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Latest Developments in the Canadian Economic Accounts

An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020

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An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020

Background

Statistical revisions are carried out regularly in the Canadian System of Macroeconomic Accounts (CSMA) to incorporate the most current information available. Generally, these revisions are limited to the months or quarters within a given reference year, or, on an annual basis, to the preceding two to three years.

Periodically, comprehensive revisions are conducted, which generally entail revisions beyond the scope of the standard revision window. These provide an opportunity to enhance estimation methods and incorporate improved data sources and concepts.

A number of comprehensive revisions were incorporated in the third quarter 2020 release of the Financial and Wealth Accounts (FWA), which is comprised of the Financial Flow Accounts (FFA), the Other Changes in Assets Account (OCAA) and the National Balance Sheet Accounts (NBSA), and which represents an integrated set of accounts within the larger Canadian System of Macroeconomic Accounts (CSMA). The revisions were carried back to 1990 for certain instruments and sectors.

Among the key revisions implemented with the third quarter 2020 release of the FWA, several are related to the inaugural release of the Monthly Credit Aggregates (MCA) program.

The MCA decomposes a portion of the NBSA (stocks) into the monthly space, providing details on lending to households and non-financial corporations across a range of credit instruments including mortgage loans, non-mortgage loans, and debt and equity securities.

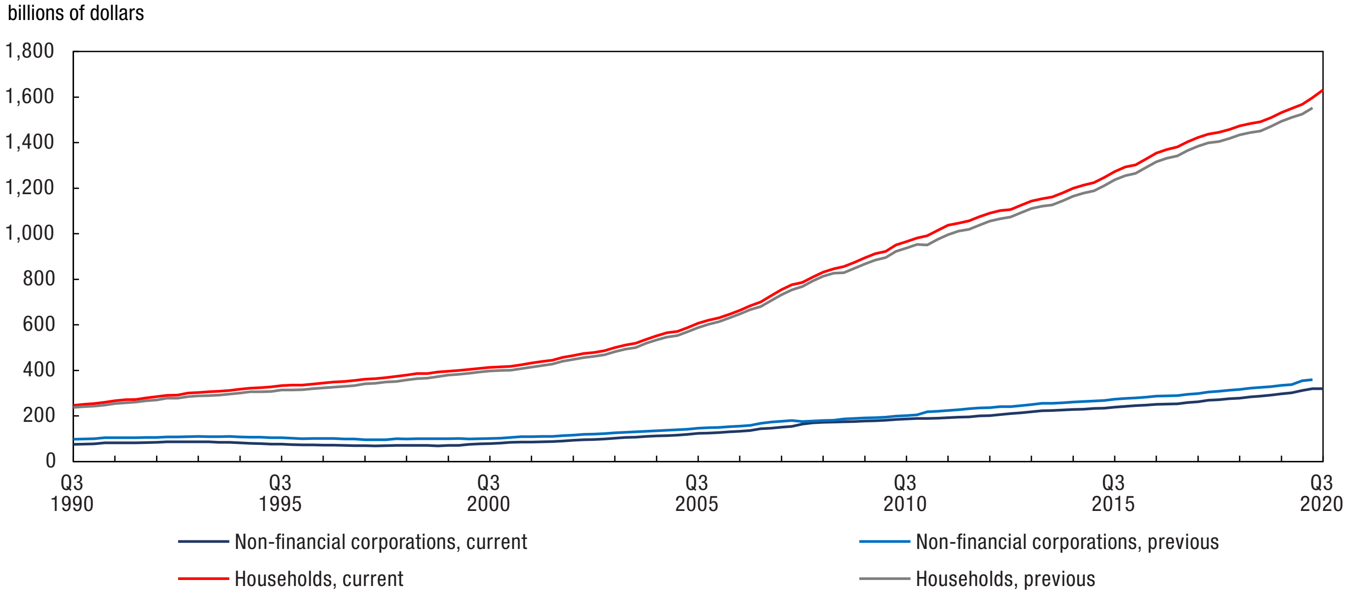
To ensure coherence between the two programs, several changes were incorporated into the NBSA. Additional instrument granularity for mortgage loans was introduced providing details on the debt associated with residential versus non-residential properties; this was coupled with the inclusion of mortgage loans into a from-whom-to-whom (FWTW) framework.

Finally, there were numerous statistical revisions arising from updates to specific concepts and methodologies. Altogether, these updates further align the FWA with international guidelines for compiling national accounts such as the System of National Accounts 2008 (SNA2008).

Revisions to mortgage loans

Within the FWA mortgage debt methodology there has always existed an implicit estimate for the value of residential and non-residential mortgages from the perspective of both the debtor (borrower) and creditor (lender).The MCA, as a decomposition of the NSBA, will explicitly provide this mortgage information and incorporate information on the amount of lending by each creditor sector to both households and non-financial corporations. To ensure consistency between each program, the FWA mortgage estimates were reviewed with the objective of identifying and incorporating counterparty information at the level of residential and non-residential mortgages.

Chart 1
Revisions to mortgages loan liabilities of households and private non-financial corporations



Source: Statistics Canada, "An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020", *Latest Developments in the Canadian Economic Accounts* (13-605-X), 2020.

Classification of mortgages based on property type

While mortgages by property type were implicit in the FWA and used to construct estimates of total mortgages, further investigation was required to examine assumptions and review lenders across a range of sectors including chartered banks, credit unions, and other corporations engaged in lending such as mortgage finance companies.

This investigation led to the re-classification of some sectors' mortgage assets from residential to non-residential and vice versa. For example, certain data sources only provide a total mortgage asset for a given sector and, in some cases, these were entirely allocated to non-residential properties. Further research indicated that these were largely related to insured residential mortgages. Correspondingly, some sectors that previously had a higher proportion of residential mortgages were found to be involved to a greater extent in commercial mortgages. As such, the source data was adjusted accordingly. Generally, data from regulatory sources is more comprehensive, allowing for a clear distinction between mortgage types, whereas detail is less granular among other lenders operating under different underwriting standards.

The broad definitions of non-residential and residential properties are outlined in Table 1. The guiding principle is that residential properties exist for the long-term accommodation of individuals and are used primarily as residences. This would include those residing permanently in an institution such as a residential care facility.

In practice, there is some inconsistency with how lenders classify property types. For example, mortgage loans tied to multi-unit residential properties may frequently be considered commercial mortgages as they are provided to a lessor who collects rental income from the property. In other cases, institutional dwellings such as retirement homes, frequently operating as a business, may be classified to non-residential properties by lenders. Mixed use properties such as rental apartments with adjoining commercial units are ideally allocated based on the use of floor space; however, in practice lenders are unlikely to make this distinction. Mixed-use condominiums allow for a more accurate classification as the individual condo units have mortgages separate from the commercial portion. Lastly, construction financing may initially be allocated to mortgage or non-mortgage loans, although once the property is constructed the classification becomes clearer. The impact of these alternate classifications is potentially mitigated by the absence of significant lending in these cases, the use of other financing arrangements, or the temporary nature of the discrepancy due to timing.

Table 1
A comparison of properties classified as residential versus non-residential mortgages

Non-residential	Residential
This includes mortgages tied to commercial real estate such as office buildings, shopping centres and other retail spaces, industrial buildings such as warehouses and other commercial properties including offices of professionals and hotels. Also included are hospitals and schools as well as commercial land.	This includes dwellings with single or multiple units including detached and semi-detached homes, town houses, condominium units, cottages, apartment buildings with a few units or many units, and retirement homes and other institutional dwellings. Also included are the construction sites associated with these dwellings.

Source: Statistics Canada, "An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020", *Latest Developments in the Canadian Economic Accounts* (13-605-X), 2020.

Lastly, in the FWA, Home Equity Lines of Credit (HELOCs) are classified as non-mortgage loans whereas some financial institutions will group them with mortgages for the purpose of external reporting. Additional details provided on the Quarterly Survey of Financial Statements enabled the removal of HELOCs that were previously embedded in mortgage assets.

Counterparties: mortgage lenders and borrowers

Once the pool of mortgage assets was accurately classified by property type the next step was to determine who was lending to whom as part of the FWA's From-Whom-To-Whom (FWTW) framework. This approach explicitly identifies the financial interconnectedness across all sectors of the economy by linking financial assets and liabilities with their corresponding counterparties (i.e., a debtor borrowing funds from a creditor represents the two sides of a contractual loan agreement).

Households are not limited to residential mortgage debt as the FWA includes some unincorporated businesses within the household sector and, consequently, a corresponding portion of non-residential mortgages. These same businesses may also be unincorporated lessors that collect rental income from residential properties. At the same time, non-financial corporations may hold residential mortgages as developers and real estate companies may be engaged in residential construction or own residential units as lessors.

In some cases assumptions were made when financial institutions were known to hold National Housing Act Mortgage-Backed Securities (NHA MBS). These mortgages are typically associated with household purchases of residential properties, providing an indication of the borrower counterparty.

A key source in determining counterparty were data on federally-regulated deposit taking institutions collected by the Bank of Canada, the Office of the Superintendent of Financial Institutions (OSFI), and Statistics Canada. Regulatory banking returns administered by these organisations contain information specific to residential and non-residential mortgages provided to either individuals or corporations. Because chartered banks account for the majority of mortgage lending in Canada, small changes in these distributions have an outsized effect on the classification and consequently the mortgage debt of the household and non-financial corporations sector. Overall, a higher proportion of residential mortgages classified to households relative to previous ratios resulted in an upwards shift in household mortgage debt and a corresponding decline in the mortgage debt of private non-financial corporations. A complete picture of household originated mortgages, a component of lending within the household sector, is not currently possible due to data limitations.

Other statistical, conceptual, and methodological revisions

Securities reconciliation and integration—monthly information

Statistics Canada produces information on securities statistics through the Monthly and Quarterly Securities programs. This includes debt securities such as bonds and commercial paper and equities such as shares listed on public exchanges. The MCA includes monthly detail on the outstanding debt and equity securities of private non-financial corporations. To ensure alignment between the MCA, FWA and monthly Securities Statistics program, information from the latter was incorporated in the quarterly FWA estimates at both market and nominal value. This was necessary to facilitate benchmarking between the FWA and MCA. However, some reconcilable differences exist between the FWA and Securities Statistics due to classification and methodological differences specific to each program.

Revisions to other sectors and instruments

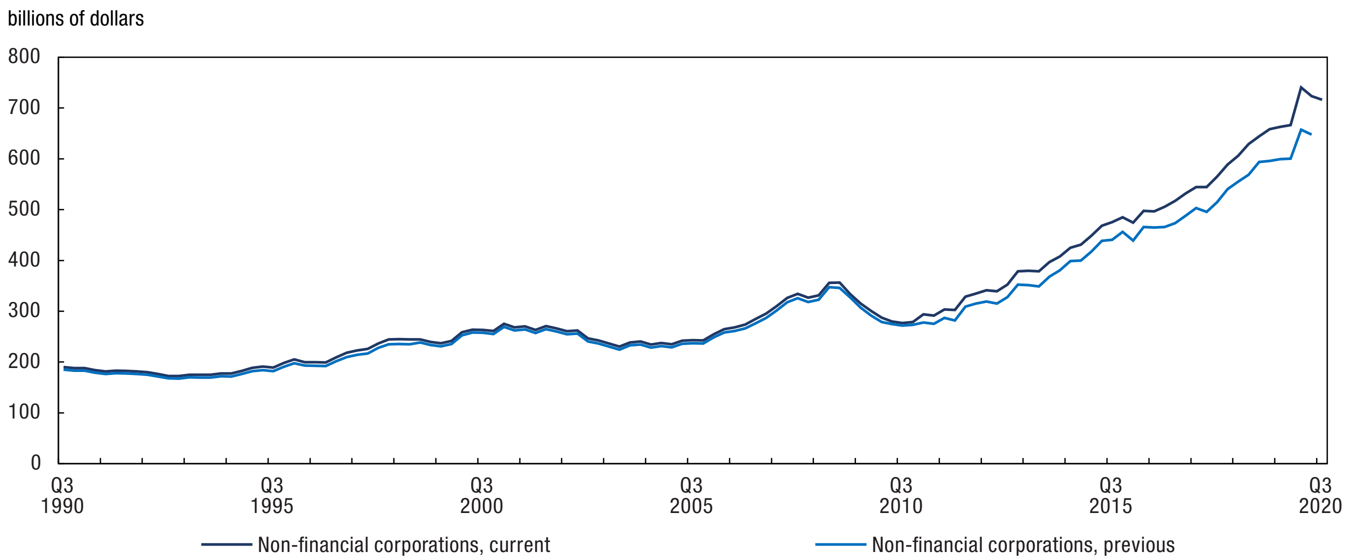
Table 2 summarizes other changes that were incorporated into certain FWA time series.

Table 2
Other changes incorporated into the Financial and Wealth Accounts (FWA) time series

Revision	Description of change
Revisions to the treatment of government claims	Governments record a claim on their respective government business enterprises (GBEs) to quantify their controlling interest in these market-producers. In the past, the change in the value of government claims arising from a change in the value of a GBEs net worth was recorded as a flow or financial transaction. However, this is more accurately captured as a change in valuation under the other changes in assets (OCA). For example, if a GBE was profitable in the reporting period and these profits were retained as cash then the net worth of the GBE and corresponding claim by government would increase due to a change in valuation and not because of any specific transaction between government and the GBE. Consequently, these flows have been re-classified in the FWA to revaluations.
Revisions to bank loans extended to private non-financial corporations	The treatment of bankers' acceptances was updated previously to better articulate the role of banks as intermediaries including the relationship between banks and non-financial corporations as one of lender and borrower. For private non-financial corporations, the loan aspect of bankers' acceptances has been expanded to include the banking sectors portion of own acceptances purchased. This aligns the treatment between the FWA and MCA as well as the information available from both quarterly and monthly sources of information on chartered banks.
Revisions to other assets and liabilities including the incorporation of updated information on repurchase agreements	Domestic sectors engage in repurchase agreements, a contract between two parties to use collateral such as securities in exchange for short-term funding. In the past, the full picture of repurchase agreements financing between domestic sectors and non-residents was not fully reflected. With this revision statistical improvements have been made to better capture this activity.

Source: Statistics Canada, "An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020", *Latest Developments in the Canadian Economic Accounts* (13-605-X), 2020.

Chart 2
Revisions to non-mortgage loan liabilities of private non-financial corporations



Source: Statistics Canada, "An overview of revisions to the Financial and Wealth Accounts, 1990 to 2020", *Latest Developments in the Canadian Economic Accounts* (13-605-X), 2020.

Future directions

Future developments planned for the FWA included the further incorporation of instruments into a from-whom-to-whom framework. For example, work to develop a holder dimension for debt securities is underway providing information on which sectors hold debt securities issued by Canadian borrowers both domestically and abroad. Work on identifying the holder sectors of private equity and inter-corporate loans is also progressing.

Additionally, further alignment of the current FWA sector and category classification with international standards is under review. Specific changes that will be the focus over the next year include the re-classification of repurchases agreements to loans as recommended by the SNA 2008 and the re-classification of derivatives to its own instrument. Currently, both of these items are classified as other assets and liabilities, but ongoing work to better allocate this category will provide more explicit details on its contents. Finally, various business accounting changes that have recently been implemented (i.e., leases) or that will be implemented soon are under investigation to ensure their impact on the FWA is understood and that estimates remain conceptually sound.