

Suggested Solutions to the Midterm

Part I.

1. FALSE. An expansionary fiscal policy can affect output under a floating exchange rate if the expansion is expected to be temporary. In this case, the DD schedule shifts to the right and, since expected exchange rate is not affected, the AA schedule does not shift at all.

2. FALSE. As Chapter 17 states, with perfect asset substitutability, sterilized foreign exchange intervention on the part of the central bank will leave the money supply unchanged, which leaves interest rates, and hence, exchange rates unaffected. With imperfect asset substitutability, sterilized foreign exchange intervention can affect the exchange rate, while leaving the money supply and interest rates unchanged.

Suppose that, as in the case of imperfectly substitutable assets, the central bank sells some of its foreign reserves, but makes a corresponding purchase of domestic assets, such as government debt. This leaves the money supply and interest rates unchanged. You should recall that it is the investing public from whom the central bank purchases domestic assets. Because, as the model in Chapter 17 has it, the stock of the public's holdings of domestic government debt has fallen, the riskiness of the public's collective portfolio of government debt has declined. This shifts the expected return curve downward, leading to an appreciation of the currency, even when the money supply has not changed.

3. FALSE. The Balassa-Samuelson theory is based on the idea that countries with greater productivity in traded-goods sectors should, other things equal, have higher price levels. Nontradables are assumed to have roughly the same productivity in any country (think of a haircut). If prices of traded-goods are nearly the same in all countries, higher productivity in tradables industries in rich countries implies higher wages, higher production costs, and therefore higher nontradables prices and higher price levels.

4. TRUE. The Balance-of-Payments identity states that the sum of the current account, capital account, the nonreserve portion of the financial account, and the reserve portion of the financial account must sum to zero. That is,

$$CA + KA + FA_{\text{nonreserve}} + FA_{\text{reserve}} = 0$$

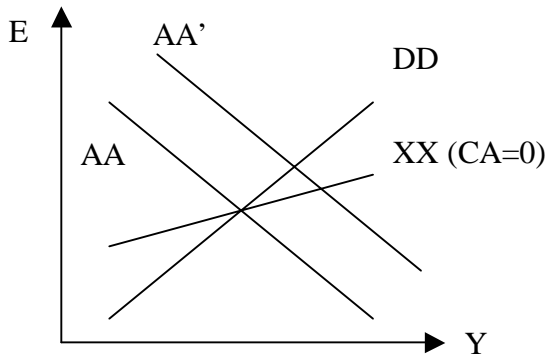
If $CA + KA + FA_{\text{nonreserve}} > 0$, then $FA_{\text{reserve}} < 0$, which means the country is importing, or accumulating, reserves. *Note:* If the capital account is small and negligible, as it usually is, then this statement is unambiguously true. If the capital account is not

negligible, then the statement is false, because we may have a case where a country is not accumulating reserves.

Part II.

1. A permanent monetary expansion under a floating exchange rate will shift the AA schedule to the right as shown in the picture below (from AA to AA'). As is clear from the picture this will lead to the depreciation of the currency and a higher output. Since the new equilibrium is above the original XX schedule, in which $CA=0$, we can assure that in the new equilibrium we will have a current account surplus ($CA>0$).

The case of a devaluation under a pegged rate can be represented by the same graph: if the central bank decides to devalue, it will have to increase money supply, and this will shift the AA schedule to the right, stimulating output and the CA as well.



2. The current account balance is defined as national income less national expenditure, or

$$(Y + \text{net factor income}) - (C + I + G) = S - I = \text{Current Account Balance}$$

This is equivalent to net exports plus net factor income. This means that any deficit in the current account reflects that either

- (a) domestic residents are spending more than they earn, or
- (b) domestic residents are saving less than is spent on investment purchases, or
- (c) domestic residents are buying more goods and services from the rest of the world than they earn in net factor payments from abroad and in selling to the rest of the world its own goods and services.

There are thus a number of ways to consider what a deficit in the current account means for the economy. In terms of (c), we can think of net factor payments themselves as payments for exports of services (of capital, for example, or of migrant

labor). So we compare the value of all imports (including services) to that of all exports (including services). In that sense, a current-account deficit means we are in fact importing more in value than we are giving to foreigners in exchange, because of the net factor payments. What is less clear is whether this is “a good thing”. It may play a useful role -- smoothing consumption or allowing big investments -- but it could also be counterproductive if it requires the need for sharply reduced living standards later to consume beyond our means now. The only way to determine whether current-account deficits are beneficial is if the net foreign borrowing is increasing the productive capacity of the economy, or if the purchase of foreign goods expands the consumption possibilities and, hence, the utility of domestic residents, in a sustainable manner.

3. The idea of PPP theory is that all countries’ price levels should be equal when expressed in terms of the same currency: $P=EP^*$.

PPP fails to hold accurately because of:

- Trade barriers (transport costs and restrictions on trade, such as tariffs and quotas), which can prevent some goods and services from being traded between countries.
- Monopolistic and oligopolistic practices in goods markets, which may interact with transportation costs and allow pricing-to-market.
- Price level data in different countries are based on different commodity baskets.

Part III.

a. The article says clearly that exports had led a decade-long economic boom, which recently started to slow. Since the baht was pegged to the dollar, any fall in the dollar makes the baht fall as well, and thus makes Thai exports cheaper and more competitive in world markets. This is clearly good for the economy, and good for growth.

b. Because confidence in the peg was weakened, markets raised their expectations about the future exchange rate and, since the central bank still wanted to keep the peg, it needed to raise the interest rate accordingly. The reason can be seen with the help of the interest parity equation below, where E_0 is the exchange rate that the central bank is targeting and $E^c=E_1$.

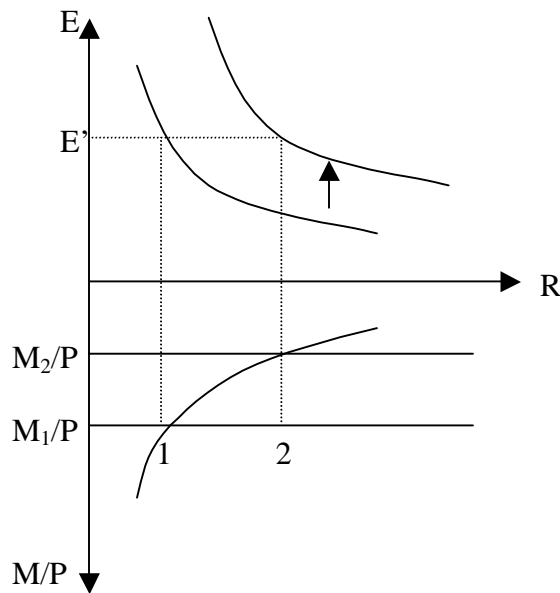
$$R=R^*+(E_1-E_0)/E_0$$

When markets expect a large future devaluations (that is, when E_1 rises) the central bank will have to raise interest rates to keep the exchange rate at the desirable level E_0 . The fact that the interest rate on bath deposits (R) rose to such high level as 1300 percent means that the market is expecting a huge devaluation.

c. The 1300% percent interest rate is an overnight rate. There are two ways to know this. First, central banks control overnight lending rates; it is the most common and frequently used policy instrument. The second way to know this is through basic common sense. The 1300% figure is an annualized rate. 365 days in the year implies that the approximate overnight equivalent rate is $1300/365 = 3.6\%$, a much more sensible-sounding number.

1300% must be an annualized rate, because if interest rates for one-year deposits were that high, then the baht shouldn't be experiencing any downward pressure.

d. The statement by the “senior economic advisor” increases E^e , shifting up the curve in the upper panel. To keep the exchange rate at the pegged level E^* , the central bank will have to sell reserves to contract money supply and raise interest rates.



e. Any bank makes money by borrowing money from depositors and other sources (taking on liabilities) and making loans to companies, firm, and other ventures (acquiring assets). The difference between the bank's lending rates and deposit rates is the basic source of any bank's profits. If a Thai bank obtains foreign liabilities by borrowing in dollars and acquires assets by making baht-denominated loans, then we have what is called a “currency mismatch”, which can be enormously risky. It would be bad enough for bank profitability for loans not to be repaid. But unpaid loans AND a devaluation of the baht-dollar exchange rate would be disastrous. Devaluation of the baht means the baht price of the dollar is higher. With a higher price of a single dollar, the value of a Thai bank's dollar-denominated liabilities increases. The bank then has a harder time paying back its debts and making profits. The bigger the devaluation, the greater the financial damage done to those banks that hold baht assets and dollar liabilities.