Understanding Capital Markets:
An examination of Financial Accounts in selected OECD countries

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TABLE OF CONTENTS

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I. Introduction:

Globalization has lead to a broadening and deepening of international capital markets, which is transforming the manner by which commerce is conducted. By virtue of its openness, Canada has contributed to this phenomenon – consequently, there are implications for consumers, industries, and governments. To help gain some understanding of these events, one can refer to a country's financial accounts, which, among other things, show national markets in relation to international markets. These accounts, in particular, illustrate the nature of financial activity in, and among, various sectors. Moreover, they help to explain the saving and investment decisions in an economy. The purpose of this paper is to provide a snapshot of the state of financial accounts in selected OECD countries.[1]

There is a growing need to monitor economic situations in the context of a global international environment. The dissemination of market moving news by statistical agencies and central banks around the world occurs daily. These data can influence the economic activity within an individual country's border and beyond. Ultimately, as globalization and convergence continue, the demand for comparability of financial statistics across a multitude of countries is likely to increase.[2]

This paper reviews the financial accounts of twelve OECD countries. First, the Group of Seven (G-7) countries were selected due to their size and significance. The G-7 consists of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States - combined they accounted for more than half of world GDP in 1999. The remaining five countries were selected due to their similarity and/or relationship to Canada. Finland, the Netherlands, and Sweden are all similar to Canada in terms of having relatively small open economies. Australia's economy is about half the size of Canada's, but it is frequently compared to Canada and has a similar financial sector. Meanwhile, Mexico's economy is of interest to Canada given its membership in NAFTA.

In general, producing data for a country is not easy - doing so in a fashion that is comparable with many other countries, each at different stages of economic development and historical processes, is even more challenging. For example, Germany's reunification in the early 90s has resulted in a complete revision of its statistics, so as to include all of Germany. Consequently, the financial accounts across OECD countries have progressed at varying rates.

The paper begins with a brief review of the various uses and relevance of financial accounts. This is followed by a summary of who produces the data in a particular country – either the central bank or statistical agency – along with its ownership structure. The paper then discusses seven general characteristics of financial accounts. These include data availability, length of time series, frequency of release, time lag from the reference period, use of primary sources, integration with other statistics from the economy, and lastly, dissemination practices. The final section provides a look at key data from the financial accounts of G7 countries.

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[1] The Organization for Economic Co-operation and Development (OECD) consists of twenty-nine countries.

[2] An example of this demand, is the recent call by Canada's Minister of Finance upon industrialized nations to establish improved surveillance mechanisms for financial systems. Various ways in which this might be done are under consideration by the Group of Seven, the IMF and the World Bank (Beauchesne, 1999).

II. Background

The financial accounts are part of the national accounts, which constitute a set of statistics that portrays the economy as a whole. These accounts are relatively new to the statistical world.[3] Their introduction in various countries, largely over the last few decades, has rounded out the integrated system of accounts that portrays a nation's economic production, income, expenditure, financing and wealth. More specifically, the financial accounts provide a framework within which financial transaction balances of sectors of the economy may be examined and related to aggregate income and expenditure accounts.

i) Definition of Financial Accounts

For the purposes of this paper, financial accounts are composed of four different components: financial flow accounts, financial level accounts, balance sheet accounts, and stock/flow reconciliation accounts. The *financial flow accounts* record capital and financial transactions of, and among, economic entities such as enterprises, households, and government. These accounts can be considered as a statement of sources and uses of funds, where examples of sources are current saving, borrowing or sale of assets; and examples of uses are acquisition of assets, including capital formation, and re-payment of liabilities. The accumulation of this activity is reflected in the balance sheet, which can be divided into two categories: *financial levels*, or year-end outstanding of financial assets and liabilities; and *balance sheet accounts*, which add non-financial assets to the financial levels. In many OECD countries, only financial levels exist or they have preceded the development of full balance sheets. The fourth, and final, component is the *stock/flow reconciliation account*, which reconcile financial flow transactions with balance sheet changes.[4]

ii) Relevance and Uses

Information from the financial accounts is used in many ways to describe and analyze economic and financial developments within a country. These accounts are designed to bring the financial activities of an economy into explicit statistical relationship with one another and into direct relation to data on income and expenditure. Thereby, allowing one to examine the magnitude of net surpluses or deficits sector by sector, and analyze how financial intermediaries channel funds into the sectors with deficits from sectors with surpluses. In this way, users gain insight into the basic structure of the financial markets, and the financing of economic activity.

The broad purpose of the financial accounts is to facilitate analysis of the financial system. The analytical power of these accounts stems fundamentally from the interlocking character of the system. For example, if capital formation by private enterprises is to be financed by corporate debt issues, some other sector must absorb the issues and finance their acquisition. To do so it must have larger sources of funds or must reduce other acquisitions. Understanding this allows one to follow the impact of sectors' financial behaviour on non-financial activity, or vice versa. In summary, by providing a detailed breakdown of economic sectors and financial operations, the financial accounts allow users, among other things, to:

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[3] The development of Canada's integrated economic system and its four principal components has occurred over many decades – balance of payments accounts (1926); income and expenditure accounts (1945); input-output tables (1949); and lastly, the financial flow (1969) and national balance sheet accounts (1985) (Statistics Canada, 1989). The Canadian System of National Accounts (SNA) is now almost complete with the publication of the national balance sheet in 1985.

[4] For more information on these accounts refer to the 1993 SNA "Other Changes in Asset Accounting" (United Nations, 1993).

- follow financial transactions by recording the payments sectors make to other sectors and the receipts received from them;
- provide a useful framework for examining the behaviour of financial institutions:
- enable analysis of various financial markets; and
- record the maze of financial transactions underlying real saving and investment. (Ritter & Silber, 1974)

The Integration of Financial Accounts
- a Canadian perspective

In Canada, the financial and wealth accounts consist of quarterly financial flows and annual balance sheets.[4] The balance sheets are, to some extent, the evolution of the flows over time. The structure of the accounts can be viewed as an array of data consisting of quarterly matrices of financial transactions. In each matrix, columns show the transactions of each sector of the economy and rows show the transactions in a particular instrument. It is a closed system consisting of approximately 30 sectors that can be aggregated up to four main sectors – persons and unincorporated businesses, business enterprises and financial intermediaries, government, and non-residents. (**Appendix I** provides a sectoral breakdown of the Canadian financial accounts).[4]

In general, the components of the Canadian national accounts are fully integrated. The links between the financial account system and the income and expenditure and balance of payments systems are briefly outlined below.

In the income and expenditure accounts, there is a capital account, which shows the final distribution of the proceeds derived from current productive activity after taking account of current consumption, and directly follows each sector income and outlay account. This arrangement has the advantage of keeping all economic transactions together and permits a full cross-articulation within the sector accounts. It also furnishes a more directly identifiable link with financial transactions, or the financial flow accounts. The financial flow system derives estimates of sector lending and borrowing, but moves beyond these flows by showing the financial transactions that underlie the net financial investment figure common to both systems (**Appendix II** shows the overlap of these accounts occurs with the measurement of saving and investment).

The integration of the balance of payments' capital account into the financial flow accounts is complete and fully consistent at the aggregate level – the capital account forms the non-resident sector in the financial flows. Although, the integration may not be that transparent due to differing classification of financial instruments adopted by the two systems. Given the link between the capital account and the financial flow accounts, it follows that the balance of payment's international investment position is the basis for the rest of world sector in the national balance sheet.

[4] Quarterly balance sheet accounts are compiled, but not published.

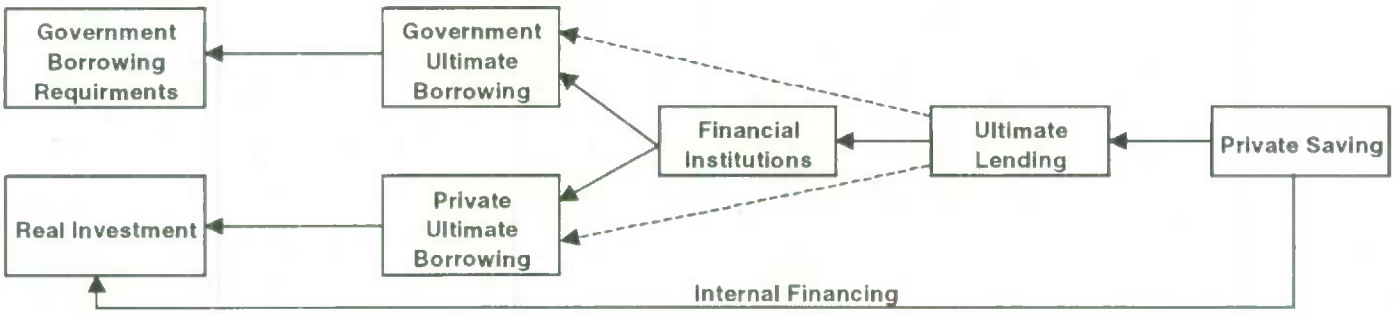
Saving-Investment process

Dawson (1996) presented a schematic view of the saving-investment process. This is the process by which saving is transformed into ultimate lending – first, by passing through financial channels to ultimate borrowing, and then into non-financial investment (Chart 1 illustrates this financing process for domestic sectors). Private saving appears at the right of the chart and as the arrows indicate is either placed into non-financial investment or ultimate lending.[6] If placed into ultimate lending, it may take any of three major forms:

1) they can become claims of financial institutions, thus placing funds with them;
2) they can be private investments, thus passing funds directly through these markets to finance private ultimate borrowing; or
3) they can be invested in government securities, thus advancing funds in this market.

Chart 1.

Saving - Investment Process



Source: Dawson, 1996

Financial institutions in lending out the funds placed with them acquire either securities or private claims. Finally, private ultimate borrowing assembles the borrowing from financial institutions and ultimate lenders, which together with internal financing provides the funds to finance real investment. At the same time, government also assembles the lending of the various sectors and provides the financing for government borrowing requirements.

In summary, the financial markets are linked to the real economy at each end of the scheme, as illustrated in Chart 1.[7] Another aspect, not illustrated in the Chart, is the feedback effect on private lenders from the benefits of their interests in real investment and/or government securities. Given this detail, the financial flows of a country can be an effective tool in understanding how capital formation or government borrowing requirements are financed.

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[6] The financial flows calculate household saving by aggregating the net increase in capital and financial assets less the net change in liabilities. Conceptually, this yields equivalent results to those obtained through the income and expenditure accounts and the movements derived by the two measures are similar.

[7] Chart 1 illustrates the utilization of private saving, but one could also investigate how people go about spending more than their income - for example, the liquidation of assets and/or increase in borrowing.

Public Policies in the Financial Area

> '...the flows and balance sheet data serve as a good framework for the structural questions that we should be asking at budget time – when we assess whether governments' tax, transfer and expenditure choices will help to enhance Canadians' welfare in the coming years.' (Grant, 2000)

In addition to private sector analysis, these accounts are effectively organized for examining key public policy problems in the financial area. Various techniques are available – ranging from highly sophisticated programming models to crude calculations of flows from different sectors and/or types of transactions.

Over the years, a number of flow of funds models have been developed.[8] With empirical financial models, government policies, structural changes, institutional innovations, and demographic or technological trends can be simulated to estimate shorter- and longer-run consequences (Backus, 1980). Making projections with data from the financial accounts have been a regular part of monetary policy making at the central bank in the United States for many years (Horne, 1998).[9]

Flow of funds models of the American economy have been developed, the most detailed being built by Hendershott (1977). James Brox and Wendy Cornwell developed the first Canadian financial flow model in 1989 (Brox, 1989).[10] It suggested that reactions to interest rate changes are relatively strong within the Canadian financial sector. Moreover, Canadians tend to use savings to reduce mortgage debt to a greater extent than Hendershott found in his American study, which is consistent with the different tax treatments in the two countries. A new class of empirical models has emerged – called multicountry models. The idea of these models is to formally link together the various national models to explore the international transmission mechanisms.[11]

It is fair to say there are promising applications for financial account statistics – especially, as countries try to get a better grip on how to manage the way national financial systems perform in a global international environment. Moreover, given the growing importance of financial issues facing many countries around the world, often simultaneously, the analysis of these accounts in the years to come will likely become more prominent.

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[8] For a history of mainline econometric models' movement into financial representation see Bodkin (1991).

[9] Results from these analyses provide a detailed statistical picture of future financial flows that is closely integrated with the prepared policy position and given to the governing Federal Reserve board.

[10] Their comparison of Canadian data to that used in Hendershott's study of the American financial system indicate that the quality of Canadian data is comparable to that produced in the United States.

[11] One such model by Marwah and Klein (1983) was designed to explain international capital flows and foreign exchange rates among six major countries. In this model, the net capital flows were separated into nine transaction-type categories that closely parallel those in flow of funds accounts. Structural equations laid out the causal variables determining each capital flow and exchange rate for a country. Based on their results, they concluded that the structural approach through dis-aggregated capital flows was quite useful in predicting the exchange rate, especially in the short run.

iii) Origin of Financial Accounts

Many of the characteristics summarized in the next section of this paper are a function of institutional arrangements covering data collection specific to a country. Of the twelve OECD countries, central banks are responsible for producing these accounts in two-thirds - France, Germany, Japan, Mexico, the Netherlands, the United Kingdom, and the United States. Statistical agencies are responsible for their production in Australia, Canada, Finland, and Sweden.

The responsibility of statistical production in a country represents the demand for such accounts, as well as the organization of its statistical agency. For instance, in Germany the central bank began to develop these accounts in the 1950s because of its specific economic functions and the initially favourable conditions for the collection of statistics (Deutsche Bundesbank, 1998). Meanwhile, in Canada the statistical agency began developing these accounts in the 1960s. Centralized statistical agencies, as is the case Canada, tend to produce financial accounts, given its inherent role in collecting statistical information on all aspects of activities for the whole country. There are a number of advantages to such an integrated system of national statistics; two are the efficient organization of its human resources and its ability to obtain general recognition as producer of data (single source for all data). In principle, one of the primary goals of central banks is to regulate the money supply with the use of monetary policy, while statistical agencies are responsible for the collection, compilation, and publication of statistics. Broadly speaking, these differing roles can lead to various characteristics in the way countries produce their data.

Source of Information

An OECD Working Group on Financial Statistics provides a forum for experts from various countries to exchange views and expertise on issues related to the financial accounts. Thereby, helping to promote international harmonization.

In 1996, as part of the work of this group, Canada initiated a survey to record the characteristics of financial accounts in OECD countries. The structure of the survey was relatively simple, yet it provided valuable information. At that time, it was decided to repeat the exercise at a future date. In 1999, the survey was conducted a second time. The results of these OECD surveys act as a basis for much of the comparative analysis in the next section.

III. Characteristics of Financial Accounts

This section examines seven characteristics of Financial Accounts – ranging from the type of accounts available to their degree of integration with other statistics on the economy.

i) Availability of Data

Most OECD countries produce statistics for one or more components of the financial accounts. Financial flow and financial level accounts are the most common. The full balance sheet, which adds non-financial assets to financial levels, has a somewhat lower availability rate across countries. Overall, there has been substantial progress in the development of financial accounts in recent years. As of 1999, out of 29 OECD countries one-fifth, or 6 countries, did not produce financial account statistics at any level. Of these countries, development work is currently underway in four - Denmark, Greece, Ireland, and Turkey – while New Zealand and Switzerland did not indicate any specific plans.

Each of the twelve selected countries compiles at least one component of the financial accounts (Table 1). All twelve countries produce both the financial flow and financial level accounts. However, five of the twelve do not produce a complete balance sheet. Two of which, Finland and the Netherlands indicate there is work in progress, but the response for other three – Germany, Italy, and Japan – suggest that there are no immediate plans to produce such accounts. The stock/flow reconciliation account is currently being produced in three countries: France, Japan, and the Netherlands. This may change in the future, since six countries have indicated work is in progress.

Table 1. Availability of Financial Account Components

Country	Financial Flow Accounts	Balance Sheet Accounts		Stock/Flow Reconciliation
		Financial Levels	Full Balance Sheets	
Australia	Y	Y	Y	W
Canada	**Y**	**Y**	**Y**	**W**
Finland	Y	Y	W	N
France	Y	Y	Y	Y
Germany	Y	Y	N	W
Italy	Y	Y	N	N
Japan	Y	Y	N	Y
Mexico	Y	Y	Y	N
Netherlands	Y	Y	W	Y
Sweden	Y	Y	Y	W
United Kingdom	Y	Y	Y	W
United States	Y	Y	Y	W
Total (12)	**12**	**12**	**7**	**3**
Total (29) OECD	**19**	**19**	**13**	**4**

** **Note:** a "W" indicates work in progress.*

Sector coverage has improved over time. A great majority of the countries provide full sector breakdowns and cover the four main sectors of the economy – households, corporations, governments and non-residents – as recommended by international manuals. There are, however, exceptions. For instance, neither the United Kingdom nor France cover the foreign sector in their balance sheet accounts, while Mexico does not cover the household sector in its financial level accounts and only covers the government sector in its balance sheet accounts. In the United States, balance sheet and reconciliation accounts are currently under development for the financial and government sectors; these are expected to be available later this year.

Seasonally adjusted flow of funds statistics have been available in the United States for some time and they, along with Canada, are the only countries that publish data on this basis.[12] The method of seasonally adjusting financial account statistics is not well established, both in terms of assessing such an adjustment's overall quality and the presence of an identifiable seasonality.

ii) Length of Time Series

In a number of countries financial accounts have been in existence for more than forty years – the United States, Germany, France, Germany, and Canada (Charts 2 and 3). At the same time, there are several countries whose accounts were developed only recently. Accounts that have been in existence prior to the 1970s can generally be distinguished from those created later, since the earlier ones have had more time to develop into a complete system. The first year of availability of financial flow data and balance sheet data is usually close in proximity for most countries. The exceptions are France (1953 vs. 1969), the United Kingdom (1963 vs. 1984), and the Netherlands (1977 vs. 1995). In general, financial level accounts have preceded the development of full balance sheet accounts.

Chart 2. Financial Flow Accounts: Length of Time Series

United States		France			United Kingdom		Mexico			Finland	
1946	1950	1953	1954	**1961**	1963	1970	1975	1977	1989	1992	1997
	Germany		Japan	**Canada**		Sweden		Netherlands	Australia		Italy

Chart 3. Balance Sheet Accounts: Length of Time Series

United States		Japan		France			United Kingdom			Netherlands	
1945	1949*	1954*	**1961**	1969	1977	1980	1984	1989	1992*	1995*	1997*
	Germany		**Canada**		Mexico	Sweden		Australia	Finland		Italy

*Note: * Indicates a country only produces partial balance sheet accounts.*

[12] In the case of Canada, a subset of the financial flow accounts has been produced on a seasonally adjusted basis since 1987.

The United States has the longest comparable historical series starting in 1945. Some other countries, such as France, have historical data but with breaks in series. This discontinuity in statistical series is due to things such as the implementation of new standards. For instance, in 1999 Japan introduced a new basis for the financial flow accounts starting with the figures for 1999. This revision will implement the methodological standards recommended by the SNA93. As the below comment indicates, the new accounts were designed to help users derive the maximum benefit:

> 'The objective was to create statistics that are simpler to use, offer greater consistency with the national accounts and make international comparison easier.' (Bank of Japan, 1999)

In recent years, there has been a trend towards international harmonization. Beginning in 1990, the financial account statistics for Germany were constructed with a new methodology and are, therefore, not comparable with the historical series (OECD, 1999). This change was due to the unification of Germany in the early 90s. Prior to 1995, the United Kingdom's system of classification of financial transactions was unique and not readily comparable to international standards. It evolved in this way for two reasons: first because the system was established in the late 1950s before the international systems were agreed upon; and secondly because of a desire to link it clearly to important policy aggregates, such as the money supply (Turnbull, 1993).

Similar to time series starting dates, development dates vary widely across countries – although, most countries backdate new component accounts to the first year of its other accounts.[13] In Canada, for example, all financial account statistics are available from 1961, yet the financial flow accounts were developed in the 1960s and the national balance sheet accounts followed in the 1970s (partial balance sheet) and 1980s (full balance sheet).[14] Development work on stock/flow reconciliation accounts has occurred in many OECD countries in the 1990s. As a relative new-comer to the SNA, the length of time series for the handful of countries, which produce these accounts, is rather short: Japan (1998), the Netherlands (1995), and France (1970).[15]

iii) Frequency of Releases

In terms of data frequency, the majority of countries produce quarterly financial flow and financial level accounts (Table 2). Three countries produce these accounts annually, as well as quarterly (France, Sweden, and the United States). Meanwhile, four countries – Finland, Germany, Mexico, and the Netherlands – only produce annual financial flow accounts. Quarterly balance sheets are not produced in any country, but Canada has made some progress in this area with data captured, but not published. Stock/flow reconciliation accounts are compiled on an annual basis in four countries (France, Japan, Sweden, and the United States) and work is currently underway in Australia to produce a quarterly reconciliation account.

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[13] Development dates refer to the first year in which data *became* available versus length of time series, which indicate the first year in which data *are* available.

[14] In the balance sheet accounts, national wealth data begin in 1926.

[15] As far as Canada is concerned, complete stock/flow reconciliation accounts (consistent with the United Nations 1978 provisional guidelines) were compiled in 1985, on an experimental basis, and summary results were released at that time. Work is currently ongoing in this area.

Table 2. Frequency of Data Releases				
Country	Financial Flow Accounts	Balance Sheet Accounts		Stock/Flow Reconciliation
		Financial Levels	Full Balance Sheets	
Australia	Q	Q	A	(Q)
Canada	**Q**	**A/(Q)**	**A/(Q)**	**..**
Finland	A	A	..	..
France	A/Q	A/Q	A	A
Germany	A	A	..	..
Italy	Q	Q	..	..
Japan	Q	A/Q	..	A
Mexico	A	A/Q	A	..
Netherlands	A	A	..	..
Sweden	A/Q	A/Q	A	A
United Kingdom	Q	Q	A	..
United States	A/Q	A/Q	A	A
Total (quarterly)	**8**	**9**	**1**	**1**

** **Note:** A = Annual; Q = Quarterly; 'Work in Progress' indicated by brackets*

iv) Timeliness of Releases

The timeliness of data releases is an important factor when one wants to analyze current economic events. The amount of time after the reference period it takes to release the data varies substantially across countries and between various components of financial accounts (Table 3). Seven, or slightly more than half, of the twelve countries release their financial flow data within 16 weeks, while the other five countries have a median of 24 weeks. Canada's financial flow data are released with the shortest time lag, at 8 weeks after the reference period, however its balance sheet accounts fall to within 12 weeks. In the United States data from the financial flows, partial balance sheets, and full balance sheets are all released 9 weeks after the reference period. Next, in terms of timeliness, are the United Kingdom and Sweden, which release their financial flow accounts with a 12-week time lag. On the other end of the spectrum is the Netherlands, which releases their data with an 80-week time lag; followed by Finland at 43 weeks. Differences in timeliness of accounts across countries reflect, to some extent, source data constraints.

Table 3. Timeliness of Data Releases *in weeks, following the end of the reporting period*				
Country	**Financial Flow Accounts**	**Balance Sheet Accounts**		**Stock/Flow Reconciliation**
		Financial Levels	**Full Balance Sheets**	
Australia	13	13	24	-13
Canada	**8**	**12**	**12**	**..**
Finland	43	43	..	..
France	16	16	16	16
Germany	20	20	..	..
Italy	22	22	..	..
Japan	24	24	..	52
Mexico	16	29	23	..
Netherlands	80	80	..	..
Sweden	12	12	60	60
United Kingdom	12	12	28	..
United States	9	9	9	9
Median	**16**	**20**	**24**	**16**

v) Primary Sources

The use of primary and secondary sources in compiling financial account statistics varies substantially across countries (Table 4). Overall, the utilization of source data primarily for financial accounts is quite low. Of the four main institutional sectors listed, the non-bank financial intermediaries' compilation has the most significant proportion of data used primarily for preparing the financial accounts; followed by the domestic non-financial sector. The government sector, on the other hand, is compiled with the least amount of primary sources. Two countries, Australia and Mexico, are the only ones that compile data primarily for the financial accounts. Germany and the United States, on the other hand, use only secondary data for compiling their accounts.

iv) Integration with other statistics

The integration of financial accounts with other accounts is generally encouraging in most countries. On average, they are more tightly integrated with the national income accounts than the balance of payments accounts. This integration can be observed in terms of conceptual issues (such as, sectorization and accounting rules) and work-related issues (such as, production and development). In general, countries' financial accounts tend to be more integrated with these other accounts on conceptual issues rather than on work-related issues. This is likely due to different organizational structures and jurisdiction for the SNA component accounts across the countries.

Germany, Canada, and the United Kingdom are almost fully integrated with the other accounts. For work-related issues, the United States' financial accounts are not integrated with the other two accounts; however, they have achieved partial integration in developmental work with the national income accounts.

Table 4. Primary Sources used for compiling Financial Accounts				
Country	**Banks and other depositories**	**Non-bank financial intermediaries**	**Domestic non-financial sectors**	**Government**
Australia	Y	Y	Y	Y
Canada	**N**	**Y**	**Y**	**N**
Finland	N	Y	N	N
France	P	N	Y	N
Germany	N	N	N	N
Italy	N	N	Y	N
Japan	N	Y	N	N
Mexico	Y	Y	Y	Y
Netherlands	Y	Y	N	N
Sweden	P	P	P	N
United Kingdom	N	Y	Y	N
United States	N	N	N	N
Total (Yes)	**3**	**7**	**6**	**2**

***Note:** Y = Yes, primary sources are used; N = No, primary sources are not used; P = partial*

iiv) Dissemination practices

Data dissemination practices are of utmost concern to analysts who need to be able to access the information in order to explore its usefulness. Each of the twelve countries under review disseminates their financial accounts on paper and all except Finland also produce an electronic edition.

The Internet is the newest medium currently being utilized in many countries. An Internet site, which contains up-to date information, will open the door to analysts from around the world to particular information within a country. For instance, financial account statistics will be accessible from a multitude of countries allowing for quick international comparisons or individual country investigations. Seven out of twelve countries have indicated that their financial account statistics are available on the Internet (these include: Australia, Finland, Germany, Italy, Japan, Mexico, the Netherlands, the United Kingdom, and the United States), however in the majority of cases only summary aggregates are available. Moreover, often one finds obstacles, such as language barriers, that prevent easy access to the information. The United States has the most extensive Internet presence in terms of detail available on their financial accounts. Canada, meanwhile, is currently working to increase the presence of financial account statistics on their site.

The final section illuminates the importance of financial account statistics by analyzing a few key indicators that highlight recent economic events in G7 countries.

IV. International Comparisons in G7 Countries

Government Debt

In many G7 countries, government deficits ballooned during the 80s. By the end of 1990, debt-to-GDP ratios for G7 countries averaged 57% compared to 46% in 1982. Italy's government debt-to-GDP was among the highest and reached 105% in 1990. The United Kingdom, on the other hand, had the lowest rate of 39%.

This trend in government deficits continued for most of the 1990s and the average debt-to-GDP ratio for G7 countries rose as a result – reaching 78% in 1998. Chart 4 illustrates that each of the G7 countries' debt-to-GDP ratios increased over this period. The Japanese government's attempts to stimulate its economy during the 1990s left it with a large public debt. By 1998, it had a debt-to-GDP ratio of 97% – an increase of more than 50% from 1990. Italy and Canada also had high government debt-to-GDP ratios in 1998, 120% and 90%, respectively.

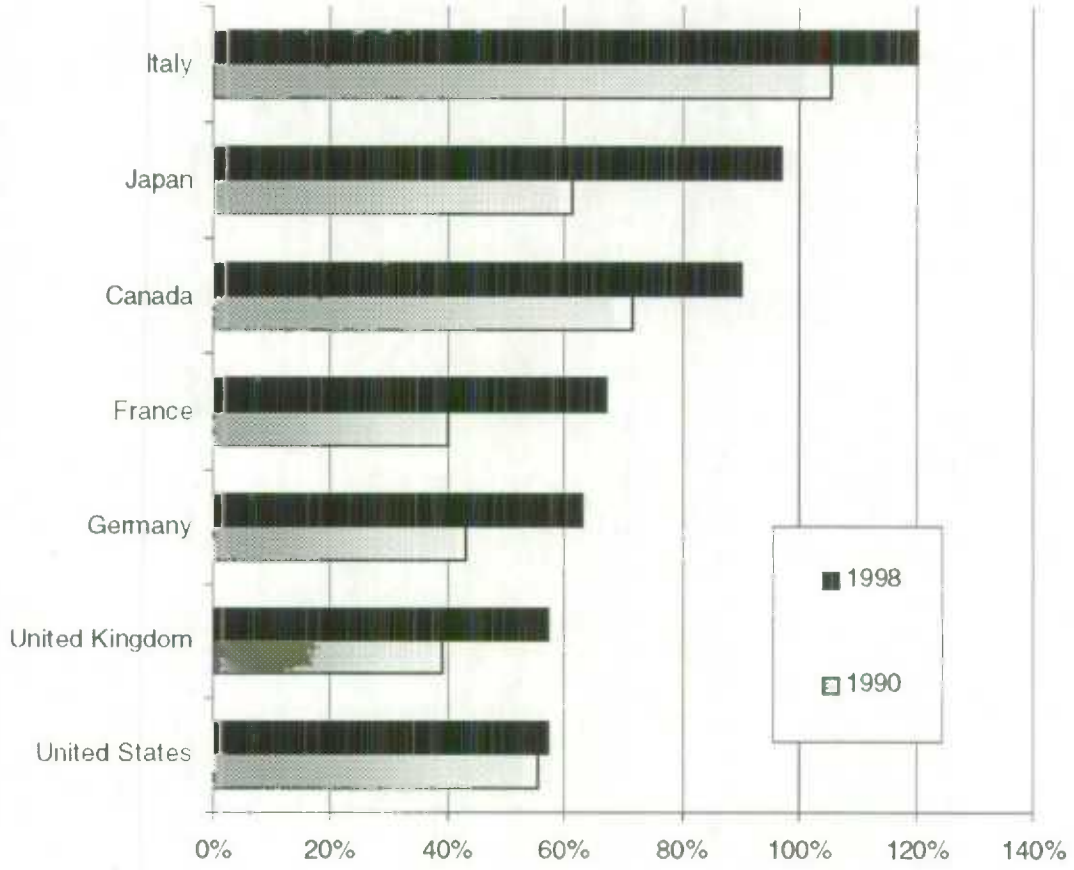
Taming of government deficits began to take place in the 90s, as governments took action to get their fiscal houses in order. Like many other countries, the Canadian government has placed debt reduction high on its priority list. For example, the 2000 Budget committed the federal government to keeping the level of debt - in relation to its annual income - on a permanent downward track. It will do so by enacting balanced budgets or better in 2000-01 and 2001-02.

The large debt accumulation in many countries involves several issues, including; the amount of debt held internally, the room for government fiscal policy, the potential burden on future generations, and the type of assets held by government. The impact on households of large public debt has been a topic of debate for a number of years.[16]

[16] A few economists theorize that deficit spending is offset by an equal increase in personal saving – this concept is referred to as the Ricardian equivalence theorem (McConnell, 1996). In other words, households spend less today – save more – in anticipation of having less future after-tax income, due to the repaying of the public debt. Although, research continues on this theory, the large budget deficits of the 1980s in many countries were accompanied by declines not increases – in household saving rates.

Chart 4. Government Gross Debt in G7 Countries, 1990 & 1998

as a percentage of nominal GDP



Source: OECD, 1999

Household Saving

One of the most closely watched time series is household saving. Changes in household saving have important macroeconomic implications, due to the fact that it is typically the most important source of funds for an economy. Household saving and its ratio to disposable household income - the household saving rate - is also central to economic modelling and forecasting, reflecting past and probable consumer responses to economic conditions.

Household saving rates in North America have fallen significantly behind the other five G7 countries. Indeed, Canada's rate experienced the largest drop over this period, from 11.5% in 1990 to 1.2% in 1998 (Chart 5). Households in France, on the other hand, maintained their thriftiest over this period – saving 14.1% of their after-tax income in 1998.

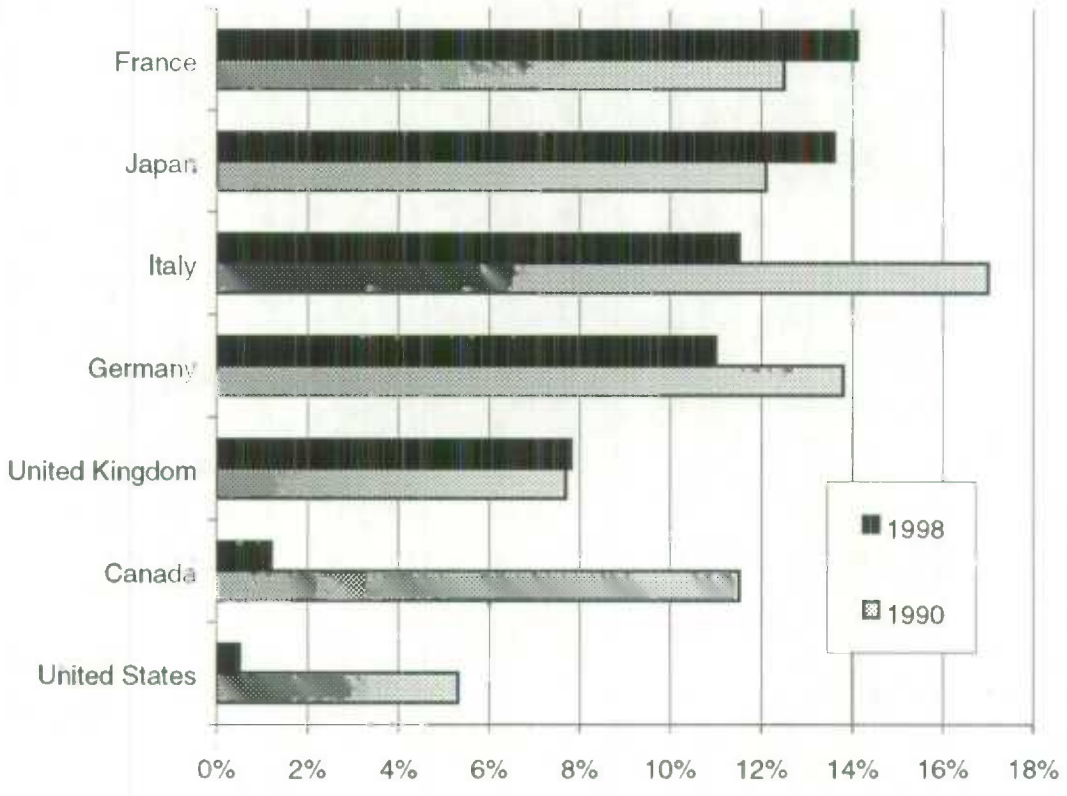
Japanese households ranked second and squirreled away 13.6% of after-tax income in 1998. In contrast, Americans saved less than 1% of their income in 1998, down from

5.3% in 1990. There are several reasons for this. One possible reason is that Americans are feeling much wealthier thanks to higher share prices, and so they feel less need to save. Another reason may be due to the demographics of America, as its baby-boom generation begins to retire there is a greater chance of experiencing dissaving. In fact, the OECD predicts the United States' household saving rate to be –1% in 2000. As far as definitions are concerned, the calculations depend on the treatment of consumer durables, private pensions and life insurance payments. Adjusting for such factors, according to one source, reduces the gap by approximately 3 percentage points (Economist, 1997).

Saving rates alone do not tell the whole story. There are wide variations of household savings across countries - on the high-end there is France (14.1%), Japan (13.6%), and Italy (11.5%) and on the low-end there is the United States (0.5%) and Canada (1.2%). Given the similar demographic dynamics of these countries – all experienced a baby boom after World War II – one might expect to observe similar saving patterns. However, this is only one aspect of a country's savings rate. Data from the financial accounts can be used to provide additional insight into the composition of savings. To better understand household saving one could also examine: household debt and net worth.

Chart 5. Household Saving in G7 countries, 1990 & 1998

as a % of disposable household income



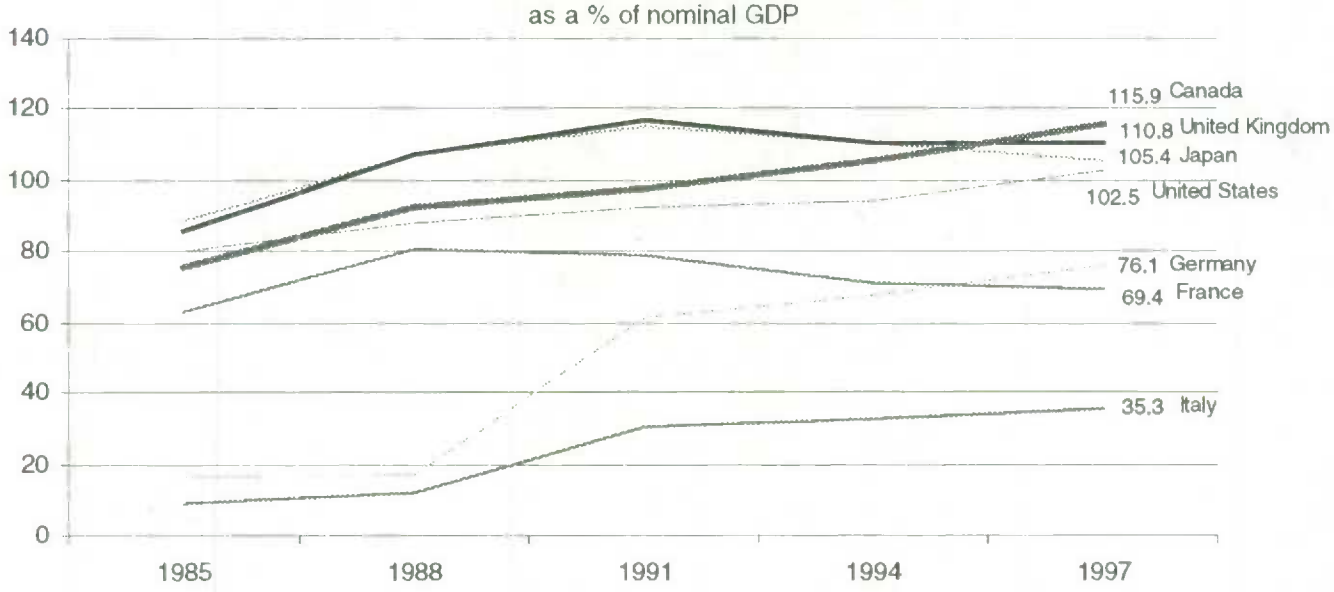
Source: OECD, 1999

Household Debt

Household debt, as a proportion of household disposable income, has risen substantially in most G7 countries over the last fifteen years (Chart 6).[17] Household debt for G7 countries was, on average, 20% higher in 1997 compared to 1985. In 1997, Canadian households owed the largest amount of debt (115.9% of disposable income) followed by the United Kingdom (110.8%) and Japan (105.4%). This spiralling debt has increased the cost to maintain it – resulting for some in credit card delinquencies, overdue mortgage payments, and consumer bankruptcies. However, interest rates in the 90s were lower than in the 80s, so in a sense a higher level of debt may not necessarily be more substantial.

Chart 6. Household Debt in G7 Countries, 1985 - 1997

as a % of nominal GDP



Source: OECD, 1999

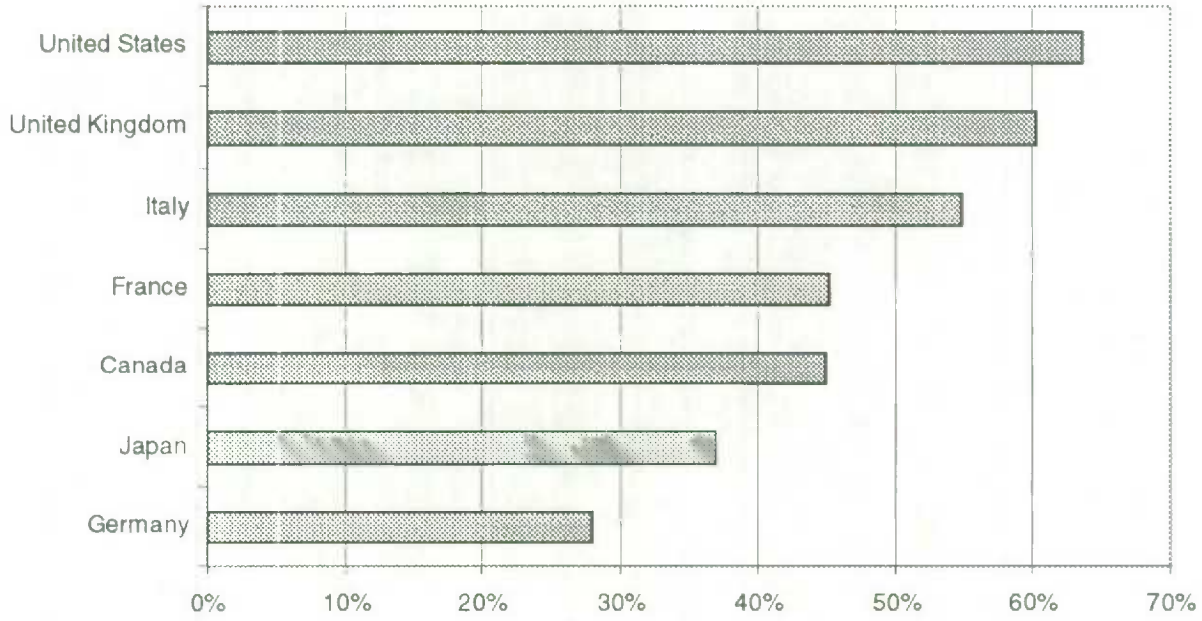
Household Net Worth

Household net worth, on the other hand, has increased in the majority of G7 countries. Net worth is the sum of net financial worth and non-financial assets. According to OECD data, four G7 countries' household net worth, as a percentage of household disposable income, increased between 1990 and 1997 (Canada, the United States, France, and Italy), while it decreased in three (Japan, Germany, and the United Kingdom). Japanese households, in particular, lost more than 25% of their net worth over this period. Households in Canada and the United States faired better and were net gainers by more than 20%. A clear influence on the wealth of households in recent year has been the tempo of financial asset accumulation.

[17] Household debt is defined as total liabilities less trade payables.

Chart 7. Household Net Financial Worth in G7 Countries, 1997

as a % of Household Net Worth



Source: OECD, 1999

The breakdown of household financial assets as a proportion of household worth for G7 countries in 1997 shows that Americans hold much of their wealth in the form of financial assets - more than 60% of household net worth (Chart 7). This is quite high, especially if one compares this to German households' whose financial assets consist of only 27% of net worth. For nations that experienced an increase in household net worth between 1990 and 1997, the catalyst for much of this growth were financial assets. In Canada, between 1990 and 1997, household net worth, as a percentage of household disposable income, grew 21%, followed by the United States (17%), France (17%), and Italy (9%). Japanese households, whose net worth plunged during the 1990s (-27%), experienced no change in net financial wealth, as a percentage of household disposable income, over this period.

This section endeavoured to depict recent economic events in G7 countries, by highlighting a handful of key indicators. Certainly, a number of factors can be considered, but one thing is for sure - exploring the financial accounts can illuminate many relevant issues.

IV. Summary and Conclusion

As globalization and the convergence of financial markets continue, the analysis of these accounts in the years to come will likely become more prevalent. As of 1999, four-fifths of all OECD countries produce financial account statistics at some level. Financial accounts can be used to investigate a wide range of financial issues within national economies. The analytical power of these accounts stems from their ability to observe the financial behaviour of economic sectors and to follow their impact to non-financial activity. Another important feature of these accounts is the portrayal of financial institutions' role as intermediaries between ultimate borrowers and ultimate lenders.

The paper reviewed the state of financial accounts in twelve OECD countries. In three-quarters of these countries, central banks are responsible for their production. Canada, in fact, is the only G7 country where responsibility lies with the statistical agency. Ideally, all countries would produce a similar set of statistics, but in reality they come from different sources, under different administrative structures, and different time frames. Several key characteristics of these accounts were examined in the paper and the basis for much of the comparative analysis came from two OECD surveys. The summaries are:

a) In terms of **availability of data**, each of the twelve selected countries produces at least one component account – the most common being the financial flows and financial levels. About half the countries still do not produce full balance sheet accounts, which add non-financial assets to the financial levels. The stock/flow reconciliation account is a recent addition to the SNA and is designed to reconcile financial flow transactions with balance sheet changes. Currently, reconciliation accounts are only prepared in three countries: France, Japan, and the Netherlands.

b) The **length of time series** varies significantly across countries. Although the financial accounts are relatively new to the statistical world, these accounts have been in existence for more than forty years in a number of countries. The United States, and Canada, have the longest comparable historical series starting in 1945 and 1961, respectively. Other countries, such as France, Japan, Italy, and Germany, have historical data but with breaks in series.

c) The **frequency of data releases** across countries are either annual, quarterly, or both. Three-quarters of the countries produce quarterly financial flow and financial level accounts. For the seven countries producing full balance sheets, compilation is done on an annual basis. Four countries – France, Japan, Sweden, and the United States – produce annual reconciliation accounts.

d) **Timeliness of data releases** is an important factor to analysts. Slightly more than half of the selected countries release their financial flow data within 16 weeks and the rest take considerably longer. Canada's financial flow data are released with the shortest time-lag, at 8 weeks after the reference period, however its balance sheet accounts fall to within 12 weeks. In the United States, data for all three accounts are released 9 weeks after the reference period. The Netherlands has the longest time-lag at 80 weeks; followed by Finland at 43 weeks. The length of time it takes to release the data is often reflective of source data constraints.

e) The use of **primary sources** in the compiling financial accounts is, on average, quite low across countries. In general, the government sector is prepared with the least

amount of primary sources, while the non-bank financial intermediary sector is prepared with the most. Australia and Mexico, prepare their accounts entirely with primary sources, while Germany and the United States use only secondary sources.

f) The **integration** of financial accounts are generally more tightly fitted with the national income accounts than the balance of payments accounts. Moreover, this integration tends to be more prevalent in terms of conceptual issues rather than work-related issues for many countries. This is likely due to different organizational structures and jurisdictions for the SNA accounts across countries. Accounts in Canada, Germany, and the United Kingdom are almost fully integrated with other SNA accounts.

g) **Dissemination practises** are a key aspect to a country's financial accounts, since analysts need to be able to access the information. Every country disseminates their data on paper, and all except one provide an electronic version. The newest medium currently being utilized in many countries is the Internet. A number of countries indicate data is available on their web-sites, but usually only summary aggregates are available. At present, the United States has the most extensive Internet presence in terms of detail available on their financial accounts.

The final section of the paper used financial account data to delve into issues of government debt and household balance sheets in G7 countries. Government deficits ballooned in most countries during in the 1980s. This trend in government deficits continued for most of the 1990s. Over this twenty year period, the average debt-to-GDP ratio for G7 countries rose substantially from 46% in the early 80s to 78% in 1998.

The impact of these public debt levels on households is debatable. Nevertheless, there are several issues to consider, including: the amount of debt held internally, the ability of government to enact proper fiscal policy, the type of government spending, and the effect on interest rates and investment. These increased public debt levels in the 90s were generally accompanied by decreases in household saving rates.

Household saving rates in North America have fallen significantly behind the other five G7 countries. For example, Japanese households saved 13.6% of their after tax income in 1997 compared to 0.5% by American households. There are many reasons for this. One possible reason is that Americans feel much wealthier thanks to higher share prices - American households held more than 60% of their wealth in the form of financial assets in 1997, while Japanese households held less than 40%. Another reason concerns the definitions used in the two countries. The calculations depend on the treatment of consumer durable, private pensions and life insurance payments. Adjusting for such factors, according to one source, reduces the gap by approximately 3 percentage points. Other influencing factors include household debt and net worth, both of which have increased in most G7 countries over the last several years.

In summary, understanding the various elements of financial accounts across countries will, in turn, enhance the usefulness of these data in monitoring global economic situations. There is a real need for additional development of these accounts in order to decipher relevant issues - in particular, the challenges of measuring new financial instruments. Progress along these lines with enable a better assessment of financial vulnerabilities within a country. The wealth of information contained in these accounts is likely to be further exploited in the future as financial markets continue to converge.

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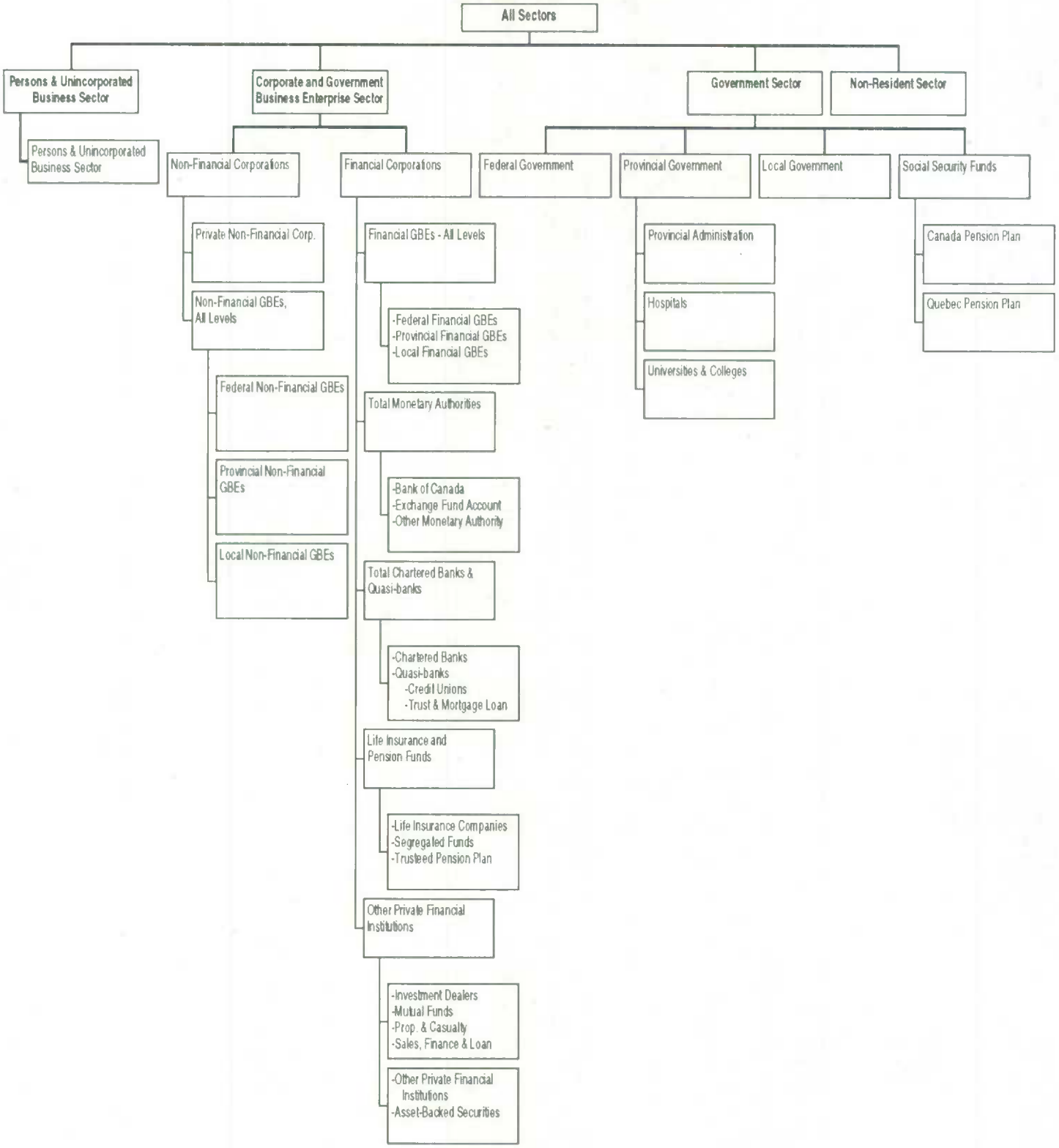
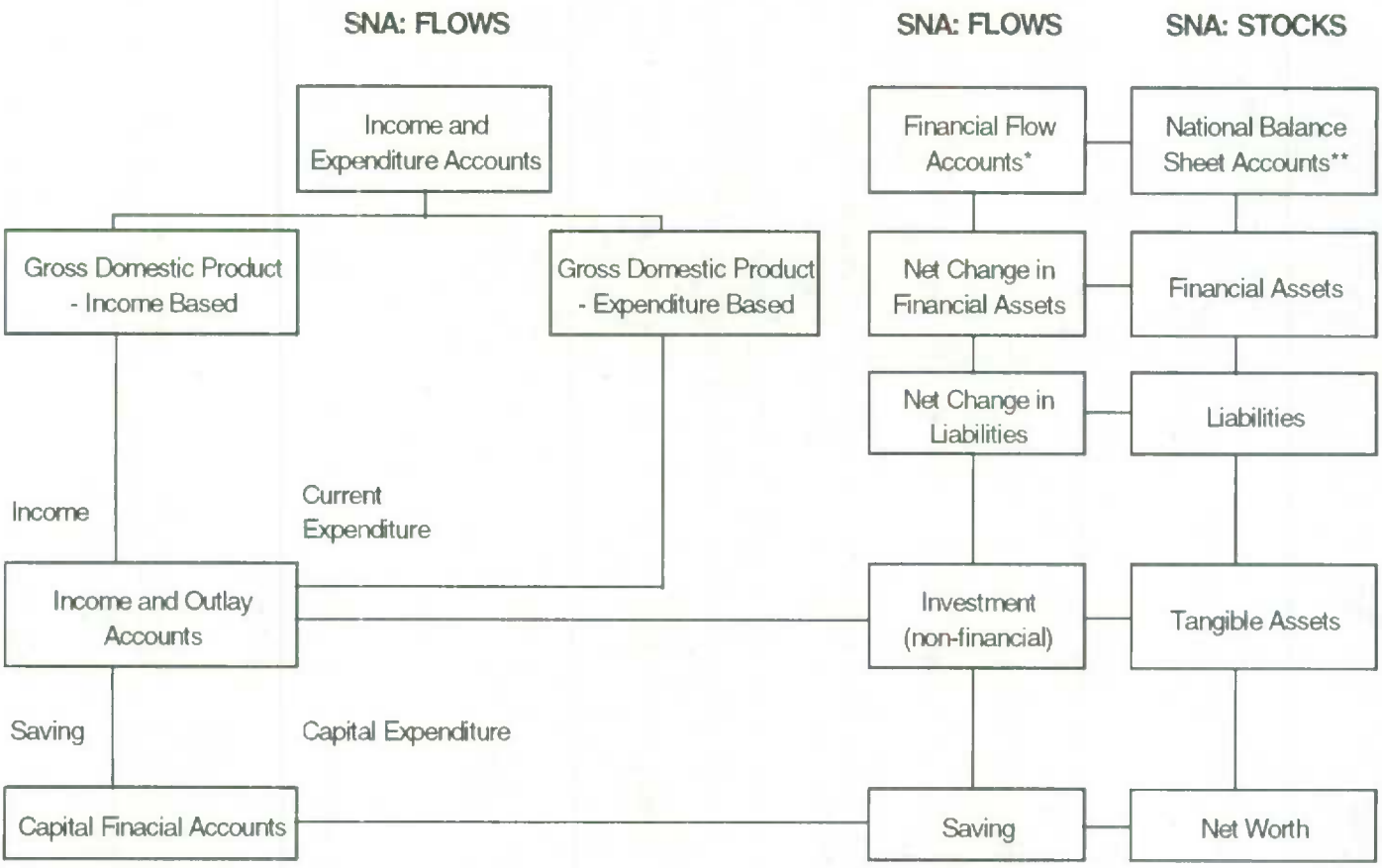
Appendix I
Sectoral Aggregations of the Canadian Financial Accounts



Source: Balance of Payments and Financial Flows Division, Statistics Canada

Appendix II

System of National Accounts (SNA):
Relationship between the Income and Expenditure Accounts, Financial Flow Accounts, and the National Balance Sheet Accounts



* Includes the Balance of Payments as the Rest of World Sector.
** Includes the International Investment Position as the Rest of World Sector.

Source: Statistics Canada, 1989b