

ECON 222A

Macroeconomic Theory I

Saving and Investment in the Open Economy Lecture 9

Announcements

- Problem set 2 due on the 11th
- Tutorial on February 28th 7.00-8.30pm in Dunning 14: only exercises
- Midterm on March 1st 6.30-8.30pm WLH 205
- Class on March 2nd is cancelled
- Room change for March 4: Dupuis 215
- First Problem set is ready to collect

Today's Lecture

- Balance of Payments Accounting
- Goods Mkt Equilibrium in an Open Economy

Open Economy

- Key change in an open economy: spending need not equal (domestic) production in every year.
- International Trade and International borrowing and lending allow to 'break' this link.

Balance of Payments Accounting

- Again, some definitional accounting before we can proceed to the analysis.
- The balance of payments (BoP) records a Country's international transactions:
 - Any transaction that involves a flow of funds into Canada is a credit item (+).
 - Any transaction that involves a flow of funds out of Canada is a debit item (-).

Balance of Payments Accounting

- The balance of payments is made of **two accounts**: the current account (**CA**) and the capital and financial account (**KA**).
- After detailing each account, we will show that the balance of payment is constructed such that **$CA+KA=0$** .

TABLE 5.1**Canada's Balance of International Payments, 2003 (Billions of Dollars)****CURRENT ACCOUNT**

Net exports			47.3	
Exports		459.9		
Goods	400.0			
Services	59.9			
Imports		-412.7		
Goods	-341.8			
Services	-70.9			
Net income from assets			-23.7	
Income receipts on investments		32.7		
Income payments on investments		-56.4		
Current transfers			0.3	
Current Account Balance (CA)				23.8

CAPITAL AND FINANCIAL ACCOUNT

Increase in Canadian-owned assets abroad			-68.1	
(capital outflow)				
Canadian official reserve assets		4.7		
Other Canadian assets		-72.8		
Increase in foreign-owned assets in Canada			43.4	
(capital inflow)				
Financial account			-24.7	
Capital account			4.0	
Capital and Financial Account Balance (KA)				-20.7
Statistical discrepancy				-3.1

Source: Adapted from the Statistics Canada CANSIM database <<http://cansim2.statcan.ca>>, Tables 376-0001 and 376-0002.

The Two Major Components of the BoP

- The **CA** measures a country's trade in **currently** produced goods and services, along with (net) transfers of income between countries.
- The **KA** records trade in **existing** assets, either real (direct investment) or financial (portfolio investment).

The Current Account (CA)

- The three **components** of the current account (**CA**) balance are:
 1. net export of goods and services;
 2. investment income from assets abroad;
 3. current transfers.
- Recall from Ch.2: $CA = NX + NFP$
(Current Transfers are negligible so we set them = 0)

CA: Net Export of G&S

1. Goods: Merchandise trade balance

- The merchandise trade is trade in goods.
- A new car brought to Canada from Italy is a merchandise import for Canada.
 - It is a debit item for Canada (-).
 - It is a credit item for Italy (+).

CA: Net Export of G&S

- **Services:** Internationally traded
(e.g. tourism, education, financial services)
- The trade in services includes, for example, transportation or tourism:
- A Canadian tourist in Italy is import of tourism services for Canada.
 - It is a debit item for Canada (-).
 - It is a credit item for Italy (+).

CA: Investment Income from Assets Abroad

2. **Investment income from assets abroad**: is interest payments, dividends, royalties a country residents receive from assets owned abroad.
- Recall from Ch.2 the concept of NFP - Net Factor Payments.
 - Net investment income from assets abroad and NFP are (almost) equivalent concepts for Canada (i.e. wages and earnings are small).

CA: Investment Income from Assets Abroad

- a. Payments from abroad to Canadians
(+) credit item, because funds flow into Canada
- e.g. stocks, bonds, profits on assets owned by Canadians but located abroad.
- b. Payments to foreigners
(-) debit item, because funds flow out of Canada
- c. Net investment income = $a - b$ (in Canada < 0)

CA: Current Transfers

3. **Current transfers:** are payments from one country to another that do not correspond to the purchase of any good, service or asset.
- E.g.: foreign aid, money gifts.
 - A transfer by a Canadian abroad (say for Tsunami aid) is a debit item (-) for Canada.

The Current Account Balance

- The **CA balance** is obtained by **adding** all the credit items **and subtracting** all the debit items.
- If the **CA balance** >0 then there is a current account **surplus**.
- If the **CA balance** <0 then there is a current account **deficit**.
- The Canadian CA balance in 2003 was 23.8 Billions

The Capital - and Financial - Account (KA)

- The components of the capital and financial account (*KA*) balance are:
 - The *financial account* records *real* (direct) and *financial* (portfolio) *investment*.
 - The *capital account* records migrants' funds, inheritances, transaction of intellectual property.

The Capital Account (KA)

- If Canada **sells an asset** to another country for Canada it is a financial **inflow**, a **credit item** (+) in the capital account.

(Capital inflow means direction payments move)

- If Canada **buys an asset** from abroad for Canada it is a financial **outflow**, a **debit item** (-) in the capital account.

The Capital Account Balance

- The *KA balance* equals the value of capital *inflows* (credit items) *minus* the value of capital *outflows* (debit items).
- If the *KA balance* >0 then there is a capital account *surplus*.
- If the *KA balance* <0 then there is a capital account *deficit*.
- The Canadian *KA balance* in 2003 was -20.7 Billions

The Official Settlements Balance

- The official settlements balance (or the balance of payments) is the net increase in the entry “Official Reserve Assets”.
- Official reserve assets are **assets** (foreign government securities, bank deposits, IMF deposits, and gold) **used in making international payments**.
- Transactions in official reserve assets are **conducted by central banks** of countries.
- The official settlements balance **can be in surplus or in deficit**.

Relationship between CA and KA

- The **CA balance** and the **KA balance** have to **sum to zero** at each period of time i.e. **$CA+KA=0$** .
- Intuition: by accounting, every transaction involves offsetting effects (but in practice, measurement problems, recorded as a statistical discrepancy, prevent $CA+KA = 0$ from holding exactly.)
- Illustration:

TABLE 5.2

Why the Current Account Balance and the Capital Account Balance Sum to Zero: An Example (Balance of Payments Data Refer to Canada)

Case I: Canada Imports \$75 Sweater from Britain; Britain Imports \$75 Telephone from Canada

Current Account	
Exports	+\$75
Imports	<u>-\$75</u>
Current account balance, <i>CA</i>	0
Capital Account	
No transaction	
Capital account balance, <i>KA</i>	0
Sum of current and capital account balances, <i>CA + KA</i>	0

Case II: Canada Imports \$75 Sweater from Britain; Britain Buys \$75 Bond from Canada

Current Account	
Imports	<u>-\$75</u>
Current account balance, <i>CA</i>	-\$75
Capital Account	
Capital inflow	<u>+\$75</u>
Capital account balance, <i>KA</i>	+\$75
Sum of current and capital account balances, <i>CA + KA</i>	0

Case III: Canada Imports \$75 Sweater from Britain; Bank of Canada Sells \$75 of British Pounds to British Bank

Current Account	
Imports	<u>-\$75</u>
Current account balance, <i>CA</i>	-\$75
Capital Account	
Capital inflow (reduction in Canadian official reserve assets)	<u>+\$75</u>
Capital account balance, <i>KA</i>	+\$75
Sum of current and capital account balances, <i>CA + KA</i>	0

Overall

- **Net Foreign Assets (NFA)**: The net amount of new foreign assets a country acquires, i.e. country's foreign assets minus its foreign liabilities.
- net increase in foreign assets = a country's current account surplus
- (Canada) Surplus: If $CA > 0$ then $KA < 0$
(capital outflow to pay for NFA assets acquired or net foreign lending)
- (US) Deficit: If $CA < 0$ then $KA > 0$
(capital inflow from selling NFA assets)

Goods Market Equilibrium in an Open Economy

- The open-economy national income accounting identity is:

$$S = I + CA = I + (NX + NFP)$$

Goods Market Equilibrium in an Open Economy

- Uses of the National Saving
- The national saving (S) has two uses:
 - increase the nation's stock of capital by funding investment (I);
 - increase the nation's stock of net foreign assets by lending to foreigners (CA).
- (three uses of private savings: the other one is lending to the government, which cancels out for a nation)

Goods Market Equilibrium in an Open Economy

- The Goods Market Equilibrium
- The closed economy goods market equilibrium holds when I and S equal their desired levels.
- In an open economy equilibrium, desired saving equals desired domestic investment plus amount lent abroad:

$$S^d = I^d + CA$$

$$S^d = I^d + (NX + NFP)$$

Goods Market Equilibrium in an Open Economy

- If we assume $NFP=0$ then the open-economy goods market **equilibrium condition** is

$$S^d = I^d + NX$$

- Alternatively, **looking at goods demand** rather than savings, this is equivalent to:

$$Y - C^d - G = I^d + NX$$

or

$$NX = Y - (C^d + G + I^d)$$

- $(C^d + I^d + G)$ is called absorption – the total spending by domestic residents.

Goods Market Equilibrium in an Open Economy

- We can see now the economic **forces** that determine **international trade and borrowing**:
- An economy in which production exceeds absorption will send goods abroad ($NX > 0$) and have a current account surplus ($CA > 0$).
- An economy that absorbs more than it produces will be a net importer ($NX < 0$) with a current account deficit ($CA < 0$).
- But what is making such a mismatch in magnitudes?

Final Comments

- Today: How can we account for the existence of international exchanges in NIA?
- Next:
- Why do trade surpluses and trade deficits exist?
- What are the implications of the size of an open economy on the equilibrium trade surplus and deficits?
- What is the impact of fiscal policy on the trade deficit/surplus?