Topic 2 Solutions

1. Define the balance of payments (BOP).

The BOP can be defined as the statistical record of a country's international transactions over a certain period (usually quarterly) in the form of double-entry bookkeeping.

2. The US has experienced continuous Current Account (CA) deficits since the early 1980s. What do you think are the main causes of the deficit? What would be the consequences of continuous US CA deficits?

The Current Account (CA) deficits of the US could be due to historically high real interest rate in the US, which is due to ballooning federal budget deficits that kept the US dollar strong. The main consequence would be the loss in competitiveness of US industries.

3. In contrast to the US, Japan has realized continuous CA surpluses. What could be the main causes for these surpluses? Is it desirable to have continuous CA surpluses?

Japan's continuous CA surpluses may have reflected a weak yen and high competitiveness of Japanese industries. Massive capital exports by Japan prevented Yen from appreciating more than it did. At the same time, foreigner's exports to Japan were hampered by the closed nature of Japanese markets. Continuous CA surpluses disrupt free trade by promoting protectionist sentiment in the deficit country.

4. Explain how a country can run an overall BOP deficit or surplus.

The sum of the current account and financial account is usually referred to the overall balance of payments.[1] That is CA + Financial Account ≡ BOP and it gives us an indication whether the country is living beyond its means and whether there is a net supply (or demand) for its currency. For example, an overall BOP deficit indicates that a country is borrowing from overseas and running down its net asset position.

[1] Since every debit has an offsetting credit, CA + Financial Account + ORT ≡ 0. Since this is always zero, it is not interesting.

Conversely, a country running a CA surplus (e.g., Australia in the last few years except the Sept 22 quarter) is accumulating claims on foreigners and building up a positive net foreign asset position. Furthermore, if it is the domestic Australian residents that are acquiring foreign assets, then the CA surplus is offset by a financial account deficit. In this case, CA ≡ -Financial Account.

If Australia is running of CA surplus **and** its domestic residents are ***NOT*** acquiring foreign assets, then it must be that the RBA is acquiring foreign assets (i.e., there is a drawing down of the central bank's reserve holdings). Likewise, an overall BOP surplus is absorbed by adding to the central bank's reserve holdings, i.e., BOP = -Official Reserve Transactions (ORT). If the BOP is positive, then ORT is negative with the RBA adding to its FOREX reserves (or is supplying domestic currency that private agents in the foreign exchange market want). If the BOP is negative, then ORT is positive with the RBA selling FOREX reserves and buying domestic currency.

In sum, a country can run an overall BOP deficit or surplus (after the private sector has made all its CA and financial account transactions) by engaging in the official reserve transactions.

5. If you add up all the current accounts of the countries of the world, the sum should be zero. Yet it is no so. Why do you think this is the case?

When compiling the BOP, errors tend to creep in for several reasons; some transactions are measured incorrectly with the value (or quantity) recorded for side of the transaction does not equal that of the compensating transaction or it is omitted entirely (i.e., sum of debits not be equal to credits) Hence we have an errors and omissions column in BOP.

With regards to the CA, because every export is another country's import, these accounts should sum to zero if ALL countries measured their transactions accurately.

6. Explain official reserve assets and its major components.

Official reserve assets are those financial assets that can be used as international means of payment. Currently, official reserve assets comprise of gold, foreign exchange, Special Drawing Rights (SDRs) and reserve positions with the IMF.

7. Explain how each of the pair of transactions will be classified and recorded in the debit and credit of the AUS BOP

Remember that each transaction is recorded twice, once as an *inflow* and the other as an *outflow*.

	Credit (Sources of FOREX)	Debit (Uses of FOREX)
Japanese purchase of Australian T-bonds (The purchase of an Australian financial asset by foreign investors shows up in the Financial Account)	X	
Japanese payment using a Sydney bank account (It is a foreign sale of an Australian financial asset. This offsetting transaction can be viewed as Australians increasing their holdings of short-term claims on foreigners)		X
Australian citizens having a meal at Arpège, a three Michelin star restaurant in Paris (An import of a service)		X
Aussies paying for the meal with their AMEX (Can be viewed as a foreign purchase of an Australian financial asset. Paying by your credit card entitles the restaurant to receive €'s. It is a claim on a future payment & viewed as a sale of an asset to France. Any time a foreign resident acquires an asset or a claim on the domestic country [Australia in this example], even if it is a bank deposit rather than a more tangible investment, it counts as a credit on the domestic capital account).	X	
Gift to extended family in Rio de Janeiro (It is a private remittance, so classified under *Secondary Income* as an import of goodwill. This transaction does not create an obligation for repayment in the future – a unilateral transfer. It can be thought of as a political or moral IOU)		X
Sale of your Petrobras shares (The gift is paid for using the sale of your Petrobras shares. Shows up in the Financial Account as capital inflow)	X	
Export of software by Atlassian (An export of a service)	X	

Being paid for the service by the foreign firm's Australian bank a/c (It is a foreign sale of an Australian financial asset. This offsetting transaction can be viewed as Australians increasing their holdings of short-term claims on foreigners)	X

8. Suppose Lufthansa buys $400 million worth of Boeing jets in 1996 and is financed by the US Exim bank (Export-Import bank) with a five-year loan that has no principal or interest payments due until 1997. What is the net impact of this sale on the US current account, financial account[2] and overall balance of payments for 1996?

In 1996, the sale Boeing jets is recorded in the US BOP as a $400 million merchandise export matched by a capital outflow of $400 million to finance the planes. This appears as a $400 million plus on the US CA and $400 million minus on the US financial ~~capital~~ account (KA), and a zero impact on the overall balance of payments.

ASIDE: As the loan is repaid, the interest payments will show up as inflows on the services and principal repayments will appear as inflows on the KA.

9. How does the trade deficit affect the current account balance?

There is no necessary relation between the balance of the merchandise trade account (X – M) deficit and the Current Account (CA) balance as the current account includes both the trade account and the services account. Keep in mind that the CA balance = Merchandise Trade balance + Service balance + net unilateral transfers. Thus, the CA could show a deficit, a surplus, or a zero balance, depending on what happens on the balance on the service account and net unilateral transfers.

10. Suppose Brazil starts welcoming foreign investment with open arms. How is this policy likely to affect the value of the *real*? The Brazilian current account balance?

The increased demand for Brazilian assets bought about by the new Brazilian investment policy will cause the Real to appreciate. This will reduce the Brazilian CA balance. Another way to

[2] As mentioned in the lecture, there has been an update to Balance of Payments terminology. Capital Account is now called the Financial Account; Investment Income is called Primary Income; and Unilateral Transfers is called Secondary Income.

address this question is to recognize that the capital inflow must be matched by a reduced Brazilian CA balance.

11. What will strong economic growth do for the Australian balance on current account? What will a recession do?

Strong Australian economic growth will boost the attractiveness of investing in the Australia, raising investment relative to saving and increasing the CA deficit. A recession should have a positive impact on the trade account.

12. The devastating earthquake that hit Kobe, Japan on January, 17 1995 was estimated to cause about $100 billion in damage to the Japanese economy. What is the likely effect of this earthquake on Japan's 1995 current account? On its capital account? Explain.

The Kobe quake caused an increase in Japanese investment to replace the assets destroyed in the quake. Other things being equal, increasing a nation's domestic investment will reduce its CA surplus (equal to Japanese savings – Japanese investment)[3]. At the same time, the increase in Japanese investment will redirect Japanese savings from foreign investment to domestic investment, thereby reducing the KA deficit. The net result, all else being equal, should be a reduction in Japan's CA surplus.

Aside: Saving = Y – C – G (Income – private and govt. spending) and Saving – Investment = CA.

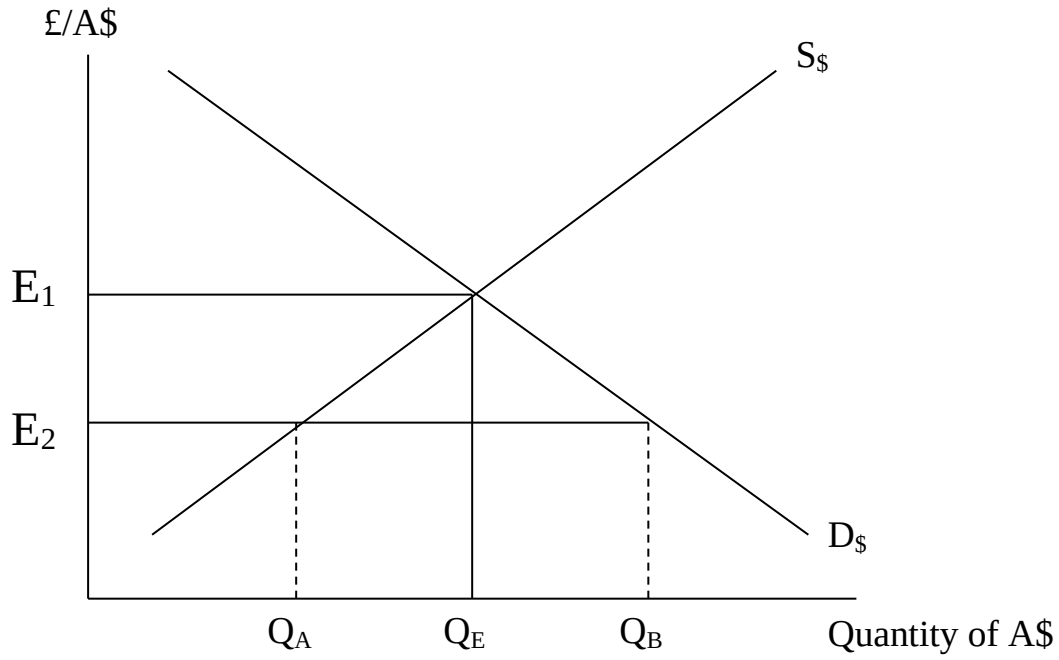
13. Explain how the balance of trade (BOT) approach to exchange rate determination works? What are the disadvantages of this approach?

It concentrates on the current account and **ignores** the capital account and the changes in official reserves. (Another disadvantage of this basic model is that it does not consider trade elasticities.) In other words, BOP = CA. The CA in turn is difference between a country's exports (X) and imports (M) of good and services. In BOT diagram (see below), the flow demand for A$ is determined by the demand for Australian goods by UK residents. Analogously, the flow supply of A$ is determined by Australian demand for British goods.

[3] Savings (that part of income that is not consumed by the government or private sector) is the total of investment (I) and the CA. Therefore, CA = S – I. If, savings exceed investment, a country will run a CA surplus.

Therefore, in its most rudimentary form, the flow demand and supply for A$ is determined by the volume of import and export transactions between Australia and the UK. If exports and imports are in equilibrium (that is, there is no trade imbalance between the two countries), the demand and supply of A$ must be in equilibrium as well and this determines the price of the A$ relative to the GBP. The point at which the demand and supply schedules for the A$ intersect determines the equilibrium exchange rate. If the exchange rate is at a level lower than the equilibrium, then the UK demand for Australian goods increases and Australia will run a trade surplus (equivalent to Q_AQ_B in the diagram). However, the increase in demand for Australian goods will also impact on the price of the A$, which will appreciate (back to the equilibrium rate, E_1) and will wipe out the trade surplus.[4]

The implication of the basic BOT model is that countries that have a trade surplus (as Australia does in our example) will see its currency appreciate. The opposite holds for a trade deficit.



[4] Keep in mind that the currency (country) of interest is in the one in the denominator, and this allows us to get around the confusion caused by direct/indirect quotations.

14. Explain how capital flows can be incorporated into the balance of trade approach to exchange rate determination?

In the previous question, we limited the discussion to the current account. Capital flows are also important in the determination in the exchange rate especially in the short and the intermediate term. Under this scenario and dis-equilibrium in exchange rates is manifested through the KA. The KA is assumed to depend on the interest rate differential between two countries. International investors are assumed to shift funds between Australia and the US depending on the nominal interest rate differential (i^{AUS} - i^{US}) between the two countries. International investors will be willing to exchange US$ for A$, if Australian interest rates (i^{AUS}) are higher relative to US interest rates (i^{US}). As the interest rate differential (i^{AUS} - i^{US}) between the two countries widens, the amount of capital inflow also tends to increase. The demand for Australian $ increases with the widening of the interest-rate differential between the two interest rates. The prevailing spot rate (S) will also impact on the KA as investors are ultimately concerned about returns in their domestic currency. As the demand for the Australian $ increases, the domestic currency appreciates. This appreciation will result in bringing the BOP back into equilibrium, since foreign goods and services will be cheaper than domestically produced goods and services.

15. The Balance of Payments of Bamako showed the following entry for 1998: a capital account surplus of 50, a deficit in the services account of 15 and a trade deficit of 45. The change in the official reserves was zero. What was the balance of the unilateral transfers of Bamako? [Past Exam Question]

	Cr	**Dr**
Capital A/c	50	
Current A/c		
Services		15
Trade		45
Unilateral transfers	**10**	
	60	60

16. Suppose Australia imposes import restrictions on Chinese made washing machines. What is likely to happen to the Australian current account deficit?

Nothing will happen to the Australian current deficit, unless the import restrictions cause a change in savings or investment behavior. Absent these changes, which are unlikely, reduced Australian imports of Chinese made washing machines will lower the Australian demand for yuan, which will lead to the value of A$ to increase. The appreciating dollar will make Australian exports less competitive and other foreign imports more attractive. The net result is that a reduction in Australian imports of Chinese made washing machines is balanced by reduced Australian exports of goods and services and increased Australian non-washing machine imports.

17. What are the five basic mechanisms for establishing exchange rates and how does each work?

The five basic mechanisms for establishing exchange rates are free float, managed float, target-zone arrangement, fixed-rate system and the current hybrid system. In a **free float**, exchange rates are determined by the interaction of currency supplies and demands. Under a system of **managed floating**, governments intervene actively in the foreign exchange market to smooth out exchange rate fluctuations in order to reduce the economic uncertainty associated with a free float. Under a **target-zone arrangement**, countries adjust their national economic policies to maintain their exchange rates within a specific margin around agreed-upon, fixed central exchange rates. Under a **fixed-rate system**, such as the Bretton Woods system, governments are committed to maintaining target exchange rates. Each central bank actively buys or sells its currency in the foreign exchange market whenever its exchange rate threatens to deviate from its stated par value by more than an agreed-on percentage. Currently, the international monetary system is a **hybrid system**, with major currencies floating on a managed basis, some currencies freely floating and other currencies moving in and out of various types of pegged exchange rate relationships.