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Canada's Cross-Border Carry Trade

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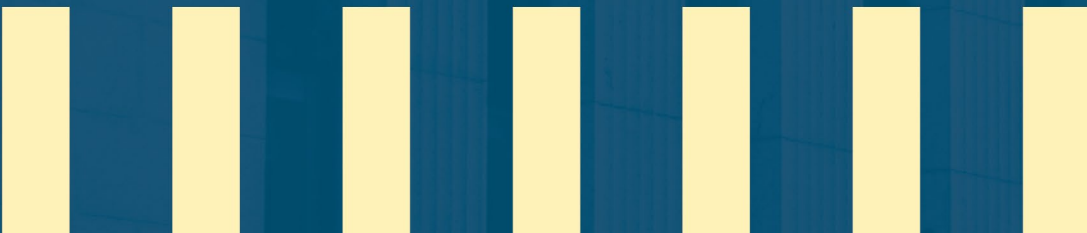
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Abstract

Canada has been spending more than its national income for much of the period since the Global Financial Crisis, relying for this on net financing from rest of the world. Yet Canada's foreign asset position has grown substantially than its foreign liabilities despite these deficits. This improvement reflects favorable changes in asset prices and exchange rates. From 1990Q1 to 2026Q2, estimated cumulative valuation gains were about 3 times as large as the cumulative current-account deficit. These gains also reflect a favorable portfolio composition. Canada increasingly holds foreign equity and direct investment, much of it denominated in U.S. dollars, while issuing relatively safer Canadian-dollar debt. Hence, higher returns on foreign equities, together with an appreciation of the U.S. dollar, raised the value of Canada's net foreign assets. Larger gross positions over time amplified these valuation effects. Overall, valuation gains have relaxed the current-account adjustment needed to stabilize Canada's external position, permitting a higher level of national expenditure than would otherwise have been feasible.

Topics:

JEL codes:

Introduction

Cross-border trade is closely linked to the difference between Canada's national savings and investment. Suppose Canada initially has no financial claims on or liabilities to the rest of the world. If Canada then imports more from the world than it exports, the difference is financed by foreigners accumulating financial claims on Canada. As this process continues, rising foreign claims commit more of Canadians' future income to foreigners. Together, cross-border trade and finance allow Canada to shift spending across time, financing spending today by issuing claims on future income.

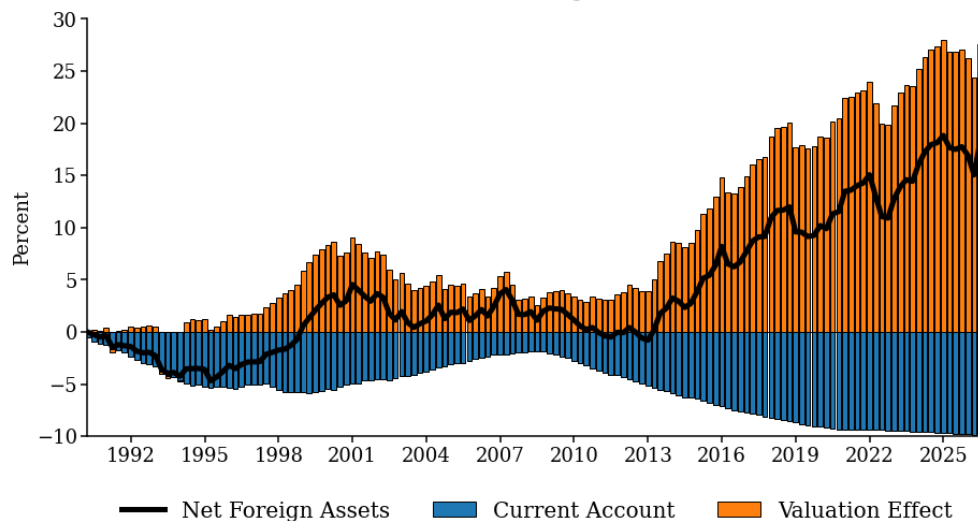
Over time, the claims that Canadians accumulate on foreigners, and the claims foreigners accumulate on Canadians, form Canada's external balance sheet. This balance sheet is revalued in financial markets every day and changes in the value of Canada's external wealth (assets minus liabilities) also alter Canada's spending possibilities.

Together, both trade and valuations determine how Canada's external balance sheet evolves over time. This process is known as external adjustment. If Canada's net external liabilities are rising, a trade deficit may eventually need to narrow to keep those liabilities from growing faster than the economy. However, by increasing Canada's external wealth, valuation gains can relax the constraint that persistent deficits would otherwise place on future spending. By contrast, valuation losses can tighten that constraint.

Valuation gains for Canada have become increasingly important, having risen significantly throughout history. From 1990 to the first quarter of 2026, the estimated total valuation gain was 3 times larger than the cumulative deficit in the current account, a broader measure that includes cross-border trade and investment income (**Chart 1**).¹ In effect, valuation gains on Canada's net foreign assets have more than offset the drag from the new liabilities accumulated through those deficits.

¹ Valuation effects are the authors' calculations based on Statistics Canada data. Investment returns are estimated from changes in positions after accounting for flows to obtain a consistent series back to 1990, since Statistics Canada's detailed decomposition begins only in 2015Q1. See Appendix for details.

Chart 1: Valuation Effects Account for Most of the Rise in Canada's Net Foreign Assets
(Cumulative Current-Account Balance and Valuation Changes as Fractions of Canadian Household Wealth)



Note: Net foreign assets represents the market-value of Canada's external assets minus its external liabilities, measured in Canadian dollars. The current account consists of net exports, net investment income, and net transfers. Valuation effects include changes in asset prices and exchange rates. See Appendix for additional details. Cumulations are calculated by scaling each period's current-account balance and valuation effect by household wealth in that same period and summing these scaled figures over time. See Appendix for details.

Sources: Statistics Canada and Bank of Canada calculations.

Sample: 1990Q1-2026Q2

This note asks how the current account and valuation changes have jointly shaped Canada's external balance sheet, particularly since the Global Financial Crisis when valuation adjustments have been substantial. It expands the earlier work of [Bruneau, Leboeuf, and Nolin \(2017\)](#) using data through the first quarter of 2026.

The main insight is that changes in the composition and size of Canada's external balance sheet continue to drive large valuation gains since 2010. Canada increasingly holds foreign equities and direct investments in U.S. dollars while issuing safer debt liabilities in Canadian dollars. As gross assets and liabilities have grown, so has the impact of their return differences on Canada's net position. The resulting valuation gains have relaxed the need for Canada's current-account deficits to narrow, which to some extent has permitted a higher level of national expenditure than would otherwise have been feasible.

How Canada's external balance sheet evolves

External adjustment is often introduced through a simple relative-price argument. If Canada needs to narrow a current-account deficit, a decline in the price of Canadian goods relative to foreign goods can encourage exports and discourage imports. In Canada, this adjustment is generally expected to occur mainly through a depreciation of the Canadian dollar because the exchange rate floats and monetary policy aims to keep inflation low and stable. A depreciation helps narrow the current-account deficit by

making Canadian exports cheaper for foreigners and foreign imports more expensive for Canadians, shifting spending toward Canadian goods and services.

Considering valuation effects as a source of external adjustment broadens this relative-price view. This broader view treats current-account imbalances as the result of saving and investment decisions over time (Obstfeld and Rogoff, 1995). When national saving falls short of domestic investment, Canada runs a current-account deficit and draws on financing from the rest of the world, allowing households, firms and governments collectively to spend more than national income today. A current-account surplus does the opposite.

Suppose Canada exports \$80 and imports \$100. Canada has imported more than it exported, receiving \$20 more in goods and services from the rest of the world than it has supplied in return. The difference must therefore be settled with financial claims. Canada must issue \$20 in new claims to foreigners or reduce its existing claims on the rest of the world by \$20. Either way, Canada's net foreign asset position falls.²

Canada's external balance sheet records these claims over time, measuring the stock of foreign assets owned by Canadians and the stock of Canadian liabilities held by the rest of the world. The difference between these assets and liabilities is Canada's net foreign asset position, NFA_t . An accounting identity describes how this position evolves.³

$$NFA_t = NFA_{t-1} + VAL_t + CA_t$$

Today's position is equal to yesterday's position plus the current account, CA_t and valuation effects, VAL_t .

- The current account records net exports, net investment income, and net transfers in the period. A current-account deficit lowers Canada's net foreign assets and corresponds to increased net borrowing from the rest of the world.
- Valuation effects capture changes in the Canadian-dollar market value of the assets and liabilities already on the balance sheet. They arise from movements in asset prices and exchange rates.

The accounting identity provides a structure for tracing how the current account and valuations jointly shape Canada's external adjustment over time. Returning to the earlier example, Canada runs a \$20 current-account deficit and accumulates \$20 in net external liabilities. That deficit can later be offset by a \$20 current-account surplus, for example,

² The same relationship can be read in reverse. If Canadians initially acquire \$20 more in new claims on foreigners than foreigners acquire on Canadians, then Canada must offset this difference through higher net exports, higher net investment income, or both.

³ We abstract from statistical discrepancies and transactions that are part of the capital account.

by exporting \$100 and importing \$80. Alternatively, that deficit can later be offset by a \$20 favourable valuation change that raises the value of Canada's net foreign assets.

More generally, Canada can run a larger current-account deficit so long as positive revaluations offset the net liabilities accumulated through higher current-account deficits. Otherwise, sustained deficit positions imply that Canada's external liabilities would continue to grow. To narrow the current account and satisfy these liabilities, Canada would eventually require either stronger future income growth or an increase in its net exports. Valuation gains therefore can relax this constraint by reducing the required future current-account adjustments.

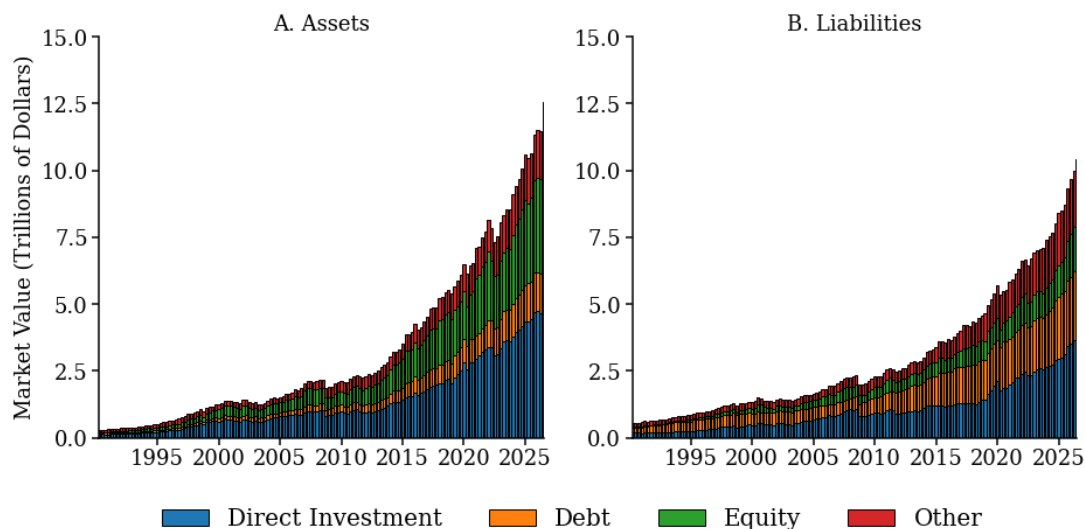
Canada holds relatively riskier external assets and issues relatively safer external liabilities

Together, the size and composition of Canada's external balance sheet determine how valuation changes have shaped Canada's external balance sheet.

- Size captures the degree of balance-sheet leverage: when Canada's gross assets and liabilities are large relative to its net position, even modest differences between returns on assets and liabilities can meaningfully affect the value of Canada's net foreign assets.
- Composition provides insight into how large those returns may be. An asset composition that significantly differs from the composition of liabilities increases the scope for return differences between assets and liabilities.

Canada's gross assets and liabilities have grown substantially since the Global Financial Crisis (**Chart 2**).

Chart 2: Both Gross Assets and Liabilities Have Grown Significantly



Note: Debt includes portfolio holdings of bonds, money-market instruments; and Canada's official international reserves; equity includes portfolio holdings of shares. Direct investment comprises equity and debt associated with a significant ownership interest. Other assets and liabilities mainly include loans, deposits, and other receivables or payables. See Appendix for details.

Sources: Statistics Canada and Bank of Canada calculations.

Sample: 1990Q1-2026Q2

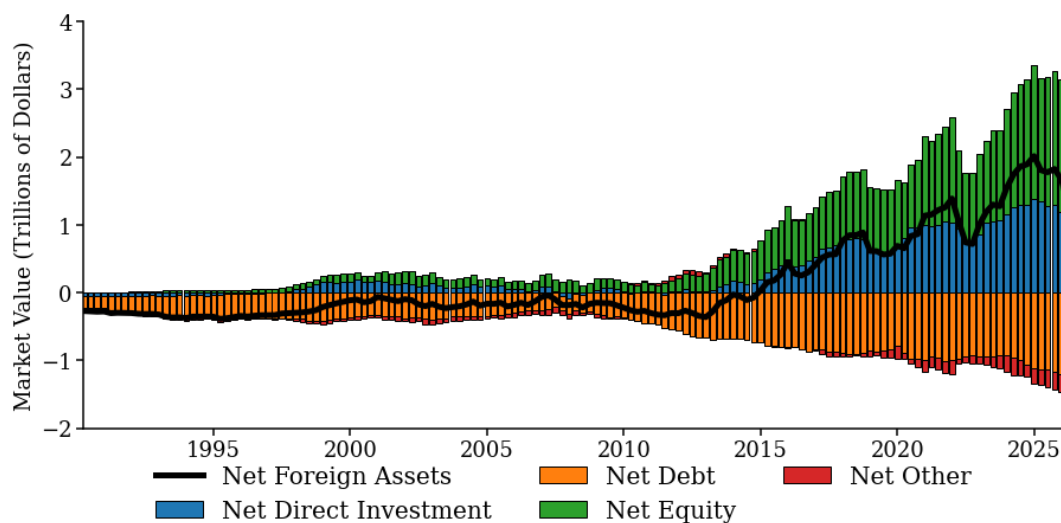
Both size and composition effects have contributed to this growth.

- On the asset side, Canada's rising claims on the rest of the world were driven largely by public equities and direct investment (**Chart 2A**).
- On the liability side, direct investments also contributed to the growth in foreign claims on Canada. But, instead of Canadian equities, foreigners hold a growing position in Canadian debt (**Chart 2B**).

As for composition, after netting assets and liabilities separately for equities, debts and direct investments, the structure of Canada's external balance sheet in effect resembles a cross-border carry trade.⁴ Canadians increasingly hold relatively riskier foreign equities and direct investments, while issuing relatively safer debt instruments (**Chart 3**).

⁴ The carry-trade comparison is an analogy for Canada's aggregate external balance sheet. Unlike a traditional carry trade, the foreign asset and liability positions reflect decisions by many different agents and are not necessarily financed or unwound together.

Chart 3: On Net, Canada's External Balance Sheet is Comprised of Foreign-Equity and Direct-Investment Assets, and Debt Liabilities



Note: Net positions equal the market value of Canada's external assets less the market value of corresponding external liabilities. Positive values indicate net assets. Net debt and net equity refer to net portfolio holdings of debt securities and equity securities. Net direct investment includes net equity and debt associated with significant ownership interests. Other includes net loans, deposits and other receivables or payables. See Appendix for details.

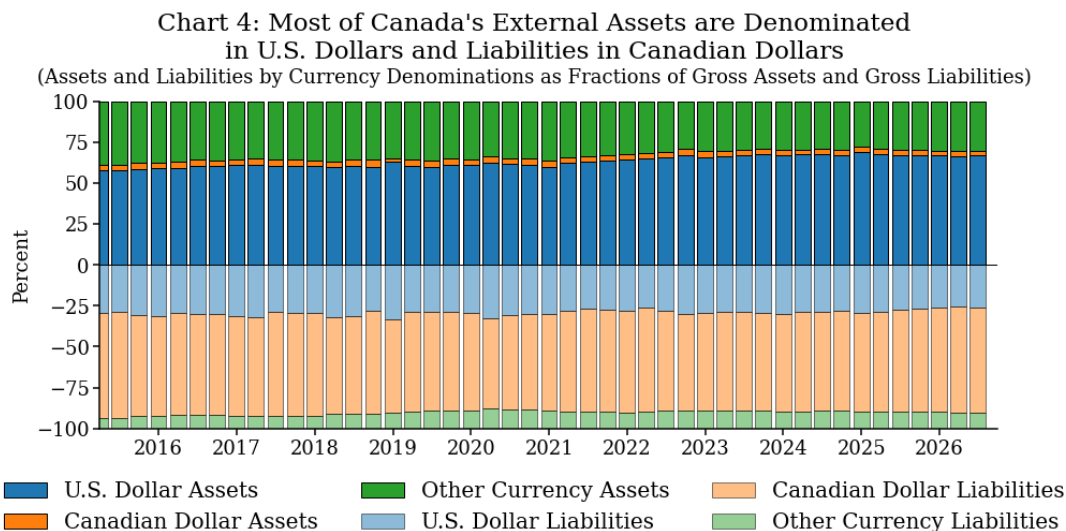
Sources: Statistics Canada and Bank of Canada calculations.

Sample: 1990Q1-2026Q2

In this carry trade,

- Canada's net foreign asset position stands to earn higher expected returns on its relatively riskier foreign equity assets than the yields on its relatively safer debt liabilities.⁵ However, equity valuations are also more volatile, which can produce temporary declines in Canada's net foreign asset position, as in 2022.
- Canada's net foreign asset position will increase when there is a foreign currency appreciation against the Canadian dollar, all else equal. This is because most of its assets are denominated in U.S. dollars, while most of its liabilities are denominated in Canadian dollars (**Chart 4**).

⁵ Debt includes corporate debt. We characterize debt as relatively safer than equity because debt holders often have contractually specified payments and rank ahead of equity holders in the event of default, while equity holders are residual claimants.

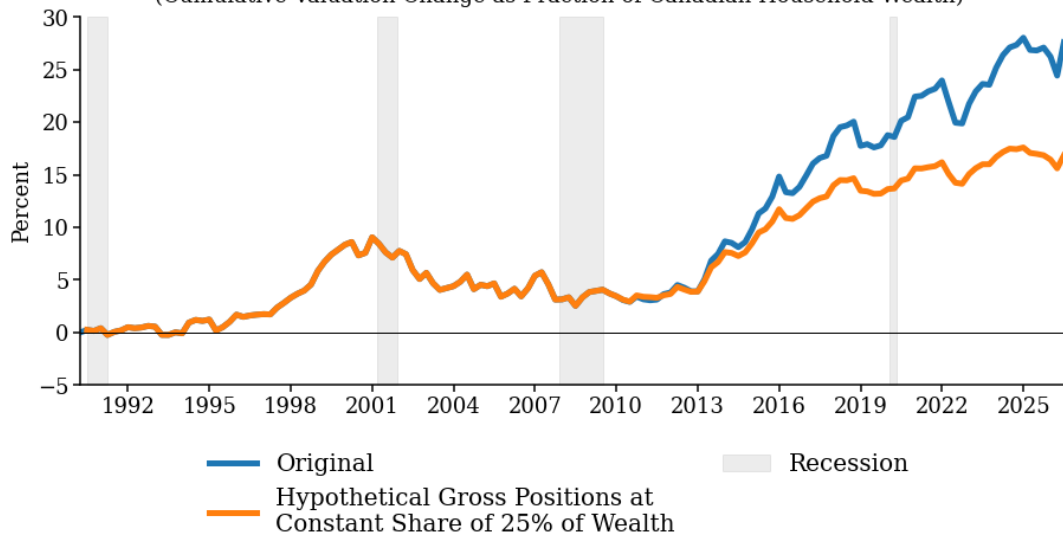


Sample: 2015Q1-2026Q2

Size and composition have driven valuation effects

Canada has benefited from significant valuation adjustments, particularly since the Global Financial Crisis (**Chart 5**). As a fraction of Canadian household wealth, Canada has cumulatively earned 12 percentage points from its net foreign assets, which is equivalent to an average valuation gain of 0.7 percentage points per year.

Chart 5: Larger Gross Positions Amplified Valuation Effects
(Cumulative Valuation Change as Fraction of Canadian Household Wealth)



Note: Original represents the actual realized valuation effects on Canada's net foreign assets. It includes changes in asset prices and exchange rates. Hypothetical gross positions at 25% represent the valuation effect on Canada's net foreign assets if Canada realized the same quarterly percentage return on assets and liabilities, but the value of those assets and liabilities were each equal to 25% of Canadian household wealth at each quarter from 2010 onward.

Sources: Statistics Canada and Bank of Canada calculations.

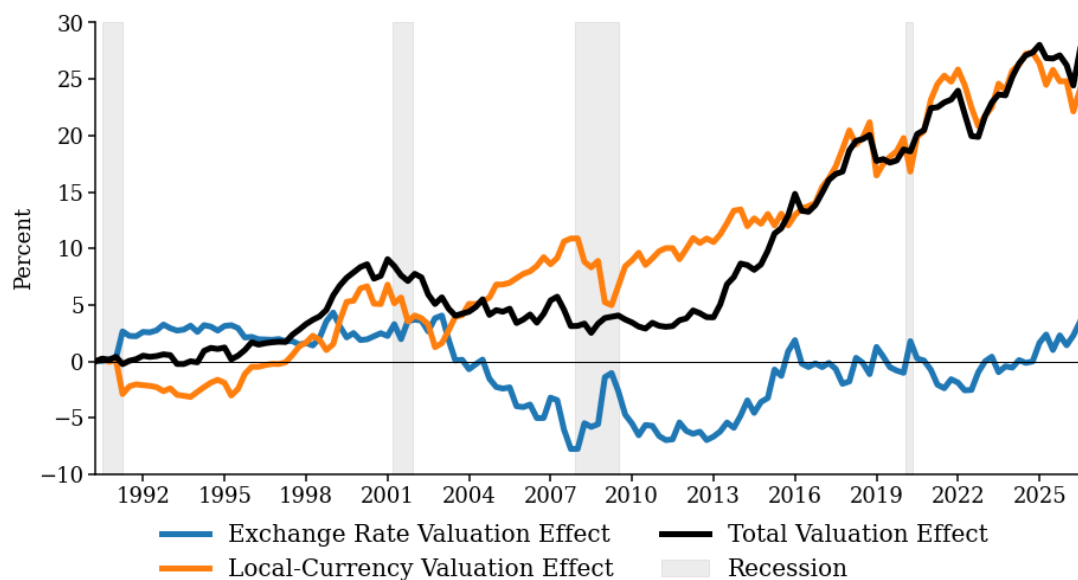
Sample: 1990Q1-2026Q2

The larger size of Canada's external balance sheet amplified the effect of realized returns on its net foreign asset position. We quantify this scale effect following [Atkeson, Heathcote, and Perri, 2025](#). Specifically, we hold the path of realized returns unchanged but assume that, from 2010 onward, gross assets and liabilities remained at 25 percent of household wealth, which is close to their pre-2010 average shares. Under this counterfactual, cumulative valuation gains would have been about 10 percentage points of household wealth smaller.

Since 1990, revaluations in Canada's external balance sheet primarily came from valuation gains in the local currency, excluding exchange-rate effects (**Chart 6**). Cumulatively, these gains have exceeded the drag coming from persistent current-account deficits, making local-currency valuation effects an increasingly important margin of external adjustment. More recently, exchange-rate effects have also contributed to the growth in Canada's external balance sheet. Since 2010, foreign currencies broadly appreciated against the Canadian dollar by 18 percent, cumulatively contributing to about 8 percentage points of household wealth.⁶

⁶ We use the Canadian effective exchange rate to approximate exchange-rate valuation effects. See Appendix for details.

Chart 6: Canada's Net Foreign Assets Have Risen
Primarily From Local-Currency Valuation Gains
(Cumulative Valuation Change as a Fraction of Household Wealth)



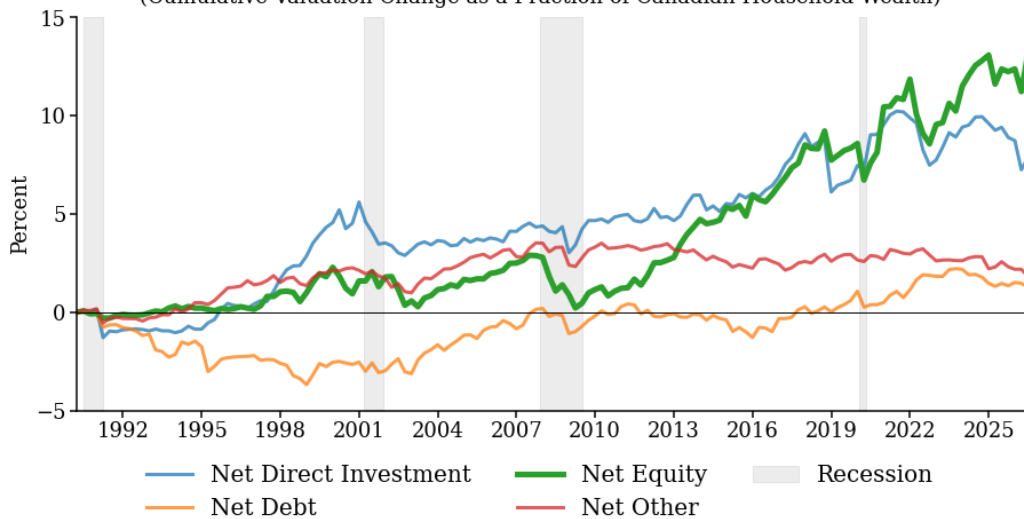
Note: Total valuation effect represents the market value change in Canada's net foreign assets. It includes changes in asset prices and exchange rates. Local-currency valuation adjustments include only asset price changes. Exchange-rate valuation adjustments include effects due to changes in the Canadian-dollar exchange rate, approximated by the Canadian Effective Exchange Rate. Cumulative valuation effects are calculated by scaling each period's valuation effect by household wealth in that same period and summing these scaled valuation effects over time. See Appendix for details.

Sources: Statistics Canada and Bank of Canada calculations.

Sample: 1990Q1-2026Q2

Looking within Canada's external balance sheet, holdings of foreign equities have contributed the most to total valuation gains (**Chart 7**). Since 2010, higher returns on Canada's holdings of foreign equities relative to foreigners' holdings of Canadian equities contributed about 12 cumulative percentage points relative to Canadian household wealth.

Chart 7: Rising Foreign Equity Valuations Drove Canada's Total Valuation Gains
(Cumulative Valuation Change as a Fraction of Canadian Household Wealth)



Note: Net positions equal the market value of Canada's external assets less the market value of corresponding external liabilities. Positive values indicate net assets. Net debt and net equity refer to net portfolio holdings of debt securities and equity securities. Net direct investment includes net equity and debt associated with significant ownership interests. Other includes net loans, deposits and other receivables or payables. See Appendix for details.

Sources: Statistics Canada and Bank of Canada calculations.

Sample: 1990Q1-2026Q2

In sum, Canada's net foreign assets have grown primarily because of relatively higher returns from holding relatively riskier foreign assets and issuing relatively safer Canadian liabilities. As gross assets and liabilities have grown, so has the impact of their return differences on Canada's net position.

Implications for Canada

The realized valuation gains on Canada's external balance sheet have relaxed the constraint that its persistent current-account deficits would otherwise have placed on spending. These gains reflect the growth of Canada's net foreign asset position and a change in its composition. This structural shift carries several important implications.

1. Exchange-rate adjustments extend beyond trade.

The exchange rate can stabilize Canada's external position through two complementary channels. A depreciation of the Canadian dollar can stabilize the external position by redirecting foreign demand toward Canadian goods and services and Canadian demand away from foreign goods and services. Another channel is that the depreciation raises the Canadian-dollar value of its external wealth, and as a result, can reduce the current-account adjustment required to stabilize the net foreign asset position over time.

2. A global downturn can hit both sides of Canada's external balance sheet.

A deterioration in global growth prospects can weaken Canada's net foreign asset position through both sides of the balance sheet. Weaker global growth prospects can

reduce the value of Canada's foreign equity and direct investment assets. It also typically leads investors to expect central banks to lower policy rates, lowering global bond yields and raising the market value of Canada's debt liabilities held by foreigners.

An accompanying flight to safety into U.S. dollar assets may weaken the Canadian dollar and partly offset foreign-asset valuation losses by raising the Canadian-dollar value of Canada's foreign assets. Canada's overall consumption would also depend on the propensity of different Canadian institutions and households consume out of their wealth, with a lower propensity suggesting that consumption is less affected by the wealth loss ([Avdjiev, Forbes, Nenova, and Santos, 2026](#)).

Overall, this downside risk reflects Canada's external balance sheet composition of relatively risky foreign assets and relatively safer debt liabilities.

3. The nature of valuation gains exposes Canada to distinct risks.

Valuation adjustments in Canada's net foreign assets can arise from changes in the expected cash flows on its foreign assets and liabilities, changes in the discount rates applied to those cash flows, or both. These sources expose Canada to different risks.

A persistent increase in the expected cash flows generated by Canada's foreign assets arising, for instance, from stronger expected productivity abroad, raises Canada's expected income stream. All else equal, the higher income stream can support higher domestic spending for a given path of future current-account adjustment.

By contrast, a decline in discount rates of those foreign assets raises their market value without increasing their underlying expected cash flows. These valuation gains can support Canada's domestic spending, but they may be more prone to reverse because discount rates move with interest rates and risk premia, both of which can change over the business cycle.

4. Cross-border financial intermediation is not unique to reserve-currency issuers.

The traditional interpretation of the United States' "exorbitant privilege" is rooted in its role as issuer of the dominant global reserve currency. Strong global demand for safe U.S. liabilities allows the United States to issue relatively safe claims while investing abroad in riskier assets ([Gourinchas and Rey, 2007](#)).

Canada has developed a similar external balance-sheet structure, but mainly from its expansion of its foreign equity and direct investment holdings. These investments may provide Canada with international diversification and may also reflect more attractive investment opportunities abroad.

On the liability side, Canadian debt has become more geographically widely held. Investors in the United States continue to hold the largest share of Canadian debt, but their share has declined from about 60 percent in 2010 to 45 percent in the second

quarter of 2026. This 15-percentage-point decline was matched by a similar increase by investors in the European Union. This broader foreign investor base may partly reflect demand for relatively safe Canadian claims, reflecting Canada's institutional and macroeconomic stability. The safety properties of Canadian liabilities may also have played a modest role.

Altogether, it appears as though Canada is an example of a financially developed economy that can also intermediate global savings by holding risky assets.

Conclusion

Cross-border trade allows countries to spend more or less than their national income by borrowing from or lending to the rest of the world. These financial claims accumulate into an external balance sheet, and that balance sheet is continuously revalued in financial markets. A persistent revaluation of the external balance sheet can move Canada's external wealth, relax or tighten future spending possibilities, and change how much future current-account adjustment would be required to stabilize a country's external position.

In Canada, favourable valuation effects have offset the drag from persistent current-account deficits. Increases in Canada's external wealth flows from its relatively safer Canadian liabilities and relatively riskier assets, like foreign equities. Because gross exposures have grown, these valuation effects have become an increasingly important margin of Canada's external adjustment.

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Appendix

Data Sources

Statistics Canada: Canada's external assets and liabilities are sourced from Statistics Canada's international investment position and balance of payment accounts. Canadian household wealth is sourced from Statistics Canada's national balance sheet accounts. The sample period for this data covers 1990Q1 to 2026Q1, except for data on positions by currency denomination, which begins in 2015. The full list of tables is as follows.

- [Table 36-10-0485](#): International investment position, book and market values, quarterly
- [Table 36-10-0472](#): Balance of international payments, financial account, quarterly
- [Table 36-10-0016](#): Balance of international payments, current account and capital account, quarterly
- [Table 36-10-0412](#): International investment position, market value, by currency, quarterly
- [Table 36-10-0039](#): International investment position, portfolio and other investment in Canada, by sector, book and market values, quarterly
- [Table 36-10-0580](#): National Balance Sheet Accounts, quarterly
- [Data and definitions of Canada's balance of payment accounts](#)

Other Data Sources: The Canadian Effective Exchange Rate (CEER) is from the [Bank of Canada's public website](#).

Data Construction

Exchange Rate: We assume that the CEER is the effective exchange rate that revalues Canada's foreign assets. We ignore exchange-rate valuation adjustments on Canada's external liabilities because they are mainly denominated in Canadian dollars.

Since the CEER is available starting from 1999, we construct its historical series back to 1990. To construct this historical series, we assume the CEER weights from 1999 are the same from 1990 to 1999. In cases where bilateral exchange rates between a foreign country and Canada are unavailable, we assume that the country's exchange rate on a given day is the average across log-level of available exchange rates on that day.

Net Foreign Assets:

Let A_t denote the domestic-currency value of Canada's foreign assets at the end of period t , and let L_t denote the domestic-currency value of domestic liabilities held by foreigners. The net foreign asset position is

$$NFA_t = A_t - L_t.$$

We decompose changes in the net foreign asset position into valuation effects and financial-account flows. Let F_{t+1}^A denote net asset flows over period $t + 1$, defined as Canada's net purchases of foreign assets. Similarly, let F_{t+1}^L denote net liability flows, defined as foreigners' net purchases of domestic liabilities.

Net financial-account flows ($FA_t = F_t^A - F_t^L$) should equal the current account (CA_t), which includes net exports, and the capital account (KA_t) balance. In practice, however, the balance of payments includes a residual or statistical discrepancy (RES_t), so measured asset and liability flows need not exactly match the current account balance. For this reason, we use the observed asset and liability flows directly rather than imposing equality with net exports.

$$CA_t + KA_t + RES_t = FA_t.$$

We assume that asset and liability flows occur at the beginning of the period, consistent with [Gourinchas and Rey, 2007](#). The law of motion for gross foreign assets and liabilities is therefore

$$A_{t+1} = R_{t+1}^A(A_t + F_{t+1}^A),$$

and

$$L_{t+1} = R_{t+1}^L(L_t + F_{t+1}^L),$$

where R_{t+1}^A is the domestic-currency gross return on foreign assets and R_{t+1}^L is the gross return on domestic liabilities. These returns reflect valuation changes from capital gains and losses alongside exchange-rate effects, and exclude dividend and interest income.

The net foreign asset position then evolves according to

$$NFA_{t+1} = R_{t+1}^A(A_t + F_{t+1}^A) - R_{t+1}^L(L_t + F_{t+1}^L).$$

The domestic-currency return on foreign assets can be decomposed into a local-currency asset return and an exchange-rate return:

$$R_{t+1}^A = R_{t+1}^{A,LC} R_{t+1}^{FX},$$

where

$$R_{t+1}^{FX} = \frac{S_{t+1}}{S_t}.$$

The exchange rate S_t is expressed as units of Canadian dollars per unit of foreign currency. Therefore, an increase in S_t represents an appreciation of the foreign currency relative to the Canadian dollar, which raises the Canadian-dollar value of foreign assets. Liabilities are assumed to be denominated in Canadian dollars, so they are not directly affected by exchange-rate movements.

Subtracting $NFA_t = A_t - L_t$ from both sides gives

$$\Delta NFA_{t+1} = F_{t+1}^A - F_{t+1}^L + (R_{t+1}^A - 1)(A_t + F_{t+1}^A) - (R_{t+1}^L - 1)(L_t + F_{t+1}^L).$$

Using $R_{t+1}^A = R_{t+1}^{A,LC} R_{t+1}^{FX}$, the foreign asset valuation effect can be separated into a local-currency valuation effect and an exchange-rate valuation effect:

$$R_{t+1}^A - 1 = (R_{t+1}^{FX} - 1) + R_{t+1}^{FX} (R_{t+1}^{A,LC} - 1).$$

We define the local-currency asset valuation adjustment as

$$VA_{t+1}^{A,LC} \equiv R_{t+1}^{FX} (R_{t+1}^{A,LC} - 1) (A_t + F_{t+1}^A),$$

the exchange-rate valuation adjustment as

$$VA_{t+1}^{A,FX} \equiv (R_{t+1}^{FX} - 1) (A_t + F_{t+1}^A),$$

and the liability valuation adjustment as

$$VA_{t+1}^L \equiv (R_{t+1}^L - 1) (L_t + F_{t+1}^L).$$

The change in the net foreign asset position can then be written compactly as

$$\Delta NFA_{t+1} = F_{t+1}^A - F_{t+1}^L + VA_{t+1}^{A,LC} + VA_{t+1}^{A,FX} - VA_{t+1}^L.$$

Finally, in some cases, we scale each component by Canadian household wealth, W_{t+1} , to express the contribution of each component relative to the size of the household sector balance sheet:

$$\frac{\Delta NFA_{t+1}}{W_{t+1}} = \frac{F_{t+1}^A - F_{t+1}^L}{W_{t+1}} + \frac{VA_{t+1}^{A,LC}}{W_{t+1}} + \frac{VA_{t+1}^{A,FX}}{W_{t+1}} - \frac{VA_{t+1}^L}{W_{t+1}}.$$