The Balance of Payments

A fundamental part of the analysis of international finance is associated with the concepts embedded in what is termed the balance of payments. The first part of our discussion will focus on the definition of the concept itself. Later we will put the concepts to work to understand the underlying forces driving the international macroeconomy.

- The Balance of Payments (BoP) records a country's transactions with the rest of the world (RoW) during a year or quarter or month. Conceptually it is a flow transaction dimensionally similar to economic variables like GDP, GNP, Investment, Consumption and so forth.
  There are two important types of transactions:
  -Those associated with the exchange of goods and services, and
  -Those associated with the exchange of assets
- The BoP is a system of accounts that use double entry bookkeeping. This means that every transaction is recorded twice: once as a credit (+) and once as a debit (-) and they have to be equal to each other. While it may sometimes be confusing and there are unquestionably some intricate and arcane rules for describing certain transactions, nonetheless in general:
- a transaction that gives rise to a receipt of money from foreigners is recorded as a credit. How does this happen? It comes from a sale of a good or service or the sale of an asset. The flow of money is from the foreigners to the domestic residents and is a credit in the BoP. If money flows to foreigners, say from the purchase of goods or services or financial assets, then the transaction is recorded as a debit. So the flow of money is the key part of the description of the transaction.

Most broadly, the Balance of Payments is divided into three sub-accounts.

- The Current Account (CA)
- The Financial Account (FA)
- The Capital Account (KA)

Because of the construction of the BoP accounts, the sum of the Current Account plus the Financial Account and the Capital Account is identically zero:

$$CA+FA+KA\equiv 0.$$

However, we will tend to ignore the capital account and focus instead on the current account and the financial account. This is because the capital account has been reserved for relatively specialized transactions that are not particularly important at our level of analysis. In what follows you might simply think of the capital account as always being equal to zero.

The Current Account

- The Trade Balance
  - The Merchandise Trade Balance: Exports of Goods less Imports of Goods
  - The Service Balance: Exports of Services less Imports of Services

- The Balance of Net Factor or Investment Income
- The Net of Unilateral Transfers

The Financial Account

- The Change in Domestically owned Foreign Assets arising from
  - Foreign Direct Investment
  - Portfolio Investment

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Consider some transactions to see that the balance of payments is always zero as an accounting exercise.

1. Purchase a Great Wall Chinese made computer and pay for it with a cheque of $2,000. The purchase means that notionally money flows out of Canada and therefore there is a debit in the Canadian current account. Your cheque is deposited into a Chinese owned Canadian dollar account in Vancouver City Credit Union. This means that VanCity has sold a Canadian asset, a deposit, and the Great Wall Chinese Computer Company has acquired an asset. This is recorded as a $2,000 credit in Canada's financial account.

2. Suppose you buy newly issued shares in Apple Computer for $1,000. If you purchase them from Apple, who deposits your cheque into a CIBC account, then since money is flowing out, your purchase gives rise to a debit in the financial account as you now own more Apple shares. Apple has purchased a deposit at CIBC so it is recorded as a credit.

Although there are amazingly complicated stories associated with the flows of funds, as the two examples above indicated, if we ignore the capital account (as it is small):

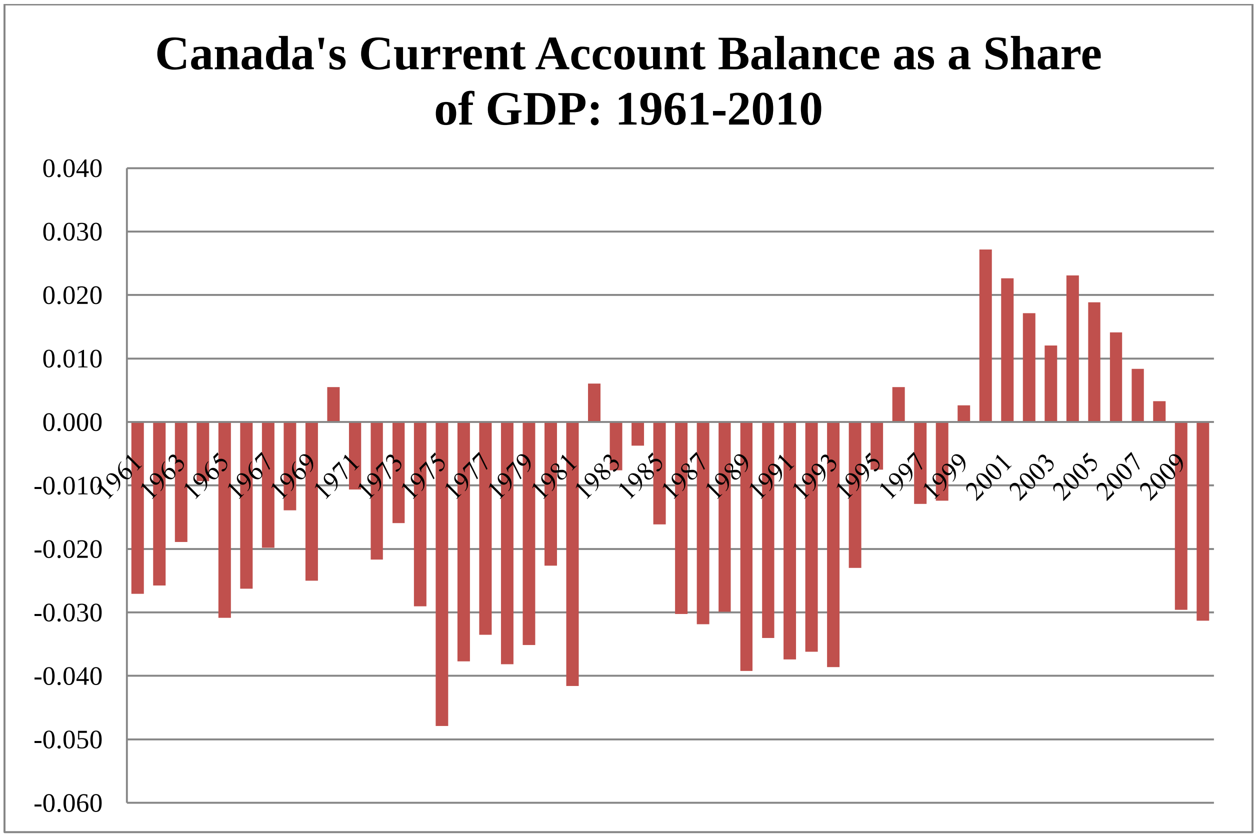
$$CA+FA\equiv 0 \text{ or } CA=-FA$$

Canada's balance of international payments
(Current account)

	2006	2007	2008	2009	2010
			$ millions		
Current account					
Total receipts	**598,428**	**619,352**	**642,271**	**501,880**	**547,141**
Goods and services	*522,338*	*532,924*	*561,238*	*437,636*	*476,086*
Goods	453,952	463,120	488,754	369,343	404,834
Services	68,386	69,804	72,484	68,292	71,252
Travel	16,458	16,578	16,544	15,547	16,198
Transportation	11,862	11,888	12,188	10,559	12,004
Other services	40,066	41,337	43,751	42,187	43,050
Investment income	66,528	76,931	70,453	55,528	61,794
Direct investments	37,073	42,253	36,258	28,047	37,836
Portfolio investments	17,323	22,082	22,215	19,874	17,376
Other investments	12,131	12,596	11,981	7,607	6,581
Transfers	9,563	9,497	10,580	8,716	9,261
Total payments	**577,938**	**606,580**	**636,995**	**547,116**	**598,005**
Goods and services	*486,866*	*504,277*	*537,825*	*464,508*	*507,844*
Goods	404,345	415,683	443,777	374,081	413,833
Services	82,521	88,593	94,048	90,427	94,011
Travel	23,316	26,511	28,629	27,692	30,464
Transportation	18,509	19,845	21,766	19,239	21,034
Other services	40,695	42,238	43,653	43,496	42,513
Investment income	80,049	90,800	87,655	71,156	78,230
Direct investments	36,856	43,033	40,455	29,828	36,720
Portfolio investments	28,787	30,776	32,716	33,506	35,537
Other investments	14,405	16,991	14,484	7,822	5,972
Transfers	11,023	11,504	11,514	11,452	11,932
Total balance	**20,490**	**12,772**	**5,276**	**-45,236**	**-50,864**
Goods and services	35,472	28,648	23,413	-26,873	-31,757
-Goods	49,606	47,437	44,977	-4,738	-8,999
-Services	-14,135	-18,790	-21,564	-22,135	-22,759
--Travel	-6,858	-9,933	-12,085	-12,146	-14,265
--Transportation	-6,647	-7,957	-9,578	-8,680	-9,030
--Other services	-629	-901	98	-1,310	537
Investment income	-13,521	-13,869	-17,202	-15,628	-16,436
-Direct investments	217	-780	-4,198	-1,781	1,116
-Portfolio investments	-11,464	-8,695	-10,501	-13,632	-18,161
-Other investments	-2,274	-4,395	-2,504	-215	609
Transfers	-1,460	-2,007	-935	-2,736	-2,671

http://www40.statcan.ca/l01/cst01/econ01a-eng.htm

Source: Statistics Canada, CANSIM, tables 376-0001 and 376-0002.



The Canadian current account has always tended to be negative. In fact the recent surpluses have been untraditional. What is interesting about the recent period is that while almost all individual balances display a fall, as a share of GDP, they are well within the range of the past half century. There is still a tendency for the merchandize trade account to be relatively robust although the goods balance fell from +40 to -9 in a year.

Financial and Capital Accounts - Flows

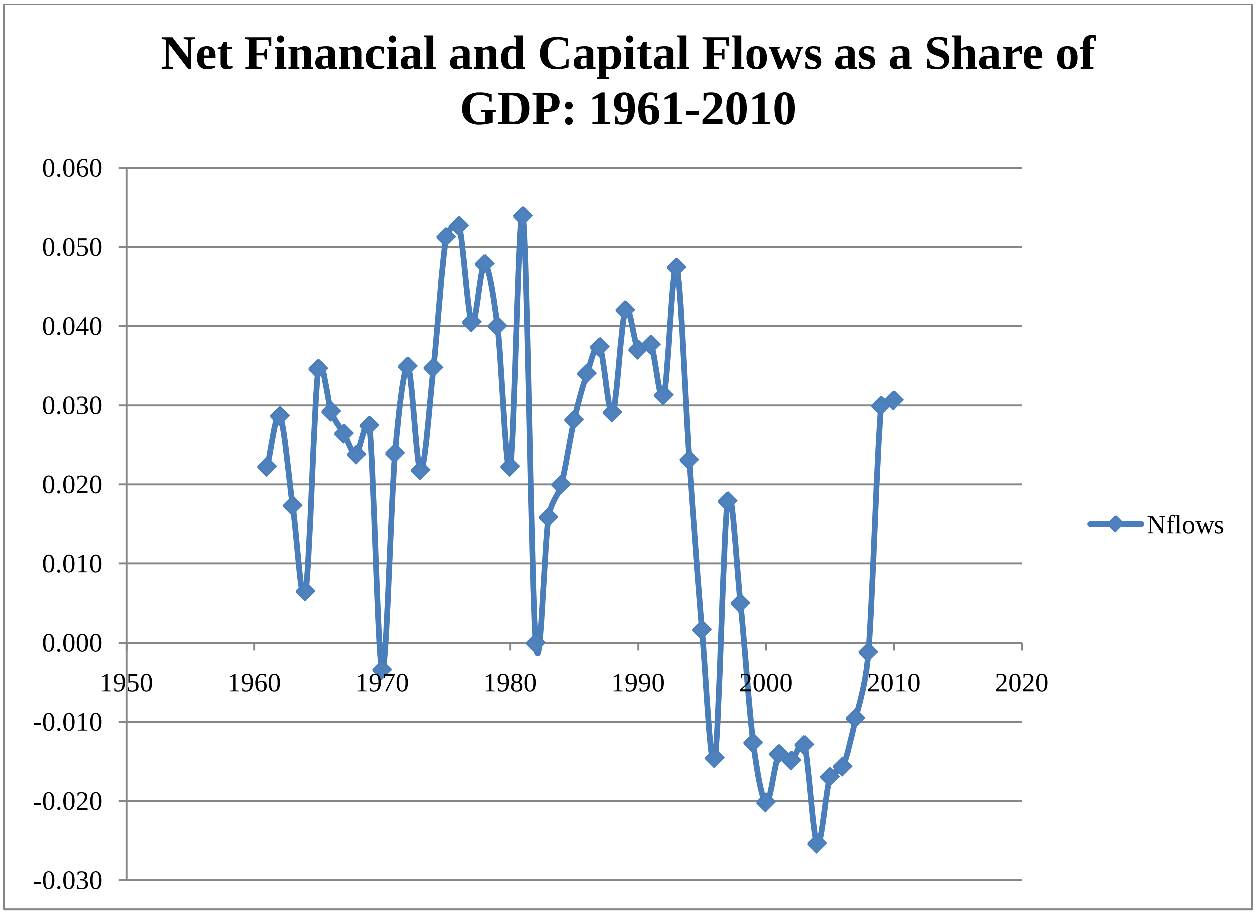
	2006	2007	2008	2009	2010
			$ millions		
Total capital and financial accounts, net flow	**-22,768**	**-14,673**	**-1,971**	**45,750**	**49,707**
Capital account, net flow	**4,202**	**4,233**	**4,579**	**3,830**	**4,758**
Capital account, inflows	4,903	4,996	5,397	5,249	5,452
Capital account, outflows	-702	-763	-818	-1,420	-694
Financial account, net flow[1]	**-26,969**	**-18,906**	**-6,550**	**41,920**	**44,949**
Canadian assets, net flow	*-166,967*	*-177,021*	*-112,995*	*-106,918*	*-106,482*
Canadian direct investments abroad	-52,423	-62,003	-85,143	-47,627	-39,749
Canadian portfolio investments	-78,668	-48,426	11,653	-8,727	-14,535
Foreign portfolio bonds	-43,761	-28,902	14,354	9,030	1,379
Foreign portfolio stocks	-28,107	-30,946	-7,913	-15,911	-13,472
Other Canadian investments	-35,877	-66,592	-39,504	-50,563	-52,199
Loans	-11,819	-10,860	-776	-17,442	-16,424
Deposits	-9,002	-42,198	-38,724	-19,246	-11,761
Official international reserves	-1,013	-4,644	-1,711	-11,618	-3,989
Other assets	-14,043	-8,890	1,707	-2,257	-20,024
Canadian liabilities, net flow	*139,998*	*158,115*	*106,445*	*148,838*	*151,431*
Foreign direct investments in Canada	68,395	123,148	61,010	24,469	24,119
Foreign portfolio investments	31,089	-31,096	31,130	111,498	117,429
Canadian portfolio bonds	16,564	12,042	17,259	84,571	96,112
Canadian portfolio stocks	10,814	-41,994	2,746	26,246	18,179
Canadian money market	3,711	-1,143	11,125	681	3,138
Other foreign investments	40,514	66,062	14,304	12,870	9,883
Loans	19,635	12,617	5,016	-9,659	8,613
Deposits	20,389	48,566	10,495	13,878	125
Other liabilities	491	4,879	-1,206	8,651	1,145
Statistical discrepancy	**2,277**	**1,901**	**-3,305**	**-513**	**1,158**

1. A minus sign denotes an outflow of capital resulting from an increase in claims on non-residents or a decrease in liabilities to non-residents

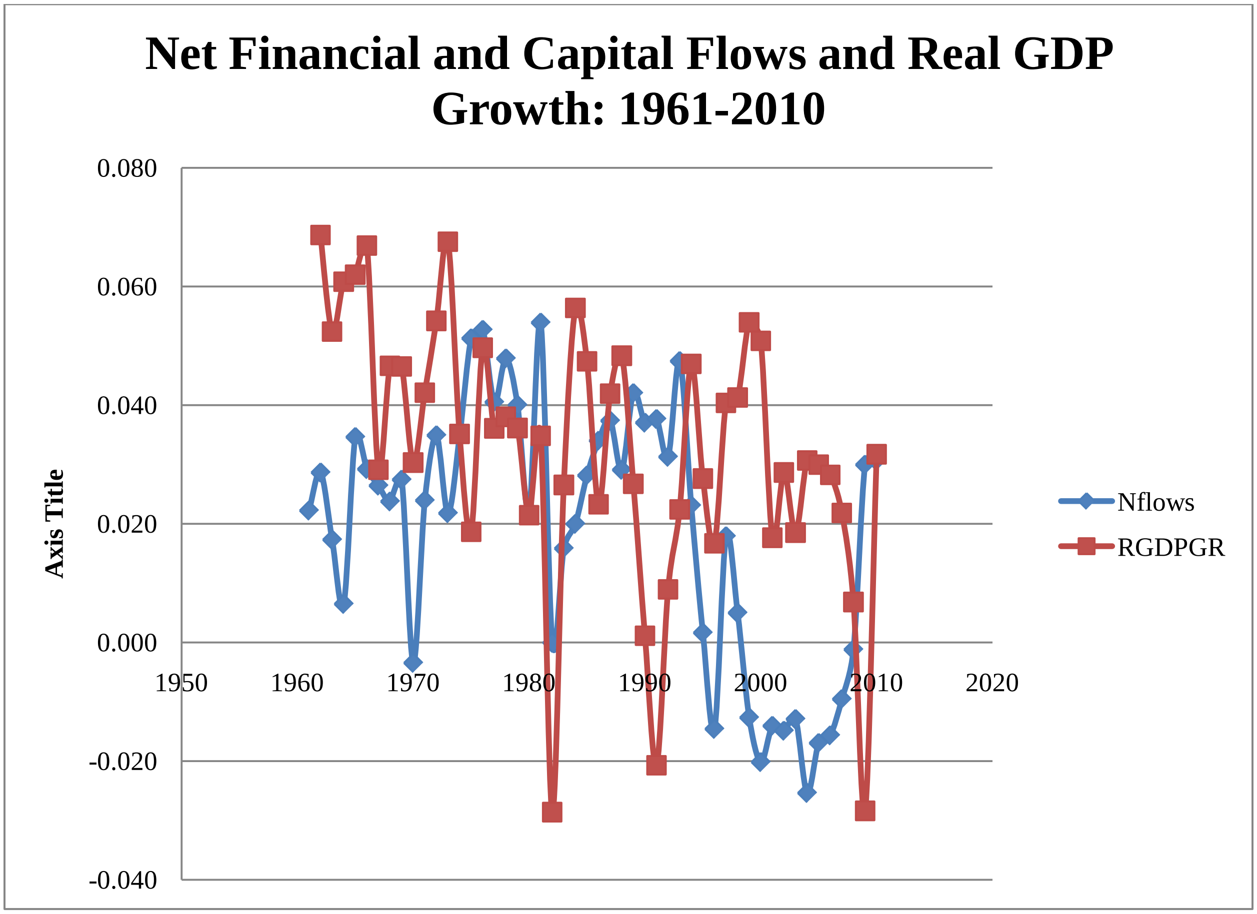
Source: Statistics Canada, CANSIM, tables 376-0001 and 376-0002.
http://www40.statcan.ca/l01/cst01/econ01b-eng.htm

We can see that there is are substantial changes in Canada's financial flows. The net financial flows have changed sign in the past five years. From 2005 when there was a net outflow of $22 billion, 2010 saw a net inflow of nearly $50 billion. Most dramatic was the decrease across the board in Canadian portfolio investments.

Over the longer term, the graph shows that Canada's financial accounts have evolved considerably especially if we think of 1990 as a particular point of interest. The flows are scaled by GDP.



Some of this, however, may also be related to local GDP growth - our richness, although it does not take into account the wealth growth of others. The figure below adds the growth of GDP to the earlier figure.



So why do we care about the balance of payments anyway?

To answer this question requires that we think about the kinds of things that the balance of payments represents. We will see that it ties into a more extended discussion about the way in which savings, investment and accumulation generally takes place in the economy.

The Current Account surplus can be identified in a number of ways to highlight the role it reflects in the economy.

We know from introductory macroeconomics that we can write GDP as:

$$Y = C + I + EX - IM = C + I + G + TB$$

where C is consumption, I is investment, EX is the value of exports and IM the value of imports. TB is the balance of trade, EX-IM. We shall assume that government spending is zero for convenience in what follows. We saw that the current account is recorded as:

$$CA = TB + rA$$

where r is the return accruing to net assets, A. The notation is a little awkward. Let the "*" indicate foreign. Domestic residents receive income on their assets owned abroad r*A (since their assets receive the foreign rate of return.) Foreigners own domestic assets which receive the local rate of return rA*, so that the net position denoted rA is really r*A-rA*.) This representation of the current account is one that emphasizes the flow of goods and services as the return on net investment is really a service arising from the existing stock of assets.

However we also know that the current account is the change in our net financial position since CA=-FA, or more precisely, the change in net foreign assets, A, held by domestic residents. We can express the current account as:

$$CA = \Delta A = A_t - A_{t-1}$$

This draws our attention he way in which financial assets must change in order to finance the levels of the current account.

Drawing on our national income identity, we can rewrite the trade balance the difference between GDP and spending on consumption and investment:

$$CA = rA + TB = rA + Y - C - I$$

If we recall that the difference between GDP and GNP is the return on net assets owned by home residents, let GNP be denoted as Y'=Y+rA, then we can rewrite the current account as:

$$CA = Y' - C - I$$

and since savings, S, is Y'-C we have

$$CA = S - I$$

This expression of the current account highlights how we can think about the process of accumulation by domestic residents. A surplus in the current account reflects a savings rate that is greater than domestic investment spending. This characterization of the current account is important for understanding economic growth.