



SUPPLEMENTARY INFORMATION

**UPDATE ON QUÉBEC'S ECONOMIC AND
FINANCIAL SITUATION – FALL 2022**

SUPPLEMENTARY INFORMATION

- 1. Margins of prudence, sensitivity analyses and main risks to Québec's financial situation 1**
- 2. Net financial surpluses or requirements 11**

1. MARGINS OF PRUDENCE, SENSITIVITY ANALYSES AND MAIN RISKS TO QUÉBEC'S FINANCIAL SITUATION

□ Margins of prudence

The provisions included in the financial framework total \$6.0 billion by 2024-2025. They cover risks that could affect the financial framework and thus make it possible to respond to an unexpected decline in revenue or an unexpected increase in expenditure.

TABLE 1

Margins of prudence (millions of dollars)

	2022-2023	2023-2024	2024-2025	Total
Contingency Fund reserve	200	400	400	1 000
Provision for economic risks and other support and recovery measures	1 000	2 000	2 000	5 000
TOTAL	1 200	2 400	2 400	6 000

□ Risks and sensitivity analyses in the context of high inflation

Over the next year, global economic growth will depend on the inflationary trend and the ability of monetary authorities to contain it. The economic situation significantly increases the uncertainty regarding parameters and assumptions underlying the establishment of forecasts for the various components of the financial framework. Consequently, the effects of risks and sensitivity analyses could be different than those expected, thereby increasing the volatility of the financial impacts presented in this section.

□ Risks and sensitivity analysis for own-source revenue

■ Risks

The own-source revenue forecasts for 2022-2023 and subsequent years involve a level of risk and uncertainty given that they are based on assumptions concerning future events, such as the persistence of inflation and the possibility that central banks may need to raise further interest rates to reduce inflation, which substantially increases the risk of a recession.

For example, the forecast for corporate tax revenue is marked by a considerable level of uncertainty owing to a combination of several economic, decision-making and administrative factors such as:

- the legal framework, which allows businesses to make choices regarding taxation, in particular the utilization of deferred losses;
- the possibility of adjusting instalment payments over the course of the year;
- the deadline for filing and processing tax returns, which affects the recognition of corporate taxes.

■ Sensitivity analysis

In general, the nominal GDP forecast is a good indicator of growth in own-source revenue¹ given the link between taxable bases and nominal GDP.

- According to the overall sensitivity analysis, a variation of 1 percentage point in nominal GDP has an impact of about \$1.0 billion on the government's own-source revenue.

This sensitivity analysis is based on an adjustment of each taxable base in proportion to the adjustment of nominal GDP.

- In reality, a change in the economic and geopolitical outlooks can have a greater impact on certain economic variables, affecting some taxable bases more than others.

Sensitivity analyses set an average historical relationship between the change in own-source revenue and growth in nominal GDP. Accordingly, they may prove inaccurate for a given year depending on the economic situation and yet not lose their validity.

- Indeed, economic fluctuations may have different impacts on revenue because of changes in the behaviour of economic agents.
- In these situations, the change in own-source revenue can be greater or lower than the change in nominal GDP.

TABLE 2

Sensitivity of own-source revenue excluding revenue from government enterprises to major economic variables

Variables	Variation forecasts for 2022	Impacts for fiscal 2022-2023
Nominal GDP	10.0%	A variation of 1 percentage point changes own-source revenue ⁽¹⁾ by about \$1.0 billion.
Wages and salaries	10.6%	A variation of 1 percentage point changes personal income tax revenue by about \$415 million.
Employment insurance	-50.3%	A variation of 1 percentage point changes personal income tax revenue by about \$8 million.
Pension income	4.5%	A variation of 1 percentage point changes personal income tax revenue by about \$60 million.
Net operating surplus of corporations	1.1%	A variation of 1 percentage point changes corporate tax revenue by about \$70 million.
Consumption excluding food expenditures and shelter	12.6%	A variation of 1 percentage point changes QST revenue by about \$200 million.
Residential investment	0.2%	A variation of 1 percentage point changes QST revenue by about \$45 million.

(1) Own-source revenue excluding revenue from government enterprises.

¹ Own-source revenue excluding revenue from government enterprises.

□ **Risks and sensitivity analysis for revenue from government enterprises**

■ **Risks**

The forecasts for government enterprises depend on the information available when they are made. Updating of information may thus have an impact on forecasts.

In addition, it must also be borne in mind that certain variables, such as those concerning weather conditions, are difficult to forecast.

■ **Sensitivity analysis**

For Hydro-Québec, a variation of:

- 1.0 US¢/kWh in the price of energy on foreign markets changes its annual net earnings by about \$210 million;
- 1 °C in winter temperatures compared to normal temperatures changes its net earnings by about \$120 million.

For Loto-Québec, a variation of 1% in sales changes its net earnings by over \$10 million.

For the Société des alcools du Québec, a variation of 1% in sales changes its net earnings by nearly \$20 million.

For Investissement Québec, a variation of 1 percentage point in interest rates changes its net earnings by nearly \$10 million.

For the Société québécoise du cannabis, a variation of 1% in sales changes its net earnings by nearly \$2 million.

□ Risks and sensitivity analysis for federal transfers

■ Risks

The main risk associated with the equalization forecast concerns the estimation of the per capita fiscal capacity of each province, given that the federal government does not publish forecasts for equalization payments by province.

In addition, the main risks associated with the forecast for revenue from the Canada Health Transfer (CHT) and the Canada Social Transfer (CST) concern the estimation of the value of the special Québec abatement² and the estimation of the population of the provinces and territories.

■ Sensitivity analysis

The forecast for revenue from equalization, the CHT and the CST is based primarily on the following economic and demographic variables:

- the growth of Canada's nominal GDP;
- the growth in wages and salaries used in the forecast for basic federal income tax;
- the growth of the net operating surplus of corporations used in the forecast for taxable corporate income;
- Québec's share of the population among the provinces as a whole.

Sensitivity analyses may not apply for a given year because of special economic conditions or changes made by the federal government to the operation of equalization, the CHT or the CST.

In addition, the sensitivity analysis of equalization revenue is based on an increase of 1 percentage point in the growth of Québec's economic variables, without any impact on those of the other provinces.

² Québec's revenues from the CHT and the CST are deducted from part of the value of the special Québec abatement (13.5% in the case of basic federal income tax collected in Québec, of which 62% is attributed to the CHT and 38% to the CST).

TABLE 3

**Sensitivity of federal transfer revenue to major economic variables
demographic variables**

Variables	Forecasts for 2022	Impacts for fiscal 2022-2023
Growth of Canada's nominal GDP	10.9%	An increase of 1 percentage point raises equalization revenue ⁽¹⁾ by about \$25 million. An increase of 1 percentage point raises CHT revenue ⁽¹⁾ by about \$35 million.
Growth in wages and salaries in Québec	10.6%	An increase of 1 percentage point reduces equalization revenue ⁽²⁾ by about \$40 million. An increase of 1 percentage point reduces CHT and CST revenues by about \$50 million.
Growth in the net operating surplus of corporations in Québec	1.1%	An increase of 1 percentage point reduces equalization revenue ⁽²⁾ by about \$5 million.
Québec's share of the population in Canada	22.3%	An increase of 0.1 percentage points raises equalization revenue ⁽²⁾ by about \$75 million. An increase of 0.1 percentage points raises CHT and CST revenues by about \$60 million.

(1) Equalization and CHT envelopes for 2022-2023 were established by the federal government in December 2021 and will not be revised. Increased growth in 2022 would have an impact as of 2023-2024.

(2) Due to the two-year lag in the equalization formula, increased growth in 2022 would have an impact as of 2024-2025. The impact of this increase for the years 2022-2023 and 2023-2024 would be nil.

□ **Risks and sensitivity analysis for portfolio expenditures**

■ **Risks**

Several factors can have an impact on the expenditures of a departmental portfolio. These factors include, in particular:

- a change in the clientele, such as recipients of last resort financial assistance or the student population in educational institutions;
- technological changes, which particularly affect the cost of drugs and medical equipment for performing diagnostics;
- an insufficient workforce, in the context of a shrinking labour pool, which limits the government's ability to implement its programs;
- changes in the general level of prices, which have different impacts on each of the government's portfolios;
- the emergence of new needs among the Québec population.

The accuracy of forecast remuneration expenditures is improved when the remuneration of government employees is governed by agreements. Since several collective agreements end on March 31, 2023, the evolution of the remuneration expenditures forecast could differ from forecasts starting in 2023-2024.

■ Sensitivity analysis

The financial framework's forecasts take into account:

- budgetary choices, which stem from the prioritization of certain sectors over others in the allocation of spending;
- economic and demographic variables, which are tied to price factors (inflation) and demographic factors (changes in population).

The two following tables show the sensitivity of portfolio expenditures according to budgetary choices and socioeconomic factors.

- It should be noted that such data are indications, and that impacts may vary depending on the nature and interaction of risk factors.

■ Budgetary choices

Spending may vary according to the choices made by the government in allocating its available budgetary resources.

For example, for fiscal 2022-2023, a 1% variation in the expenditure of the Santé et Services sociaux portfolio would lead to a variation of about \$560 million in government expenditures.

TABLE 4

Sensitivity of expenditures to a variation of 1% for the major portfolios (millions of dollars)

	Impact for fiscal 2022-2023
Santé et Services sociaux	560
Éducation	190
Enseignement supérieur	100
Other portfolios	480
TOTAL	1 330

▪ **Socioeconomic factors**

The analysis carried out also makes it possible to estimate the sensitivity of portfolio expenditures to certain socioeconomic factors.

▪ **Prices**

Public spending is influenced by the price of services offered by the government. The change in the price of such services is closely tied to the change in the general level of prices in the economy, that is, inflation.

Accordingly, a uniform variation in prices could lead to variations in portfolio expenditures.

The results show that a variation of 1% in prices would lead to a variation of \$580 million in spending, that is 0.4 percentage points in total spending.

▪ **Population**

Expenditure is affected by changes in total population and by the changes in the size of the clientele for certain services.

For example, a variation of 1% in the total population would change total spending by about \$1 040 million, that is, 0.8 percentage points.

— A variation of 1% in the number of people aged 0-4, that is, the population that affects, in particular, the demand for childcare services, would have a \$110-million impact on total expenditure.

TABLE 5

Sensitivity of portfolio expenditures to a variation of 1% in each economic and demographic variable

(millions of dollars and percentage points)

Socioeconomic variables		Impact for fiscal 2022-2023	
		(\$million)	(percentage points)
Prices			
Inflation	Total spending	580	0.4
Population			
Total population	Total spending	1 040	0.8
	Per portfolio:		
	– Santé et Services sociaux		0.7
	– Éducation		0.8
	– Enseignement supérieur		0.9
	– Other		0.7
0-4 years	Total spending	110	0.1
5-16 years	Total spending	220	0.2
17-24 years	Total spending	130	0.1
65 years and over	Total spending	300	0.2

□ Risks and sensitivity analysis for debt service

■ Risks

The main risk associated with the debt service forecast is a higher-than-anticipated increase in interest rates or a lower-than-anticipated return on the Retirement Plans Sinking Fund (RPSF).³

The RPSF is an asset that was created for payment of the retirement benefits of public and parapublic sector employees. It is managed by the Caisse de dépôt et placement du Québec.

The income of the RPSF is applied against debt service. Therefore, a lower-than-expected return on the RPSF would lead to an increase in debt service.

■ Sensitivity analysis

A greater-than-anticipated rise in interest rates of 1 percentage point over a full year would increase the interest expenditure by \$597 million.

A return of 1 percentage point less than the anticipated return on the RPSF would lead to an increase of about \$29 million in debt service the following year.

A change in the value of the Canadian dollar compared with other currencies has no impact on debt service because the government's debt has no foreign currency exposure.

³ With its investment policy, which is based on a long-term horizon, the RPSF should generate an annual return of 6.35%.

□ Main risks for the financial situation

TABLE 6

Margins of prudence and main risks for Québec's financial situation

Margins of prudence	Risks	Estimated impact
Financial framework	Economic variables	
Provision for economic risks and other support and recovery measures:	Impact of external variables on the Québec economy	
– \$1.0 billion in 2022-2023	– Variation of 1 percentage point in U.S. real GDP	Impact of 0.45 percentage points on Québec's real GDP
– \$2.0 billion in 2023-2024	– Variation of 1 percentage point in Ontario's real GDP	Impact of 0.42 percentage points on Québec's real GDP
– \$2.0 billion in 2024-2025		
	Own-source revenue	
	Global slowdown	
	– Variation of 1 percentage point in Québec's nominal GDP (equivalent to a 1.0-percentage point variation in growth in the consumer price index)	Impact of \$1.0 billion on own-source revenue ⁽¹⁾
	– Typical recession (average) ⁽²⁾	Impact of \$8.3 billion on own-source revenue ⁽¹⁾
	Government enterprises	
	Variation of 1 °C in winter temperatures compared to normal temperatures	Impact of \$120 million on Hydro-Québec's net earnings
	Federal transfers	
	Variation of 0.1 percentage points in the share of Québec's population in Canada	Impact of \$135 million on federal transfer revenues
Portfolio expenditures	Portfolio expenditures	
Contingency Fund reserve:	Unforeseen expenditures in government programs	Undetermined impact
– \$200 million in 2022-2023	Variation of 1 percentage point in the total population	Impact of \$1 040 million on spending
– \$400 million in 2023-2024	Additional variation of 1 percentage point in technology-related costs for health care	Impact of \$350 million on spending
– \$400 million in 2024-2025	Variation of 1 percentage point in the general level of prices	Impact of \$580 million on spending
	Natural disaster	Undetermined impact
	Public capital investment completion rate for a given year (5% difference)	Impact of \$85 million on spending (depreciation and interest)
Debt service	Debt service	
	Variation of 1 percentage point in interest rates	Impact of \$597 million on debt service ⁽³⁾
	Variation of 1 percentage point in the return on the RPSF	Impact of \$29 million on debt service

(1) Own-source revenue excluding revenue from government enterprises.

(2) In Québec, an analysis of historical data shows that an average recession could bring about a downward adjustment of 3.3 percentage points to nominal GDP during the first year and 0.8 percentage points over the next year in comparison to a baseline scenario.

(3) Ultimately, in the fifth year, the impact of a greater-than-anticipated rise in interest rates of 1 percentage point would increase debt service by almost \$2.1 billion.

2. NET FINANCIAL SURPLUSES OR REQUIREMENTS

Net financial surpluses or requirements represent the difference between the government's cash inflow and disbursements. These net financial surpluses or requirements take into account:

- changes in the budgetary balance on an accrual basis;
- resources or requirements arising from, in particular, the acquisition or disposal of fixed assets, investments, loans and advances and from other activities such as paying accounts payable and collecting accounts receivable.

TABLE 7

Net financial surpluses or requirements (millions of dollars)

	2022-2023	2023-2024	2024-2025
SURPLUS (DEFICIT)⁽¹⁾	-1 972	1 680	1 899
Non-budgetary transactions			
Investments, loans and advances ⁽²⁾	-495	-1 261	-2 367
Capital investments ⁽³⁾	-5 445	-5 799	-5 914
Pension plans and other employee future benefits ⁽⁴⁾	-2 951	-3 276	-3 581
Other accounts ⁽⁵⁾	-2 460	1 065	1 910
Deposits of dedicated revenues in the Generations Fund	-3 253	-3 947	-4 564
Total non-budgetary transactions	-14 604	-13 218	-14 516
NET FINANCIAL SURPLUSES (REQUIREMENTS)	-16 576	-11 538	-12 617

Note: A negative entry represents a financial requirement and a positive entry, a source of funding.

(1) Balance within the meaning of public accounts.

(2) Investments, loans and advances include mainly investments made by the government in its enterprises and loans and advances granted to entities not included in the government's reporting entity.

(3) Forecast net financial requirements associated with net capital investments result mainly from needs arising from the Québec Infrastructure Plan.

(4) Net financial requirements associated with retirement plans and other employee future benefits arise from gross employer contributions, employee contributions, benefits and administration costs, employee future benefits as well as uncollected income from the Retirement Plans Sinking Fund and other employee future benefits funds.

(5) Net financial surpluses or requirements for other accounts consist of a series of changes in assets and liabilities, such as accounts receivable and accounts payable.

TABLE 8

Net capital investments (millions of dollars)

	2022-2023	2023-2024	2024-2025
Investments	-10 491	-10 753	-11 087
Depreciation	5 046	4 954	5 173
NET CAPITAL INVESTMENTS	-5 445	-5 799	-5 914

Note: A negative entry represents a financial requirement and a positive entry, a source of funding.