

# User Guide: Canadian System of Macroeconomic Accounts

## Chapter 3 Key concepts in brief of the Canadian System of Macroeconomic Accounts



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# User Guide: Canadian System of Macroeconomic Accounts

## Chapter 3 Key concepts in brief of the Canadian System of Macroeconomic Accounts

### What this chapter seeks to do

The national accounts provide a simplified picture of a very complex economic reality—the economy. This chapter introduces and explains key ideas and categorizations comprising that picture and describes the international standard ‘sequence of accounts’—an accounting framework that holds the picture together. Later chapters expand upon these concepts as the structure of Canada’s System of Macroeconomic Accounts (CSMA) is described and illuminated.

### 3.1 Introduction

The **economy**—we hear about it every day in the news. But what is an economy? It is a wide network of economic agents—households, businesses, governments and non-residents—engaging in production, distribution, consumption, saving and investing activities within a specified geographical region. Canada’s system of macroeconomic accounts aims to describe and quantify the nation’s economy as it changes through time and enables comparisons of the economy with others.

Individuals live in a local or community economy. They purchase goods from local shops and find employment in nearby businesses and governments. That economy in turn is situated within larger economies bounded by municipalities, provinces, nations and indeed the world as a whole. The national accounts, despite the name, can portray economies at all of these levels. In Canada, the national accounts provide an integrated macroeconomic picture of all of the country’s thirteen provinces and territories individually, as well as the nation as a whole. Moreover Canada, like other countries, submits every year its national accounts statistics to the international organizations—the Organization for Economic Cooperation and Development (OECD), the United Nations (UN), the International Monetary Fund (IMF) and the World Bank (WB)<sup>1</sup>—where they are aggregated to produce statistics for the world economy. In other words, the national accounts provide an integrated and comprehensive picture of the world economy in several layers, and Canada’s national accounts supply the pieces of the global economic picture corresponding to this country.

In this chapter, the main concepts and classifications underpinning Canada’s national accounts are identified, explained and discussed. The chapter draws extensively on information contained in the international System of National Accounts standard, referred to here as SNA 2008<sup>2</sup>

### 3.2 Concepts

Modern economies are complicated. They typically involve a great many players—individuals, households, businesses, non-profit organizations, government organizations—interacting day after day, each to achieve their individual objectives. In the national accounts, the players are termed ‘institutional units’ and they are grouped into ‘institutional sectors’ according to their objectives and functions. Their interactions mostly involve **transactions**—one player purchasing and the other selling goods, services or assets—but they also involve unrequited **transfers**.<sup>3</sup> The system facilitates the **production, distribution and consumption** of goods and services and the **accumulation** of assets over time.

#### 3.2.1 Stocks and flows

The economic accounts measure stocks and flows of economic value. A stock measures economic value at a point of time, for example at the end of a year.<sup>4</sup> A value **flow**, in contrast, is a change in economic value over a period of time, for example in a week, a month or a year. Stocks are characterized by the instant at which they are measured, but they do not have a time dimension—they are not measured per month or per year. Flows, however, are defined by their time dimension and are measured per month, or per quarter, or per year. The stock and flow concepts are closely related because the difference between a stock of something at one instant in time and the stock of that

same thing at an earlier instant in time can usually be explained by certain economic flows during the time period extending between those two instants.

Two kinds of flows are identified in the SNA: Transaction flows and other flows. A **transaction flow** in most instances represents dollars exchanged between buyers and sellers during an accounting period. Some transactions, though, are not stated in units of currency, like barter transactions, while other transactions are internal to institutional units as when units produce fixed assets for their own consumption. Transaction flows are generally characterized by quantities and prices of one or more products transacted. Other flows consist of economic changes that are not associated with transactions, such as the reduction in value of a house that has been damaged by a severe storm or the reduction in retail inventory stocks as the result of theft.

**Balancing items** can also appear in a flow account or in a balance sheet. They are accounting constructs. In many instances they are the difference between one transaction flow and another.

### 3.2.1.1 Transactions in goods and services (products)

Transactions in goods and services reveal the origin (domestic output or imports) and use (intermediate consumption, final consumption, capital formation or exports) of goods and services.

Transaction flows are the essential source of data that fuels the national accounts. Whenever two players, a seller and a buyer, agree to exchange a product on a particular date for an agreed sum of money, they are voluntarily assigning a value to that product. National accountants seek to collect comprehensive data on such transactions so as to calculate the overall average and total values assigned to products by Canadians.

Transactions include purchases by consumers in retail outlets, sales of industrial products from one business to another, the sale of labour services to an employer by an employee, the receipt of payments from businesses abroad in exchange for goods and services exported by Canadian enterprises and many other kinds of trades. As discussed further below, each such transaction finds a place in two sets of accounts—those of the seller and buyer—and the national accounts record and aggregate this accounting information.

The SNA also includes distributive transactions by which the value added generated by production is distributed to labour, capital and government (for example, wages are a distribution to households and interest is a distribution to the owners of capital) as well as redistributive transactions (for example, income tax is a type of redistributive transfer to governments, typically from households or businesses).

### 3.2.1.2 Transactions in assets

Just as for goods and services, players in the Canadian economy also purchase and sell **assets** of various kinds. Data from these transactions are of use in compiling the capital accounts, the financial flow accounts and the national balance sheet accounts. Assets are classified as financial and non-financial.

The items referred to here include produced, non-financial (or 'real') assets like new and used housing units, commercial, industrial and institutional buildings, engineering developments such as roads, bridges and pipelines, and items of machinery and equipment such as railroad stock, ships, trucks and a wide range of industrial and commercial equipment. This category also includes intellectual property products, such as research and development, software products and mineral rights resulting from exploration (though in Canada, other intellectual property products such as databases and entertainment, literary and artistic originals are not included in the definition at present due to source data limitations).

Assets that are not used in economic activity, or are not subject to ownership rights, are not recognized in the system. Important examples include consumer durable goods,<sup>5</sup> which are excluded because household output lies outside the production boundary,<sup>6</sup> and human capital. Estimates of the implicit value of some of these types of assets have nevertheless been developed for Canada, in occasional studies.

Non-produced assets also fall within the asset boundary of the system and are included in the balance sheets. These include land and natural resources with economic value (such as oil and gas resources, timber rights and wireless spectrum). Certain contracts, leases and licences, purchased goodwill and marketing assets are also included in the SNA 2008 standard definition although they are presently excluded in Canada's SNA, again for reasons of source data limitations.

The assets category also includes financial assets such as stocks, bonds, bank deposits, mortgages, bank loans and currency. Of course, one player's financial asset corresponds to another player's liability.

Many non-financial assets have very thin resale markets, so there are often few transactions upon which to base market value estimates. For example, a business might purchase some very specialized manufacturing equipment. Assessing the changing market value of that equipment as it ages would be difficult if used equipment of this kind was rarely offered for sale on the market. Sometimes this makes it difficult to assign a current value to the stock of these assets. However, while non-financial asset resale markets are often quite thin, most financial assets have high daily turnover that greatly facilitates the use of transactions data for market valuation purposes.

### 3.2.1.3 Connecting flows to stocks of assets

The national accounts are structured to account for changes in the value of an economy's assets between the start and end of a period. After all, an economy's growth and continuing prosperity depend upon its stocks of assets. Some of the **transaction flows** during the period help explain these changes, such as expenditures on investment goods or the accumulation of inventories (in the case of the non-financial accounts) and the sale of government bonds and the issuing of corporate equity (in the case of the financial accounts). In addition, there are a number of other factors contributing to the explanation of changes in the value of assets between the start and end of a period. As mentioned previously, these are sometimes referred to as **other flows**, and they consist of **other changes in the volume of assets** and **revaluations**. Natural disasters and mineral discoveries fall into the first of these categories and the second is concerned with asset price changes. In effect, the closing (end-of-period) asset value is determined as the opening (start-of-period) asset value, plus relevant transaction flows during the period, plus relevant other flows during the period. This topic is more fully explained in chapter 6, which deals with the national balance sheet accounts.

### 3.2.1.4 A low-level example

An everyday example may be helpful in explaining these concepts. Consider the valuation of a home that is owned by a household. The home has a market value of \$350,000 at the beginning of the year. During the year, the household spends \$50,000 to renovate, building a new addition off the back of the house. Later that same year, an earthquake occurs that puts cracks in the home's foundation. The household decides not to repair the home that year, but determines that the repairs would cost \$35,000. Meanwhile, as the year goes by the housing market slumps and similar houses in the general area decrease in market value by 5 per cent on average. At the end of the year, the home's value will have changed from \$350,000 to \$347,500 as shown in Table 3.1. In this example, the opening and closing asset values are \$350,000 and \$347,500, the transaction flows are \$50,000, the other changes in the volume of assets are -\$35,000 and the revaluation is  $-0.05 \times \$350,000 = -\$17,500$ .

**Table 3.1**  
**Stocks and flows example**

Home value component	Flow	Stock
	dollars	
Home market value, start of year	...	350,000
Home renovation (transaction)	50,000	...
Earthquake value loss (other volume change)	-35,000	...
Housing price change (other revaluation)	-17,500	...
Sub-total	-2,500	...
Home market value, end of year	...	347,500

... not applicable

Source: Statistics Canada.

### 3.2.1.5 A high-level example

For another example, consider a very high-level aggregate stock (asset) series: Canada's national wealth. At the end of a particular time period, the third quarter of 2009, national wealth was estimated at \$7.571 trillion. This huge stock figure is the estimated total, at the end of the day on September 30, 2009, of the values of all non-financial assets in the country—residential and non-residential structures, machinery and equipment, inventories, intellectual property assets, land and net claims of Canadians on the rest of the world. (A broader definition of national wealth would also include an estimate of the value of natural resource wealth.) One quarter previously, at the end of the second quarter of 2009, national wealth was \$7.461 trillion.

What accounts for the difference,  $\$7.571 - \$7.461 = \$0.110$  trillion? The answer is the sum of a number of transaction and other flows during the third quarter of 2009. Some of these flows represent transactions related to new construction of structures, purchases of machinery and equipment and net acquisition of intellectual property assets; others represent the depreciation or 'wearing out' of existing assets during the third quarter; others represent increases or decreases in the level of inventories held by businesses; still others represent price fluctuations, during the third quarter of 2009, affecting the market values of assets that already existed at the end of the second quarter; and finally, the value of national wealth might also have changed due to other kinds of changes in the volume of assets such as the detection of previously undiscovered mineral deposits or the destruction of assets as a result of violent weather or earthquakes.

The economic accounts consist of a great many stocks and flows such as these. Some are high-level aggregates, as in the example just cited, while others are much lower-level aggregates. The interplay between stocks and flows of economic value is a recurring theme throughout this volume.

### 3.2.2 Price and volume changes

The national accounts, like the corporate or government accounting statements from which they are derived, are normally laid out in dollars (that is, in 'value' or 'nominal' terms). This is natural, because revenues, expenditures and other such accounting magnitudes are measured that way in the here and now. However, because prices are constantly in flux, the dollar is an elastic ruler, representing different amounts of purchasing power at different points in time. To address this fact, the national accounts also provide decompositions of some value series into distinct price and volume (or 'quantity', or 'real') components.

The volume and price decomposition accounts are available only for corresponding nominal accounts that focus on expenditures on products, for example the expenditure-based gross domestic product table or the household final consumption expenditure table. It is not feasible to construct volume and price accounts for most income, transfer and financial flow accounts because the component series in these non-product accounts do not have well defined market prices.

The volume and price decomposition accounts are a vital component of the macroeconomic accounts because they 'pull aside the veil of money' to reveal underlying changes in the real economy. They also provide a picture of relative price change by product category, and measures of aggregate price inflation. Nominal GDP may be growing, but is real GDP? The answer to this question has serious implications for employment, unemployment, productivity and living standards.

The nominal-versus-price-and-volume decompositions represent the temporal movement in a given value series,  $V(t)$ , in terms of the temporal movements of the price and quantity components, as follows:

$$(3.1) \quad \frac{V(t)}{V(s)} = \frac{P(t)}{P(s)} \cdot \frac{Q(t)}{Q(s)}$$

where  $t$  and  $s$  are any two time periods. This equation simply says that the relative movement, or growth rate, in a value series between time periods  $s$  and  $t$  is equal to the product of the relative movement in its corresponding price and quantity indexes.

As an example, consider the gross domestic product value aggregate and let  $t$  be the current quarter and  $s$  be the previous quarter. This decomposition states that the nominal quarter-to-quarter growth rate of GDP can be represented as the product of the corresponding growth rates of the price index of GDP and the quantity, or volume, index of GDP (also known as ‘real GDP’ or in some instances as ‘GDP at constant prices’). In numbers, this might be  $1.010 = 1.002 \times 1.008$ , indicating nominal GDP growth of 1%, inflation of 0.2% and real growth of 0.8%.

Equation (3.1) can also be re-written in the form:

$$(3.2) \quad \frac{V(t)}{V(s)} / \frac{P(t)}{P(s)} = \frac{Q(t)}{Q(s)}$$

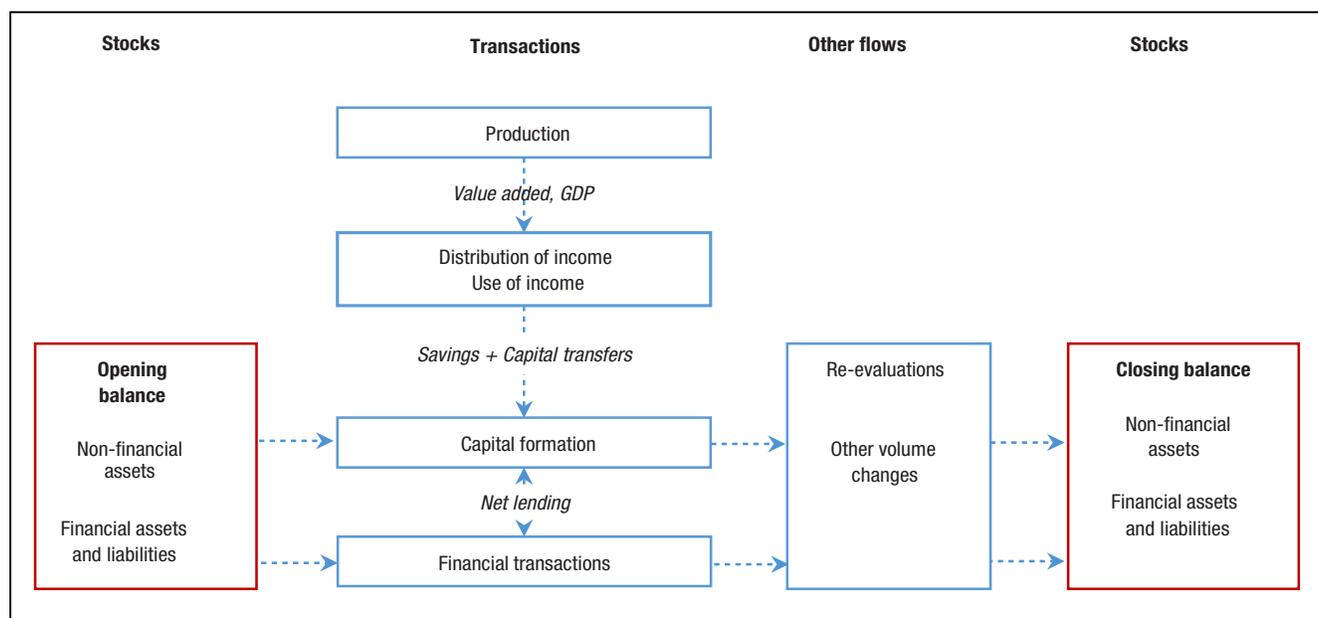
Equation (3.2) says that when we “deflate” the value index between periods  $s$  and  $t$  using an appropriate price index, we calculate a volume or ‘constant price’ index.

There are many possible ways to measure price and volume indexes and these are discussed in chapter 7. This decomposition plays a very important role in national accounting as it provides a way of determining the path of the real, as distinct from the nominal economy.

### 3.2.3 Production, distribution, consumption and accumulation

The raison d’être of the national accounts are to portray the economy as it changes through the course of time and to enable comparisons of one economy with other economies. The key dimensions of the modern economy that the accounts seek to portray are the current accounts, dealing with production, incomes arising from production, distribution of incomes and consumption, and the accumulation accounts, showing changes between the opening and closing balance sheets. In a sense, the system is set up to show how economic activity and other factors change wealth from one period to the next. This framework, which is the focus of greater attention later in this chapter, is depicted in Figure 3.1 below.

**Figure 3.1**  
Framework of Canada's macroeconomic accounts



Source: System of National Accounts 2008.

### 3.2.3.1 Production

First and foremost, the economy is an engine for producing goods and services. The human species has always engaged in production to meet its needs and as the centuries have gone by, the means of production have grown ever more sophisticated. In today's modern economy, production is frequently an exceedingly interrelated and complex activity involving the use of a variety of labour, capital and intermediate goods and services inputs to produce outputs of products.

Production is carried out under the responsibility, control and management of an institutional unit, most often in the business sector but possibly in the government and other resident sectors. This responsible institutional unit either owns the resulting outputs, or is entitled to compensation for the managerial services provided.

What is meant by production? This is the question of the **production boundary**. It is the issue of which activities are to be included, and which excluded from the definition of an economy's production or measure of gross domestic product. The national accounts aim for a broad and non-normative definition of output, focussed primarily but not exclusively on the market economy. Generally speaking, if a product is produced for sale in the marketplace, it falls within the national accounts production boundary. This holds true whether the product is judged positively or negatively by society. Thus, for example, legal tobacco products are included as part of national output even though they are widely viewed as harmful and undesirable. SNA 2008 recommends that illegal products marketed in the 'underground economy', such as narcotic drugs and prostitution, also be included within the production boundary. However, products of this kind are presently excluded from the Canadian production boundary because of measurement difficulties. If a product is not produced for sale in the marketplace, it may or may not fall within the production boundary.

**Financial intermediation services indirectly measured (FISIM)** are a rather unique product category within the production boundary. Banks and other financial intermediaries make it their business to borrow at relatively low interest rates and re-lend at higher rates, using the margin to cover their costs and make a profit. Often no explicit price is charged for their intermediation service, so this product cannot be said to be offered for sale in the marketplace, at least not in the normal sense of that phrase. Nevertheless this service is considered to be within the production boundary.

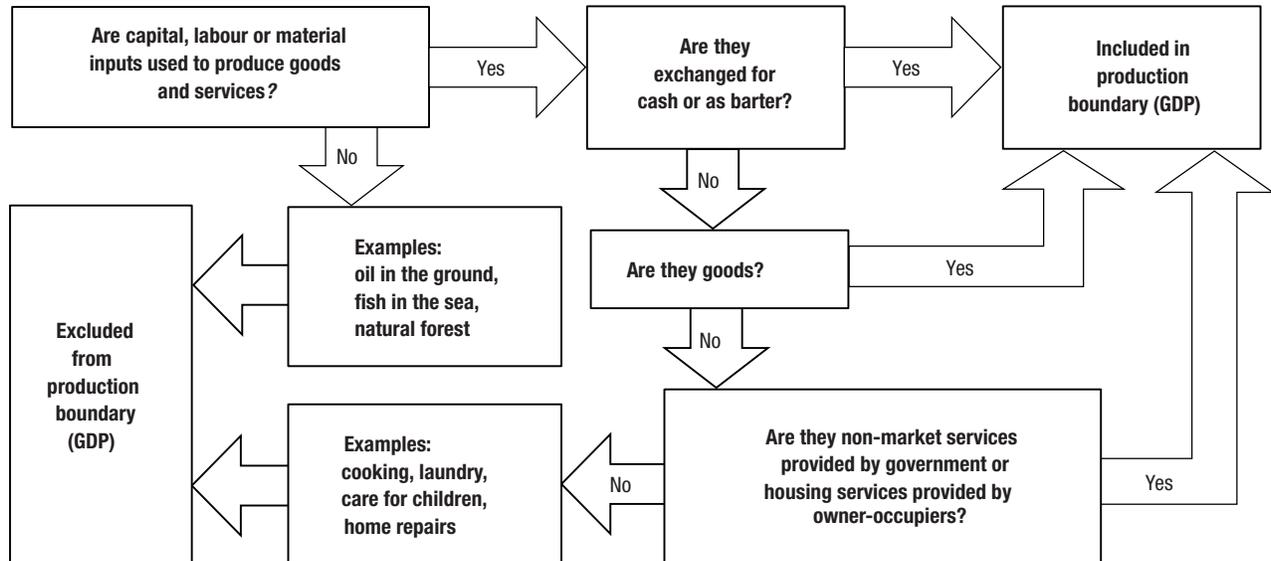
Most household sector outputs for own use are excluded from the production boundary. When members of a household produce meals for one another, or do laundry, the output they produce, while obviously real and important within society, is deemed outside the production boundary because there is no market valuation of these goods and services.<sup>7</sup> In addition, the growth of plants in the wild or the natural breeding and development of fish and animals without human intervention are not considered production for national accounts purposes.

An exception is the services provided by owner-occupied dwellings, for which an imputed rental charge is included in the production boundary. In effect, homeowners are treated as if they were landlords renting their homes to themselves. Again, no market price is observable, so a price is imputed based on the rental prices of rented dwellings that can be observed in the marketplace.<sup>8</sup> Own-account residential construction and major renovations by homeowners are also considered to be within the production boundary, as is agricultural production by farmers for their own personal use.

Most outputs of the government and non-profit sectors are included within the production boundary, even though they typically are distributed free or at economically non-significant prices.<sup>9</sup> In particular, government production of public administration, health, education, security and other services are considered to be within the production boundary. Since these outputs have no observable market values, their value is imputed in the national accounts at cost. The same is true for non-market production by non-profit organizations.

Figure 3.2 highlights how the two sides of the production boundary are determined.

**Figure 3.2**  
**Determining the production boundary<sup>10</sup>**



**Source:** Francois Lequiller and Derek Blades, *Understanding National Accounts*, Organization for Economic Cooperation and Development, 2006.

There are three categories of output in the national accounts:

1. **Market output**, consisting of output intended for sale at economically significant prices. In addition to all the usual kinds of market production—food, clothing, other manufactured goods, services, etc. that are traded in value terms—this includes the value of products that are bartered or used for payments in kind, the value of goods temporarily destined for inventory and margins charged on the supply of goods such as transportation or wholesalers' and retailers' markups.
2. **Output for own final use**, consisting of output retained by the producer for his or her own final consumption or capital formation, often referred to as 'own-account production'. This includes products made by an unincorporated business and consumed within the same household, the value of services to households by paid domestic staff, the value of imputed services from owner-occupied dwellings, the value of fixed assets produced by a business for its own use in future production and the value of changes in inventory intended for any of these uses.
3. **Non-market output**, consisting of products produced by governments or non-profit institutions that are supplied to other institutional units either for free, or at economically non-significant prices. In the accounts, this output less sales to other sectors is shown as acquired by the government and NPISH sectors in the use of income account (as seen later in this chapter). This should not be confused with production for own use (output category 2). The **use** of the individual goods and services produced by governments and NPISH units is by households, and the use of the collective services they produce is by households or other resident institutional units, even though the associated **expenditure** is by governments and non-profit institutions. Thus non-market output (category 3) should not be confused with output for own use (category 2) where the producer unit not only has imputed expenditure on the output, but also actually uses the output.

By products, we mean the full gamut of goods and services that humans create to satisfy their needs. The national accounts organize products into product classes, as discussed later in this chapter and explained in detail in chapter 4.

One of the things making a production process complex is that many different products are often required as inputs in order to produce some other product as an output. Thus, for example, to produce bread output, inputs of flour, yeast, salt and additional ingredients are required as well as labour services, rental charges on the bakery premises and so on. More multifaceted and complex examples of production processes can easily be conceived, such as the manufacturing of automobiles and computers, and the production of medical and telecommunications services.

Some products are used not for final consumption, but for intermediate consumption. In other words, they are used as inputs into the process for producing others goods and services. The concept of **gross value added** brings out this distinction. It refers to the difference between total output and intermediate consumption. This concept refers to the contribution of a producer to total GDP in the economy.

The most aggregate measure of value added in the national accounts is gross domestic product (GDP), which represents the total value added of all parts of the economy and avoids any double-counting of intermediate inputs. Monthly, quarterly and annual measures of GDP are available in the national accounts and these are discussed in chapters 4 and 5.

The concept of **productivity** is about the quantity of output that can be produced from a given quantity of inputs. If the ratio of outputs to inputs increases, productivity is rising and this is universally seen as beneficial to society.

The concept of **value added** is central to production. Returning to the bread example, just discussed, if the baker purchases flour, yeast and salt from other producers for use in making the bread, the value of these inputs is already counted as output of the businesses that produced the flour, yeast and salt. Their value is therefore part of the baker's output but they are not part of the baker's **value added** which, rather, consists solely of the value of the inputs of **factors of production** going into the production of the bread. These consist primarily, if not entirely, of the wages paid to the baker's employees plus the profits earned by the baker by virtue of his having put capital at risk.

### 3.2.3.2 Distribution

How much value is added is one question. How the value added is translated into various incomes is another. The value added is comprised of wages and salaries paid, other taxes (less subsidies) on production (such property taxes and license fees) and operating surplus (comprised of interest paid, capital consumption and net profit).<sup>11</sup> The accounts show how these incomes are allocated to institutional units as recipients of **primary incomes**.

The national accounts portray the distribution of incomes in two major parts, referred to as **the primary and the secondary distributions**. The former involves the allocation of primary incomes to institutional units as a consequence of their involvement in the production process or their ownership of assets used for purposes of production. The secondary distribution shows how an institutional unit's primary income is transformed into its **disposable income** by the receipt and payment of current **transfers**. Transfers have no associated *quid pro quo*. They include transfers of income taxes from households and corporations to government, for example, and transfers of employment insurance benefits, welfare benefits, pensions and other transfers from government mainly to households. The term **disposable income** refers to the income that remains and is available for spending or saving after transfers to and from the institutional unit have been accounted for. These income distribution accounts are discussed later in this chapter.

### 3.2.3.3 Consumption

The term **consumption** refers to the using up of output, either in the production of other goods and services or in the direct satisfaction of human wants and needs. When firms use goods and services as part of the production process, that usage is referred to as **intermediate consumption**. In contrast, when households, in their role as consumers, use goods and services purchased with their disposable incomes to satisfy human wants and needs that usage is referred to as **final consumption expenditure**. Non-profit institutions and governments also engage in final consumption spending,<sup>12</sup> but corporations do not.

There is another, more comprehensive concept of consumption by households which is referred to as **actual individual consumption**. This concept includes, in addition to the consumption that is represented by household expenditures on goods and services, the consumption represented by social transfers in kind from governments and non-profit institutions serving households. In Canada, these transfers include health, education and housing services, among other products. Section 3.4.4 below describes the functional classifications of expenditures, which are central to the measurement of actual individual consumption.

The actual individual consumption concept can be especially useful when comparing living standards across different countries, or even across provinces. This is because services that are delivered by the private sector in some countries or provinces, and are therefore included in final consumption expenditure by households, are delivered fully or partially by the public sector or by non-profit institutions in other countries or provinces, where they are therefore fully or partially excluded from final consumption expenditure by households. An example is health care services which are provided mostly by governments in Canada and mostly through the market in the United States.<sup>13</sup>

Another consumption concept is the **consumption of fixed capital**, also referred to as **economic depreciation**. This refers to the using up of capital assets during a production period as a result of wear and tear, normal obsolescence or normal accidental damage. Note that for purposes of the national accounts, consumption of fixed capital refers to the value of using up the capital assets, which may differ substantially from depreciation of amortized capital as it is measured in historical cost accounting records.

#### 3.2.3.4 Accumulation

If society used up all output as intermediate consumption and final consumption expenditure on goods and services, the stock of capital would gradually decline over time due to the consumption of fixed capital. To avoid this, which would imply a steady downward trend in output capacity, society must set aside some of its output to replenish its capital stock and indeed, to expand that capital stock through time. This is necessary if society is to grow and progress. The process is referred to as the **accumulation of capital**, investment or **gross capital formation**.

Gross investment is the total amount set aside in the economy both to replenish and to grow the capital stock. Net investment, in contrast, is the amount by which capital accumulation exceeds the amount necessary to replenish consumption of fixed capital. If net investment is positive, the capital stock is growing but if net investment is negative, the capital stock is decreasing.

The accounts recognize many kinds of fixed capital, including residential and non-residential buildings, engineering structures such as pipelines, roads and electrical utilities, a wide variety of machinery and equipment, and intellectual property assets.

Accumulation flows account for the difference between the opening and closing national balance sheets, as is discussed in chapter 6. The accumulation accounts include the capital account, the financial account, the other changes in the volume of assets account and the revaluation account. Gross fixed capital formation flows, as just discussed, relate to the production of capital goods. Financial flows, in contrast, involve the accumulation of financial assets and liabilities such as equities, bank deposits and bonds. In addition to these flows, the balance sheet is also influenced by ‘other changes in the volume of assets’, which might be caused by new discoveries of natural assets (positive changes) or by natural disasters (negative changes), and by revaluations associated with asset market price changes.

#### 3.2.4 Residence

The **Balance of Payments and International Investment Position Manual**<sup>14</sup> defines the **residence** of an institutional unit (institutional units are discussed in section 3.3) as “the economic territory with which it has the strongest connection, expressed as its centre of predominant economic interest”. This definition applies whether the accounts are being compiled for a province or territory, or for a country, or for a grouping of countries such as the European Economic Community. The “economic territory” aspect of this definition includes not just the land, water and airspace of the territory, but also its embassies, consulates and military bases that may be located in other territories.

“A household is resident in the economic territory in which household members maintain or intend to maintain a dwelling or succession of dwellings treated and used by members of the household as their principal dwelling.”<sup>15</sup> In practical terms, though, the determination of residence can be a very complicated matter. In Canada, the residence of a household is established on a calendar year basis and Statistics Canada accepts the determinations on this matter that are made by the Canada Revenue Agency. That agency, in turn makes its decisions with guidance from the courts, where a large case law has accumulated. Canada Revenue Agency has the following to say about the determination of residence:

“The most important factor to be considered in determining whether an individual leaving Canada remains resident in Canada for tax purposes is whether the individual maintains residential ties with Canada while abroad.”

“The residential ties of an individual that will almost always be significant residential ties for the purpose of determining residence status are the individual’s: dwelling place (or places); spouse or common-law partner; and dependants.”

“Many of the comments in this chapter apply to determinations of residence status for provincial, as well as federal, tax purposes.”<sup>16</sup>

Under this definition of residence, all members of a given household have the same residence. This means, for example, if a household were to live in a city near a provincial border, and if the place of employment of a member of that household were across that border in another province, that household would still be deemed resident in the province where the household as a whole resided. It also means that if a household had more than one residential property, in different provinces or territories, then only one of those provinces or territories could be designated as the location of residence for national and provincial/territorial accounting purposes.

The definition of residence is intended to ensure that all institutional units reside in one and only one economic territory. For example, within Canada this means that if a household, business or government unit resides in one province for purposes of that province’s economic accounts, then it cannot also reside in another province for purposes of that province’s accounts. Otherwise there would be double counting.

An enterprise is considered resident in an economic territory when it is engaged in a significant amount of production of goods and services from a location in the territory. This can get complicated for businesses that may have production locations spread across multiple provinces or indeed, countries. Canada has many such multi-provincial corporations and the world as a whole has multi-national corporations. Such multi-territorial businesses can usually be broken down into sub-units for each of which the residence is clearly defined. Thus, a multi-provincial enterprise with a head office in one province and plants in other provinces is considered to be one institutional unit, but with several sub-units. This is elaborated in chapter 4.

In some uncommon instances, a multi-territory enterprise may be so tightly integrated that it is not feasible to break it down into separate provincial branches. In such cases, a more artificial division of the company into sub-units may be necessary using, for example, accounts from the business as a whole that are prorated based on sales, employment or some other indicator.

For purposes of the balance sheet accounts, land, buildings and other immovable assets are always deemed to be owned by residents of the territory where those assets are physically located. This is the case regardless of where the legal owners of those assets actually reside and regardless of whether those owners engage in economic activities in the territory where those assets are located. Similarly, extraction of subsoil resources can only be done by resident institutional units. Where no such resident units exist in fact, they are artificially created for purposes of the accounts.

In a situation where a business does not have a location, its residency is determined according to the economic territory under whose laws the enterprise is incorporated or registered.

### 3.3 Sectors

There are many players, or **institutional units** as they are called in the SNA, involved in Canada's economy:

- approximately 2 million businesses, most of them very small but some quite big;
- over 5,000 governments—federal, provincial, territorial, municipal and aboriginal;
- about 35 million residents, living in about 13 million households;
- roughly 100,000 non-profit organizations serving households; and
- an innumerable number of other players residing outside the country but engaging in international transactions with players inside Canada.

The parties just described do many things. But from the national accounts perspective, they are viewed as economic agents that own, produce, distribute and consume goods and services. They also accumulate and own non-financial and financial assets and incur liabilities.

Coping with the enormous number and great variety of players involved in the economy requires a classification system. The international standard, SNA 2008, prescribes such a classification system and Canada has adopted it.<sup>17</sup> The system organizes the players just discussed into five domestic sectors and one international sector, as shown in the Table 3.2 below.

**Table 3.2**  
**Sectors in the Canadian Economy**

Sector code	Sector name
S1	Total Canadian economy
S11	Non-financial corporations
S12	Financial corporations
S13	General government
S14	Households
S15	Non-profit institutions serving households
S2	Rest of the world

Source: Statistics Canada.

Each sector is said to be comprised of institutional units. As defined in SNA 2008, an institutional unit “is 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” (page 61). In principle, each institutional unit must be capable of compiling a complete set of financial accounts, whether or not they actually do compile such accounts.

#### 3.3.1 Non-financial corporations

The non-financial corporations sector is comprised of the main producing agents in the economy. As such, the institutional units in this sector include legal entities<sup>18</sup> whose primary purpose is to produce goods and/or non-financial services for profit. To be an institutional unit in this sector, a unit's existence must be recognized independently of the persons or other institutional units that may own or control them, who in turn enjoy limited liability. Accordingly, most of the units in the sector are corporations. The sector also includes not-for-profit institutional units whose primary purpose is to serve businesses in the non-financial or financial corporations sectors. Examples of such units include Chambers of Commerce and industry associations.

Non-financial corporations are further sub-classified according to how they are controlled. Some are publicly controlled, by government sector entities, and in Canada these are often referred to as Crown corporations or government business enterprises. Others are controlled by private sector entities in Canada, and these form the majority of Canadian corporations. Finally, some resident corporations, while they operate in Canada, are controlled by entities outside Canada. The latter businesses are often called foreign-controlled corporations.<sup>19</sup> All of these units fall into the non-financial corporations sector.

The non-financial corporations sector is a focus of attention in chapters 4, 5 and 6.

### 3.3.2 Financial corporations

The financial corporations sector includes corporations that are primarily engaged in the production of financial services. It also includes non-profit institutions engaged in providing financial services.<sup>20</sup> In this context, the term ‘financial services’ comprises financial intermediation, risk management, liquidity transformation and other like activities including the activities of holding companies. It includes not just banking, but also insurance and pension funding services. The outputs of financial corporations include financial intermediation services indirectly measured (see chapter 4) as well as an array of other services, such as wealth management, brokerage, safe-keeping and insurance for which fees are charged directly.

In the financial flow and national balance sheet accounts, the financial corporations sector is broken down into the sub-sectors shown in Table 3.3. This breakdown is uniquely Canadian and is intended to reflect the current structure of the country’s financial system. The sector is a major focus of attention in chapter 6.

**Table 3.3**  
**Financial sub-sectors in the Canadian economy**

Sector code	Sector name
S12	Financial corporations
S121	Monetary authorities
S122	Chartered banks and quasi-banks
S1221	Chartered banks
S1222	Quasi-banks
S123	Insurance and pension funds
S1231	Insurance business
S1232	Segregated funds of life insurance companies
S1233	Trusteed pension plans
S1234	Property and casualty insurance companies
S124	Other private financial institutions
S1241	Mutual funds
S12411	Money market funds
S12412	Other mutual funds
S1242	Sales finance and consumer loan companies
S1243	Issuers of asset-backed securities
S1244	Other private financial institutions
S125	Financial government business enterprises

Source: Statistics Canada.

### 3.3.3 General government

Institutional units in the government sector assume responsibility for the provision of goods and services to the community as a whole, such as policing, justice, regulation and national defence services, and directly to individual households, such as public housing, education and health care services. They also redistribute income and wealth by means of transfers and engage in non-market production. Government sector institutional units are legal entities with the powers: (i) to raise revenues through taxation and/or to receive revenues as transfers from other government institutional units, (ii) to spend such funds in the pursuit of policy objectives and (iii) to borrow funds on their own account.

In Canada, the government sector consists of the sub-sectors shown in Table 3.4.

**Table 3.4**  
**Government sub-sectors in the Canadian economy**

Sector code	Sector name
S13	Total general government sector
S131	Federal general government
S132	Other levels of general government
S1321	Provincial and territorial general governments
S1322	Local general governments
S1323	Aboriginal general governments
S133	Social security funds

Source: Statistics Canada.

The government sector does not include public corporations and quasi-corporations<sup>21</sup> owned by governments and engaged in production for sale at economically significant prices. These corporations are included in the non-financial or financial business sectors, despite their being government owned and controlled. However, the government sector does include government-funded and controlled non-market non-profit organizations.<sup>22</sup>

Government departments, such as those responsible for financial, judicial, industrial, trade, social or environmental policies, are not themselves considered to be distinct institutional units because they are not generally capable, in their own right, of owning assets, incurring liabilities and engaging in transactions with other entities. Rather, such departments collectively constitute the institutional unit. Occasionally governments create special funds that are focussed on specific policy objectives. Generally these too are considered part of the government institutional unit rather than being distinct units.

The federal, provincial and territorial, and local government sectors are each broken out in considerable detail in the macroeconomic accounts, as is described more fully in chapter 9. In Canada's democracy, each level of government is required to produce audited public accounts statements at least annually and these accounts provide much of the statistical information that is used to compile the government sector accounts. The accounts are produced according to the **Government Finance Statistics**<sup>23</sup> standard, which is consistent with and expands upon the SNA 2008 standard.

In the SNA 2008 international standard, social insurance schemes that have broad coverage, are imposed and controlled by government institutional units, have their assets and liabilities held separately and engage in financial transactions on their own account are considered to be a distinct sub-sector within the general government sector. In Canada this sector includes the Canada and Quebec Pension Plans.

First Nations and other aboriginal government (alternatively Aboriginal general governments) is a relatively new sector in the macroeconomic accounts that was introduced with the historical revision of 2012. Prior to that revision, First Nations and other aboriginal band councils were included within the former "Persons and unincorporated business" (now "Households") sector. The institutional units in the sector consist of the governing entities in the over 600 First Nations and aboriginal bands in various locations across Canada.

The government sector, described here, is not the same as the ‘public sector universe’, which also includes government business enterprises. As mentioned previously, in the SNA these enterprises, when market-oriented and operating for profit, are allocated to the non-financial and financial business sectors.

### 3.3.4 Households

A household is a group of persons who share the same living accommodation, pool some or all of their income and wealth, and consume some goods and services collectively, such as housing and food. Households often coincide with families, though they need not. All members of the household are considered to have the same residence, regardless of their places of employment.

Paid domestic employees living on the same premises as their employer are considered to be part of other separate households, since they have no claim on the collective resources of their employers’ households. However, two or more people sharing an apartment but otherwise unrelated are considered to be one household.

Persons living in institutions, such as long-term hospital patients, residents of retirement homes, members of monasteries and convents, and prisoners serving long sentences in penitentiaries are considered to be members of institutional households. Each hospital, retirement home, etc. is considered a distinct institutional household unit. However, persons spending a short period of time in one of these institutions, normally less than one year, are considered to remain part of their original household rather than to be part of the institutional household.

Households are, of course, consumers of goods and services and suppliers of labour to businesses, governments and non-profit institutions. Indeed, households residing near the border may also be suppliers of labour to non-resident institutional units.

The household sector includes unincorporated businesses operated by households. These market enterprises might be engaged in the production and sale of a wide variety of goods and services, for example, home renovations, farming, apartment rentals. While for some purposes it would be preferable to allocate these enterprises to another sector, this is not generally possible. Usually the fact that these businesses are not incorporated means their financial records are merged with those of the household. In effect, the assets and liabilities of the business are also those of the household and vice versa.

Accordingly the household sector includes not just households, but also unincorporated enterprises. The SNA 2008 standard identifies a particular kind of unincorporated business that acts, to all intents and purposes, as if it were incorporated. These businesses are termed **quasi-corporations** and must each (i) have sufficient information to compile a complete set of financial accounts, (ii) operate like a separate corporation and (iii) have a *de facto* relationship to its owner(s) similar to that of the relationship between a corporation and its shareholder(s). Examples of such enterprises include legal, accounting and architectural partnerships which often have legal status that provides a form of limited liability. Unincorporated enterprises owned by non-resident institutional units are also deemed to be quasi-corporations if they engage in significant production activity within Canada over a long (more than one year) or indefinite period of time. The SNA 2008 standard recommends that quasi-corporations be allocated to the non-financial or financial corporations sector, rather than the household sector, but to date that has not been feasible in Canada.

### 3.3.5 Non-profit institutions serving households

Non-profit institutions (NPIs) are legal entities that have been created to produce services or more rarely, goods, and whose status does not permit them to earn profit for the gain of the units that control or finance them. They may charge an economically significant price for their services, in which case they are called market NPIs, or they may provide their services free or at economically non-significant prices, in which case they are called non-market NPIs. Such organizations may make a profit, but they cannot distribute that profit to their owners.

Some NPIs are allocated to the non-financial and financial business sectors, such as Chambers of Commerce, trade associations, business lobby groups and the like. The subscriptions or fees paid by member businesses to these NPIs typically cover the costs of the services they provide back to those same businesses, so they are classified as market NPIs serving enterprises. Other NPIs are controlled and financed to a large extent by governments, such as some schools, colleges, universities, and hospitals, and these generally non-market NPIs are classified to the government sector.

There remain a large number of NPIs that provide mostly non-market services to households, such as professional associations, trade unions, political parties, churches, and cultural, recreational and sports clubs. In Canada's national accounts this group of NPIs has been broken out as a sector on its own, referred to as the **non-profit institutions serving households (NPISH) sector**. NPISH units provide services to households either free or at economically non-significant prices and these services are mostly considered part of final consumption expenditure. Also included in the NPISH sector are charities, such as the Red Cross, that are created for philanthropic purposes rather than to serve the interests of the members controlling the units. These units provide non-market goods and services to Canadian households in need and to non-residents.

### 3.3.6 Rest of the world

“Rest of the world” is a catch-all sector comprised of all the institutional units residing outside the boundaries of the domestic economy that transact with or have other economic links with institutional units residing within the territory of the economy. It is also known as the “non-resident sector”.

The financial and non-financial transactions that occur between Canadian residents and non-residents are portrayed in great detail in the balance of international payments and the international investment position. These parts of the macroeconomic accounts, which follow closely the international standard set out in the *Balance of Payments and International Investment Position Manual*, are explained in chapter 8.

The process by which individual institutional units are assigned to sectors is pictured in Figure 3.3. This process is described in the sections that follow immediately below.

### 3.3.7 Sectors versus statistical units

Institutional units are not to be confused with **statistical units**. The latter are units of observation or measurement for which data are collected or derived via surveys, administrative data or other sources. Sometimes an institutional unit definition equates quite closely to that of a statistical unit. In other instances, however, there may be no such correspondence.

In business surveys, the principal statistical units are **enterprises, companies, establishments** and **locations**.

The **enterprise** lies at the top of the business hierarchy and is associated with a complete set of financial statements. The enterprise, as a statistical unit, is defined as the organizational unit of a business that directs and controls the allocation of resources relating to its domestic operations, and for which consolidated financial and balance sheet accounts are maintained from which international transactions, an international investment position and a consolidated financial position for the unit can be derived. It corresponds to the non-financial or financial corporation institutional unit as defined for the CSMA.

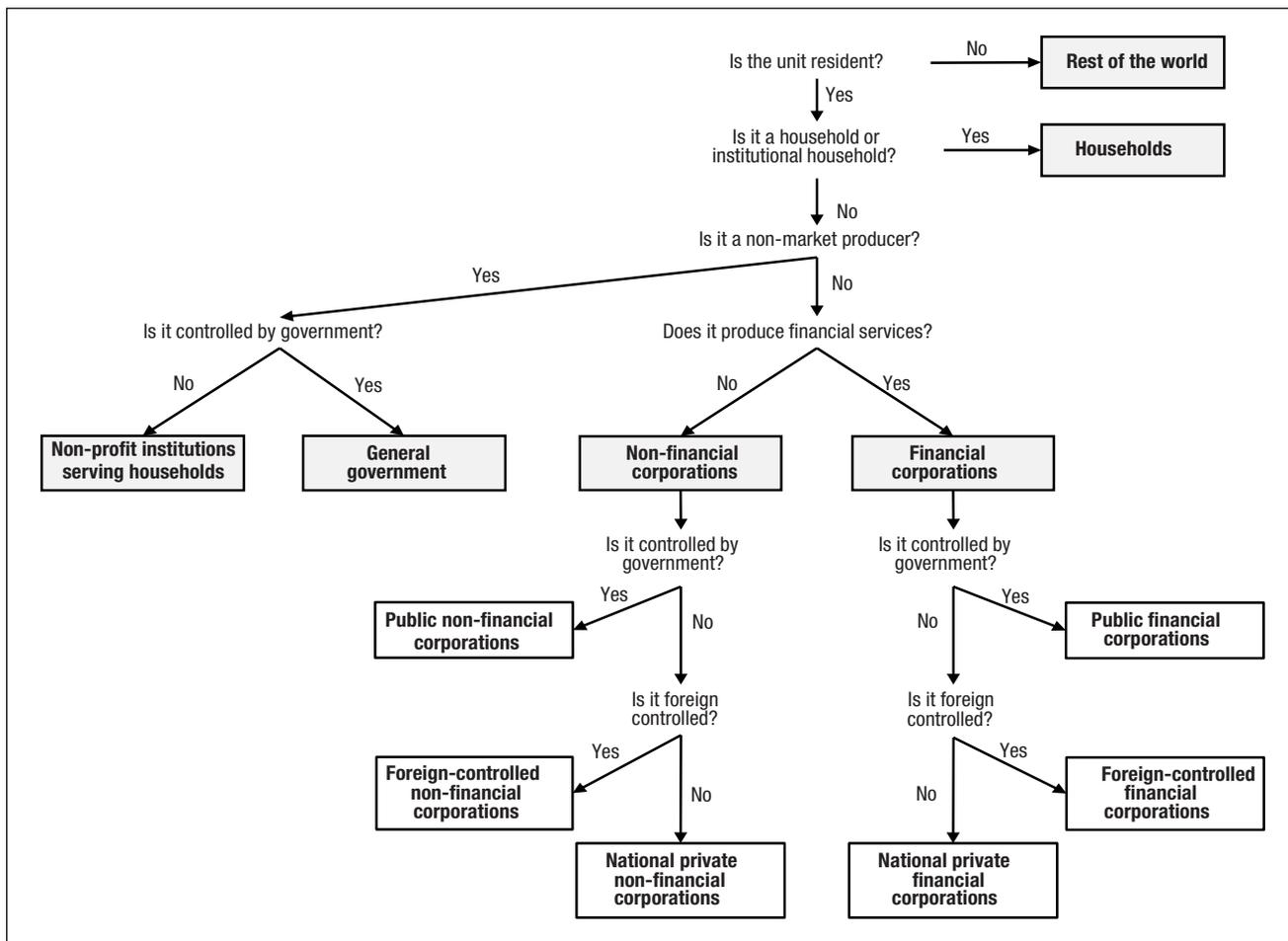
The **company** is the level at which operating profit can be measured. The company, as a statistical unit, is defined as the organizational unit for which income and expenditure accounts and balance sheets are maintained from which operating profit and the rate of return on capital can be derived. An enterprise consists of one or more companies.

The **establishment** is the level at which the accounting data required to measure production are available (principal inputs, revenues, salaries and wages). The establishment, as a statistical unit, is defined as the most homogeneous unit of production for which the business maintains accounting records from which it is possible to assemble all the data elements required to compile the full structure of the gross value of production (total sales or shipments, and inventories), the cost of materials and services, and labour and capital used in production. A company consists of one or more establishments.

Finally, the **location**, at the bottom of the hierarchy, requires only the number of employees for delineation. The location, as a statistical unit, is defined as a producing unit at a single geographical location at which or from which economic activity is conducted and for which, at a minimum, employment data are available. An establishment consists of one or more locations.

A variety of statistical units are also defined for social surveys, including the census family, the dwelling, the economic family, the employed person, the household, the immigrant and the person among others. Of these, the household corresponds fairly closely to the household institutional unit in the CSMA but the others have no corresponding institutional unit.

**Figure 3.3**  
**Process for assigning institutional units to sectors<sup>24</sup>**



Source : System of National Accounts 2008.

### 3.4 Classifications

The various classification systems of the national accounts can be considered the skeleton of the system. By collapsing the enormous detail that makes up the economy, involving millions of households, businesses, products and financial instrument types, into a relatively small number of categories these classifications greatly simplify the system, permitting its key characteristics to be seen.

### 3.4.1 Industry classification

It is an enormous challenge to deal with the great complexity of Canada's national economy. At the end of 2013, Statistics Canada reported there were an estimated 2,685,366 production locations in the country.<sup>25</sup> The vast majority of these locations were businesses, although some of them were government establishments. That is a very big number for a nation like Canada, with just over 35 million residents. Ontario had 990,182 of these locations while at the other end of the size spectrum, Nunavut had just 892. Only 1,200,357 of these locations had employees and the rest were single-person, partnership or family businesses. Of those with employees, 23,146 locations had more than 100 employees each and the remaining 1,177,211 had fewer—in most cases a lot fewer.

Canada's businesses are engaged in a great variety of production activities and they are the focus of much, though not all of the national accounts. The way the national accounts copes with this complexity is by using a classification system. The North American Industry Classification System (NAICS) takes the 2,685,366 production locations just referred to and sorts them into 922 categories, or classes, based on the main kind of production process each business engages in. These classes are further aggregated into 323 industry groups and 20 highest-level industry aggregates.<sup>26</sup> Statistics are then compiled by combining information from all of the businesses within each of these classes.

Table 3.5 shows the distribution of Canadian production locations by NAICS industry.

**Table 3.5**  
**Canadian production locations, by industry, December 2013**

Industry	Number of locations
Agriculture, forestry, fishing, hunting	183,563
Mining, quarrying, oil and gas extraction	22,453
Utilities	3,032
Construction	312,346
Manufacturing	85,366
Wholesale trade	103,751
Retail trade	229,810
Transportation and warehousing	150,834
Information and culture industries	39,903
Finance and insurance	146,726
Real estate, rental, leasing	296,000
Professional, scientific, technical services	359,887
Management of companies and enterprises	86,341
Administrative and support, waste management and remediation services	116,982
Education services	26,246
Health care and social assistance	154,651
Arts, entertainment and recreation	43,339
Accommodation and food services	108,018
Other services except public administration	207,630
Public administration	8,488
Total all industries	2,685,366

Source: Statistics Canada

How does Statistics Canada keep track of all these businesses and how does it know what industry class each should be assigned to? The process is straightforward and involves the use of information collected by the Canada Revenue Agency (CRA) combined with Statistics Canada's own surveys. Whenever a new business is formed, it must open a tax account with CRA and when the business does so, Statistics Canada is notified. The CRA application form for new businesses requires a brief description of the business activities. Sometimes this description alone is sufficient for Statistics Canada to assign an industrial classification code to the business, and in cases when the description is not sufficiently detailed Statistics Canada follows up with an inquiry of its own. For the largest and most complex businesses (only 2,731 have more than 500 employees), which may consist of multiple establishments engaged in different production activities, Statistics Canada sends classification experts to visit the companies periodically, to

collect up-to-date information about their structure and to assign classification codes to each establishment within the structure.

A database, known as the Business Register, is maintained including records for all of the almost 3 million businesses. As time goes by, the businesses file tax records with CRA and information from these records is used by Statistics Canada to gauge the size of each business, in terms of revenue and number of employees. When a new business is formed, it is added to the database and when an existing business ceases operations, it is recorded as inactive. When a large and complex business changes its organization, the new structure is recorded. In short, the Business Register provides an up-to-date portrait of Canada's business population.

The Business Register is Statistics Canada's link between the industry aggregates published in the national accounts and the individual businesses comprising those aggregates. When Statistics Canada conducts a survey of businesses in a particular industry, manufacturing or accommodation and food services for example, it draws a sample of active businesses from the Business Register for that purpose. Similarly, when incorporated businesses file their annual corporate income tax forms, the information from these forms is aggregated by industry using the NAICS codes in the Business Register, to provide estimates of revenues, expenses, operating profits, financial assets and liabilities, and other economic variables for use in compiling the national accounts.

For purposes of aggregations and comparisons across countries, the United Nations maintains a classification similar to, but less detailed than NAICS referred to as the International Standard Industrial Classification of All Economic Activities (ISIC). National accounts statistics compiled in Canada according to NAICS are **concorded**<sup>27</sup> to ISIC when they are submitted to the international organizations.

As is explained in chapter 4 on the production and generation of income accounts, Statistics Canada uses a special NAICS aggregation, called the supply and use industrial classification or aggregation, with 235 industry classes for purposes of the production accounts.<sup>28</sup>

### 3.4.2 Product classification

As just discussed, the structure of the Canadian business sector is complex when viewed by size, by geography and by type of business, but the Business Register makes that complexity manageable. The products produced by those businesses provide another dimension of complexity and that dimension too is addressed by means of a classification system, called the North American Product Classification System (NAPCS). Unfortunately, though, there is no comprehensive product register analogous to the Business Register. Developing and maintaining such a register would be an enormous task because the number of specific goods and services offered in the market is so large and new products keep appearing in the marketplace at a rapid pace.

A casual look in the windows of a few retailers in any Canadian shopping mall quickly reveals the enormous variety of goods and services that are available to consumers. In addition to those products, Canadian businesses and governments, and non-residents purchasing Canadian exported goods, also buy a wide variety of raw materials and other intermediate products as inputs to their production processes, as well as capital goods. Taken all together, there are many millions of different products and brands. To simplify and facilitate analysis of this enormous variety of products, they are grouped into 2,694 categories in the NAPCS classification.

In the national accounts, output is portrayed in four dimensions: time, province or territory, industry and product class. This four-dimensional matrix of information provides an enormously detailed picture of Canadian output, as is discussed in chapter 4. Statistics Canada uses a special NAPCS aggregation, called the supply and use product classification or aggregation, with 473 product classes for purposes of the production accounts.

### 3.4.3 Financial instruments classification

The financial flow and balance sheet accounts are explained in chapter 6. These accounts show how savings are channelled from savers to borrowers through the financial intermediation system. Central to these accounts is the classification of financial instruments, which is shown in Table 3.6 below. This classification is explained more fully in chapter 6.

Essentially, borrowing and lending instruments are summarized in seven broad categories: official international reserves, currency and deposits, debt securities, loans, equity and investment funds, life insurance and pensions, and other accounts receivable.

**Table 3.6**  
**Financial instrument categories**

Category number	Category name
1	Official international reserves
2	Total currency and deposits
3	Canadian currency and deposits
4	Foreign currency and deposits
5	Debt securities
6	Canadian short-term paper
7	Government of Canada short-term paper
8	Other short-term paper
9	Foreign investments: Short-term paper
10	Canadian bonds and debentures
11	Savings bonds
12	Government of Canada bonds
13	Provincial and territorial government bonds
14	Local government bonds
15	Other Canadian bonds
16	Foreign investments: Bonds
17	Loans
18	Consumer credit
19	Non-mortgage loans
20	Mortgages
21	Corporate claims: Loans and advances
22	Government claims: Loans and advances
23	Equity and investment funds
24	Listed shares
25	Unlisted shares
26	Corporate claims: Equity
27	Mutual fund shares (units)
28	Government claims: Equity
29	Foreign investments: Equity
30	Life insurance and pensions
31	Other accounts receivable
32	Trade receivables
33	Other receivables

Source: Statistics Canada.

### 3.4.4 Functional expenditure classifications

Expenditures can be classified in several different ways, depending on the objective. For example, expenditures on goods could be classified according to the principal material used in their manufacture (copper, steel, plastics, wood, etc.). Or if the classification is to be used in international trade, it might be based on the tariffs, quotas and other trade limitations that apply. In the national accounts, an important basis for classification of expenditures is that of **function** or **purpose**. SNA 2008 endorses four United-Nations-developed classification systems for use in the functional analysis of expenditures by sector.<sup>29</sup>

Functional breakdowns of expenditures are vital for the calculation of actual individual consumption, as discussed in section 3.2.3.3 above. They also have great analytical value in a variety of applications.

#### 3.4.4.1 Classification of Individual Consumption According to Purpose (COICOP)

The Classification of Individual Consumption According to Purpose (COICOP) is an aggregation of expenditures aimed at meeting household needs. The first 12 categories in the classification itemize individual consumption expenditures by households, and these classes correspond closely to those used in Canada's national and provincial accounts to articulate household final consumption expenditure. The 13th category refers to individual consumption expenditure of non-profit institutions serving households and the 14th refers to individual consumption expenditure of general government.

COICOP is presented in Table 3.7 below.

**Table 3.7**  
**Classification of Individual Consumption According to Purpose (COICOP)**

Classification code	Classification name
01-12	Individual consumption expenditure of households
01	Food and non-alcoholic beverages
01.1	Food
01.2	Non-alcoholic beverages
02	Alcoholic beverages, tobacco and narcotics
02.1	Alcoholic beverages
02.2	Tobacco
02.3	Narcotics
03	Clothing and footwear
03.1	Clothing
03.2	Footwear
04	Housing, water, electricity, gas and other fuels
04.1	Actual rentals for housing
04.2	Imputed rentals for housing
04.3	Maintenance and repair of the dwelling
04.4	Water supply and miscellaneous services relating to the dwelling
04.5	Electricity, gas and other fuels
05	Furnishings, household equipment and routine household maintenance
05.1	Furniture and furnishings, carpets and other floor coverings
05.2	Household textiles
05.3	Household appliances
05.4	Glassware, tableware and household utensils
05.5	Tools and equipment for house and garden

**Table 3.7**  
**Classification of Individual Consumption According to Purpose (COICOP)**

<b>Classification code</b>	<b>Classification name</b>
05.6	Goods and services for routine household maintenance
06	Health
06.1	Medical products, appliances and equipment
06.2	Outpatient services
06.3	Hospital services
07	Transport
07.1	Purchase of vehicles
07.2	Operation of personal transport equipment
07.3	Transport services
08	Communication
08.1	Postal services
08.2	Telephone and telefax equipment
08.3	Telephone and telefax services
09	Recreation and culture
09.1	Audio-visual, photographic and information processing equipment
09.2	Other major durables for recreation and culture
09.3	Other recreational items and equipment, gardens and pets
09.4	Recreational and cultural services
09.5	Newspapers, books and stationery
09.6	Package holidays
10	Education
10.1	Pre-primary and primary education
10.2	Secondary education
10.3	Post-secondary non-tertiary education
10.4	Tertiary education
10.5	Education not definable by level
11	Restaurants and hotels
11.1	Catering services
11.2	Accommodation services
12	Miscellaneous goods and services
12.1	Personal care
12.2	Prostitution
12.3	Personal effects not elsewhere classified
12.4	Social protection
12.5	Insurance
12.6	Financial services not elsewhere classified
12.7	Other services not elsewhere classified
13	Individual consumption expenditure of non-profit institutions serving households
13.1	Housing

**Table 3.7**  
**Classification of Individual Consumption According to Purpose (COICOP)**

Classification code	Classification name
13.2	Health
13.3	Recreation and culture
13.4	Education
13.5	Social protection
13.6	Other services
14	Individual consumption expenditure of general government
14.1	Housing
14.2	Health
14.3	Recreation and culture
14.4	Education
14.5	Social protection

**Source:** United Nations Statistical Commission.

#### 3.4.4.2 Classification of the Purposes of Non-Profit Institutions Serving Households (COPNI)

The Classification of the Purposes of Non-Profit Institutions Serving Households (COPNI) casts light on how NPISH institutional units allocate their expenditures. It also permits the isolation of NPISH expenditures that benefit individual households, for use in the calculation of actual expenditures. These classes of government expenditures are recorded in division 13 of COICOP as well as in COPNI. In Canada, no breakdown of NPISH expenditures on the basis of COPNI is presently available.

**Table 3.8**  
**Classification of the Purposes of Non-profit Institutions Serving Households (COPNI)**

Classification code	Classification name
01	Housing
01.0	Housing
02	Health
02.1	Medical products, appliances and equipment
02.2	Outpatient services
02.3	Hospital services
02.4	Public health services
02.5	Research and development health
02.6	Other health services
03	Recreation and culture
03.1	Recreational and sporting services
03.2	Cultural services
04	Education
04.1	Pre-primary and primary education
04.2	Secondary education
04.3	Post-secondary non-tertiary education
04.4	Tertiary education
04.5	Education not definable by level
04.6	Research and development education
04.7	Other educational services
05	Social protection
05.1	Social protection services
05.2	Research and development social protection
06	Religion
06.0	Religion
07	Political parties, labour and professional organizations
07.1	Services of political parties
07.2	Services of labour organizations
07.3	Services of professional organizations
08	Environmental protection
08.1	Environmental protection services
08.2	Research and development environmental protection
09	Services not elsewhere classified
09.1	Services not elsewhere classified
09.2	Research and development services not elsewhere classified

Source: United Nations Statistical Commission.

### 3.4.4.3 Classification of the Functions of Government (COFOG)

The Classification of Functions of Government (COFOG) facilitates the analysis of trends in government spending for particular purposes through time. It also permits the isolation of government expenditures that benefit individual households, for use in the calculation of actual individual consumption. These classes of government expenditures are recorded in division 14 of COICOP as well as in COFOG. Canadian government statistics broken down on this basis are available and is discussed in chapter 9.

**Table 3.9**  
**Classification of the Functions of Government (COFOG)**

Classification code	Classification name
01	General public services
01.1	Executive and legislative organs, financial and fiscal affairs, external affairs
01.2	Foreign economic aid
01.3	General services
01.4	Basic research
01.5	Research and development general public services
01.6	General public services not elsewhere classified
01.7	Public debt transactions
01.8	Transfers of a general character between different levels of government
02	Defence
02.1	Military defence
02.2	Civil defence
02.3	Foreign military aid
02.4	Research and development defence
02.5	Defence not elsewhere classified
03	Public order and safety
03.1	Police services
03.2	Fire-protection services
03.3	Law courts
03.4	Prisons
03.5	Research and development public order and safety
03.6	Public order and safety not elsewhere classified
04	Economic affairs
04.1	General economic, commercial and labour affairs
04.2	Agriculture, forestry, fishing and hunting
04.3	Fuel and energy
04.4	Mining, manufacturing and construction
04.5	Transport
04.6	Communication
04.7	Other industries
04.8	Research and development economic affairs
04.9	Economic affairs not elsewhere classified
05	Environmental protection

**Table 3.9**  
**Classification of the Functions of Government (COFOG)**

<b>Classification code</b>	<b>Classification name</b>
05.1	Waste management
05.2	Waste water management
05.3	Pollution abatement
05.4	Protection of biodiversity and landscape
05.5	Research and development environmental protection
05.6	Environmental protection not elsewhere classified
06	Housing and community amenities
06.1	Housing development
06.2	Community development
06.3	Water supply
06.4	Street lighting
06.5	Research and development housing and community amenities
06.6	Housing and community amenities not elsewhere classified
07	Health
07.1	Medical products, appliances and equipment
07.2	Outpatient services
07.3	Hospital services
07.4	Public health services
07.5	Research and development health
07.6	Health not elsewhere classified
08	Recreation, culture and religion
08.1	Recreational and sporting services
08.2	Cultural services
08.3	Broadcasting and publishing services
08.4	Religious and other community services
08.5	Research and development recreation, culture and religion
08.6	Recreation, culture and religion not elsewhere classified
09	Education
09.1	Pre-primary and primary education
09.2	Secondary education
09.3	Post-secondary non-tertiary education
09.4	Tertiary education
09.5	Education not definable by level
09.6	Subsidiary services to education
09.7	Research and development education
09.8	Education not elsewhere classified
10	Social protection
10.1	Sickness and disability
10.2	Old age

**Table 3.9**  
**Classification of the Functions of Government (COFOG)**

Classification code	Classification name
10.3	Survivors
10.4	Family and children
10.5	Unemployment
10.6	Housing
10.7	Social exclusion not elsewhere classified
10.8	Research and development social protection
10.9	Social protection not elsewhere classified

**Source:** United Nations Statistical Commission.

#### 3.4.4.4 Classification of Outlays of Producers by Purpose (COPP)

The Classification of Outlays of Producers by Purpose (COPP), shown in Table 3.10, provides a structured breakdown of expenditures by businesses. As can be seen, it offers analytical insight on the ways in which businesses allocate their current and capital expenditures. Statistics classified on this basis can be particularly useful in growth studies and environmental impact assessments, for example. Unfortunately this kind of information is not readily available in business accounting records, or in other existing data sources, and its collection through surveys would be quite burdensome, so the Canadian national accounts do not contain this kind of information at the present time.

**Table 3.10**  
**Classification of outlays of producers by purpose (COPP)**

Classification code	Classification name
01	Outlays on infrastructure
01.1	Outlays on road and land construction and improvement
01.2	Outlays on engineering and related technological work
01.3	Outlays on information management
02	Outlays on research and development
02.1	Outlays on research and experimental development on natural sciences and engineering
02.2	Outlays on research and experimental development on social sciences and humanities
03	Outlays on environmental protection
03.1	Outlays on protection of ambient air and climate
03.2	Outlays on waste water management
03.3	Outlays on waste management
03.4	Outlays on protection of soil and groundwater
03.5	Outlays on noise and vibration abatement
03.6	Outlays on protection of biodiversity and landscape
03.7	Outlays on environmental protection not elsewhere classified
04	Outlays on marketing
04.1	Outlays on direct sales efforts
04.2	Outlays on advertising
04.3	Outlays on marketing not elsewhere classified
05	Outlays on human resource development
05.1	Outlays on education and training
05.2	Outlays on health
05.3	Outlays on social services
06	Outlays on current production programs, administration and management
06.1	Outlays on current production programmes
06.2	Outlays on external transportation
06.3	Outlays on safety and security
06.4	Outlays on management and administration

**Source:** United Nations Statistical Commission.

### 3.4.5 Other classifications

The Canadian SNA makes use of a number of additional classifications where needed. For example, SNA 2008 prescribes classifications of transactions in products, transactions in non-produced assets and distributive transactions.<sup>30</sup> These come up repeatedly in the chapters ahead. As another example, in the environment satellite accounts, special geographical classifications for watersheds and ecozones are employed. These other classification systems are introduced and explained as they arise in the chapters to come.

## 3.5 Accounting rules

Accounting involves the measurement, processing and communication of financial information about the economic activities of an institutional unit. Modern accounting practice is central to the smooth functioning of the market economy as it provides vital information to managers, investors, creditors, regulators—and national accounts

statisticians. The comparability of the accounting information across institutional units is assured by accounting standards (referred to as “Generally Accepted Accounting Principles”, or GAAP)<sup>31</sup> and the reliability of the information is guaranteed by financial auditing.

From the perspective of an institutional unit, modern accounting takes the form of double-entry bookkeeping. In this system, all accounting entries must ensure the continuing validity of the identity:  $\text{Assets} = \text{Liabilities} + \text{Equity}$ . Thus, if a particular transaction leads to an increase in assets, there must be a corresponding increase in liabilities or equity, or possibly an offsetting decrease in assets, so the identity continues to hold. Put another way, each transaction recorded in the financial books must include a credit and an offsetting debit, the credit referring to the source of funds, or resource, or inflow, and the debit to the use of funds, or outflow. So, for example, if firm A drew funds from its bank account to purchase supplies from firm B, the accounts of firm A would show a credit for the funds drawn out of the bank account and a debit for the increase in inventories due to the purchased supplies.

This system is called double-entry bookkeeping for the simple reason that each transaction is recorded twice. In national accounting, however, the situation is different because the statistician has information about both sides of the transaction. Thus a single transaction between two parties gives rise to four entries. In the example just cited, the statistician would have information about the transaction from firm B’s perspective as well as firm A’s. This means the national accounts can operate with a system of quadruple-entry bookkeeping, leading to consistent recording of one transaction by both parties.

The macroeconomic accounts are best thought of as an aggregation of the individual current and capital accounts of the various institutional units in the economy, with adjustments made where necessary to ensure the accounts being aggregated are comprehensive and consistent in terms of value measurement, time of recording and classification. Each unit, whether a business, a government, a household or a non-profit organization, does its own double-entry bookkeeping and the macroeconomic accounts bring all these accounts together in a coherent manner to paint a picture of the macro economy.

The accounting can be done over any period of time. In Canada, a few accounts are produced monthly, others quarterly and still others annually. The most detailed economic picture emerges in the annual accounts. For this reason, the provincial economic accounts and the supply and use accounts are available only at an annual frequency. This reflects the fact that the most detailed and reliable data sources used in compiling the accounts are typically annual—notably government public accounts and business annual regulatory reports and tax filings.

### 3.5.1 Valuation of transactions

As noted, when purchases and sales are recorded in the accounts of two different institutional units it is important for purposes of the national accounts that they have the same basis of valuation. That valuation, generally speaking, is at **market prices**. The prices must be determined at arm’s length, with normal commercial considerations being the only significant driving factor. When this principle is violated, as it might be for example when two branches of the same enterprise engage in a transaction,<sup>32</sup> adjustments are needed. Market prices should include the impact of any taxes, subsidies, rebates, discounts or other such add-ons that may apply.

A problem can arise when valuing barter transactions, for example when product X is traded for product Y. Since no money changes hands, there is no obvious value to assign to the transaction. Each unit may place a different value on the item bartered. Since the accounting rule of the SNA requires that a single value to be recorded for both parties, a simple average of different valuations may be taken as the value of the transaction.

Another problem arises when products are not sold in the marketplace at economically significant prices. This is true for much of government sector output, for example. It is also true for business production for own account. Government sector output is generally valued at cost, since there are often no good market equivalents to use in estimating market prices. Business own-account production is valued at average market prices where possible and at cost where market prices cannot be estimated. Market prices are sometimes estimated by calculating the costs and adding an average markup for net operating surplus.

When it comes to the valuation of physical assets, business accounting rules often use the ‘book value’ or ‘historical cost’ approach. Moreover, for tax reasons those asset values are often depreciated in a way that differs from what would be obtained if normal estimates of wear and tear, obsolescence, etc. were calculated. National accounting requires a net present market valuation method for assets and a consumption of fixed capital approach for

depreciation. This means that national accounts estimates of the capital stock cannot be calculated by simply adding up the estimates of depreciated capital found in corporate accounting statements. Instead, as described later in this volume, the national accounts use a ‘perpetual inventory’ method to estimate depreciation and thereby the changing market value of corporate assets. A similar approach is applied when calculating government, household and NPISH fixed asset values and the gradual consumption of those fixed assets.

As discussed more fully in chapter 4, the production accounts make an important distinction among three bases of valuation:<sup>33</sup>

- **Basic prices** are defined as “the amount receivable by the producer from the purchaser for a unit of good or service produced as output minus any tax payable and plus any subsidy receivable on the product as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.” This is the basis of valuation for gross output in the supply and use accounts and it records the value of the product when it is produced.
- **Producer prices** are defined as “the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any value added tax (VAT), or similar deductible tax, invoiced to the purchaser. It also excludes any transport charges invoiced separately by the producer.” This basis of valuation is used when it is not possible to calculate basic prices.
- **Purchaser prices** are defined as the amount payable by the purchaser, excluding any deductible VAT or similar deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser. The purchaser’s price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.” This is the basis of valuation for a product used for intermediate consumption or for final consumption by the purchaser.

### 3.5.2 Timing of transactions

A market transaction is often spread out over time. It may begin with the signing of a contract, after which a delivery may occur following the passage of some time. An invoice may be provided to the seller when the contract is signed or when the products are delivered and the purchaser may delay payment for some period of time. In such a situation, which is by no means uncommon, to what accounting period should the transaction be assigned?

There are many possible answers to this question. Transactions could be timed based on when the associated cash flows, or when it is due, for example. However, the core principle for national accounting is that transactions should be timed according to the **accrual** concept.

SNA 2008 defines this concept as follows:

“Accrual accounting records flows at the time economic value is created, transformed, exchanged, transferred or extinguished. This means that flows that imply a change of ownership are entered when the change occurs, services are recorded when provided, output at the time products are created and intermediate consumption when materials and supplies are being used.”<sup>34</sup>

Most transactions are recorded on an accruals basis from the very start. In some circumstances this is not so, however, and when such cases are significant they require national accounts timing adjustments.

For goods, the transaction is generally deemed to occur when the economic ownership changes hands. For services, it occurs when they are delivered. For incomes such as wages and salaries, interest or rent the transaction takes place in the accounting period when the amounts payable are accumulated, whether or not money flows actually occur in that accounting period. Dividends are recorded in the accounting period when the associated shares are quoted as ‘ex dividend’. Transactions in financial assets are recorded when the change of ownership occurs.

Production is recorded in the accounts as additions to work-in-progress inventories<sup>35</sup> accumulate. When production is completed, the work-in-progress inventories accumulated up to that point are transformed into stocks of finished product inventories. When companies record their inventories using last-in-first-out (LIFO) or first-in-first-out (FIFO) accounting conventions, adjustments are required to put the values on a national accounts basis. This matter, and the related one involving the timing of consumption of fixed capital assets, are discussed further in chapters 5 and 7.

### 3.5.3 Transactions with the rest of the world

International transactions in goods and services are recorded at border values, during the accounting period when the products cross the border. More specifically, exports and imports of goods are valued **free-on-board** (FOB), which is to say at the exporter's customs frontier. Putting this principle into practise is not always straightforward, for a number of reasons. This topic is discussed further in chapters 4, 5 and 8.

### 3.6 The sequence of accounts in SNA 2008

At the total economy level, the essence of the national accounts is found in four tables: one recording gross domestic product at market prices based on the final expenditures approach, another showing GDP at market prices based on the primary input expenses approach, a third displaying GDP at basic prices based on the gross value added by industry approach and a final one recording the national balance sheet account. These four tables are fully explained and discussed in chapters 4, 5 and 6. They represent a consolidation of a more detailed set of tables recording income, expenditure and transfer flows among the different institutional sectors of the economy. These more detailed tables are known in SNA 2008 as the **sequence of accounts**.

The sequence of accounts extends from the production accounts through to the balance sheet accounts. SNA 2008 presents the sequence as 14 distinct accounts, each of which can be broken out separately for individual institutional units, the 6 high-level institutional sectors (households, non-profit institutions serving households, non-financial corporations, financial corporations, general government and the non-resident sector) and the total economy.<sup>36</sup> Each account closes with a balancing item that becomes the opening item in the next account. In this way, the accounts provide a cascading representation of the overall economy, broken out by institutional sector, showing the interrelationships of production, the generation of income, the allocation and redistribution of income, the final expenditure of income and the resulting saving, investment in capital assets, borrowing and lending, financial portfolio adjustments and ultimately changes in balance sheets.

The sequence of accounts can be presented as a series of high-level summary ledger sheets or 'T-accounts'.<sup>37</sup> 'Resources' are shown, by convention, on the right-hand side and 'uses' on the left-hand side. In the current accounts, 'resources' are transactions that add to the amount of economic value of an institutional unit or sector. For example, income tax receipts of a government unit are a 'resource' for that unit. 'Uses', in contrast, are transactions that subtract from the amount of economic value of a unit. Thus, income tax payments by a household are a 'use' for that unit. In the ledger sheets for the accumulation accounts, 'resources' refer to changes in liabilities and net worth, while 'uses' refer to changes in assets.<sup>38</sup>

In this section the 14 accounts are each described. In chapter 5 it is explained how these accounts are presented in the Canadian context, not just at the total economy level but also by institutional sector, and not just conceptually but also empirically. Text box 3.1 provides a list of the 14 accounts with their corresponding balancing items.

**Text box 3.1**  
**Sequence of accounts summary**

<b>Account</b>	<b>Balancing item</b>
<b>Current accounts</b>	
Production account	Value added
Generation of income account	Operating surplus/Mixed income
Allocation of primary income account	Balance of primary income
Entrepreneurial income account	Entrepreneurial income
Allocation of other primary income account	Balance of primary income
Secondary distribution of income account	Disposable income
Use of disposable income account	Saving
Redistribution of income in kind account	Adjusted disposable income
Use of adjusted disposable income account	Saving
<b>Accumulation accounts</b>	
Capital account	Net borrowing or lending
Financial account	Net borrowing or lending
Other changes in the volume of assets account	
Revaluation account	
<b>Balance sheet account</b>	<b>Net worth</b>

### 3.6.1 Production account

Chapter 4 presents the **production account**, the first in the sequence of accounts, in great detail. It is presented there with an establishment/industry breakdown, but it can also be presented with a breakdown by institutional sector, although Canada does not currently release production account estimates on that basis.<sup>39</sup> The account's structure is reproduced in Table 3.11, without any numbers. The balancing item is gross value added. Net value added could also be shown, as the difference between gross value added and consumption of fixed capital, but this element is omitted for brevity. This abbreviated presentation is used for greater simplicity in the remainder of this section to explain the structure of the sequence of accounts. Keep in mind that all of the 'gross' balancing items recorded in these accounts—gross value added, gross saving, gross fixed capital formation—can also be reported on a 'net' basis by subtracting consumption of fixed capital.

**Table 3.11**  
**Production account**

<b>Uses</b>	<b>Resources</b>
	Output
Intermediate consumption	
Gross value added	

**Source:** System of National Accounts 2008.

In the production account, output is the only 'resource' and intermediate consumption is a 'use'. The balancing item gross value added, the difference between output and intermediate consumption, appears as the other 'use' in the account.

This account can be displayed separately for all resident institutional units and sectors. The non-resident sector, by SNA 2008 definition, produces no output. Most output is produced in the non-financial and financial corporations sectors. In the case of the household sector, gross output is largely the production of unincorporated businesses. In the NPISH and government sectors output is typically distributed without charge or at economically insignificant prices, so it is measured at cost. The aggregate of gross value added over all resident sectors (or over all industries) is **gross domestic product** (see Text box 3.2).

### 3.6.2 Generation of income account

The second account in the sequence is the **generation of income account**, shown in Table 3.12. This account is also discussed in chapter 4. It focuses on resident institutional sectors in their capacity as producers whose activities generate primary incomes. The account shows how the primary income resulting from participation in production processes is distributed, initially, among institutional units. In this context, ‘participation in production processes’ entails not just direct involvement by supplying labour or entrepreneurial effort, but also supplying owned assets that are needed for production.

The balancing item on the ‘uses’ side of the production account, gross value added, is the opening item on the ‘resources’ side of the generation of income account. Opposite this ‘resource’ on the ‘uses’ side of the account are the various kinds of primary income that are discussed in chapter 4. The residual primary income share, gross operating surplus plus gross mixed income, is the account’s balancing item.

**Table 3.12**  
**Generation of income account**

Uses	Resources
	Gross value added
Compensation of employees	
Taxes on production and imports	
Less: Subsidies	
Gross operating surplus plus gross mixed income	

**Source:** System of National Accounts 2008.

SNA 2008 defines **primary incomes** as “incomes that accrue to institutional units as a consequence of their involvement in processes of production or [economic] ownership of assets that may be needed for purposes of production” (page 131).

It is important to recognize that the primary incomes recorded as ‘uses’ in this account are those **originating** in the institutional sector the account is describing. For example, in the generation of income account for the household sector, compensation of employees consists of the wages and salaries originating in the sector only, paid to employees by unincorporated businesses and paid to domestic staff (which are included in the sector), **not** the wages and salaries received by households from other sectors.<sup>40</sup>

For an individual business, it matters whether capital resources are owned or rented since for that business, rental of capital resources implies higher intermediate consumption offset by lower gross operating surplus or gross mixed income compared to the case in which capital resources are owned. For the total economy, however, gross operating surplus and gross mixed income are both invariant as to whether the capital resources used in production are owned or rented by a particular enterprise and if they are owned, whether they are financed out of own funds or out of borrowed funds.

Like the production account, the generation of income account can be displayed for all resident institutional units and sectors and it can also be compiled for establishments and industries.

**Text box 3.2****Major total-economy aggregates in the sequence of accounts**

**Gross and net domestic product (GDP and NDP)** – The aggregate of gross or net value added over all resident institutional units in the production account

**Gross and net national income (GNI and NNI)** – The aggregate of the balance of primary incomes over all resident institutional units in the allocation of primary income account

**National disposable income** – The aggregate of disposable income over all resident institutional units in the secondary distribution of income account

**Gross and net national saving** – The aggregate of saving over all resident institutional units in the use of adjusted disposable income account

**National wealth** – The aggregate of non-financial assets and net claims on the rest of the world over all resident institutional units in the balance sheet account

**3.6.3 Allocation of primary income account**

The **allocation of primary income account** focuses on institutional units in their capacity not as producers, but as **recipients** of primary incomes. It reveals where the types of income shown in the generation of income account are receivable. It also indicates the amounts of property income payable and receivable by sectors. The account is depicted in Table 3.13.

**Table 3.13****Allocation of primary income account**

Uses	Resources
	Gross operating surplus and gross mixed income
	Compensation of employees
	Taxes on production and imports
	Less: Subsidies
Property income	Property income
Gross balance of primary incomes or gross national income	

Source: System of National Accounts 2008.

In this account and the ones that follow, the listed ‘resources’ and ‘uses’ are not meant to apply necessarily or in the same way to each of the institutional sectors. Rather, some of the line items shown may apply to some sectors and others to other sectors. For example, the non-financial corporations sector records no compensation of employees income as receivable (a ‘resource’) in its allocation of primary income account (although it does show compensation of employees as a ‘use’ in its generation of income account). However income of that kind is shown as a ‘resource’ of the household sector in its allocation of primary income account.

Property income is “that part of primary incomes that accrues by lending or renting financial or natural resources, including land, to other units for use in production” (SNA 2008, page 131). It includes interest payments, distributed income of corporations (dividends and withdrawals of income of quasi-corporations), reinvested earnings of direct foreign investment,<sup>41</sup> property income attributed to insurance policy holders<sup>42</sup> and rent.

For example, a household might lend money to a non-financial corporation by purchasing its bonds. The interest paid on those bonds by the corporation to the household would be recorded as property income flows in the allocation of primary income accounts of households (a ‘resource’) and non-financial corporations (a ‘use’). Similarly if a household borrowed funds from a financial corporation in order to buy a home, the mortgage payments made by that household would also be recorded as property income flows, in this instance in the allocation of primary income accounts of households (a ‘use’) and financial corporations (a ‘resource’).

The production account and the generation of income account apply to resident institutional units and sectors only. There is no production or generation of primary income in the non-resident sector. However, the allocation of primary income account and the other accounts that follow apply to the non-resident sector as well as the other sectors. Non-resident institutional units can both pay and receive investment income to/from resident institutional units. Resident businesses might also pay compensation to non-resident employees who live in a foreign country while working in Canada, or in the reverse circumstance employees might reside in Canada while being employed by a non-resident institutional unit.<sup>43</sup>

Unlike the production account and the generation of income account, the allocation of primary income account cannot be compiled for establishments and industries. It can only be compiled for institutional units and sectors, and for the economy as a whole.<sup>44</sup> When compiled for a particular institutional unit or sector, the account's balancing item is the gross balance of primary incomes received by the unit or sector. When compiled for the total economy, the balancing item is **gross national income** (or **net national income** if consumption of fixed capital is deducted).

In other words, gross national income is the sum of the balances of primary incomes of resident institutional units. This can be compared with gross domestic product, which is output less intermediate consumption of resident institutional units. The difference between the two is the difference between the total primary incomes receivable by residents from non-residents and the total primary incomes payable by residents to non-residents. Gross national income is arguably a better measure of the standard of living of a country than gross domestic product because it gauges the income actually received by its residents after taking account of income flows to and from non-residents.

### 3.6.4 Entrepreneurial income account

The concept of 'profit' is central to the theory of the firm and the measurement of the health of the business sector. The gross and net operating surpluses are indicators of profit, as are the gross and net balances of primary incomes received by corporate institutional units. An additional, more refined measure of profit can also be obtained by partitioning the allocation of primary income accounts of the non-financial and financial corporations sectors into sub-accounts: the **entrepreneurial income account** and the allocation of other primary income account. The purpose is to identify entrepreneurial income, an additional balancing item which is useful for market producers as it is closer to the concept of current profit before tax that is familiar in business accounting.

Entrepreneurial income is measured **before** the payment of dividends, withdrawals of income from quasi-corporations and reinvested earnings. It shows the profit earned by the enterprise before it distributes any of that income to shareholders. The concept applies only to corporate institutional units, not to other kinds of institutional units and not to establishments.

Table 3.14 displays the entrepreneurial income account. The account's 'resources' include all of the sources of income received by a business—its gross operating surplus or gross mixed income plus its property income (interest, dividends and so on). Its 'uses' are the property income disbursements it is legally obligated to make (which exclude dividends and reinvested earnings on foreign direct investments), plus the balancing item, **gross entrepreneurial income**.

**Table 3.14**  
**Entrepreneurial income account**

Uses	Resources
	Gross operating surplus and gross mixed income
	Property income
	Interest
	Distributed income of corporations
	Reinvested earnings of foreign direct investment
	Investment income disbursements
	Rent
Property income	
Interest	
Investment income disbursements	
Rent	
Gross entrepreneurial income	

Source: System of National Accounts 2008.

Thus, gross entrepreneurial income is equal to gross operating surplus plus all the property income earned by the institutional unit minus all the property income contractually required to be paid out by the institutional unit.

### 3.6.5 Allocation of other primary income account

The **allocation of other primary income account** is the counterpart to the entrepreneurial income account (see Table 3.15). The two accounts together represent a decomposition of the allocation of primary income account for the non-financial and financial corporations sectors. The balancing item from the first of the two accounts, gross entrepreneurial income, is carried down as a 'resource' in the allocation of other primary income account. The balancing item for the latter account, gross balance of primary incomes or gross national income, is the same as the balancing item for the allocation of primary income account.

In other words, if one is tracing through the sequence of accounts one can go directly to the gross balance of primary incomes (or gross national income) from the generation of primary incomes account via the allocation of primary income account, or alternatively one can take a slightly more circuitous route via the entrepreneurial income account and the allocation of other primary income account. Either way, the destination is the same: the gross balance of primary incomes (or gross national income).

**Table 3.15**  
**Allocation of other primary income account**

Uses	Resources
	Gross entrepreneurial income
	Compensation of employees
	Taxes on production and imports
	Less: Subsidies
	Property income
	Interest
	Reinvested earnings of foreign direct investment
	Rent
Property income	
Interest	
Reinvested earnings of foreign direct investment	
Rent	
Gross balance of primary incomes or gross national income	

Source: System of National Accounts 2008.

### 3.6.6 Secondary distribution of income account

The next account in the sequence is the **secondary distribution of income account**, shown in Table 3.16. Starting from the gross balance of primary incomes ‘resource’, which is the balancing item of the allocation of primary income account, this account records current transfers received as additional ‘resources’ and current transfers paid as ‘uses’. The account’s balancing item is gross disposable income. This account can be compiled for all of the institutional units and sectors.

**Table 3.16**  
**Secondary distribution of income account**

Uses	Resources
	Gross balance of primary incomes
	Current taxes on income and wealth
	Net social contributions
	Social benefits other than social transfers in kind
	Other current transfers
Current taxes on income and wealth	
Net social contributions	
Social benefits other than social transfers in kind	
Other current transfers	
Gross disposable income or national disposable income	

Source: System of National Accounts 2008.

Whereas the receipts and payments recorded in the allocation of primary income account are all **required** current transactions, those in the secondary distribution of income account are **unrequired** transfers.<sup>45</sup> This is the fundamental difference between the two accounts.

Transfers can be in cash or in kind. Both types of transfer exist in Canada. Social transfers in cash include payments under the Old Age Security program or under provincial welfare programs, for example. Income taxes are another form of unrequited social cash transfer. Social transfers in kind include health, education and social housing, among others. They can include both non-market production of individual services by government and NPISH units and the purchase by government and NPISH units of market goods and services for transfer to households free or at prices that are not economically significant. The secondary distribution of income account refers only to current transfers in cash. Social transfers in kind appear later in the sequence of accounts, in the **redistribution of income in kind account**.

Current transfers are to be distinguished from capital transfers. The latter refer to cash or in-kind transfers intended to help an institutional unit acquire or dispose of a capital asset. The secondary distribution of income account includes only current transfers. Capital transfers appear later in the sequence of accounts as a line entry in the capital account.

As shown in Table 3.16, current transfers in cash are classified in four categories:

- current taxes on income and wealth;
- net social contributions;
- social benefits other than social transfers in kind; and
- other current transfers.

Current taxes on income and wealth (for example, personal income taxes) and net social contributions (for example, Employment Insurance contributions) generally constitute transfers from the non-government sectors to the government sector, whereas social benefits other than social transfers in kind (for example, Old Age Security benefits) and other current transfers (for example, cash assistance to victims of a natural disaster) generally are transfers from governments to the non-government sectors.

The balancing item in the secondary distribution of income account is gross disposable income in the case of an individual institutional unit or sector or **national disposable income** for the economy as a whole.

### 3.6.7 Use of disposable income account

The **use of disposable income account** (see Table 3.17) is the link between the current accounts and the accumulation accounts. Its balancing item, gross saving, is brought down to become the main 'resource' of the capital account.

There are two 'resources' in the use of disposable income account as it is presented in SNA 2008: gross disposable income, brought down from the balancing item in the secondary distribution of income account, and the adjustment for the change in pension entitlements which is explained later in this section. Its 'uses' are final consumption expenditure, the adjustment for changes in pension entitlements and gross saving, the account's balancing item. Final consumption has two main components, individual and collective consumption expenditure, and it is possible to provide far more product detail on both if desired. Gross saving can, in principle, be either positive or negative for a given institutional unit or sector.

**Table 3.17**  
**Use of disposable income account**

Uses	Resources
	Gross disposable income
	Adjustment for change in pension entitlements
Final consumption expenditure	
Individual consumption expenditure	
Collective consumption expenditure	
Adjustment for change in pension entitlements	
Gross saving	

Source: System of National Accounts 2008.

The distinction between individual and collective consumption expenditure was introduced in SNA 1993. **Individual consumption expenditure** is the amount spent by an institutional unit during an accounting period to purchase consumption goods and services for the benefit of a specific individual or group of individuals that could, in principle, be identified. **Collective consumption expenditure** is the amount spent by an institutional unit during an accounting period to purchase consumption goods and services for the benefit of the collectivity living within or visiting a local community, or a city, or a province, or the country as a whole.

Individual consumption expenditure includes both purchases of goods and services by households for their own use and the provision of goods and services to specific households or groups of households by government and NPISH units. The former includes purchases of food, clothing, transportation and a wide range of other consumer products by households. The latter includes, for example, the provision of elementary and secondary schooling to children and the provision of health care services.

Collective consumption expenditure, in contrast, corresponds to the economic concept of the ‘public good’—products that an individual cannot be effectively excluded from using and for which one individual’s consumption does not significantly reduce the availability of the good or service for others. Examples of collective consumption expenditures include spending on policing, defence services, Parliament and general public administration.

The use of disposable income account also contains an **adjustment for changes in pension entitlements**. The secondary distribution of income account determines gross disposable income. In doing so, it excludes the contributions of employers and employees to pension funds since these contributions, once made, reduce the amount of income that is ‘disposable’. However, in SNA 2008 these contributions are considered to be additions to the financial assets of the household sector and to the liabilities of the financial corporations and government sectors. They are therefore a form of gross saving, adding to households’ equity in the pension funds. In addition, there can be other adjustments to households’ net equity in these pension funds as, for example, when pension managers deduct fees from the account balance. If gross saving were determined simply by deducting final consumption expenditure from gross disposable income, which excludes these contributions and other changes in entitlements, gross saving would be misstated. Accordingly, the additional ‘resource’ (for the household sector) and ‘use’ (for the financial corporations and government sectors) known as the ‘adjustment for changes in pension entitlements’ is added to the use of disposable income account. This brings gross saving back to its proper level. SNA 2008 describes the adjustment as follows:

“It is equal to: the total value of the actual and imputed social contributions payable into pension schemes, **plus** the total value of contribution supplements payable out of the property income attributed to pension fund beneficiaries, **minus** the value of the associated service charges, **minus** the total value of the pensions paid out as social insurance benefits by pensions schemes.” (p. 182)

Accordingly, the household sector’s use of disposable income account includes gross disposable income and the adjustment for changes in pension entitlements as its ‘resources’ and final consumption expenditure and the balancing item, gross saving, as its ‘uses’. The use of disposable income accounts for the government and NPISH sectors also include gross disposable income as their sole ‘resource’ and potentially include both individual consumption expenditure and collective consumption expenditure as well as the adjustment for changes in pension entitlements and gross saving as their ‘uses’. There are no entries in the use of disposable income account for non-financial corporations, other than gross disposable income and gross saving which are equal since the sector does not make final consumption expenditures. Finally, the account for the financial corporations sector, and possibly also for the non-resident sector, includes as ‘uses’, in addition to gross saving, the adjustment for changes in pension entitlements which is the counterpart entry for the adjustment in the households account.

### 3.6.8 Redistribution of income in kind account

As explained, gross disposable income is the balancing item in the secondary distribution of income account. For a household, it is the maximum amount that can be spent on consumption goods and services during the accounting period without having to accommodate its expenditures by reducing its financial or non-financial assets or increasing its liabilities. But a household’s disposable income does not, in fact, show the full limit of its final consumption possibilities during the accounting period because it may also benefit from individual consumption expenditure by government or NPISH units on its behalf.

Thus, for example, a government wanting to assist homeless people could either transfer cash to them in the form of social welfare payments (money transfers) or construct social housing and provide the housing to them either without rental charges or at economically insignificant rental charges (in-kind transfers).

By taking social transfers in kind into account as well, the **redistribution of income in kind account** (see Table 3.18) yields an alternative definition of gross disposable income, known as **gross adjusted disposable income**. The account's 'resources' are gross disposable income and social transfers in kind (for institutional units receiving such transfers), while its 'uses' are social transfers in kind (for institutional units making such transfers to other units) and the balancing item gross adjusted disposable income. Thus, the alternative disposable income concept is equal to gross disposable income plus the value of any social transfers in kind received minus the value of any social transfers in kind paid.

Social transfers in kind are payable only by government or NPISH institutional units and are receivable only by households. Thus, the gross adjusted disposable incomes of government and NPISH institutional units are necessarily equal to or lower than their gross disposable incomes, while the gross adjusted disposable income of the household sector is necessarily greater than or equal to its gross disposable income. Gross adjusted disposable income and gross disposable income are necessarily equal for the economy as a whole, since the increase for the household sector due to social transfers in kind received is fully offset by the decrease for the government and NPISH sectors due to social transfers in kind paid.

**Table 3.18**  
**Redistribution of income in kind account**

Uses	Resources
	Gross disposable income
	Social transfers in kind
Social transfers in kind	
Gross adjusted disposable income	

Source: System of National Accounts 2008.

### 3.6.9 Use of adjusted disposable income account

The **use of adjusted disposable income account** (see Table 3.19) is the counterpart to the use of disposable income account. It records gross adjusted disposable income as its sole 'resource' and **actual final consumption** plus the balancing item, gross saving, as its 'uses'. The purpose of the account is to portray a more complete picture of income and consumption in the household, government and NPISH sectors, as compared to the cash-transaction orientation that is portrayed in the use of disposable income account.

The concept of **actual final consumption** refers to the sum of final consumption expenditure by an institutional unit plus or minus social transfers in kind received or paid by that unit.

For the household sector, the 'resources' in this account are greater than those in the use of disposable income account by the amount of social transfers in kind. Actual final consumption is greater than final consumption expenditure by the same amount, so the balancing item, gross saving, is the same in this account as in the use of disposable income account.

For the government and NPISH sectors, the 'resources' in this account are lower than those in the use of disposable income account by the amount of social transfers in kind. Actual final consumption is lower than final consumption expenditure by the same amount, so the balancing item, gross saving, is the same in this account as in the use of disposable income account.

**Table 3.19**  
**Use of adjusted disposable income account**

Uses	Resources
	Gross adjusted disposable income
	Adjustment for change in pension entitlements
Actual final consumption	
Actual individual consumption	
Actual collective consumption	
Adjustment for change in pension entitlements	
Gross saving	

Source: System of National Accounts 2008.

### 3.6.10 Capital account

The capital account is the first in a series of four accounts, known collectively as the **accumulation accounts**, recording changes in the values of assets held by institutional units. The other three, following in the sequence of accounts, are the **financial account**, the **other changes in the volume of assets account** and the **revaluation account**. Together these accounts decompose and thereby explain the change in net worth during an accounting period for an institutional unit. The impact of the four accounts is brought together in the **balance sheet accounts** which record, for each institutional unit or sector, the beginning- and end-of-period stocks of assets, liabilities and net worth.

Table 3.20 provides a simple depiction of the **capital account**. In this account, as in the other three accumulation accounts, ‘resources’ are defined as changes in liabilities and net worth. ‘Uses’ are defined as changes in assets.

**Table 3.20**  
**Capital account**

Uses = Changes in assets	Resources = Changes in liabilities and net worth
	Gross saving
	Current external balance
	Capital transfers receivable
	Less: Capital transfers payable
Gross capital formation	
Less: Consumption of fixed capital	
Equals: Net capital formation	
Net acquisition of non-produced, non-financial assets	
Net lending (+) or borrowing (-)	

Source: System of National Accounts 2008.

The first of the account’s resources is gross saving, which is the balancing item from the use of disposable income account (and the use of adjusted disposable income account). The current external balance, representing saving made available to the economy by the non-resident sector, is the second line entry. Capital transfers receivable net of capital transfers payable is the final ‘resource’ category.

The account’s ‘uses’ include gross capital formation, plus the net acquisition of non-produced, non-financial assets and the account’s balancing item, net lending (+) or borrowing (-).

In effect, the capital account sums up the sources of funds (other than borrowed funds) that are available to an institutional unit for investment purposes—that is, savings and capital transfers. From the total of these sources it deducts the uses of these funds for capital investment purposes, either for purchasing capital goods (housing, plant and equipment, inventories, intellectual property, etc.) or for acquiring other non-financial assets that are not produced (land, mineral resources, non-cultivated biological resources, etc.). If some of the available funds are not used for gross capital formation purposes or for the net acquisition of non-produced, non-financial assets, they are available for lending to other institutional units. Alternatively, if the institutional unit's gross capital formation plus net acquisition of non-produced, non-financial assets exceeds the available sources of funds, the unit must borrow the difference from other units. Accordingly, the account's balancing item is referred to as net lending (+) or borrowing (-).

Note that the first 'use' in the account is gross capital formation. Some of this capital formation is, in effect, a replacement for capital consumed in production during the accounting period while the remaining capital formation is net new investment.

### 3.6.11 Financial account

The **financial account**, depicted in Table 3.21, reveals how an institutional unit's net lending (+) or borrowing (-) is reflected in its net acquisition of financial assets and liabilities. The account's 'resources' include the net lending (+) or borrowing (-), plus or minus any additional funds raised or disposed of by acquiring new or liquidating old liabilities. (Acquiring a new liability means gaining access to additional financial 'resources'.) The account's 'uses' show the unit's net acquisition of financial assets during the accounting period.

**Table 3.21**  
**Financial account**

Uses = Changes in assets	Resources = Changes in liabilities and net worth
	Net lending (+) or borrowing (-)
	Net acquisition of liabilities
Net acquisition of financial assets	

Source: System of National Accounts 2008.

Net lending/borrowing is shown as a 'resource' and not as a balancing item in this account. This is because, in the sequence of accounts, net lending/borrowing has already been determined as the balancing item in the capital account. However, in the practical application of the sequence of accounts it should be recognized that, assuming good estimates are available for net acquisition of financial assets and liabilities, the capital account and the financial account yield two essentially independent estimates of net lending/borrowing that are very unlikely to be identical. That is, there is a statistical discrepancy.

This account is fully explained in chapter 6.

### 3.6.12 Other changes in the volume of assets account

Table 3.22 is a simplified portrayal of the other changes in the volume of assets account. In essence, the account records positive and negative changes in the assets, liabilities and net worth of an institutional unit, during an accounting period, that cannot be accounted for by economic transactions. An example of a positive change of this kind is the discovery of mineral deposits not previously known to exist. A negative change can be exemplified by the catastrophic destruction of housing and municipal infrastructure assets as a result of an earthquake. The balancing item in this account is a 'resource' and is changes in net worth due to other changes in the volume of assets.

**Table 3.22**  
**Other changes in the volume of assets account**

<b>Uses = Changes in assets</b>	<b>Resources = Changes in liabilities and net worth</b>
	Other changes in volume not elsewhere classified
	Changes in classification
Economic appearance of assets	
Natural resources	
Contracts, leases and licences	
Goodwill and marketing assets	
Economic disappearance of assets	
Natural assets	
Contracts, leases and licences	
Goodwill and marketing assets	
Catastrophic losses	
Uncompensated seizures	
Other changes in volume not elsewhere classified	
Changes in classification	
	Changes in net worth due to other changes in the volume of assets

**Source:** System of National Accounts 2008.

This account is fully explained in chapter 6.

### 3.6.13 Revaluation account

Table 3.23 shows the basic structure of the revaluation account. This account records changes in the value of the assets, liabilities and net worth of an institutional unit, during an accounting period, accruing to owners of those assets and liabilities simply from changes in the market prices of those assets and liabilities. An example of a positive change of this kind affecting non-financial assets is the rise in the value of housing assets held by the household sector as a result of rising housing prices during the accounting period. A change affecting liabilities is exemplified by the reduction in the market value of a corporate bond as a result of rising interest rates during the accounting period.

**Table 3.23**  
**Revaluation account**

<b>Uses = Changes in assets</b>	<b>Resources = Changes in liabilities and net worth</b>
	Nominal holding gains and losses
	Liabilities
Nominal holding gains and losses	
Non-financial assets	
Financial assets	
	Changes in net worth due to nominal holding gains and losses
	Neutral holding gains
	Liabilities
Neutral holding gains	
Non-financial assets	
Financial assets	
	Changes in net worth due to neutral holding gains
	Real holding gains
	Liabilities
Real holding gains	
Non-financial assets	
Financial assets	
	Changes in net worth due to real holding gains and losses

Source: System of National Accounts 2008.

The balancing item in the revaluation account is described as changes in net worth due to nominal holding gains or losses. The holding gains and losses are divided into neutral holding gains and losses and real holding gains and losses. The neutral holding gains and losses on an asset over a given period of time are equal to the value of the asset at the beginning of the period multiplied by the proportionate change in some price index selected to measure change in the general price index (a measure of inflation or deflation). Real holding gains are the difference between the nominal and neutral holding gains on that asset.

As can be seen in Table 3.23, this account shows three balancing items that are ‘resources’, one for nominal holding gains and losses, another for neutral holding gains and a third for real holding gains and losses.

This account also is fully explained in chapter 6.

### 3.6.14 Balance sheets

A balance sheet is a statement, drawn up at a particular point in time, of the value of assets owned and liabilities owed by an institutional unit or group of units.

In the SNA, the **balance sheet accounts** are the destination that the sequence of accounts ultimately leads to. For any institutional unit in any given accounting period, the sequence starts with production; it shows how primary incomes are generated from production; primary incomes are channelled from producers to the recipients of primary income; disposable incomes are derived from primary, property and transfer incomes; gross saving is calculated after deducting final consumption from incomes; gross capital formation is financed in part by gross saving and capital transfers and in part by borrowing and lending; the acquisition of financial assets and liabilities allows lenders with excess gross saving to direct their left-over funds to borrowers with deficient gross saving; and other changes in the value of non-financial and financial assets and liabilities are accounted for by events other than economic transactions and by revaluations due to price changes. The balance sheet accounts show the opening and closing stocks of non-financial and financial assets and liabilities and they are, in fact, unique among the 14 accounts in having their values shown in the account as stocks rather than flows.

The balance sheet accounts are actually three closely interrelated sub-accounts. The first is the **opening balance sheet account** which shows, for an institutional unit, the stock levels for non-financial and financial assets and liabilities at the beginning of the accounting period. The second account is, unlike its two sister accounts, a flow account showing the total of all changes to the levels of the stocks of non-financial and financial assets and liabilities during the accounting period. This account is, in effect, a combination of the four accumulation accounts previously discussed. Finally, the third account is the **closing balance sheet account** recording the stock levels for non-financial and financial assets and liabilities at the end of the accounting period. The closing balance sheet values are, of course, equal to the corresponding opening balance sheet values plus the corresponding changes that are recorded in the accumulation accounts.

**Table 3.24**  
**Balance sheets account**

<b>Uses = Assets</b>	<b>Resources = Liabilities and net worth</b>
	Opening balance sheet
	Liabilities
Opening balance sheet	
Non-financial assets	
Financial assets	
	Net worth
	Total changes in liabilities and net worth
	Liabilities
Total changes in assets	
Non-financial assets	
Financial assets	
	Changes in net worth
	Closing balance sheet
	Liabilities
Closing balance sheet	
Non-financial assets	
Financial assets	
	Net worth

Source: System of National Accounts 2008.

This account also is fully explained in chapter 6.

## Notes for chapter 3

1. These four organizations are referred to collectively as “the international organizations” in this volume. There is a fifth international organization that compiles aggregate national accounts information, the European Commission, but its focus is confined to the countries of the European Economic Community.
2. *System of National Accounts 2008*, published by the European Commission, the International Monetary Fund, the Organization for Economic Cooperation and Development, the United Nations and the World Bank, 2009. This updated international standard for national accounting was developed by a team of national accounts experts from around the world, including a Canadian representative, Ms. Karen Wilson, over a period of several years leading up to 2008. The volume, which is about 700 pages long, is available without charge on the United Nations Internet site. In places, this chapter and others also refer to two other, closely related international manuals published by the International Monetary Fund: *Balance of Payments and International Investment Position Manual*, 6th edition, 2009 (referenced as BPM6) and *Government Finance Statistics Manual*, pre-publication draft, 2014. These manuals are available without charge on the IMF Internet site.
3. In the national accounts, a transfer is a transaction in which one institutional unit provides a good, service or asset to another unit without receiving from the latter any good, service or asset in return as a direct counterpart. Transfers are separated into current transfers and capital transfers, and are discussed in chapter 5.
4. In the international investment position accounts, stocks are often referred to as **positions**.
5. Since consumer durable goods (motor vehicles, major appliances, furniture, etc.) are not included within the asset boundary, expenditures on these goods by households are not considered to be gross fixed capital formation. Nevertheless, the estimated value of the stock of consumer durable goods is included in the non-financial assets component of the national balance sheet accounts. See chapter 6.
6. The production boundary is explained in section 3.2.3.1. It distinguishes between what is and is not considered to be ‘production’ in the national accounts. For example, the serving of meals in a restaurant is deemed to be within the production boundary whereas the making of meals within a private household is not.
7. This is sometimes viewed as controversial. Statistics Canada has done occasional special studies that impute a value to household work.
8. An important advantage of this treatment is that market-produced output does not swing up or down solely due to changes in household preferences for rental versus owner-occupied housing.
9. According to *SNA 2008*, “Economically significant prices are prices that have a significant effect on the amounts that producers are willing to supply and on the amounts purchasers wish to buy. These prices normally result when: (a) The producer has an incentive to adjust supply either with the goal of making a profit in the long run or, at a minimum, covering capital and other costs; and (b) Consumers have the freedom to purchase or not purchase and make the choice on the basis of the prices charged.”
10. Figure 3.2 is borrowed from François Lequiller and Derek Blades, *Understanding National Accounts*, Organization for Economic Cooperation and Development, Paris, 2006, p. 100.
11. As is explained in chapter 4, this is **gross value added at basic prices**.
12. For example, governments spend on health and education services, which are a form of final consumption expenditure.
13. Canadian estimates of actual individual consumption are calculated in connection with the International Comparison Project and are published in Statistics Canada Table 36-10-0367-01. This is discussed further in chapters 5 and 7. No estimates of actual individual consumption are presently available at the provincial and territorial level.
14. International Monetary Fund, *Balance of Payments and International Investment Position Manual*, 6th edition, 2009. This volume is available without charge at the IMF site on the Internet.
15. See *SNA 2008*, p. 487.

16. Excerpts from the Canada Revenue Agency web site, S5-F1-C1: *Determining an Individual's Residence Status*. See also CRA Form NR73, Determination of Residency Status (Leaving Canada) and CRA Form NR74, Determination of Residency Status (Entering Canada).

17. See *SNA 2008*, Annex 1, Part B.1.

18. According to *SNA 2008*, "A legal or social entity is one whose existence is recognized by law or society independently of the persons, or other entities, that may own or control it. Such units are responsible and accountable for the economic decisions or actions they take, although their autonomy may be constrained to some extent by other institutional units; for example, corporations are ultimately controlled by their shareholders." (p. 61)

19. It should be noted that control is not always the same as ownership, although the two are closely related. In some cases all of the equity or shares of a corporation may be held by a single institutional unit such as another corporation, a household, a government unit or a non-resident unit, and in these cases ownership and control are both present. However, ownership of a listed corporation is generally diffused among several, and possibly a great many institutional units. In such a case, effective control may exist where ownership is partial.

20. An example is the Canadian Bankers Association.

21. Quasi-corporations are explained in section 3.3.4.

22. Examples include most universities and hospitals.

23. See International Monetary Fund, *Government Finance Statistics Manual*, pre-publication draft, 2014, available without charge on the IMF Internet site.

24. This figure is borrowed from *SNA 2008*, page 64.

25. See Statistics Canada Table 33-10-0029-01.

26. In NAICS these highest-level industry classes are called 'sectors'. However, in the national accounts the word sector is used to represent something quite different, so this usage of the word in the context of industry classification is only used in quotation marks here to help avoid confusion.

27. Two classifications are **concorded** to one another by preparing a table showing which category or categories in one of the classifications correspond to which category or categories in the other. The resulting table is called a **concordance table**.

28. Also referred to as the supply and use accounts, or the industry accounts.

29. These four classifications were approved by the United Nations through its Statistical Commission at the 30th session of the Commission in March 1999.

30. See *SNA 2008*, Annex 1, Part B.2.

31. The world appears to be converging on a new set of International Financial Reporting Standards (IFRS) that was established by the International Accounting Standards Board. Canada moved to IFRS in 2009. For more information, see the Chartered Professional Accounts Canada web site.

32. This phenomenon is called 'transfer pricing'. It is an important concern for tax authorities. A multi-national enterprise might, for example, sell products from one of its companies in country A to another of its companies in country B. If corporate tax rates are higher in country A than in country B, the enterprise might under-charge for the products, thereby lowering the profits of its company in the high-tax country and raising them for its company in the low-tax country. This would raise the enterprise's world-level after-tax profits. Most countries have taxation agreements with other countries that are designed, among other aims, to counteract transfer pricing. Multi-national enterprises are required to charge market price equivalents when their companies engage in transactions with affiliated entities. However, there is often a lot of wiggle room around the 'market price equivalent' concept. Transfer pricing can also be a problem in a federation like Canada's where corporate taxes apply at different rates in different provinces.

33. The three quotations are from *SNA 2008*, page 53.

34. *System of National Accounts 2008*, page 55.

35. *SNA 2008* explains work-in-progress inventories as follows (p. 106): “The output of most goods or services is usually recorded when their production is completed. However, when it takes a long time to produce a unit of output, it becomes necessary to recognize that output is being produced continuously and to record it as “work-in-progress”. For example, the production of certain agricultural goods or large durable goods such as ships or buildings may take months or years to complete. In such cases, it would distort economic reality to treat the output as if it were all produced at the moment of time when the process of production happens to terminate. Whenever a process of production extends over two or more accounting periods, it is necessary to calculate the work-in-progress completed within each of the periods in order to be able to measure how much output is produced in each period.”
36. See *SNA 2008*, Annex 2, p. 561.
37. The word ‘T-account’ comes from the world of business accounting. It refers to a basic accounting structure with a shape similar to the letter ‘T’ and having credit items on one side and debit items on the other.
38. See *SNA 2008*, p. 20.
39. The SNA recommends a cross-classification of industries and institutional sectors.
40. Most unincorporated businesses in the household sector generate primary incomes in the form of mixed income although some also generate compensation of employees. Owner-occupiers and unincorporated dwelling-lessors in the household sector, in particular, generate primary incomes as mixed income. Domestic staff working in households generate primary incomes in the form of compensation of employees.
41. In the national accounts, institutional units resident in one country and directly investing in another are treated as if they received, as an international investment income flow, their share of any retained earnings attributable to that investment and then reinvested those funds in the foreign enterprise. This is discussed further in chapter 8.
42. Insurance companies and pension funds hold financial assets on behalf of their policy holders and earn investment income on these funds. In the national accounts this income is treated as property income of the policy holders, who are the ultimate beneficiaries of the funds, and the income is deemed to be reinvested in the funds.
43. This might occur for institutional units located near the Canada-US border, in Windsor and Detroit for example. While uncommon in Canada, this kind of cross-border employment situation occurs more frequently in Europe.
44. Since investment income is paid or earned by corporations, and cannot be associated with individual establishments, it is impossible to allocate primary incomes to industries.
45. The Merriam-Webster dictionary defines the verb **to requite** as “to give or do something in return for something that another person has given or done”.