



**CONFERENCE ON STRENGTHENING SECTORAL POSITION AND
FLOW DATA IN THE MACROECONOMIC ACCOUNTS**

Jointly organized by the IMF and OECD

February 28–March 2, 2011

IMF Headquarters 2 (HQ2)

Conference Hall 1 & 2 (lobby level)

1900 Pennsylvania Ave NW, Washington, DC, 20431

Development and Use of Flow of Funds Data: Canada

To be presented in Session 2, Item 2 by Art Ridgeway

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This paper has been prepared by Art Ridgeway, Statistics Canada.



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I: Introduction

The Canadian Financial and Wealth Accounts (FWA) are made up of the *Financial Flow Accounts* (FFA) and the *National Balance Sheet Accounts* (NBSA)¹. The *Financial Flow Accounts* present the accumulation of capital and financial transactions, during a quarter, for the persons and unincorporated businesses sector, the corporate sector, the government sector and the non-resident sector. They include both the capital and the financial accounts. The capital account describes the non-financial (i.e., physical) investment by each institutional sector, while the financial account measures financial transactions. The *National Balance Sheet Accounts* present, for each sector, the value of physical and financial assets and the value of liabilities at the end of each quarter.

The *Financial Flow Accounts* and *National Balance Sheet Accounts* are presented in considerable sub-sector and instrument detail (thirty sectors and twenty-five classes of financial instruments), showing the financing of economic activity. The *Financial Flow Accounts* are available within approximately 60 days of the end of the reference quarter whereas the *National Balance Sheet Accounts* are available within approximately 75 days.

This paper describes the history, motivation, structure and compilation of the quarterly Canadian Financial and Wealth Accounts, as well as the data sources used to construct them.

II: Historical development

The Canadian *Financial Flow Accounts* stem from development work done for the Royal Commission on Canadian Economic Prospects in 1959, published in W.C. Hood's *Financing Economic Activity in Canada*. The years covered by the prototype financial flows were 1946 to 1954, and they were known as the national transactions accounts. Statistics Canada first published quarterly financial flows in their present form in 1968, commencing with the year 1962. Since their inception, the accounts have been available on a quarterly basis. Year-end levels of outstanding financial assets and liabilities were made available for the years 1961 forward. In 1984 these partial balance sheets, which excluded non-financial assets and net worth estimates, were superseded by the annual *National Balance Sheet Accounts*.

Over the last 25 years, development of both the financial flow and balance sheet accounts has continued. In 1987, first estimates of seasonally adjusted financial market activity were made available, followed by a summary table of credit market debt. In 1997, Statistics Canada produced, for the first time, seasonally adjusted quarterly sector accounts (incomes, outlays, capital and financial transactions). A quarterly balance sheet, at book value, was added in 2003, commencing with the year 1990. Market valuation for marketable securities was added in 2004, resulting in the release of both a book value and a market value *National Balance Sheet Account*.

¹ [Other change in asset accounts are in development.](#)

In the fall of 2009 Statistics Canada published revised FWA sector and category detail. These changes included a new table, the national financial accounts, which provide estimates of total domestic financial transactions for the Canadian economy. In addition, a number of sectors and categories that were previously published in both the FFA and NBSA were combined, in order to provide more relevant sector and category information. Finally, market value estimates in the NBSA on annual and quarterly bases were expanded. Annual market value data was produced for all sectors from 1970 onward.

Motivation for quarterly accounts

Before describing the structure of the quarterly Financial and Wealth Accounts, it is important to highlight the factors that motivated their development. This centered primarily on the importance of improving the quality of Canadian macro-economic statistics, and secondly on their analytical usefulness.

Quality

Each quarter, Canada publishes an integrated set of quarterly national accounts. The income and outlay accounts highlight the sources and uses of income. The capital accounts show how saving and capital transfers are available to fund capital formation and capital consumption. The financial accounts provide a framework within which financial transactions of institutional sectors of the economy may be examined and related to the non-financial set of accounts—particularly the capital finance account, and saving and investment. The balance sheet accounts complete the system of national accounts by providing a stock dimension to the associated flow data.

Within the Canadian System of National Accounts the *Financial Flow Accounts* are released at the same time as the *Income and Expenditure Accounts*. The *National Balance Sheet Accounts* are published approximately 15 days after this.

The quarterly financial accounts provide an alternative perspective on net lending/borrowing from that provided by the income and outlay balance combined with the capital account balance. This is a key check on the quality of the estimates. When the two measures are out of balance, it provides the national statistical system insight into potential issues with source data or compilation problems. Therefore, when constructing Canadian gross domestic product (GDP), not only does income-based GDP need to be reconciled with expenditure-based GDP, but the net lending/borrowing flowing out of the capital account must tie in with the net financial investment flowing out of the financial account.

For example, if the net financial investment calculated in the Financial Flow Accounts is significantly different from the net lending or borrowing derived from the capital account, it is an indication that something within the system is out of balance and that the estimates require further analysis and refinement. National accountants responsible for the different accounts

then re-examine the relevant source data to determine where there may be issues with respect to quality or compilation.

Analytical usefulness

Not only does the quarterly compilation of the Financial and Wealth Accounts improve the overall quality of the quarterly national accounts, they also provide useful and relevant information to data users. This was clearly evident during the recent financial crisis which began in the fourth quarter of 2008.

Prior to the financial crisis, the Financial and Wealth Accounts were not as well understood by national account data users. Statistics Canada responded to this in a number of ways.

Normally the Financial Flow Accounts are released on the same day as the quarterly estimates of Gross Domestic Product (GDP). Given the profile of GDP as a leading macroeconomic indicator, the release of the financial accounts often gets overlooked by the media and policy analysts. In order to raise the profile of the data Statistics Canada decoupled its quarterly GDP release from *Financial Flow Accounts* release. This allowed the agency to draw attention to the Financial Flow Accounts and emphasize their importance and usefulness.

Second, Statistics Canada developed and published new financial indicators drawn from both the financial transactions and balance sheet accounts for the persons and unincorporated businesses, corporate and government sectors. These indicators assisted users in interpreting data contained in the FWA as well as serving as a monitoring and evaluation tool for the various sectors of the economy.

Third, the text accompanying the releases regularly articulated key developments in the financial sector as shown in these accounts. During the financial crisis (mid-2007 to end-2008), Canadian investors repatriated substantial funds from overseas to the perceived safe haven of Canada (investors also sold stocks in Canadian markets in 4Q08). With investors seeking out the security of public debt and improved liquidity at the peak of the crisis, the federal government issued over \$50 billion of new debt in the fourth quarter of 2008 to meet this demand. Part of the increase in federal government funds raised through the issue of Treasury Bills was deposited with the Bank of Canada, which, in turn, provided liquidity via loans to the banking system. Chartered banks stepped up borrowings from the Bank of Canada in the fourth quarter of 2008, symptomatic of the drop in inter-bank lending markets in Canada (which was much less marked than in the U.S. and Europe). The other portion of the proceeds from federal borrowing was advanced to the Canada Mortgage and Housing Corporation, which used this to purchase \$25 billion of mortgage-backed securities (through the Insured Mortgage Purchase Program), providing a further injection of liquidity into financial institutions. All of these transactions were clearly recorded in the FWA. In addition to tracing and recording these transactions, Statistics Canada disseminated a series of *Frequently Asked Questions* to help users better understand and interpret these unusual flows and changes in position.

Fourth, between the third quarter of 2008 and the second quarter of 2010, Statistics Canada published three articles highlighting the data contained in the FWA and their importance in understanding the financial crisis. These articles included:

- *A national accounts perspective on recent financial events*: Using national accounts data on the financial flows, balance sheets and Canada's international investments, this paper showed how the crisis in financial markets affected financial behaviour in Canada.
- *What does the Pension Satellite Account tell about Canada's pension system?* New data from the Pension Satellite Account show there have been several notable shifts this decade in the structure of pension assets. Assets have nearly quadrupled, mostly due to higher investment income. Contributions rose steadily, but barely kept up with the increase in withdrawals as the population aged rapidly.
- *The evolution of the global financial crisis and cross-border financial activity, 2007-2010*: A review of how the unfolding of the global financial crisis was reflected in securities transactions and investment flows into and out of Canada.

Finally, Statistics Canada also prepared a presentation that showed the usefulness of the FWA in understanding the global financial crisis. This presentation was given at various conferences across the country, as well as to various government departments and other important users of national accounts data.

In short, both enhanced quality and analytical usefulness make a strong argument for the development and integration of quarterly FWA into a country's sub-annual macroeconomic statistics program. The next section of this article focuses on how Statistics Canada compiles and presents this information to users.

III: The structure and compilation of the financial and wealth accounts

Structure

The Canadian quarterly Financial and Wealth Accounts are most easily seen as a series of tables which show the evolution of activity and financial position by sector or sub-sectors over time. The sector accounts comprise four major sectors of the economy: persons and unincorporated business, corporations, governments and non-residents. The non-resident sector is derived directly from the *Canada's Balance of International Payments* in the FFA and *Canada's International Investment Position* in the NBSA. The corporate sector is broken down into a number of sub-sectors, with the bulk of this detail comprising classes of financial institutions, reflecting the importance of the financial system in transferring funds from surplus to deficit sectors. The government sector is available by level of government. In total, there are 30 sectors in the FWA. Each column shows assets-liabilities, or their related transactions, by sector; and, each row shows the same for a particular financial instrument or non-financial asset category.

Additional tables provide added detail. The financial market summary table approximates final demand for funds by focusing on borrowing by non-financial sectors through conventional credit market instruments (marketable securities and negotiated loans). The credit market summary table is the debt resulting from this activity. The national financial accounts table shows total domestic financial transactions for the Canadian economy. This is the transactions` equivalent to the National Balance Sheet in the NBSA, which is the sum of all domestic sectors` balance sheets and yields both national wealth (economy-wide non-financial assets) and national net worth (national wealth adjusted for net foreign debt/asset position).

The transaction categories grouped under financial assets and liabilities show the financial instruments through which the sector`s lending or borrowing is carried out. The categories record transactions by instrument type. Examples include currency and deposits, marketable short-term paper, longer term marketable instruments such as bonds and stocks, negotiated instruments such as loans and mortgages, and a variety of other items such as trade accounts receivable. Each asset category has an equivalent liability category, not necessarily in the same sector. A category called net financial investment records the sector's overall net purchase of financial assets less the net incurrence of liabilities. Net financial investment is the conceptual equivalent of net lending or borrowing and should be equal to it. For some sectors, however, there is a difference attributable to the use of different data sources in obtaining the two numbers. This difference is recorded in a separate category as "statistical discrepancy," and offers a rudimentary check on the quality or, more accurately, the consistency of the data. The equality of net lending/borrowing and net financial investment arises from the more general constraint that sources of funds equals uses of funds.

The National Balance Sheet Accounts has the same detail in financial instruments, but adds estimates of non-financial assets to complete the balance sheet. There are two sets of *National Balance Sheet Accounts* data — a set at book values and a set at market values — though emphasis is given to the market value series at the time of the release. Non-financial assets are at current values, in both sets. In the market value NBSA, tradable securities are estimated at market values².

Compilation: Example the financial flow accounts

Compilation of the FFA present two main challenges: Measuring financial transactions and balancing the FFA matrix. In the case of the NBSA the challenges are integrating estimates of non-financial wealth with financial wealth and estimating market values for selected financial instruments.

² [Non-traded equity will also be valued at market prices in 2012 coincident with revisions to introduce SNA 2008.](#)

Given the integrated nature of the Canadian System of National Accounts, the compilation of the FWA requires the cooperation of a number of different areas. Analysts working in the FWA must work closely with analysts working on the balance of payment accounts, government financial statistics and income and expenditure accounts. This degree of cooperation and confrontation of data is one of the strengths of the Canadian system.

Processing the data follows these typical steps: Compile initial sector data and check for series breaks and outliers; consultation with data suppliers; data substitution for specific instruments (e.g., use of debt inventories); initial data analysis against economic events, real economic activity and financial indicators; and, initial assessment of the sector balancing items.

From this point, portions of the data are closed in sequence. The sequence is based on descending order of the quality of the data (from highest to lowest), such that the higher quality data are fully leveraged in the construction of the matrix. In this way, the higher quality data are relatively large contributors to the overall final picture.

An important tool in the compilation process is the Financial Market Summary Table (FMST). The FMST presents total funds raised (by financial instrument) on credit and equity markets for each of the sectors of the economy. The FMST is closed first, making use of information on equity issues in the debt inventory systems and counterpart data for loans (from lenders' supplementary schedules and detail on standard survey forms). The FMST is then drawn into the overall FFA matrix (which shows sources and uses of funds for the 30 sectors of the economy), and those totals are set. Next, deposit asset flows by sector are finalized, making use of counterpart data (from deposit-takers' supplementary schedules and detail, on standard survey forms). Following this, the asset side of transactions in securities, which are concentrated in the large institutional investors (e.g., pension and investment funds) are completed, as are the most of the financial institutions (the notable exception being holding companies). At the same time, certain aspects of the balance of payments which are finalized—cross-border investment flows in securities, come into play. Subsequently, the government sector is closed, with the final review reconciling the two measures of net lending or borrowing. Based on the preceding, the major financial transactions in the household sector are also closed (borrowing, and investment flows in deposits, pensions, insurance, equities and investment funds).

At this point, the balancing becomes more difficult. Remaining segments of the matrix to close are non-financial corporations, holding companies, parts of banking (linked to the Balance of Payments (BOP)), non-residents and smaller parts of the household sector. Next, cross-border takeover activity is finalized and the holding company sector is almost final. When the BOP is

closed, the non-resident sector and the remaining banking data are almost final. At this point, final adjustments tend to be concentrated on the lower quality financial instruments—most notably, “other financial assets or liabilities.”

Canada published explicit statistical discrepancies between Income and expenditure based estimates of GDP and between the current and financial account of the BOP. Larger absolute GDP or BOP discrepancies will have an adverse effect on the other sectors³ in the matrix, given the integrated nature of the SNA. Consultations with GDP and BOP analysts on the nature of the problems faced in the quarter provide insight on where to allocate adjustment(s) to the sub-sectors (corporate, non-financial, banking, etc.).

IV: Data sources and methodology

A number of different data sources are used to compile the quarterly FWA. A large share of the information comes from other accounts within the Canadian System of National Accounts, reflecting the integrated nature of the CSNA. These accounts include the Income and Expenditure Accounts, Balance of Payments Accounts and the Government Accounts. Data are also extracted from administrative files and derived from other Statistics Canada surveys and other sources. Finally, data are also extracted from a number of private sector databases that are purchased by Statistics Canada to help compile the FWA. The following provides a brief overview of the various source data.

Non-financial assets in the NBSA

Non-financial assets in the NBSA sectors cover both produced and non-produced assets. Produced assets include non-residential structures (building construction and engineering construction), residential structures, machinery and equipment, inventories (both farm and non-farm), consumer durables. Non-produced assets currently include developed land (including agricultural land, and land surrounding residential and non-residential structures) and selected natural resources (timber and sub-soil assets) at the national level only.

As with many countries, estimates of most produced capital are constructed using the perpetual inventory method (PIM). PIM requires information about the value of investments, price indexes, average services lives of the capital, and the choice of a depreciation method. PIM estimates for components of produced assets are produced both annually and quarterly. PIM assets are sectored using industry data for business capital, and housing stock data by type and tenure (rented-owned, occupied, non-occupied) for residential structures. Inventory data are largely survey derived. Estimates of agricultural land by sector are derived from the agricultural census supplemented by inter-censal projections. Land surrounding structures, split

³ This is generally the case, unless the GDP and BOP errors offset each other.

between residential and non-residential land, is estimated using land-to-structure ratios developed from a variety of sources and sectorized based on the corresponding produced assets.

Saving-investment estimates in the FFA

For the four main sectors of the economy—governments, corporations, non-residents and households—saving, capital consumption allowances, capital transfers, capital investment, and inventory changes originate in the Income and Expenditure Accounts. Estimates of flows of existing assets (including land) are prepared using various sources of data (e.g., new housing sales, including or excluding land) and information about significant sales of assets from one sector to another.

Government sector

The government sector is comprised of federal, provincial (including health and education sub-sectors) local governments, and social security funds. Data are largely balance sheet based, supplemented by transactions data. Basic information is principally drawn from the (annual) audited public accounts and (higher frequency) administrative records. In addition, there is some survey-based information for local governments. Most of the source data are supplied by the Public Sector Statistics Division. Source data are supplemented by the debt inventory system which has been reconciled with a broader debt inventory system compiled in the balance of payments area. Data on federal government debt are routinely cross-checked against those of the Bank of Canada (debt manager).

Corporate sector

Data are for the most part obtained via enterprise based surveys and supplemented by external information (e.g., information from umbrella organizations such as the Investment Funds Institute of Canada). Data on government business enterprises are largely survey based and submitted alongside government sector data.

Non-financial corporations

Data are drawn from an enterprise-based survey, covering all non-financial industries. Enterprises are defined as either booked-in-Canada complex or simple entities. For each industry, there is a take-all, take-some and take-none stratification of the universe, commonly referred to as a sampled and non-sampled portion. Because of the large number of non-financial corporations, imputations (derived by incorporating tax data benchmarks) can be

significant. Typically, this factor does not adversely affect total (asset and liability) transactions, but imputations can lead to challenges in balancing by type of financial instrument. This underlines the need to supplement survey outputs, with counterpart data as well as securities' issues inventories.

Financial flows are derived using adjusted balance sheet changes in the file compiled by the by the data supplying division. Essentially, for assets and liabilities by underlying instrument, a detailed statement of change in financial position is constructed, by adjusting for items such as capital gains or losses and structural changes⁴.

Financial institutions

Financial corporations' sub-sector comprises a wide variety of institutions, monetary authorities including banks and near-banks, investment dealers, insurance (by type), sales finance companies, investment funds, pension funds, issuers of asset-backed securities, government business enterprises and investment management and holding companies. Estimates are largely constructed from the aforementioned enterprise-based survey, supplemented by other data. Data quality is relatively higher than for non-financial corporations (with the exception of holding companies), as most financial industries have close to universal coverage. As a result, only selected sub-sectors have explicit measurement error, including banks and holding companies. It should be noted that the financial sub-sectors provide the overwhelming proportion of the counterpart data used in other sectors.

There remain some issues with these data, however. First, care must be taken with the allocation of saving-investment data across the sub-sectors. Second, the holding company sub-sector is large and data accuracy is lower. In particular, the presence of takeover activity in the holding company sector requires regular adjustment to those data. Third, financial institutions have embraced the use of new financial instruments somewhat faster than the statistical system can keep pace. Essentially, financial market activity and credit market debt are not as straightforward to compile now as they were in the past, as securitization has expanded and evolved.

Non-resident sector

The non-resident sector is supplied by the international accounts program. The current and the capital-financial account of the balance of payments (BOP) make up the sector account components of the income and outlay account and the capital and financial account. The

⁴ [While this account is used internally, it is not yet published.](#)

International investment position is the non-resident sector balance sheet. The universe of transactors is very different that in other sectors, in that they are a non-homogeneous group. As a result, BOP-IIP estimates are assembled using a variety of different and unrelated sets of data for its main components—trade in goods and services, investment income, transfers, direct investment flows and stocks estimates, portfolio investment flows and stocks, banking transactions and positions, and the activities and positions of monetary authorities.⁵ This work is made more challenging given the changing patterns of international trade and finance, in response to worldwide consolidation of production and major financial events or crises.

Persons and unincorporated business sector

The financial activity and wealth position of the household sector is compiled from numerous sources of information. Essentially, the bulk of the financial transactions are largely based on counterpart entry data from enterprise-based surveys and administrative or regulatory data for some categories, while other instruments are residually-derived.

Supplementary schedules from deposit-taking and lending institutions provide the counterpart data used to construct the bulk of the household sector liability flows (i.e., consumer credit and mortgages) as well as the deposit asset flows. In addition, the net liability transactions of pension funds comprise the pensions' asset flows of the household sector. The majority of insurance and investment fund net liability flows are allocated to household asset transactions. Non-marketable federal and provincial savings bond liabilities can only be the assets of households.

Other debt securities are residually-derived, but are a very small component of asset flows. Corporate equities are also derived residually, but, given the good quality of the equities across the FFA matrix, these are considered to be a reasonably good estimate. "Other financial assets," derived residually as well, contain any data shortcomings from elsewhere in the matrix, such as any capital gains or losses remaining in the financial transactions for specific instruments, including derivatives.

Market value debt and equity estimates in the NBSA

For financial assets and liabilities, market values have been derived by estimating and linking control total market value estimates for the liability-side debt and equities to the corresponding market value asset-side values. Marketable domestic corporate equity liabilities are estimated on the basis of the values assigned them in the market, that is stock market prices for those

⁵ A discussion of balance of payments sources, while useful, is too lengthy for this paper.

firms. The market value of domestic bond liabilities is estimated using micro-data in a debt inventory system. For the assets of the major domestic institutional sectors (e.g., pension funds, segregated funds of life insurance companies, mutual funds), market value data are readily available from Statistics Canada surveys and other sources. For other sectors, where holdings of marketable stocks and bonds are considerably less significant, the derived average asset market-to-book ratio of the institutional investors is used to estimate a market value. The household sector marketable securities art market value are derived residually, but are considered to be of high quality.

V: Future developments and current extensions

The Canadian System of National Accounts is currently undertaking a large comprehensive revision of all its accounts, including the Financial and Wealth Accounts. There are several significant changes planned over the next several years.

- **Market valuation:** Currently only marketable securities are valued at market value in the national balance sheet. Foreign direct investment, non-marketable shares and inter-company holdings are recorded at book value. With the first quarter 2012 release of the FWA, a combination of methods will be used to value these holdings at market value. This includes using transaction prices where they exist, market capitalization ratios for large unlisted companies, OFBV for smaller unlisted companies and industries—companies with special measurement challenges. Other valuation adjustments (i.e., liquidity ratios, size risk, and other finance concepts) will be considered to further refine the method.
- **Other change in asset account:** Currently Statistics Canada does not release an *Other Changes in Assets Account* (OCAA), although these are analyzed on a quarterly basis as part of the production of FFA and NBSA. This is one of the major data gaps within the Canadian System of National Accounts. Work is underway to develop a provisional OCAA to be published sometime in 2012 or early 2013. Once these provisional estimates have been developed and vetted, Statistics Canada will incorporate the production of this account into its regular quarterly releases.
- **Natural resources:** Natural resource assets are counted nationally as part of Canada's national wealth, but no sector estimates of assets derived from resources is available. Among other things, this means that corporate sector net asset values do not reconcile with market value equity. As part of the comprehensive 2012 revision to the CSNA, Statistics Canada will include estimates of natural resources (for approximately 14 resource assets) on its quarterly balance sheet. This will include partitioning natural resource wealth between the government and corporate sectors.

In addition to extensions to the FWA brought about by the comprehensive revision of the SNA there have been, and continue to be, a number of other data extensions.

Pension satellite account

In 2008, Statistics Canada released a Pension Satellite Account to better understand the impact of pension stocks and flows on both economic behaviour and on the economy as a whole. The Pension Satellite Account (PSA) aims to supplement the CSNA by providing additional detail on aspects of pension schemes and the movement of pension funds. It presents the values of pension stocks and flows in an integrated stock-flow matrix that parallels the framework of the CSNA, and therefore provides a comprehensive picture of the Canadian pension system. The PSA structure incorporates many aspects of pension schemes, such as contributions, investment income and withdrawals, and realized and unrealized gains and losses which contribute to change in wealth.

The PSA provides users with an additional analytical dataset, to better analyze household consumption and saving behaviour in light of a significant shift in the source of funds from current income to dependence on accumulated assets such as payment of pension benefits (employer-based plans) or withdrawals from pension assets (individual plans). It allows a deeper understanding of personal wealth and its distribution.

The PSA project first released estimates in June 2008 for the level (or stock) of pension assets. The first full-matrix PSA release, in 2009, covered the level of pension assets for the period 1990 to 2008 and the pension flows for the period 1990 to 2007. Statistics Canada is working to increase the overall level of detail and timeliness of the PSA.

Interest and dividends matrix

Statistics Canada is also currently developing an Interest and Dividends Matrix (IDM) to improve its overall estimates of investment flows and Balance Sheet Accounts. The Interest and Dividends Matrix is an economic account that links interest and dividend flows to financial instruments in the NBSA. It is a closed system, covering all 30 institutional sectors in great detail, and all financial instruments. In this framework, reported interest and dividend flows can be reconciled to implied flows by financial instrument, interest flows can be better articulated, and missing data can be calculated in an integrated framework.

In addition, it will be possible to produce an implicit yield matrix, as the ratio of yield flows in the IDM to the corresponding assets or liabilities in the NBSA. It will eventually be possible to supplement the IDM with the impact of capital gains or losses by financial instrument. All of this will improve and add to the quality of the accounts.

VI: Summary

The timely Canadian Financial and Wealth Accounts (FWA), comprised of the quarterly *Financial Flow Accounts* and the quarterly *National Balance Sheet Accounts*, are an integral part of the Canadian System of National Accounts. They both complete the sector income and outlay

accounts and provide a stock dimension to the system. The financial crisis highlighted the use of these accounts.

The FWA are compiled quarterly using a variety of information, from enterprise surveys, to administrative data to securities' databases. These same sources have led to SNA extensions and will feed the forthcoming development of the *Other Changes in Assets Account*. Nevertheless, a good deal of the accuracy-reliability of the sector accounts depends on the data confrontation work of the analysts during the quarterly production cycles.