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Latest Developments in the Canadian Economic Accounts

A preview of the 2015 comprehensive revision of the Canadian System of Macroeconomic Accounts

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. not available for any reference period
.. not available for a specific reference period
... not applicable
0 true zero or a value rounded to zero
0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p} preliminary
^{r} revised
x suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E} use with caution
F too unreliable to be published
* significantly different from reference category ($p < 0.05$)

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A preview of the 2015 comprehensive revision of the Canadian System of Macroeconomic Accounts

Introduction

The Canadian System of Macroeconomic Accounts (CSMA) is a source of invaluable information for businesses, governments and citizens. These accounts provide users with important insights into the inner-workings of the economy, current economic trends and interactions between the various sectors of the economy. In order for these accounts to remain relevant, the underlying concepts, methods, classification systems and data sources need to be periodically updated.

The speed with which economies are changing has caused Statistics Canada to re-examine the frequency of its substantial or comprehensive revisions to the Canadian System of Macroeconomic Accounts. In the past, comprehensive revisions were made to the CSMA (Canadian System of Macroeconomic Accounts) every ten to fifteen years. This was deemed acceptable, in part because the pace and complexity of economic change was slower and the dissemination vehicles necessary to distribute and absorb the revised data were limited. The increased pace and amplitude of economic change has resulted in a new approach in the frequency of CSMA (Canadian System of Macroeconomic Accounts) comprehensive revisions. The next CSMA (Canadian System of Macroeconomic Accounts) comprehensive revision is planned for late 2015. This paper highlights the proposed changes and is meant to help users prepare their systems and analytical frameworks for the new concepts, methods, classification systems and data sources that will be integrated into the CSMA (Canadian System of Macroeconomic Accounts). This paper first provides a calendar of revisions, by account, along with the time period that is open to revision. The second section outlines the major changes that will take place. The paper concludes by highlighting the changes in the way the products are disseminated.

Schedule of revisions

The Canadian System of Macroeconomic Accounts is comprised of the following statistical programs:

1. Input-Output Tables (Supply and Use Tables)
2. Gross Domestic Product (GDP) by Industry
3. Gross Domestic Product (GDP) by Income and by Expenditure
4. Financial Flow Accounts
5. Balance Sheet Accounts
6. Labour Productivity
7. Industrial Capacity Utilization Rates
8. Government Finance Statistics
9. Balance of International Payments
10. International Investment Position
11. Merchandise Trade Statistics
12. International Transactions in Securities
13. International Transactions in Services
14. Foreign Direct Investment
15 Pension Satellite Account

16. Fixed Capital and Investment

Table 1 provides the time period open to revision and the month that revised estimates are anticipated to be released, for each program. Section two of this paper outlines the revisions that will be made to certain of these programs as part of the CSMA (Canadian System of Macroeconomic Accounts)'s 2015 comprehensive revision.

Table 1 Proposed Canadian System of Macroeconomic Accounts release schedule

Program	Data			Tentative release date
	Frequency	Geography	Revision period	
Input-Output Tables (Supply and Use Tables)	Annual	National, Provincial and Territorial	2010 to 2012	November 2015
GDP by Industry	Monthly	National	1997 to 2015	December 2015
GDP by Industry	Annual	National, Provincial and Territorial	2007 to 2014	November 2015
			1997 to 2006	December 2015
GDP by Income and by Expenditure	Quarterly	National	1981 to 2015	December 2015
GDP by Income and by Expenditure	Annual	National, Provincial and Territorial	1981 to 2014	November 2015
Financial Flow Accounts	Quarterly	National	1990 to 2015	December 2015
Balance Sheet Accounts	Quarterly	National	1990 to 2015	December 2015
Pension Satellite Account	Annual	National	1990 to 2014	December 2015
Balance of International Payments	Quarterly	National	1981 to 2015	November 2015
International Investment Position	Quarterly	National	1981 to 2015	December 2015
International Trade in Services	Quarterly	National	1997 to 2015	October 2015
International Trade in Goods	Monthly	National	2012 to 2015	December 2015
International Transactions in Securities	Monthly	National	1988 to 2015	November 2015
Foreign Direct Investment	Quarterly	National	2011 to 2014	April 2015
Government Finance Statistics	Annual	National	2007 to 2014	November 2015
Labour Productivity	Quarterly	National	1981 to 2015	December 2015
Labour Productivity	Annual	National, Provincial and Territorial	1997 to 2014	November 2015
Industrial Capacity Utilization rates	Quarterly	National	1997 to 2015	March 2016
Fixed Capital and Investment	Annual	National	1981 to 2014	November 2015

Taxonomy of revisions

The CSMA (Canadian System of Macroeconomic Accounts) comprehensive revision encompasses six types of revisions: conceptual revisions, methodological revisions, classification revisions, statistical revisions, presentational revisions and content revisions.

1. **Conceptual revisions** reflect changes in what is being measured. For example, key concepts in the macroeconomic accounts include the concept of a production boundary, consumption, institutional units, etc. (and so on) Any change to these definitions or the addition of a new concept would be considered a conceptual revision.
2. **Methodological revisions** reflect changes in how things are measured or the methods used to compile the accounts. For example, methods often used in macroeconomic accounting include deflation, seasonal adjustment, benchmarking and modeling. Any change to these techniques or the development of new techniques would be considered a methodological revision.
3. **Classification revisions** occur when the classification systems (assets, industries, products, consumption, etc. (and so on)) underlying the macroeconomic accounts are updated. Classification revisions are required to ensure that the presentation of the macroeconomic accounts reflect current economic and social structure.
4. **Statistical revisions** occur when new (generally higher quality) source data are integrated into the macroeconomic accounts.
5. **Presentational revisions** occur when the way data are presented, the terms used to describe the data are updated, or additional data is provided. These revisions are generally made to align with international terminology or to make the data more intuitive for the users.
6. **Content revisions** reflect changes in the amount of detail presented for a given account or set of macroeconomic statistics.

The 2015 comprehensive revision will encompass all six types of revisions. The planned revisions for 2015 are noted below. For each revision, a description of the change is presented along with the category of revision and the CSMA (Canadian System of Macroeconomic Accounts) accounts that are impacted by the revision.

Planned changes 2015

1. Integration of the Government Finance Statistics into the Canadian Macroeconomic Accounts
2. Treatment of defined benefit pension plans
3. Non-produced non-financial assets: Natural resources
4. Non-produced non-financial assets: Electromagnetic spectrum
5. Produced non-financial assets and the consumption of fixed capital
6. Subsidies provided to non-profit institutions
7. Currency and deposits
8. Other statistical revisions
9. Content of Provincial and Territorial GDP (Gross Domestic Product) by Income and by Expenditure
10. Canada's International Reserves
11. Foreign direct investment flows and positions by debt and equity components
12. Foreign direct investment on an asset and liability basis

13. Presentation of the “other investment functional category” in the international accounts
14. Bond liabilities
15. Household final consumption expenditure
16. Addition of the aquaculture industry
17. Stock-Flow Difference Account
18. Presentational revisions to Input-Output Tables
19. Presentational revisions to CANSIM table and vector numbers

1. Integration of the Government Finance Statistics into the Canadian Macroeconomic Accounts

In 2014, the Canadian Macroeconomic Accounts adopted the International Monetary Fund’s framework for compiling government finance statistics—the Government Finance Statistics Manual (GFSM). The adoption of this framework, along with improvements in the source data used to compile government finance statistics (GFS), resulted in substantial improvements in the macroeconomic accounting of government revenues, expenditures, financial transactions and balance sheets. Since the concepts, definitions and methods underlying the GFSM (Government Finance Statistics Manual) are aligned with the 2008 System of National Accounts (2008 SNA), the new GFS (government finance statistics) data are being integrated into the CSMA (Canadian System of Macroeconomic Accounts). This integration means that the general government sector, public administration industries and government business enterprise statistics will be revised throughout the CSMA (Canadian System of Macroeconomic Accounts).

The revisions resulting from the GFSM (Government Finance Statistics Manual) can be attributed to three main factors. The first is that the GFS (government finance statistics) data are compiled on an accrual basis. The 2008 SNA recommends the same treatment. Currently, within the CSMA (Canadian System of Macroeconomic Accounts), some government transactions are treated on a cash rather than an accrual basis (such as income tax refunds and employer pension payments). With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will move to an accrual treatment for all public sector transactions and stocks. For the most part, this change will only be implemented from 2008 onwards, since no source data prior to 2008 is available. The second factor contributing towards revisions pertains to the way certain public sector transactions are treated conceptually. For example, under the GFSM (Government Finance Statistics Manual), transactions such as drivers’ licence fees are treated as the sale of a good and service. Currently, within the CSMA (Canadian System of Macroeconomic Accounts), drivers’ licence fees are treated as a tax. With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will adopt the GFSM (Government Finance Statistics Manual) treatment. Finally, the majority of GFS (government finance statistics) estimates are compiled using detailed government accounting records (general ledger information). These higher quality source data underlying the GFS (government finance statistics) are being incorporated into the rest of the CSMA (Canadian System of Macroeconomic Accounts). Currently, within the CSMA (Canadian System of Macroeconomic Accounts), government revenues, expenditures and balance sheet information are derived using a combination of outputs from government accounting systems and aggregate public account information.

Table 2 Summary – Integration of Government Finance Statistics
Revision type: Conceptual, methodological, classification, statistical, content, presentational
Significance of the revision: High

Provincial and Territorial GDP by Income and by Expenditure	Main macroeconomic aggregates impacted
• National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure	• Taxes and subsidies on production • Taxes and subsidies on products • General government final consumption expenditure • Household final consumption expenditure • General government primary and secondary incomes • General government saving • General government net lending or net borrowing
• Financial Flow Accounts • Balance Sheet Accounts • Pension Satellite Account	• General government net lending or net borrowing • General government net financial worth • General government net worth
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	• General government output • General government intermediate consumption • General government gross domestic product • Household final consumption expenditure • Taxes and subsidies on products • Taxes and subsidies on production • Labour productivity, non-business sector • Offsetting revisions to output, intermediate consumption and gross domestic product in other industries

2. Treatment of defined benefit pension plans

Pensions are contractual obligations between employers and employees. The contract entitles the employee to receive, as part of their compensation, a contribution to a pension plan made on their behalf. In theory, the contribution that is received by the employee should equal, in each accounting period, the amount they are entitled to as per the contractual obligation. For defined benefit plans, the entitlement represents the present value of future pension benefits. In practice, the contributions of businesses and governments do not always match, in a given period, the entitlements of the employee. Sometimes they are less—indicating that they are underfunding the pension, and sometimes they are more, indicating that they are overfunding the pension—or attempting to reduce the underfunding of previous periods. Macroeconomic accounting standards, such as the 2008 SNA, recommend that the pension flows be recorded as compensation of employees to reflect the entitlement due to the employee during the accounting period, rather than the actual contribution made by employers.

Recording on an entitlement basis brings a number of important improvements to the national accounts. First, it lines up the timing of the flow of compensation of employees with the actual production of goods and services occurring during the accounting period. Second, it ensures that the full pension assets and liabilities (the actuarial asset or liability) are recorded on the balance sheets of governments, trusteed pension plans, non-financial corporations and households, rather than just the value of the accumulated asset or liability.

The best way to illustrate this change is by way of an example. Consider the case where an employer enters into a contractual obligation with its employees. The contract states that, as part of their compensation package, the employer will provide each employee with a defined benefit upon retirement. In order to meet this contractual obligation, it is determined that the employer should be contributing $1 million each quarter. Assume that all other factors that could impact pension entitlement are zero, and that the employer chooses to delay contributions to the pension plan over the course of the first two years and then decides to partially ‘catch-up’ in the third year.[1]

Table 3 represents the flows and accumulated assets, based on the cash contributions. Table 4 represents the flows and accumulated assets based on the entitlements, as per the contract.

Table 3 Cash contributions

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	millions of dollars							
Flows	0	0	0	0	0	0	0	7,000
Stock	0	0	0	0	0	0	0	7,000

Table 4 Entitlement contributions

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	millions of dollars							
Flows	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Stock	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000

The accrual or entitlement treatment of pensions more accurately reflects the compensation of the employee in the accounting period, as well as the value of the pension asset.

Table 5 Summary – Revisions to treatment of defined benefit pension plans
Revision type: Conceptual, methodological, classification, statistical, content
Significance of the revision: High

Accounts impacted	Main macroeconomic aggregates impacted
• National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure	• Compensation of employees • Gross operating surplus • Household, non-financial corporation, financial corporation and general government primary incomes, disposable income, saving and net lending or net borrowing • Government final consumption expenditure
• Financial Flow Accounts • Balance Sheet Accounts • Pension Satellite Account	• Household, non-financial corporations, financial corporations and general government net lending or net borrowing, net financial assets, net worth
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry	• Government output, government intermediate consumption, general government gross domestic product, compensation of employees by industry, gross operating surplus by industry

• National Labour Productivity • Provincial and Territorial Labour • Productivity	

3. Non-produced non-financial assets: Natural resources

Within the Canadian System of Macroeconomic Accounts, natural resources are non-produced assets. Currently, the value of these assets is recorded on the annual Consolidated National Balance Sheet. These assets form a significant part of Canada's wealth. With the 2015 comprehensive revision, these assets will also be recorded on the quarterly National Balance Sheet, with the asset assigned to either the corporate sector or the general government sector, based upon the benefits they derive from the asset.

This allocation by sector begins with existing data in Statistics Canada's natural resource stock accounts and estimating quarterly natural resource wealth, using current indicators related to sales revenue and extraction costs. Royalty-to-rent ratios are then used to partition the natural resource wealth between the corporate sector (the principal economic owner) and the general government sector (the legal owner).

Provisional estimates show that, on average, two-thirds of natural resource wealth is allocated to the corporate sector and the remaining third to the provincial, territorial and federal general government sectors.

Table 6 Summary – Natural resource revisions
Revision type: Conceptual, methodological, classification, statistical, content
Significance of the revision: High

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts	• National wealth • General government net worth • Non-financial corporations' net worth

4. Non-produced non-financial assets: Electromagnetic spectrum

In the 2000s, with the emergence of mobile phones, telecommunications companies began to seek licensing rights to the airwaves that wireless networks require for the operation of these phones. This resulted in the appearance of a new asset—electromagnetic spectrum—on the national balance sheet. This asset is initially held by the federal government, which sells the asset to other sectors of the economy. The sale of the asset usually involves an auction in which companies bid on the right to use the assets for a set period of time. Three auctions of electromagnetic spectrum have taken place in Canada (2001, 2008 and 2014). In each case the treatment of the sale was recorded slightly differently in the CSMA (Canadian System of Macroeconomic Accounts). The CSMA (Canadian System of Macroeconomic Accounts) has now settled on a consistent treatment and will be applying this treatment to the 2001 and 2008 electromagnetic spectrum auctions. The treatment involves the following steps:

- When the federal general government announces a spectrum auction, a non-financial non-produced asset will be recorded in the Other Changes in the Volume of Assets Account in the federal general government sector, and be placed on the federal general government's balance sheet. The asset will be valued at its expected value.
- When an asset is sold to the non-financial corporations' sector, an entry will be made in the capital accounts of both the federal general government sector and the non-financial corporations' sector, and recorded as the sale/purchase of an existing asset. In the financial account, the cash transaction will be recorded as a credit to currency and deposits in the federal government sector and as a debit to currency and deposits in the non-financial corporations' sector.
- The non-produced non-financial asset should be maintained on the non-financial corporations' balance sheet at market value and amortized over the life of the licence.

Table 7 Summary – Electromagnetic spectrum revisions
Revision type: Conceptual

Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts	• National wealth • General government net worth • Non-financial corporations' net worth

5. Produced non-financial assets and the consumption of fixed capital

The value of capital stock is estimated using the perpetual inventory method (PIM), whereby investment flows are accumulated and depreciated over time, giving rise to a stock of assets. In particular, the PIM (perpetual inventory method) uses a time series of investment flows, asset lives and prices, and assumptions regarding methods of depreciation and discard patterns when developing estimates of the market value of non-residential and residential capital stock.

In 2014, Statistics Canada released revised estimates of investment flows, consumption of fixed capital and capital stocks for reference years 1961 to 2013. The revised estimates are based on an updated depreciation profile and service life model and investment flows. The investment flows represent the CSMA (Canadian System of Macroeconomic Accounts) benchmark estimates of gross fixed capital formation. The asset lives and depreciation profiles for non-residential investment were updated to incorporate results from a study conducted by Statistics Canada, in which responses from the

Capital and Repair Expenditures Survey related to 'expected useful life of asset' and 'price' were used to develop depreciation rates. Asset prices have also been revised to align more closely with the price methodology employed in the CSMA (Canadian System of Macroeconomic Accounts).

The revision to the capital stock and consumption of fixed capital estimates is far-reaching and will result in revisions to macroeconomic aggregates such as the level of gross domestic product, net domestic product, national wealth and net lending or borrowing by sector.

Table 8 Summary – Revisions to produced non-financial assets and the consumption of fixed capital
Revision type: Methodological, classification, statistical, content, presentational
Significance of the revision: High

Accounts impacted	Main macroeconomic aggregates impacted
• National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure	• Net domestic product • Consumption of fixed capital • Government final consumption expenditure • Household, non-profit institutions serving households, non-financial corporations, financial corporations, general government gross saving
• Financial Flow Accounts • Balance Sheet Accounts	• National wealth
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	• Net operating surplus by industry • General government and non-profit institutions serving households' output • General government and non-profit institutions serving households' gross domestic product by industry • Labour productivity, non-business sector

6. Subsidies provided to non-profit institutions

The CSMA (Canadian System of Macroeconomic Accounts) receives an aggregate measure of general government transfers to non-profit institutions. This aggregate measure includes general government transfers to all non-profit institutions, namely non-profit institutions serving households, non-profit institutions serving businesses and non-profit institutions serving government. When compiling the CSMA (Canadian System of Macroeconomic Accounts), a portion of the aggregate value of government transfers is allocated to each of these three sub-sectors. As part of the 2015 comprehensive revision this allocation process is being refined in two ways. First, the allocation factor is being updated with new information from the Government Finance Statistics program. Second, a significant portion of the transfers allocated to the non-profit institutions serving businesses were already included in the corporate sector resulting in an overestimate of subsides in the non-financial corporations' sector. With the 2015 comprehensive revision, only the amount that is not already included in the non-profit institutions serving businesses sector will be allocated to the non-financial corporations' sector.

Table 9 Summary – Revisions to subsidies provided to non-profit institutions
Revision type: Statistical
Significance of the revision: Medium

Accounts impacted	Main macroeconomic aggregates impacted
• National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure	• Subsidies • Gross operating surplus, non-financial corporations • Gross operating surplus, financial corporations • Saving, non-financial corporations • Saving, financial corporations
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	• Gross operating surplus by industry • Subsidies by industry • Gross domestic product by industry

7. Currency and deposits

Covered bonds and bearer deposit notes are liquid low-risk financial instruments acquired by corporations (financial and non-financial). Currently, these instruments are recorded as currency and deposits in the national Balance Sheet Accounts, but given that these instruments can be traded on secondary markets, they are more properly classified as securities. In addition to a reallocation from currency and deposits to securities, there may be some reallocation of these instruments from the non-financial corporations' sector to the financial corporations' sector. New information indicates that while these instruments may originate in the non-financial corporations' sector they are subsequently bought by institutional investors. This revision will result in a substantial reduction in the currency and deposits recorded in the non-financial corporations' sector of the national balance sheet.

In the international accounts, covered bonds are classified as deposit liabilities on a bank's balance sheet and thus are part of the 'other investment' functional category. However, with the existence of a secondary market for covered bonds, they are in effect negotiable instruments and should be recorded as 'portfolio investment' in the international accounts and in the rest of the CSMA (Canadian System of Macroeconomic Accounts).

Table 10 Summary – Revisions to currency and deposits
Revision type: Classification, statistical
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Balance of International Payments • International Investment Position • Financial Flow Accounts • Balance Sheet Accounts	• Currency and deposits (non-financial corporations, financial corporations) • Portfolio investment

8. Other statistical revisions

There are a number of additional (smaller) statistical revisions that will be made to the CSMA (Canadian System of Macroeconomic Accounts) in 2015. These revisions are due to the integration of new data sources or factors used to model certain series and are outlined in Table 11.

Table 11 Summary – Other statistical revisions
Revision type: Statistical
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted	Rationale
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	Explicit banking services	New methodology will be used to allocate explicit banking fees between the household sector and the corporate sector. This will result in changes to both household final consumption expenditure and intermediate consumption.
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	Financial services (investment service fees)	New source data on administrative fees charged by mutual funds will be integrated into the CSMA.
• National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	Foreign investment	New source data on securities will be used to refine estimates of foreign investment.
• Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	Corporate claims equity and other share equity	New source data on securities will be used to refine estimates of corporate claims equity and other share equity.
• Balance Sheet Accounts	Bond liabilities	New source data on securities and currency and deposits will be used to refine estimates of bond liabilities for private non-financial corporations and other financial corporations.
• Balance Sheet Accounts	Residential real estate	Estimates will be benchmarked to data from the Survey of Financial Security (2012) and municipal assessment rolls.
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National Labour Productivity • Provincial and Territorial Labour Productivity	Own-account software	Incorporation of the latest estimates from the National Household Survey, of the share of wages of individuals in the computer and information systems professionals' occupation to total wages.
• National, Provincial and Territorial Input-Output Tables	Output of	Incorporation of the latest results from the Annual Survey of Service

• National GDP by Industry • Provincial and Territorial GDP by Industry • National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • National Labour Productivity • Provincial and Territorial Labour Productivity	accounting, tax preparation, bookkeeping and payroll services	Industries (accounting services).
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • National Labour Productivity • Provincial and Territorial Labour Productivity	Output and gross domestic product of retail trade industries	Incorporation of the latest results from the Annual Survey of Retail Industries.
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • National Labour Productivity • Provincial and Territorial Labour Productivity	Own account research and development (universities)	Current estimates of research and development by universities include capital equipment that has already been capitalized in other investment categories. These values will be removed and estimates of research and development for universities will be subsequently revised.
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry Provincial and Territorial GDP by Industry • National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • Government Finance Statistics • National Labour Productivity • Provincial and Territorial Labour Productivity	Reclassification of units	A number of units are being reclassified either from the business sector to the general government sector or from the general government sector to the business sector. These reclassifications will result in a re-sectoring of output, intermediate inputs, incomes, expenditures, financial transactions and stocks.

9. Content of Provincial and Territorial GDP (Gross Domestic Product) by Income and by Expenditure Accounts

Each year, Statistics Canada releases the Provincial and Territorial GDP (Gross Domestic Product) by Income and by Expenditure Accounts. These regional accounts represent a partial set of national accounts for each province and territory in Canada. The accounts provide extensive information on the production and use of goods and services in the economy, along with the aggregate incomes and expenditures in each jurisdiction. The accounts have limited information on the incomes and expenditures of the different sectors of the provincial and territorial economies. Currently, only estimates of the income and expenditures of the household sector are compiled. Following the 2015 comprehensive revision, Statistics Canada will re-introduce a set of provincial and territorial general government sector tables which will articulate the incomes and expenditures of the different levels of general government within a province or territory. These estimates will include an allocation of the federal general government revenues and expenditures by province and territory.
The overall structure of the new government tables by province and territory will parallel the current and capital accounts and the revenue, expenditure and budgetary balance tables presented at the national level.

Table 12 Summary – Provincial and Territorial GDP by Income and by Expenditure content revisions
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Provincial and Territorial GDP by Income and by Expenditure	• Full set of government sector tables (allocation of primary income account, secondary distribution of income account, use of disposable income account and capital account) will be released following the 2015 comprehensive revision.

10. Canada's international reserves

International reserve assets are assets that are held by the government of Canada that can be used to facilitate international financial transactions. International reserve assets are recorded in the Financial Flow Accounts, Balance Sheet Accounts, Balance of International Payments (BOP) and in the International Investment Position (IIP).

In the Canadian BOP (Balance of International Payments) and IIP (International Investment Position), reserve assets in the form of securities and foreign currency deposits are amalgamated into a single asset category. As recommend by international standards, they will be presented separately in the CSMA (Canadian System of Macroeconomic Accounts), as part of the 2015 comprehensive revision. In addition, securities will be split between short- and long-term debt instruments.

Table 13 Summary – Revisions to international reserves
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	• International reserve assets • General government net worth • International investment position

11. Foreign direct investment flows and positions by debt and equity components

The new Organisation for Economic Co-operation and Development (OECD) Benchmark Definition (BDM4) and the International Monetary Fund's Balance of Payments and International Investment Position Manual 6 (BPM6) require the presentation of foreign direct investment flows and positions by equity (excluding retained earnings) and debt instruments, in the quarterly Balance of International Payments and in the International Investment Position. Historically, estimates of foreign direct investment flows and positions have been released on an aggregated basis.

This revision will increase compliance the compliance of Canada's BOP (Balance of International Payments) and IIP (International Investment Position) with international standards, improve bilateral comparisons, increase relevance and increase consistency across the CSMA (Canadian System of Macroeconomic Accounts). The new presentation is outlined below:

- **Foreign direct investment**
  - Equity
    - Equity other than reinvested earnings (flows only)
    - Reinvested earnings (flows only)
  - Debt instruments

Table 14 Summary – Revisions to foreign direct investment flows and positions
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	• Foreign direct investment stocks and flows

12. Foreign direct investment on an asset and liability basis

The new OECD (Organization for Economic Co-Operation and Development) benchmark definition of foreign direct investment (FDI) and the BPM6 require the presentation of FDI (foreign direct investment) flows and position on the basis of the asset-liability principle (gross basis). Currently in the Balance of International Payments and in the International Investment Position, estimates of foreign direct investment flows and stocks are reported based on the direction of the direct investment relationship—referred to as the directional principle, net basis. Under the directional principle, Canadian direct investment abroad includes all assets and liabilities between Canadian direct investors and their direct investment enterprises abroad. Foreign direct investment in Canada includes all liabilities and assets between Canadian direct investment enterprises and their foreign direct investors. Under the asset-liability presentation, FDI (foreign direct investment) assets include assets of both Canadian direct investors and Canadian direct investment enterprises, while FDI (foreign direct investment) liabilities include liabilities of both Canadian direct investment enterprises and Canadian direct investors. This new presentation will affect only the aggregates released as part of the quarterly BOP (Balance of International Payments) and IIP (International Investment Position) products. Detailed annual FDI (foreign direct investment) stock data by country and industry will continue to be produced based on the directional principle.

Table 15 Summary – Foreign direct investment revisions
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Balance of International Payments • International Investment Position	• Foreign direct investment stocks and flows

13. Presentation of the "other investment functional category"

The international Balance of Payments and International Investment Position Manual 6 (BPM6) recommends that the 'other investment' functional category in the international accounts be presented using the breakdown below. Starting in 2015 Statistics Canada will incorporate this additional detail.

- **Other investment**
  - Currency and deposits
  - Loans
  - Other investment
    - Other equity (mainly subscriptions to international organisations)

- Trade credits and advances
- Other accounts receivable or payable

Table 16 Summary – Other investment functional category revisions
Revision type: Presentational
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	• Other investment flows and stocks

14. Bond liabilities

With the 2015 comprehensive revision, additional detail related to bond liabilities will be published. Bond liabilities will be shown on both a currency and a term-to-maturity basis. This will enable users to better monitor the risk associated with these financial assets and liabilities. In addition, the methodology used to derive the market value of bond liabilities will be updated, improving the overall accuracy of the market value International Investment Position and Balance Sheet Accounts.

Table 17 Summary – Revisions to bond liabilities
Revision type: Presentational
Significance of the revision: Medium

Accounts impacted	Main macroeconomic aggregates impacted
• Financial Flow Accounts • Balance Sheet Accounts • Balance of International Payments • International Investment Position	• Bond liabilities

15. Household final consumption expenditure

Currently, estimates of household final consumption expenditures are presented at market price—inclusive of all margins and taxes. In order to better understand the role that value added taxes have in the purchase of household goods and services, estimates of Goods and Services Tax and Provincial Sales Tax by household final consumption expenditure will be published from 2007 onwards.

Table 18 Summary – Revisions to household final consumption expenditure
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• National GDP by Income and by Expenditure	• Household final consumption expenditure (additional detail)

16. Addition of the aquaculture industry

With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will re-introduce the aquaculture industry into the input-output framework. Specifically, this will impact the following industries:

- Animal production, excluding aquaculture (BS112A00)
- Aquaculture (BS112500)

These data will be back-cast to 2007 within the input-output table framework and back to 1997 within the annual Provincial and Territorial GDP (Gross Domestic Product) by Industry and the Provincial and Territorial Labour Productivity programs.

Table 19 Summary – Aquaculture industry revisions
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• National, Provincial and Territorial Input-Output Tables • Provincial and Territorial GDP by Industry • Provincial and Territorial Labour Productivity	• GDP by industry • Output by industry • Intermediate consumption by industry

17. Stock-Flow Difference Account

With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will begin to publish stock-flow difference tables as a first step towards developing a Revaluation Account and an Other Changes in the Volume of Assets Account. The stock-flow difference tables will simply

present the opening stock of assets and liabilities in the balance sheet, plus transactions, less the closing stock—currently missing from the current CSMA (Canadian System of Macroeconomic Accounts) presentation. For example, assume opening stock, closing stock and current period transactions in equity for the household sector are as presented in Table 20. It is clear that the opening stock plus the transactions do not equal the closing stock—there is a difference of $30. This is because revaluations and other changes in the volume of assets are not articulated in the current CSMA (Canadian System of Macroeconomic Accounts) sequence of national accounts.

Table 20 Opening stock, transactions and closing stock

Instrument	Opening stock	Transactions	Closing stock
	dollars		
Equity	100	10	140

With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will explicitly publish a set of stock-flow difference tables, as outlined in Table 21.

Table 21 Opening stock, transactions, closing stock and stock-flow difference

Instrument	Opening stock	Transactions	Closing stock	Stock-flow difference
	dollars			
Equity	100	10	140	30

Table 22 Summary – Stock-Flow Difference Account
Revision type: Content
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• Balance Sheet Accounts	• Additional detail

18. Presentational revisions to input-output tables

With the 2015 comprehensive revision, the CSMA (Canadian System of Macroeconomic Accounts) will introduce a major presentational change to the national and the provincial and territorial input-output tables. The current CSMA (Canadian System of Macroeconomic Accounts) input-output presentation differs from the international standard and the practice found in most national statistical organizations. The CSMA (Canadian System of Macroeconomic Accounts) will align its presentation with the international standard, moving away from the current CSMA (Canadian System of Macroeconomic Accounts) presentation, found in Table 23.

Table 23 Current CSMA presentation (input-output tables)

	Output		Input		Final demand table				
	industry 1	industry 2	industry 1	industry 2	Final consumption expenditure	Gross fixed capital formation	Inventories	Exports	Less imports
Product 1									
Product 2									
Product 3									
Compensation of employees									
Gross operating surplus									
Gross mixed income									
Taxes on production									
Subsides on production									
Taxes on products									
Subsides on products									

Both the 1993 SNA and the 2008 SNA have suggested that this information be re-arranged into a set of supply and use tables. As the name suggests, the supply and use tables show the supply of each product in the economy alongside its corresponding use. The supply and use of a given product must always balance. This supply=use identity is one of the more important and powerful accounting identities within the macro-accounting frameworks. Supply and use tables are presented in tables 24 and 25.

Table 24 Supply table

	Supply			
	Output industry 1	Output industry 2	Imports	Taxes and margins

Product 1				
Product 2				
Product 3				

Table 25 Use table

	Intermediate consumption and value-added		Final consumption expenditure	Gross fixed capital formation	Inventories	Exports
	Industry 1	Industry 2				
Product 1						
Product 2						
Product 3						
Compensation of employees						
Gross operating surplus						
Gross mixed income						
Taxes on production						
Subsidies on production						
Taxes on products						
Subsidies on products						

The supply and use tables can be constructed using Canada's current rectangular input-output tables by rearranging the information such that the supply of a good (production plus imports plus taxes and margins) appear in an industry-by-commodity supply table and the use of a product (intermediate consumption, final consumption expenditure, gross fixed capital formation, inventories and exports) appear in a use table. In addition to the presentational change, Statistics Canada will adopt the term product rather than commodity, since product is the internationally accepted term.

Finally, Statistics Canada will continue to produce input-output tables, but this term will be reserved for the symmetric industry by industry tables which are used to conduct economic impact modelling and other similar types of analysis. The symmetric input-output tables are presented in Table 26.

Table 26 Industry by industry input-output table

	Industry 1	Industry 2	Final consumption expenditure	Gross fixed capital formation	Inventories	Exports	Total economy
Industry 1							
Industry 2							
Imports							
Compensation of employees							
Gross operating surplus							
Gross mixed income							
Taxes on production							
Subsidies on production							
Taxes on products							
Subsidies on products							
Total output							

In summary, information on output, intermediate consumption and final demand will be presented in two different ways:

1. Supply and use tables (as shown in Table 24 and Table 25)
2. Symmetric industry by industry input-output tables (as shown in Table 26)

Table 27 Summary – Input-output tables
Revision type: Presentational
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• National, Provincial and Territorial Input-Output Tables	• Additional presentation

19. Presentational revisions to CANSIM table and vector numbers

All current CSMA (Canadian System of Macroeconomic Accounts) CANSIM tables and vector numbers will continue to be published with the 2015

comprehensive revision. In certain cases additional detail are being added to existing CSMA (Canadian System of Macroeconomic Accounts) products. In cases where additional data are added new vector numbers will be established.

Table 28 Summary – CANSIM presentational revisions
Revision type: Presentational
Significance of the revision: Low

Accounts impacted	Main macroeconomic aggregates impacted
• National, Provincial and Territorial Input-Output Tables • National GDP by Industry • Provincial and Territorial GDP by Industry • National GDP by Income and by Expenditure • Provincial and Territorial GDP by Income and by Expenditure • Financial Flow Accounts • Balance Sheet Accounts • National Labour Productivity • Provincial and Territorial Labour Productivity • Balance of International Payments • International Investment Position	• Additional presentation

Notes

1 These factors include: (i) past service increase, associated with the fact that all participants are one year closer to retirement, (ii) decrease due to the payment of benefits to retirees of the scheme, and (iii) other factors such as salary indexation changes or changes in life expectancies.