RULES OF THUMB FOR BALANCE OF PAYMENTS ACCOUNTING[1]

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Abstract

Balance of payments accounting can be confusing for students, because it is sometimes difficult to determine whether a certain transaction (e.g., a currency exchange) is a debit or a credit to a certain account. It is therefore the purpose of this paper to summarize the standard balance of payments concepts according to useful rules of thumb, which are intended to help students more easily determine how a given international transaction affects each balance of payment account.

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Introduction

Teaching balance of payments (BP) accounting can be quite challenging, as it can be difficult to explain to students how we know whether a certain international transaction results in a debit or a credit to one of the BP accounts. For example, when a monetary authority engages in a foreign exchange intervention, do we consider the currency exchange to be a purchase of a foreign currency or a sale of the domestic currency?

With this problem in mind, the main contribution of this article is not in explaining the balance of payments concepts themselves, as they can be found in any standard International Economics textbook (e.g., Krugman, Obstfeld, and Melitz, 2012; Salvatore, 2012; and Sawyer and Sprinkle, 2009). Instead, the contribution is to summarize these concepts according to useful rules of thumb, which are intended to help students more easily determine how a given international transaction affects each balance of payment account.

The article proceeds as follows: the next section summarizes the balance of payment concepts that are used to develop the aforementioned rules-of-thumb. Then, the rules-of-thumb are summarized. I conclude with some numerical applications of these rules-of-thumb.

Balance of Payments Concepts

The success (or failure) of monetary and fiscal policies in an open economy depends, in part on how these policies affect the accounts contained in the **Balance of Payments (BP)**: a

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summary statement of all transactions of the residents of a nation with the rest of the world during a particular period of time (usually a year).

There are three types of transactions included in the BP accounts:

- Trade of goods and services in world product markets
- Trade of capital assets in world financial markets
- The international exchange of gifts

Furthermore, each type of transaction is included in one of two specific BP accounts:

- **Current account**: includes trade of goods and services, as well as gifts
- **Capital and financial accounts**: includes trade of capital and foreign exchange

Like accountants, the federal government keeps track of its balance of payments by essentially (*but not literally*) entering every transaction twice: once as a debit and once as a credit – a procedure known as "double-entry bookkeeping." Under this accounting procedure, every transaction has *both* a debit and a credit to balance, because there are typically two sides to every transaction: every dollar spent by one person must be a dollar in revenue for someone else.

In particular, for the domestic economy a transaction involves a:

- **BP credit** when a payment is *received from* foreign businesses, governments or individuals by domestic businesses, governments, or individuals.
- **BP debit** when a payment is *made to* foreign businesses, governments or individuals by domestic businesses, governments, or individuals.

Therefore, whenever we need to classify a transaction as either a debit or a credit, we can ask ourselves the following question: are we making payments to foreigners or are they making the payments to us?

Let's now examine each of the above three transactions in more detail, starting with trade in goods and services. This interaction is the most important part of the current account, and can be divided into two types of transactions:

- **Exports** are domestically-produced goods and services that are sold abroad, and are BP *credits* because foreigners are paying us for our goods and services.
- **Imports** are foreign-produced goods and services that are sold domestically, and are BP *debits* because we are paying foreigners for their goods and services.

Net exports (**trade balance**) equal exports minus imports, and we can say that we have:

- A **trade surplus** if net exports are positive
- A **trade deficit** if net exports are negative
- **Balanced trade** if net exports are zero

The second interaction included in the BP accounts involves trade of capital assets and foreign currencies. These transactions can be divided into two categories:

- **Capital outflows** involve foreign assets being sold to domestic residents, and are represented by ***debits*** in the BP accounts; we are paying foreigners for their assets (i.e., payments for assets are flowing ***outward*** from domestics to foreigners).
- **Capital inflows** involve domestic assets being sold to foreign residents, and are represented by credits in the BP accounts; foreigners are paying us for our assets (payments for assets are flowing ***inward*** from foreigners to domestics).

Flows of financial capital are reflected in the **capital and financial accounts** (hereafter just called the **capital account**) of the balance of payments. However, the *income* earned on these investments (e.g., debt payments and dividends) are included in the *current account* because money actually crosses borders, unlike the equipment and infrastructure that remain in a country.

In other words, *if a transaction involves something crossing international borders, then it is in the current account; if it remains in the original country so that only ownership changes hands, then it is in the capital account.*

Just as the difference between exports and imports is net exports, **net capital outflows** are calculated as the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners. Therefore, if a Canadian resident buys stock in Apple, the purchase *increases* Canadian net capital outflow; on the other hand, if a Japanese resident buys a Canadian government bond, the purchase *reduces* Canadian net capital outflow.

Note that capital flows can take two forms:

- **Foreign Direct Investment (FDI)**: investor actively manages investment
- **Foreign Portfolio Investment (FPI)**: investor only plays a passive role

The final type of international interaction is known as a **unilateral transfer** ("gift"), such as government grants, pensions, charitable donations and foreign aid. This component of the BP accounts can also be divided into two types of transactions:

- When a domestic government, individual or firm *gives* a gift to a foreigner, it is a ***debit*** in the BP accounts because we are making payments to foreigners.
- When a domestic government, individual or firm *receives* a gift from a foreigner, it is a ***credit*** in the BP accounts because foreigners are making payments to us.

Note that such transfers involve ***international market transactions*** because currencies must be converted in foreign exchange (FX) markets. We also include unilateral transfers in the current account because the gift actually crosses international borders.

Finally, there is one more component of the BP accounts: a **statistical discrepancy** that

exists because debits are unlikely to perfectly offset credits in practice (since we cannot *literally* account for every single transaction). Fortunately, it is very small for countries such as Canada and the United States.

Rules of Thumb

In summary, we can use the following **rules of thumb** to determine how an international transaction will affect the BP accounts:

a) If no money ever crosses borders, then there is *no effect* on the BP accounts.
b) If we export goods and services, then there *must* be:
    i) A credit in the current account (NX rises): sell domestic asset (goods and services) to a foreign individual, business or government.
    ii) A debit in the capital account (NCO rises): buy foreign asset (currency) in exchange for domestic asset (currency) to complete the transaction.
    iii) All underlined words are changed to their opposite terms if we import goods and services instead of exporting them (i.e., we change "credit" to "debit", "sell" to "buy", "domestic" to "foreign", "rise" to "fall", etc.).
c) If we purchase ownership in foreign companies (FDI or FPI) then there *must* be:
    i) A debit in the capital account (NCO rises): buy foreign asset (business).
    ii) A credit in the capital account (NCO falls): sell domestic asset (currency) in exchange for foreign asset (currency) to complete the transaction.
    iii) This transaction does *not* affect the current account (NX) at all, because goods and services do not cross borders. Only ownership changes hands.
    iv) All underlined words are changed to their opposite terms if we instead sell ownership in domestic companies.
d) With a foreign exchange intervention such that foreigners are sold more domestic currency by a domestic bank, then:
    i) There must be a debit in the domestic capital account (NCO rises): buy foreign asset (currency) in exchange for domestic asset (currency); this FX is held in reserve (so they do not return to the foreign country).
    ii) The domestic currency sold will then turn into ***either*** a credit in the capital account (NCO falls) if we sell domestic assets (companies) internationally, ***or*** a credit in the current account (NX rises) if we sell domestic goods and services internationally.
    iii) All underlined parts are changed to their opposite terms if domestics are sold more foreign currency by a foreign bank.
e) If we give foreign aid to foreigners, then there *must* be:
    i) A debit in the current account (net unilateral transfers fall): give gifts to foreigners (analogous to making a payment to them). Notice that the gift crosses international borders, so it is part of the current account.
    ii) A credit in the capital account (NCO falls): sell domestic asset (currency) in exchange for foreign asset (currency) to complete the transaction.
    iii) All underlined words are changed to their opposite terms if we instead receive gifts from foreigners (i.e., change "give" to "receive", "to" to "from", etc.).

Conclusion and Applications

The purpose of this paper was to create some rules of thumb that can be used to teach students how a given transaction will affect the balance of payments accounts. The following applications are now offered to demonstrate how these rules of thumb can be used.

Applications: Explain how each of the following transactions generates a credit and a debit in the Canadian balance of payments accounts, specifically in terms of how it would affect net capital outflows (NCO) and net exports (NX). All dollar amounts quoted are in terms of Canadian dollars.

a) China National Offshore Oil Corporation (CNOOC) acquires Calgary-based Nexen Inc. for $15.1 billion.

   Answer: First, there is a decrease in NCO (credit in the capital account) of $15.1 billion because foreigners are paying us for our assets (in this case, ownership in Nexen). We then need to find a corresponding debit, and since no goods or services are crossing the border, NX cannot change; there must be a debit in the capital account (a rise in NCO) of $15.1 billion, which implies we need to buy foreign assets (so payments for assets are flowing outward). Specifically, we will purchase Chinese renminbi in exchange for 15.1 billion Canadian dollars so that CNOOC can pay for its ownership of CNOOC in Canadian dollars. Since the Canadian dollars do not ultimately leave Canada, the renminbi is the currency that we use to determine whether the change in NCO is a debit or a credit. Notice that under the rules of double-entry bookkeeping, there is both a debit and a credit in the balance of payments accounts, and the value of the total debit ($15.1 billion) is necessarily identical to the value of the total credit.

b) The Canadian government carries out an official foreign exchange intervention in which it uses euros held in a German bank to buy 10 million Canadian dollars from its citizens.

   Answer: We are selling domestic currency to a foreign bank, so there will definitely be a credit in the Canadian capital account of $10 million (NCO falls): a foreigner (the German bank) is paying us for our assets (Canadian dollars), using euros (so the payments are flowing inward). The number of euros received by Canadians (which are equivalent to 10 million Canadian dollars) will likely be spent in the EU, so we will likely purchase either EU goods and services (so NX falls, a debit in the current account); or EU companies (so NCO rises, a debit in the capital account as payments are flowing outward). Since the Canadian dollars remain in a different country (because they are not given directly to citizens of any country), they are the reason for there being a credit in the Canadian capital account.

c) Canadians donate $1 million to support New Jersey victims of Hurricane Sandy.

   Answer: No goods or services are being *sold* internationally, so NX cannot change.

However, unilateral transfers are part of the current account; in this case, this transaction will be counted as a current account debit of $1 million because we are giving gifts to foreigners. This means we must also see a credit in the capital account of $1 million for the balance of payments accounts to balance (NCO falls), and this happens with currency exchanges: we will sell one million Canadian dollars in exchange for the equivalent in U.S. dollars. Since the foreign currency (U.S. dollars) does not leave its home country in the end, while the Canadian dollars remain outside Canada, the Canadian dollar is the key variable: there will be a credit in the capital account as we sell our domestic assets (Canadian dollars) in exchange for foreign assets (U.S. currency); in other words, payments for assets are flowing inward.

d) Calgary Transit purchases equipment from the U.S. for $20 million to build an LRT line that will go to Mount Royal University.

Answer: This time, the first transaction involves goods crossing the border. Since a Canadian company is buying equipment from the U.S., Canadian imports rise meaning there is a debit in the current account (a fall in NX) of $20 million. Next, these U.S. firms want to be paid in U.S. dollars so the Canadian firm will sell 20 million Canadian dollars in exchange for the equivalent in U.S. dollars. Since Canadian dollars leave the country and stay there while U.S. dollars remain in the U.S. in the end, this currency exchange leads to a credit in the capital account (a fall in NCO); we are selling our assets to foreigners, and payments for assets are flowing inward.

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