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| **Exercises from old exams to chapters in B & W with solutions.** |

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| **Chapter 14 AD AS** |

**Exercise 1**

Consider an aggregate supply and aggregate demand model:

Use the model to analyze the effect of an expansionary fiscal policy under fixed exchange rates

1. in the short run and
2. in the long run.
3. Consider the situation in point (i); what is the difference from the same situation in a Mundell Fleming framework?

**Answer:**

1. In the short run shift AD curve right. Real GDP increase and you get higher inflation.
2. In the long run the economy must return to initial point. Three central restrictions are: 1. The government budget constraint rules out permanent fiscal expansion. 2. Output must return to its trend and stabilize along the LAS curve (underlying and actual inflation must equal). 3. Inflation can not deviate from the foreign inflation rate.
3. In the short run output has increased, but inflation has also risen, which was ignored by definition in the Mundell Fleming framework. Because of this external competitiveness is eroding. Thus rising inflation reduces the impact of the demand disturbance.

**Exercise 2**

1. Draw and explain the AD-AS model (aggregate supply - aggregate demand) under flexible exchange rates.

**Answer:**

In the long run, output is at its trend growth level and the central bank’s target inflation rate determines the rate of inflation. The figure depicts long-run equilibrium when the short-run aggregate demand and supply curves pass through the same point as the long run curves.

1. Use the AD-AS model to explain what will happen to the economy in the short run and in the long run, if the central bank lowers its inflation target (contractionary monetary policy) under flexible exchange rates.

**Answer:**

With contractionary monetary policy. Short run effect: the AD curve shifts to the left and the LAD curve shifts down reflecting the permanent lower target inflation rate. Short run equilibrium occurs where underlying inflation exceeds actual inflation. Thereafter underlying inflation decreases to its long-run level where it is equal to the new target inflation rate and with GDP equal to trend output.

**Exercise 3**

a) Explain how the AD curve can be derived from the Mundell Fleming model under fixed exchange rates.

b) Explain by using the AS AD framework how a country can reduce inflation.

**Answer:**

1. B & W chapter 14. Like explained in fig 14.3.
2. B & W chapter 14.4.4.

**Exercise 4**

1. Use the AD-AS model to describe an adverse demand shock and discuss the use of fiscal – or monetary policy tools to restore the economy.

**Answer:**

1. An adverse demand shock is represented by a leftward exogenous shift of the short run aggregate demand curve. Inflation declines and output falls below its trend level. The government has the required instruments at its disposal, monetary policy if flexible exchange rates or fiscal policy if fixed exchange rates. This could restore the AD curve to its original position. After using this as a standard policy tool in the 1960s, many countries was more restrictive after fighting inflation in the 1970s and -80s, but after the financial crisis in 2008 with a sharp, global reduction in aggregate demand many countries implemented short term stimulus packages. The idea was to replace or at least supplement aggregate demand lost through postponed or cancelled investment projects or reduced private consumption with government consumption.

**Exercise 5**

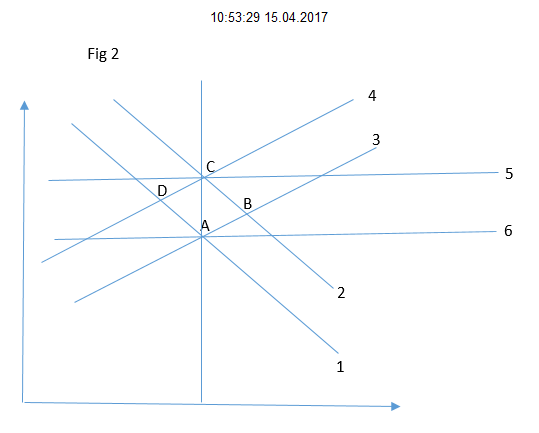
Explain by using the AS-AD framework the long run effect of a monetary expansionary policy if flexible exchange rates.

**Answer:**

A permanently higher target rate of inflation implies as explained by the dichotomy principle that real side of the economy is left unaffected. No increase in GDP, only higher inflation.

**Exercise 6**

Explain by using the AD-AS framework the effect of an expansionary monetary policy under flexible exchange rates. Refer to fig 2 if desired.



**Answer:**

The long run result of an expansionary monetary policy is the dichotomy principle that the real side of the economy is left unaffected. The only change in the long run is higher inflation. In fig 2 this is the move from point A to point C. In the short run the AD curve shift from 1 to 2 (point B), but in point B the actual rate of inflation exceeds the underlying rate. Over time underlying inflation begins to track actual inflation (line 3, short run AS, shift left to line 4). New long run equilibrium point C. Line 6 shifting to line 5 is the new long run aggregate demand curve (LAD). It shifts because the underlying inflation increase.

**Exercise 7**

1. Define the AD curve in an AD-AS model.
2. Why is the slope of the AD curve different when moving from the short to the long run under fixed exchange rates?
3. Explain by using the AD-AS framework the effect of an expansionary monetary policy under fixed exchange rates.
4. Explain by using the AD-AS framework the effect of a devaluation.
5. Use economic theory to give reasons why a country with fixed exchange rates experience their currency to depreciate in relation to other countries.

**Answer:**

1. Aggregate demand (AD) is different combinations of inflation and output that are consistent with equilibrium in the goods market.
2. In the short run the AD curve slopes downwards in a fig with inflation on the vertical and output on the horizontal axis, because a reduction in a country’s inflation (compared to inflation abroad) will increase competitiveness and increase aggregate demand. In the long-run we assume that the purchasing parity hold. If so then inflation gaps will cause nominal exchange rates to change in a way that makes the real exchange rate constant. The long run restriction on the demand side will therefore be that domestic inflation must equal foreign inflation and the long run aggregate demand curve (LAD) is horizontal.
3. A key lesson is that it is impossible to carry out an autonomous monetary policy when the exchange rate is fixed (if no restrictions on capital movements). This is because a country cannot run a monetary policy on their own (with an interest rate different from other countries) if they at the same time want exchange rates fixed.
4. If we go on to explaining a devaluation, it will increase competitiveness and lead to higher demand in the short run (shifting AD to the right), but rising inflation will undo some of the real depreciation. Higher inflation will also lead to higher underlying inflation, which will eventually lead to pressure to devalue again, or a painful period of lower inflation and a negative output gap to restore competitiveness.
5. According to the purchasing power parity condition chapter, the nominal exchange rate will in the long-run change, if inflation is different in different countries. The theory states that depreciations will occur in countries with higher inflation than other countries.