Catalogue no. 13-605-X
ISSN 1705-9658

Latest Developments in the Canadian Economic Accounts

An Economic Account for Non-bank Financial Intermediation as an Extension of the National Balance Sheet Accounts

Prepared by The Bank of Canada and Statistics Canada

Release date: December 14, 2018
Correction date: August 8, 2019

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On August 8, 2019, a correction was made to Chart 1 in the section titled "Findings". The chart axis was incorrectly labelled in both the French and English versions of 13-605-X. However, the data displayed in the chart were unaffected.

We regret any inconvenience this may have caused.

Published by authority of the Minister responsible for Statistics Canada

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Introduction

This paper explains the methodology and data sources used to construct a comprehensive economic account on non-bank financial intermediation (NBFI). NBFI has previously been known as "shadow banking".

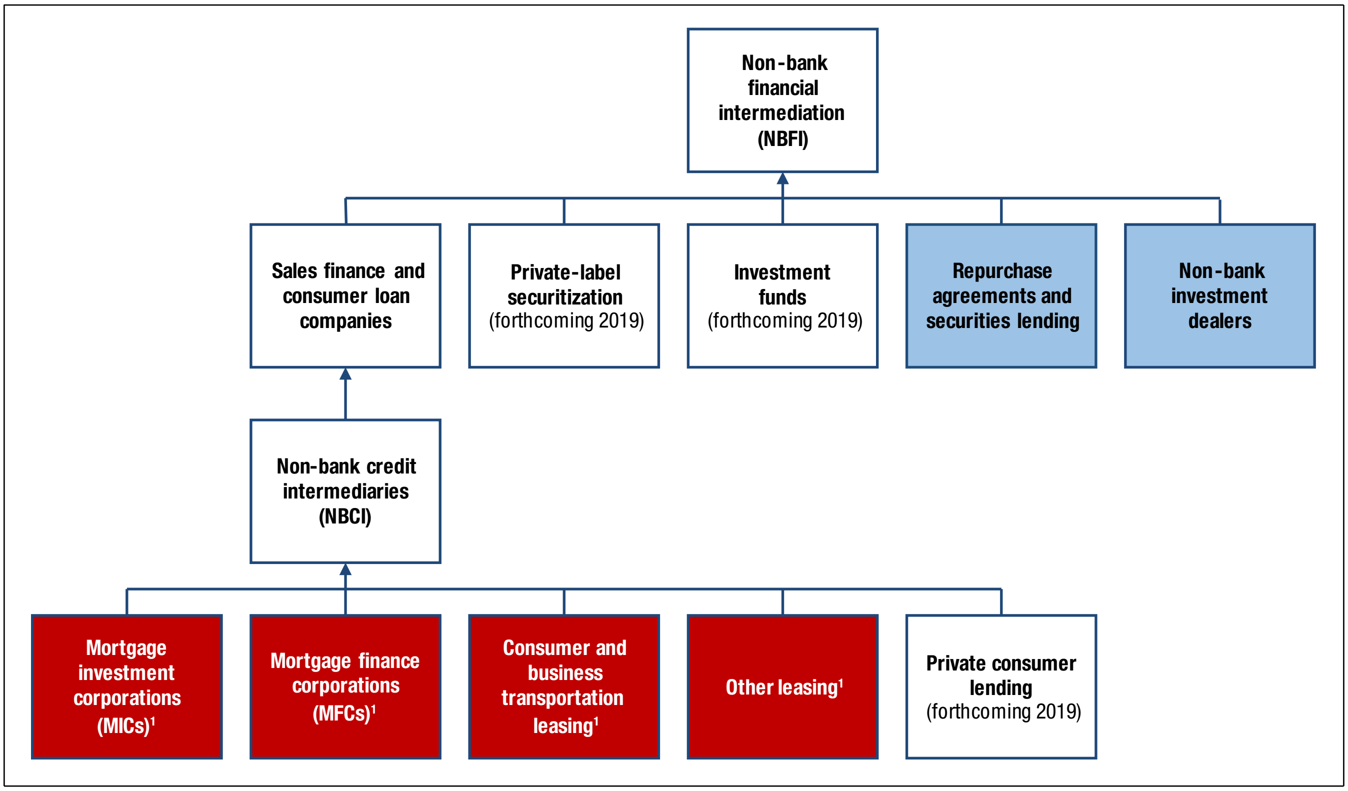
Non-bank financial intermediation is defined as financial intermediation activities that are outside the traditional, regulated financial system. The International Monetary Fund (IMF) has provided twenty recommendations to address the data gaps identified after the global financial crisis in the late 2000s. One objective arising from these recommendations, known as Phase 2 of the Data Gaps Initiative (DGI-2)[1], was to provide a more granular breakdown of the activity of these non-deposit taking institutions and non-regulated credit intermediaries, which are not consolidated into prudentially-regulated entities such as chartered banks, pension funds, credit unions, or life insurance companies.

For policy-makers, researchers, and regulators, understanding vulnerabilities in the financial system does not stop at traditional entities where oversight and risk assessment are well established. The activities of NBFIs are an important part of the financial system and, due to the many inter-linkages between NBFIs and other financial institutions, it is crucial to develop the estimates needed to better monitor risk throughout the entire system. This economic account seeks to reach that objective.

Non-bank financial intermediation includes activities undertaken by particular types of entities such as investment funds, non-bank investment dealers, and sales finance and consumer loan companies. It also covers repurchase agreements, securities lending, and private-label securitization across financial institutions.

1. To learn more about the G20 DGI-2.

Figure 1
The current scope of the Non-banking financial intermediaries (NBFI) universe



1. These sectors are included in this current release of the NBFI economic account.
Source: Statistics Canada.

This economic account is an extension of the National Balance Sheet Accounts (NBSA). In this first iteration, the NBSA will provide annual balance sheet estimates for a sub-set of NBFIs that engage in sales financing and consumer lending, referred to collectively as non-bank credit intermediaries (NBCIs). This sub-class includes sectors comprised of mortgage investment corporations (MICs), mortgage finance corporations (MFCs), consumer and business transportation leasing companies, other leasing companies, and private consumer lenders.[2] These sectors were chosen as the starting point due to the lack of information about their nature and size, their expanding footprint as borrowers look to other lending options, and because they provide important credit channels for the macroeconomy.

The compilation of this economic account was accomplished by re-classifying entities from existing institutional sectors in the NBSA to a set of sub-sectors aligned with the current classification of NBFIs. This reclassification improves Canada's reporting to the Financial Stability Board (FSB)[3], fulfilling a requirement of the DGI-2. It also provides a clearer understanding of the activities of NBFIs in Canada and their interconnectedness within the financial system.

Additionally, this economic account closely follows the NBSA's classification of financial instruments, for assets and liabilities. It contains annual estimates covering a 10-year time span from 2007 to 2017.

The current estimates are available in data table 36-10-0607.

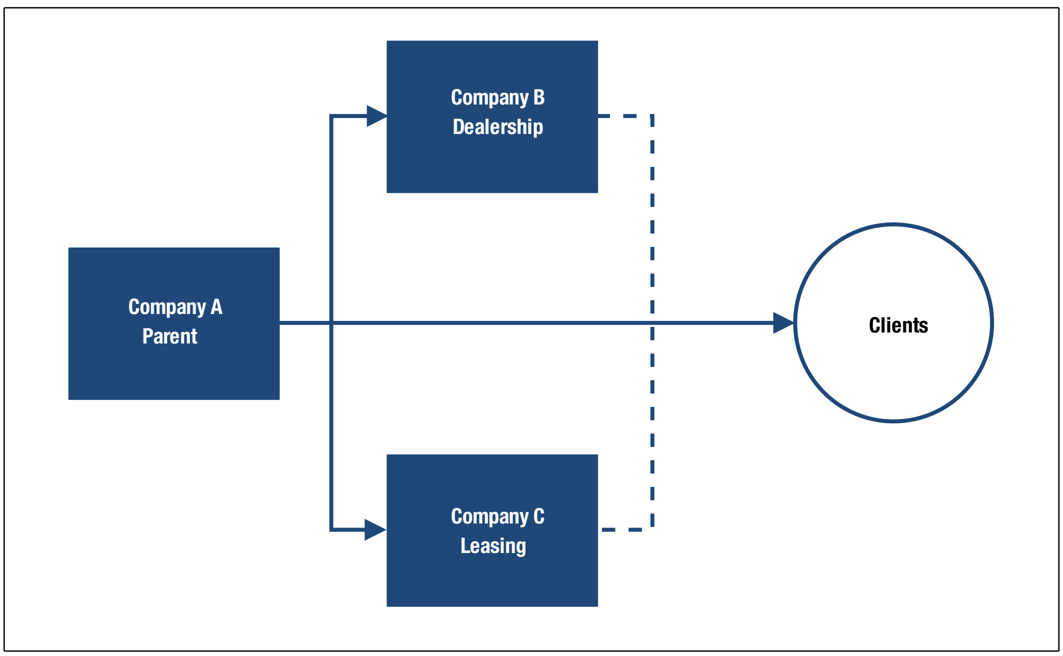
2. The NBCI estimates will be extended in 2019 to include private consumer lending.
3. To learn more about FSB shadow banking data.

Institutional units and sectors

The NBCI aggregate estimates were constructed using data compiled principally at the level of the institutional unit (i.e., "an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities[4]"). Given the available data, primarily legal entities or legally incorporated businesses are the institutional units of interest.

Operating at the level of legal entity facilitates a more precise delineation of activity such that the institutional sectors being built will cover, insofar as possible, only what is relevant. This is key when dealing with large entities that have complex organizational structures. For example, in Figure 2, the three corporations A, B and C represent the legal entities, where A wholly owns B, and C. When classifying entities to the transportation leasing company sector, company C was flagged as a potential addition to the frame as opposed to company A, which may include the activities of companies B and C in their consolidated financial statements or company B, which is engaged in non-financial activities that are outside the scope of this account.

Figure 2
An example of legal entities within a complex organisational structure



Source: Statistics Canada.

Table 1 outlines the defining characteristics of the detailed institutional sectors to which NBCI's were classified. In certain cases, the consultations with relevant industry participants confirmed the characteristics.

4. System of National Accounts 2008 (PDF)

Table 1
Defining characteristics of the currently estimated non-bank credit intermediation sectors

Non-bank credit intermediaries sector	Characteristics	North American Industry Classification System[1,2]
Mortgage investment corporations (MICs)	MICs, governed by Section 13.1 of the *Income Tax Act*, are engaged in mortgage lending. Funds are raised through the sale of shares to investors or via debt and these funds are used to provide financing. The return to investors is typically the interest earned on the MIC's portfolio of outstanding loans. An MIC usually has 20 or more shareholders and provides short term loans (6-36 months) secured by real estate property. MICs offer advantages over a traditional bank as they are more flexible in their lending terms. One can have a personalized structured loan with a short turnaround time for assessing and providing funds that, when compared to other lenders, allows them to charge a higher interest rate. The structure of an MIC represents a vehicle for those with equity to generate profit from the lucrative residential mortgages loan industry.	522299 - All other non-depository credit intermediation 522310 - Mortgage and non-mortgage brokers 526913 - Mortgage funds 523910 - Miscellaneous intermediation
Mortgage finance corporations (MFCs)	MFCs are large financial institutions that originate and service residential mortgages (usually insured). These mortgages are typically sourced from brokers, but some are sourced directly from clients. These mortgages tend to be packaged and sold to regulated financial institutions and thus must adhere to mortgage lending rules to satisfy the requirements of both their institutional buyers and the Canada Mortgage and Housing Corporation regarding the public insurance of residential mortgages. Due to these two considerations, MFCs are often considered as quasi-regulated. MFCs have a complex relationship with the major banks that is both co-operative and competitive. "While some banks rely on MFCs to underwrite and service broker-originated mortgages, MFCs also rely on banks to fund their operating capital and a significant share of their mortgage lending. At the same time, MFCs and banks compete for broker-originated mortgages".[3]	522299 - All other non-depository credit intermediation 522310 - Mortgage and non-mortgage brokers 526913 - Mortgage funds 523910 - Miscellaneous intermediation
Consumer and business transportation leasing companies	A lease is a long-term contract of one or more years where the lessee pays the depreciation on a good including an associated interest expense and is offered the option at the end of the lease to buy out the good completely or return it. In the case of vehicle leasing the contract is typically around three years. This sector includes all types of transportation vehicles (i.e., planes, trains, and automobiles) and fleets, but excludes rentals.	441120 - Used car dealers 441110 - New car dealers 532112 - Passenger car leasing 532120 - Truck, utility trailer and recreational vehicle (RV) rental and leasing
Other leasing companies	Other leasing companies adhere to the same general definition of a lease and cover all other types of leasing, such as equipment, furniture, and machinery. Transportation leasing and rentals are excluded.	532410 - Construction, transportation, mining and forestry machinery and equipment rental and leasing 532490 - Other commercial and industrial machinery and equipment rental and leasing 532420 - Other machinery and equipment rental and leasing 522220 - Sales financing

1. The *North American Industry Classification System (NAICS) Canada 2017 Version 3.0* (12-501-X) provides more information on NAICS descriptions and codes.
2. Top five NAICS where majority of the entities within the institutional sector fell.
3. The Rise of Mortgage Finance Companies in Canada: Benefits and Vulnerabilities (PDF)

Source: Statistics Canada and the Bank of Canada.

Sources and methods

Constructing and validating the non-bank credit intermediaries universe

Various sources were used to build a list of entities that fall within the NBCI universe. These sources include Statistic Canada's Business Register (BR), administrative data, the Quarterly Survey of Financial Statements (QSFS), and other relevant information. These sources were confronted to validate the classification of entities.

Table 2
Principal data sources used in building the NBCI universe and aggregate estimates

Source	Description	Use
Business register	Statistics Canada maintains a comprehensive database of types of entities in the Canadian economy. This information supports survey programs including sampling and weighting, provides important meta data, and supports the classification of entities to industries and institutional sectors.	Frame, estimates
Publicly-available information	Publicly-available information includes items such as audited financial statements and other financial filings, as well as information accessible on the internet regarding an entity's predominant business activity.	Frame, estimates
Administrative data	Administrative data was an important source of information used to build and validate the non-bank credit intermediation (NBCI) universe and create estimates for the NBCI aggregates by financial assets and liabilities.	Frame, estimates
Quarterly survey of financial statements (QSFS)	The QSFS is an enterprise survey that collects detailed financial information for consolidated groups of corporations, or in cases where the structure is simple, individual corporations.	Validation, estimates

Source: Statistics Canada.

Industry association information and third-party data sources were used to identify lists of likely candidates for inclusion in the NBCI universe.

A further approach involved the identification of characteristics expected among NBCIs. Some of these characteristics were drawn from the initial frame and others from an understanding of these entity's activities. Data was obtained from administrative data and the QSFS for financial variables that could be used to identify the activity of a given business. For example, companies that reported outstanding leasing or mortgage assets were reviewed to verify if they were in scope for the NBCI frame.

A brief overview of North American Industrial Classification System

The North American Industry Classification System (NAICS) is an industry classification system developed by the statistical agencies of Canada, Mexico and the United States. It is designed to provide common definitions of the industrial structure of the three countries and a common statistical framework to facilitate the analysis of the three economies.

As an example, NAICS industry code 522299 represents all other non-depository credit intermediation. The examples below show what is found in this industry and highlight that MICs should be classified to this NAICS code. As expected, many MICs are coded to 522299 (30% of the MIC universe), but this represents only a small fraction of the total number of entities coded to this NAICS (2.7%).

Examples of entities typically found under NAICS 522299 – All other non-depository credit intermediation:

- Mortgage investment companies
- Merchant banking
- Loan correspondents

Throughout this work the description of each entity's predominant business activity was considered. Statistics Canada's BR, which stores activity and industry classifications for entities in the Canadian economy, was consulted as a means for making additions to the NBCI frame as well as for validating the existing entity classifications. This was combined with other sources such as information from administrative data on businesses primary products, services sold and ownership structures. For example, if a company described their primary product as "leasing" or had been assigned a NAICS code for that industry then the entity was more closely reviewed to see if it fit the definition of an NBCI.

Additionally, these sources were used to better understand business ownership structures. If an entity classified as a leasing company was wholly owned by a chartered bank, it was then removed from the frame as its data would be consolidated with a regulated deposit-taking institution (DTI) and would consequently be out-of-scope.

Compiling non-bank credit intermediaries estimates

To derive balance sheet estimates for the NBCI universe, administrative data and QSFS data were extracted, combined with useful metadata and classifications, verified for data quality and coherence, and aggregated to totals by sector by instrument. In cases where sufficient information was not available then alternate sources were used. These data together provided insight into the functioning of the NBCI business structures, including the type of financing provided and how the activity was funded.

It was also critical to ensure consistency when comparing the newly derived NBCI balance sheet aggregates with previously published estimates such as those available from the NBSA and FSB. An exercise was undertaken to map NAICS to institutional sectors contained in the FSB shadow banking template, which is completed by all member countries. Additionally, a concordance was created between financial variables from source data and the financial instruments used in the NBSA (see Text box 1).

Text box 1
Financial instrument taxonomy

Non-bank credit intermediaries balance sheet

Total assets

- **Total non-financial assets**
- **Total financial assets**
    - Total currency and deposits
    - Debt securities
        - Canadian short-term paper
    - Loans
        - Non-mortgage loans
        - Mortgages
        - Corporate claims: loans and advances
    - Equity and investment fund shares
    - Other financial assets
- **Total financial liabilities**
    - Debt securities
    - Loans
        - Mortgages
        - Non-mortgage loans
        - Corporate claims: loans and advances
    - Equity and investment fund shares
    - Other financial liabilities

Source: Statistics Canada.

Findings

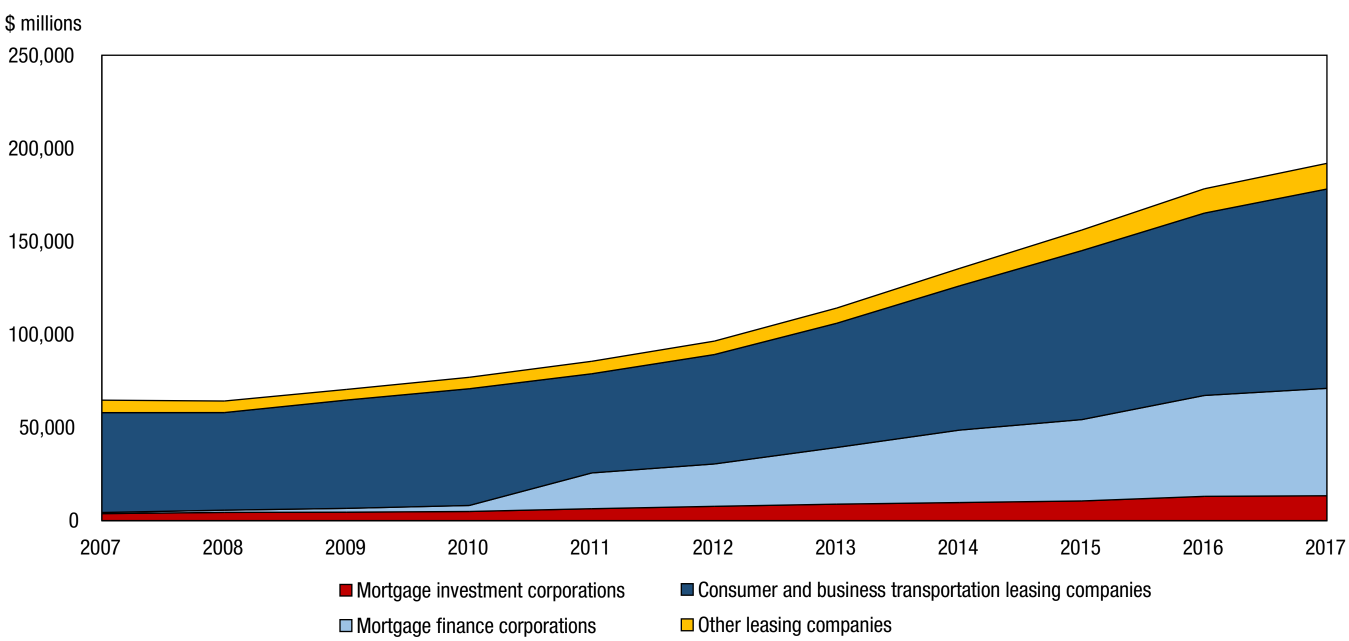
The total assets of the NBCI sectors have been steadily increasing over the past 10 years. Among NBCIs, the largest sector was consumer and business transportation leasing companies with total financial assets valued at $107.1 billion in 2017, followed by MFCs ($57.7 billion), MICs ($13.3 billion), and other leasing companies ($13.8 billion). The leasing industry grew at a relatively slower pace (+7.7%) between 2007 and 2017 when averaging its year-over-year growth whereas MICs and MFCs recorded average growth of 39.7%.

Table 3
Selected estimates of non-bank credit intermediaries by sector, 2007 and 2017

	Balance sheet items								
	Mortgage investment corporations and mortgage finance corporations			Consumer and business transportation leasing companies			Other leasing companies		
	2007	2017	Percent change	2007	2017	Percent change	2007	2017	Percent change
	millions of dollars		%	millions of dollars		%	millions of dollars		%
Institutional sector									
Total financial assets	**4,363.8**	**71,065.7**	**1,528.5**	**53,638.9**	**107,103.6**	**99.7**	**6,709.6**	**13,781.5**	**105.4**
Total loans	3,409.2	65,316.9	1,815.9	28,330.4	49,374.8	74.3	2,414.8	7,345.0	204.2
Mortgages	2,893.7	64,272.6	2,121.1	805.6	3,015.1	274.3	23.4	7.0	-70.0
Non-mortgage loans	504.8	1,006.9	99.5	25,522.4	43,397.9	70.0	2,074.6	5,816.7	180.4
Other financial assets	626.1	3,284.6	424.6	17,021.7	31,039.6	82.4	2,549.1	2,208.3	-13.4
Total financial liabilities	**4,434.2**	**71,347.0**	**1,509.0**	**103,962.1**	**165,077.3**	**58.8**	**10,556.8**	**19,660.5**	**86.2**
Total loans	920.0	55,172.4	5,897.0	44,798.1	82,431.2	84.0	5,614.5	10,673.4	90.1
Non-mortgage loans	566.3	54,204.3	9,471.7	25,172.9	61,436.2	144.1	2,847.0	4,060.7	42.6
Equity and investment fund shares	2,524.5	9,296.5	268.3	22,780.4	38,476.1	68.9	3,456.9	6,269.9	83.0
Other financial liabilities	969.0	6,411.5	561.7	36,230.0	43,207.9	19.3	1,483.0	2,714.1	81.4

Source: Statistics Canada.

Chart 1
Total financial assets of non-bank credit intermediaries



Source: Statistics Canada, table 36-10-0607-01.

Non-regulated financial institutions may not be subject to the same rules and regulations that must be adhered to by regulated financial institutions. As such, these entities can offer different terms and conditions to potential borrowers.

The total assets of the MIC sector has more than tripled in 10 years, increasing from $3.8 billion to $13.5 billion between 2007 and 2017. It has grown consistently over the past 10 years with an average year-over-year increase of over 13.9% primarily through existing entities growing their business. As a result, this sector's mortgage lending has been steadily increasing reaching $10.3 billion in 2017. MICs primarily fund their activities via revolving lines of credits with deposit-taking institutions whereas MFCs utilize market-based funding.

Table 4
An overview of non-bank credit intermediation funding models

Sector	Mortgage investment corporations	Mortgage finance corporations	Consumer and business transportation leasing companies	Other leasing companies
Leverage	Low	High	Low	Low
Funding model	Revolving lines of credit with deposit-taking institutions.	Growing use of market-based funding	Long-term market-based funding	Long-term market-based funding

Source: Statistics Canada and the Bank of Canada.

The total financial assets of the consumer and business transportation leasing sector has averaged 7.6% year over year growth between 2007 and 2017, resulting in a doubling of assets over the 10 year span from $53.6 billion in 2007 to $107.1 billion in 2017. Lease receivables are primarily classified as non-mortgage loan assets and stood at $43.4 billion in 2017. These lending activities were predominantly funded by non-mortgage loan liabilities of $61.4 billion in 2017, and include short and long-term debt amounts such as lines of credits with credit unions and Canadian chartered banks, private loans, and government sourced financing. The other leasing companies sector is structured similarly with leases classified as non-mortgage loans assets ($5.8 billion in 2017) and their principal source of funding also in the form of non-mortgage loans ($4.1 billion in 2017).

The total loan assets of NBCIs ($122.0 billion) represent roughly 5% of the total for the financial corporations sector ($2,385 billion). However, when considering growth between 2007 and 2017, NBCIs averaged 14.2% gains compared with chartered banks, which grew 9.1% when averaging year-over-year growth over the period. While NBCIs currently represent a smaller share of the total financial sector, they have been growing quickly relative to other lending sectors. Going forward, this economic account will allow users to track this evolution.

Way forward

This economic account will continue to evolve with the future inclusion of additional sub-sectors, including companies engaged in private consumer lending, investment funds, exchange traded funds (ETF), real estate investment trusts (REITs), and entities engaged in securitization.