paper (CP) rating at R-2 (high). All trends are Stable. The credit ratings of NSPI are based on the Company's regulated integrated electricity operations under the Nova Scotia Utility and Review Board (NSUARB). The Stable trends reflect NSPI's key credit metrics, which have weakened following the Province of Nova Scotia's (the Province; rated A (high) with a Stable trend by Morningstar DBRS) intervention in the most recent General Rate Application (GRA) process, but are supportive of the BBB credit rating category.

In February 2023, the NSUARB approved most of NSPI's negotiated settlement for the 2022 to 2024 GRA as submitted. The NSUARB approved, among others, (a) a 1.8% increase in nonfuel rates effective February 2, 2023, (b) a 5.1% and 6.9% increase in rates for fuel and demand-side management (DSM) costs for 2023 and 2024, respectively, and (c) a new storm rider effective for each of 2023, 2024, and 2025. Morningstar DBRS is encouraged that the NSUARB approval of the negotiated settlement did not face further political interference from the Province, but considers regulatory interference to still be a heightened concern.

Morningstar DBRS notes that in October 2023, the Province published its 2030 Clean Power Plan. The plan calls for the addition of new wind, solar, and natural gas capacity to the grid, as well as investments in battery storage, and a new transmission line to New Brunswick to improve reliability of the grid. The Province also confirmed that it would not be feasible to complete the Atlantic Loop in time to meet its mandated deadline of 80% renewable power and to phase out coal-fired generation plants (51% of NSPI's 2022 generation capacity) by 2030. Morningstar DBRS is encouraged that there is now a plan for NSPI to achieve its provincially mandated renewable generation targets, and there is alignment with the Province that substantial capital expenditures (capex) will be required. However, Morningstar DBRS expects these plans will require substantial funding support from both the Provincial and Federal governments under an ambitious time frame. Morningstar DBRS will continue to monitor the Company's

progress, especially with the release of a Clean Electricity Solutions Task Force report expected early in 2024.

Morningstar DBRS had noted in its most recent review of NSPI that the Company's earnings and key credit metrics would likely weaken because of the rate cap under Bill 212, which amended the Public Utilities Act. As expected, NSPI's key credit metrics were pressured in 2022 and the last 12 months ended September 30, 2023 (LTM 2023), but are supportive of the current rating category. Morningstar DBRS expects the Company to remain prudent in managing its capex and dividends in order to maintain key credit metrics in line with the BBB credit rating range. NSPI's parent company, Emera Inc. (Emera), has historically been supportive of the Company by maintaining a flexible dividend payout policy (none paid in 2023) and providing equity injections ($125 million received as of September 30, 2023) to maintain leverage in line with the regulatory capital structure.

Morningstar DBRS also notes that NSPI has increased the limit on its CP program to $800 million from $500 million. The Company's CP program is backstopped by a $800 million committed revolving credit facility maturing in December 2027 (the Credit Facility). Based on its review, Morningstar DBRS is satisfied that NSPI's revised CP program limit and the Credit Facility continue to meet Morningstar DBRS's requirements with respect to the *DBRS Morningstar Global Criteria: Commercial Paper Liquidity Support for Nonbank Issuers*. Morningstar DBRS is of the view that the increase in NSPI's CP program limit has no impact on the credit profile of the Company.

A negative credit rating action could occur if there is further political interference in the regulatory process for NSPI, or if key credit metrics weaken to a level no longer supportive of the current ratings (i.e. cash flow-to-debt remaining below 10% for a sustained period of time). A positive credit rating action is unlikely in the medium term as Morningstar DBRS would need to see (1) the regulatory process for the next GRA conducted free of any interference and with the NSUARB's full independence on the determination of rates, (2) meaningful progress for the Company within its role under the Province's 2030 Clean Power Plan, and (3) key credit metrics return to be in line with the "A" credit rating category.

Financial Information

	12 mos. ended September 30	For the year ended December 31				
	2023	**2022**	**2021**	**2020**	**2019**	**2018**
Cash flow/total debt (%)[1]	10.0	9.8	12.9	12.6	14.4	14.8
Total debt in capital structure (%)[1, 2]	68.7	69.9	66.3	66.6	62.4	65.4
EBIT gross interest coverage (times)[1]	1.48	1.58	1.97	2.02	2.00	2.33

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits, and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Rating Considerations

Strengths

1. Low-risk regulated electricity business

The Company's current regulatory framework is based on a cost-of-service (COS) methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. Morningstar DBRS views NSPI's target return on equity (ROE) range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a fuel-adjustment mechanism (FAM), which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years. Morningstar DBRS notes, however, the recent intervention by the Province in the GRA process has heightened regulatory risk and introduced volatility and instability for the Company.

2. Good franchise strength

NSPI is the primary electricity supplier for the Province, providing more than 95% of its electricity generation, transmission, and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers under established tariffs (renewable-to-retail tariffs), Morningstar DBRS does not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2023, no retail suppliers were operating under these renewable-to-retail tariffs.

Challenges

1. Political intervention in the ratemaking process

In November 2022, the Province passed Bill 212, which amended the Public Utilities Act to cap the base-rate increase for NSPI's ongoing GRA at 1.8% during the 2022 to 2024 period, excluding DSM and fuel and purchase power costs, and to limit the allowed ROE and deemed equity to 9.25% and 40.0%, respectively. Morningstar DBRS considers any political interference in the ratemaking process as credit negative because it introduces instability and unpredictability in the regulatory framework, and it impairs the independence of the regulator in determining the appropriate ROE and deemed equity ratio.

2. Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates among Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. Energy delivery from the Muskrat Falls Hydroelectric Project, which began in 2021, will reduce the contribution of coal-based assets; however, these assets are still expected to constitute a part of the generation mix until 2030. The Canada-Nova Scotia Equivalency Agreement (the Equivalency Agreement) should allow NSPI to remain compliant with federal emission regulations through 2029; however, federal and provincial regulations mandate the closure of all coal-based power plants by 2030, and significant investments will be needed to replace coal-generating capacity.

3. Regulatory lag

NSPI faces some regulatory risk with respect to the timeliness of full cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. Morningstar DBRS expects the impact of fluctuating fuel prices to lessen going forward with energy delivery from the Muskrat Falls Hydroelectric Project, which increased the contribution of renewable energy supply to the Company's overall generation mix.

4. Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, Morningstar DBRS expects Emera to continue to support the Company's capex program with a flexible dividends policy and equity injections, if needed.

Earnings and Outlook

	12 mos. September 30	For the year ended December 31				
(CAD millions where applicable)	**2023**	**2022**	**2021**	**2020**	**2019**	**2018**
Revenues	1,653	1,675	1,501	1,494	1,430	1,440
Fuel cost[1]	(716)	(950)	(817)	(721)	(663)	(639)
Net revenues	**937**	**725**	**684**	**773**	**767**	**801**
EBITDA	538	495	518	511	503	520
EBIT	265	236	272	275	272	301
Gross interest expense	(179)	(149)	(138)	(136)	(136)	(129)
Earnings before taxes	128	124	152	142	128	139
Net income before nonrecurring items	134	131	141	125	138	131
Reported net income	124	131	141	125	138	131
Return on equity (%)[2]	8.2	8.5	9.3	8.1	9.3	9.8
Regulated rate base	N/A	4,610	4,404	4,274	4,225	3,863
Approved regulated return on equity (%)	N/A	9.25	9.25	9.25	9.25	9.25

1 Before fuel adjustment changes.
2 Adjusted for accumulated other comprehensive income.

2022 Summary

- Overall, earnings for NSPI have generally been stable, reflecting the regulated nature of its operations.
    - Morningstar DBRS notes that NSPI has a FAM in place that allows the Company to recover actual fuel costs from customers through annual fuel rate adjustments.
- EBITDA and EBIT both decreased in 2022 because of higher operating expenses as well as depreciation from the growing rate base.

2023 Summary/Outlook

- EBITDA and EBIT both increased for LTM 2023 because of a base-rate increase of 1.8% effective February 2, 2023, partly offset by higher operating costs and depreciation.
    - Reported net income includes a $10 million penalty from the Province for noncompliance with the Renewable Electricity Regulations (RER).
- Morningstar DBRS expects earnings for 2023 to be moderately higher following the base-rate increase.

- Overall, however, NSPI has noted that it expects ROE to be weaker and less than the allowed ROE of 9.0%.
- Morningstar DBRS does not expect the Company's financial performance to materially improve until it files its next GRA.

Financial Profile

	12 mos. ended September 30	For the year ended December 31				
(CAD millions where applicable)	**2023**	**2022**	**2021**	**2020**	**2019**	**2018**
Net income before nonrecurring items	134	131	141	125	138	131
Depreciation & amortization	275	261	248	242	238	225
Other noncash operating items	(26)	(45)	5	6	9	24
Cash flow from operations[1]	**383**	**347**	**394**	**373**	**385**	**380**
Dividends paid	0	(150)	(80)	(258)	0	(177)
Capital expenditures	(543)	(508)	(366)	(338)	(383)	(345)
Free cash flow (before working capital changes)	**(160)**	**(311)**	**(52)**	**(223)**	**2**	**(142)**
Changes in noncash working capital items	(395)	(153)	103	46	(167)	(77)
Adjustment for regulated assets and liabilities	(201)	(28)	(128)	(94)	(46)	(16)
Net free cash flow	**(756)**	**(492)**	**(77)**	**(271)**	**(211)**	**(235)**
Acquisitions & long-term investments	0	0	0	0	0	0
Proceeds on asset sales	0	0	1	0	0	0
Net equity change	125	0	0	2	119	91
Net debt change	687	504	85	278	103	151
Other investing & financing[1]	(13)	(10)	(9)	(9)	(11)	(7)
Change in cash	**43**	**2**	**0**	**0**	**0**	**0**
Total debt	3,848	3,553	3,049	2,964	2,681	2,566
Cash flow/total debt (%)[2]	10.0	9.8	12.9	12.6	14.4	14.8
Total debt in capital structure (%)[2,3]	68.7	69.9	66.3	66.6	62.4	65.4
EBIT gross interest coverage (times)[2]	1.48	1.58	1.97	2.02	2.00	2.33
Dividend payout ratio (%)	0.0	114.5	56.7	206.4	0.0	135.1

1 Net of fuel adjustment mechanism changes.
2 Adjusted for operating leases.
3 Adjusted for accumulated other comprehensive income.

2022 Summary

- NSPI's key credit metrics weakened as expected in 2022 as base-rate increases were capped at 1.8% over 2022 to 2024, and the timing of the dividend payment.
    - Overall, the Company's key credit metrics are now supportive of the BBB rating category.
- Cash flow from operations decreased because of the lower net income for the year.
- The Company manages its annual dividend payout to stay within its regulatory capital structure ($150 million for 2022).
- Gross capex increased to $540 million for the year as NSPI invested in improving reliability and for customer growth.
- The Company funded its net free cash flow deficit through CP issuances and by drawing on its credit facility.

2023 Summary/Outlook

- Morningstar DBRS expects NSPI's key credit metrics to be stronger in 2023 because of the higher earnings and the equity injection from its parent.
    - While the Company's metrics are expected to be weaker than in previous years, they are in line with the BBB rating range.
- The Company has forecast capex to be at around $440 million for 2023.
    - The lower capex is largely as a result of Bill 212, which directed that the 1.8% base rate increase can be used only to improve the reliability of services to customers. As such, NSPI had reduced its previous capex plan for the year to focus primarily on the reliability and safety of its systems.
- Morningstar DBRS expects Emera to continue to support NSPI with its flexible dividends policy and equity injections, if needed, to maintain leverage within regulatory parameters.
    - As of September 30, 2023, the Company has received an equity injection of $125 million.

Liquidity and Debt Profile

Liquidity

(CAD millions as at September 30, 2023)	Amount	Drawn/Letter of Credit	Available	Expiry
Cash & cash equivalents	49	-	49	N/A
Committed revolving facilities	800	317	483	December 2027
Total	**849**	**317**	**532**	

- Morningstar DBRS deems the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility to support operating requirements.
- NSPI has an $800 million Credit Facility maturing in December 2027.
    - The Credit Facility is used to backstop the Company's $800 million CP program and to partially fund its working capital and capex requirements. Availability under the Credit Facility is reduced by the amount of CP issued. The Credit Facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%), and NSPI has been compliant with the covenant as at September 30, 2023.

Long-Term Debt

(CAD millions as at September 30, 2023)	2023	2024	2025	2026	2027	Thereafter	Total
Total long-term debt	0	398	125	40	303	3,000	**3,866**
%	0	10	3	1	8	78	**100**

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company currently has a debenture covenant, which states that NSPI would not incur debt if its funded debt would be more than 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Regulation

- NSPI operates under the NSUARB's regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.

- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.
    - The Company historically achieved actual ROE in the higher end of the target range.
    - NSPI's 2022 rates are based on a ROE of 9.0% and an equity component of 37.5%.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request.
- Morningstar DBRS notes, in November 2022, the Province amended the Public Utilities Act through Bill 212 to cap base-rate increases for NSPI at 1.8% during the 2022 to 2024 period and limit the ROE and deemed equity to, respectively, 9.25% and 40.0%. Bill 212 also requires that the base-rate increase can be used only for the improvement of reliability of services to customers.
    - Morningstar DBRS considers this political intervention to be negative to the regulatory assessment of NSPI as it interferes with the stability and predictability of the ratemaking process as well as the independence of the NSUARB in determining the appropriate ROE and deemed equity for the Company.
- In February 2023, the NSUARB approved most of a negotiated settlement filed by NSPI and intervenors for the Company's GRA for rates effective 2022 to 2024. Under the negotiated settlement, the NSUARB approved the following:
    - An average rate increase of 6.9% for each 2023 and 2024 composing of a base-rate increase of 1.8%, a DSM increase of 3.6%, and a fuel increase of 1.5% for 2023, and a DSM increase of 0.3%, and a fuel increase of 6.6% in 2024;
    - ROE unchanged at 9.0% based on an earnings band of 8.75% to 9.25%;
    - Maximum allowed equity unchanged at 40%;
    - A decarbonization deferral account to recover undepreciated thermal asset value and unrecovered decommissioning costs; and
    - Storm rider for NSPI to have the option to apply for the recovery of major storm restoration expenses exceeding $10.2 million, $10.4 million, and $10.4 million for 2023, 2024, and 2025, respectively.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets more than $1,000,000 is subject to the NSUARB's approval.
    - In September 2023, the NSUARB approved the 2022 ACE plan of $165.9 million.
- NSPI has a FAM in place that, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments. As shown in the table below, NSPI's FAM balance was in a planned asset position as at September 30, 2023.

FAM Balance	
(CAD millions)	**2023**
FAM regulatory asset - balances as at January 1	**307**
Net under-recovery of current period fuel costs	31
Interest on FAM balance	6
Refund to customers of the reduced Maritime Link assessment recovered in prior year	(1)
FAM regulatory asset - balances as at September 30	**343**

Environmental Regulation

- In October 2017, the Province passed amendments to the Environment Act for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019.
    - In July 2021, the Province amended the RER to mandate that 80% of electricity sales should be from renewable sources by 2030.
    - In November 2021, the Province passed the Environmental Goals and Climate Change Reduction Act, which mandated the phasing out of coal-fired generation by 2030.
- In November 2014, the Province and the Government of Canada (rated AAA with a Stable trend by Morningstar DBRS) entered into an Equivalency Agreement regarding GHG from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015, and was terminated on December 31, 2019.
    - In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants. Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour (GWh) of electricity generated will have to be closed by (1) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2019, if commissioned before 1975; or (2) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2029, if commissioned after 1974.
    - In December 2019, the Province and the Government of Canada renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying with provincial regulations. The renewed Equivalency Agreement came into force on January 1, 2020, and will expire on December 31, 2024; however, it may be renewed until December 31, 2029.
    - As a result of the COVID-19 pandemic, there was a delay to the in-service date for the Muskrat Falls Project, delaying the delivery of power to NSPI; the Company would thus be unable to achieve the provincially legislated target of 40% of electric sales generated from renewable sources in 2020.
    - In May 2020, the Province provided an alternative compliance plan, where NSPI would have to meet the 40% target over a three-year period of 2020 to 2022.
- In April 2023, the Province levied a $10 million penalty on NSPI for noncompliance with the RER in 2022.
    - The Company has filed an application with the NSUARB appealing the penalty.
- In October 2023, the Province published its 2030 Clean Power Plan.
    - Under the plan, the Province intends to add new wind, solar, and natural gas generation capacity, as well as deploy battery storage and for the construction of a new transmission line to New Brunswick to improve reliability.
    - Morningstar DBRS expects NSPI's capex plan over the medium term will be guided by this plan, with the Company likely involved with the battery storage, natural gas generation, and new transmission line.
    - Morningstar DBRS notes, however, these projects will likely require substantial funding commitments from the Provincial and Federal governments in order to remain economical for ratepayers.

Assessment of Regulatory Framework

Criteria	Score	Analysis
1. Deemed Equity	Excellent Good Satisfactory **Below Average** Poor	NSPI's target-regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. Morningstar DBRS notes that under Bill 212, the Company's deemed equity is capped at 40.0% for 2022 to 2024.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE had historically been in the higher end of this target range but will likely be at the bottom of the range for 2022 to 2024. Morningstar DBRS notes that under Bill 212, the Company's ROE is capped at 9.25% for 2022 to 2024.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed to customers through the FAM, and rates change annually to account for variances between forecast and actual fuel costs. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	Capital costs of more than $1,000,000 are generally preapproved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI, like its Canadian peers, earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Rate Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory Below Average **Poor**	In November 2022, the Province passed Bill 212, which amended the Public Utilities Act and directly interfered with the ongoing GRA for NSPI's 2022 to 2024 rates. Morningstar DBRS considers this adverse intervention to be negative for the Company's regulatory environment as it injected volatility and heightens uncertainty with the regulatory process.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent Good Satisfactory **Below Average** Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner. As part of Bill 212, the Province is capping rate increases for the Company's 2022 to 2024 GRA at 1.8% for base rates, excluding DSM and fuel and purchase power costs.

Environmental, Social, and Governance (ESG) Credit Risk Considerations

Environmental

Carbon and GHG costs had a relevant effect on the credit analysis of NSPI. Morningstar DBRS considers the Company's transition from reliance on coal-based generation (51% of 2023 installed generation capacity) to lower-emitting sources to be a challenge, as coal-fired generation is mandated to be phased out, and 80% of electricity sales are to be from renewable sources by 2030. The Province published its 2030 Clean Power Plan in October 2023, which outlined how it will achieve its targets within the deadlines. However, significant investments will be needed by NSPI, including substantial funding support from both the Provincial and Federal governments.

Social

There were no social factors that had a relevant or significant effect on the credit analysis. For more details about which social factors could have an effect on the credit, please refer to the following checklist.

Governance

There were no governance factors that had a relevant or significant effect on the credit analysis. For more details about which governance factors could have an effect on the credit analysis, please refer to the following checklist.

A description of how Morningstar DBRS considers ESG factors within the Morningstar DBRS analytical framework can be found in the *DBRS Morningstar Criteria: Approach to Environmental, Social, and Governance Risk Factors in Credit Ratings* at https://www.dbrsmorningstar.com/research/416784/.

ESG Factor		ESG Credit Consideration Applicable to the Credit Analysis: Y/N		Extent of the Effect on the ESG Factor on the Credit Analysis: Relevant (R) or Significant (S)*
Environmental		**Overall:**	**Y**	**R**
	Emissions,Effluents, and Waste	Do we consider the costs or risks result, or could result in changes to an issuer's financial, operational, and/or reputational standing?	**N**	**N**
	Carbon and GHG Costs	Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs?	**Y**	**R**
	Resource and Energy Management	Does the scarcity of sourcing key resources hinder the production or operations of the issuer, resulting in lower productivity and therefore revenues?	**N**	**N**
	Land Impact and Biodiversity	Is there a financial risk to the issuer for failing to effectively manage land conversion, rehabilitation, land impact, or biodiversity activities?	**N**	**N**
	Climate and Weather Risks	Will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact?	**N**	**N**
Social		**Overall:**	**N**	**N**
	Social Impact of Products and Services	Do we consider that the social impact of the issuer's products and services could pose a financial or regulatory risk to the issuer?	**N**	**N**
	Human Capital and Human Rights	Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts that could result in a material financial or operational impact?	**N**	**N**
		Do violations of rights create a potential liability that can negatively affect the issue's financial wellbeing or reputation?	**N**	**N**
		Human Capital and Human Rights:	**N**	**N**
	Product Governance	Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability?	**N**	**N**
	Data Privacy and Security	Has misuse or negligence in maintaining private client or stakeholder data resulted, or could result, in financial penalties or client attrition to the issuer?	**N**	**N**
	Occupational Health and Safety	Would the failure to address workplace hazards have a negative financial impact on the issuer?	**N**	**N**
	Community Relations	Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer?	**N**	**N**
	Access to Basic Services	Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer?	**N**	**N**
Governance		**Overall:**	**N**	**N**
	Bribery, Corruption, and Political Risks	Do alleged or actual illicit payments pose a financial or reputational risk to the issuer?	**N**	**N**
		Are there any political risks that could impact the issuer's financial position or its reputation?	**N**	**N**
		Bribery, Corruption, and Political Risks:	**N**	**N**
	Business Ethics	Do general professional ethics pose a financial or reputational risk to the issuer?	**N**	**N**
	Corporate / Transaction Governance	Does the issuer's corporate structure limit appropriate board and audit independence?	**N**	**N**
		Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation?	**N**	**N**
		Corporate / Transaction Governance:	**N**	**N**
	Institutional Strength, Governance, and Transparency (Governments Only)s	Compared with other governments, do institutional arrangements provide a higher or lesser degree of accountability, transparency, and effectiveness?	**N**	**N**
		Are regulatory and oversight bodies insufficiently protected from inappropriate political influence?	**N**	**N**
		Are government officials insufficiently exposed to public scrutiny or held to insufficiently high ethical standards of conduct?	**N**	**N**
		Institutional Strength, Governance, and Transparency (Governments Only)s:	**N**	**N**
		Consolidated ESG Criteria Output:	**Y**	**R**

Balance Sheet							
(CAD millions)	Sep. 30	Dec. 31	Dec. 31		Sep. 30	Dec. 31	Dec. 31
Assets	**2023**	**2022**	**2021**	**Liabilities & Equity**	**2023**	**2022**	**2021**
Cash & equivalents	49	2	0	Short-term borrowings	0	0	1
Accounts receivable	315	375	280	Accounts payable	178	347	250
Inventories	353	287	201	Current portion long-term debt.	0	1	1
Other current assets	97	206	170	Other current liabilities	192	463	280
Total current assets	**814**	**870**	**651**	**Total current liabilities**	**370**	**811**	**532**
Net fixed assets	4,728	4,589	4,345	Long-term debt	3,848	3,552	3,047
Other long-term assets	1,428	1,383	1,091	Provisions	175	172	196
				Other long-term liabilities	863	815	824
				Shareholders' equity	1,714	1,492	1,488
Total assets	**6,970**	**6,842**	**6,087**	**Total liabilities & equity**	**6,970**	**6,842**	**6,087**

Ratios	12 mos. ended September 30	For the year ended December 31				
Balance Sheet & Liquidity & Capital Ratios	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Current ratio (x)	2.20	1.07	1.22	1.74	1.26	0.97
Total debt in capital structure (%)	69.2	70.4	67.2	69.3	65.0	69.3
Total debt in capital structure (%)[1, 2]	68.7	69.9	66.3	66.6	62.4	65.4
Cash flow/total debt (%)	10.0	9.8	12.9	12.6	14.4	14.8
Cash flow/total debt (%)[1]	10.0	9.8	12.9	12.6	14.4	14.8
(Cash flow-dividends)/capex (x)	0.71	0.39	0.86	0.34	1.01	0.59
Dividend payout ratio (%)	0.0	114.5	56.7	206.4	0.0	135.1
Coverage Ratios (x)						
EBIT gross interest coverage	1.48	1.58	1.97	2.02	2.00	2.33
EBIT gross interest coverage[1]	1.48	1.58	1.97	2.02	2.00	2.33
EBITDA gross interest coverage	3.01	3.32	3.75	3.76	3.70	4.03
Fixed-charge coverage	1.68	1.80	2.07	2.03	1.92	2.05
Profitability Ratios (%)						
EBITDA margin	57.4	68.3	75.7	66.1	65.6	64.9
EBIT margin	28.3	32.6	39.8	35.6	35.5	37.6
Profit margin	14.3	18.1	20.6	16.2	18.0	16.4
Return on average equity[2]	8.2	8.5	9.3	8.1	9.3	9.8
Return on average capital[2]	5.0	4.8	5.2	5.0	5.6	5.7

1 Adjusted for operating leases.
2 Adjusted for accumulated other comprehensive income.

Operating Statistics		For the year ended December 31				
Electricity Sold (GWh)	**%**	**2022**	**2021**	**2020**	**2019**	**2018**
Residential	46	4,822	4,661	4,652	4,664	4,581
Commercial	29	3,006	2,902	2,850	3,068	3,102
Industrial	24	2,480	2,480	2,341	2,388	2,611
Other (including exports)	1	148	153	185	350	323
Total	**100**	**10,456**	**10,196**	**10,028**	**10,470**	**10,617**
Energy sales growth (%)		2.6%	1.7%	-4.2%	-1.4%	3.6%
Installed Generation Capacity (MW)						
Coal	51	1,229	1,229	1,221	1,229	1,229
Hydro	15	374	374	395	395	395
Dual fuel	13	318	318	318	318	318
Gas turbine	15	375	375	375	375	375
Wind	3	81	81	81	81	81
Biomass	2	43	43	43	43	43
Installed capacity	**100**	**2,420**	**2,420**	**2,433**	**2,441**	**2,441**
Long-term IPP contracts		546	546	546	545	546
Energy Generated (GWh)						
Coal	34	3,771	4,623	4,342	4,949	4,930
Natural gas	15	1,650	1,673	1,872	1,369	1,427
Oil and petroleum coke	10	1,148	600	967	981	1,246
Hydro, wind, and biomass	11	1,232	1,167	1,107	1,362	1,391
Gross energy generated		**7,801**	**8,063**	**8,288**	**8,661**	**8,994**
Plus: purchases	30	3,333	2,842	2,471	2,540	2,368
Energy generated + purchased	**100**	**11,134**	**10,905**	**10,759**	**11,201**	**11,362**
Less: transmission losses & internal use		678	709	731	731	745
Total		**10,456**	**10,196**	**10,028**	**10,470**	**10,617**

Operating Statistics	For the year ended December 31				
Earnings Quality/Operating Efficiency	**2022**	**2021**	**2020**	**2019**	**2018**
Fuel for generation and purchase power/revenues (%)	56.7	54.4	48.3	46.4	44.4
Approved ROE (mid-point) (%)	9.00	9.00	9.00	9.00	9.00
Customers/employee	253	255	257	281	293
Growth in customer base (%)	1.0	1.4	1.0	0.8	0.9
GWh sold/employee	4.89	4.84	4.88	5.62	5.99
Self-Generation (Cost Structure)					
OM&A	4.11	3.43	3.37	3.52	3.05
Fuel for generation and purchased power	13.34	11.11	9.54	8.36	7.75
Variable costs	**17.45**	**14.54**	**12.92**	**11.88**	**10.80**
Government levies	0.60	0.57	0.56	0.52	0.48
Gross interest expense	2.09	1.88	1.80	1.72	1.56
Total cash costs	**20.15**	**16.98**	**15.27**	**14.11**	**12.85**
Noncash financial charges	(0.07)	(0.05)	(0.03)	(0.04)	(0.04)
Depreciation & amortization	3.64	3.35	3.12	2.91	2.65
Total costs (excluding income taxes)	**23.71**	**20.27**	**18.37**	**16.99**	**15.47**
Customer Accounts					
Residential	491,528	486,535	479,581	474,622	471,017
Commercial	37,312	37,160	36,761	36,661	36,455
Industrial	2,310	2,334	2,333	2,363	2,359
Other	9,771	9,772	9,710	9,646	9,537
Total	**540,921**	**535,801**	**528,385**	**523,292**	**519,368**
Employees	2,138	2,105	2,054	1,863	1,773
Rate base (CAD millions)	4,610	4,404	4,274	4,225	3,863
Total Fixed Costs (GWh)					
Net generated electricity	7,123	7,354	7,557	7,930	8,249
Net purchased electricity	3,333	2,842	2,471	2,540	2,368

Rating History

	Current	2022	2021	2020	2019	2018
Issuer Rating	BBB (high)	BBB (high)	A (low)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	BBB (high)	BBB (high)	A (low)	A (low)	A (low)	A (low)
Commercial Paper	R-2 (high)	R-2 (high)	R-1 (low)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- "Morningstar DBRS Assigns Ratings of BBB (high) with Stable Trends to Nova Scotia Power's $500 Million Notes Issues," March 24, 2023.
- "Morningstar DBRS Downgrades Nova Scotia Power Inc. to BBB (high) and R-2 (high) with Stable Trends," December 20, 2022.

Previous Report

- Nova Scotia Power Inc.: Rating Report, January 19, 2023.

Related Research

- "Morningstar DBRS Comments on Impact on Nova Scotia Power Following the Province's Proposed Legislation on Rate Increases," October 20, 2022.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrsmorningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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Rating Report
Nova Scotia Power Inc.

Morningstar DBRS
January 15, 2025

Commercial Paper Limit
$800 million

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Credit Ratings

Obligation	Rating	Rating Action	Trend
Issuer Rating	BBB (high)	Confirmed	Stable
Unsecured Debentures & Medium-Term Notes	BBB (high)	Confirmed	Stable
Commercial Paper	R-2 (high)	Confirmed	Stable

Credit Ratings Drivers

Positive Credit Rating Drivers	Negative Credit Rating Drivers
A positive credit rating action could occur if (1) the regulatory process for the next GRA conducted free of any interference and with the NSUARB's full independence on the determination of rates, (2) establishment of the NSIESO which will reduce NSPI's exposure to penalties under the RER, and (3) key credit metrics in line with the "A" credit rating category.	A negative credit rating action could occur if there is further political interference in the regulatory process for NSPI, or if key credit metrics weaken to a level no longer supportive of the current ratings (i.e., cash flow-to-debt remaining below 10% for a sustained period).

Key Credit Rating Considerations

The ratings of Nova Scotia Power Inc. (NSPI or the Company) are based on its integrated electricity operations under the Nova Scotia Utility and Review Board (NSUARB). The Stable trends reflect the Company's key credit metrics which are in line with the BBB rating category.

There were several positive developments for NSPI in 2024. In April, the NSUARB approved for the sale of $117 million of fuel-adjustment mechanism (FAM) regulatory assets from NSPI to the Province of Nova Scotia (the Province; rated A (high) with a Stable trend). NSPI will collect this amount from customers on behalf of the Province over a 10-year period. In September 2024, the federal government also finalized an agreement with NSPI, NSP Maritime Link Inc. (NSPML; Maritime Link Financing Trust rated (P) AAA with a Stable trend), and the Province for a federal loan guarantee of $500 million of debt to be issued by NSPML. Proceeds from this December 2024 issuance were transferred to the Company and applied against the FAM regulatory asset balance. NSPI will collect this amount from customers on behalf of NSPML over a 28-year period. These two transactions (1) will reduce debt at the Company by $617 million, (2) reduce regulatory lag for NSPI disposing of the balance in the FAM, and (3) reduce rate pressure on customers as the recovery is spread over a much longer period.

Furthermore, in April 2024, the Province enacted *Bill 404 - Energy Reform (2024) Act*. Bill 404 enacts the *More Access to Energy Act*, which provides for the establishment and transition to the Nova Scotia Independent Energy System Operator (NSIESO). The NSIESO will be tasked with operating the Provincial electricity grid as well as energy forecasting and resource planning. This will streamline NSPI's responsibilities so it can focus on its operations as an integrated utility. Importantly, while the Company

will still be required to adhere to climate change regulations and, as the dominant utility in the Province, be involved in the transition, the responsibility for procuring renewable energy in the Province and meeting targets under the Renewable Electricity Regulations (RER) are expected to be transferred to the NSIESO.

While these developments will strengthen NSPI's financial metrics and reduce uncertainty under the RER, we remain concerned about potential political interference in the next regulatory review process. We note that during the recent November Provincial election, the Progressive Conservative's (PC) platform included a proposal to cap electricity rate increases at the average increase across the country. Should legislation be enacted by the Province that, once again, diminishes the NSUARB's independence and impacts the Company's ability to fully recover its costs in its next General Rate Application (GRA), a negative rating action would likely occur.

Earnings Outlook

Earnings for NSPI have generally been very stable, reflecting the regulated nature of its operations. The Company has a FAM in place that allows it to recover actual fuel costs from customers through annual rate adjustments. Earnings increased in 2023 because of a base-rate increase of 1.8% effective February 2023; however, NSPI achieved a return on equity (ROE) of 8.25%, which was below the approved regulated ROE band of 8.75% to 9.25%. We do not expect the Company's financial performance to materially improve until the next GRA and rates are rebased, which we expect to occur in 2026.

Financial Outlook

NSPI's key credit metrics strengthened in the last 12 months ended September 30, 2024 (LTM 2024), because of the stronger earnings and cash flows, and the reduction in debt following the sale of the $117 million balance in the FAM to the Province. We expect the Company's metrics to further strengthen in 2024 following the $500 million transfer from NSPML, proceeds of which were used to pay down debt. NSPI has a significant capital expenditures (capex) program, however (around $630 million annually for the next three years), as the Company invests in reliability of the network and growth in the customer base. We expect NSPI to be prudent in financing its capex and dividends to maintain key credit metrics in line with the BBB credit rating range. NSPI's parent company, Emera Inc. (Emera), has historically been supportive of the Company by maintaining a flexible dividend payout policy (none paid in 2023 and 2024) and providing equity injections ($308 million received in 2023) to maintain leverage in line with the regulatory capital structure.

Financial Information

	12 mos. ended Sep. 30	For the year ended December 31				
	2024	2023	2022	2021	2020	2019
Cash flow/total debt (%)	10.7	9.9	9.8	12.9	12.6	14.4
Total debt in capital structure (%)[1]	64.5	66.3	69.9	66.3	66.6	62.4
EBIT gross interest coverage (x)	1.32	1.39	1.58	1.97	2.02	2.00

1 Adjusted for accumulated other comprehensive income.

Issuer Description

NSPI is a fully integrated, regulated utility that generates, transmits, and distributes electricity in Nova Scotia. The Company is wholly owned by Emera, which is a diversified energy and energy-services holding company.

Business Risk Assessment

1. Low-risk regulated electricity business

The Company's current regulatory framework is based on a cost-of-service (COS) methodology, under which NSPI can recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments. We view NSPI's target ROE range of 8.75% to 9.25% as reasonable and in line with the Company's Canadian peers. NSPI is also allowed to use a FAM, which mitigates the risk associated with fluctuating fuel prices. Under the FAM, the difference between actual fuel costs and amounts recovered from customers (through fuel rates) are deferred and collected from or refunded to customers in subsequent years. We note, however, the recent intervention by the Province in the GRA process has heightened regulatory risk and introduced volatility and instability for the Company.

2. Political intervention in the ratemaking process

In November 2022, the Province passed Bill 212, which amended the Public Utilities Act to cap the base-rate increase for NSPI's most recent GRA at 1.8% during the 2022 to 2024 period, excluding demand side management (DSM) and fuel and purchased power costs, and to limit the allowed ROE and deemed equity to 9.25% and 40.0%, respectively. We consider any political interference in the ratemaking process as credit negative because it introduces instability and unpredictability in the regulatory framework, and it impairs the independence of the regulator in determining the appropriate ROE and deemed equity ratio.

3. Unfavourable generation mix

As a result of the current generation mix, NSPI is dependent on international suppliers for its fuel supply, exposing the Company to volatile global pricing. This exposure, combined with continued investment in renewable energy, contributed to higher-than-average electricity retail rates compared to other Canadian provinces. Higher electricity rates could make it increasingly challenging for NSPI to fully pass on costs to ratepayers in a timely manner. Energy delivery from the Muskrat Falls Hydroelectric Project, which began in 2021, will reduce the contribution of coal-based assets; however, these assets are still expected to constitute a part of the generation mix until 2030. The Canada-Nova Scotia Equivalency Agreement (the Equivalency Agreement) should allow NSPI to remain compliant with federal emission regulations through 2029; however, federal and provincial regulations mandate the closure of all coal-based power plants by 2030, and significant investments will be needed to replace coal-generating capacity.

4. Good franchise strength

NSPI is the primary electricity supplier for the Province, providing more than 95% of its electricity generation, transmission, and distribution. Although the *Electricity Reform (2013) Act* permits licensed retail suppliers to sell renewable electricity generated within the Province directly to retail customers

under established tariffs (renewable-to-retail tariffs), we do not expect a material attrition rate to weaken NSPI's franchise strength significantly. As at September 30, 2024, no retail suppliers were operating under these renewable-to-retail tariffs.

5. Regulatory lag

NSPI faces some regulatory risk with respect to the timeliness of fuel cost recovery, although this risk is lower now than when the FAM was not in place. Although the FAM allows the Company to recover fluctuating fuel expenses from its customers, the rate adjustments are annual and subject to the NSUARB's approval. We expect the impact of fluctuating fuel prices to lessen going forward with energy delivery from the Muskrat Falls Hydroelectric Project, which increased the contribution of renewable energy supply to the Company's overall generation mix.

Financial Risk Assessment

1. Reasonable financial profile

NSPI's key credit metrics are reasonable for the current rating category. For the LTM 2024, the Company's cash flow-to-debt ratio was in line with the BBB rating category, while the stronger debt-to-capital ratio offset a weaker EBIT-to-interest coverage.

2. Limited access to equity markets

NSPI has limited access to common equity markets to fund any free cash flow deficits. As such, we expect Emera to continue to support the Company's capex program with a flexible dividends policy and equity injections, if needed.

Environmental, Social, and Governance Checklist

ESG Factor	ESG Credit Consideration Applicable to the Credit Analysis: Y/N		Extent of the Effect on the ESG Factor on the Credit Analysis: Relevant (R) or Significant (S)*
Environmental	**Overall:**	**Y**	**R**
Emissions, Effluents, and Waste	Do we consider that the costs or risks for the issuer or its clients result, or could result, in changes to an issuer's financial, operational, and/or reputational standing?	**N**	**N**
Carbon and GHG Costs	Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs and/or will such costs increase over time affecting the long-term credit profile?	**Y**	**R**
Resource and Energy Management	Does the scarcity of sourcing key resources hinder the production or operations of the issuer, resulting in lower productivity and therefore revenues?	**N**	**N**
Land Impact and Biodiversity	Is there a financial risk to the issuer due to the loss of biodiversity and/or the mitigation of such loss, including land conversion and rehabilitation?	**N**	**N**
Climate and Weather Risks	In the near term, will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact?	**N**	**N**
	In the long term, will the issuer's or client's business activities and infrastructure be materially affected financially by physical and/or transition risks under key IPCC climate scenarios?	**N**	**N**
	Climate and Weather Risks:	**N**	**N**
Passed-through Environmental credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by environmental factors (see respective ESG checklist for such issuer)?	**N**	**N**
Social	**Overall:**	**N**	**N**
Social Impact of Products and Services	Do we consider that the social impact of the issuer's products and services pose a financial or regulatory risk to the issuer?	**N**	**N**
	Do changes in consumer behaviour or secular social trends pose a financial or regulatory risk to the issuer?	**N**	**N**
	Social Impact of Products and Services:	**N**	**N**
Human Capital and Human Rights	Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts, that could result in a material financial or operational impact?	**N**	**N**
	Do violations of rights create a potential liability that can negatively affect the issuer's financial wellbeing or reputation?	**N**	**N**
	Human Capital and Human Rights:	**N**	**N**
Product Governance	Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability?	**N**	**N**
Data Privacy and Security	Has misuse or negligence in maintaining private client or stakeholder data resulted, or could it result, in financial penalties or client attrition to the issuer?	**N**	**N**
Occupational Health and Safety	Would the failure to address workplace hazards have a negative financial impact on the issuer?	**N**	**N**
Community Relations	Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer?	**N**	**N**
Access to Basic Services	Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer?	**N**	**N**
Passed-through Social credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by social factors (see respective ESG checklist for such issuer)?	**N**	**N**
Governance	**Overall:**	**N**	**N**
Bribery, Corruption, and Political Risks	Do alleged or actual illicit payments pose a financial or reputational risk to the issuer?	**N**	**N**
	Are there any political risks that could affect the issuer's financial position or its reputation?	**N**	**N**
	Bribery, Corruption, and Political Risks:	**N**	**N**
Business Ethics	Do general professional ethics pose a financial or reputational risk to the issuer?	**N**	**N**
Corporate / Transaction Governance	Does the issuer's corporate structure allow for appropriate board and audit independence?	**N**	**N**
	Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation?	**N**	**N**
	Does the board and/or management lack a formal framework to assess climate related financial risks to the issuer?	**N**	**N**
	Corporate / Transaction Governance:	**N**	**N**
Passed-through Governance credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by governance factors (see respective ESG checklist for such issuer)?	**N**	**N**
	Consolidated ESG Criteria Output:	**Y**	**R**

ESG Considerations

Environmental

Carbon and greenhouse gas (GHG) costs had a relevant effect on the credit analysis of NSPI. We consider the Company's transition from reliance on coal-based generation (51% of 2023 installed generation capacity) to lower-emitting sources to be a challenge, as coal-fired generation is mandated to be phased out, and 80% of electricity sales are to be from renewable sources by 2030. We note that once the NSIESO is established, the responsibility of procuring renewable energy in the Province will transition away from NSPI. However, we expect significant investments will still be needed by the Company, including substantial funding support from both the Provincial and Federal governments.

Social

There were no social factors that had a relevant or significant effect on the credit analysis. As a regulated utility, NSPI provides an essential service to its customers. Any disruptions in its operations could result in reputation damage as well as financial penalties. As of Q3 2024, the Company had 1.48 outages per customer and 3.99 hours of outages per customer, both of which were below the 2024 target of 2.05 outages and 4.29 hours, respectively. NSPI is also committed to the safety of its employees and customers.

Governance

There were no governance factors that had a relevant or significant effect on the credit analysis. NSPI's board of directors includes nine members, seven of whom are independent directors. The board has oversight over climate-related issues at the Company.

A description of how Morningstar DBRS considers ESG factors within the Morningstar DBRS analytical framework can be found in *Morningstar DBRS Criteria: Approach to Environmental, Social, and Governance Factors in Credit Ratings* at https://dbrs.morningstar.com/research/437781.

Rating History

	Current	2023	2022	2021	2020	2019
Issuer Rating	BBB (high)	BBB (high)	BBB (high)	A (low)	A (low)	A (low)
Unsecured Debentures & Medium-Term Notes	BBB (high)	BBB (high)	BBB (high)	A (low)	A (low)	A (low)
Commercial Paper	R-2 (high)	R-2 (high)	R-2 (high)	R-1 (low)	R-1 (low)	R-1 (low)

Previous Action

- "DBRS Morningstar Confirms Credit Ratings on Nova Scotia Power Inc. at BBB (high) and R-2 (high), Stable Trends," December 20, 2023.

Previous Report

- Nova Scotia Power Inc.: Rating Report, January 12, 2024.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on dbrs.morningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

Appendix 1—Liquidity and Debt Profile

Liquidity

(CAD millions as at September 30, 2024)	Amount	Drawn/Letter of Credit	Available	Expiry
Cash & cash equivalents	3	-	3	N/A
Committed revolving facilities	800	291	509	June 2029
Total	**803**	**291**	**512**	

- We consider the Company's liquidity position to be adequate with sufficient headroom under its committed revolving credit facility to support operating requirements.
- NSPI has an $800 million credit facility maturing in December 2029.
    - The credit facility is used to backstop the Company's $800 million commercial paper (CP) program and to partially fund its working capital and capex requirements. Availability under the credit facility is reduced by the amount of CP issued. The credit facility is also subject to a financial covenant (debt-to-capital ratio of less than or equal to 70.0%), and NSPI is in compliance with the covenant as at September 30, 2024.

Long-term Debt

(CAD millions as at September 30, 2024)	2024	2025	2026	2027	2028	Thereafter	Total
Total long-term debt	0	425	40	0	0	3,268	**3,733**
%	0	11	1	0	0	88	**100**

- NSPI's long-term debt maturities are well spread out with minimum refinancing risk in the near term.
- The Company has a debenture covenant, which states that NSPI would not incur debt if its funded debt would be more than 75% of total capitalization. The debenture covenant is not expected to restrict the Company's operations going forward or pose any challenges in the near to medium term.

Appendix 2—Regulation

- NSPI operates under the NSUARB's regulatory environment using a COS methodology that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
- NSPI's target ROE range, approved by the NSUARB, is between 8.75% and 9.25% based on an actual five-quarter average-regulated common equity component of up to 40.00%.
    - The Company historically achieved actual ROE in the higher end of the target range.
- NSPI is not subject to an annual rate review process; rather, the Company participates in a general rate-setting process from time to time at its discretion or at the NSUARB's request.
- In November 2022, the Province amended the Public Utilities Act through Bill 212 to cap base-rate increases for NSPI at 1.8% during the 2022 to 2024 period and limit the ROE and deemed equity to, respectively, 9.25% and 40.0%. Bill 212 also requires that the base-rate increase can be used only for the improvement of reliability of services to customers.
    - We consider this political intervention to be negative to the regulatory assessment of NSPI as it interferes with the stability and predictability of the ratemaking process as well as the independence of the NSUARB in determining the appropriate ROE and deemed equity for the Company.
- In February 2023, the NSUARB approved most of a negotiated settlement filed by NSPI and intervenors for the Company's GRA for rates effective 2022 to 2024. Under the negotiated settlement, the NSUARB approved the following:
    - An average rate increase of 6.9% for each 2023 and 2024 composing of a base-rate increase of 1.8%, a DSM increase of 3.6% and a fuel increase of 1.5% for 2023, and a DSM increase of 0.3% and a fuel increase of 6.6% in 2024;
    - ROE unchanged at 9.0% based on an earnings band of 8.75% to 9.25%;
    - Maximum allowed equity unchanged at 40%;
    - A decarbonization deferral account to recover undepreciated thermal asset value and unrecovered decommissioning costs; and
    - Storm rider for NSPI to have the option to apply for the recovery of major storm restoration expenses exceeding $10.2 million, $10.4 million, and $10.4 million for 2023, 2024, and 2025, respectively.
- In December 2024, the NSUARB approved a Storm Rider of $24 million to be recovered in 2025.
- NSPI also files an annual capex (ACE) plan with the NSUARB, which outlines its capital outlay for the forecast period. All spending for capital assets more than $1,000,000 is subject to the NSUARB's approval.
    - In August 2024, the NSUARB approved the 2024 ACE plan of $151.9 million.
- NSPI has a FAM in place that, subject to the NSUARB's review and approval, allows the Company to recover fluctuating fuel expenses through annual rate adjustments.
    - In April 2024, NSPI sold $117 million of the FAM regulatory asset to the Province. The Company will collect this amount from customers on behalf of the Province over a 10-year period.

- In December 2024, NSPML issued $500 million of debt, guaranteed by the federal government, the proceeds of which were transferred to NSPI to reduce the balance under its FAM regulatory account. The Company will collect this amount on behalf of NSPML over a 28-year period.

Environmental Regulation

- In October 2017, the Province passed amendments to the Environment Act for the development of a cap-and-trade program for carbon emissions, which became effective on January 1, 2019.
  - In July 2021, the Province amended the RER to mandate that 80% of electricity sales should be from renewable sources by 2030.
  - In November 2021, the Province passed the Environmental Goals and Climate Change Reduction Act, which mandated the phasing out of coal-fired generation by 2030.
- In November 2014, the Province and the Government of Canada (rated AAA with a Stable trend) entered into an Equivalency Agreement regarding GHG from electricity producers in the Province. The Equivalency Agreement allows NSPI to achieve compliance with federal GHG emission regulations by complying with provincial regulatory requirements, which are deemed equivalent. The Equivalency Agreement came into force on July 1, 2015, and was terminated on December 31, 2019.
  - In December 2018, the Government of Canada published new federal GHG regulations for coal-fired electricity plants. Under the regulations, power plants that emit more than 420 tonnes of carbon dioxide emission from fossil fuels for each gigawatt hour (GWh) of electricity generated will have to be closed by (1) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2019, if commissioned before 1975; or (2) the earlier of (A) December 31 of the calendar year 50 years after the commissioning date and (B) December 31, 2029, if commissioned after 1974.
  - In December 2019, the Province and the Government of Canada renewed the Equivalency Agreement, which will allow NSPI to achieve compliance with the federal GHG regulation until 2029 by complying with provincial regulations. The renewed Equivalency Agreement came into force on January 1, 2020, and was renewed in August 2024 until December 31, 2029.
  - As a result of the COVID-19 pandemic, there was a delay to the in-service date for the Muskrat Falls Project, delaying the delivery of power to NSPI; the Company would thus be unable to achieve the provincially legislated target of 40% of electric sales generated from renewable sources in 2020.
  - In May 2020, the Province provided an alternative compliance plan, where NSPI would have to meet the 40% target over a three-year period of 2020 to 2022.
- In April 2023, the Province levied a $10 million penalty on NSPI for noncompliance with the RER in 2022.
  - The Company has filed an application with the NSUARB appealing the penalty.
- In October 2023, the Province published its 2030 Clean Power Plan.

- Under the plan, the Province intends to add new wind, solar, and natural gas generation capacity, as well as deploy battery storage and for the construction of a new transmission line to New Brunswick to improve reliability.

- In April 2024, the Province enacted *Bill 404 - Energy Reform (2024) Act*.
  - Bill 404 enacts the *More Access to Energy Act*, which provides for the establishment and transition to the NSIESO, which will be tasked with operating the Provincial electricity grid as well as energy forecasting and resource planning.

Assessment of Regulatory Framework

Criteria	Score	Analysis
1. Deemed Equity	Excellent Good Satisfactory **Below Average** Poor	NSPI's target-regulated ROE is based on an actual five-quarter average-regulated common equity component of up to 40.0%. We note that under Bill 212, the Company's deemed equity is capped at 40.0% for 2022 to 2024.
2. Allowed ROE	Excellent **Good** Satisfactory Below Average Poor	NSPI's target regulated ROE range is between 8.75% and 9.25%. Actual regulated ROE had historically been in the higher end of this target range but will likely be at the bottom of the range for 2022 to 2024. We note that under Bill 212, the Company's ROE is capped at 9.25% for 2022 to 2024.
3. Energy Cost Recovery	Excellent Good Satisfactory **Below Average** Poor	Fuel costs are passed to customers through the FAM, and rates change annually to account for variances between forecast and actual fuel costs. Fuel costs are subject to an independent audit by the NSUARB that could potentially disallow a portion of fuel-related costs.
4. Capital and Operating Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	Capital costs of more than $1,000,000 are generally preapproved by the regulator, but there is some modest upfront capex before regulatory approval. NSPI earns an allowance for funds used during construction (AFUDC). Once the project is complete and put into service, the cost of the asset, including AFUDC, is recovered from customers through rates.
5. COS versus Incentive Rate Mechanism	**Excellent** Good Satisfactory Below Average Poor	NSPI is regulated under a COS model that allows the Company to recover all prudently estimated operating expenses and earn a reasonable return on approved capital investments.
6. Political Interference	Excellent Good Satisfactory Below Average **Poor**	In November 2022, the Province passed Bill 212, which amended the Public Utilities Act and directly interfered with the ongoing GRA for NSPI's 2022 to 2024 rates. We consider this adverse intervention to be negative for the Company's regulatory environment as it injected volatility and heightens uncertainty with the regulatory process. We further note that in the most recent election campaign, the PC's platform included capping rate increases for NSPI at the country wide average.
7. Stranded Cost Recovery	Excellent **Good** Satisfactory Below Average Poor	The NSUARB disallowed the recovery of some, but not a material amount of, fuel-related costs.
8. Rate Freeze	Excellent Good Satisfactory **Below Average** Poor	The retail residential electricity rates in the Province are higher than the average among Canada's provinces. This could make it challenging for NSPI to pass all costs on to ratepayers in a timely manner. As part of Bill 212, the Province capped rate increases for the Company's 2022 to 2024 GRA at 1.8% for base rates, excluding DSM and fuel and purchase power costs.

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Request IR-2:

References:

(a) on page 9 of Appendix 10A, Concentric provides Figure 1 (copied below) that summarizes its return on equity (ROE) estimates for NS Power:

Figure 1: Summary of Results[1]

	Canadian Regulated Utilities	US Electric Utilities	North American Electric Utilities
CAPM – Historical MRP	9.71%	10.69%	10.32%
Multi-Stage DCF	9.60%	9.35%	9.29%
Risk Premium	9.54%	10.45%	10.00%
Average	**9.62%**	**10.16%**	**9.87%**

(b) Concentric provided a similar analysis estimating the ROE for NSP Maritime Link Inc. (NSMPL) in Appendix A of NSPML's 2026 Assessment Application (which is dated July 2025). On page 10 of Appendix A of the NSMPL application, Concentric provided Figure 1 (copied below) that summarizes its return on equity (ROE) estimates for NSPML:

Figure 1: Summary of Results[4]

CAPM – Historical MRP	8.82%
Multi-Stage DCF	9.28%
Risk Premium	9.92%
Average	**9.34%**

Preamble:

The analysis included in Appendix 10A (which is dated September 2025) appears to have been prepared in March or April of 2025 according to numerous references and data estimates. For example, Appendix 10A references the January 2025 Bank of Canada

Monetary Policy Report (MPR), Figure 8 provides yield data for 30-year versus 10-year Government of Canada bonds up to March of 2025, as does Figure 9, which refers to 30-year Canada yields and the yields on A-rated Canadian utilities.

Concentric provided a similar analysis estimating the ROE for NSP Maritime Link Inc. (NSMPL) in Appendix A of NSPML's 2026 Assessment Application (which is dated July 2025). This analysis appears to have been prepared in May or June of 2025 according to numerous references and data estimates. For example, Appendix A references the May 2025 Bank of Canada MPR, Figure 8 provides yield data for 30-year versus 10-year Government of Canada bonds up to May of 2025, as does Figure 9, which refers to 30-year Canada yields and the yields on A-rated Canadian utilities.

Question:

(a) Please confirm the approximate dates that the analysis included in Appendix 10A of the current NS Power 2026-2027 GRA application was conducted.

(b) Please confirm the approximate dates that the analysis included in Appendix A of the NSPML 2026 Assessment application was conducted.

(c) Please confirm that the main reason for Concentric's 0.53% higher overall ROE estimate for the respective North American Proxy Groups during the current NS Power GRA proceeding (i.e., 9.87% versus 9.34%) is due to the much higher capital asset pricing model (CAPM) NS Power GRA ROE estimate of 10.32%, versus 8.82% for the NSPML CAPM ROE estimate. If not confirmed, please explain.

(d) Please confirm that the main reason for the 1.5% difference in the two CAPM estimates is due to the much higher weighted average beta estimate used for the respective North American Proxy Groups, which is 0.64 for the NSPML North American Proxy Group (that is comprised of 60% U.S. utilities), and which is almost

50% higher with a 0.90 beta estimate for the NS Power GRA North American Proxy Group (that is comprised of 77% U.S. utilities). If not confirmed, please explain.

Response IR-2:

(a) The ROE analysis that is summarized in Figure 1 of Concentric's report for NS Power was based on market data as of January 31, 2025. The economic and capital market data described in Section 3 of Concentric's report for NS Power was updated through March 2025.

(b) The ROE analysis that is summarized in Figure 1 of Concentric's report for NSPML was based on market data as of May 30, 2025. The economic and capital market data in Section 3 of Concentric's report was also updated through May 2025.

(c) Confirmed.

(d) Concentric confirms that the average beta coefficients for the North American Electric proxy group used in Concentric's CAPM analysis for NS Power are substantially higher than the beta coefficients for the North American T&D proxy group used in our CAPM analysis for NSPML. This is attributable to two primary factors, including: 1) differences in the composition of the respective proxy groups; and 2) differences in the dates of the respective analyses.

Request IR-3:

References:

In Section 5E, on pages 56-57 of Appendix 10A, Concentric references allowed ROEs and equity ratios (ERs) in other Canadian, but mostly U.S., jurisdictions.

Question:

Does Concentric agree that as or more important than considering allowed ROEs and ERs in other jurisdictions in determining the appropriate ROE and ER for NSPML is an examination of NS Power's business risk and financial risk, as well as an examination of market-based evidence regarding factors that should impact earned ROEs, such as expected future stock market returns, government bond yields, yields on NSP and similar Canadian utility bonds.

Response IR-3:

In addition to providing authorized ROEs and equity ratios for other vertically-integrated electric utilities in Figure 30 of its report, Concentric also provides a discussion of NS Power's unique business and financial risks (see Section 6), an analysis of the investor-required cost of equity for proxy groups of Canadian, U.S. Electric, and North American Electric utilities based on market data as of January 31, 2025 (see Section 5), and a summary of conditions in the economy and capital markets, including a discussion of government and utility bond yields, projected economic growth rates, and historical stock market returns (see Section 3). All this data and analysis informed Concentric's recommended ROE for NS Power of 9.9 percent. The Company, however, elected to request continuation of its existing authorized ROE of 9.0 percent even though the market data supports a higher return for NS Power, and continuation of its existing deemed ratio of 40.0 percent even though this equity ratio is in line with those for electric utilities in Ontario

that do not own any generation assets, and well below the average equity ratios available in the U.S.

Request IR-4:

References:

(a) On page 45 (footnote 44) of Appendix 10-A, Concentric refers to the following source for the "forecast" data for "Long-Term Forecast for 10-Year Government Bond Yields" for Government of Canada bonds that is used to prepare Figure 20 (page 40): "Consensus Forecasts by Consensus Economics Inc., Survey Date October 7, 2024, at 29 and 3."

(b) During the 2024 Ontario Energy Board (OEB) proceedings dealing with the "2024 REVIEW OF COST OF CAPITAL PARAMETERS AND DEEMED CAPITAL STRUCTURE" (EB-2024-0063), in Exhibit N-M2-7-AMPCO/IGUA-1 IGUA-AMPCO, in response to IR-1 (b-d), Concentric confirmed the following (bold added for emphasis):

> **b) The "OEB Deemed Long-Term Debt Rate" is provided annually by the OEB in its Cost of Capital Parameter Calculations. It is the 10-year Government of Canada Consensus Forecast, plus the actual spread of the 30-year over 10-year Government of Canada bond yields, plus the actual A-rated utility bond yield spread over 30-year Government of Canada bond yields.**
>
> **c) Concentric confirms that the cited reference indicates that the actual long-term debt cost rates have exceeded the OEB's deemed long-term debt cost rate by an average of 40 basis points since 2010.**
>
> **d) Concentric confirms that, as stated in the Concentric report, the average difference between the OEB's deemed long-term debt cost rate and the Bloomberg index has been 40 basis points since 2010, and that that figure is approximately the same as the "about 0.4%" difference found by Dr. Cleary when he compared average actual 30-year government yields from 2011-2023 to average September (November) Consensus forecasts.**

Question:

(a) Please provide the source Consensus Forecast document used to provide the figures, which are reported in Figure 20 (page 45) of Appendix 10A.

(b) Given the upward bias of +0.40% confirmed in Concentric's 2024 OEB evidence that shows the deemed long-term debt rates (based on forecast yields) averaged +0.40% higher than the actual yields, please explain why Concentric continues to rely upon "forecasts" for 10-year Canada yields and then estimates a spread it adds to this forecast to estimate 30-year Canada yields, as opposed to using actual 30-year Canada yields.

Response IR-4:

(a) Please refer to Attachment 1 for the requested report.

(b) The cost of capital is a forward-looking estimate that represents investors' return requirements based on their expectations for interest rates, inflation, GDP growth, earnings growth, utility risk as measured by beta, and other market data and economic indicators. Therefore, Concentric believes it is reasonable to use forecasts of 30-year government bond yields rates as the risk-free rate in the CAPM analysis rather than historical average interest rates.

With regard to the "upward bias of 0.40%" noted in Concentric's 2024 evidence in Ontario, while forecast bond yields were higher than actual bond yields for many years following the financial crisis of 2007-2009, that has changed in the last several years, as actual interest rates have exceeded the level of forecasts due to higher-than-expected inflation. If Concentric had used current actual interest rates instead of forecast bond yields in its CAPM and Risk Premium analysis, the ROE results for NS Power would have been higher. For example, in Canada, Concentric used a risk-free rate of 3.66 percent in the CAPM

analysis, while the 30-day average yield on the 30-year Government of Canada bond was 3.73 percent as of September 30, 2025. The same is true in the U.S., with the 30-day average yield on the 30-year Treasury yield 4.79 percent in September 2025 while the risk-free rate used in Concentric's CAPM analysis was 4.14 percent.

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CONSENSUS FORECASTS®

Surveys of International Economic Forecasts

- G-7 & Western Europe

Survey Date:
October 7, 2024

Every month, Consensus Economics surveys over 250 prominent financial and economic forecasters in G-7 & Western Europe for their macro estimates of a range of variables including future growth, inflation, interest rates and exchange rates. More than 20 countries are covered and the reference data, together with analysis and polls on topical issues, is rushed to subscribers.

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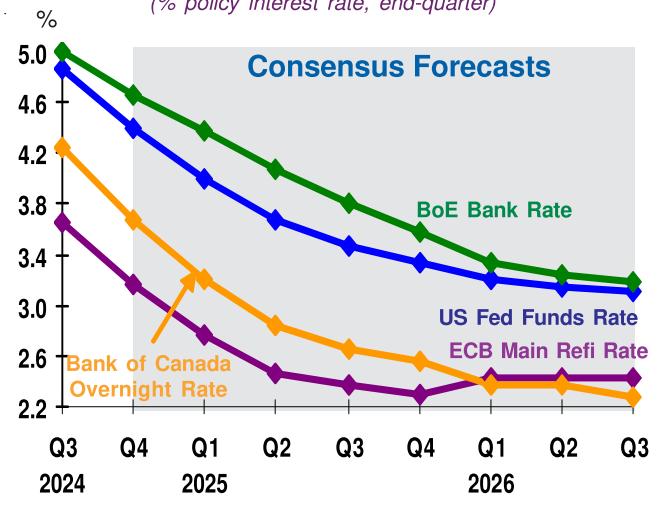
Survey Highlights and Long-Term Forecasts

The focus among G7 policymakers, both at central banks and in government, is shifting away from the inflation surge of 2021-23 and towards a weakening growth outlook. The 2025 consensus of GDP growth forecasts for the **G7 and Western European** economies now fall within the range of 0.9%-1.7%. Most have seen rapid progress on disinflation, although services inflation remains an upside cause for concern (consumers are still prioritising spending on leisure and experiences in the post-lockdown era as opposed to goods) as are shelter costs (amid high mortgage costs and insufficient house supply in some markets). War in the Middle East may add further upside risk to inflation. Nevertheless, with growth the concern, central banks are embarking on rate-cutting cycles, perhaps faster than previously estimated. The **US Federal Reserve** surprised the markets by reducing its policy rate on September 18 by a larger-than-expected 50 basis points. Still, the **US** economy is proving more resilient in its labor-market than the Fed anticipated three weeks' ago. That is not the case with other economies. **German** and **French** GDP prospects, both short- and long-term, are downwardly impacted, in part by structural issues, discussion of which are pertinent to our special survey on **Long-Term Forecasts** this month (see pages 2-3, 28-30). **Germany** has struggled to kickstart activity amid increased energy costs and a new era of 'competitive protectionism' which will necessitate a big modernisation push in order to relaunch home-grown industry, incorporate the green transition and attract strategic supply-chains. The **US's** Inflation Reduction Act and CHiPS legislation, for example, extended tax relief and subsidies...

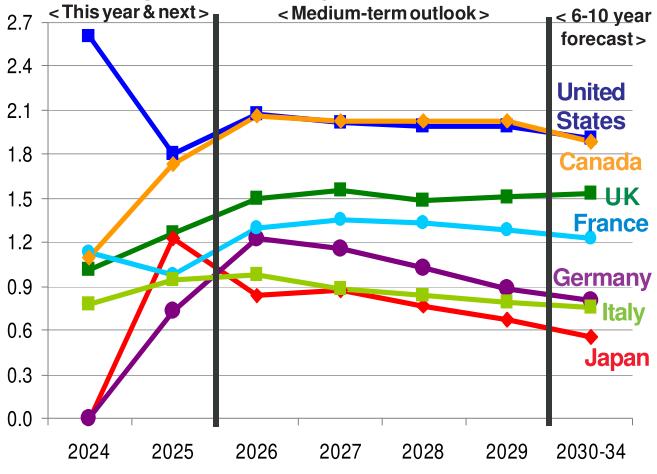
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Central Bank Policy Rates Through Q3 2026

(% policy interest rate, end-quarter)



Short- and Long-Term GDP Growth Forecasts – US, Japan, Germany, France, UK, Canada



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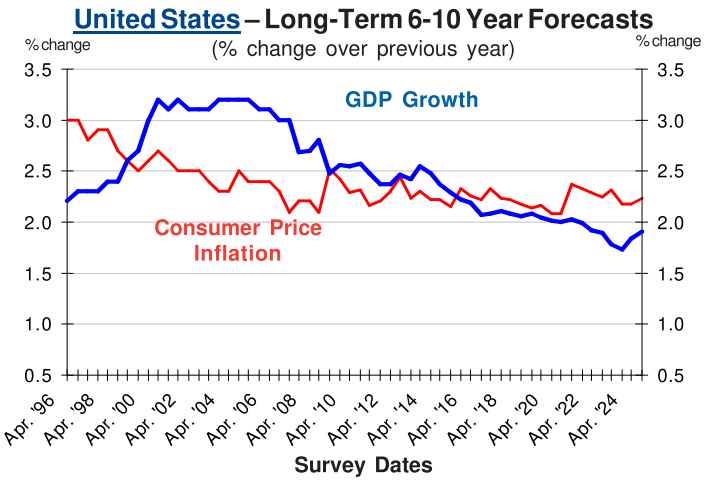
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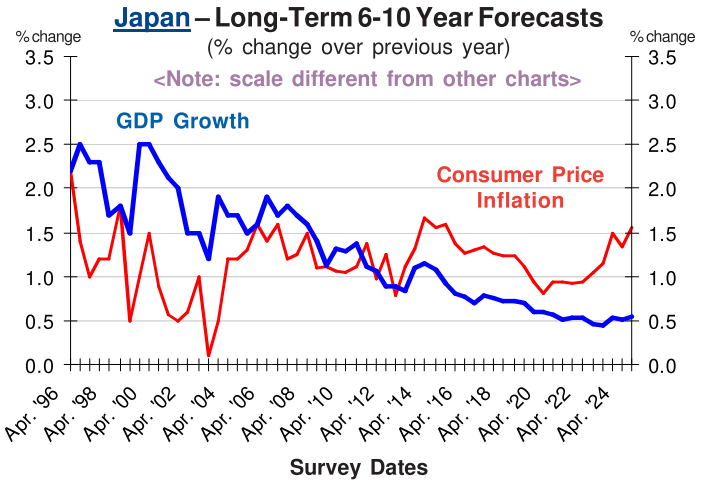
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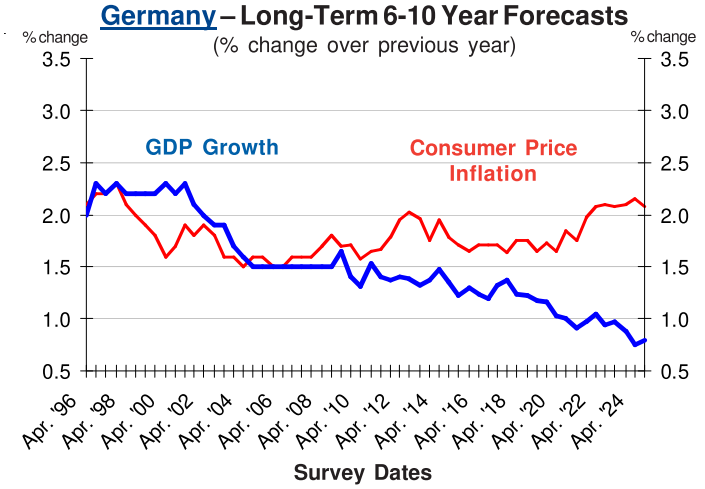
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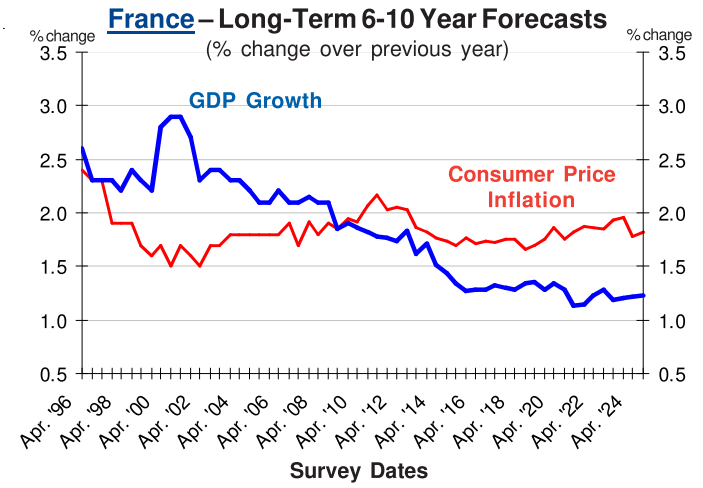
SIGNIFICANT CHANGES IN THE LONG-TERM CONSENSUS OCTOBER 2024

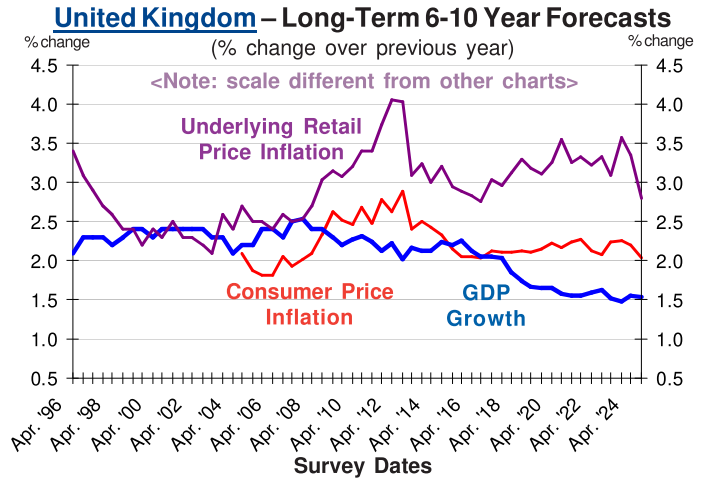
This month, we chart **Significant Changes in Long-Term Forecast Trends for GDP Growth and Inflation** for the **US, Japan, Germany, France,** the **UK, Italy** and **Canada**. Twice-yearly long-term projections for the 6-10 year period averages (in this case 2030-2034) are contrasted with those long-term forecasts surveyed back to April 1996. It is this rolling 6-10 year trendline average which we show in the charts below. The 6-10-year trend averages may be viewed as a measure of **potential GDP and inflation** expectations. This construct has two problems, however. One is that the 6-10 year horizon is a moving horizon shifting forward one year, each year. The other is that the number of panellists responding to our long-term surveys is smaller and therefore somewhat less representative than the panellist numbers responding to our one and two-year surveys on pages 4-24.

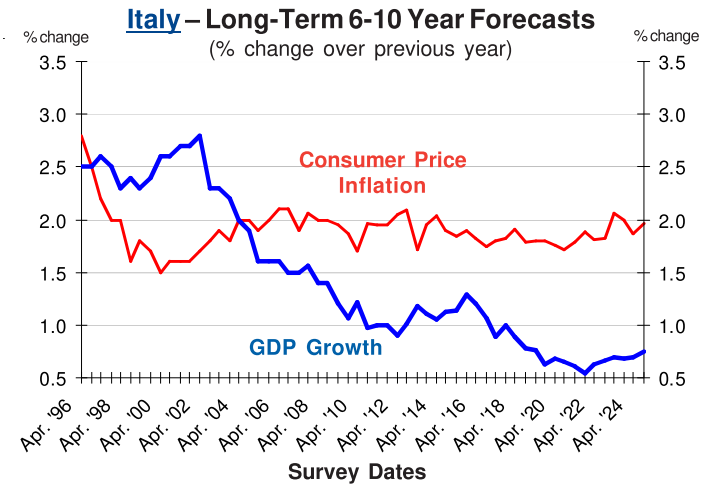


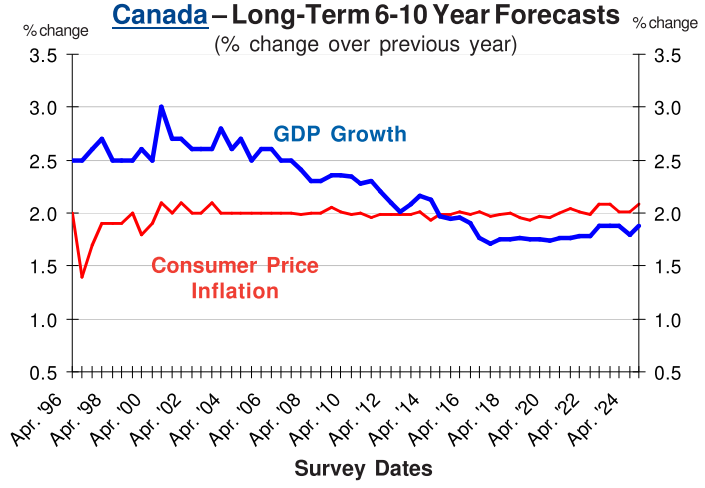












 Source: Consensus Forecasts

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In addition to their regular forecasts, country panellists were asked to provide longer-term forecasts covering the period until 2034 for growth in real GDP, consumer spending, investment and industrial production, along with consumer price inflation, current account balances and long-term bond yields. Definitions correspond to those used in the individual country pages.

United States

* % change over previous year	Historical				Consensus Forecasts						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-2.2	6.1	2.5	2.9	2.6	1.8	2.1	2.0	2.0	2.0	1.9
Personal Consumption*	-2.5	8.8	3.0	2.5	2.4	1.9	2.0	2.1	2.1	2.0	2.0
Business Investment*	-4.6	6.0	7.0	6.0	3.9	2.8	3.4	3.3	3.1	3.2	3.2
Industrial Production*	-7.1	4.4	3.4	0.2	0.1	1.2	1.9	1.7	1.7	1.7	1.8
Consumer Prices*	1.2	4.7	8.0	4.1	2.9	2.2	2.4	2.3	2.3	2.2	2.2
Current Account Balance (USbn)	-601	-868	-1012	-905	-1018	-1055	-1067	-1077	-1076	-1084	-1070
10 Year Treasury Bond Yield, %[2]	0.9	1.6	3.9	3.9	3.7[3]	3.7[4]	3.7	3.7	3.7	3.8	3.8

Text continued from page 1

boosted tech infrastructure and relocated strategic supply chains closer to home. **China's** Belt and Road initiative, established before Covid, gave it a head start in terms of accessing the world's in-demand raw materials. The rest of the **G7 & Western Europe** have struggled to meet the scope of these ambitious and highly-subsidised policies, even with the promise of EU recovery funds. How economies rework their economic models to meet that competitive challenge will be of interest. **Germany's** medium-term growth outlook is muted, hovering below 1% through to 2034. **US** GDP growth is expected to maintain a higher 1.9% pace, though even that is down from the +3% rates of potential growth predicted in the early 2000s. The **US** has another competitive advantage at the moment, though: tech and AI. **Japan's** expected rates of growth are approaching 0.6% for 2030-34, despite a recent spending push to automate and expand semiconductor facilities with the aim of weather-proofing the economy, especially from declining birth-rates and labor shortages. The **G7** is also impacted by ageing populations; **Japan** may be somewhat further along in its journey managing this challenge, which will not only mean greater automation but likely working longer and retiring later. Capex spending there is supported by relatively cheaper borrowing costs. **US** and **European** debt, by contrast, is more expensive to service. Softer growth dynamics and a narrowing taxpayer pool add to the fiscal bind. There is no shortage of projects for policymakers (better public services, promoting national industry, the green transition, military defence); the question is what to prioritise, and where to cut back fiscally.

Japan

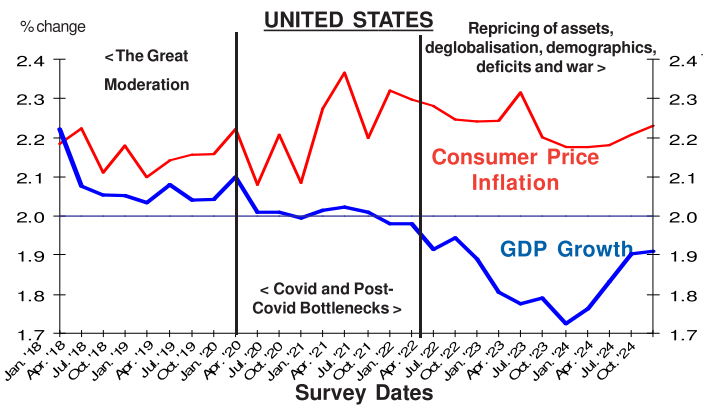
* % change over previous year	Historical				Consensus Forecasts						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-34
Gross Domestic Product*	-4.2	2.7	1.2	1.7	0.0	1.2	0.8	0.9	0.8	0.7	0.6
Private Consumption*	-4.4	0.8	2.2	0.6	-0.1	1.3	0.8	0.8	0.7	0.6	0.5
Business Investment*	-5.1	1.6	2.8	2.1	1.4	2.0	1.4	1.5	1.2	1.0	0.7
Industrial Production*	-10.9	5.8	0.0	-1.4	-2.3	3.0	1.6	1.4	1.2	1.0	0.5
Consumer Prices*	0.0	-0.2	2.5	3.3	2.6	2.1	1.7	1.7	1.7	1.6	1.6
Current Account Balance (¥tn)	15.8	21.2	10.5	21.4	24.9	25.2	25.3	25.0	24.6	21.8	20.7
10 Year Treasury Bond Yield, %[2]	0.0	0.1	0.4	0.6	1.1[3]	1.3[4]	1.4	1.5	1.6	1.5	1.6

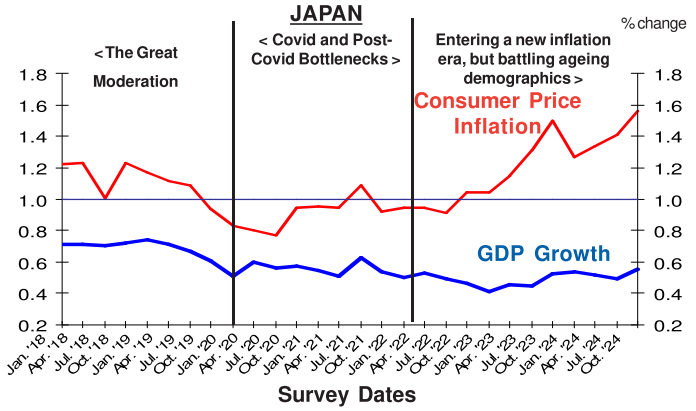
[1] *Signifies average for period* [2] *End period* [3] *End January 2025* [4] *End October 2025*

We have 'telescoped' the **6-10 year rolling-period average of GDP and CPI forecasts (collected four times a year)** from **January 2018 to October 2024**. This encapsulates the Great Moderation era of globalisation and 0% interest rates, followed by the Covid and Post-Covid era, and finally the current period. Inflection points like war in Ukraine, inflation, rapidly tightening monetary policies have triggered a reset in geopolitics and globalisation, not to mention repriced assets, labour and debt.

United States and Japan – Long-Term 6-10 Year Forecasts between January 2018 - October 2024

(annual % change over previous year)





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UNITED STATES — OCTOBER 2024

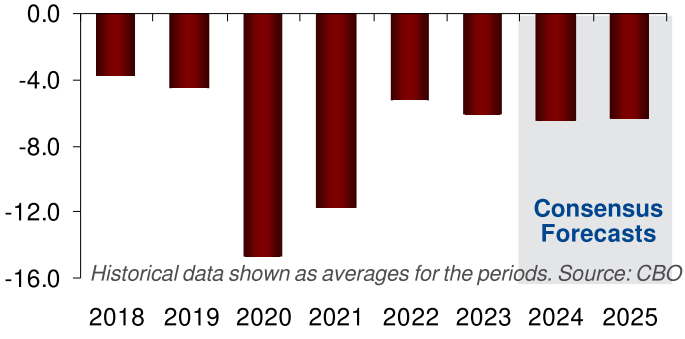
	Average % Change on Previous Calendar Year																		Annual Total	
	Gross Domestic Product		Personal Consumption		Business Investment		Pre - Tax Corporate Profits		Industrial Production		Consumer Prices		Core PCE Prices (ex. food & energy)		Producer Prices		Employment Costs		Auto & Light Truck Sales (inc. imports, mn units)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
S&P Global Market Intel	2.7	2.1	2.6	2.4	4.1	2.9	7.0	0.8	-0.1	0.8	2.8	2.0	2.7	2.1	1.0	0.8	na	na	15.7	16.2
EY Parthenon	2.7	1.8	2.5	1.9	3.8	1.4	na	na	0.0	1.1	2.8	2.1	2.7	2.1	1.1	1.5	4.0	3.2	15.7	16.0
Fannie Mae	2.7	2.1	2.6	2.4	4.1	2.8	na	na	na	na	2.9	2.1	2.7	2.2	na	na	na	na	15.7	16.2
Swiss Re	2.7	1.9	2.3	2.0	na	na	na	na	0.4	1.5	2.9	2.3	na	na	na	na	4.0	3.5	15.8	17.0
Wells Fargo	2.7	2.0	2.5	2.0	4.0	3.7	6.5	3.4	0.0	1.6	2.9	2.3	2.7	2.3	na	na	4.0	3.6	15.6	16.5
Visa Business & Econ	2.7	2.2	2.6	2.3	4.2	4.7	6.5	3.5	na	na	3.0	2.4	2.7	2.3	na	na	na	na	15.7	16.5
Oxford Economics	2.7	2.5	2.6	2.7	4.1	4.1	9.6	9.0	-0.1	1.9	2.9	2.4	2.7	2.2	1.2	1.6	4.0	3.5	15.8	16.3
Robert Fry Economics	2.7	1.4	2.4	0.6	4.2	3.3	5.8	-6.7	-0.2	0.6	2.9	2.2	2.7	2.0	1.0	0.7	4.0	3.3	15.5	15.5
JP Morgan	2.7	1.9	2.5	1.6	4.3	4.3	7.1	4.2	-0.2	0.7	2.9	2.1	2.7	2.1	na	na	3.9	2.9	15.6	16.1
Moody's Analytics	2.7	2.3	2.7	2.6	4.1	3.2	6.2	0.2	0.0	2.2	2.9	2.4	2.7	2.1	0.1	2.0	3.9	2.8	15.7	16.7
Ford Motor Company	2.7	1.6	2.5	1.7	4.1	2.4	na	na	-0.2	0.2	3.0	2.1	2.8	2.2	1.0	0.8	na	na	na	na
Eaton Corporation	2.7	2.4	2.2	2.5	4.0	3.5	na	na	0.3	1.2	3.0	2.5	na	na	1.7	1.6	na	na	15.6	16.3
PNC Financial Services	2.6	1.8	2.3	1.8	3.8	2.6	na	na	0.4	2.0	3.0	2.4	2.5	2.2	1.1	1.7	na	na	15.5	15.1
Inforum - Univ Maryland	2.6	1.8	2.4	1.9	3.8	2.6	6.5	2.6	0.0	1.4	2.9	2.2	2.7	2.2	1.1	1.4	4.0	3.3	15.6	16.1
Allianz	2.6	1.7	2.5	1.7	3.7	2.1	na	na	na	na	2.9	2.2	na	na	na	na	3.8	3.3	na	na
Barclays	2.6	2.1	2.5	1.9	4.1	3.3	na	na	0.2	1.7	2.9	2.1	2.8	2.2	na	na	na	na	na	na
BMO Capital Markets	2.6	1.9	2.6	2.1	4.0	2.8	7.5	4.5	0.0	1.9	2.9	2.2	2.7	2.1	na	na	4.0	3.6	15.7	16.1
First Trust Advisors	2.6	1.5	2.5	2.3	3.6	1.4	na	na	-0.1	-0.2	2.9	1.6	2.7	1.4	na	na	na	na	15.6	15.5
ICIS	2.6	1.8	2.4	1.8	3.9	3.2	6.8	3.3	0.1	1.6	3.0	2.3	2.7	2.2	1.9	1.9	4.0	3.4	15.7	16.1
Nat Assn of Home Builders	2.6	1.9	2.5	2.2	3.9	2.7	na	na	na	na	2.9	2.1	2.7	2.2	1.0	0.9	na	na	na	na
TD Economics	2.6	1.9	2.5	1.9	3.9	3.4	5.5	1.5	na	na	3.1	2.3	2.7	2.1	na	na	na	na	na	na
Univ of Michigan - RSQE	2.6	1.9	2.5	1.9	3.7	2.9	7.5	5.0	0.1	0.6	2.9	2.3	2.7	2.1	na	na	na	na	15.6	15.8
Bloomberg Economics	2.6	1.8	2.4	1.9	3.9	3.6	na	na	na	na	2.9	2.6	2.7	2.5	na	na	na	na	na	na
Royal Bank of Canada	2.5	1.3	2.4	1.5	3.8	2.7	4.8	0.9	na	na	2.8	2.0	na	na	na	na	na	na	15.7	14.5
The Conference Board	2.5	1.7	2.5	2.1	4.1	2.6	na	na	na	na	na	na	2.7	2.0	na	na	na	na	na	na
Georgia State University	2.5	1.2	2.3	1.5	3.7	1.7	4.5	-4.6	-0.2	0.1	2.9	1.7	2.8	2.4	1.2	0.8	3.4	3.4	15.3	14.9
Dynamic Econ Strategy	2.4	1.8	2.2	2.0	3.5	2.5	5.1	3.2	0.3	1.5	3.0	2.8	2.5	2.3	1.3	1.3	3.7	3.3	15.4	15.8
Econ Intelligence Unit	2.4	1.4	2.1	1.5	na	na	na	na	0.4	1.7	3.0	2.7	na	na	2.2	2.3	na	na	na	na
Citigroup	2.4	0.7	2.3	1.1	2.8	-0.9	na	na	na	na	2.9	2.5	2.7	2.0	na	na	na	na	na	na
Consensus (Mean)	2.6	1.8	2.4	1.9	3.9	2.8	6.5	2.1	0.1	1.2	2.9	2.2	2.7	2.2	1.2	1.4	3.9	3.3	15.6	16.0
Last Month's Mean	2.5	1.7	2.3	1.8	3.7	2.7	5.2	2.5	0.2	1.2	3.0	2.2	2.7	2.2	1.2	1.4	3.9	3.3	15.6	15.9
3 Months Ago	2.3	1.7	2.1	1.7	3.3	2.6	4.8	2.5	0.1	1.3	3.1	2.3	2.7	2.2	1.6	1.6	3.9	3.3	15.6	16.0
High	2.7	2.5	2.7	2.7	4.3	4.7	9.6	9.0	0.4	2.2	3.1	2.8	2.8	2.5	2.2	2.3	4.0	3.6	15.8	17.0
Low	2.4	0.7	2.1	0.6	2.8	-0.9	4.5	-6.7	-0.2	-0.2	2.8	1.6	2.5	1.4	0.1	0.7	3.4	2.8	15.3	14.5
Standard Deviation	0.1	0.4	0.1	0.4	0.3	1.1	1.3	3.8	0.2	0.7	0.1	0.3	0.1	0.2	0.5	0.5	0.2	0.2	0.1	0.6
Comparison Forecasts																				
CBO (Jun. '24)	2.6	2.1	2.7	1.8	3.2	3.0					3.2	2.4	2.9	2.4			4.1	3.7		
IMF (Jul. '24)	2.6	1.9																		
OECD (Sep '24)	2.6	1.6									2.4	1.8								

Government and Background Data

President - Mr. Joseph R. Biden (Democrat). **Congress -** Democrats have retained a majority in the House of Representatives (lower house) and narrowly taken control of the Senate (upper house). **Next Elections** November 5, 2024 (presidential and congressional). **Nominal GDP -** US$27,361bn (2022). **Population -** 343.5mn (UN, Mid 2023).

Federal Budget Balance – % of GDP

(fiscal years)



Historical data shown as averages for the periods. Source: CBO

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-2.2	6.1	2.5	2.9
Personal Consumption*	-2.5	8.8	3.0	2.5
Business Investment*	-4.6	6.0	7.0	6.0
Pre - Tax Corporate Profits*	-2.4	27.6	7.8	6.9
Industrial Production*	-7.1	4.4	3.4	0.2
Consumer Prices*	1.2	4.7	8.0	4.1
Core PCE Prices*	1.3	3.6	5.4	4.1
Producer Prices*	-1.3	8.9	13.4	1.5
Employment Costs*	2.6	3.3	4.9	4.5
Auto & Light Truck Sales (inc. imports), mn	14.5	14.9	13.8	15.5
Housing Starts, mn	1.39	1.60	1.55	1.42
Unemployment Rate, %	8.1	5.4	3.6	3.6
Current Account, US bn	-601	-868	-1012	-905
Federal Budget Balance fiscal years, US bn	-3132	-2776	-1375	-1694
3 mth Treasury Bill, %, end yr	0.1	0.1	4.3	5.3
10 Yr Treasury Yield, %, end yr	0.9	1.6	3.9	3.9

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OCTOBER 2024 — UNITED STATES

Annual Total		Year Average		Annual Total		Fiscal Years (Oct-Sep)		Rates on Survey Date 4.5 %		4.0 %	
Housing Starts (mn units)		Unemployment Rate (%)		Current Account (US$ bn)		Federal Budget Balance (US$ bn)		3 month Treasury Bill Rate (%)		10 Year Treasury Bond Yield (%)	
2024	2025	2024	2025	2024	2025	FY 23-24	FY 24-25	End Jan'25	End Oct'25	End Jan'25	End Oct'25
1.35	1.37	4.0	4.3	-1048	-1116	na	na	na	na	na	na
1.32	1.29	4.1	4.5	na	na	na	na	4.3	3.0	3.8	3.6
1.35	1.38	4.1	4.4	na	na	na	na	3.8	3.4	3.8	3.9
na	na	na	na	na	na	na	na	na	na	4.0	3.8
1.36	1.42	4.1	4.1	na	na	-1850	-1900	3.9	3.2	3.5	3.4
1.34	1.36	4.1	4.3	na	na	-1915	-1945	3.9	3.2	3.4	3.3
1.37	1.51	4.1	4.3	-1059	-1122	-1802	-1792	4.0	3.4	3.8	3.7
1.35	1.42	4.0	4.3	na	na	-1900	-2000	3.7	3.3	3.5	4.0
1.38	1.50	4.1	4.4	-991	-1027	-1915	-1850	na	na	na	na
1.35	1.49	4.0	4.1	-1076	-1073	na	na	na	na	na	na
1.35	1.36	4.0	4.2	na	na	na	na	3.8	3.5	3.8	3.9
1.35	1.41	4.1	4.3	na	na	na	na	na	na	na	na
1.37	1.54	4.1	4.4	na	na	na	na	3.9	3.2	3.8	3.9
1.35	1.40	4.1	4.4	na	na	na	na	4.3	3.6	3.9	3.8
na	na	4.2	4.7	na	na	-2150	-2250	3.8	3.0	na	na
na	na	4.1	4.3	-1058	-1166	-1950	-1844	na	na	4.0	4.0
1.35	1.42	4.0	4.4	-1070	-1155	-1932	-1960	4.3	3.3	3.6	3.4
1.39	1.45	4.1	4.5	-1024	-1081	-1850	-2100	4.0	2.6	3.7	3.5
1.38	1.44	4.1	4.3	-1005	-1065	-1875	-1939	4.0	3.6	3.7	3.6
1.33	1.35	4.1	4.4	na	na	na	na	na	na	na	na
1.30	1.40	4.1	4.2	-1026	-1107	na	na	3.9	3.0	3.6	3.5
1.33	1.37	4.0	4.4	na	na	na	na	4.0	3.4	3.8	3.6
na	na	4.2	4.8	na	na	na	na	na	na	3.4	3.3
1.39	1.44	4.1	4.4	-1017	-1120	na	na	4.3	4.1	4.0	3.9
na	na	4.1	4.1	na	na	na	na	na	na	na	na
1.36	1.32	4.1	4.7	-994	-982	-1509	-1608	4.1	3.3	3.7	3.8
1.36	1.40	4.2	4.4	-985	-1021	-1782	-1834	4.3	4.2	3.9	4.0
na	na	4.1	4.3	-938	-949	-1964	-2038	4.6	4.1	3.5	3.2
na	na	4.2	4.9	-966	-782	-1903	-1910	4.3	3.3	na	na
1.35	1.41	4.1	4.4	-1018	-1055	-1878	-1926	4.1	3.4	3.7	3.7
1.36	1.41	4.1	4.4	-990	-1024	-1798	-1874				
1.39	1.44	4.0	4.2	-973	-1010	-1750	-1831				
1.39	1.54	4.2	4.9	-938	-782	-1509	-1608	4.6	4.2	4.0	4.0
1.30	1.29	4.0	4.1	-1076	-1166	-2150	-2250	3.7	2.6	3.4	3.2
0.02	0.06	0.1	0.2	41	101	138	151	0.2	0.4	0.2	0.3
		3.9	4.0	-975	-1060	-1915	-1938				

US Fed Funds Rate (Mid-Point of Target Range)
at October 7, 2024 (mid-point) = 4.875%

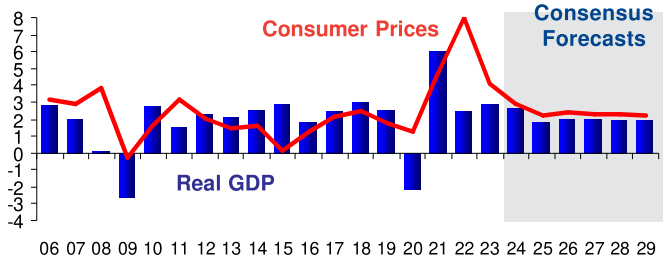
Average probabilities of a change in the Funds Rate on Nov 7:

Increase 0.3% **No change** 12.7% **Decrease** 87.0%

Consensus Forecasts	End Dec '24	End Mar '25	End Jun '25	End Sep '25	End Dec '25	End Mar '26	End Jun '26	End Sep '26
Mean Average:	4.395%	3.993%	3.677%	3.471%	3.330%	3.211%	3.137%	3.115%
Median:	4.375%	3.875%	3.625%	3.375%	3.375%	3.125%	3.000%	3.000%

US Real Growth and Inflation

(% change over previous year)



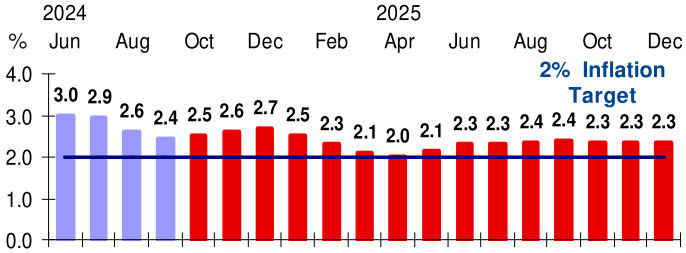
Fed Cuts More Than Expected at September Meeting

At the widely-anticipated FOMC meeting on September 18, the US Federal Reserve cut by a surprisingly large 50 basis points from the 5.25-5.5% range to 4.75-5%. In a speech on September 30, Fed chair Jerome Powell espoused an upbeat view of the economy and progress in disinflation, but said the Fed remained data dependent. Headline CPI has eased from 3.0% (y-o-y) in June to 2.9% in July, 2.6% in August and 2.4% in September. Core PCE price inflation has been stickier, shifting around the 2.6-2.7% range since May, and the Fed remains cautious about services and shelter costs. Nevertheless, Chair Powell indicated that the September cut reflected confidence regarding inflation and an economic soft landing, which has allowed the central bank to pivot towards supporting employment. When the Fed met in September, there were jitters about cooling labor market indicators. This was until the release of the September jobs report on October 4. Nonfarm payrolls jumped 254,000 while July and August outturns were revised noticeably higher, which suggest that hiring is stronger than the FOMC may have initially thought. Consequently, the Fed could settle on smaller rate cuts (or even consider pausing) at its next meetings in November and December (see below left for our end-quarter Fed funds rate forecasts to September 2026). Sentiment has been reinforced by extensive upside revisions to the quarterly and annual national accounts by the Bureau of Economic Analysis, notably for GDP, personal consumption and business investment in 2021, 2022 and 2023, as well as the income accounts.

This month, we asked our panelists what probability would they assign to a recession occurring between Q3 2024 and end-2025. Respondents gave us an **average probability** of **27.3%**; answers ranged from a high of 45.0% to a low of 0%.

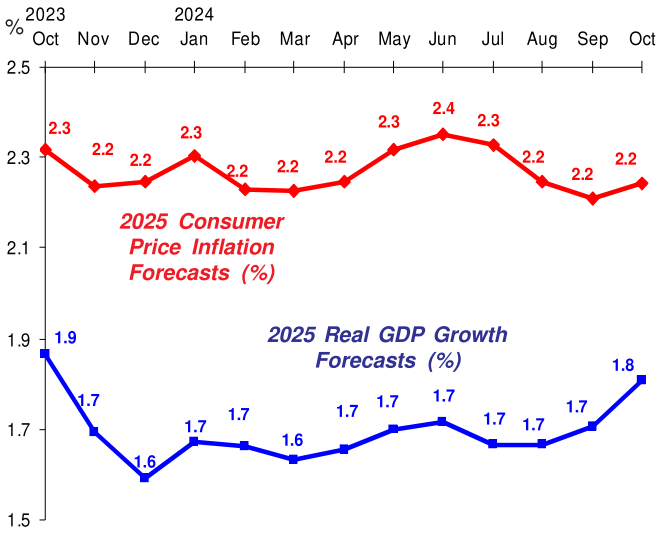
Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



2025 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



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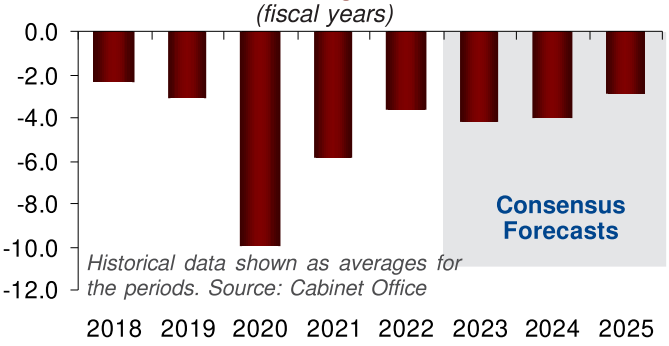
	Average % Change on Previous Calendar Year																Annual Total	
	Gross Domestic Product		Private Consump-tion		Business Investment		Industrial Production		Consumer Prices		Core-Core Consumer Prices (ex. all food (less alcohol) & energy)		Domestic Corporate Goods Prices		Total Cash Earnings (nominal)		New Car Registra-tions (mn)	
	国内総生産		民間消費		民間設備投資		鉱工業生産		消費者物価		食料（酒類を除く）及びエネルギーを除く総合		卸売物価		現金給与総額（名目）		新車登録台数（百万台）	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
Econ Intelligence Unit	0.6	1.1	-0.1	1.2	na	na	-3.8	1.7	2.5	2.0	na	na	1.8	1.3	na	na	na	na
Euromonitor Intl	0.4	1.1	-0.3	1.3	na	na	-2.0	1.6	2.5	1.9	na	na	na	na	na	na	na	na
Toyota Motor Corporation	0.2	0.9	0.2	1.1	1.6	2.2	na	na	2.5	2.0	na	na	na	na	na	na	na	na
Bloomberg Economics	0.2	1.7	0.1	2.0	0.1	2.0	na	na	2.5	2.1	na	na	na	na	na	na	na	na
Oxford Economics	0.2	1.1	0.0	1.4	1.5	1.1	-1.4	5.0	2.3	1.3	na	na	na	na	3.3	4.6	na	na
Deutsche Securities	0.1	1.5	-0.1	1.4	1.9	2.3	-1.0	4.4	2.5	2.3	2.3	1.9	2.3	2.9	2.5	3.1	na	na
ITOCHU Institute	0.1	1.5	0.0	1.6	1.9	1.6	-2.3	3.6	2.5	2.0	2.4	2.5	2.0	-0.3	3.3	3.3	2.45	2.61
HSBC	0.1	1.3	0.1	1.5	na	na	-1.8	2.5	2.5	2.2	2.4	2.2	1.7	2.1	3.1	1.5	na	na
S&P Global Mkt Intelligence	0.0	1.2	-0.3	1.3	1.7	1.5	-1.8	3.2	2.6	2.2	1.7	1.8	1.9	2.2	na	na	na	na
Daiwa Institute of Research	0.0	1.6	0.1	1.7	1.3	2.0	-1.9	3.9	2.5	2.3	2.0	2.1	1.9	1.9	na	na	na	na
Morgan Stanley	0.0	1.3	-0.1	1.3	1.7	2.8	-2.1	2.0	2.6	2.2	2.0	1.8	na	na	na	na	na	na
UBS	0.0	1.1	-0.1	1.2	na	na	-2.2	2.1	2.5	1.8	na	na	na	na	na	na	na	na
JP Morgan - Japan	-0.1	1.1	-0.2	1.3	1.4	1.7	-2.5	1.8	2.6	3.1	2.1	2.5	1.7	-0.2	na	na	na	na
Barclays	-0.1	1.3	0.1	1.8	1.3	1.1	-2.7	2.8	2.7	2.2	na	na	na	na	na	na	na	na
Citigroup Japan	-0.1	1.4	-0.1	1.3	1.8	3.4	-2.2	4.3	2.6	2.2	na	na	na	na	na	na	na	na
Mitsubishi Research Institute	-0.1	1.1	-0.1	1.3	1.7	2.4	-2.5	4.8	2.6	2.4	2.1	2.0	1.9	1.9	na	na	na	na
Japan Ctr for Econ Research	-0.1	1.1	-0.1	1.7	1.6	1.7	-2.2	1.6	2.7	2.4	1.9	1.6	2.2	0.7	2.5	2.0	na	na
Moody's Analytics	-0.2	1.2	-0.3	1.0	0.8	2.5	-3.2	4.1	2.6	1.7	2.0	2.1	na	na	na	na	na	na
Capital Economics	-0.2	0.8	-0.1	1.7	na	na	na	na	2.6	1.7	na	na	na	na	na	na	na	na
Dai-Ichi Life Research	-0.2	1.3	-0.2	1.0	1.7	3.0	-2.2	3.1	2.6	2.0	1.9	1.7	1.9	0.1	2.8	2.4	na	na
Mizuho Research Institute	-0.2	1.2	-0.2	1.2	1.2	1.7	-2.8	2.0	2.6	2.2	2.0	1.6	1.7	0.2	3.0	3.0	na	na
NLI Research Institute	-0.2	1.3	-0.2	1.4	1.4	2.9	-2.6	2.7	2.5	2.0	1.9	1.7	2.0	0.7	2.6	2.9	na	na
Eaton Corporation	-0.3	0.7	-0.7	-0.6	1.1	1.0	-2.2	0.8	2.6	2.1	na	na	na	na	na	na	na	na
Nomura Securities	-0.3	1.4	-0.3	1.1	1.1	1.6	-2.2	4.7	2.5	2.0	2.0	1.8	2.1	1.2	2.3	1.9	na	na
Consensus (Mean)	0.0	1.2	-0.1	1.3	1.4	2.0	-2.3	3.0	2.6	2.1	2.1	2.0	1.9	1.1	2.8	2.7	na	na
Last Month's Mean	0.0	1.2	-0.2	1.2	1.5	2.0	-1.7	3.3	2.5	2.1	2.0	1.9	2.0	1.1	2.8	2.9	na	na
3 Months Ago	0.1	1.3	-0.4	1.2	1.4	2.3	-1.3	3.3	2.5	2.1	2.1	1.9	1.5	0.9	2.5	2.7	na	na
High	0.6	1.7	0.2	2.0	1.9	3.4	-1.0	5.0	2.7	3.1	2.4	2.5	2.3	2.9	3.3	4.6	na	na
Low	-0.3	0.7	-0.7	-0.6	0.1	1.0	-3.8	0.8	2.3	1.3	1.7	1.6	1.7	-0.3	2.3	1.5	na	na
Standard Deviation	0.2	0.2	0.2	0.5	0.4	0.7	0.6	1.3	0.1	0.3	0.2	0.3	0.2	1.0	0.4	0.9	na	na
Comparison Forecasts																		
IMF (Jul. '24)	0.7	1.0																
OECD (Sep. '24)	-0.1	1.4							2.5	2.1								

Government and Background Data

Prime Minister - Mr. Shigeru Ishiba of the Liberal Democratic Party (LDP). **Parliament -** The LDP won 261 of the 465 seats of the Lower House of Parliament at the October 2021 elections and has formed a coalition with the minority party, Komeito Party. **Next Elections** House of Representatives (27 October, 2024). **Nominal GDP -** ¥593.4tn (2023). **Population -** 124.4mn (UN, Mid 2023). **Yen/$ Exchange Rate -** 140.3 (average, 2023).

General Government Budget Balance – % of GDP

(fiscal years)



Historical data shown as averages for the periods. Source: Cabinet Office

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-4.2	2.7	1.2	1.7
Private Consumption*	-4.4	0.8	2.2	0.6
Business Investment*	-5.1	1.6	2.8	2.1
Industrial Production*	-10.9	5.8	0.0	-1.4
Consumer Prices*	0.0	-0.2	2.5	3.3
Core-Core Consumer Prices*	0.0	-0.8	0.1	2.6
Domestic Corp. Goods Prices*	-1.2	4.6	9.8	4.3
Total Cash Earnings (nominal)*	-1.2	0.3	1.9	1.2
New Car Registrations, mn	2.48	2.40	2.22	2.65
Housing Starts, mn	0.82	0.86	0.86	0.82
Unemployment Rate, %	2.8	2.8	2.6	2.6
Current Account, ¥tn	15.8	21.2	10.5	21.4
General Govt Budget Balance, SNA basis, fiscal years[1], ¥tn	-53.9	-32.5	-20.2	-24.9 *e*
3 mth TIBOR, % (end yr)	0.1	0.1	0.1	0.1
10 Yr Govt Bond, % (end yr)	0.0	0.1	0.4	0.6

e = consensus estimate based on latest survey

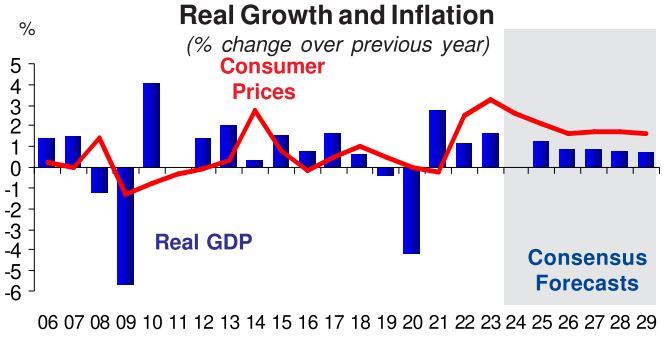
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OCTOBER 2024 JAPAN

Annual Total	Year Average	Annual Total	Fiscal Years (Apr-Mar)	Rates on Survey Date 0.4%	0.9 %
Housing Starts (mn)	Unemployment Rate (%)	Current Account (¥tn)	General Government Budget Balance (¥tn)	3 month Yen TIBOR Rate (%)	10 Year Govt Bond Yield (%)
新設住宅着工（百万戸）	失業率	経常収支	一般政府財政収支（SNA ベース、兆円）	3ヵ月物円建譲渡性預金	10年物国債利回り
2024 2025	2024 2025	2024 2025	FY 24-25 FY 25-26	End Jan'25 End Oct'25	End Jan'25 End Oct'25
na na	2.6 2.5	21.4 20.2	-28.7 -26.2	0.5 0.8	1.1 1.1
0.83 0.87	2.5 2.6	24.6 22.8	na na	na na	na na
na na	na na	na na	na na	na na	na na
na na	na na	na na	na na	na na	na na
0.81 0.81	2.4 2.2	25.7 26.0	-22.4 -21.2	0.6 0.9	1.2 1.4
na na	2.6 2.4	29.0 33.9	-33.3 -27.2	0.5 0.8	1.3 1.5
0.80 0.78	2.5 2.3	23.2 20.6	-14.2 -8.6	0.8 0.9	1.3 1.6
na na	2.6 2.5	23.8 22.0	-27.6 -9.5	na na	1.0 1.1
0.82 0.82	2.6 2.5	23.7 20.7	na na	0.7 0.9	0.9 1.2
na na	2.5 2.4	25.8 27.1	na na	na na	1.1 1.4
na na	2.6 2.6	26.4 26.6	na na	na na	na na
na na	2.5 2.2	na na	na na	na na	na na
na na	2.5 2.4	17.8 24.1	na na	na na	na na
na na	2.6 2.5	23.5 20.3	na na	na na	na na
na na	2.6 2.6	25.8 26.4	-24.4 -14.5	na na	na na
0.79 0.78	2.6 2.5	25.2 23.2	na na	na na	1.2 1.5
0.81 0.81	2.5 2.4	24.7 23.7	-19.3 -18.3	na na	1.3 1.3
0.82 0.83	2.6 2.6	24.6 25.0	-29.5 -26.8	na na	1.1 1.4
na na	2.6 2.6	24.4 26.6	na na	na na	na na
0.79 0.80	2.6 2.5	26.0 26.0	na na	na na	1.0 1.3
0.80 0.79	2.6 2.6	27.0 29.9	na na	na na	na na
0.80 0.79	2.6 2.5	26.4 27.2	-17.9 -13.1	0.7 0.9	1.0 1.2
na na	na na	na na	na na	na na	na na
na na	2.6 2.5	28.1 31.9	na na	na na	1.2 1.6
0.81 0.81	2.6 2.5	24.9 25.2	-24.1 -18.4	0.6 0.9	1.1 1.3
0.81 0.81	2.6 2.4	24.8 25.1	-23.8 -18.7		
0.80 0.80	2.5 2.4	25.0 25.5	-25.2 -19.7		
0.83 0.87	2.6 2.6	29.0 33.9	-14.2 -8.6	0.8 0.9	1.3 1.6
0.79 0.78	2.4 2.2	17.8 20.2	-33.3 -27.2	0.5 0.8	0.9 1.1
0.01 0.03	0.0 0.1	2.4 3.8	6.2 7.4	0.1 0.0	0.1 0.2

Bank of Japan overnight call rate: 0.25%
Next BoJ monetary meeting: October 30-31

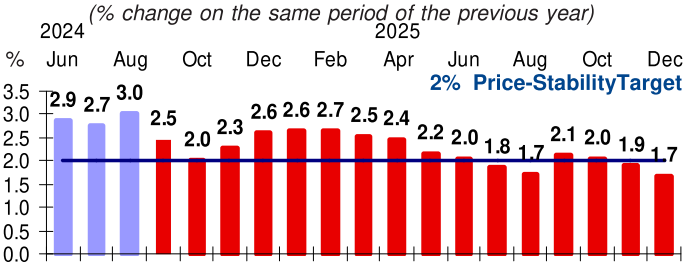
Consensus Forecasts	End Dec '24	End Mar '25	End Jun '25	End Sep '25	End Dec '25	End Mar '26	End Jun '26	End Sep '26
Mean Average:	0.34%	0.48%	0.58%	0.70%	0.72%	0.78%	0.86%	0.86%
Median:	0.25%	0.50%	0.50%	0.75%	0.75%	0.75%	0.87%	0.87%



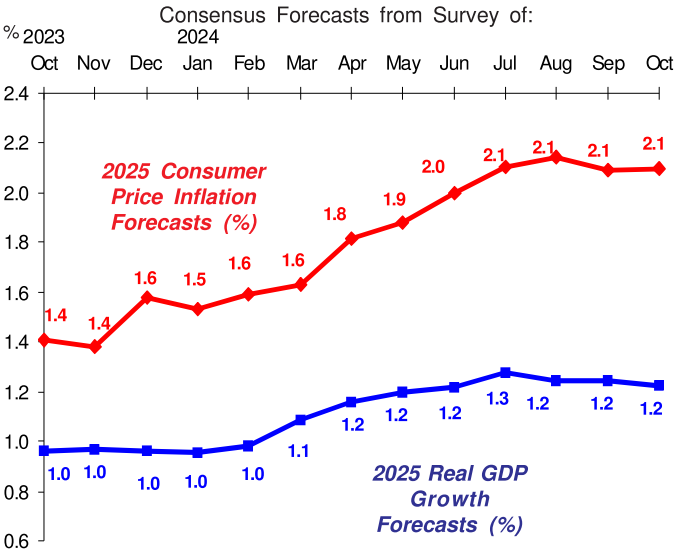
Macro Fundamentals Preoccupy BoJ and Government

The Bank of Japan (BoJ) held its policy rate unchanged at 0.25% on September 19-20, as widely expected. BoJ governor Kazuo Ueda emphasized the bank's gradualist monetary tightening stance, increasing the likelihood of a rate hike at the BoJ's December meeting rather than at the October 30-31 one. This put the yen under renewed downside pressure; the past year or so has seen pronounced yen weakness as the divergence between US monetary tightening and looser BoJ conditions widened markedly. With the Fed embarking on a rate-cutting cycle, that downward pressure on the yen had alleviated in the last month, but Ueda's remarks, and those of new LDP prime minister Shigeru Ishiba, reiterate a highly-cautious approach to managing a still-uncertain macro situation. Borrowing costs cannot rise rapidly given the public debt accumulated over the last few decade. Despite having at one time criticised 'Abenomics,' PM Ishiba in his first speech to parliament signalled his intent to promote pro-growth policies until "a positive growth cycle with wage increases outpacing inflation and driving capital expenditures is established." This echoes the BoJ's own hopes of shedding 30 years of deflation, where sustained wage growth could help support a recovery in consumption and inflation. However, this is only likely to happen once consumers perceive those wage gains to be entrenched. Growth has faltered in recent quarters as consumers pared back spending in the face of high inflation, fuelled by yen depreciation, energy price shocks and labor shortages. Headline CPI remains relatively elevated at 3.0% (y-o-y) in August, and our panel expects some stickiness over the next 6-9 months (chart below). Consumption indicators are improving, though. September's services PMI remain firm on solid demand, while retail sales in August accelerated to 0.8% (m-o-m), bringing the y-o-y rate up to 2.8%.

Monthly CPI Outturns and y-o-y Consensus Forecasts



2025 GDP Growth and Inflation Forecasts



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GERMANY

OCTOBER 2024

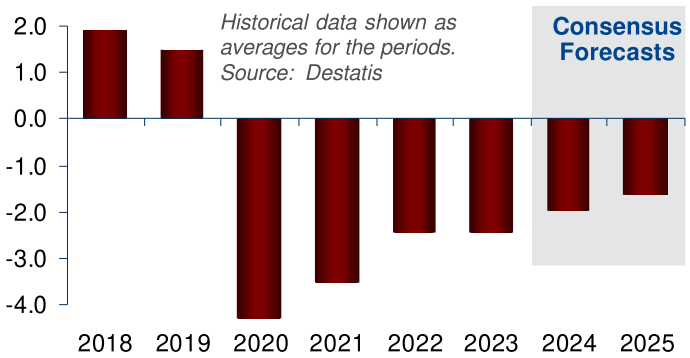
Average % Change on Previous Calendar Year

Economic Forecasters	Gross Domestic Product *Bruttoinlands-produkt* 2024	2025	Private Consumption *Privater Verbrauch* 2024	2025	Machinery & Equipment Investment *Ausrüstungs-investitionen* 2024	2025	Industrial Production *Produktion im Produzierenden Gewerbe* 2024	2025	Consumer Prices *Preisindex für die Lebenshaltung* 2024	2025	Producer Prices *Index für Erzeugerpreise* 2024	2025	Negotiated Wages and Salaries – Production Sector *Tariflohn- und -gehaltsniveau* 2024	2025
Econ Intelligence Unit	0.2	0.9	0.7	1.9	na	na	-3.2	-0.5	2.6	2.1	-1.3	0.7	na	na
HWWI	0.2	1.0	0.6	1.2	-5.0	3.0	-3.5	1.0	2.2	2.1	-1.5	2.2	4.5	3.5
FERI	0.1	0.2	0.7	0.2	-5.7	-1.1	-3.4	0.2	2.2	1.9	-1.8	2.0	4.5	3.5
DWS	0.1	1.0	0.4	0.8	-5.7	0.8	na	na	2.5	2.3	na	na	na	na
RWI Essen	0.1	0.9	0.4	1.1	-6.7	0.9	na	na	2.3	2.0	na	na	na	na
Swiss Life Asset Mgrs	0.1	1.0	na	na	na	na	na	na	2.2	1.9	na	na	na	na
UBS	0.1	0.8	0.3	1.2	na	na	-3.2	0.5	na	na	na	na	na	na
Bank of America - Merrill	0.0	0.8	0.3	0.7	na	na	-3.0	2.4	2.5	1.7	na	na	na	na
IWH Halle Institute	0.0	1.0	0.4	1.2	-4.2	5.2	-2.5	1.5	2.3	2.4	na	na	4.7	2.3
Bank Julius Baer	0.0	0.8	0.6	1.9	-5.4	3.1	-3.2	0.1	2.2	1.4	na	na	na	na
BayernLB	0.0	0.5	0.6	1.0	-4.5	4.1	na	na	2.4	2.5	na	na	na	na
Commerzbank	0.0	0.5	0.3	0.6	-5.9	0.1	-4.3	0.9	2.1	2.1	-2.4	0.9	5.5	3.5
DIW - Berlin	0.0	0.9	0.5	1.0	-6.3	0.7	na	na	2.2	2.0	na	na	4.4	2.1
Helaba Frankfurt	0.0	1.1	0.5	1.4	-5.0	2.0	-4.0	1.0	2.3	2.3	-1.5	3.0	4.5	3.0
HSBC Trinkaus	0.0	0.4	0.4	0.5	na	na	-3.8	1.3	2.3	2.3	na	na	na	na
IFO - Munich Institute	0.0	0.9	0.4	1.4	-7.2	0.7	na	na	2.2	2.0	na	na	na	na
LB Baden-Württemberg	0.0	0.7	0.4	0.4	-4.0	-1.5	-3.5	0.5	2.5	2.1	-1.5	2.0	4.0	3.0
Morgan Stanley	0.0	0.5	0.5	0.9	na	na	na	na	2.2	2.1	na	na	na	na
UniCredit	0.0	1.0	0.4	0.9	-5.7	0.7	na	na	2.2	1.5	na	na	4.8	3.5
S&P Global Market Intel	0.0	1.0	0.5	1.7	-6.4	3.2	-4.1	2.1	2.4	1.8	-1.9	0.6	5.7	3.5
Bloomberg Economics	0.0	0.8	0.4	1.0	-3.0	0.5	na	na	2.4	1.3	na	na	5.0	2.4
Oxford Economics	-0.1	0.5	0.5	1.8	-2.6	1.3	-3.9	1.4	2.1	1.1	-2.7	-4.4	4.2	2.5
DZ Bank	-0.1	0.6	0.4	1.0	-3.4	-1.5	na	na	2.3	2.2	na	na	4.5	3.0
Allianz	-0.1	0.7	0.4	0.2	-6.5	-0.8	na	na	2.1	2.0	na	na	4.6	2.7
Berliner Sparkasse	-0.1	0.7	0.4	0.9	-5.9	1.8	-3.9	0.0	2.2	2.1	-1.5	2.6	4.2	3.0
German Econ Inst (IW)	-0.1	na	0.6	na	-5.5	na	-3.0	na	2.1	na	na	na	na	na
Kiel Institute	-0.1	0.5	0.4	0.6	-7.2	1.4	na	na	2.2	2.0	na	na	4.0	1.0
Citigroup	-0.1	0.4	0.4	1.1	-6.5	-1.5	-4.2	0.8	2.4	1.5	na	na	na	na
DekaBank	-0.1	0.5	0.3	0.7	-9.9	-2.3	-2.6	1.0	2.2	2.1	na	na	5.7	2.9
Moody's Analytics	-0.1	0.8	0.4	0.7	na	na	-5.1	0.1	2.2	1.6	-1.9	0.7	na	na
Capital Economics	-0.2	0.4	0.2	0.4	na	na	na	na	2.4	1.8	na	na	na	na
Consensus (Mean)	0.0	0.7	0.4	1.0	-5.6	0.9	-3.6	0.8	2.3	1.9	-1.8	1.0	4.7	2.8
Last Month's Mean	0.0	0.8	0.5	1.1	-5.3	1.3	-3.4	0.9	2.3	2.1	-1.7	1.5	4.5	2.7
3 Months Ago	0.2	1.1	0.5	1.4	-1.4	2.4	-1.8	2.0	2.3	2.0	-1.5	1.6	4.6	3.0
High	0.2	1.1	0.7	1.9	-2.6	5.2	-2.5	2.4	2.6	2.5	-1.3	3.0	5.7	3.5
Low	-0.2	0.2	0.2	0.2	-9.9	-2.3	-5.1	-0.5	2.1	1.1	-2.7	-4.4	4.0	1.0
Standard Deviation	0.1	0.2	0.1	0.5	1.6	2.0	0.6	0.8	0.1	0.3	0.5	2.1	0.5	0.7
Comparison Forecasts														
Bundesbank (Jun. '24)	0.2	1.0	0.7	1.6									5.9	2.7
Government (Oct. '24)	-0.2	1.1	0.2	1.0					2.2	2.0				
Joint Econ F'cast (Oct. '24)	-0.1	0.8	0.4	0.6	-6.7	0.5			2.2	2.0				
Eur Commission (May '24)	0.1	1.0	0.6	0.9										

Government and Background Data

Chancellor - Olaf Scholz (Social Democrats or SPD). **Parliament -** The September 26, 2021 election saw the SPD win the most seats (206) in the 709-seat Bundestag (lower house). A coalition government was formed between the SPD, Greens and Free Democratic Party. **Next Elections -** September 28, 2025. **Nominal GDP -** €4,122bn (2023). **Population -** 84.5mn (UN, Mid 2023). **$/Euro Exchange Rate -** 1.082 (average, 2023).

General Government Budget Balance – % of GDP



Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-4.1	3.7	1.4	-0.3
Private Consumption*	-6.8	2.3	5.6	-0.4
Machinery & Eqpt Investment*	-11.6	3.5	4.5	-0.8
Industrial Production*	-7.7	3.6	-0.7	-1.8
Consumer Prices*	0.5	3.1	6.9	5.9
Producer Prices*	-1.0	9.6	29.8	0.2
Negotiated Wages & Salaries*	2.2	1.5	2.7	3.9
Unemployment Rate, %	5.9	5.7	5.3	5.7
Current Account, Euro bn	223	263	165	258
Budget Balance, net lending/borrowing, (ESA10, Maastrict), Euro bn	-148	-130	-96.9	-101.6
3 mth Euro, % (end yr)	-0.5	-0.6	2.1	3.9
10 Yr German Govt Bond, % (end yr)	-0.6	-0.2	2.6	2.0

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Year Average		Annual Total				Rates on Survey Date 3.3 %			2.3 %
Unemployment Rate (%)		Current Account (Euro bn)		General Govt Budget Bal (Maastricht) (Euro bn)		3 month Euro Rate (%)		10 Year German Govt Bond Yield (%)	
Arbeitslosenquote, % der Erwerbspers. insgesamt		*Leistungsbilanz (€ bn)*		*Finanzierungssaldo des Staates (Maastricht) (€ bn)*		*3 Monate Euro (%)*		*Rendite von Bundesanleihen, 10 Jahre (%)*	
2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
na	na	269	255	-66.8	-56.8	3.1	2.3	2.4	2.3
6.0	5.9	275	285	-80.0	-65.0	3.1	2.7	2.2	2.2
5.7	5.9	274	219	-96.7	-76.2	3.0	2.1	1.6	2.2
na	na	na	na	na	na	na	na	na	na
5.9	5.9	304	303	na	na	3.7	2.8	na	na
6.0	6.0	na	na	na	na	2.6	2.3	2.1	2.2
na	na	175	215	na	na	na	na	na	na
na	na	na	na	na	na	na	na	na	na
6.0	6.1	302	308	-87.4	-75.1	3.5	2.9	2.3	2.1
6.0	6.0	na	na	na	na	2.7	2.2	1.9	2.2
5.9	6.1	290	250	-110.0	-145.0	2.9	2.7	2.3	2.5
6.0	6.2	210	200	-55.0	-45.0	2.9	2.5	2.0	2.3
6.0	5.9	289	297	-104.5	-96.7	3.2	2.5	2.2	2.2
6.0	5.8	290	300	-85.0	-65.0	2.7	2.5	2.0	2.3
6.0	6.1	302	297	-75.0	-55.0	na	na	na	na
6.0	5.8	304	305	-86.3	-57.7	2.7	2.0	2.2	2.2
6.0	6.2	275	260	-75.0	-65.0	2.8	2.3	2.3	2.3
na	na	267	285	-69.1	-62.1	na	na	na	na
6.0	6.0	285	305	-85.0	-87.0	na	na	na	na
na	na	276	246	-87.7	-69.2	3.0	2.1	2.3	2.2
na	na	na	na	na	na	na	na	na	na
6.0	6.0	295	265	-97.8	-68.0	2.4	1.8	2.3	2.3
6.1	6.0	na	na	-95.0	-85.0	2.9	2.2	2.1	2.1
6.0	5.7	243	244	na	na	3.3	2.3	2.3	2.2
6.0	6.1	281	283	-78.0	-72.0	na	na	na	na
6.0	na	na	na	na	na	3.5	na	2.5	na
6.0	6.1	299	301	-104.3	-76.7	na	na	na	na
6.0	6.5	272	300	-75.7	-57.8	na	na	2.2	1.9
6.0	6.1	302	304	-74.8	-65.5	3.0	2.8	2.3	2.2
6.0	6.2	304	330	-99.1	-59.2	na	na	na	na
na	na	292	290	-86.5	-67.0	na	na	na	na
6.0	6.0	278	277	-85.2	-71.5	3.0	2.4	2.2	2.2
6.0	6.0	282	282	-83.4	-67.8				
5.9	5.8	281	284	-71.0	-53.5				
6.1	6.5	304	330	-55.0	-45.0	3.7	2.9	2.5	2.5
5.7	5.7	175	200	-110.0	-145.0	2.4	1.8	1.6	1.9
0.1	0.2	31	34	13.7	20.2	0.3	0.3	0.2	0.1
5.9	5.6								
6.0	6.0	283	277	-92.6	-82.5				

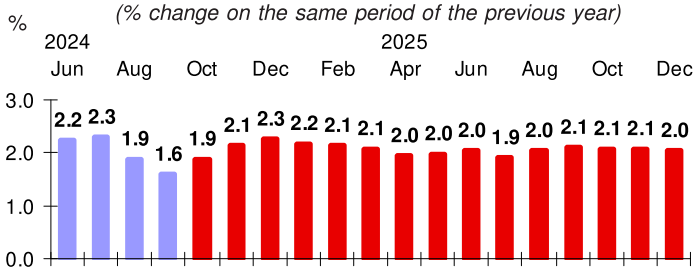
Q2 Confirms Worrying Economic Slump

Industrial production unexpectedly jumped +2.9% (m-o-m) in August (on the back of volatile automobile output), while factory orders plunged -5.8%. Nevertheless, the industrial outlook is depressed, and recent releases paint a gloomy picture for the rest of the year. September's manufacturing PMI dropped to a 12-month low at 40.6, deep in contraction territory. New orders and output fell at a faster pace, while geopolitical tensions, alongside China's downturn and Germany's own economic weakness, fuelled the deterioration in sentiment. Home-grown industry has come under acute pressure from Chinese competition, particularly in automobiles with the mass production of electric vehicles (EVs). Recently, Volkswagen announced the closure of some German factories for the first time in its history in a bid to remain competitive. Up until now, strong levels of employment have been able to mitigate some sluggishness, but these numbers have been edging down over the past two years. The increasingly precarious (and structural) economic situation has been a deterrent for investment: machinery and equipment investment forecasts for 2024 have plunged -5.6% from -1.4% in July, after investment contracted -4.1% (q-o-q) in Q2. Structural and bureaucratic challenges facing investment are illustrated by US chip giant Intel's announcement to paused its €30bn expansion within Germany for about two years (although there is no certainty they may restart). The investment would have been the largest by a foreign company in Germany, creating about 3000 jobs.

Meanwhile, the government now expects GDP to fall by -0.2% in 2024 (after falling -0.3% in 2023), but should see a recovery in 2025 and 2026, rising 1.1% and 1.6% respectively. Economy Minister Habeck noted that geopolitical uncertainty and "structural problems" are an downside risk.

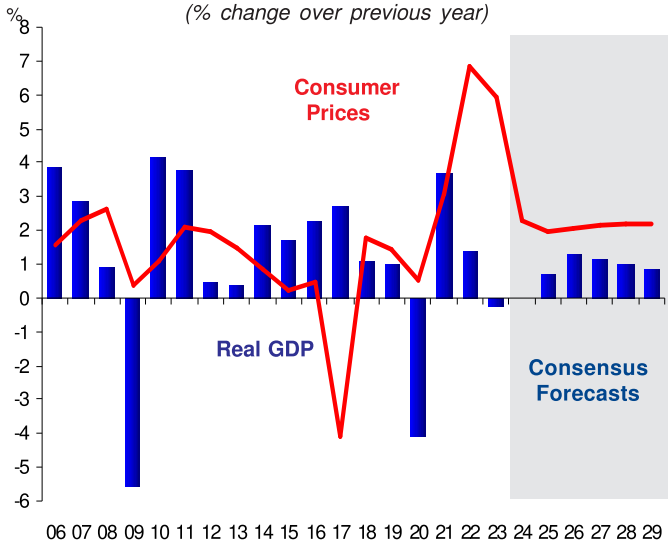
Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



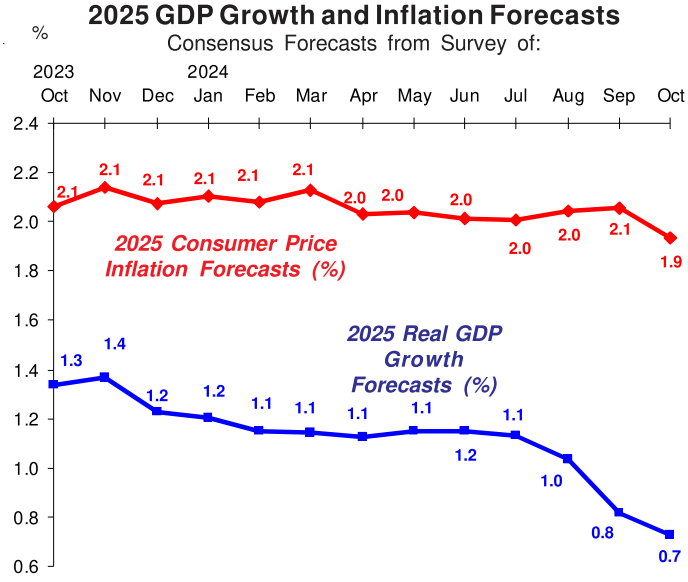
Real Growth and Inflation

(% change over previous year)



2025 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



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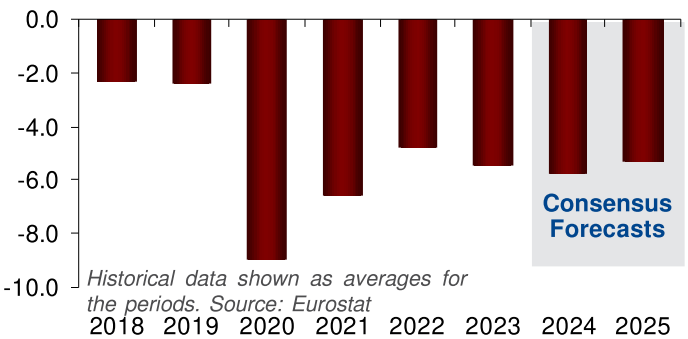
FRANCE — OCTOBER 2024

	Average % Change on Previous Calendar Year											
	Gross Domestic Product		Household Consumption		Business Investment		Manufacturing Production		Consumer Prices (INSEE)		Hourly Wage Rates	
	Produit Intérieur Brut		*Consommation des Ménages*		*Investissements des Entreprises*		*Production Manufacturière*		*Prix à la Consommation (INSEE)*		*Taux de Salaire Horaire*	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
UBS	1.2	1.1	0.5	1.2	-0.7	2.0	-0.8	0.8	na	na	na	na
Goldman Sachs	1.2	1.0	1.1	1.9	na	na	na	na	2.5	2.1	na	na
BNP Paribas	1.2	1.2	0.8	1.3	-1.3	0.8	-1.0	0.5	2.1	0.7	3.0	1.4
Econ Intelligence Unit	1.2	1.2	0.6	1.1	na	na	na	na	2.6	2.2	na	na
Natixis	1.2	1.2	0.6	1.2	-1.3	0.6	na	na	2.0	1.6	na	na
Swiss Life Asset Mgrs	1.2	1.0	1.2	0.9	0.8	1.6	na	na	2.0	1.1	na	na
Moody's Analytics	1.2	1.0	0.8	1.3	na	na	-0.5	0.7	2.2	2.0	na	na
Capital Economics	1.2	1.0	0.6	1.0	na	na	na	na	2.5	1.7	na	na
Fitch Ratings	1.2	1.2	0.5	1.0	na	na	na	na	2.5	2.2	na	na
Oxford Economics	1.1	0.9	0.6	0.8	-0.9	0.3	-1.2	1.0	2.0	1.3	2.7	2.8
Credit Agricole	1.1	1.0	0.5	0.7	-1.3	0.4	na	na	2.0	1.1	na	na
Bank of America - Merrill	1.1	0.9	0.6	1.1	na	na	na	na	2.4	1.8	na	na
S&P Global Market Intel	1.1	1.0	0.6	0.9	-0.5	-0.2	-0.5	0.8	2.4	2.0	na	na
Allianz	1.1	1.4	0.6	1.3	-0.3	1.4	-0.6	1.0	2.0	1.5	3.0	2.4
HSBC	1.1	0.9	0.7	1.1	-1.3	0.1	-1.5	0.0	2.2	1.4	3.0	2.3
Oddo BHF	1.1	0.6	0.7	0.9	-1.2	0.4	-0.8	0.0	2.0	1.2	2.9	2.0
OFCE	1.1	0.8	0.6	1.1	-1.4	-0.7	na	na	2.0	1.5	2.6	2.2
Rexecode	1.1	0.7	0.6	1.0	-1.8	-1.4	na	na	2.0	1.1	3.3	2.0
S&P Global Ratings	1.1	1.2	0.7	1.3	na	na	na	na	2.5	1.9	na	na
UniCredit	1.1	1.2	0.5	0.7	-1.2	0.9	na	na	2.0	1.3	na	na
Citigroup	1.1	1.1	0.6	1.2	-1.0	1.9	-0.9	1.7	2.7	2.1	3.8	4.2
Bloomberg Economics	1.1	1.0	0.5	1.3	-1.2	2.0	na	na	2.5	1.2	na	na
GAMA - Paris-Nanterre Uni	1.0	0.1	0.5	0.3	-1.5	-2.0	na	na	2.0	1.8	na	na
Societe Generale	1.0	0.9	0.7	1.3	-0.3	2.0	na	na	na	na	na	na
Consensus (Mean)	1.1	1.0	0.7	1.1	-1.0	0.6	-0.9	0.7	2.2	1.6	3.0	2.4
Last Month's Mean	1.1	1.1	0.8	1.1	-0.9	0.9	-0.8	0.7	2.3	1.8	3.0	2.6
3 Months Ago	0.9	1.2	1.0	1.3	-0.7	1.5	0.4	1.5	2.4	1.8	3.1	2.6
High	1.2	1.4	1.2	1.9	0.8	2.0	-0.5	1.7	2.7	2.2	3.8	4.2
Low	1.0	0.1	0.5	0.3	-1.8	-2.0	-1.5	0.0	2.0	0.7	2.6	1.4
Standard Deviation	0.1	0.3	0.2	0.3	0.6	1.2	0.3	0.5	0.3	0.4	0.4	0.8
Comparison Forecasts												
Banque de France (Sep. 24)	1.1	1.2										
Government (Feb. '24)	1.0											
Eur Commission (May '24)	0.7	1.3	1.2	1.4								
IMF (Jul. '24)	0.9	1.3										
OECD (Sep '24)	1.1	1.2							2.4	1.9		

Government and Background Data

President - Mr. Emmanuel Macron (*Ensemble*). **Prime Minister -** Mr. Michel Barnier (*LR*). **Parliament -** *Nouvelle Front Populaire* currently has 180 seats in the National Assembly; *Ensemble* has 159 seats; *Rassemblement National* has 142 seats. No party has an outright majority. **Next Elections -** Presidential: 2027. **Nominal GDP -** €2,826bn (2023). **Population -** 66.4mn (UN, Mid 2023). **$/Euro Exchange Rate -** 1.082 (average, 2023).

General Government Budget Balance – % of GDP



Historical data shown as averages for the periods. Source: Eurostat

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-7.6	6.8	2.6	1.1
Household Consumption*	-6.5	5.2	3.0	0.9
Business Investment*	-5.6	10.0	3.0	3.1
Manufacturing Production*	-11.7	5.4	1.7	1.0
Consumer Prices (INSEE)*	0.5	1.6	5.2	4.9
Hourly Wage Rates*	1.8	1.4	3.7	4.7
Unemployment Rate (ILO), %	7.9	7.7	7.1	7.1
Current Account, Euro bn	-47.5	7.8	-30.8	-28.9
General Govt. Budget Balance (Maastricht definition), Euro bn	-207	-165	-126	-154
3 mth Euro, % (end yr)	-0.5	-0.6	2.1	3.9
10 Yr French Govt Bond, % (end yr)	-0.3	0.2	3.1	2.6

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OCTOBER 2024 FRANCE

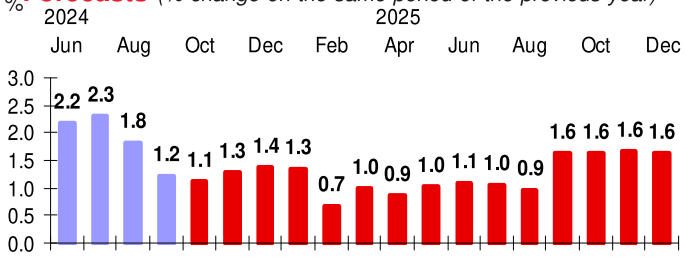
Year Average		Annual Total				Rates on Survey Date 3.3 %		3.0%	
Unemployment Rate, ILO (%)		Current Account (Euro bn)		General Govt Budget Balance (Maastricht) (Euro bn)		3 month Euro Rate (%)		10 Year French Govt Bond Yield (%)	
Taux de Chômage, BIT (%)		*Solde Courant (€ md)*		*Balance Budgétaire (Maastricht) (€ md)*		*Taux d'intéret 3 mois Euro (%)*		*Rendement des obligations d'Etat, 10 ans (%)*	
2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
7.5	7.5	-30.4	-27.0	na	na	na	na	na	na
7.3	7.3	na	na	-158.4	-150.7	na	na	na	na
7.2	7.4	-18.0	-25.0	na	na	na	na	na	na
7.2	7.2	-11.4	-23.6	-153.1	-145.5	3.1	2.3	3.0	2.8
7.2	7.3	na	na	na	na	2.8	2.0	2.8	2.8
7.2	7.4	na	na	na	na	2.6	2.3	2.9	2.9
7.4	7.5	-16.2	-13.2	-177.1	-154.5	na	na	na	na
7.6	7.7	7.3	7.6	-155.2	-148.3	na	na	na	na
7.5	7.5	-23.1	-20.3	-179.2	-177.1	na	na	na	na
7.2	7.4	-12.5	12.9	-175.2	-168.3	2.4	1.8	3.2	3.2
7.3	7.3	na	na	-176.5	-162.7	2.9	2.6	2.8	2.9
na	na	-15.0	-12.7	na	na	na	na	na	na
7.5	7.7	-18.4	-26.5	-161.9	-152.7	3.0	2.1	2.9	2.7
7.3	7.1	-54.0	-3.5	-177.0	-161.0	na	na	3.0	2.8
7.2	7.5	-14.3	-9.0	-170.6	-158.4	na	na	2.7	2.4
7.2	7.4	-16.4	-18.2	-180.0	-157.3	2.8	2.0	3.2	3.0
7.2	7.5	na	na	-178.1	-156.2	3.0	2.5	2.8	2.5
7.3	7.6	-20.3	-48.0	-165.0	-155.0	3.1	2.1	2.9	3.0
7.5	7.6	na	na	na	na	na	na	na	na
7.3	7.3	na	na	-178.0	-175.0	na	na	na	na
7.4	7.4	6.1	-0.1	-152.1	-156.5	na	na	2.9	3.0
7.5	7.4	na	na	na	na	na	na	na	na
na	na	na	na	na	na	3.3	3.0	3.3	3.8
7.4	7.8	-8.8	-12.0	-166.4	-165.3	2.8	2.0	2.9	2.7
7.3	7.4	-16.4	-14.6	-169.0	-159.0	2.9	2.2	2.9	2.9
7.4	7.5	-7.3	-9.8	-154.7	-146.7				
7.5	7.5	-6.4	-10.3	-151.7	-138.8				
7.6	7.8	7.3	12.9	-152.1	-145.5	3.3	3.0	3.3	3.8
7.2	7.1	-54.0	-48.0	-180.0	-177.1	2.4	1.8	2.7	2.4
0.1	0.2	14.3	15.3	10.1	8.9	0.2	0.4	0.2	0.3
7.7	7.8								

Budget Dynamics in the Spotlight

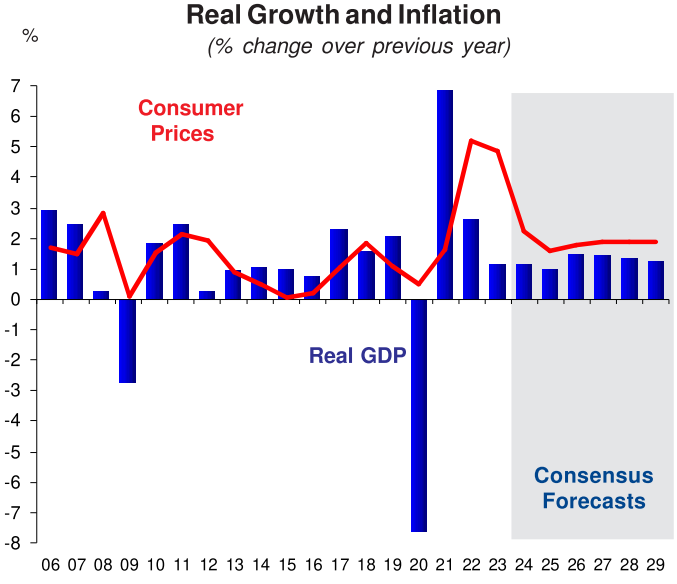
The newly-announced government estimates that the budget deficit may exceed -6% of GDP this year (after rising to -5.5% in 2023). Similarly, the Treasury estimates that the deficit could (if no actions are taken) reach -6.2% in 2025, -6.7% in 2026, and -6.5% in 2027. These projections are considerably larger than the European Commission's -3% target. New Prime Minister Michel Barnier announced that the country was aiming to reach that target by 2029, instead of 2027. He highlighted a particularly concerning image of the public finances, noting a massive debt load (now around €3.2tn), repayments on which are a major cost factor for the government. The differential between French and German bond yields has widened, increasing the risk premium on French debt as it rose above that of Spain for the first time since 2008. PM Barnier announced a first step in fiscal discipline: a reduction in next year's budget deficit to -5% of GDP, mostly via spending cuts and tax increases on wealthy individuals and companies. In an environment in which business taxes are already high, and political uncertainty has prompted businesses to pause spending plans, business investment has contracted in q-o-q terms for the last three quarters. Our panel expects it to decline in 2024, while next year's forecast has been pared back to +0.5%.

While the 2024 and 2025 CPI consensus is only modestly downgraded this month, monthly CPI (chart below) projections have been noticeably pared back by almost 1 full percentage point in some cases. September's outturn was lower at 1.2% (versus 1.9% expected), and February 2025 CPI is now expected to see only 0.7% y-o-y (versus 1.4% expected last month). Following the French power regulator's recommendation, electricity prices are to fall annually by 10% starting in January.

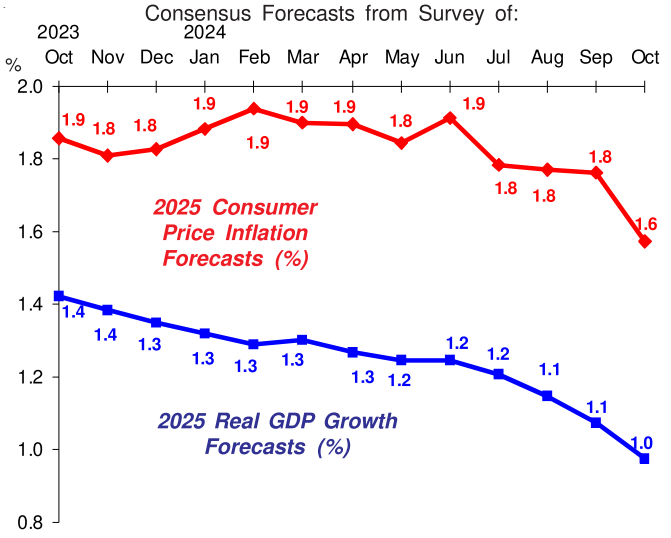
Monthly CPI Outturns (INSEE) and y-o-y Consensus Forecasts *(% change on the same period of the previous year)*



Real Growth and Inflation
(% change over previous year)



2025 GDP Growth and Inflation Forecasts
Consensus Forecasts from Survey of:



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UNITED KINGDOM

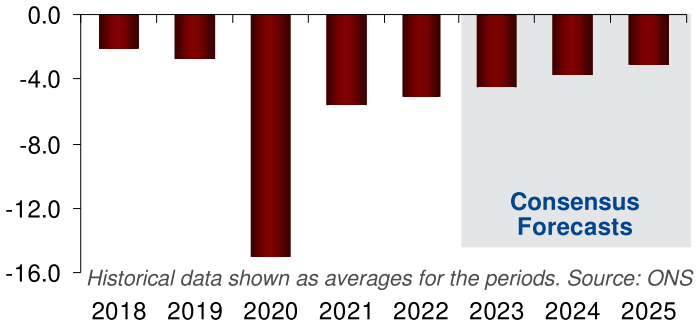
OCTOBER 2024

	Average % Change on Previous Calendar Year																	
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Company Trading Profits		Manufacturing Production		Retail Prices (RPI-X, underlying rate)		Consumer Prices Index		Output Prices		Average Weekly Earnings	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
Societe Generale CIB	1.2	1.5	0.5	1.4	1.3	1.6	na	na	na	na	na	na	2.6	2.4	na	na	4.9	3.0
S&P Global Mkt Intelligence	1.2	1.3	0.4	1.0	1.4	2.2	na	na	na	na	na	na	2.6	2.2	na	na	na	na
Deutsche Bank	1.2	1.6	0.6	1.3	1.1	1.9	na	na	na	na	na	na	2.6	2.1	na	na	na	na
Allianz	1.1	1.8	0.6	1.3	1.3	2.1	na	na	na	na	na	na	2.6	2.2	na	na	4.3	2.7
Beacon Econ Forecasting	1.1	1.2	0.9	2.1	0.8	0.8	na	na	0.3	-0.5	2.9	3.4	2.6	2.6	0.8	0.4	4.6	4.1
Econ Intelligence Unit	1.1	1.2	0.6	1.5	1.1	1.2	na	na	na	na	na	na	2.9	2.0	1.2	0.8	na	na
Nomura	1.1	1.4	0.4	1.2	1.1	1.8	na	na	na	na	na	na	2.7	2.7	na	na	4.8	3.5
Goldman Sachs	1.1	1.5	na	na	na	na	na	na	na	na	na	na	2.5	2.1	na	na	na	na
UBS	1.1	1.5	0.4	1.8	1.1	1.7	na	na	na	na	na	na	2.6	2.3	na	na	4.6	2.6
Experian	1.0	1.3	0.2	0.9	0.5	0.5	na	na	na	na	2.9	3.1	2.6	2.3	na	na	4.7	3.0
S&P Global Ratings	1.0	1.3	0.4	1.4	1.1	1.6	na	na	na	na	na	na	2.6	2.3	na	na	na	na
Fitch Ratings	1.0	1.5	0.3	1.1	1.1	1.8	na	na	na	na	na	na	2.6	2.3	na	na	na	na
JP Morgan	1.0	0.9	0.7	0.9	0.1	-0.5	na	na	-0.1	0.0	na	na	2.6	2.9	0.9	0.9	na	na
NatWest Markets	1.0	0.8	0.4	0.9	0.8	-1.0	na	na	0.7	0.5	2.7	3.6	2.6	2.2	0.5	1.8	4.5	3.4
Oxford Economics	1.0	1.5	0.8	1.9	0.6	1.3	1.5	7.0	-0.2	0.7	3.7	3.3	2.5	2.4	0.2	0.6	4.8	3.4
Capital Economics	1.0	1.5	0.8	1.5	1.8	2.6	na	na	na	na	2.9	2.9	2.6	2.0	na	na	4.8	4.2
HSBC	1.0	1.4	0.7	1.3	1.3	2.7	na	na	na	na	na	na	2.6	2.4	na	na	4.9	4.0
Citigroup	1.0	0.7	0.6	0.6	0.9	1.0	-1.5	1.6	na	na	3.0	3.8	2.6	2.6	na	na	4.5	2.7
Moody's Analytics	1.0	1.3	na	na	1.2	2.9	na	na	-0.2	-0.1	3.5	2.5	2.5	2.1	0.5	1.1	5.3	4.3
Heteronomics	0.9	0.9	0.9	1.9	1.3	0.9	na	na	na	na	2.9	4.3	2.6	3.1	0.6	0.9	5.1	4.0
KPMG	0.9	1.2	0.7	1.4	1.0	1.3	na	na	na	na	na	na	2.6	2.6	na	na	na	na
Liverpool Macro Research	0.9	1.1	0.2	0.8	na	na	na	na	na	na	3.6	3.0	2.5	2.0	na	na	4.7	3.7
Swiss Life Asset Mgrs	0.9	1.0	na	na	na	na	na	na	na	na	na	na	2.5	2.1	na	na	na	na
TS Lombard	0.9	1.2	0.7	1.3	1.8	2.3	na	na	na	na	na	na	na	na	na	na	na	na
Consensus (Mean)	1.0	1.3	0.6	1.3	1.1	1.5	0.0	4.3	0.1	0.1	3.1	3.3	2.6	2.3	0.7	0.9	4.7	3.5
Last Month's Mean	1.0	1.2	0.5	1.4	1.0	1.2	-3.3	1.6	0.6	0.2	3.1	3.3	2.6	2.4	1.1	1.4	4.9	3.6
3 Months Ago	0.8	1.1	0.5	1.4	0.8	1.0	-4.0	0.9	0.8	0.5	3.1	3.1	2.6	2.3	1.4	1.8	4.8	3.5
High	1.2	1.8	0.9	2.1	1.8	2.9	1.5	7.0	0.7	0.7	3.7	4.3	2.9	3.1	1.2	1.8	5.3	4.3
Low	0.9	0.7	0.2	0.6	0.1	-1.0	-1.5	1.6	-0.2	-0.5	2.7	2.5	2.5	2.0	0.2	0.4	4.3	2.6
Standard Deviation	0.1	0.3	0.2	0.4	0.4	1.0	2.1	3.8	0.4	0.5	0.4	0.5	0.1	0.3	0.3	0.4	0.3	0.6
Comparison Forecasts																		
OBR - Treasury (Mar. '24)	0.8	1.9	0.7	2.0	-4.5	0.4					3.1	2.0	2.2	1.5			3.9	2.8
IMF (Jul. '24)	0.7	1.4																
OECD (Sep '24)	1.1	1.2											2.7	2.4				

Government and Background Data

Prime Minister - Sir Keir Starmer (Labour Party). **Parliament -** The Labour party won 412 seats in the 650-seat House of Commons (lower house) on July 4, 2024. **Next Election -** No later than July 2029 (general election). **Nominal GDP -** £2,690bn (2023). **Population -** 69.2mn (UN, Mid 2023). **$/£ Exchange Rate -** 1.243 (average, 2023).

Public Sector Net Borrowing – % of GDP
(fiscal years)



Historical data shown as averages for the periods. Source: ONS

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-10.3	8.6	4.8	0.3
Household Consumption*	-13.0	7.0	7.3	0.5
Gross Fixed Investment*	-9.7	7.6	5.1	-0.1
Company Trading Profits*	-0.5	4.2	4.9	9.3
Manufacturing Production*	2.2	1.6	-3.3	1.1
Retail Prices (RPI-X, underlying rate)*	1.7	4.2	11.5	8.6
Consumer Price Index*	0.9	2.6	9.1	7.3
Output Prices*	-1.0	5.2	16.0	3.2
Average Weekly Earnings*	1.8	5.9	6.0	7.0
Unemployment Rate (LFS), %	4.7	4.6	3.9	4.0
Current Account, £ bn	-61.7	-10.0	-53.1	-53.3
Public Sector Net Borrowing (excl. financial interventions)				
fiscal years, £ bn	314.8	126.3	127.9	122.1
3 mth Interbank, % (end yr)	0.0	0.3	3.8	5.2
10 Yr Gilt Yield, % (end yr)	0.2	1.0	3.7	3.5

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OCTOBER 2024 — UNITED KINGDOM

Year Average		Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date 5.0 %			4.2%
Unemployment Rate (%) (Labour Force Survey)		Current Account (£ bn)		Public Sector Net Borrowing (£ bn)		3 month SONIA Rate (%)		10 Year Gilt Yield (%)	
2024	2025	2024	2025	FY 24-25	FY 25-26	End Jan'25	End Oct'25	End Jan'25	End Oct'25
4.3	4.6	-79.0	-79.9	98.1	96.9	na	na	na	na
4.4	4.9	-101.9	-124.5	na	na	4.7	3.7	3.8	3.8
4.4	4.3	na	na	na	na	na	na	na	na
4.2	4.2	na	na	113.0	119.0	4.5	3.0	3.8	3.6
4.2	4.6	-81.1	-81.3	136.9	166.7	4.7	4.5	4.4	4.1
4.2	4.2	-83.8	-87.7	na	na	4.7	4.0	3.9	3.8
4.3	4.4	na	na	na	na	na	na	na	na
4.5	4.6	na	na	na	na	na	na	na	na
4.3	4.1	-75.8	-68.3	na	na	na	na	na	na
4.3	4.4	-81.0	-75.0	99.0	90.0	na	na	na	na
4.3	4.4	na	na	na	na	na	na	na	na
4.3	4.0	na	na	na	na	na	na	na	na
4.2	4.3	-76.5	-91.7	na	na	na	na	na	na
4.4	4.9	-79.0	-47.0	106.0	98.0	4.6	4.0	4.1	3.8
4.3	4.3	-83.9	-85.3	97.3	80.7	4.5	3.8	3.9	3.7
4.2	4.2	-84.8	-80.4	100.1	70.4	4.4	3.3	4.0	3.6
4.4	4.9	na	na	na	na	na	na	na	na
4.3	4.9	-105.7	-79.1	88.3	44.9	4.8	3.5	na	na
4.3	4.5	-100.3	-54.0	na	na	na	na	na	na
4.2	4.3	na	na	na	na	4.6	4.3	na	na
4.3	4.4	-101.0	-114.7	119.4	86.1	4.7	4.2	4.0	3.9
na	na	-36.5	-16.9	100.0	60.6	4.8	3.0	na	na
4.2	4.1	na	na	na	na	na	na	na	na
na	na	na	na	na	na	4.5	3.8	na	na
4.3	4.4	-83.6	-77.6	105.8	91.3	4.6	3.7	4.0	3.8
4.4	4.5	-82.9	-74.5	101.8	90.1				
4.4	4.6	-70.5	-65.4	96.4	87.5				
4.5	4.9	-36.5	-16.9	136.9	166.7	4.8	4.5	4.4	4.1
4.2	4.0	-105.7	-124.5	88.3	44.9	4.4	3.0	3.8	3.6
0.1	0.3	17.1	26.7	14.0	33.7	0.1	0.5	0.2	0.2
4.4	4.4			87.2	77.5				

UK Official Bank Rate – on October 9, 2024 = **5.00%**

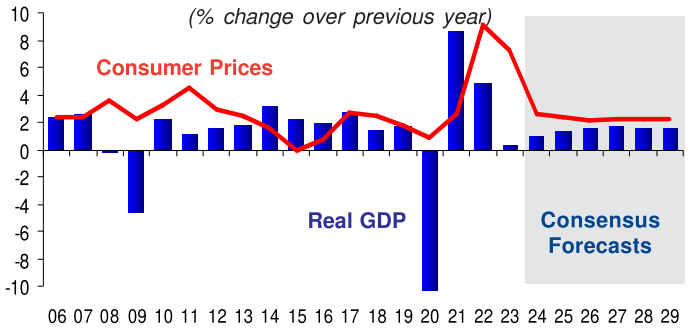
Average probabilities of a change in the Bank Rate on Nov 7:

Increase 0.9% **No change** 18.8% **Decrease** 80.3%

Consensus Forecasts	End Dec '24	End Mar '25	End Jun '25	End Sep '25	End Dec '25	End Mar '26	End Jun '26	End Sep '26
Mean Average:	4.65%	4.38%	4.07%	3.80%	3.58%	3.34%	3.25%	3.18%
Median:	4.75%	4.50%	4.25%	3.75%	3.50%	3.25%	3.00%	3.00%

UK Real Growth and Inflation

(% change over previous year)



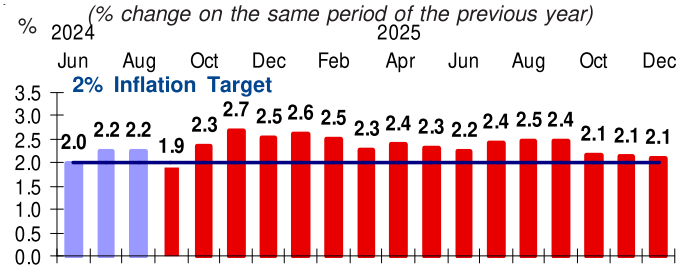
Inflation Eases While Budget Decision Looms

A downward revision to Q2 GDP growth, from 0.6% to 0.5% (q-o-q), coincided with ONS revisions revealing a higher Q2 contribution from business investment, as well as strong government spending. However, a major driver of growth, household consumption, was muted in Q2. Overall, the H1 2024 growth pace was solid (thanks in part to the base effect of a H2 2023 contraction). Still, that improved momentum has been somewhat halted by two consecutive months of stagnating m-o-m growth in June and July. After advancing 1.1% (m-o-m) in June, the manufacturing index fell by -1% in July amid declining auto and machinery & equipment output. The September manufacturing PMI failed to improve on August's two-year high, slowing slightly, but still expanding. Businesses' hesitancy with regards to the upcoming October 30 budget appears to be stalling potential output and harming confidence. The Prime Minister did warn that the budget will be painful, looking to recover a worse-than-anticipated fiscal situation which will likely necessitate tax increases and spending cuts. Forecasts for the PSNB this month show more borrowing in FY24-25 and FY25-26.

CPI was unchanged at 2.2% (y-o-y) in August, but is forecast to pick up again (see chart below), though within touching distance of the Bank of England's (BoE) 2% inflation target. August air-fare spikes were offset by reduced fuel costs, a result of lower global oil prices. However, a recent 10% increase in Ofgem's energy price cap may put upside pressure on the inflation outlook. Lingering services inflation (5.6% in August) is a factor, as is wage feed-through; the BoE is also trying to assess whether the economy is slowing faster than expected. In the absence of definitive data, the BoE remained on hold on September 19. Forecasters are expecting at least one cut before the end of the year.

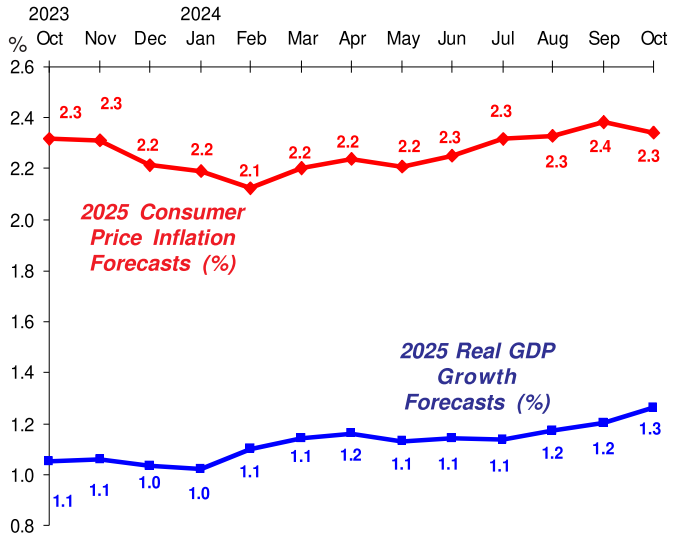
Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



2025 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



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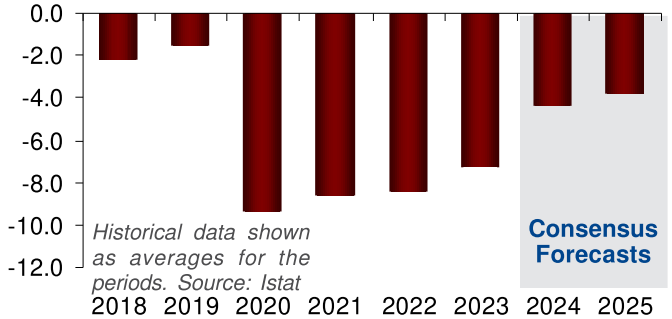
ITALY — OCTOBER 2024

	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices (CPI)		Producer Prices		Contractual Hourly Earnings	
	Prodotto Interno Lordo		*Consumi delle Famiglie*		*Investimenti Fissi Lordi*		*Produzione Industriale*		*Prezzi al Consumo (NIC)*		*Prezzi alla Produzione*		*Retribuzione Oraria Contrattuali*	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
Centro Europa Ricerche	1.0	0.6	0.6	0.7	1.2	1.0	na	na	1.4	2.3	na	na	na	na
Confindustria	0.9	1.1	0.2	1.2	1.0	0.7	na	na	1.7	1.8	na	na	na	na
Econ Intelligence Unit	0.9	0.9	0.5	1.0	2.0	0.9	-1.6	1.3	1.2	1.8	-6.2	0.7	na	na
S&P Global Ratings	0.9	1.1	0.2	1.3	3.0	1.6	na	na	1.4	1.9	na	na	na	na
Bloomberg Economics	0.9	1.0	0.1	1.2	3.3	2.2	na	na	1.2	1.2	na	na	3.6	3.3
Fitch Ratings	0.8	1.2	0.2	1.5	3.0	1.1	na	na	1.1	1.6	na	na	na	na
UBS	0.8	0.8	-0.1	0.7	3.4	1.8	na	na	na	na	na	na	2.5	2.1
Goldman Sachs	0.8	0.9	0.3	1.1	3.2	1.8	na	na	1.9	1.6	na	na	na	na
Allianz	0.8	1.2	0.1	1.2	3.0	1.2	na	na	1.2	2.0	na	na	na	na
Deutsche Bank	0.8	0.9	0.2	0.9	1.1	-0.7	na	na	1.1	1.8	na	na	na	na
Societe Generale CIB	0.8	0.8	0.0	0.7	2.9	1.3	na	na	na	na	na	na	na	na
UniCredit	0.8	1.1	na	na	na	na	na	na	1.0	1.8	na	na	na	na
LC Macro Advisors	0.8	1.1	-0.1	0.9	1.6	3.0	-2.9	1.2	1.0	1.6	-4.2	2.7	3.2	2.8
Oxford Economics	0.8	1.0	0.0	1.1	3.0	0.8	-3.1	1.2	1.0	1.7	-6.9	-0.3	na	na
S&P Global Market Intel	0.8	0.9	0.1	0.7	2.8	1.5	-2.4	1.2	1.3	1.8	-5.2	3.0	na	na
Bank of America - Merrill	0.8	1.1	-0.1	0.7	2.4	1.0	na	na	1.5	1.5	na	na	na	na
Citigroup	0.8	0.8	0.1	0.8	2.9	2.6	na	na	1.0	1.7	na	na	na	na
Prometeia	0.8	0.8	0.1	0.8	2.6	-1.9	-3.0	0.9	1.2	1.9	na	na	na	na
Capital Economics	0.7	0.5	0.1	0.9	na	na	na	na	1.2	1.5	na	na	na	na
Banca Nzle del Lavoro	0.7	1.0	0.1	0.8	1.7	2.7	na	na	1.0	1.6	na	na	na	na
HSBC	0.7	0.8	0.0	0.9	2.6	0.8	-2.9	1.1	1.0	1.8	na	na	na	na
ING Financial Markets	0.7	0.9	0.0	1.0	0.4	-0.4	-2.7	1.5	1.0	1.6	na	na	3.1	2.9
Natixis	0.7	1.2	0.0	1.1	1.2	1.0	na	na	1.0	1.5	na	na	na	na
REF Ricerche	0.7	0.7	0.1	0.8	0.4	-2.0	na	na	1.0	1.8	na	na	3.7	3.5
Intesa Sanpaolo	0.7	1.2	0.1	1.5	1.0	0.9	-3.0	0.7	1.1	1.9	-4.5	1.1	3.1	2.7
Moody's Analytics	0.5	0.9	na	na	1.2	0.7	-2.9	0.5	1.2	2.0	-4.4	-0.5	na	na
Consensus (Mean)	0.8	0.9	0.1	1.0	2.1	1.0	-2.7	1.1	1.2	1.7	-5.2	1.1	3.2	2.9
Last Month's Mean	0.8	0.9	0.2	1.0	2.5	1.0	-2.2	1.5	1.2	1.8	-5.0	0.8	3.1	2.8
3 Months Ago	0.9	1.0	0.2	1.0	2.3	1.0	-1.4	1.9	1.2	1.7	-6.3	0.3	3.0	2.8
High	1.0	1.2	0.6	1.5	3.4	3.0	-1.6	1.5	1.9	2.3	-4.2	3.0	3.7	3.5
Low	0.5	0.5	-0.1	0.7	0.4	-2.0	-3.1	0.5	1.0	1.2	-6.9	-0.5	2.5	2.1
Standard Deviation	0.1	0.2	0.2	0.3	1.0	1.2	0.5	0.3	0.2	0.2	1.1	1.5	0.4	0.5
Comparison Forecasts														
Banca d'Italia (Jun. '24)	0.6	0.9	0.2	1.2	0.9	-0.2								
Government (Apr. '24)	1.0	1.2	0.7	1.2	1.7	1.7								
Eur Commission (May '24)	0.9	1.1	0.2	1.4	1.3	0.7								
IMF (Jul. '24)	0.7	0.9												
OECD (Sep '24)	0.8	1.1							1.3	2.2				
UPB (Oct. '24)	1.0	1.0	0.3	1.1	2.1	1.2								

Government and Background Data

Prime Minister - Ms. Giorgia Meloni (Brothers of Italy). **Parliament -** Meloni won the largest percentage of votes at the election on September 25, 2022 and formed a centre-right coalition to gain an absolute majority of seats. **Next Election -** No later than 22 December 2027 (parliamentary). **Nominal GDP -** €2,085bn (2023). **Population -** 59.5mn (UN, Mid 2023). **$/Euro Exchange Rate -** 1.082 (average, 2023).

General Government Budget Balance – % of GDP



Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-8.9	8.9	4.7	0.7
Household Consumption*	-11.5	5.9	5.9	1.0
Gross Fixed Investment*	-7.1	21.5	7.5	8.5
Industrial Production*	-11.5	12.3	0.3	-0.2
Consumer Prices (CPI)*	-0.2	1.9	8.1	5.7
Producer Prices*	-3.3	10.7	34.4	-5.6
Contractual Hourly Earnings*	0.6	0.7	1.1	3.0
Unemployment Rate, %	9.3	9.4	8.1	7.7
Current Account, Euro bn	64.5	43.3	-30.9	9.7
Budget Balance, net lending/borrowing, (Maastricht definition), Euro bn	-156	-159	-168	-154
3 mth Euro, % (end yr)	-0.5	-0.6	2.1	3.9
10 Yr Italian Govt Bond, % (end yr)	0.5	1.2	4.7	3.7

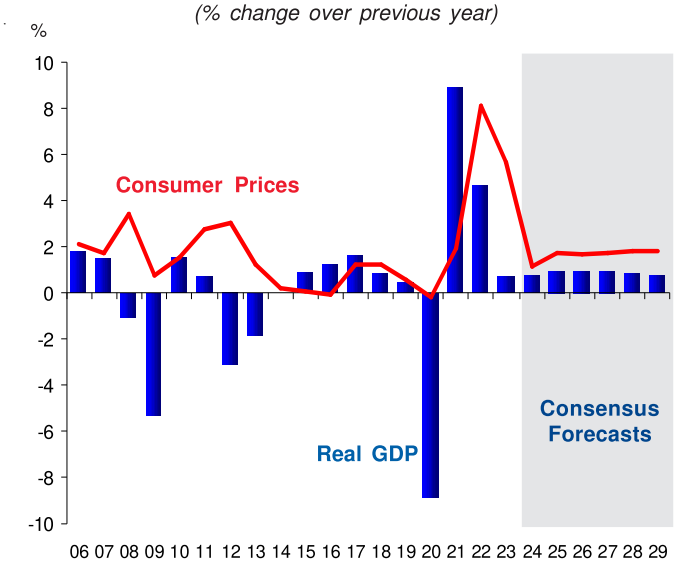
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OCTOBER 2024 — ITALY

Year Average		Annual Total				Rates on Survey Date 3.3 %		3.6%	
Unemployment Rate (%)		Current Account (Euro bn)		General Govt Budget Bal (Maastricht) (Euro bn)		3 month Euro Rate (%)		10 Year Italian Govt Bond Yield (%)	
Tasso di Disoccupazione (%)		*Partite Correnti (€ mld)*		*Indebitamento netto (Maastricht) (€ mld)*		*Interessi Euro Trimestrali (%)*		*Buoni del Tesoro Decennali (%)*	
2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
6.9	6.8	24.4	21.2	-88.3	-81.6	3.2	2.8	3.6	3.5
7.5	7.1	31.4	35.1	-93.2	-86.6	na	na	na	na
7.3	7.3	31.9	29.0	-110.6	-87.3	3.1	2.3	3.8	3.6
7.0	7.4	na	na	na	na	na	na	na	na
7.1	7.6	na	na	na	na	na	na	na	na
6.8	6.5	37.4	48.6	-103.6	-93.7	na	na	na	na
7.6	7.6	21.7	22.3	na	na	na	na	na	na
7.9	8.0	na	na	-92.9	-91.2	na	na	na	na
na	na	na	na	na	na	na	na	na	na
7.4	7.6	na	na	na	na	na	na	na	na
6.8	6.2	43.1	40.5	-95.0	-87.0	na	na	na	na
6.8	6.7	30.0	36.0	-86.5	-78.6	na	na	na	na
6.6	6.3	43.3	51.8	-85.5	-76.3	2.7	2.2	3.4	3.3
6.9	7.4	39.7	36.0	-85.4	-76.4	2.4	1.8	3.7	4.2
7.0	7.3	31.1	30.5	-105.6	-95.9	3.0	2.1	4.0	4.0
7.6	7.5	23.4	25.8	na	na	na	na	na	na
7.0	7.0	11.2	15.2	-97.9	-87.3	na	na	3.5	3.6
6.9	7.0	29.0	39.8	-92.7	-84.9	3.2	2.5	3.9	4.0
6.8	6.5	48.0	43.7	-117.4	-98.4	na	na	na	na
6.9	7.0	na	na	na	na	na	na	na	na
7.0	6.8	39.2	30.8	-83.3	-77.1	na	na	na	na
6.8	6.6	38.2	44.2	-85.7	-79.3	na	na	3.7	3.9
6.5	6.6	na	na	na	na	na	na	na	na
6.7	6.5	51.0	61.8	-85.0	-70.0	3.3	2.5	3.5	3.0
6.6	6.7	29.6	25.7	-82.2	-74.5	2.8	2.5	3.2	3.6
6.6	6.5	44.3	60.4	-89.3	-80.5	na	na	na	na
7.0	7.0	34.1	36.8	-93.3	-83.7	3.0	2.3	3.6	3.7
7.1	7.0	35.0	36.7	-100.8	-90.6				
7.2	7.2	29.7	33.7	-103.0	-92.2				
7.9	8.0	51.0	61.8	-82.2	-70.0	3.3	2.8	4.0	4.2
6.5	6.2	11.2	15.2	-117.4	-98.4	2.4	1.8	3.2	3.0
0.4	0.5	10.0	12.9	10.1	7.9	0.3	0.3	0.2	0.4
7.3	7.3								
7.1	7.0								
7.5	7.3								
7.1	6.8								

Real Growth and Inflation

(% change over previous year)



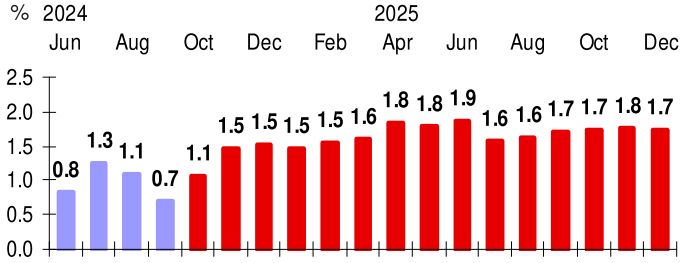
The Economy Reaches its Pre-Financial Crisis Peak

Istat recently rebased its national accounts to 2020 prices, and as a result GDP was slightly worse-than-expected in 2023, up +0.7% (vs +0.9%). Conversely, 2021 and 2022 GDP were upgraded to +8.9% (vs +8.3%) and +4.7% (vs +4.0%), respectively. As a result, real GDP levels finally reached their peak of 2007; Italian GDP levels had failed to recover from the 2008 global financial crisis amid a lost decade of fiscal restriction and growth stagnancy. Growth in 2021 and 2022 was largely supported by the 'Superbonus' (the government's 100% house-renovation subsidy introduced in 2020). Although the boost from the bonus has largely fizzled out, growth may also benefit from the Next Generation EU Investment Programme and a recovery in real wages as inflation ebbs from its highs of 2022. Most recently, the domestic CPI eased to 0.7% (y-o-y) in September, down from 1.1% in August. Following the rebased national accounts, the Treasury revised its public deficit projections: -3.8% of GDP in 2024 (below the -4.3% projections made in April), -3.3% in 2025 (vs -3.6%), before falling below the EU's -3% ceiling in 2026. Despite the Superbonus providing a boost to growth and subsequently reducing some of the public deficit, it also contributed to Italy's public debt burden which stands over double the EU's 60% of GDP ceiling. According to the Treasury, public debt is now targeted to reach 135.8% of GDP in 2024, 136.9% in 2025, 137.8% in 2026 and 137.5% in 2027.

Industrial production was somewhat flat in August,rising only +0.1% (m-o-m), highlighting ongoing domestic and international weakness. September's manufacturing PMI remains in contraction territory amid faster falls in new orders and output levels. Uncertainty with regards to European neighbours and China has also hindered demand for Italian goods.

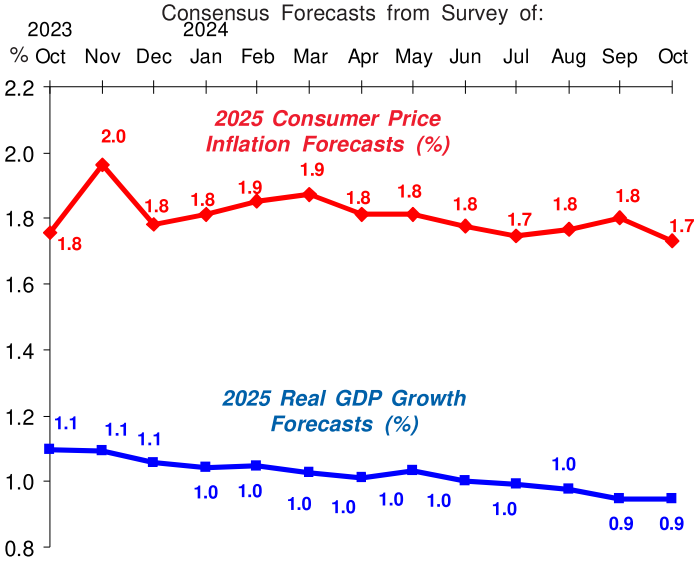
Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



2025 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



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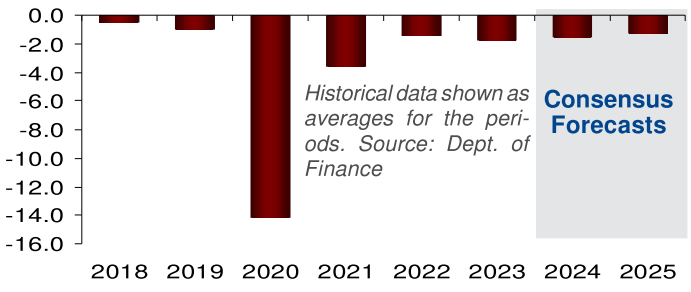
CANADA — OCTOBER 2024

	Average % Change on Previous Calendar Year																Annual Total	
	Gross Domestic Product		Household Final Consumption Expenditure		Machinery & Equip-ment Investment		Net Operat-ing Surplus: Corporations		Industrial Production		Consumer Prices		Industrial Product Prices		Average Hourly Earnings		Housing Starts (thousand units)	
	Produit Intérieur Brut		*Dépenses de Consommation Finale des Ménages*		*Investissement de Machines et Matériel*		*Excédent d'exploitation net: sociétés*		*Production Industrielle*		*Prix à la Consom-mation*		*Prix des Produits Industriels*		*Rémunér-ation Horaire Moyenne*		*Construc-tion de Logements mises en chantier, milliers*	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
Econ Intelligence Unit	1.3	1.7	2.1	2.3	na	na	na	na	na	na	2.4	2.4	0.7	2.0	na	na	na	na
Economap	1.2	2.0	2.0	1.9	0.8	3.2	-2.5	5.0	0.0	1.5	2.4	1.9	-0.1	1.2	3.8	3.4	250	260
Stokes Econ Consulting	1.2	2.2	1.5	2.8	na	na	-4.8	6.1	na	na	2.7	2.2	na	na	na	na	240	254
Moody's Analytics	1.2	1.9	na	na	na	na	-3.4	3.0	-0.1	1.5	2.4	2.1	1.0	1.4	4.7	4.3	250	250
BMO Capital Markets	1.1	1.8	2.0	1.7	0.7	3.3	-1.0	5.0	0.0	1.3	2.4	1.8	1.0	2.0	4.0	3.5	250	260
Conf Board of Canada	1.1	1.7	2.0	2.0	na	na	-6.1	1.1	na	na	2.6	2.1	na	na	na	na	242	240
Desjardins	1.1	1.8	2.3	1.8	-0.4	3.3	-2.3	12.1	na	na	2.4	2.1	1.0	1.3	na	na	246	230
Scotia Economics	1.1	1.9	1.7	1.9	na	na	-0.6	12.3	0.0	2.3	2.6	2.1	na	na	na	na	250	254
Toronto Dominion Bank	1.1	1.7	1.9	1.3	na	na	-3.5	5.3	na	na	2.5	2.1	na	na	na	na	246	238
University of Toronto	1.1	1.8	2.0	1.9	0.1	4.1	-3.8	0.5	na	na	2.4	1.9	na	na	na	na	243	240
CIBC Capital Markets	1.1	1.8	1.8	1.5	0.7	3.6	na	na	na	na	2.3	1.7	na	na	na	na	250	263
JP Morgan	1.1	1.8	2.0	2.1	-0.8	2.9	na	na	0.0	1.8	2.5	2.3	1.6	3.0	na	na	na	na
Inst Fiscal Studies	1.1	2.0	1.7	1.9	0.5	2.7	na	na	-0.2	1.5	2.8	2.1	na	na	na	na	246	251
Royal Bank of Canada	1.1	1.6	1.8	1.1	-0.6	2.4	-4.5	2.3	na	na	2.5	1.9	na	na	na	na	252	255
Oxford Economics	1.0	1.4	1.9	1.4	0.0	5.1	-0.7	5.5	-0.1	1.4	2.4	2.2	1.4	0.9	3.1	1.9	239	254
Citigroup	0.7	0.6	1.6	0.5	-0.4	1.6	na	na	na	na	2.5	2.2	na	na	na	na	na	na
Consensus (Mean)	1.1	1.7	1.9	1.7	0.1	3.2	-3.0	5.3	-0.1	1.6	2.5	2.1	0.9	1.7	3.9	3.3	246	250
Last Month's Mean	1.1	1.8	1.8	1.7	0.2	3.7	-3.6	4.5	-0.1	1.6	2.6	2.1	1.0	1.6	3.8	3.5	246	257
3 Months Ago	1.0	1.8	1.8	1.7	-2.1	3.3	-4.0	5.2	0.2	1.7	2.5	2.1	0.6	1.4	3.7	3.4	244	255
High	1.3	2.2	2.3	2.8	0.8	5.1	-0.6	12.3	0.0	2.3	2.8	2.4	1.6	3.0	4.7	4.3	252	263
Low	0.7	0.6	1.5	0.5	-0.8	1.6	-6.1	0.5	-0.2	1.3	2.3	1.7	-0.1	0.9	3.1	1.9	239	230
Standard Deviation	0.1	0.3	0.2	0.5	0.6	1.0	1.8	3.9	0.1	0.3	0.1	0.2	0.5	0.7	0.6	1.0	4	10
Comparison Forecasts																		
Bank of Canada (Jul. '24)	1.2	2.1									2.6	2.4						
IMF (Jul. '24)	1.3	2.4																
OECD (Sep '24)	1.1	1.8									2.5	2.2						

Government and Background Data

Prime Minister - Mr. Justin Trudeau (Liberals). **Government -** The Liberals hold 160 out of 338 seats in parliament (170 seats are needed for an outright majority). **Next Election -** by 20 October 2025 (Federal election). **Nominal GDP -** C$2,892bn (2023). **Population -** 39.3mn (UN, Mid 2023). **C$/$ Exchange Rate -** 1.349 (average, 2023).

Federal Government Budget Balance – % of GDP



Historical Data

	2020	2021	2022	2023
Gross Domestic Product*	-5.0	5.3	3.8	1.2
Household Consumption Expenditure*	-6.4	5.2	5.1	1.7
Machinery & Eqpt. Invt*	-15.0	14.0	-0.3	-6.4
Net Operating Surplus: Corporations*	0.9	33.2	14.7	-17.4
Industrial Production*	-7.5	5.0	3.9	-0.7
Consumer Prices*	0.7	3.4	6.8	3.9
Industrial Product Prices*	-0.4	13.9	12.8	-1.8
Average Hourly Earnings*	3.6	2.8	4.0	3.5
Housing Starts, '000 units	218	271	262	240
Unemployment Rate, %	9.7	7.5	5.3	5.4
Current Account, C$bn	-44.8	0.4	-10.3	-21.0
Federal Govt Budget Balance, fiscal years, C$bn	-314	-90.3	-41.3	-50.9
3 mth Trsy Bills, % (end yr)	0.1	0.2	4.3	4.9
10 Yr Govt Bond, % (end yr)	0.7	1.4	3.3	3.1

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OCTOBER 2024 CANADA

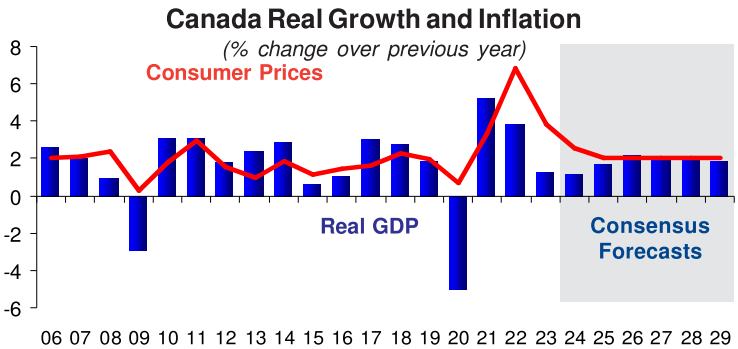
Year Average		Annual Total		Fiscal Years (Apr-Mar)		Rates on Survey Date 3.9 %		3.2%	
Unemploy - ment Rate (%)		Current Account (C$ bn)		Federal Govt Budget Balance (C$ bn)		3 month Treasury Bill Rate (%)		10 Year Government Bond Yield (%)	
Taux de Chômage (%)		*Balance Courante (C$ md)*		*Balance Budgétaire (C$ md)*		*Rendement sur les Bons du Trésor de 3 mois %*		*Rendement des Obligat- ions d'État de 10 ans %*	
2024	2025	2024	2025	FY 24-25	FY 25-26	End Jan'25	End Oct'25	End Jan'25	End Oct'25
6.4	6.5	-37.6	-47.2	na	na	3.5	2.7	na	na
6.4	6.9	-29.5	-35.0	-40.0	-38.0	3.4	2.5	3.0	2.8
6.3	6.0	na	na	na	na	na	na	na	na
6.4	6.8	-19.1	-22.7	na	na	na	na	na	na
6.4	7.0	-31.0	-40.0	-45.0	-45.0	3.4	2.5	3.1	2.8
6.3	6.2	-28.8	-19.8	-57.8	-23.6	3.3	2.5	3.2	3.5
6.4	6.6	-29.9	-37.8	-46.4	-48.7	3.2	2.4	2.8	2.8
6.4	6.7	-36.8	-69.0	-39.8	-38.9	3.7	3.0	3.2	3.7
6.4	6.7	-17.2	-7.5	na	na	3.5	2.6	2.9	2.9
6.4	7.1	-26.3	-30.3	na	na	3.5	3.0	3.2	3.3
6.4	6.4	na	na	na	na	3.0	2.0	3.0	3.0
6.2	6.3	-23.1	-27.3	na	na	na	na	na	na
6.5	6.7	na	na	na	na	3.3	2.5	2.9	2.7
6.4	6.7	-30.6	-27.4	na	na	3.4	3.0	2.9	3.0
6.5	7.1	-30.6	-35.5	na	na	2.7	2.1	2.8	2.9
6.6	7.1	-27.6	-47.8	-45.8	-40.7	3.5	2.8	3.0	2.9
6.4	6.7	-28.3	-34.4	-45.8	-39.2	3.3	2.6	3.0	3.0
6.4	6.7	-27.0	-33.4	-42.7	-38.2				
6.3	6.4	-21.2	-26.4	-42.9	-42.5				
6.6	7.1	-17.2	-7.5	-39.8	-23.6	3.7	3.0	3.2	3.7
6.2	6.0	-37.6	-69.0	-57.8	-48.7	2.7	2.0	2.8	2.7
0.1	0.3	5.9	15.2	6.6	8.6	0.2	0.3	0.1	0.3

Canada Overnight Lending Rate – Oct. 7, 2024 = 4.25%

Average probabilities of a change in the Lending Rate on Oct. 23:

Increase 0.3% No change 8.5% Decrease 91.2%

Consensus Forecasts Mean	End Dec '24	End Mar '25	End Jun '25	End Sep '25	End Dec '25	End Mar '26	End Jun '26	End Sep '26
Average:	3.67%	3.21%	2.85%	2.65%	2.56%	2.36%	2.36%	2.28%
Median:	3.75%	3.250%	2.95%	2.50%	2.50%	2.250%	2.25%	2.250%

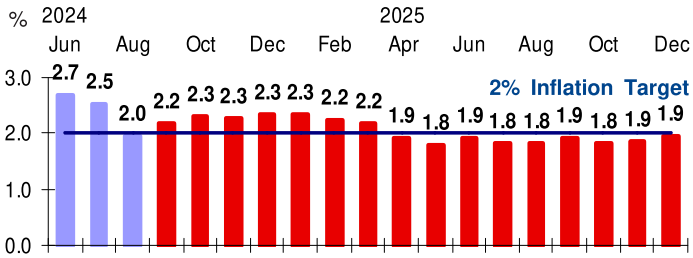


Economic Weakness Concerning for the BoC

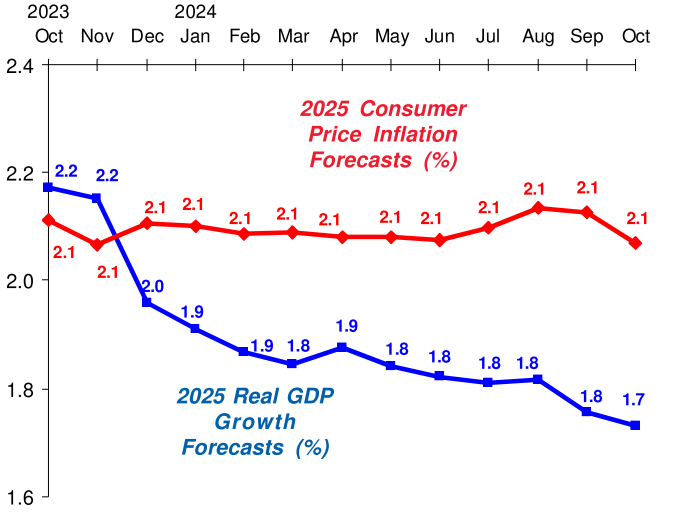
GDP growth regained momentum in July, expanding by +0.2% (m-o-m) after stalling in June. Services were the primary driver of activity: on a m-o-m basis, retail trade jolted up 1%. Meanwhile, widespread disruption to railway transportation (down -4.6% m-o-m), which was caused by wildfires effecting key routes and suspending traffic, prompted transportation and warehousing activity (which fell -0.4% m-o-m) to subtract from monthly GDP. Exceptionally hot weather lifted utilities consumption. Nevertheless, the GDP report also pointed to an advance estimate for August of flat growth. The Bank of Canada (BoC) governor has indicated concern over slack in the economy and waning momentum. Policymakers have been worried about weakened labour market fundamentals this year (August's 6.6% unemployment rate rose from July's 6.4%), amid signs of easing consumption growth (July's 1.0% m-o-m jump in retail sales aside). Minutes from the September BoC meeting suggest that one scenario that policymakers are considering is inflation undershooting the 2% target amid softer activity. However, the BoC is vigilant of strong core and shelter inflation. Mortgage interest costs are the largest contributor to CPI, and housing supply is under pressure from population growth. The next BoC meeting on October 23 is expected to bring another rate cut, which could reduce the overnight rate to 4% or below. Some economists are pricing in more rapid and larger rate cuts in line with expectations for the US Fed and the BoC's own concerns about Canadian growth.

August saw a C$1.1bn trade deficit as exports dropped 1% from July owing to decreased energy exports. Energy constitutes a major portion of total Canadian exports to the US. Global demand for oil has see-sawed, while demand for manufactured goods has been weaknening for some time.

Monthly CPI Outturns and y-o-y Consensus Forecasts
(% change on the same period of the previous year)



2025 GDP Growth and Inflation Forecasts
Consensus Forecasts from Survey of:



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EURO ZONE

OCTOBER 2024

The EURO ZONE is: Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain.

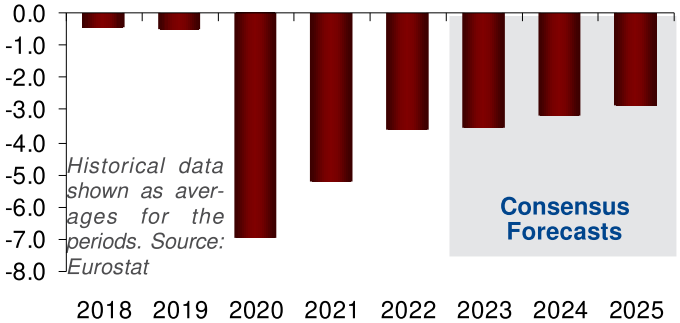
Average % Change on Previous Calendar Year

Economic Forecasters	Gross Domestic Product		Household Consumption Expenditure		Govt Con-sumption		Gross Fixed Investment		Industrial Product-ion		Harmo-nised Consumer Prices (HICP)		Core HICP (ex. energy, food, alcohol & tobacco		Industrial Producer Prices		Hourly Labour Costs – Total	
	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
Econ Intelligence Unit	1.0	1.4	0.9	1.5	1.4	1.2	-0.9	2.1	na	na	2.5	2.1	na	na	-4.0	1.1	na	na
Deutsche Bank	0.9	1.5	1.1	1.5	1.4	0.9	0.5	1.5	na	na	2.3	1.8	2.8	2.2	na	na	na	na
BNP Paribas	0.8	1.4	0.7	1.2	na	na	na	na	na	na	2.3	1.8	2.8	2.3	na	na	na	na
IWH Halle Institute	0.8	1.5	0.6	1.1	1.2	1.1	-0.2	2.9	-2.3	0.5	2.4	2.3	na	na	na	na	4.0	2.7
Natixis	0.8	1.3	0.7	1.0	1.6	1.2	-2.5	0.5	na	na	2.3	1.6	2.8	1.9	na	na	na	na
Oxford Economics	0.8	1.2	0.8	1.5	1.6	0.5	-1.6	2.8	-2.7	2.1	2.3	1.5	2.8	2.1	-3.6	-2.5	na	na
S&P Global Mkt Intelligence	0.8	1.3	0.7	1.3	1.7	1.7	-2.4	2.0	-2.0	1.7	2.4	1.9	2.9	2.5	-3.1	1.9	na	na
Moody's Analytics	0.8	1.3	na	na	1.7	1.3	-2.0	1.2	-1.9	1.1	2.4	1.9	na	na	-3.6	1.1	na	na
JP Morgan	0.7	1.0	0.8	1.1	1.6	0.8	-2.6	0.9	-2.7	1.3	2.3	1.7	2.9	2.2	-4.9	0.1	na	na
Bloomberg Economics	0.7	1.2	0.7	1.3	1.6	0.8	-1.3	2.4	na	na	2.3	1.3	2.9	2.0	na	na	3.9	2.3
Goldman Sachs	0.7	1.1	0.8	1.5	na	na	-2.4	1.2	na	na	2.3	2.0	2.8	2.3	na	na	na	na
Capital Economics	0.7	1.0	0.7	1.2	1.7	0.8	-2.8	0.1	na	na	2.3	1.5	2.8	2.2	na	na	na	na
Intesa Sanpaolo	0.7	1.1	0.7	1.2	1.6	0.7	-2.7	-0.2	-2.9	1.2	2.4	1.8	2.7	2.0	-4.4	2.9	4.4	3.2
Bank Julius Baer	0.7	1.1	0.8	1.6	1.5	0.7	-1.5	3.0	-2.6	1.3	2.4	2.0	2.9	2.2	na	na	4.4	3.3
Bank of America - Merrill	0.7	1.1	0.6	1.0	1.4	1.0	-1.1	1.0	-2.2	2.3	2.3	1.5	na	na	na	na	na	na
ETLA	0.7	1.7	1.0	1.5	1.0	0.5	0.0	2.0	na	na	2.5	2.0	2.8	2.0	na	na	na	na
FUNCAS	0.7	1.5	0.8	1.5	1.6	0.6	-2.5	1.8	na	na	2.3	2.1	na	na	na	na	na	na
HSBC	0.7	1.0	0.8	1.1	1.6	0.6	-2.7	0.4	-3.2	0.5	2.3	1.9	2.8	2.1	na	na	na	na
Morgan Stanley	0.7	1.0	0.6	0.9	1.7	1.1	-2.6	0.4	na	na	2.3	2.0	2.8	2.1	na	na	na	na
Nomura	0.7	1.0	0.5	0.3	1.6	0.8	-2.2	3.2	na	na	2.3	1.8	2.9	2.4	na	na	na	na
Societe Generale CIB	0.7	1.0	0.7	1.0	1.6	0.9	-2.3	0.4	na	na	2.3	1.8	2.9	2.4	na	na	na	na
Swiss Life Asset Mgrs	0.7	1.0	na	na	na	na	na	na	na	na	2.4	1.9	na	na	na	na	na	na
UniCredit	0.7	1.1	0.7	1.1	1.7	1.3	-2.2	1.1	na	na	2.4	1.8	2.9	2.1	na	na	na	na
Citigroup	0.7	1.0	0.7	1.1	1.7	0.8	-2.7	0.9	na	na	2.3	1.7	2.8	1.9	na	na	na	na
Barclays	0.7	1.0	0.6	0.8	1.7	1.0	-2.9	-0.1	na	na	2.3	1.9	2.9	2.3	na	na	na	na
Commerzbank	0.7	1.1	0.7	1.0	1.0	0.7	-2.0	0.3	na	na	2.4	2.4	2.9	2.5	na	na	4.0	3.3
UBS	0.6	1.2	0.9	1.1	1.1	0.7	na	na	na	na	2.4	2.1	2.9	2.3	na	na	na	na
Consensus (Mean)	0.7	1.2	0.7	1.2	1.5	0.9	-1.9	1.3	-2.5	1.3	2.3	1.9	2.8	2.2	-3.9	0.7	4.1	3.0
Last Month's Mean	0.7	1.3	0.8	1.2	1.4	0.9	-1.3	1.6	-2.1	1.5	2.4	2.0	2.8	2.2	-3.9	0.7	4.3	3.2
3 Months Ago	0.7	1.4	1.0	1.4	1.1	0.8	0.0	1.8	-1.3	2.1	2.4	2.0	2.8	2.2	-4.0	0.4	4.2	3.1
High	1.0	1.7	1.1	1.6	1.7	1.7	0.5	3.2	-1.9	2.3	2.5	2.4	2.9	2.5	-3.1	2.9	4.4	3.3
Low	0.6	1.0	0.5	0.3	1.0	0.5	-2.9	-0.2	-3.2	0.5	2.3	1.3	2.7	1.9	-4.9	-2.5	3.9	2.3
Standard Deviation	0.1	0.2	0.1	0.3	0.2	0.3	0.9	1.0	0.4	0.6	0.1	0.2	0.1	0.2	0.7	1.9	0.2	0.4
Comparison Forecasts																		
Eur Commission (May. '24)	0.8	1.4	1.1	1.5			0.1	1.6			2.5	2.1	2.7	2.1				
ECB (Sep. '24)	0.8	1.3	0.8	1.4	1.2	1.1	-0.5	1.2			2.5	2.2						
IMF (Apr. '24)	0.8	1.5									2.4	2.1						
OECD (Sep '24)	0.7	1.3									2.4	2.1						

European Monetary Union

Euro zone - The 20 European countries (listed at the top of this page) are united by a common currency (the euro), monetary policy and adherence to the Maastricht Treaty. **Monetary Policy** - is set by the European Central Bank's (ECB) governing board, headed by Christine Lagarde. **Nominal GDP -** €14,379bn (2023). **Population -** 349.6mn (Eurostat, 2023). **$/Euro** - 1.082 (average, 2023).

General Government Budget Balance – % of GDP



Historical Data

** % change on previous year*	2020	2021	2022	2023
Gross Domestic Product*	-6.1	6.2	3.3	0.4
Private Consumption*	-7.9	4.7	4.9	0.7
Government Consumption*	1.2	4.3	1.1	1.2
Gross Fixed Capital Formation*	-5.8	3.5	1.9	0.9
Industrial Production*	-7.6	8.8	2.1	-2.1
Harmonised Consumer Prices (HICP)*	0.3	2.6	8.4	5.4
HICP ex. food, energy, alco. & tob. *	0.7	1.5	4.0	5.0
Industrial Producer Prices*	-2.6	12.2	32.8	-2.1
Hourly Labour Costs – Total*	2.7	0.9	4.9	5.1
Unemployment Rate, (%)	8.0	7.7	6.8	6.6
Exports - Goods & Services*	-8.8	11.4	7.3	-0.5
Imports - Goods & Services*	-8.2	8.9	8.1	-0.9
Current Account, Euro bn	192	311	-43	230
General Govt. Budget Balance (Maastricht definition), **Euro bn**	-808	-653	-494	-516
Money Supply, M3, end period*	12.3	7.0	3.8	0.1

e = consensus estimate based on latest survey

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OCTOBER 2024 — EURO ZONE

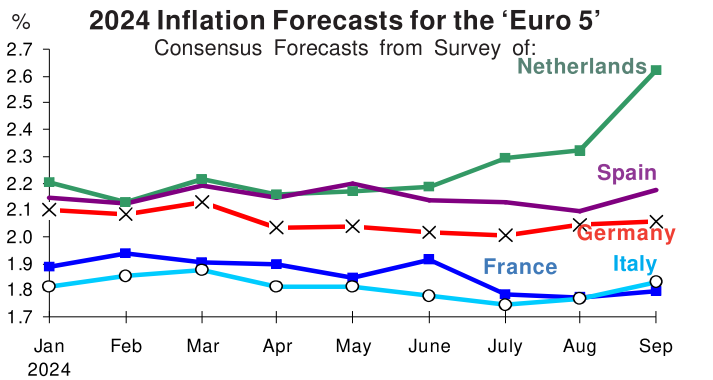
Year Average		Average % Change on Previous Calendar Year				Annual Total				Average % Change on Prev. Year	
Unemployment Rate (%)		Export of Goods & Services		Import of Goods & Services		Current Account (€ bn)		General Govt Budget Balance (Maastricht) (€ bn)		Money Supply, M3, end period	
2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025
6.5	6.5	1.5	2.3	0.6	2.9	459	413	-459	-415	na	na
6.5	6.5	2.5	3.9	2.7	3.6	420	521	-470	-428	na	na
na	na	na	na	na	na	na	na	na	na	na	na
6.4	6.2	1.6	3.8	-0.1	4.0	460	460	-440	-420	na	na
6.5	6.5	2.1	2.8	-0.1	2.5	na	na	na	na	na	na
6.5	6.5	0.0	1.9	-1.4	2.9	414	370	-468	-450	3.1	3.6
6.4	6.5	1.8	2.2	0.0	3.2	493	446	-489	-442	3.5	4.5
6.4	6.4	1.7	2.1	-0.2	2.3	485	544	na	na	2.5	4.9
6.5	6.4	2.0	2.5	-0.3	2.3	429	436	-420	-420	na	na
6.5	6.4	1.9	2.0	0.2	2.6	na	na	na	na	na	na
6.7	6.7	1.9	1.7	-0.4	1.4	na	na	-501	-437	na	na
6.5	6.6	2.0	2.1	-0.3	1.9	489	546	-497	-468	na	na
6.5	6.7	1.8	2.3	-0.5	2.1	370	330	-504	-422	2.3	2.2
6.5	6.5	1.3	1.7	-0.5	2.9	na	na	na	na	na	na
6.8	7.0	na	na	na	na	420	411	na	na	na	na
6.5	6.4	0.0	3.5	-0.5	3.0	na	na	na	na	na	na
6.8	7.0	2.0	2.7	-0.3	2.4	na	na	na	na	na	na
6.5	6.8	2.0	3.0	-0.2	2.8	na	na	na	na	na	na
6.5	6.5	2.0	2.8	-0.2	2.8	na	na	na	na	na	na
6.5	6.6	2.5	4.3	0.3	4.7	na	na	na	na	na	na
6.5	6.3	1.9	2.5	-0.1	2.5	464	485	na	na	na	na
6.5	6.5	na	na	na	na	na	na	na	na	na	na
6.5	6.6	2.0	3.2	0.0	3.9	na	na	-451	-436	na	na
6.4	6.2	1.9	1.9	-0.2	2.1	364	242	-514	-516	na	na
6.5	6.6	na	na	na	na	na	na	na	na	na	na
6.6	6.5	1.7	3.0	0.1	2.5	450	450	na	na	2.0	3.5
6.7	7.0	0.5	2.3	1.0	2.7	328	373	na	na	na	na
6.5	6.6	1.7	2.6	0.0	2.8	432	430	-474	-441	2.7	3.7
6.5	6.5	1.6	2.8	0.2	3.0	431	433	-464	-421	2.5	3.7
6.5	6.5	1.2	2.7	0.6	3.1	339	349	-456	-421	2.2	3.8
6.8	7.0	2.5	4.3	2.7	4.7	493	546	-420	-415	3.5	4.9
6.4	6.2	0.0	1.7	-1.4	1.4	328	242	-514	-516	2.0	2.2
0.1	0.2	0.7	0.7	0.7	0.7	50	84	30	29	0.6	1.0
6.6	6.5	0.9	3.1	0.9	3.2						
6.5	6.5	1.2	2.6	0.0	2.8						
6.6	6.4										

Euro zone Main Refinancing Rate – Oct. 7, 2024 = 3.65%

Average probabilities of a change in the Main Refi Rate on Oct. 17:

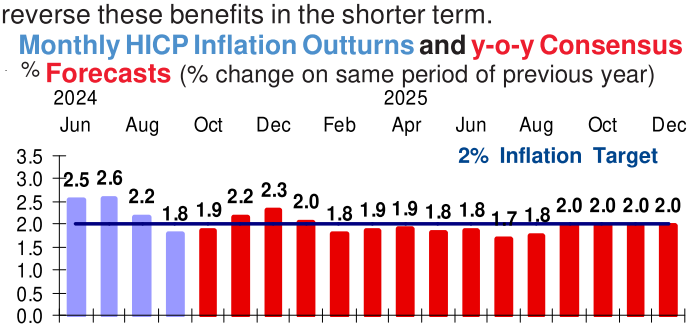
Increase 0.0% **No change** 15.9% **Decrease** 84.1%

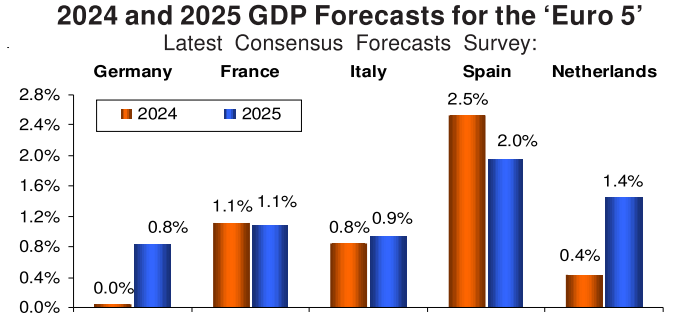
Consensus Forecasts Mean	End Dec '24	End Mar '25	End Jun '25	End Sep '25	End Dec '25	End Mar '26	End Jun '26	End Sep '26
Average:	3.17%	2.77%	2.46%	2.36%	2.30%	2.43%	2.43%	2.43%
Median:	3.15%	2.65%	2.40%	2.40%	2.40%	2.40%	2.40%	2.400%

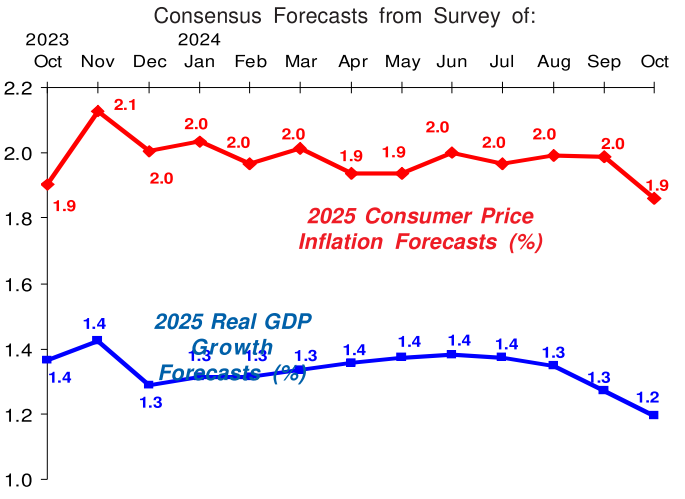


Another Cut in October?

Softer inflation data in Germany, France, Italy, and Spain saw the bloc's headline HICP ease to 1.8% (y-o-y) in September, and falling below the ECB's 2% target for the first time in three years. Falling petrol prices (amid lower global oil prices) was a major contributing factor in this slowdown. Core HICP (excluding energy, food, alcohol & tobacco) eased to 2.4%. Softer-than-expected inflation in the bloc is likely to encourage the ECB to cut rates again at its next meeting on October 17 (rates were cut by 25bps on September 12). Although policymakers had noted that a December cut was highly likely, there was little mention of an October cut, but financial markets are now pricing in two cuts before by end-2024. Some are even speculating a 50bps cut at either meeting due to the worrying economic environment. Industrial production contracted for the fourth consecutive month by -0.3% (m-o-m) in August, while September's manufacturing PMI disappointed and slid further in contraction territory, with Germany seeing the weakest performance. German economic weakness is a particular concern for policymakers. The PMI also noted concern about shipment delays which have become more prominent recently. Overall, production and new orders continue to decline amid weak global demand. Positively, businesses noted the drop in energy prices helped to bring input costs down, however, further escalation in the Middle East may reverse these benefits in the shorter term.







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NETHERLANDS

OCTOBER 2024

	Average % Change on Previous Calendar Year												Annual Total				Rates on Survey Date			
	Gross Domestic Product		Private Con-sumption		Gross Fixed Investment		Manufac-turing Produc-tion		Con-sumer Prices (CPI)		Hourly Wages (Manu-facturing)		Current Account (€ bn)		General Govt Bud Balance (Maastricht) (€ bn)		3.3 %		2.5%	
																	3 month Euro Rate (%)		10 Year Dutch Govt Bond Yield (%)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
Capital Economics	0.8	1.9	0.3	1.5	-1.3	1.9	na	na	na	na	na	na	107.7	125.2	-17.3	-14.8	na	na	na	na
Rabobank Nederland	0.7	1.4	0.5	1.6	-1.2	0.4	na	na	3.2	2.7	na	na	na	na	na	na	3.2	2.8	2.7	2.9
S&P Global Ratings	0.6	1.5	0.3	1.4	-1.4	1.8	na	na	3.0	2.6	na	na	na	na	na	na	na	na	na	na
CPB	0.6	1.5	0.7	2.7	-1.4	2.7	na	na	3.6	3.2	na	na	122.1	118.1	-20.0	-29.6	2.7	2.7	2.7	2.7
Econ Intelligence Unit	0.6	1.4	-0.4	0.6	-1.5	2.2	na	na	3.5	2.5	na	na	95.1	83.0	-15.3	-14.0	3.1	2.3	2.8	2.7
S&P Global Market Intel	0.6	1.7	0.3	1.0	-1.6	1.4	-2.0	1.6	3.1	2.0	na	na	96.7	106.8	-10.0	-11.5	3.0	2.1	2.5	2.4
Bank of America - Merrill	0.5	1.2	0.2	0.6	-1.7	1.1	-0.5	2.7	3.1	2.4	na	na	51.2	63.2	na	na	na	na	na	na
FERI	0.5	0.6	0.4	0.8	-2.2	-0.4	-1.5	1.2	3.3	2.5	6.3	4.9	102.6	106.2	-20.5	-22.1	3.0	2.1	2.1	3.1
ABN AMRO	0.5	1.3	na	na	-2.3	1.1	na	na	2.7	2.2	na	na	80.6	79.8	na	na	2.8	1.6	2.2	2.1
Oxford Economics	0.5	1.4	0.3	1.6	-1.3	3.0	na	na	3.4	2.5	5.5	3.0	111.2	110.5	-4.5	-21.2	2.4	1.8	2.6	2.5
Moody's Analytics	0.5	1.4	0.4	2.9	-1.4	1.5	-1.2	2.2	3.2	2.5	na	na	112.3	117.1	-10.2	-22.6	na	na	na	na
Euromonitor Intl	0.3	1.6	1.3	1.9	-0.9	2.0	na	na	3.1	2.4	na	na	100.9	99.2	-15.1	-18.0	na	na	na	na
Consensus (Mean)	0.6	1.4	0.4	1.5	-1.5	1.6	-1.3	1.9	3.2	2.5	5.9	3.9	98.0	100.9	-14.1	-19.2	2.9	2.2	2.5	2.6
Last Month's Mean	0.4	1.4	0.7	1.7	-1.5	1.4	-0.9	1.6	3.3	2.6	6.1	4.0	108.7	107.3	-17.4	-20.5				
3 Months Ago	0.4	1.4	2.1	1.8	-1.6	1.5	-1.5	1.8	2.9	2.3	5.9	3.9	98.9	101.8	-16.4	-18.2				
High	0.8	1.9	1.3	2.9	-0.9	3.0	-0.5	2.7	3.6	3.2	6.3	4.9	122.1	125.2	-4.5	-11.5	3.2	2.8	2.8	3.1
Low	0.3	0.6	-0.4	0.6	-2.3	-0.4	-2.0	1.2	2.7	2.0	5.5	3.0	51.2	63.2	-20.5	-29.6	2.4	1.6	2.1	2.1
Standard Deviation	0.1	0.3	0.4	0.8	0.4	0.9	0.6	0.7	0.2	0.3	0.5	1.3	20.0	19.7	5.5	5.8	0.2	0.5	0.3	0.3
Comparison Forecasts																				
De Nederlandsche Bank (Jun. '24)	0.5	1.3	1.9	1.8																
Eur Commission (May '24)	0.8	1.5	1.6	1.7	-2.1	1.2														
IMF (Jul. '24)	0.7	1.5																		
OECD (May '24)	0.7	1.3	1.9	1.2	-3.3	0.4														

- Although domestic CPI edged down to 3.5% (y-o-y) in September, consumer prices remain elevated compared to their European neighbours. Inflation was spurred by food, drink, tobacco, and service prices, conversily fuel prices declined. Elsewhere, the government is pledging to increase new housing builds in a bid to tackle inflationary pressure from the tight housing market.

- The 2025 draft budget laid out cuts to healthcare, social security, and the civil service, as well as to the prior government's big spending plans. Alongside these austerity measures, the government lowered the tax band on lower income earners and is trying to promote competitiveness and high skills within the economy. Defence spending is also projected to increase.

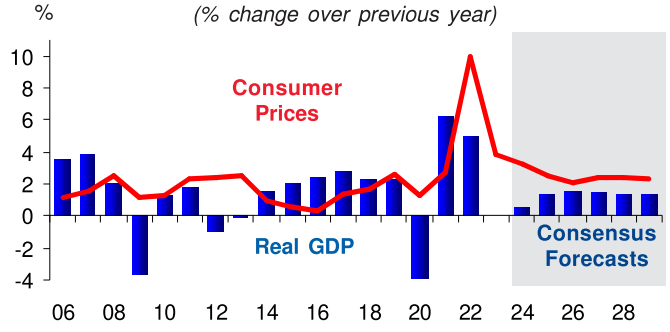
Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-3.9	6.3	5.0	0.1
Private Consumption*	-6.1	4.5	6.9	0.8
Gross Fixed Investment*	-2.5	2.4	3.4	1.3
Manufacturing Production*	-3.0	7.2	7.8	-0.4
Consumer Prices*	1.3	2.7	10.0	3.8
Hourly Wages (manufacturing)*	2.9	2.2	3.4	7.1
Current Account, Transactions basis, Euro bn	45.6	89.3	65.7	105.2
General Govt. Budget Balance (Maastricht definition), Euro bn	-29.6	-19.5	-0.9	-3.5
3 mth Euro, % (end year)	-0.5	-0.6	2.1	3.9
10 Yr Dutch Govt Bond Yield % (end year)	-0.5	0.0	2.9	2.3

Nominal GDP - €1,033bn (2023). **Popn -** 18.1mn (UN, Mid 2023). **$/Euro Exch. Rate -** 1.082 (average, 2023).

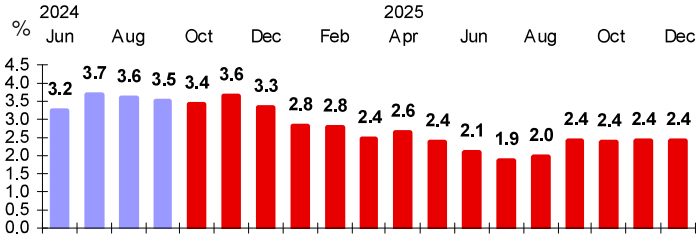
Real Growth and Inflation

(% change over previous year)



Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



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OCTOBER 2024 NORWAY

	Average % Change on Previous Calendar Year														Annual Total		Rates on Survey Date			
	Gross Domestic Product (Mainland)		Gross Domestic Product (Total)		Private Consumption		Gross Fixed Investment		Manufacturing Production		Consumer Prices		Wages & Salaries		Current Account (Nkr bn)		4.7% 3 month Interbank Rate (%)		3.5 % 10 Year Govt Bond Yield (%)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
Econ Intelligence Unit	na	na	1.0	1.5	0.9	1.5	0.6	0.7	na	na	2.2	2.0	na	na	888	834	4.5	3.9	3.1	2.9
Fitch Ratings	na	na	0.9	1.6	na	na	na	na	na	na	3.8	2.7	na	na	675	622	na	na	na	na
S&P Global Market Intel	na	na	2.4	2.2	1.0	1.8	-3.3	3.7	na	na	3.0	1.8	na	na	1039	1029	4.5	3.3	3.4	3.2
HSBC	0.8	1.1	na	na	1.2	1.4	-5.7	1.8	na	na	3.5	2.5	4.9	4.0	na	na	na	na	na	na
FERI	0.7	0.9	2.0	0.7	1.1	1.3	-4.9	0.8	2.1	1.1	3.1	2.1	4.6	2.7	811	819	4.5	3.8	3.3	3.4
Statistics Norway	0.7	2.1	1.0	1.3	1.1	2.1	-2.4	-0.1	2.2	3.7	3.4	3.3	5.3	4.6	878	918	na	na	na	na
Citigroup	0.6	1.5	na	na	1.2	1.7	-7.1	0.8	na	na	2.9	1.9	na	na	514	528	4.3	3.3	3.3	3.0
Bank of America - Merrill	0.6	1.1	1.6	1.8	1.1	2.7	na	na	na	na	3.2	3.2	na	na	na	na	na	na	na	na
NHO Conf Nor Enterprise	0.6	1.6	1.6	2.1	0.9	2.1	-3.3	-1.7	na	na	na	2.7	na	na	na	na	na	na	na	na
UniCredit	0.6	1.0	0.7	1.2	na	na	na	na	na	na	3.2	2.1	na	na	na	na	na	na	na	na
JP Morgan	0.6	1.0	na	na	na	na	na	na	na	na	3.3	2.7	na	na	na	na	na	na	na	na
Oxford Economics	0.6	1.1	2.3	0.5	0.8	2.0	-4.2	2.0	2.3	1.9	3.2	2.0	5.2	4.0	870	781	4.6	3.8	3.3	3.3
Capital Economics	0.6	1.2	na	na	1.1	2.1	na	na	na	na	3.3	1.8	na	na	na	na	na	na	na	na
Moody's Analytics	0.1	0.7	na	na	0.7	0.9	-2.6	2.2	na	na	3.1	1.8	2.4	1.9	841	669	na	na	na	na
Consensus (Mean)	0.6	1.2	1.5	1.4	1.0	1.8	-3.6	1.1	2.2	2.2	3.2	2.3	4.5	3.4	814	775	4.5	3.6	3.3	3.2
Last Month's Mean	0.7	1.3	1.3	1.6	0.4	1.6	-3.7	0.9	1.3	2.4	3.4	2.3	5.1	3.7	803	762				
3 Months Ago	0.8	1.4	1.1	1.8	0.3	1.8	-3.5	1.3	1.1	2.3	3.5	2.4	4.9	3.8	790	763				
High	0.8	2.1	2.4	2.2	1.2	2.7	0.6	3.7	2.3	3.7	3.8	3.3	5.3	4.6	1039	1029	4.6	3.9	3.4	3.4
Low	0.1	0.7	0.7	0.5	0.7	0.9	-7.1	-1.7	2.1	1.1	2.2	1.8	2.4	1.9	514	528	4.3	3.3	3.1	2.9
Standard Deviation	0.2	0.4	0.6	0.6	0.2	0.5	2.2	1.5	0.1	1.3	0.4	0.5	1.2	1.1	157	163	0.1	0.3	0.1	0.2
Comparison Forecasts																				
Norges Bank (Oct. '24)	0.6	1.1	1.6	1.8	1.1	2.7					3.2	3.2								
Min. of Finance (May. '24)	0.9										3.9									
IMF (Apr. '24)			1.5	1.9							3.3	2.6								
OECD (May '24)	0.5	1.6	0.8	1.8	1.1	1.3	1.7	2.8			3.9	2.8								

*Individual forecasts available in Excel

Consensus*

General Govt Budget Balance (Nkr bn)	
2024	2025
687.6	597.8

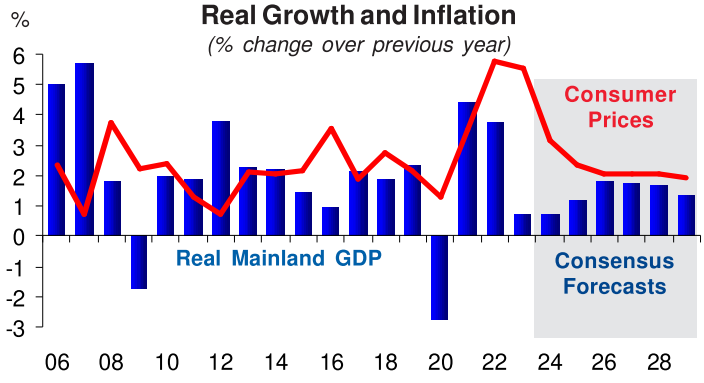
◈ CPI rose to 3.0% (y-o-y) in September, up from 2.8% the month prior. Despite this increase, consumer prices are expected to fall back to around 2% for the rest of the year (see chart below right). Nevertheless, lingering concerns about inflation and currency weakness (which in turn is also fuelling inflation pressures) encouraged the Norges Bank to hold rates at 4.5% on September 19 (a position its held since December 2023). Notably, the bank signalled that rates won't be cut until Q1 2025, quashing speculation that it would start its easing cycle at the December meeting, as many had suspected. Norges Bank will have to tread a fine line between bringing above-target inflation down, while simultaneously supporting the economy. Indeed, mainland GDP grew +0.1% (q-o-q) in Q2 while 2024 forecasts have edged down to +0.6%.

Historical Data

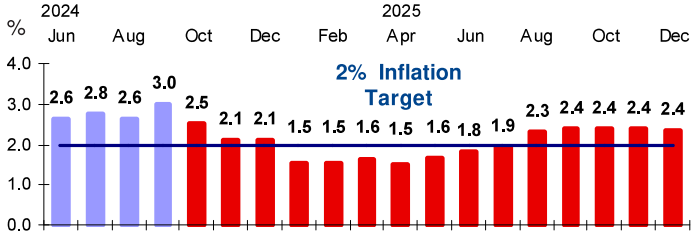
* % change on previous year	2020	2021	2022	2023
GDP (Mainland)*	-2.8	4.5	3.7	0.7
GDP (Total)*	-1.3	3.9	3.0	0.5
Private Consumption*	-6.4	5.1	5.9	-0.9
Gross Fixed Investment*	-4.1	0.7	5.2	0.3
Manufacturing Production*	-3.1	3.2	-0.3	-0.2
Consumer Prices*	1.3	3.5	5.8	5.5
Wages & Salaries per Full-Time Employee (Total)*	2.7	3.4	4.2	5.7
Current Account, Nkr bn	38.2	644	1722	917
General Govt. Bud Bal, Nkr bn	-89	445	1459	845
3 mth Interbank Rate, % End yr	0.5	1.0	3.3	4.7
10 Yr Govt Bond Yield, % End yr	0.9	1.7	3.2	3.3

Nominal GDP (total) - Nkr 5,129bn (2023). **Population -** 5.5mn (UN, Mid 2023). **Nkr/$ Exchange Rate -** 10.56 (average, 2023).

Real Growth and Inflation
(% change over previous year)



Monthly CPI Outturns and y-o-y Consensus Forecasts
(% change on the same period of the previous year)



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SPAIN — OCTOBER 2024

	Average % Change on Previous Calendar Year												Annual Total				Rates on Survey Date			
	Gross Domestic Product		House-hold Con-sumption		Gross Fixed Invest-ment		Industrial Produc-tion		Con-sumer Prices (CPI)		Salary Cost per Hour		Current Account (€ bn)		General Govt Bud Balance (Maastricht) (€ bn)		3.3 % 3 month Euro Rate (%)		3.0 % 10 Year Spanish Govt Bond Yield (%)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
FUNCAS	3.0	2.1	2.7	2.3	2.2	2.5	0.2	1.7	2.7	1.7	5.5	2.7	47.0	47.6	-49.5	-50.0	3.0	2.3	2.9	2.8
Oxford Economics	2.9	2.1	2.5	2.0	2.9	4.6	0.4	2.5	2.7	2.0	3.9	2.3	53.4	59.3	-48.7	-49.0	2.4	1.8	3.2	3.4
Natixis	2.9	2.2	2.2	1.5	2.7	3.0	na	na	2.8	1.5	na	na	na	na	na	na	na	na	na	na
AFI	2.9	2.2	2.4	2.1	2.5	2.6	na	na	2.8	2.0	3.9	3.2	51.3	38.0	-45.2	-40.9	2.5	2.3	3.1	3.3
Capital Economics	2.9	2.8	2.3	3.4	2.5	2.9	na	na	na	na	na	na	31.1	28.7	-46.7	-45.8	na	na	na	na
Grupo Santander	2.8	2.1	2.4	2.1	2.9	3.2	na	na	2.9	2.2	na	na	na	na	na	na	2.9	2.4	3.1	3.1
Moody's Analytics	2.8	2.0	2.5	2.4	2.5	3.3	-0.1	0.7	2.9	1.9	na	na	56.0	57.3	-50.8	-47.9	na	na	na	na
Citigroup	2.8	2.0	1.9	1.3	2.3	3.0	na	na	2.9	1.7	na	na	23.3	28.3	-45.2	-40.2	na	na	2.9	3.0
S&P Global Ratings	2.7	2.1	2.0	2.0	2.8	3.7	na	na	3.0	2.1	na	na	na	na	na	na	na	na	na	na
S&P Global Market Intel	2.7	1.7	1.9	1.5	3.0	4.3	0.2	1.3	2.8	2.0	na	na	55.7	50.8	-57.9	-49.9	3.0	2.1	3.2	3.3
Goldman Sachs	2.7	1.8	2.2	1.8	2.3	2.6	na	na	3.2	2.3	na	na	na	na	-43.6	-39.9	na	na	na	na
CEOE	2.7	2.0	2.0	1.4	2.1	1.4	na	na	2.9	2.0	na	na	46.4	42.0	-46.4	-45.3	2.8	2.2	2.7	2.5
Econ Intelligence Unit	2.7	2.2	2.1	2.1	2.7	3.0	0.9	1.5	3.0	2.2	na	na	37.6	37.9	-49.0	-49.8	3.1	2.3	3.1	3.1
HSBC	2.7	1.9	1.9	1.6	2.7	3.3	0.0	1.3	na	na	na	na	54.8	46.0	-44.5	-38.9	na	na	na	na
UniCredit	2.7	1.6	1.9	1.8	2.5	2.7	na	na	na	na	na	na	na	na	-49.1	-49.4	na	na	na	na
Fitch Ratings	2.7	2.1	1.9	1.7	2.6	2.7	na	na	3.0	2.4	na	na	40.5	38.3	-46.0	-46.8	na	na	na	na
Inst Estud Economicos	2.6	1.9	2.1	1.5	2.3	1.5	na	na	2.9	2.1	4.0	2.9	31.5	30.6	-51.0	-47.4	2.5	1.8	2.7	2.6
Repsol	2.6	2.0	1.9	2.3	3.0	3.2	0.9	1.5	2.9	2.1	3.0	2.2	29.2	14.6	-46.8	-43.9	3.1	2.6	3.2	3.2
Societe Generale CIB	2.6	1.5	1.9	1.5	2.0	0.7	na	na	2.8	1.5	na	na	48.0	42.0	-40.0	-38.0	na	na	na	na
Euromonitor Intl	2.6	2.0	2.0	1.7	2.7	3.1	na	na	3.0	2.2	na	na	77.8	90.1	-49.0	-47.0	na	na	na	na
Bank of America - Merrill	2.6	1.5	1.8	1.4	2.2	1.5	0.4	1.6	3.1	1.6	na	na	41.1	40.7	na	na	na	na	na	na
CEPREDE	2.5	2.4	2.3	2.1	2.4	4.7	1.6	1.6	2.9	2.2	4.8	3.5	45.1	41.5	-55.4	-63.6	3.2	2.4	2.8	2.7
BBVA	2.5	2.1	2.2	1.9	3.4	5.4	na	na	3.3	2.4	na	na	na	na	-45.6	-44.4	3.1	2.6	3.0	3.1
EthiFinance Ratings	2.5	2.2	2.3	2.0	1.5	1.4	na	na	3.1	2.3	na	na	33.6	31.8	-48.2	-47.9	na	na	na	na
La Caixa	2.4	2.3	2.2	2.4	2.5	3.6	na	na	3.2	2.5	4.2	3.1	41.6	44.3	-47.0	-42.9	3.1	2.5	3.2	3.0
Bloomberg Economics	2.3	1.7	2.4	2.6	3.5	4.0	na	na	3.0	1.7	5.3	2.2	na	na	na	na	na	na	na	na
UBS	2.2	1.9	1.7	1.7	2.4	2.6	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Consensus (Mean)	2.7	2.0	2.1	1.9	2.6	3.0	0.5	1.5	2.9	2.0	4.3	2.8	44.5	42.6	-47.9	-46.1	2.9	2.3	3.0	3.0
Last Month's Mean	2.5	2.0	2.0	1.9	2.5	3.1	0.8	1.9	3.0	2.1	3.6	2.8	44.3	42.0	-47.7	-46.3				
3 Months Ago	2.3	1.9	2.0	1.8	2.6	3.3	1.1	1.8	3.1	2.1	3.9	2.7	36.9	36.4	-49.0	-47.9				
High	3.0	2.8	2.7	3.4	3.5	5.4	1.6	2.5	3.3	2.5	5.5	3.5	77.8	90.1	-40.0	-38.0	3.2	2.6	3.2	3.4
Low	2.2	1.5	1.7	1.3	1.5	0.7	-0.1	0.7	2.7	1.5	3.0	2.2	23.3	14.6	-57.9	-63.6	2.4	1.8	2.7	2.5
Standard Deviation	0.2	0.3	0.2	0.5	0.4	1.1	0.5	0.5	0.2	0.3	0.8	0.5	12.6	15.6	3.9	5.5	0.3	0.3	0.2	0.3
Comparison Forecasts																				
Banco de Espana (Sep. '24)	2.8	2.2	2.2	2.1																
Government (Sep. '24)	2.7	2.4	2.2	2.1																
Eur Commission (May '24)	2.1	1.9	2.1	1.9	1.9	2.9														
IMF (Jul. '24)	2.4	2.1																		
OECD (Sep '24)	2.8	2.2							3.0	2.1										

Individual forecasts available in Excel

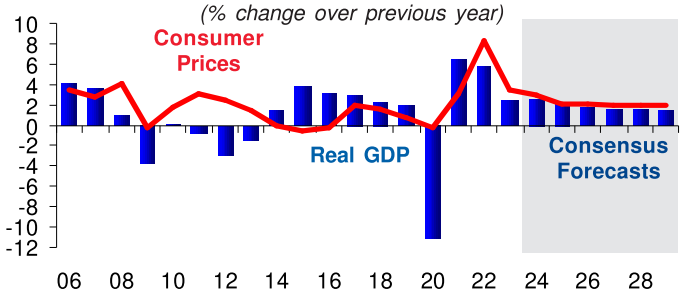
Unemployment Rate (%)	
2024	2025
Consensus* 11.6	11.2

◈ September's flash CPI unexpectedly fell to +1.5% (y-o-y), down from 2.3% in August and lowest rate since March 2020. Fuel prices (as Brent dropped to a 2-year low in September) was the main downwards driver, while reduced food and electricity prices also contributed to the easing of consumer prices.

◈ In contrast to its European neighbours, Spain's manufacturing PMI surged in September in spite of struggles earlier in the year. Orders and production were up while easing cost pressures boosted business sentiment. Similarly, the services PMI also surprisingly boasted strong growth in September due to strong demand. This was despite the summer season coming to an end. As a result, private consumption will likely be the main driver for growth.

Real Growth and Inflation

(% change over previous year)



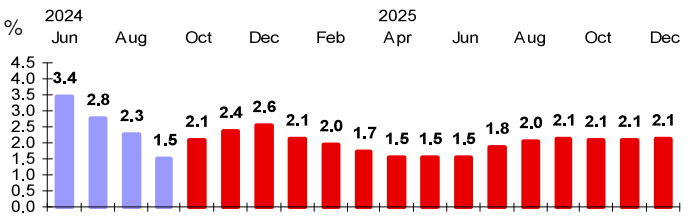
Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-11.2	6.4	5.8	2.5
Household Consumption*	-12.4	7.2	4.8	1.8
Gross Fixed Investment*	-9.0	2.8	2.4	0.8
Industrial Production*	-10.1	8.1	1.9	-0.7
Consumer Prices*	-0.3	3.1	8.4	3.5
Salary Cost per Hour*	6.0	-0.2	2.3	5.0
Unemployment Rate, %	15.5	14.9	13.0	12.2
Current Account, Euro bn	6.9	9.3	8.2	37.7
General Govt. Budget Balance (Maastricht definition), Euro bn	-113	-82.3	-63.7	-53.2
3 mth Euro, % (end year)	-0.5	-0.6	2.1	3.9
10 Yr Govt Bond Yield % (end year)	0.0	0.6	3.7	3.0

Nominal GDP - €1,462bn (2023). **Popn -** 47.9mn (UN, Mid 2023). **$/Euro Exch. Rate -** 1.082 (average, 2023).

Monthly CPI Outturns and y-o-y Consensus Forecasts

(% change on the same period of the previous year)



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OCTOBER 2024 — SWEDEN

	Average % Change on Previous Calendar Year												Annual Total				Rates on Survey Date			
	Gross Domestic Product		House-hold Con-sumption		Gross Fixed Invest-ment		Mining & Manu-facturing Produc-tion		Con-sumer Prices (CPI)		Hourly Earnings (Mining & Manuf.)		Current Account (SEK bn)		General Govt Budget Balance (SEK bn)		3.0 % 3 month Interbank Rate (%)		2.2 % 10 Year Govt Bond Yield (%)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
Confed of Swed Enterprise	0.9	2.3	-0.1	2.6	-1.7	2.7	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Svenska Handelsbanken	0.9	2.3	0.2	3.1	-2.0	2.2	na	na	2.9	1.5	3.9	3.7	na	na	-79.3	-83.9	2.8	2.3	2.1	2.2
HSBC	0.9	2.6	0.1	2.1	-1.6	3.8	na	na	3.1	1.4	na	na	na	na	na	na	na	na	na	na
Oxford Economics	0.8	2.2	0.1	2.2	-1.8	2.4	-0.6	3.7	2.7	1.1	3.7	3.0	462	319	-34.0	-64.0	2.5	2.1	2.1	2.2
S&P Global Market Intel	0.8	1.8	0.1	1.8	-1.5	2.4	na	na	2.8	1.2	na	na	324	302	-110.2	-107.7	2.7	2.3	2.5	2.4
Citigroup	0.7	1.1	-0.2	0.8	-1.7	1.4	na	na	na	na	na	na	433	461	-31.5	na	2.5	1.8	2.0	2.0
Econ Intelligence Unit	0.7	1.8	0.7	2.5	-1.0	2.4	-1.5	1.8	na	na	na	na	412	401	na	na	3.5	3.0	2.0	2.6
National Institute - NIER	0.7	1.8	0.0	2.4	-2.2	1.4	-0.5	3.2	2.8	-0.3	4.1	3.7	463	453	-94.0	-42.0	na	na	2.0	2.1
UniCredit	0.7	1.6	0.2	2.0	-1.5	1.5	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Euromonitor Intl	0.7	2.1	0.5	3.1	-0.2	2.6	na	na	3.1	1.8	na	na	434	396	-49.8	-38.6	na	na	na	na
SE Banken	0.6	2.6	-0.1	3.2	-1.5	3.0	na	na	2.8	0.4	3.9	3.4	422	372	na	na	2.2	2.1	2.0	2.1
Capital Economics	0.6	1.5	-0.2	1.9	-2.4	0.7	na	na	na	na	na	na	na	na	-43.5	-93.2	na	na	na	na
Morgan Stanley	0.5	1.0	-0.3	0.6	-2.1	0.9	na	na	3.0	2.0	na	na	na	na	na	na	na	na	na	na
Moody's Analytics	0.5	1.8	na	na	-2.4	1.7	na	na	3.0	1.8	na	na	325	335	na	na	na	na	na	na
Swedbank	0.2	2.4	0.3	3.2	-1.3	1.8	na	na	3.0	1.1	3.8	3.6	na	na	na	na	na	na	na	na
Consensus (Mean)	0.7	1.9	0.1	2.3	-1.7	2.1	-0.9	2.9	2.9	1.2	3.9	3.5	409	380	-63.2	-71.6	2.7	2.3	2.1	2.2
Last Month's Mean	0.7	1.9	0.4	2.2	-1.2	2.1	-0.9	3.1	3.0	1.4	3.9	3.5	387	357	-68.8	-42.2				
3 Months Ago	0.8	2.0	0.7	2.2	-0.7	2.3	0.4	2.8	3.1	1.6	3.9	3.5	369	359	-71.9	-32.7				
High	0.9	2.6	0.7	3.2	-0.2	3.8	-0.5	3.7	3.1	2.0	4.1	3.7	463	461	-31.5	-38.6	3.5	3.0	2.5	2.6
Low	0.2	1.0	-0.3	0.6	-2.4	0.7	-1.5	1.8	2.7	-0.3	3.7	3.0	324	302	-110.2	-107.7	2.2	1.8	2.0	2.0
Standard Deviation	0.2	0.5	0.3	0.8	0.6	0.8	0.5	1.0	0.1	0.7	0.1	0.3	55	59	31.2	28.1	0.4	0.4	0.2	0.2
Comparison Forecasts																				
Riksbank (Sep. '24)	0.8	1.9							2.7	0.4										
Government (Sep. '24)	0.8	2.5	0.3	2.9	-0.2	3.0			2.8	0.9										
Eur Commission (May '24)	0.2	2.1	0.5	2.5	-1.4	2.1														
IMF (Apr. '24)	0.2	2.2																		
OECD (May '24)	0.6	2.6	1.3	2.9	-0.9	3.9			3.6	2.1										

*Individual forecasts available in Excel

Consensus*

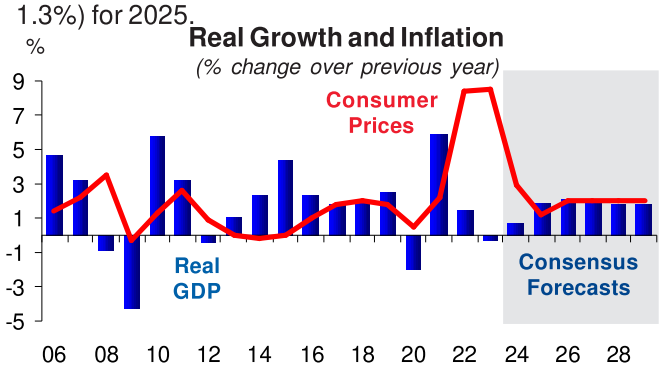
General Govt Budget Balance (% of GDP)	
2024	2025
-1.0	-1.1

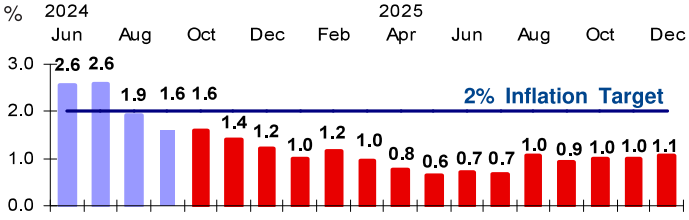
◈ The Riksbank cut its policy rate for the third time by 25bps, to 3.25% at its September meeting, as policymakers became increasingly concerned about the economic outlook. GDP fell -0.3% (q-o-q) in Q2. Policymakers telegraphed further cuts at both its next two meetings (November 7 and December 19), with a potential 50bps cut at one of these, highlighting a quicker pace of easing than initially expected. Inflation has been easing, falling within the Riksbank's 2% target in August (1.9% y-o-y) and to 1.6% in September. CPIF (CPI with fixed interest rates, closely monitored by the Riksbank), eased to 1.1% in September. Softening inflation has encouraged the Riksbank to revise its forecasts to 2.7% (vs 3.1%) for 2024, and 0.4% (vs 1.3%) for 2025.

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-2.0	5.9	1.5	-0.3
Household Consumption*	-3.0	6.0	2.8	-2.3
Gross Fixed Investment*	1.6	7.3	0.3	-1.4
Min. & Manufacturing Prodn*	-5.2	7.4	2.3	1.4
Consumer Prices*	0.5	2.2	8.4	8.5
Average Hourly Earnings (Mining & Manufacturing)*	1.0	2.6	2.4	3.8
Current Account, SEK bn	291	378	290	401
General Govt. Bud Bal, SEK bn	-159	-8.0	60.1	-38.7
% of GDP	-3.2	-0.1	1.0	-0.6
3 mth Interbank Rate, % end yr	0.0	0.0	2.7	4.1
10 Yr Govt Bond Yield, % end yr	0.0	0.2	2.4	2.1

Nominal GDP - Skr 6,206bn (2023). **Population -** 10.6mn (UN, Mid 2023). **Skr/$ Exchange Rate -** 10.61 (average, 2023).





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SWITZERLAND — OCTOBER 2024

	Average % Change on Previous Calendar Year												Annual Total				Rates on Survey Date			
	Gross Domestic Product		GDP, Sports Event Adjusted		Private Consump-tion		Gross Fixed Invest-ment		Industrial Production		Consumer Prices		Merchan-dise Exports (SwFrbn)		Current Account (SwFrbn)		0.9 % 3 month Swiss Av. Rate (SAR3M) (%)		0.5 % 10 Year Govt Bond Yield (%)	
Economic Forecasters	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	2024	2025	End Jan'25	End Oct'25	End Jan'25	End Oct'25
Goldman Sachs	1.7	1.9	na	na	na	na	na	na	4.6	4.1	1.4	1.4	na	na	na	na	na	na	na	na
Capital Economics	1.6	2.1	na	na	1.5	2.1	-1.4	1.3	na	na	1.2	0.8	na	na	82.3	80.0	na	na	na	na
HSBC	1.6	1.4	na	na	1.4	1.3	-1.3	1.9	1.9	2.9	1.1	0.8	na	na	74.6	79.1	0.7	0.5	na	na
Luzerner Kantonalbank	1.6	1.7	1.4	1.9	1.4	1.5	-1.2	2.6	na	na	1.2	0.9	na	na	na	na	0.7	0.7	0.6	0.7
KOF Swiss Econ Inst	1.5	1.2	1.1	1.6	1.5	1.5	-1.2	2.2	na	na	1.2	0.7	271	279	50.5	47.0	0.7	0.7	0.5	0.6
Citigroup	1.5	1.5	na	na	1.5	1.5	-1.2	2.3	na	na	1.1	0.8	na	na	60.2	58.4	0.8	0.3	0.7	0.8
S&P Global Market Intel	1.5	1.6	1.1	1.7	1.3	1.2	-1.3	3.2	1.8	1.3	1.2	0.9	268	274	76.5	82.4	1.0	1.1	0.6	0.8
Bank J Safra Sarasin	1.5	1.0	1.1	1.3	1.4	1.4	-1.3	1.0	na	na	1.1	0.6	na	na	na	na	0.7	0.2	0.4	0.5
Bank Julius Baer	1.5	1.6	1.1	1.6	1.4	1.5	-0.7	2.2	na	na	1.1	0.9	na	na	na	na	0.8	0.5	0.4	0.5
Allianz	1.4	1.5	na	na	na	na	na	na	na	na	1.2	1.1	na	na	na	na	1.0	1.0	0.5	0.8
Swiss Life Asset Mgrs	1.4	1.2	1.0	1.1	1.1	1.0	1.2	3.2	na	na	1.1	0.4	na	na	na	na	1.0	1.0	0.5	0.6
UBS	1.4	1.3	1.0	1.5	1.4	1.2	-1.4	1.2	na	na	1.1	0.7	na	na	na	na	0.8	0.5	0.5	0.5
Oxford - BAK	1.4	1.2	1.0	1.5	1.4	1.6	-1.2	2.9	2.0	2.1	1.2	0.6	na	na	52.9	63.2	0.8	0.8	0.6	0.9
Fitch Ratings	1.4	1.4	na	na	1.5	1.4	-1.1	1.1	na	na	1.2	1.1	na	na	50.4	48.9	na	na	na	na
S&P Global Ratings	1.4	1.5	na	na	1.5	1.4	-1.2	1.6	na	na	1.3	1.1	na	na	na	na	na	na	na	na
Moody's Analytics	1.1	1.7	na	na	1.4	1.1	-1.4	0.9	3.4	2.9	1.1	1.0	na	na	86.8	119.5	na	na	na	na
Econ Intelligence Unit	1.1	1.6	na	na	1.4	1.2	-0.8	2.2	5.0	4.2	1.2	1.1	na	na	55.5	55.3	0.6	0.7	0.6	0.5
Consensus (Mean)	1.4	1.5	1.1	1.5	1.4	1.4	-1.0	2.0	3.1	2.9	1.2	0.9	269	276	65.5	70.4	0.8	0.7	0.5	0.6
Last Month's Mean	1.4	1.5	1.1	1.6	1.3	1.4	-0.5	2.1	1.8	2.7	1.2	1.0	281	294	63.6	66.0				
3 Months Ago	1.4	1.5	1.1	1.6	1.3	1.4	0.0	2.5	1.1	2.7	1.3	1.1	276	285	62.0	64.4				
High	1.7	2.1	1.4	1.9	1.5	2.1	1.2	3.2	5.0	4.2	1.4	1.4	271	279	86.8	119.5	1.0	1.1	0.7	0.9
Low	1.1	1.0	1.0	1.1	1.1	1.0	-1.4	0.9	1.8	1.3	1.1	0.4	268	274	50.4	47.0	0.6	0.2	0.4	0.5
Standard Deviation	0.2	0.3	0.1	0.2	0.1	0.3	0.7	0.8	1.4	1.1	0.1	0.2	2.3	3.2	14.5	22.8	0.1	0.3	0.1	0.1
Comparison Forecasts																				
IMF (Apr. '24)	1.3	1.4									1.5	1.2								
SECO (Sep. '24)	1.6	1.2	1.2	1.6							1.2	0.7								
OECD (May '24)	1.1	1.4			1.2	1.5	-2.8	0.9			1.5	1.4								

*Individual forecasts available in Excel

Consensus*

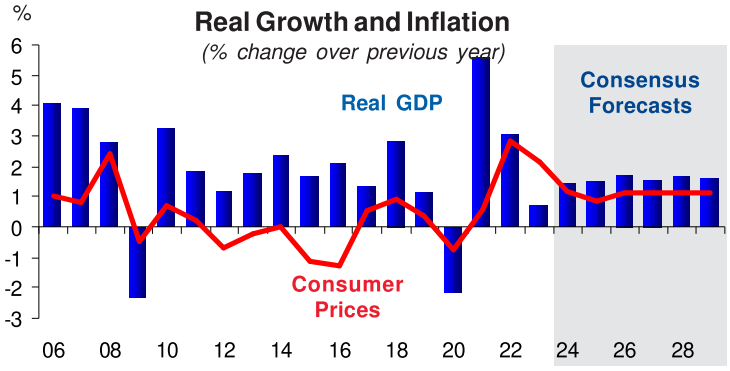
General Govt Budget Balance (SwFrbn)	
2024	2025
2.2	*2.5*

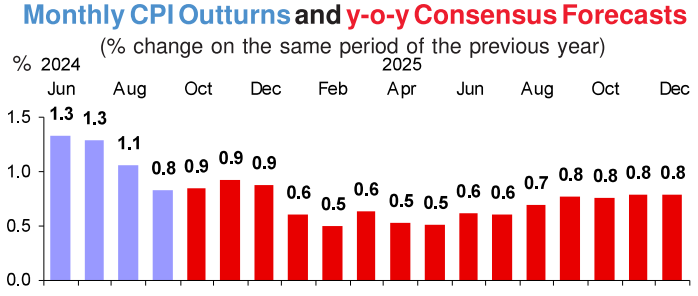
◈ The Swiss National Bank (SNB) cut its policy rate for the third consecutive time by 25bps to 1% at its September meeting. The SNB became one of the first major central banks to cut rates in March, reducing by 25bps at every meeting since. Policymakers remain willing to cut further as inflation continues to moderate within the central bank's below-2% target. Inflation dropped to 0.8% (y-o-y) in September, benefitting from an appreciation in the Swiss franc over the past couple months. The central bank revised its CPI forecasts to 1.2% (vs 1.3%) for 2024, 0.6% (vs 1.1%) for 2025, and 0.7% (vs 1%) for 2026. Economics ministry SECO also revised its CPI forecast to 1.2% (vs 1.4%) in 2024 and 0.7% (vs 1.1%) in 2025. The consensus is looking at 1.2% for 2024 and 0.9% for 2025.

Historical Data

* % change on previous year	2020	2021	2022	2023
Gross Domestic Product*	-2.1	5.6	3.0	0.7
GDP, Sports Events Adjusted	-2.1	5.3	2.8	1.1
Private Consumption*	-3.4	2.2	4.3	1.5
Gross Fixed Investment*	-1.3	2.7	-0.1	0.1
Industrial Production*	-3.4	8.9	5.6	0.6
Consumer Prices*	-0.7	0.6	2.8	2.1
Merch Exports, SwFr bn*	225	260	278	274
Current Account, SwFr bn	3.4	51.2	74.6	55.5
General Govt Bud Bal, SwFr bn	-19.0	-6.7	6.8	4.4
3mth Swiss Av. Rate, % End yr	-0.7	-0.7	1.0	1.7
10Yr Govt Bond Yield, % End yr	-0.5	-0.2	1.6	0.7

Nominal GDP - CHF795bn (2023). **Population -** 8.9mn (UN, Mid 2023). **SwFr/$ Exchange Rate -** 0.898 (average, 2023).





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OCTOBER 2024 — ADDITIONAL COUNTRIES

Forecasts for the countries in Western Europe, the Middle East and Africa shown on the next two pages were provided by the following leading economic forecasters, among others:

ABSA Capital — *Akava Works* — *Allianz* — *Banco BPI*
Bank Leumi — *Bank of America* — *Barclays* — *Capital Economics*
Citigroup — *Danske Bank* — *Deutsche Bank* — *Economist Intelligence Unit*
ETLA — *Euromonitor* — *Fitch Ratings* — *Forecaster ECOSA*
Goldman Sachs — *Handelsbanken* — *Moody's Analytics* — *NedBank*
Oxford Economics — *Scope Ratings* — *S&P Global Market Intel* — *S&P Global Ratings*
Universidade Catolica Portuguesa

AUSTRIA

Population - 9.1mn (Mid 2023, UN)

Nominal GDP - US$516.1bn (2023)	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*	-6.6	4.2	4.8	-0.8	0.0	1.5
Industrial Production *(% change on previous year)*	-5.5	11.2	4.6	-1.0	-2.0	1.6
Consumer Prices *(% change on previous year)*	1.4	2.8	8.6	7.8	3.2	2.2
Current Account *(US Dollar bn)*	14.9	7.8	-1.3	13.7	15.5	9.6

BELGIUM

Population - 11.6mn (2022, IMF)

Nominal GDP - US$578.5bn (2022)	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*	-5.3	6.9	3.0	1.4	1.2	1.3
Industrial Production *(% change on previous year)*	-4.1	25.5	-0.8	-7.5	-1.5	0.9
Consumer Prices *(% change on previous year)*	0.7	2.4	9.6	4.1	3.8	2.2
Current Account *(US Dollar bn)*	7.3	8.2	-5.3	-6.2	-4.1	-3.1

DENMARK

Population - 5.9mn (Mid 2023, UN)

Nominal GDP - US$405.2bn (2023)	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*	-2.4	6.8	2.7	1.8	1.9	1.9
Manufacturing Production *(% change on previous year)*	-4.1	10.4	13.4	10.5	8.6	4.4
Consumer Prices *(% change on previous year)*	0.4	1.9	7.7	3.3	1.6	1.9
Current Account *(US Dollar bn)*	26.5	35.5	46.8	41.0	47.8	47.9
					Jan '25	Oct '25
3 month Interbank Rate, *End period %*	-0.2	-0.3	2.5	3.9	2.8	2.3

EGYPT

Population - 104.1mn (Mid 2023, UN)

Nominal GDP - US$395.9bn (2023)[1]	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*[1]	3.6	3.3	6.6	3.8	2.9	4.1
Industrial Production *(% change on previous year)*	-10.2	9.4	6.8	0.0	0.0	4.2
Consumer Prices *(% change on previous year)*	5.0	5.2	13.9	33.8	29.8	16.7
Current Account *(US Dollar bn)*	-14.2	-18.6	-10.5	-12.6	-18.1	-12.0

[1] *year(s) ending June 30*

FINLAND

Population - 5.9mn (Mid 2023, UN)

Nominal GDP - US$300.2bn (2023)	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*	-2.4	2.8	1.3	-1.0	-0.3	1.5
Industrial Production *(% change on previous year)*	-3.0	4.1	3.6	-1.5	-1.3	2.0
Consumer Prices *(% change on previous year)*	0.3	2.2	7.1	6.2	1.4	1.6
Current Account *(US Dollar bn)*	1.4	1.2	-6.9	-4.3	-3.4	-2.9

GREECE

Population - 10.2mn (Mid 2023, UN)

Nominal GDP - US$238.2bn (2023)	Historical Data 2020	2021	2022	2023	Consensus Forecasts 2024	2025
Gross Domestic Product *(% change on previous year)*	-9.0	8.1	5.7	2.0	2.1	2.1
Industrial Production *(% change on previous year)*	-2.2	10.4	2.5	2.3	6.2	2.0
Consumer Prices *(% change on previous year)*	-1.2	1.2	9.6	3.5	2.7	2.2
Current Account *(US Dollar bn)*	-12.3	-14.0	-25.1	-14.7	-14.6	-14.2

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ADDITIONAL COUNTRIES

OCTOBER 2024

IRELAND

Population - 5.2mn (Mid 2023, UN)

Nominal GDP - US$545.7bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	6.6	15.1	9.4	-3.2	0.0	3.2
Industrial Production *(% change on previous year)*	14.6	28.4	18.9	-7.7	-8.2	4.3
Consumer Prices *(% change on previous year)*	-0.3	2.4	7.8	6.3	2.1	2.1
Current Account *(US Dollar bn)*	-27.9	70.4	57.5	53.8	66.3	54.3

ISRAEL

Population - 9.3mn (Mid 2023, UN)

Nominal GDP - US$507.2bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	-1.5	9.3	6.5	2.0	1.0	3.5
Industrial Production *(% change on previous year)*	5.7	7.3	14.2	0.8	-2.2	3.8
Consumer Prices *(% change on previous year)*	-0.6	1.5	4.4	4.2	3.0	2.9
Current Account *(US Dollar bn)*	20.0	19.4	20.6	25.3	23.0	23.6
					Jan '25	Oct '25
3 Month Interbank Rate, *end period %*	0.1	0.1	3.7	4.5	4.3	3.8

NIGERIA

Popn - 227.9mn (Mid 2023, UN)

Nominal GDP - US$367.4bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	-1.9	3.4	3.1	2.7	3.2	3.2
Consumer Prices *(% change on previous year)*	13.2	17.0	18.8	24.5	31.7	20.4
Current Account *(US Dollar bn)*	-16.0	-3.3	1.0	1.2	5.9	3.9

PORTUGAL

Population - 10.4mn (Mid 2023, UN)

Nominal GDP - US$287.4bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	-8.3	5.7	6.8	2.3	1.7	1.9
Industrial Production *(% change on previous year)*	-7.4	3.5	0.0	-2.6	0.9	1.8
Consumer Prices *(% change on previous year)*	0.0	1.3	7.8	4.3	2.5	1.9
Current Account *(US Dollar bn)*	-2.4	-1.9	-2.9	3.9	6.1	5.7

SAUDI ARABIA

Popn - 33.3mn (Mid 2023, UN)

Nominal GDP - US$1,067.1bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	-3.6	5.1	7.5	-0.8	1.5	4.3
Consumer Prices *(% change on previous year)*	3.4	3.1	2.5	2.4	1.7	2.0
Current Account *(US Dollar bn)*	-25.5	41.7	151.5	42.1	28.9	8.3

SOUTH AFRICA

Popn - 63.2mn (Mid 2023, UN)

Nominal GDP - US$379.4bn (2023)	Historical Data				Consensus Forecasts	
	2020	2021	2022	2023	2024	2025
Gross Domestic Product *(% change on previous year)*	-6.0	4.7	1.9	0.6	1.0	1.9
Manufacturing Production *(% change on previous year)*	-12.5	6.1	-0.3	0.7	0.9	2.3
Consumer Prices *(% change on previous year)*	3.3	4.6	6.9	5.9	4.7	4.1
Current Account *(US Dollar bn)*	6.6	15.3	-1.8	-6.1	-6.7	-9.4
					Jan '25	Oct '25
3 Month Interbank Rate, *end period %*	3.6	3.9	7.3	8.5	7.8	7.4

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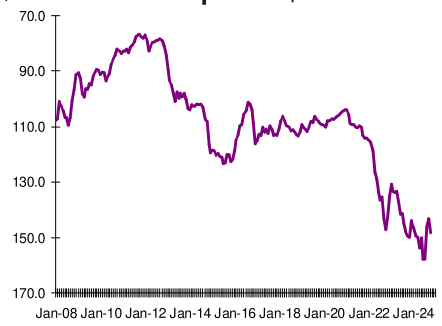
Foreign Exchange Rates*

**All US$ rates are amounts of currency per dollar, except the UK pound and the euro which are reciprocals. A positive (+) sign for the % change implies an appreciation of the currency against the US Dollar and vice versa.*

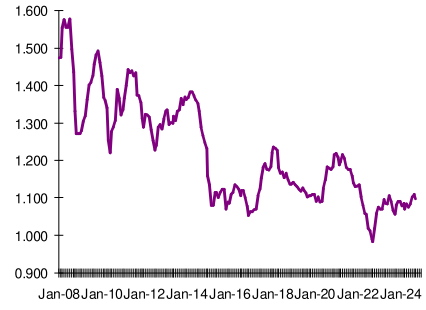
	Historical Data: Rates at end of: 2020	2021	2022	2023	Latest Spot Rate (Oct. 7)	Consensus Forecasts: Forecast End Jan. 2025	Percent Change	Forecast End Oct. 2025	Percent Change	Forecast End Oct. 2026	Percent Change
Rates per US Dollar*											
Canadian Dollar	1.274	1.263	1.355	1.319	1.361	1.360	0.1	1.345	1.2	1.325	2.7
Egyptian Pound	15.68	15.66	24.75	30.90	48.34	48.81	-1.0	49.91	-3.1	51.40	-6.0
European Euro	1.224	1.137	1.067	1.105	1.098	1.103	0.5	1.114	1.5	1.127	2.7
Israeli Shekel	3.211	3.112	3.529	3.601	3.789	3.661	3.5	3.593	5.5	3.597	5.3
Japanese Yen	103.2	115.2	131.9	141.0	148.2	142.5	4.0	138.1	7.3	133.3	11.2
Nigerian Naira	383.0	410.2	460.8	905.5	1620	1590	1.9	1645	-1.5	1836	-11.7
Saudi Arabian Riyal	3.750	3.750	3.758	3.750	3.756	3.750	0.2	3.750	0.2	3.750	0.2
South African Rand	14.69	15.96	17.02	18.29	17.41	17.50	-0.5	17.55	-0.8	18.01	-3.4
United Kingdom Pound	1.367	1.354	1.203	1.275	1.308	1.302	-0.4	1.311	0.2	1.309	0.1
Rates per Euro											
Danish Krone	7.444	7.438	7.436	7.455	7.457	7.455	0.0	7.455	0.0	7.456	0.0
Norwegian Krone	10.48	10.03	10.51	11.22	11.67	11.46	1.8	11.15	4.7	10.84	7.7
Swedish Krona	10.05	10.30	11.12	11.13	11.37	11.34	0.3	11.12	2.3	10.90	4.4
Swiss Franc	1.082	1.036	0.987	0.930	0.940	0.948	-0.9	0.958	-1.9	0.966	-2.8

For more forecasts covering a majority of world currencies, please email us about ***Foreign Exchange Consensus Forecasts.***

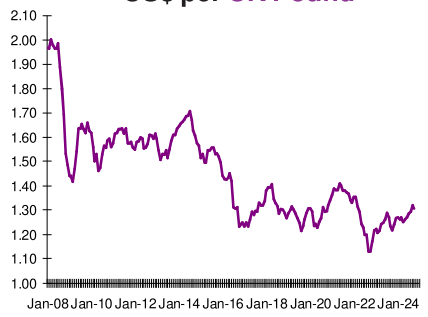
Yen per US$



US$ per Euro[1]



US$ per UK Pound



Brent, US$ per barrel

Range 1990-2024	US$9.10 - US$143.95
Spot Rate (Oct. 7)	US$ 81.74

Brent October 2024 survey	Forecasts for: End Jan 2025	End Oct 2025
Consensus (Mean) Forecasts	77.40	77.93
High	90.00	93.00
Low	69.20	67.70
Standard Deviation	4.15	5.99
No. of Forecasts	44	44

Brent Continues to See-Saw Between US$70-80

Brent prices have faced significant volatility over the past month as conflict in the Middle East intensified and oil-consuming economies appeared to be slowing. This increased concerns over both supply and demand fundamentals. Spot prices for Brent even fell to US$70.31 per barrel on September 11. More recently, Brent rose just over the US$80-mark on our survey date, October 7. Escalating tensions between Israel and Iran has pushed up geopolitical risk amid concerns that Iranian oil installations might be targeted and disrupted. Meanwhile, hopes resurfaced that CCP policymakers would introduce fiscal stimulus in order to boost the weak Chinese economy, which is a major fuel buyer. However, on October 8, crude futures dipped to US$78.19, as China's initial fiscal package disappointed traders hoping for a 'bazooka' injection of stimulus. Weakness in Western European economies, also consumers of oil, has amplified, too, and the US Energy Information Administration (EIA) has downgraded its demand outlook for 2025.

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continued from page 3

Germany

* % change over previous year	Historical				Consensus Forecasts						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-4.1	3.7	1.4	-0.3	0.0	0.7	1.2	1.2	1.0	0.9	0.8
Private Consumption*	-6.8	2.3	5.6	-0.4	0.4	1.0	1.3	1.3	1.1	1.0	0.9
Machinery & Eqpt Investment*	-11.6	3.5	4.5	-0.8	-5.6	0.9	3.0	2.5	2.2	2.3	1.9
Industrial Production*	-7.7	3.6	-0.7	-1.8	-3.6	0.8	2.3	1.9	1.5	1.1	0.5
Consumer Prices*	0.5	3.1	6.9	5.9	2.3	1.9	1.9	2.0	2.0	2.1	2.1
Current Account Balance (Euro bn)	223	263	165	258	278	277	278	269	266	240	222
10 Year Govt Bond Yield, % [1]	-0.6	-0.2	2.6	2.0	2.2 [3]	2.2 [4]	2.2	2.4	2.4	2.6	2.6

France

* % change over previous year	Historical				Consensus Forecasts						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-7.6	6.8	2.6	1.1	1.1	1.0	1.3	1.4	1.3	1.3	1.2
Household Consumption*	-6.5	5.2	3.0	0.9	0.7	1.1	1.4	1.4	1.4	1.3	1.2
Business Investment*	-5.6	10.0	3.0	3.1	-1.0	0.6	1.8	1.9	2.0	1.7	1.5
Manufacturing Production*	-11.7	5.4	1.7	1.0	-0.9	0.7	1.7	1.6	1.5	1.3	1.1
Consumer Prices*	0.5	1.6	5.2	4.9	2.2	1.6	1.8	1.9	1.9	1.9	1.8
Current Account Balance (Euro bn)	-47.5	7.8	-30.8	-28.9	-16.4	-14.6	-14.1	-17.9	-19.8	-23.5	-26.3
10 Year Govt Bond Yield, % [1]	-0.3	0.2	3.1	2.6	2.9 [3]	2.9 [4]	2.9	2.8	2.8	2.8	2.7

United Kingdom

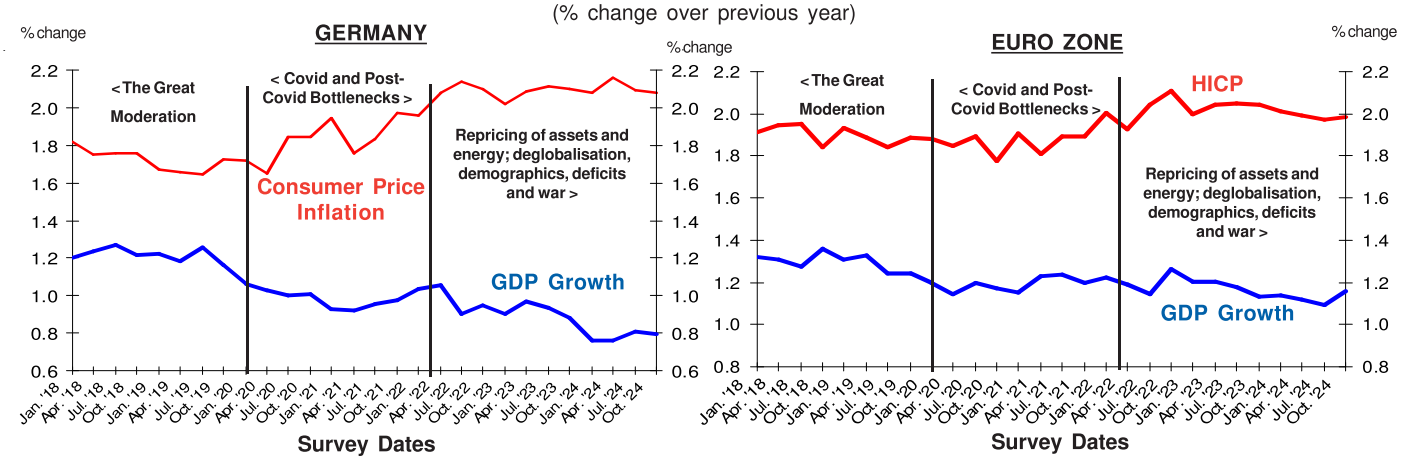
* % change over previous year	Historical				Consensus Forecasts						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-10.3	8.6	4.8	0.3	1.0	1.3	1.5	1.6	1.5	1.5	1.5
Household Consumption*	-13.0	7.0	7.3	0.5	0.6	1.3	1.5	1.6	1.5	1.5	1.5
Gross Fixed Investment*	-9.7	7.6	5.1	-0.1	1.1	1.5	2.2	1.7	1.4	1.1	1.5
Manufacturing Production*	2.2	1.6	-3.3	1.1	0.1	0.1	0.9	0.8	0.4	0.0	0.1
Retail Prices (underlying rate)*	1.7	4.2	11.5	8.6	3.1	3.3	2.8	3.0	2.9	2.9	2.8
Consumer Prices*	0.9	2.6	9.1	7.3	2.6	2.3	2.0	2.1	2.1	2.1	2.0
Current Account Balance (£ bn)	-61.7	-10.0	-53.1	-53.3	-83.6	-77.6	-69.1	-63.1	-67.3	-65.0	-70.6
10 Year Govt Bond Yield, % [2]	0.2	1.0	3.7	3.5	4.0 [3]	3.8 [4]	3.6	3.6	3.6	3.6	3.5

[1] *Signifies average for period* [2] *End period* [3] *End January 2025* [4] *End October 2025*

We have 'telescoped' the **6-10 year rolling-period average of GDP and CPI forecasts (collected four times a year)** from **January 2018 to October 2024**. This encapsulates the Great Moderation era of globalisation and 0% interest rates, followed by the Covid and Post-Covid era, and finally the current period. Inflection points like war in Ukraine, inflation, rapidly tightening monetary policies have triggered a reset in geopolitics and globalisation, not to mention repriced assets, labour and debt.

Germany and Euro zone – Long-Term 6-10 Year Forecasts between January 2018 - October 2024

(% change over previous year)



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Italy

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-8.9	8.9	4.7	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.8
Household Consumption*	-11.5	5.9	5.9	1.0	0.1	1.0	0.9	0.8	0.8	0.8	0.7
Gross Fixed Investment*	-7.1	21.5	7.5	8.5	2.1	1.0	1.7	0.8	1.1	0.8	0.9
Industrial Production*	-11.5	12.3	0.3	-0.2	-2.7	1.1	1.5	1.5	1.3	1.0	0.6
Consumer Prices*	-0.2	1.9	8.1	5.7	1.2	1.7	1.7	1.8	1.8	1.8	2.0
Current Account Balance (Euro bn)	64.5	43.3	-30.9	9.7	34.1	36.8	40.4	39.6	42.2	45.0	39.3
10 Year Treasury Bond Yield, %[2]	0.5	1.2	4.7	3.7	3.6[3]	3.7[4]	3.9	3.9	4.0	4.0	4.0

Canada

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-5.0	5.3	3.8	1.2	1.1	1.7	2.1	2.0	2.0	2.0	1.9
Personal Expenditure*	-6.4	5.2	5.1	1.7	1.9	1.7	2.1	2.0	2.1	2.2	2.0
Machinery & Eqpt Investment*	-15.0	14.0	-0.3	-6.4	0.1	3.2	4.4	3.0	2.6	2.3	1.8
Industrial Production*	-7.5	5.0	3.9	-0.7	-0.1	1.6	2.1	2.1	2.1	1.5	1.4
Consumer Prices*	0.7	3.4	6.8	3.9	2.5	2.1	2.0	2.1	2.1	2.1	2.1
Current Account Balance (C$ bn)	-44.8	0.4	-10.3	-21.0	-28.3	-34.4	-31.9	-35.0	-36.2	-28.7	-47.6
10 Year Treasury Bond Yield, %[2]	0.7	1.4	3.3	3.1	3.0[3]	3.0[4]	3.2	3.4	3.5	3.5	3.5

Euro zone

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-6.1	6.2	3.3	0.4	0.7	1.2	1.4	1.4	1.3	1.3	1.2
Private Consumption*	-7.9	4.7	4.9	0.7	0.7	1.2	1.4	1.4	1.3	1.3	1.1
Gross Fixed Investment*	-5.8	3.5	1.9	0.9	-1.9	1.3	2.1	2.0	1.8	1.5	1.2
Industrial Production*	-7.6	8.8	2.1	-2.1	-2.5	1.3	2.2	1.8	1.5	1.4	1.2
Consumer Prices*	0.3	2.6	8.4	5.4	2.3	1.9	1.9	1.9	2.0	2.0	2.0
Current Account Balance (Euro bn)	192	311	-43	230	432	430	412	380	389	402	443
3 month Euribor Rate, % **	-0.5	-0.6	2.1	3.9	2.9[3]	2.3[4]	2.3	2.3	2.4	2.4	2.5

Netherlands

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-3.9	6.3	5.0	0.1	0.6	1.4	1.5	1.5	1.5	1.6	1.6
Private Consumption*	-6.1	4.5	6.9	0.8	0.4	1.5	1.9	1.7	1.5	1.7	1.9
Gross Fixed Investment*	-2.5	2.4	3.4	1.3	-1.5	1.6	2.1	2.2	2.3	2.3	2.2
Manufacturing Production*	-3.0	7.2	7.8	-0.4	-1.3	1.9	2.1	2.3	2.0	1.6	1.4
Consumer Prices*	1.3	2.7	10.0	3.8	3.2	2.5	2.3	2.5	2.4	2.4	2.2
Current Account Balance (Euro bn)	45.6	89.3	65.7	105.2	98.0	100.9	99.5	104.8	109.2	117.0	131.3
10 Year Treasury Bond Yield, %[2]	-0.5	0.0	2.9	2.3	2.5[3]	2.6[4]	2.7	2.6	2.6	2.7	2.6

[1] *Signifies average for period* [2] *End period* [3] *End January 2025* [4] *End October 2025*

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Norway

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Dom Prod (Mainland)*	-2.8	4.5	3.7	0.7	0.6	1.2	1.6	1.7	1.7	1.5	1.1
GDP (Total)*	-1.3	3.9	3.0	0.5	1.5	1.4	1.4	1.4	1.6	1.5	1.4
Private Consumption*	-6.4	5.1	5.9	-0.9	1.0	1.8	2.2	2.1	1.9	1.6	1.5
Gross Fixed Investment*	-4.1	0.7	5.2	0.3	-3.6	1.1	2.6	2.7	2.6	2.3	1.8
Manufacturing Production*	-3.1	3.2	-0.3	-0.2	2.2	2.2	1.0	0.6	0.4	0.1	0.0
Consumer Prices*	1.3	3.5	5.8	5.5	3.2	2.3	2.1	2.2	2.1	2.0	1.9
Current Account Balance (Nkr bn)	38.2	644	1722	917	814	775	682	672	646	628	579
10 Year Treasury Bond Yield, %[2]	0.9	1.7	3.2	3.3	3.3[3]	3.2[4]	3.3	3.5	3.5	3.6	3.6

Spain

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-11.2	6.4	5.8	2.5	2.7	2.0	1.8	1.7	1.6	1.6	1.4
Household Consumption*	-12.4	7.2	4.8	1.8	2.1	1.9	1.8	1.7	1.7	1.6	1.4
Gross Fixed Investment*	-9.0	2.8	2.4	0.8	2.6	3.0	2.6	2.4	2.2	2.0	1.7
Industrial Production*	-10.1	8.1	1.9	-0.7	0.5	1.5	2.1	1.8	1.6	1.5	1.1
Consumer Prices*	-0.3	3.1	8.4	3.5	2.9	2.0	2.0	2.0	2.0	2.0	2.1
Current Account Balance (Euro bn)	15.5	14.9	13.0	12.2	44.5	42.6	43.1	44.9	44.1	45.9	38.3
10 Year Treasury Bond Yield, %[2]	0.0	0.0	0.0	0.0	3.0[3]	3.0[4]	3.1	3.2	3.2	3.4	3.5

Sweden

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-2.0	5.9	1.5	-0.3	0.7	1.9	2.4	2.1	1.8	1.8	1.7
Household Consumption*	-3.0	6.0	2.8	-2.3	0.1	2.3	2.5	2.0	1.8	1.8	2.1
Gross Fixed Investment*	1.6	7.3	0.3	-1.4	-1.7	2.1	3.2	2.8	2.4	1.9	1.6
Mining & Manufacturing Productior	-5.2	7.4	2.3	1.4	-0.9	2.9	1.4	1.7	1.8	1.5	1.6
Consumer Prices*	0.5	2.2	8.4	8.5	2.9	1.2	1.8	2.1	2.0	2.0	2.1
Current Account (Skr bn)	291	378	290	401	409	380	365	349	339	305	306
10 Year Treasury Bond Yield, %[2]	0.0	0.2	2.4	2.1	2.1[3]	2.2[4]	2.3	2.4	2.5	2.7	2.7

Switzerland

* % change over previous year	Historical 2020	2021	2022	2023	2024	Consensus Forecasts 2025	2026	2027	2028	2029	2030-34[1]
Gross Domestic Product*	-2.1	5.6	3.0	0.7	1.4	1.5	1.7	1.5	1.7	1.6	1.6
GDP, Sports Events Adjusted*	-2.1	5.3	2.8	1.1	1.1	1.5	1.5	1.6	1.5	1.6	1.6
Private Consumption*	-3.4	2.2	4.3	1.5	1.4	1.4	1.5	1.4	1.3	1.5	1.4
Gross Fixed Investment*	-1.3	2.7	-0.1	0.1	-1.0	2.0	2.1	2.1	2.0	1.8	1.8
Industrial Production*	-3.4	8.9	5.6	0.6	3.1	2.9	2.3	2.8	2.4	2.2	2.2
Consumer Prices*	-0.7	0.6	2.8	2.1	1.2	0.9	0.9	1.0	1.0	1.1	1.1
Current Account Balance (SwFr bn)	3.4	51.2	74.6	55.5	65.5	70.4	66.4	66.6	68.4	84.3	99.5
10 Year Treasury Bond Yield, %[2]	-0.5	-0.2	1.6	0.7	0.5[3]	0.6[4]	1.0	1.1	1.2	1.4	1.4

[1]*Signifies average for period* [2]*End period* [3]*End January 2025* [4]*End October 2024*

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- **GDP** - Gross Domestic Product **IMF** - International Monetary Fund
  na - not available **Emu** - European economic and monetary union
  OECD - Organisation for Economic Co-operation and Development **ECB** - European Central Bank
  BoE - Bank of England **PMI** - Purchasing Managers Index
  y-o-y - year-on-year **q-o-q** - quarter-on-quarter **m-o-m** - month-on-month

- Measures of GDP, Consumption, Business Investment and Industrial Production are expressed in real (i.e. inflation-adjusted) terms. These variables, and certain others as indicated, are expressed as percentage changes over the previous year.

- All individual country forecasters on pages 4-24 are listed in descending order of their 2023 real GDP estimates. Consensus forecasts are mean arithmetic averages of the listed individual estimates.

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CONSENSUS FORECASTS: WORLD ECONOMIC ACTIVITY

↑ Consensus Forecast **Increase** From Prior Month ↓ Consensus Forecast **Decrease** From Prior Month

October Survey	Real GDP % increase			Consumer Prices % increase			Current Account Balance, US$bn		
	2023	2024	2025	2023	2024	2025	2023	2024	2025
Belgium	1.4	1.2	1.3 ↓	4.1	3.8 ↑	2.2	-6.2	-4.1	-3.1
Canada	1.2	1.1	1.7 ↓	3.9	2.5 ↓	2.1	-15.5	-20.8	-25.5
France	1.1	1.1	1.0 ↓	4.9	2.2 ↓	1.6 ↓	-31.2	-17.8	-16.2
Germany	-0.3	0.0	0.7 ↓	5.9	2.3	1.9 ↓	278.7	303.5	307.2
Italy	0.7	0.8	0.9	5.7	1.2	1.7 ↓	10.5	37.2	40.8
Japan	1.7	0.0	1.2	3.3	2.6 ↑	2.1	152.4	166.7	180.1
Netherlands	0.1	0.6 ↑	1.4	3.8	3.2 ↓	2.5 ↓	113.8	107.0	111.9
Norway	0.7	0.6 ↓	1.2 ↓	5.5	3.2 ↓	2.3	86.9	76.7	76.1
Spain	2.5	2.7 ↑	2.0	3.5	2.9 ↓	2.0 ↓	40.8	48.5	47.3
Sweden	-0.3	0.7	1.9	8.5	2.9 ↓	1.2 ↓	37.8	39.3	37.6
Switzerland	0.7	1.4	1.5	2.1	1.2	0.9 ↓	61.8	75.1	81.9
United Kingdom	0.3	1.0	1.3 ↑	7.3	2.6	2.3 ↓	-66.3	-107.4	-101.4
United States	2.9	2.6 ↑	1.8 ↑	4.1	2.9 ↓	2.2	-905	-1018.5	-1054.7
North America[1]	2.8	2.5	1.8	4.1	2.9	2.2	-920.9	-1039.3	-1080.2
Western Europe[2]	0.5	0.9	1.2	5.5	2.3	1.9	619.8	675.5	682.5
European Union[2]	0.6	1.0	1.4	7.2	2.4	2.0	458.0	617.7	608.2
Euro zone[2]	0.4	0.7	1.2 ↓	5.4	2.3 ↓	1.9 ↓	248.4	471.1	477.2
Asia Pacific[3]	4.2	3.8	3.8	2.1	1.7	1.9	639.4	668.2	668.8
Eastern Europe[4,7]	2.9	3.1	2.8	16.7	14.0	8.4	-27.2	11.6	-3.7
LatAm ex Venezuela[5,7]	2.2	1.8	2.2	23.8	15.6	7.2	-81.5	-75.5	-89.9
Other Countries[6]	1.4	1.9	3.6	12.6	12.7	8.4	51.0	33.0	14.3
Total[7]	2.8	2.6	2.5	5.6	3.9	2.8			

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*Regional totals and the grand totals for GDP growth and inflation, are weighted averages calculated using **2020 GDP weights, converted at average 2020 US$ exchange rates.** These weights and rates were last updated in July 2021. Due to annual updates in exchange rates and GDP weights in July-September of each year, there will be differences in the Regional and World Aggregates in those months. Therefore, some aggregates may not be comparable to the aggregates from previous months. Current account forecasts given in national currencies on pages 7-24 have been converted using consensus exchange rate forecasts for the purposes of comparison. [1] USA and Canada. [2] The Euro zone aggregate is taken from our panel's latest forecasts (pages 18-19). The Euro zone current account data and forecasts are based on extra-euro zone data, i.e., an aggregate of the Euro zone member states' transactions with nonresidents of theat economic area. The European Union data includes the Euro zone countries listed on page 18 plus Denmark and Sweden, as well as the Czech Republic, Hungary, Poland, Romania, Bulgaria (data taken from Eastern Europe Consensus Forecasts). Western Europe comprises the six Euro zone countries listed in the table above, plus Austria, Denmark, Finland, Greece, Ireland, Norway, Portugal, Sweden, Switzerland and the United Kingdom. [3] Survey results for Japan plus sixteen other countries taken from **Asia Pacific Consensus Forecasts**. [4] Twenty-seven countries, including twelve European Union countries taken from the latest issue of **Eastern Europe Consensus Forecasts.** [5] Seventeen countries taken from the latest issue of **Latin American Consensus Forecasts** (inflation figures are on a December/December basis). Venezuela is excluded beginning in April 2018. [6] Egypt, Israel, Nigeria, Saudi Arabia and South Africa. [7] The **Eastern Europe** and **Latin American** components of the **World Total** are taken from the prior month's survey.*

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Request IR-5:

Preamble:

On pages 30-32 of Appendix 10-A, Concentric discusses the integration of Canadian and U.S. capital markets in order to justify its heavy reliance on U.S. utilities, as well as U.S. capital market statistics such as U.S. Treasury yields and beta estimates in its analyses. As part of its discussion, Concentric's Figure 13 (on page 31), includes a dated 2021 assessment of country risk ratings for Canada and the U.S. that are provided by the Economist Intelligence Unit, as opposed to referencing more recent ratings provided by reputable debt rating agencies.

Question:

(a) Please confirm that more recent (July 2025) data from reputable debt rating agencies reports the following debt ratings, which show that Canada has higher debt ratings than the U.S. with S&P and Moody's, consistent with their currently lower government market bond yields than U.S government yields:[1]

> **Canada's sovereign debt: AAA (S&P); Aaa (Moody's); and AA+ (Fitch)**
> **U.S. sovereign debt: AA+ (S&P); Aa1 (Moody's), and AAA (Fitch).**

If not confirmed, please provide the corrected ratings and the sources for these ratings.

(b) Would Concentric agree that there is a "home bias" among investors, not only from Canada, but also globally. For example, while Canadian equities generally represent less than 3% of world stock markets (e.g., 2.9% as of September 30, 2021) Canadian investors (including institutions) had a domestic allocation for equities of over 40%

[1] Source: Sovereigns Ratings List 2025 | countryeconomy.com, July 31, 2025.

in 2020.[2] The home bias is even more dramatic in Canadian fixed income markets, which similarly comprise about 3% of global fixed income markets, but Canadian investors had a domestic allocation for fixed income of approximately 84%.[3]

If not confirmed, please explain and provide empirical support for any such assertions.

(c) Please confirm that U.S. government yields have been higher than Canada government yields for several years, and that this is still the case. For example, as of September 29, 2025, 30-year Government of Canada bond yields were 3.63%, while U.S. Government 30-year Treasury Bond yields were 1.08% higher at 4.71%. If not confirmed, please explain.

(d) In light of the information cited in questions (b) and (c) above, does Concentric believe that NS Power would choose to borrow at rates that are over 1% higher in the U.S. rather than borrow in Canada, and in the process also expose themselves to currency risk, on top of paying higher interest costs? If so, please elaborate on the basis for this belief.

Response IR-5:

(a) Confirmed.

(b) "Home bias" refers to an investor's tendency to invest a majority of their portfolio in domestic equities or to have a concentrated exposure to their employer's stock rather than diversifying by investing in foreign equities. Systematic risk is reduced by investing in foreign equities because they are not fully impacted by changes in domestic markets.

[2] Source: https://www.finiki.org/wiki/Home_country_bias#cite_note-8, September 10, 2022.
[3] Ibid.

Concentric does not agree that there is "home bias" among investors in the utility industry. For example, as shown in the table below, there have been approximately two dozen acquisitions of U.S. utilities by Canadian utility holding companies since 2000. This track record does not suggest a "home bias" from Canadian investors.

Cross-Border Utility Acquisitions

Buyer	Target	Deal Value (USD $Million)	Year Closed
Canadian Buyers Acquiring U.S. Utilities Since 2000			
Canadian Pension Plan Investment Board	Allete, Inc.	$6,200	2025
Enbridge Inc.	Public Service Co. of NC	$4,297	2024
Enbridge Inc.	Questar Gas Co.	$5,798	2024
Enbridge Inc.	East Ohio Gas Company	$8,917	2024
ENMAX Corporation	Emera Maine	$959	2020
Liberty Utilities Co.	St. Lawrence Gas Company, Inc.	$65	2019
AltaGas	WGL Holdings Inc.	$6,955	2018
Algonquin Power & Utilities	Empire District Electric Co	$2,349	2017
Fortis Inc.	ITC Holdings Corp	$11,577	2016
Emera Inc.	TECO Energy Inc.	$10,585	2016
Caisse de dépôt et placement	IPALCO Enterprises Inc.	$134	2016
Caisse de dépôt et placement	IPALCO Enterprises Inc.	$247	2015
Algonquin Power & Utilities	New Hampshire Gas Corp	$3	2015
Fortis Inc.	UNS Energy Corp	$4,383	2014
Algonquin Power & Utilities	New England Gas Company	$74	2013
Fortis Inc.	CH Energy Group Inc.	$1,526	2013
Algonquin Power & Utilities	Natural Gas Distribution Operations	$141	2013
Algonquin Power & Utilities	California Pacific Electric Co.	$39	2012
AltaGas	SEMCO Holding Corp	$1,156	2012
Algonquin Power & Utilities	Midwest Natural Gas Distribution	$124	2012

Algonquin Power & Utilities	Granite State / EnergyNorth	$285	2012
Gaz Metro LP	Central Vermont Public Service	$700	2012
Emera Inc	Maine & Maritimes Corporation	$99	2010
Gaz Métro LP	Green Mountain Power Corp	$293	2007
NS Power Holdings Inc.	Bangor Hydro-Electric Co.	$365	2001
Total U.S. Acquisitions by Canadian Utilities		**$67,271**	

Further, an August 25, 2025 article from Bloomberg reported that:

> Canadian investors have injected C$124 billion ($89.7 billion) into U.S. Stocks in 2025, even as Trump's trade war disrupted the two countries' longstanding, largely tariff-free relationship, according to data compiled by Warren Lovely at National Bank of Canada Financial Markets. That's on track for the largest yearly inflow since at least the 1990s.
>
> Canadian investors can't seem to resist the lure of the US market, which has outperformed the domestic benchmark in each of the past two years. Pinpointing the exact reason for this year's enthusiasm – when the relations between the two countries have grown more tense – is a tricky proposition. But optimism over an artificial intelligence frenzy that's pushed US tech titans to multiple records looms large.

(c) Concentric agrees that U.S. government bond yields have generally been higher than Canadian government bond yields for the past several years, and this continues to be the case as of October 2025. However, Canadian and US government bond yields have shown a strong correlation, moving in the same direction over the long term. The relationship between Canadian and US government bond yields is complex and influenced by a variety of economic and political factors. While recent trends indicate a divergence with lower Canadian yields, the potential for future convergence exists, driven by a potential weakening of the U.S. economy, the impact of trade policies, and shifts in monetary and fiscal policies in both countries. This is consistent with the October 2025 forecast from Consensus Economics, which shows the spread between 10-year government bond yields

in Canada and the U.S. narrowing from 80 basis points in 2026 to 50 basis points by the end of the decade, as shown in the table below.

Long-Term Forecast for 10-Year Government Bond Yields[4]

	2026	**2027**	**2028**	**2029**	**2030**	**2031-2035**
Canada	3.3%	3.6%	3.6%	3.6%	3.6%	3.7%
U.S.	4.1%	4.1%	4.2%	4.1%	4.1%	4.2%

(d) NS Power's borrowing costs are not addressed in Concentric's report, but Canadian utility companies borrow in both Canadian and U.S. markets for many reasons, including diversification of capital market access, currency risk management, and matching of revenue streams with capital costs. Of note, the Risk Premium model estimated by Concentric with only Canadian market inputs, including Long Canada bond yields, produces an ROE estimate more than 50 basis points above that requested by NS Power. (See Concentric Report p. 51, Figure 29). The Company has requested a continuation of its existing authorized ROE of 9.0 percent even though the market data supports a higher return for NS Power.

[4] Consensus Forecasts by Consensus Economics Inc., Survey Date October 13, 2025, at 3 and 29.

Request IR-6:

References:

(a) In Figure 16, on page 35 of Appendix 10A, Concentric provides its North American Electric T&D proxy group that is comprised of three Canadian utilities and 10 U.S utilities, as copied below:

Figure 16: North American Electric Proxy Group

Company	Ticker
Canadian Utilities Ltd.	CU
Fortis Inc.	FTS
Hydro One Ltd.	H
Alliant Energy Corp.	LNT
American Electric Power Company	AEP
Duke Energy Corporation	DUK
Entergy Corporation	ETR
Evergy Inc.	EVRG
NextEra Energy, Inc.	NEE
OGE Energy Corporation	OGE
Pinnacle West Capital Corp.	PNW
Portland General Electric Company	POR
PPL Corporation	PPL

(b) In Figure 17, on page 35 of Appendix A of its evidence provided for the 2026 NSPML proceeding, Concentric provided a North American Electric T&D proxy group of five utilities (two Canadian and three U.S) as copied below:

Figure 17: North American Electric T&D Proxy Group

Company	Ticker
Canadian Utilities Ltd.	CU
Hydro One Ltd.	H
Consolidated Edison, Inc.	ED
Eversource Energy	ES
Exelon Corp.	EXC

(c) During the 2024 Ontario Energy Board (OEB) proceedings dealing with the "2024 REVIEW OF COST OF CAPITAL PARAMETERS AND DEEMED CAPITAL

STRUCTURE" (EB-2024-0063), Concentric advanced the following "North American Electric T&D Proxy Group" of 19 utilities (four Canadian and 15 U.S.) in Figure 7 on page 49 of its evidence (which was filed on July 19, 2024).

Figure 7: North American Electric Proxy Group

Company	Ticker
Canadian Utilities Limited	CU
Emera Corp.	EMA
Fortis, Inc.	FTS
Hydro One Ltd.	H
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Duke Energy Corporation	DUK
Entergy Corporation	ETR
Eversource Energy	ES
Exelon Corp.	EXC
Evergy, Inc.	EVRG
NextEra Energy Corp	NEE
OGE Energy Corporation	OGE
Pinnacle West Capital Corp	PNW
Portland General Electric Company	POR
PPL Corporation	PPL
Southern Company	SO
Xcel Energy Inc.	XEL

Question:

(a) Please confirm that the North American proxy group provided in Figure 16 on page 35 of Appendix 10A consisted of 10 U.S. utilities, none of which were included in the three U.S. utilities it included in its North American proxy group in its NSPML 2026 evidence. If not confirmed please explain.

(b) Please explain the significant difference in the composition of these three North American Electric T&D proxy groups chosen by Concentric, given the short time difference between the evidence dates. In particular, please justify the exclusion of each utility not included in the current proxy group, as well as the inclusion of the additional utilities included during the current NS Power GRA proceeding.

Response IR-6:

(a) Confirmed. The primary reason for the difference between Concentric's proxy groups for NS Power and NSPML is that NS Power is a vertically integrated electric utility, while NSPML is an electric transmission utility. Therefore, in developing the proxy group for NS Power, Concentric screened for U.S. electric utilities that own regulated generation, whereas in developing the proxy group for NSPML, Concentric excluded U.S. electric utility companies that own any material amount of generation. Consequently, there is no overlap between the two groups. The purpose of a proxy group is to select companies that are comparable in business and financial risks to the subject company for which the return is being established.

(b) As Dr. Cleary is aware, the Ontario Energy Board was setting the authorized ROE for all electric and gas utilities in Ontario, including those that own electric generation, transmission, and distribution assets, and natural gas distribution. For that case, Concentric included companies that own electric generation in its electric proxy groups, as it has in this case for the NS Power proxy group. Concentric also included combination electric and gas utilities such as Ameren Corporation, Southern Company, and Xcel Energy in its proxy groups in Ontario because the OEB was setting a generic return for both electric and gas utilities, whereas in Nova Scotia, Concentric required companies to derive a slightly higher percentage of net operating income from electric utility service, consistent with the operating profile of NS Power. Finally, in Ontario Concentric included electric T&D companies such as Exelon Corporation and Eversource Energy in the proxy group because the Ontario generic ROE applies to both T&D companies and electric generators, while in Nova Scotia, Concentric did not include companies that do not own electric generation in the proxy group for NS Power. However, these two companies (Exelon and Eversource) were included in the proxy group for NSPML.

In the case of NSPML, Concentric's task was to identify companies that own electric transmission in particular. Since there are no publicly-traded pure play electric

transmission companies, Concentric selected a group of electric T&D utilities, as described in Section 5 of its report for NSPML. This is a relatively small sample of five companies, but it more closely matches the business and financial risks of NSPML than the broader group used in the Ontario Generic Cost of Capital proceeding in 2024.

Request IR-7:

Preamble:

On pages 39-40 of Appendix 10A, Concentric discusses states (bold added for emphasis):

> **The DCF results are shown in Figure 19 and in Exhibits CEA-4 and CEA-5. To mitigate any concern that short-term EPS growth rates may not be sustainable, we have relied on the results of the Multi-Stage DCF model, which tempers the short-term growth rate in Years 1-5 with projected GDP growth in Years 11-200. As summarized in Figure 22, the Multi-Stage DCF model produces an average cost of common equity of 9.6 percent for the Canadian Utility proxy group, 9.4 percent for the U.S. Electric proxy group, and 9.3 percent for the North American Electric Utility proxy group. These values include an adjustment of 50 basis points for flotation costs and financial flexibility.**

Question:

(a) Please confirm that the short-term EPS growth rates used by Concentric are based upon the average of Value Line, Zacks, S&P Capital IQ Pro and Seeking Alpha "sell-side" (and not "buy-side") analyst forecasts. If not confirmed please explain.

(b) Please confirm that the average short-term growth rates of 5.50% for its Canadian proxy group, 6.76% for its U.S. proxy group and 6.36% for its North American proxy group that it uses in its multi-stage DCF estimates greatly exceed Concentric's estimates for expected nominal GDP growth of 4.04% for Canada, 4.14% for the U.S., and 4.12% for the North American proxy group. If not confirmed, please explain.

(c) Please confirm in its multi-stage DCF model, that Concentric assumes the higher analyst average growth rates of 5.50% (Canada), 6.76% (U.S.) and 6.36% (North America) exist for a full 5 years, then gradually decline over the following 5 years to a stable long-term growth rate of 4.04% (Canada), 4.14% (U.S.) and 4.12% (North

America) equal to its respective estimates of average long-term nominal GDP growth. Therefore, this approach assumes that utilities' earnings and dividends will grow at rates above nominal GDP growth for 10 years, then will grow at estimated nominal GDP growth from year 11 to infinity. Hence, this approach implicitly assumes earnings and dividends will grow from now to infinity at an average rate "above" expected nominal GDP growth (i.e., since they would grow above estimated nominal GDP growth for 10 years and then fall to nominal GDP growth for years 11 to infinity). If not confirmed, please clarify.

(d) Exhibit CEA-5 provides the multi-stage DCF Ke estimate for the North American proxy group of 8.78% (before adding 0.50% for flotation costs). According to Exhibits CEA-4 and CEA-5, this estimate is based on an average growth rate of 6.36% for years 1-5, an average growth rate of 5.24% for years 6 through 10, followed by an average long-term growth of 4.12% from years 11 to infinity. Please confirm that the long-term growth rate that would also lead to an 8.78% Ke estimate (pre-flotation costs) for the North American proxy group in the Constant-Growth DCF model, based on the expected dividend yield (DY_1) of 3.87% (provided in cell F79 of CEA-4) would be 4.91%. I.e., since in the Constant-Growth DCF model:

Ke (8.78%) = DY_1 + g = 3.87% + 4.91%

If not confirmed, please provide the correct corresponding long-term growth rate in the Constant-Growth DCF model that would result in a cost of equity (Ke) estimate of 8.78% for the North American proxy group, based on its DY_1 estimate of 3.87%.

(e) Please confirm the implied long-term growth rate of 4.91% determined in part (d) above is well above Concentric's estimate of North American long-term nominal GDP growth of 4.12%. If not confirmed, please explain.

(f) Please confirm the analysis included in parts (c) and (d) above clearly demonstrate that Concentric's growth forecasts used in obtaining its multi-stage DCF estimates provide results are equivalent to using a growth rate of 4.91% in a Constant-Growth DCF model, which exceeds Concentric's 4.12% estimate of expected North American nominal GDP growth.

Response IR-7:

(a) Confirmed. The consensus growth rates reported by Zacks, S&P Capital IQ, and Seeking Alpha are compiled from sell-side analysts that are experts on the companies they cover. There are regulations in place to prevent conflicts of interest between the research function and the investment banking function. Value Line is an independent research publication that provides investment information, including forecast earnings growth rates, from analysts who are also experts on the companies in their coverage universe.

(b) Confirmed.

(c) This cannot be confirmed. As shown in Exhibit CEA-4, at least one company (Canadian Utilities Ltd.) in the North American Electric T&D proxy group has a lower EPS growth rate in Stage 1 than the GDP growth rate in Stage 3. As explained in Concentric's report, the Multi-Stage DCF model is intended to allow for the use of varying growth rates in the three stages. The growth rate in Stage 1 is not always materially higher than the growth rate in Stage 3, as the question assumes.

(d) Confirmed.

(e) Confirmed.

(f) Not confirmed. Concentric's ROE recommendation of 9.90 percent for NS Power does not include the results of the Constant Growth DCF model. Further, Concentric does not agree that this is the correct way to interpret the results of the Multi-Stage and Constant Growth

DCF models. This is because current stock prices for the proxy group companies are based on investor assumptions regarding both near-term growth and longer-term growth. Figure 15 of Concentric's report demonstrates that over the period from 2009-2024, the EPS and DPS growth rates for the companies in the three proxy groups have exceeded historical GDP growth over the same period, indicating that GDP growth is not necessarily a cap on EPS or DPS growth rates for electric utilities.

Request IR-8:

Preamble:

On page 45 of Appendix 10A, Concentric discusses its risk-free (RF) rate estimates that it uses in its CAPM cost of equity calculations.

Question:

(a) Please confirm that in the CAPM, RF represents the actual existing risk-free asset that an investor can invest in today and earn the risk-free rate of return. If not confirmed, please explain.

(b) Please explain how a Canadian investor today could buy a 30-year U.S. Government bond promising a risk-free rate of return of 4.14%, which is not currently available to investors (i.e., Concentric's estimated "forecast-based" U.S. RF)?

Response IR-8:

(a) Not confirmed. In many Canadian jurisdictions, the utility regulator uses a projected government bond yield as the risk-free rate in the CAPM. For example, the current Ontario formula relies on forecast government bond yields, and other utility regulators in Canada including the British Columbia Utilities Commission and the Alberta Utilities Commission also rely on bond yield forecasts to set the authorized ROE. This is because the cost of equity is a forward-looking estimate that is intended to represent the return investors expect to earn in the future. The projected government bond yield better reflects that perspective than does the current average bond yield, and in particular, it is not appropriate to use a current spot yield as the risk-free rate because it does not take into account the variability that occurs in financial markets over the course of 30 or 90 trading days.

(b) The yield on 30-year U.S. Treasury bonds ranged from 4.41 percent to 5.08 percent during the first nine months of 2025. This demonstrates that the forecast risk-free used by Concentric in the CAPM analysis for the U.S. Electric proxy group is quite conservative and reflects the market's expectation that Treasury bond yields will decline. Nevertheless, the risk-free rate in the CAPM analysis should be based on the interest rate that investors are expecting during an upcoming future period, such as the next three or five years, not the interest rate an investor would receive today if they were to purchase a particular bond.

Request IR-9:

References:

(a) On pages 45-48 of Appendix 10A, Concentric discusses its beta estimates that it uses in its CAPM cost of equity calculations.

(b) On pages 45-46 of Appendix 10A, Concentric states that:

> **Both Value Line and Bloomberg provide adjusted betas to compensate for the tendency of beta to revert toward the market mean of 1.0 over time.**

(c) On page 46 of Appendix 10A Concentric refers to a 55-year old study by Marshall Blume (referenced in footnote 46).

Question:

(a) Please confirm that the Blume (1970) study referenced by Concentric examines beta estimates for the entire universe of stocks across all industries, and does not focus on one particular industry (including utility stocks). If not confirmed, please explain.

(b) Please provide the Blume (1970) study referenced in footnote 46.

(c) Please provide all the associated raw "unadjusted" beta estimates for the beta estimates provided in Exhibit CEA-6 for the Canadian, U.S. and North American proxy groups, and recalculate Concentric's CAPM cost of equity estimates for these three groups of 9.70%, 10.68% and 10.31% respectively as reported in CEA-6 using raw beta estimates (instead of adjusted beta estimates). If Concentric is unable to locate the raw or unadjusted beta estimates from the initial data sources, please adjust the beta estimates using the formula:

Raw Beta = (Adj. Beta -1/3)×(3/2)

For example, the average adjusted beta of 0.90 for Concentric's North American proxy group would equate to a raw beta of 0.85 as calculated below:

Raw Beta = (0.90 – 0.33)(3/2) = 0.85

Please provide all supporting data and worksheets (in excel format), with all accompanying formulae.

Response IR-9:

(a) Confirmed.

(b) Please refer to Attachment 1 for the article referenced in footnote 46.

(c) Please refer to Attachment 2 for the revised betas. As shown in the Attachment, the average raw beta for the North American Electric proxy group from Bloomberg is 0.82 and from Value Line is 0.92. The average CAPM results (including flotation costs) for the North American Electric proxy group are 10.00 percent, compared to 10.31 percent when adjusted betas are used. Concentric does not agree with the use of raw or unadjusted betas for the reasons explained in its report at pages 41-43 [Appendix 10A], nor is it the practice of either Canadian or U.S. utility regulators.

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On the Assessment of Risk

Marshall E. Blume

The Journal of Finance, Vol. 26, No. 1. (Mar., 1971), pp. 1-10.

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ON THE ASSESSMENT OF RISK

MARSHALL E. BLUME*

I. INTRODUCTION

THE CONCEPT OF RISK has so permeated the financial community that no one needs to be convinced of the necessity of including risk in investment analysis. Still of controversy is what constitutes risk and how it should be measured. This paper examines the statistical properties of one measure of risk which has had wide acceptance in the academic community: namely the coefficient of non-diversifiable risk or more simply the beta coefficient in the market model.

The next section defines this beta coefficient and presents a brief non-rigorous justification of its use as a measure of risk. After discussing the sample and its basic properties in Section III, Section IV examines the stationarity of this beta coefficient over time and proposes a method of obtaining improved assessments of this measure of risk.

II. THE RATIONALE OF BETA AS A MEASURE OF RISK

The interpretation of the beta coefficient as a measure of risk rests upon the empirical validity of the market model. This model asserts that the return from time (t-1) to t on asset i, $\tilde{R}_{it}$,[1] is a linear function of a market factor common to all assets $\tilde{M}_t$, and independent factors unique to asset i, $\tilde{\varepsilon}_{it}$.

Symbolically, this relationship takes the form

$$\tilde{R}_{it} = \alpha_i + \beta_i \tilde{M}_t + \tilde{\varepsilon}_{it}, \tag{1}$$

where the tilde indicates a random variable, α_i is a parameter whose value is such that the expected value of $\tilde{\varepsilon}_{it}$ is zero, and β_i is a parameter appropriate to asset i.[2] That the random variables $\tilde{\varepsilon}_{it}$ are assumed to be independent and

* University of Pennsylvania.

1. In this paper, return will be measured as the ratio of the value of the investment at time t with dividends reinvested to the value of the investment at time (t-1). Dividends are assumed reinvested at time t.

2. The parameter β_i is defined as Cov $(\tilde{R}_i, \tilde{M})$/Var $(\tilde{M})$.

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unique to asset i implies that Cov ($\tilde{\varepsilon}_{it}$, $\tilde{M}_t$) is zero and that Cov ($\tilde{\varepsilon}_{it}$, $\tilde{\varepsilon}_{jt}$), $i \neq j$, are zero. This last conclusion is tantamount to assuming the absence of industry effects.

The empirical validity of the market model as it applies to common stocks listed on the NYSE has been examined extensively in the literature.[3] The principal conclusions are: (1) The linearity assumption of the model is adequate.[4] (2) The variables $\tilde{\varepsilon}_{it}$ cannot be assumed independent between securities because of the existence of industry effects. However, these industry effects, as documented by King,[5] probably account for only about ten percent of the variation in returns, so that as a first approximation they can be ignored. (3) The unique factors $\tilde{\varepsilon}_{it}$ correspond more closely to non-normal stable variates than to normal ones. This conclusion means that variances and covariances of the unique factors do not exist. Nonetheless, this paper will make the more common assumption of the existence of these statistics in justifying the beta coefficient as a measure of risk since Fama[6] and Jensen[7] have shown that this coefficient can still be interpreted as a measure of risk under the assumption that the $\tilde{\varepsilon}_{it}$'s are non-normal stable variates.

That the beta coefficient, β_i, in the market model can be interpreted as a measure of risk will be justified in two different ways: the portfolio approach and the equilibrium approach.

A. *The Portfolio Approach*

The important assumption underlying the portfolio approach is that individuals evaluate the risk of a portfolio as a whole rather than the risk of each asset individually. An example will illustrate the meaning of this statement. Consider two assets, each of which by itself is extremely risky. If, however, it is always the case that when one of the assets has a high return, the other has a low return, the return on a combination of these two assets in a portfolio may be constant. Thus, the return on the portfolio may be risk free whereas each of the assets has a highly uncertain return. The discussion of such an

3. See Marshall E. Blume, "Portfolio Theory: A Step Towards Its Practical Application," forthcoming *Journal of Business;* Eugene F. Fama, "The Behavior of Stock Market Prices," *Journal of Business* (1965), 34-105; Eugene F. Fama, Lawrence Fisher, Michael Jensen, and Richard Roll, "The Adjustment of Stock Prices to New Information," *International Economic Review* (1969), 1-21; Michael Jensen, "Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios," *Journal of Business* (1969), 167-247; Benjamin F. King, "Market and Industry Factors in Stock Price Behavior," *Journal of Business* (1966), 139-90; and William F. Sharpe, "Mutual Fund Performance," *Journal of Business* (1966), 119-38.

4. The linearity assumption of the model should not be confused with the equilibrium requirement of William F. Sharpe, "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk," *Journal of Finance* (1964), 425-42, which states that $\alpha_i = (1 - \beta_i)\ R_F$, where R_F is the risk free rate. It is quite possible that this equality does not hold and at the same time that the market model is linear.

5. King, *op. cit.*

6. Eugene F. Fama, "Risk, Return, and Equilibrium" (Report No. 6831, University of Chicago, Center for Mathematical Studies in Business and Economics, June, 1968).

7. Jensen, *op. cit.*

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obvious point may seem unwarranted, but there is very little empirical work which indicates that people do in fact behave according to it.

Now if an individual is willing to judge the risk inherent in a portfolio solely in terms of the variance of the future aggregate returns, the risk of a portfolio of n securities with an equal amount invested in each, according to the market model, will be given by

$$\text{Var}(\tilde{W}_t) = \left(\sum_{i=1}^{n} \frac{1}{n}\beta_i\right)^2 \text{Var}(\tilde{M}_t) + \sum_{i=1}^{n} \left(\frac{1}{n}\right)^2 \text{Var}(\tilde{\varepsilon}_{it}) \qquad (2)$$

where $\tilde{W}_t$ is the return on the portfolio. Equation (2) can be rewritten as

$$\text{Var}(\tilde{W}_t) = \bar{\beta}^2 \text{Var}(\tilde{M}_t) + \frac{\overline{\text{Var}(\tilde{\varepsilon})}}{n} \qquad (3)$$

where the bar indicates an average. As one diversifies by increasing the number of securities n, the last term in equation (3) will decrease. Evans and Archer[8] have shown empirically that this process of diversification proceeds quite rapidly, and with ten or more securities most of the effect of diversification has taken place. For a well diversified portfolio, Var $(\tilde{W}_t)$ will approximate $\bar{\beta}^2$ Var $(\tilde{M}_t)$. Since Var $(\tilde{M}_t)$ is the same for all securities, $\bar{\beta}$ becomes a measure of risk for a portfolio and thus β_i, as it contributes to the value of $\bar{\beta}$, is a measure of risk for a security. The larger the value of β_i, the more risk the security will contribute to a portfolio.[9]

B. *The Equilibrium Approach*

Using the market model, Sharpe[10] and Lintner,[11] as clarified by Fama,[12] have developed a theory of equilibrium in the capital markets. This theory relates the risk premium for an individual security, $E(\tilde{R}_{it}) - R_F$, where R_F is the risk free rate, to the risk premium of the market, $E(\tilde{M}_t) - R_F$, by the formula

$$E(\tilde{R}_{it}) - R_F = \beta_i[E(\tilde{M}_t) - R_F]. \qquad (4)$$

The risk premium for an individual security is proportional to the risk premium for the market. The constant of proportionality β_i can therefore be interpreted as a measure of risk for individual securities.

8. John L. Evans and Stephan H. Archer, "Diversification and the Reduction of Dispersion: An Empirical Analysis," *Journal of Finance* (1968), 761-68.

9. This argument has been extended to a non-Gaussian, symmetric stable world by E. F. Fama, "Portfolio Analysis in a Stable Paretian Market," *Management Science* (1965), 404-19; and P. A. Samuelson, "Efficient Portfolio Selection for Pareto-Levy Investments," *Journal of Financial and Quantitative Analysis* (1967), 107-22.

10. Sharpe, "Capital Asset Prices," *op. cit.*

11. John Lintner, "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets," *Review of Economics and Statistics* (1965), 13-37.

12. Eugene F. Fama, "Risk, Return, and Equilibrium: Some Clarifying Comments," *Journal of Finance* (1968), 29-40.

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This theory of equilibrium, although theoretically sound, is based upon numerous assumptions which obviously do not hold in the real world. A theoretical model, however, should not be judged by the accuracy of its assumptions but rather by the accuracy of its predictions. The empirical work of Friend and Blume[13] suggests that the predictions of this model are seriously biased and that this bias is primarily attributable to the inaccuracy of one key assumption, namely that the borrowing and lending rates are equal and the same for all investors. Therefore, although Sharpe's and Lintner's theory of equilibrium can be used as a justification for β_i as measure of risk, it is a weaker and considerably less robust justification than that provided by the portfolio approach.

III. The Sample and Its Properties

The sample was taken from the updated Price Relative File of the Center for Research in Security Prices at the Graduate School of Business, University of Chicago. This file contains the monthly investment relatives, adjusted for dividends and capital changes of all common stocks listed on the New York Stock Exchange during any part of the period from January 1926 through June 1968, for the months in which they were listed. Six equal time periods beginning in July 1926 and ending in June 1968 were examined. Table 1 lists these six periods and the number of companies in each for which there was a complete history of monthly return data. This number ranged from 415 to 890.

The investment relatives for a particular security and a particular period were regressed[14] upon the corresponding combination market link relatives, which were originally prepared by Fisher[15] as a measure of the market factor. This process was repeated for each security and each period, yielding, for instance, in the July 1926 through June 1933 period, 415 separate regressions. The average coefficient of determination of these 415 regressions was 0.51. The corresponding average coefficients of determination for the next five periods were, respectively, 0.49, 0.36, 0.32, 0.25, and 0.28. These figures are consistent with King's findings[16] in that the proportion of the variance of returns explained by the market declined steadily until 1960 when his sample terminated. Since 1960, the importance of the market factor has increased slightly according to these figures.

Table 1, besides giving the number of companies analyzed, summarizes the distributions of the estimated beta coefficients in terms of the means, standard deviations, and various fractiles of these distributions. In addition, the number of estimated betas which were less than zero is given. In three of the periods,

13. Irwin Friend and Marshall Blume, "Measurement of Portfolio Performance Under Uncertainty," *American Economic Review* (1970), 561-75.

14. John Wise, "Linear Estimators for Linear Regression Systems Having Infinite Variances," (Berkeley-Stanford Mathematics-Economics Seminar, October, 1963) has given some justification for the use of least squares in estimating coefficients of regressions in which the disturbances are non-normal symmetric stable variates.

15. Lawrence Fisher, "Some New Stock-Market Indexes," *Journal of Business* (1966), 191-225.

16. King, *op. cit.*

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TABLE 1

DESCRIPTIVE SUMMARY OF ESTIMATED BETA COEFFICIENTS

Period	Number of Companies	Mean	Standard Deviation	Number of BETAS less than Zero	Fractiles				
					.10	.25	.50	.75	.90
7/26-6/33	415	1.051	0.462	1	0.498	0.711	1.023	1.352	1.616
7/33-6/40	604	1.036	0.474	0	0.436	0.701	1.015	1.349	1.581
7/40-6/47	731	0.990	0.504	0	0.500	0.643	0.872	1.186	1.606
7/47-6/54	870	1.010	0.409	2	0.473	0.727	0.996	1.263	1.565
7/54-6/61	890	0.998	0.423	0	0.458	0.678	0.984	1.250	1.558
7/61-6/68	847	0.962	0.390	4	0.475	0.681	0.934	1.199	1.491

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none of the estimated betas was negative. Of the 4357 betas estimated in all six periods, only seven or 0.16 per cent were negative. This means that although the inclusion of a stock which moves counter to the market can reduce the risk of a portfolio substantially, there are virtually no opportunities to do this. Nearly every stock appears to move with the market.[17]

IV. The Stationarity of Beta over Time

No economic variable including the beta coefficient is constant over time. Yet for some purposes, an individual might be willing to act *as if* the values of beta for individual securities were constant or stationary over time. For example, a person who wishes to assess the future risk of a well diversified portfolio is really interested in the behavior of averages of the β_i's over time and not directly in the values for individual securities. For the purposes of evaluating a portfolio, it may be sufficient that the historical values of β_i be unbiased estimates of the future values for an individual to act *as if* the values of the β_i's for individual securities are stationary over time. This is because the errors in the assessment of an average will tend to be less than those of the components of the average providing that the errors in the assessments of the components are independent of each other.[18] Yet, a statistician or a person who wishes to assess the risk of an individual security may have completely different standards in determining whether he would act as if the β_i's are constant over time. The remainder of the paper examines the stationarity of the β_i's from the point of view of a person who wishes to analyze a portfolio.

A. *Correlations*

To examine the empirical behavior of the risk measures for portfolios over time, arbitrary portfolios of n securities were selected as follows: The estimates of β_i were derived using data from the first period, July 1926 through June 1933, and were then ranked in ascending order.[19] The first portfolio of n securities consisted of those securities with the n smallest estimates of β_i. The second portfolio consisted of those securities with the next n smallest estimates of β_i, and so on until the number of securities remaining was less than n. The number of securities n was allowed to vary over 1, 2, 4, 7, 10, 20, 35, 50, 75, and 100. This process was repeated for each of the next four periods.

Table 2 presents the product moment and rank order correlation coefficients between the risk measures for portfolios of n securities assuming an equal investment in each security estimated in one period and the corresponding risk

17. The use of considerably less than seven years of monthly data such as two or three years to estimate the beta coefficient results in a larger proportion of negative estimates. This larger proportion is probably due to sampling errors which, as documented in Richard Roll, "The Efficient Market Model Applied to U. S. Treasury Bill Rates," (Unpublished Ph.D. thesis, Graduate School of Business, University of Chicago, 1968) may be quite large for models with non-normal symmetric stable disturbances.

18. This property of averages does not hold for all distributions (*cf.* Eugene F. Fama, "Portfolio Analysis in a Stable Paretian Market"), but for the distributions associated with stock market returns it almost certainly holds.

19. Only securities which also had complete data in the next seven year period were included in this ranking.

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measure for the same portfolio estimated in the next period.[20] The risk measure calculated using the earlier data might be regarded as an individual's assessment of the future risk, and the measure calculated using the later data can be regarded as the realized risk. Thus, these correlation coefficients can be interpreted as a measure of the accuracy of one's assessments, which in this case are simple extrapolations of historical data.

TABLE 2

PRODUCT MOMENT AND RANK ORDER CORRELATION COEFFICIENTS OF BETAS FOR PORTFOLIOS OF N SECURITIES

Number of Securities per Portfolio	7/26-6/33 and 7/33-6/40		7/33-6/40 and 7/40-6/47		7/40-6/47 and 7/47-6/54		7/47-6/54 and 7/54-6/61		7/54-6/61 and 7/61-6/68	
	P.M.	Rank	P.M.	Rank	P.M.	Rank	P.M.	Rank	P.M.	Rank
1	0.63	0.69	0.62	0.73	0.59	0.65	0.65	0.67	0.60	0.62
2	0.71	0.75	0.76	0.83	0.72	0.79	0.76	0.76	0.73	0.74
4	0.80	0.84	0.85	0.90	0.81	0.89	0.84	0.84	0.84	0.85
7	0.86	0.90	0.91	0.93	0.88	0.93	0.87	0.88	0.88	0.89
10	0.89	0.93	0.94	0.95	0.90	0.95	0.92	0.93	0.92	0.93
20	0.93	0.99	0.97	0.98	0.95	0.98	0.95	0.96	0.97	0.98
35	0.96	1.00	0.98	0.99	0.95	0.99	0.97	0.98	0.97	0.97
50	0.98	1.00	0.99	0.98	0.98	0.99	0.98	0.98	0.98	0.97

The values of these correlation coefficients are striking. For the assessments based upon the data from July 1926 through June 1933 and evaluated using data from July 1933 through June 1940, the product moment correlations varied from 0.63 for single securities to 0.98 for portfolios of 50 securities. The high value of the latter coefficient indicates that substantially all of the variation in the risk among portfolios of 50 securities can be explained by assessments based upon previous data. The former correlation suggests that assessments for individual securities derived from historical data can explain roughly 36 per cent of the variation in the future estimated values, leaving about 64 per cent unexplained.[21]

These results, which are typical of the other periods, suggest that at least as measured by the correlation coefficients, naively extrapolated assessments of future risk for larger portfolios are remarkably accurate, whereas extrapolated assessments of future risk for individual securities and smaller portfolios are of some, but limited value in forecasting the future.

B. *A Closer Examination*

Table 3 presents the actual estimates of the risk parameters for portfolios of 100 securities for successive periods. For all five different sets of portfolios, the rank order correlations between the successive estimates are one, but there is obviously some tendency for the estimated values of the risk parameter to

20. Because of the small number of portfolios of 100 securities, correlations are not presented in Table 2 for these portfolios.

21. This large magnitude of unexplained variation may make the beta coefficient an inadequate measure of risk for analyzing the cost of equity for an individual firm although it may be adequate for cross-section analyses of cost of equity.

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TABLE 3

ESTIMATED BETA COEFFICIENTS FOR PORTFOLIOS OF 100 SECURITIES IN TWO SUCCESSIVE PERIODS

Portfolio	7/26-6/33	7/33-6/40	7/33-6/40	7/40-6/47	7/40-6/47	7/47-6/54	7/47-6/54	7/54-6/61	7/54-6/61	7/61-6/68
1	0.528	0.610	0.394	0.573	0.442	0.593	0.385	0.553	0.393	0.620
2	0.898	1.004	0.708	0.784	0.615	0.776	0.654	0.748	0.612	0.707
3	1.225	1.296	0.925	0.902	0.746	0.887	0.832	0.971	0.810	0.861
4			1.177	1.145	0.876	1.008	0.967	1.010	0.987	0.914
5			1.403	1.354	1.037	1.124	1.093	1.095	1.138	0.995
6					1.282	1.251	1.245	1.243	1.337	1.169

change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the future values, and furthermore the values of the risk coefficients as measured by the estimates of β_i tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios.

C. *A Method of Correction*

In so far as the rate of regression towards the mean is stationary over time, one can in principle correct for this tendency in forming one's assessments. An obvious method is to regress the estimated values of β_i in one period on the values estimated in a previous period and to use this estimated relationship to modify one's assessments of the future.

Table 4 presents these regressions for five successive periods of time for individual securities.[22] The slope coefficients are all less than one in agreement with the regression tendency, observed above. The coefficients themselves do change over time, so that the use of the historical rate of regression to correct

TABLE 4

MEASUREMENT OF REGRESSION TENDENCY OF ESTIMATED BETA COEFFICIENTS FOR INDIVIDUAL SECURITIES

Regression Tendency Implied Between Periods	$\beta_2 = a + b\beta_1$
7/33-6/40 and 7/26-6/33	$\beta_2 = 0.320 + 0.714\beta_1$
7/40-6/47 and 7/33-6/40	$\beta_2 = 0.265 + 0.750\beta_1$
7/47-6/54 and 7/40-6/47	$\beta_2 = 0.526 + 0.489\beta_1$
7/54-6/61 and 7/47-6/54	$\beta_2 = 0.343 + 0.677\beta_1$
7/61-6/68 and 7/54-6/61	$\beta_2 = 0.399 + 0.546\beta_1$

22. The reader should not think of these regressions as a test of the stationarity of the risk of securities over time but rather merely as a test of the accuracy of the assessments of future risk which happen to be derived as historical estimates. In this test of accuracy, the independent variable in these regressions is measured without error, so that the estimated coefficients are unbiased. In the test of the stationarity of the risk measures over time, the independent variable would be measured with error, so that the coefficients in Table 4 would be biased.

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for the future rate will not perfectly adjust the assessments and may even overcorrect by introducing larger errors into the assessments than were present in the unadjusted data.

To examine the efficacy of using historical rates of regression to correct one's assessments, the estimated risk coefficients for the individual securities for the period from July 1933 through June 1940 were modified using the first equation in Table 4 to obtain adjusted risk coefficients under the assumption that the future rate of regression will be the same as the past. This process was repeated for each of the next three periods using respectively the next three equations in Table 4 to estimate the rate of regression.

Table 5 compares these adjusted assessments with the unadjusted assessments which were used in Tables 2 and 3. For the portfolios selected previously using the data from July 1933 through June 1940, both the unadjusted

TABLE 5
MEAN SQUARE ERRORS BETWEEN ASSESSMENTS AND FUTURE ESTIMATED VALUES

Number of Sec./ Port.	Assessments Based Upon							
	7/33-6/40		7/40-6/47		7/47-6/54		7/54-6/61	
	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted
1	0.1929	0.1808	0.1747	0.1261	0.1203	0.1087	0.1305	0.1013
2	0.0915	0.0813	0.1218	0.0736	0.0729	0.0614	0.0827	0.0535
4	0.0538	0.0453	0.0958	0.0483	0.0495	0.0381	0.0587	0.0296
7	0.0323	0.0247	0.0631	0.0276	0.0387	0.0281	0.0523	0.0231
10	0.0243	0.0174	0.0535	0.0220	0.0305	0.0189	0.0430	0.0169
20	0.0160	0.0090	0.0328	0.0106	0.0258	0.0139	0.0291	0.0089
35	0.0120	0.0055	0.0266	0.0080	0.0197	0.0101	0.0302	0.0089
50	0.0096	0.0046	0.0192	0.0046	0.0122	0.0097	0.0237	0.0064
75	0.0081	0.0035	0.0269	0.0067	0.0112	0.0078	0.0193	0.0056
100	0.0084	0.0020	0.0157	0.0035	0.0114	0.0084	0.0195	0.0056

and adjusted assessments of future risk were obtained. The accuracy of these two alternative methods of assessment were compared through the mean squared errors of the assessments versus the estimated risk coefficients in the next period, July 1940 through June 1947.[23] This process was repeated for each of the next three periods.

For individual securities as well as portfolios of two or more securities, the assessments adjusted for the historical rate of regression are more accurate than the unadjusted or naive assessments. Thus, an improvement in the accuracy of one's assessments of risk can be obtained by adjusting for the historical rate of regression even though the rate of regression over time is not strictly stationary.

23. The mean square error was calculated by $\frac{\Sigma(\beta_1 - \beta_2)^2}{n}$ where β_1 is the assessed value of the future risk, β_2 is the estimated value of the risk, and n is the number of portfolios. In using an estimate of beta rather than the actual value, the mean square error will be biased upwards, but the effect of this bias will be the same for both the adjusted and unadjusted assessments.

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V. Conclusion

This paper examined the empirical behavior of one measure of risk over time. There was some tendency for the estimated values of these risk measures to regress towards the mean over time. Correcting for this regression tendency resulted in considerably more accurate assessments of the future values of risk.

2026-2027 GRA Cleary IR-09 Attachment 2 has been filed electronically.

Request IR-10:

Preamble:

On pages 48-49 of Appendix 10A, Concentric discusses its market risk premium (MRP) estimates it uses in its CAPM cost of equity calculations.

Question:

(a) Please provide the source documents, as well as workpapers including all data and calculations used to estimate the historical MRP estimates for Canada and the U.S. that are reported in Figure 23.

(b) Please confirm that the historical MRP estimate for Canada of 5.68% is 35% higher than the arithmetic average estimate of 4.2% provided in the Dimson et al. (2016) study (which examines MRPs over the 1900-2015 period), and is 72% above the geometric average of 3.3% determined in the same study. If not confirmed please provide the actual percentage differences.

(c) Please confirm that the historical MRP estimate for the U.S. of 7.17% is 24% higher than the arithmetic average estimate of 5.8% provided in the Dimson et al. (2016) study (which examines MRPs over the 1900-2015 period), and is 63% above the geometric average of 4.4% determined in the same study. If not confirmed please provide the actual percentage differences.

(d) Please explain why Concentric's historical MRP estimates are so much higher than those included in the Dimson et al. (2016) study, given the significant overlap of a large number of annual observations included in both estimates.

(e) Please provide intuitive justification and empirical support for using "income only returns" for bonds to determine MRPs rather than "total returns," which is standard practice for finance professionals. The justification should provide support that this is common practice in finance – aside from utilities' experts providing evidence on behalf of utilities during such proceedings, or in textbooks on regulatory finance published by authors such as Dr. Morin, who has provided evidence on behalf of utilities in over 50 cases through the years. Such support could come from sources advocating this approach to estimating market risk premiums such as: mainstream finance industry research publications or research reports; current College or University finance textbooks; recent CFA curriculum; and/or, mainstream academic articles that would have been published in one of the 50 top mainstream finance journals (which can be found at the following webpage: https://www.scimagojr.com/journalrank.php?category=2003).

Response IR-10:

(a) Please refer to Attachment 1 for the requested source documents.

(b) Confirmed.

(c) Confirmed.

(d) Dimson's estimates are actually higher than those used by Concentric. As explained in Concentric's report, the historical MRPs for Canada and the U.S. are the values reported by Kroll, which publishes information on historical market returns and government bond yields. The Canadian data cover the period from 1919-2023, while the U.S. data are from 1926-2023. The historical MRP reported by Kroll is based on the annual return on large company stocks (i.e., the S&P 500 in the U.S. and the TSX in Canada) less the income-only return on 20-year government bonds, equal to 7.31 percent for the U.S. and 5.75 percent for Canada. The Dimson study cited by Dr. Cleary used a different time period than

the Kroll data that Concentric relied upon (1900-2015, vs. 1919-2024). Dimson computes a real return on equities, inflation, and real bond returns over this period. If one adds Dimson's real equity returns to inflation and subtract the real bond yields, all reported by Dimson, these estimates are higher than those used by Concentric from Kroll, resulting in an MRP of 8.8 percent in the U.S. and 8.5 percent in Canada.

(e) Data on the historical market risk premium is published by Kroll (formerly Duff & Phelps). Kroll computes the historical MRP by subtracting the income-only return on government bonds from the total return on large company stocks (i.e., the S&P 500 in the U.S. and the S&P/TSX in Canada). Return data from Kroll is commonly used by finance professionals in valuations. Kroll explains why it uses the income-only return instead of the total return on government bonds as follows:

> Another point to keep in mind when calculating the equity risk premium is that the income return on the appropriate-horizon Treasury security, rather than the total return, is used in the calculation. The total return comprises three return components: the income return, the capital appreciation return, and the reinvestment return. The income return is defined as the portion of the total return that results from a periodic cash flow, or in this case, the bond coupon payment. The capital appreciation return results from the price change of a bond over a specific period. Bond prices generally change in reaction to unexpected fluctuations in yields. Reinvestment return is the return on a given month's investment income when reinvested into the same asset class in the subsequent months of the year. The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return.[1]

[1] Duff & Phelps, 2021 SBBI Yearbook, at 10-22.

2026-2027 GRA Cleary IR-10 Attachment 1 has been filed electronically.

Request IR-11:

Preamble :

On pages 52-56 of Appendix 10A, Concentric discusses what it refers to as its risk premium analysis.

Question:

(a) Please confirm that the Risk Premium approach discussed on pages 52-56 of Appendix 10A is the same model that Mr. Coyne labelled as his Bond Yield Plus Risk Premium Model "BYPRPM" during the 2018 Alberta GCOC proceedings. If not confirmed, please explain.

(b) Please confirm that the Risk Premium approach discussed on pages 52-56 of Appendix 10A:

(i) estimates the risk premium in excess of long-term U.S. and Canadian government bond yields (i.e., the U.S. and Canadian risk-free rates), and hence does not take advantage of incorporating observable market data on utilities' credit spreads, which is included in utility bond yields; and

(ii) uses the approved ROEs of regulators in the U.S. and Canada, which do not represent actual capital market based data.

(c) Please provide justification for the use of allowed ROEs in the U.S. and Canada, which do not provide market-based evidence, do not account for issues such as jurisdiction-specific legislations and case law, nor do they reflect NSPML utility-specific business risks.

Response IR-11:

(a) Confirmed.

(b)

(i) Confirmed. However, regardless of whether the Risk Premium model is based on the relationship between government bond yields or utility bond yields, the regression analysis demonstrates that there is an inverse relationship between interest rates and the equity risk premium. If Concentric had used utility bond yields instead of government bond yields, the Risk Premium regression analysis would have produced similar results.

(ii) Confirmed. Concentric, however, does not agree with those concerns. The September 2023 BCUC decision is instructive on this point. On page 117 of Decision and Order G-236-23, the BCUC writes:

> Consequently, the Panel considers that circularity concerns alone do not justify eliminating reliance on the Risk Premium Model, or any particular model, for determining the appropriate ROE for FEI and FBC. Instead, it is a factor in the overall consideration of model results.

(c) While Concentric recognizes the limitations of the Risk Premium approach, it believes these concerns are mitigated by the fact that its Risk Premium analysis is based on more than 770 integrated electric utility rate case decisions in the U.S. since 1992. In addition, Concentric has presented a risk premium analysis based on more than 60 Canadian ROE decisions dating back to 2000. Further, in Concentric's experience, the regulatory environment in many Canadian jurisdictions is not materially different than it is in many U.S. states. Analysts at Moody's Ratings and Scotiabank have expressed that same view on the similarity of utility regulation in Canada and the U.S., as described on pages 74-75 of Concentric's report for NS Power [2026-2027 GRA Appendix 10A].