

# Balance of Payments

- BOP is an accounting of a country's international transactions by individuals, firms and government agencies) for a specific time period (quarter or year)
- Money coming in is a credit (b/c you sell domestic goods or assets)
- Money going out is a debit (b/c you buy foreign goods or assets)
  
- All transactions cause a credit and a debit (credit in one country and debit in the other) or alternatively a buy for 1 country is a sell for the other
- BOP is comprised of two major accounts

**Current account** – includes merchandise trade, services, interest and dividend income, and one-way transfers = **CA**

**Financial account** – includes financial assets (stocks, bonds) and direct foreign investment (businesses, real estate). This account tracks U.S. owned assets abroad and foreign owned assets in the U.S. = **FA**

- As an accounting principle the current account balance and financial account balance must equal zero. When they do not the central bank must buy or sell currency to resolve the imbalance. Thus the full balance of payments is **CA + FA +  $\Delta$ off reserves = 0**. Changes in official reserves are critical in fixed exchange rate systems for maintaining exchange rate values that are not market clearing values.

# Balance of Payments

- Current account deficits must be offset by financial account surpluses. Therefore, increasing current account deficits mean that capital inflows increase.

$$CA < 0 = FA > 0$$

- Current account surpluses will be offset by financial account deficits. Therefore, current account surpluses mean that capital outflows increase.

$$CA > 0 = FA < 0$$

- All BOP transactions impact the foreign currency markets for the participants. When you buy (sell domestic) foreign goods or assets you must have foreign (domestic) currency to complete the exchange.
- Financial account transfers may impact the loanable funds markets of the participants. These capital flows include direct investment, purchases of stocks and bonds and central bank purchases of assets. Capital inflows will increase the supply of loanable funds; capital outflows will decrease the supply of loanable funds.

# Balance of Payments

## Trading Around, How to Keep Track!

Lesson Plan:

Objectives – The student will be able to do the following:

- Place examples of international transactions in the appropriate balance of payments account.
- Classify transactions as credits or debits in the balance of payments.
- Predict the impact on the supply or demand of currency in the foreign currency market from examples of balance of payments transactions.
- Create currency markets models illustrating the impact of changes in supply or demand of foreign currency on the exchange rate.
- Predict the impact on the loanable funds market from financial account transactions in the balance of payments.
- Create loanable funds market models showing the impact on the real interest rate from financial account balance of payment transactions.
- Predict the status of one major account in the balance of payments given the status of the other major account. Example – If the current account is in deficit, what must be true of the financial account?

Materials:

1. Laminated posters of Eastan's and Westan's balance of payments.
2. 14 Transaction cards – 7 for Eastan and 7 for Westan. (Copy Eastans in one color and Westan in another for ease in distinguishing between the two)
3. Practice Questions/Formative assessment – 1 copy for each student.

# Balance of Payments

## Procedures:

- Divide the class into two nations – Eastan and Westan.
- Appoint one scribe for each nation to fill in the balance of payments poster for that country.
- Pass out the 7 Eastan transaction cards to individuals in the Eastan group and the 7 Westan cards to individuals in the Westan group.
- Ask a student to read their card and determine where in their countries balance of payments the transaction falls. The rest of their country may help them make the determination. Then ask the other country where this transaction falls in their balance of payments. (Allow for a fair amount of discussion as students think through the process of determining the placement of their transaction. The instructor may guide students with hints or questions to help the process along or to redirect an incorrect analysis)
- Alternate groups in asking for transaction cards to be analyzed. Answer student questions as the activity progresses.
- Go back over the transactions asking students if the transaction would cause a change in demand for their currency or a change in supply of their currency.
- Then ask students to determine the transactions that would be tracked as capital inflows and outflows.
- Upon completion of the activity randomly place students in pairs to complete the practice questions.

# Balance of Payments

## Trading Around, How to Keep Track! (Answers)

### *Merchandise Trade transactions:*

- (1) Farmer Wallace from Weststan is selling 1 ton of grain to East Grocery Store for \$250
- (2) East Pride Shirts sells 50,000 printed t-shirts to West Homecoming Inc. for \$500
- (3) Warren Wolf sells 5 assembly line robots to Eaststan General Motors for \$300.
- (4) Paisley Panther sells movie posters to West Film Corp. for \$500

### *Service transactions:*

- (5) Patrick Panther is paid \$50 for his business consult with Last Chance Inc in Weststan.
- (6) West Wolf Programming sells software design to PESH Graphics for \$20.
- (7) Winslow Wolf receives \$30 for his time as a Feng Shui designer to PESH.
- (8) Paprika Panther designed new uniforms for the Weststan hockey team for \$40.

## Balance of trade:

EAST	Exports of goods (2) +\$500, (4) + \$500
	Imports of goods (1) -\$250, (3) -\$300
	Exports of services (5) +\$50, (8) +\$40
	Imports of services (6) -\$20, (7) -\$30
	Balance of Trade +\$490

WEST	Exports of goods (1) +\$250, (3) +\$300
	Imports of goods (2) -\$500, (4) -\$500
	Exports of services (6) +\$20, (7) +\$30
	Imports of services (5) -\$50, (8) -\$40
	Balance of Trade -\$490

- (9) Penny Panther sends \$50 to her cousin Waverly Wolf in Weststan.
- (10) West Corporation sends Padma Panther \$40 in dividends on her West Corp.stock.

## Current Account Balances:

EAST	Net investment income (10) +\$40
	<u>Net transfers (9) -\$50</u>
	Net remittances = -\$10
	Balance on Current Account +\$480

WEST	Net investment income (10) -\$40
	<u>Net transfers (9) +\$50</u>
	Net remittances = +\$10
	Balance on Current Account -\$480

# Balance of Payments

## *Financial/Capital Account transactions*

(11) Paolo Panther purchases stock in West Publishing Inc. for \$2200. (initial public offering)

(12) Washi Wolf sells bonds from West Calendar Corp. for \$1600 to Petunia Panther.

(13) Parvin Panther sells East Put-Put Golf course for \$1800 to ‘Wildman’ Wolf.

(14) Waldo Wolf purchased East Waterworks Play Park for \$1500 from Peppermint

## **Financial/Capital Account Balances:**

EAST Financial/Capital Account
Capital going abroad (11) -\$2200, (12) -\$1600
Capital coming in (13) +\$1800, (14) +\$1500
Balance on Financial/Capital Account -\$500

WEST Financial/Capital Account
Capital going abroad (13) -\$1800, (14) -\$1500
Capital coming in (11) +\$2200, (12) +\$1600
Balance on Financial/Capital Account +\$500

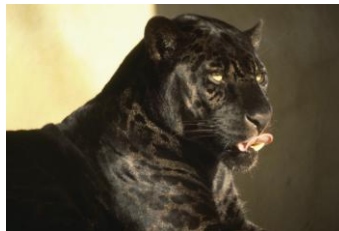
## **Official Reserve Account (which must change to bring BP into balance:**

$$\text{BP} = \text{CA} + \text{FA} + \Delta \text{off Res}$$

EAST Official Reserves Account
Official reserves transactions balance +\$20

WEST Official Reserves Account
Official reserves transactions balance -\$20

# Balance of Payments



## Balance of Payments for Eaststan

### Current Account:

Exports of goods \_\_\_\_\_  
Imports of goods \_\_\_\_\_  
Exports of services \_\_\_\_\_  
Imports of services \_\_\_\_\_  
Balance of Trade \_\_\_\_\_

Net investment income \_\_\_\_\_  
Net transfers \_\_\_\_\_

Balance of Current Account \_\_\_\_\_

### Financial/Capital Account

Capital going abroad \_\_\_\_\_  
Capital coming in \_\_\_\_\_  
Balance on Financial/Capital Account \_\_\_\_\_

### Official Reserves Account

Official reserves transactions balance \_\_\_\_\_

Total Balance of Payments \$0

# Balance of Payments



## Balance of Payments for Weststan

### Current Account:

Exports of goods \_\_\_\_\_  
Imports of goods \_\_\_\_\_  
Exports of services \_\_\_\_\_  
Imports of services \_\_\_\_\_  
Balance of Trade \_\_\_\_\_

Net investment income \_\_\_\_\_  
Net transfers \_\_\_\_\_

Balance of Current Account \_\_\_\_\_

### Financial/Capital Account

Capital going abroad \_\_\_\_\_  
Capital coming in \_\_\_\_\_  
Balance on Financial/Capital Account \_\_\_\_\_

### Official Reserves Account

Official reserves transactions balance \_\_\_\_\_

Total Balance of Payments \$0



## Balance of Payments

### East Cards

### West Cards

East Pride Shirts sells 50,000 printed t-shirts to West Homecoming Inc. for \$500.	Farmer Wallace from Weststan sells 1 ton of grain to East Grocery Store for \$250.
Paisley Panther sells movie posters to West Film Corp. for \$500.	Warren Wolf sells 5 assembly line robots to Eaststan General Motors for \$300.
Penny Panther sends \$50 to her cousin Waverly Wolf in Weststan.	West Wolf Programming sells software design to PESH Graphics for \$20.

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<p>Paprika Panther designs new uniforms for the Weststan hockey team for \$40.</p>	<p>Winslow Wolf receives \$30 for his time as a Feng Shui designer to PESH.</p>
<p>Patrick Panther receives \$50 for his business consultation with Last Chance Inc. in Weststan.</p>	<p>West Corporation sends Padma Panther \$40 in dividends on her West Corp. stock.</p>
<p>Paolo Panther purchases stock in West Publishing Inc. for \$2200. (initial public offering)</p>	<p>Washi Wolf sells bonds from West Calendar Corp. for \$1600 to Petunia Panther.</p>
<p>Parvin Panther sells East Put-Put Golf course for \$1800 to 'Wildman' Wolf.</p>	<p>Waldo Wolf purchases East Waterworks Play Park for \$1500 from Peppermint Panther.</p>

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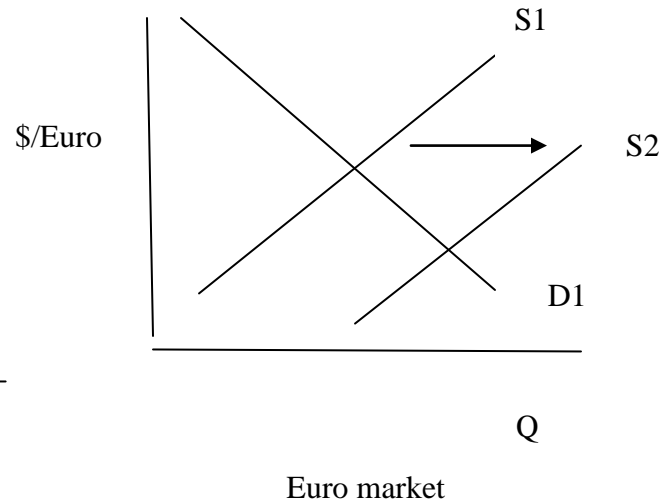
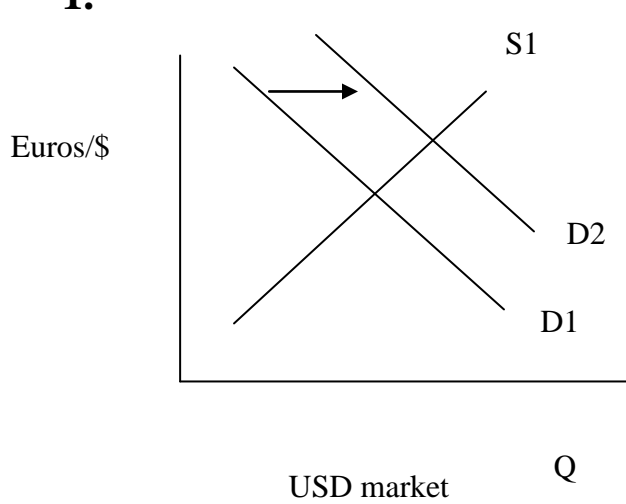
## Practice Questions

1. Draw foreign currency markets for the US dollar and the European zone euro. Show on each model the impact of US exports of grain to the European zone. Determine the impact on the international value of the US dollar and of the euro.
2. Draw foreign currency markets for the US dollar and the Singapore dollar. Show on each model the impact of US imports of silk from Singapore. Determine the impact on the international value of the US dollar and of the Singapore dollar.
3. Draw foreign currency markets for the US dollar and the Mexican peso. Show on each model the impact of US firms importing architectural services from a Mexican architectural firm. Determine the impact on the international value of the US dollar and of the peso.
4. Draw foreign currency markets for the US dollar and the Japanese yen. Show on each model the impact of a Japanese firm importing US healthcare services. Determine the impact on the international value of the US dollar and of the yen.
5. Draw a model for the US loanable funds market. Show the impact on the real interest rate of increasing purchases of US government securities by China. How would this impact the international value of the US dollar? Explain.
6. Draw a loanable funds market for Zambia. Show the impact on the real interest rate of worried foreign investors moving their funds out of the country. How would this impact the international value of Zambia's currency? Explain.

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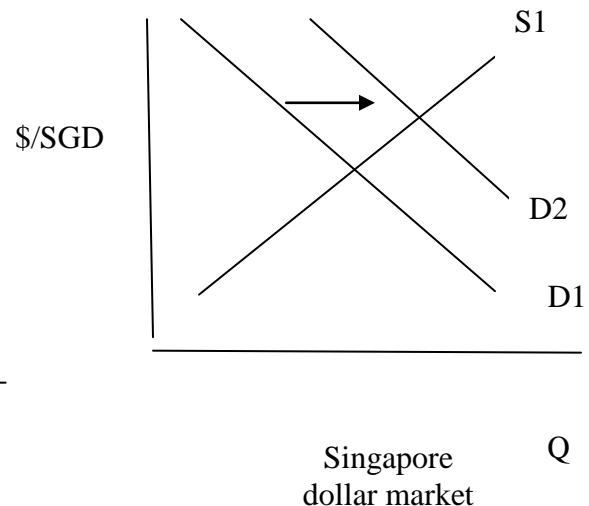
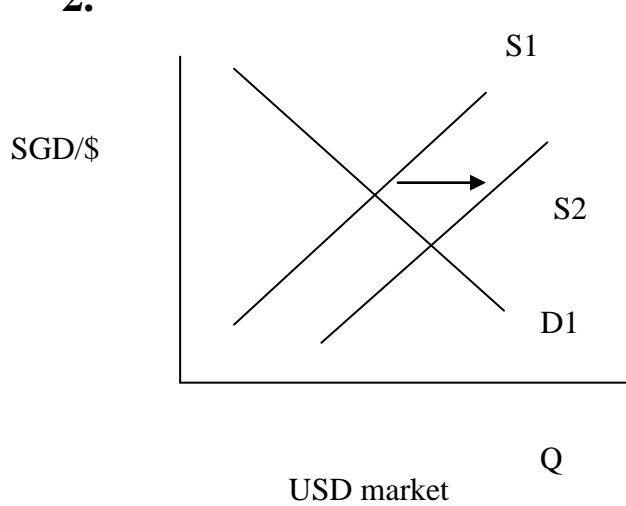
Answers to practice questions:

1.



US dollar appreciates and the euro depreciates

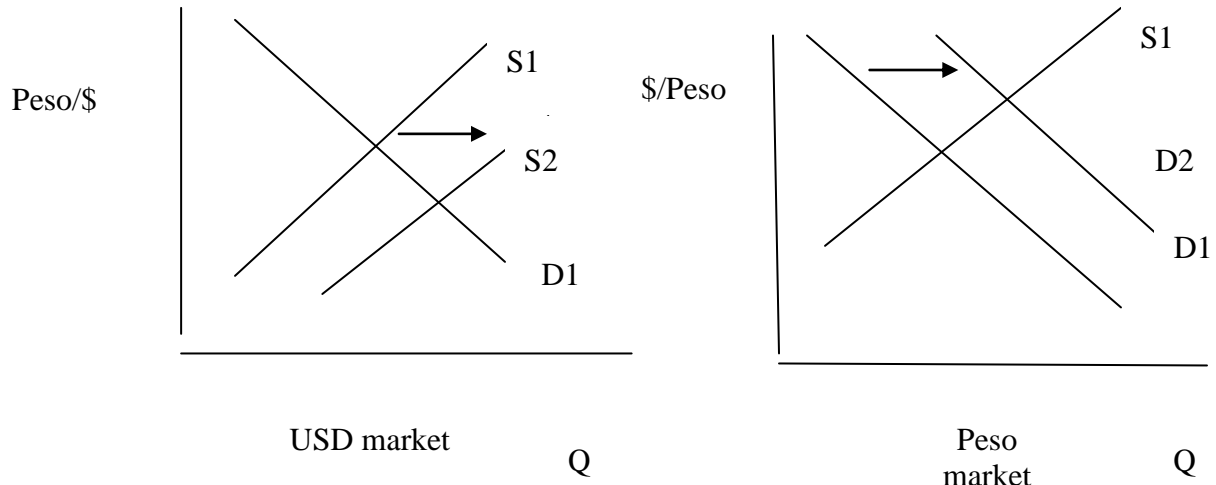
2.



The US dollar depreciates and the Singapore dollar appreciates.

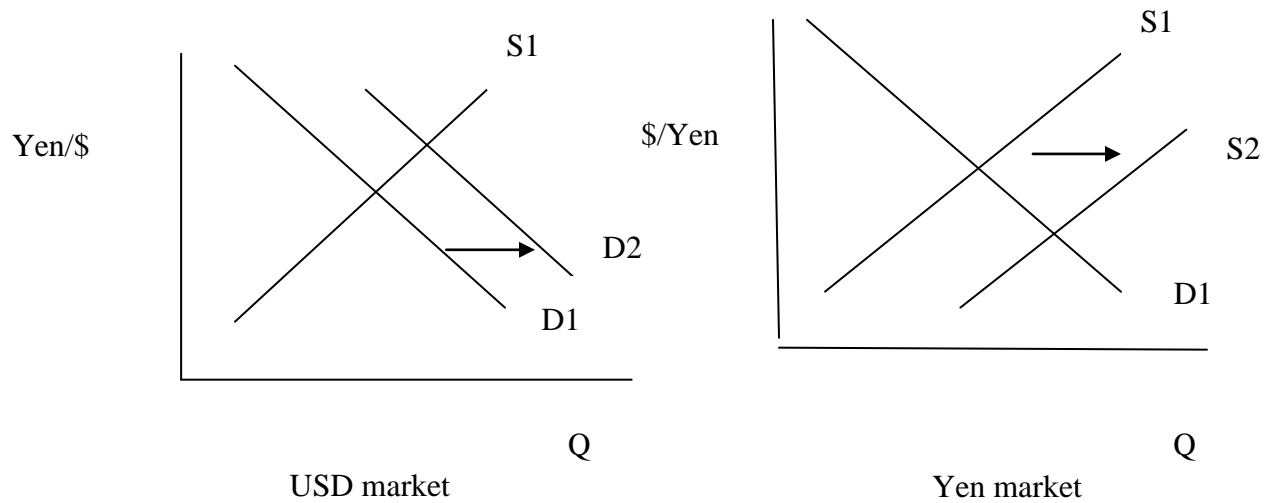
# Balance of Payments

3.



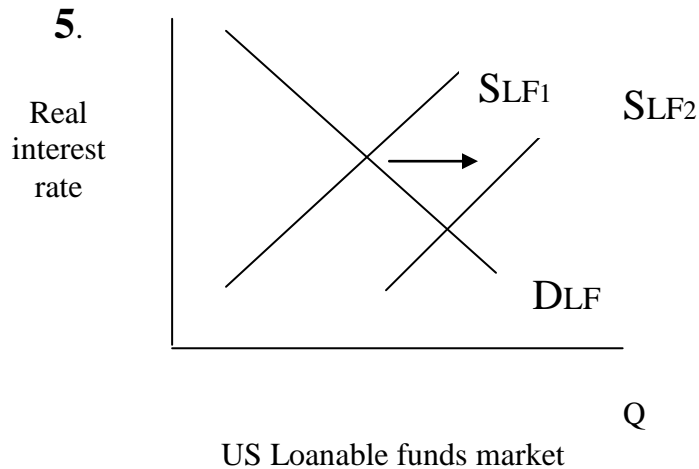
The US dollar depreciates and the peso appreciates.

4.

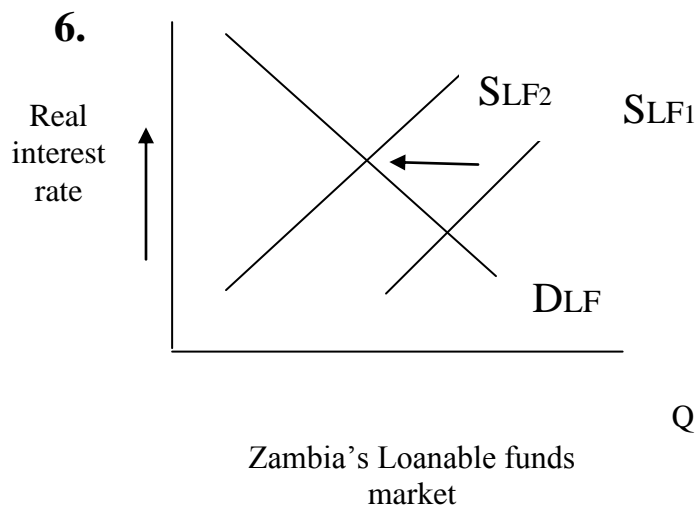


The US dollar depreciates and the yen appreciates

# Balance of Payments



Capital flows into the US, increasing the supply of loanable funds and decreasing the real interest rate. The dollar would appreciate as dollars are purchased in order to buy US government bonds.



Capital flows out of Zambia, decreasing the supply of loanable funds and increasing the real interest rate. Zambia's currency would depreciate as the currency is used to purchase other currencies.

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