Exam-2025-solutions **2A, 5B, 8C, 2D, 4E, 2F; N=23; avg of 21 = 72,6; avg of 23 = 69,6**

Part 1. Explain whether the statements are true, false, or whether it depends. (25 points)

1.1 Nigeria is among the 15 West African countries that are interested in adopting a single currency, the eco. Nigeria would account for 62% of regional GDP and is an important oil exporter among some smaller regional partner economies that are oil importers. Such economic diversity within a currency area would be beneficial for its stability.

F. Think about the conditions for a stable OCA: free trade; free L,K mobility; symmetric shocks and stabilization transfers. Given Nigeria's economic size and the importance of oil in its exports and that other countries in the bloc are small and net importers would suggest that the economies are on different business cycles, making them subject to asymmetric shocks. Nigeria being so large a country would likely be the country that has the resources to make transfers, but not even the EU has such a mechanism to transfer income for macro stability. Nigeria could destabilize the currency by running +BOT to others in the union running -BOT.

1.2 Whether a reduction in the government's budget deficit increases domestic investment will depend on the response of monetary policy.

T/D. A ↓ (G-T) → ↓ i but also a ↓Y thru ΔIS and DD curves. It is not clear then that a ↓i → ↑I in a macro environment where Y↓. An ↑MS is expansionary would ↑Y which would offset, somewhat, the effect of the ↓(G-T) on Y. With CB intervention the ↓Y from ↓(G-T) negatively affects C(Y) and there is no guarantee that private savings increases either.

1.3 An external devaluation is when the local currency is weakened relative to a foreign currency whereas an internal devaluation is when fiscal and monetary policies are tightened. This implies the two macroeconomic policy actions are essentially the same.

F. An external devaluation is a deliberate reduction the lc value r.t. a fc. This makes X cheaper and imports more expensive to improve BOT. The aim, in part, is to ↑Q of tradables and ↓C of tradables thru expenditure switching. By contrast, an internal devaluation is the result of MP and FP tightening which leads to a similar cost competitiveness but does so through domestic adjustments to wages and prices. ↓MS → ↓P and W and ↓ (G-T) → ↓C,Y and probably I.

1.4 The Marshall-Lerner condition related to a depreciation in the local currency has no relevance to the J-curve because the trade balance is only expected to improve in the long run.

F. M-L condition says that if the sum of the exchange rate elasticities of ES and ED (in absolute value) was > 1 then a depreciation → ↑BOT. The J-curve effect is that an improvement in BOT occurs in the long run for three propositions: (1) ΔP takes time, (2) import P ↑ faster than export P in lc terms, and (3) that Q_X and Q_M are inelastic. Thus, the J-curve effect would suggest that the M-L condition is only expected to improve BOT in LR from a depreciation.

1.5 The US dollar as the principal reserve currency and the currency in which most trade is denominated means the US is more likely to run a negative balance of trade.

T. This is not a question of what causes the US -BOT. It is about how the US $ as the reserve currency can affect US X,M given that so much trade is denominated in $. A Δ$ value will make fc cost of $-denominated goods, services and assets. So, an ↑ $ value will

make US exports more expensive to other countries. However, a Δ$ value given goods are denominated in $ leaves the price of the good unaffected for the US market so imports into the US are less affected. It is not until the price/cost of foreign goods change that the $-value of the good is affected and thus causing US imports to change. But that happens in the longer term.

Part 2. Answer each of the following questions or respond to the specific statements. (45 pts)

2.1 The roles of fiscal and monetary policy have evolved in macroeconomic policymaking and their roles have been affected by changes in a country's political environment. Keep this in mind when answering the following:

2.1.1 *List* advantages/disadvantages of fiscal policy relative to monetary policy in policymaking under different macroeconomic target settings. (5 pts)

2.1.2 Consider the macroeconomic conditions in which non-traditional monetary policy is required. In countries whose central bank turned to such instruments, central bankers have been blamed for worsening income inequality. Explain how such a claim could be valid. How might this situation reflect a changing role of fiscal and monetary policy? (10 pts)

2.1.1
* FP works on ΔAD to affect Δ business cycle
* FP works on ΔAS thru G, T targeted to sectors and/or G,T related to L mkt; MP does not have a direct effect on AS
* FP works well when E is fixed and MP is used to complement FP (FP dominance)
* Both FP and MP can control debt, but in periods when debt is a problem policymakers hesitate from using G and T to address it where MP can do it thru Δi and ΔP
* FP is political an more about Y-redistribution – picks winners and losers within society (tax one group to support another group)
* FP can be linked to the election cycle complicating inflation fighting
* MP is more dominant when E is flexible;
* MP can be aimed at controlling MS growth or inflation and thus is more technocratic, independent and not subject to the election cycle
* MP has more direct effect on P and i despite having a lag (FP has not direct effect)

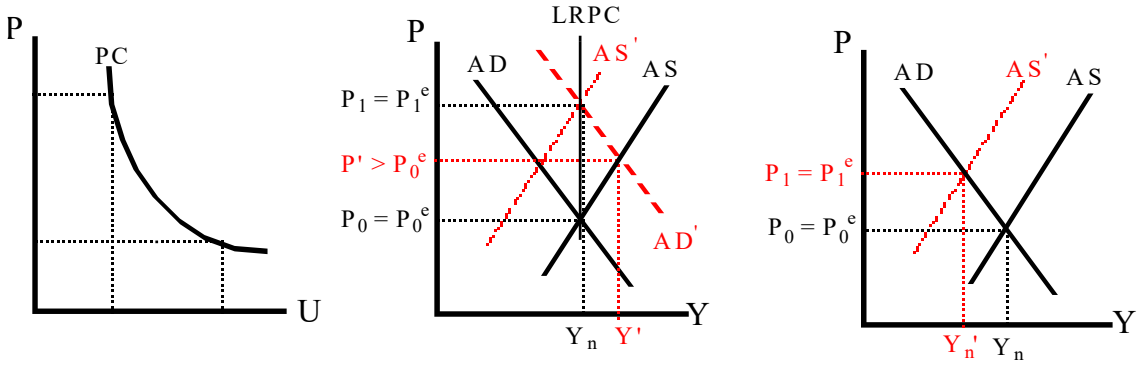
2.1.2
In periods of deflation, e.g., ↓ AD → ↓P traditional MP does not work and the distinction of MP and FP is blurred. GFC: QE by the CB is ↑MS to buy assets, helping asset holders and can be seen as monetizing the public debt – loss of independence, political and picking winners. FP by gov't/min of finance helped bail out banks/fin institutions and provided K injections to help in short run. MP and FP worked together. Lowering the i-rate helps borrowers; facilitating credit helps the financial system and firms; helping to ↑P of assets is an income transfer to the richer members of society. This helped to worsen Y-inequality. Covid response: non-trad MP did much of the same (QE) and FP provided even more support but was aimed at correcting mistakes during GFC – ie., support households and workers.

2.2 Think about the relationship between inflation and unemployment that Phillips observed for the UK and that Solow and Samuelson observed for the US economy.

2.2.1 The aggregate supply curve, expressed as $AS = Y^S(W/P; P/P^e; Z)$, links output to the goods and services market and the labor market. How might this expression relate to the short-run and long-run relationship behind the Phillips curve? (10 pts)

2.2.2 Provide a *list* of some labor market regulations that could be included in the catch-all variable Z. Explain how a change in Z might affect the natural rate of unemployment if Z included regulatory changes in the labor market. (5 pts)

2.2.1 The original logic behind the PC is that it was a trade-off between inflation and unemployment (left-hand chart). Low levels of U were associated with high rates of π; high levels of U were associated with low rates of π. There was no expectations and no concept of u_n.
The AS curve as expressed supports the idea of the natural rate of output, natural rate of unemployment, and expectations of changes in inflation. In the center chart, an ↑ AD, for example, causes $Y > Y_n$. For producers to respond, P must ↑ P must happen but it is faster than changes in expectations of inflation. As P ↑, L renegotiates pay and → ↑ W to bring W/P back. In so doing, ↑ P^e → ↓AS, restoring Y_n, u_n but at a higher P level, P_1, where there are no further changes in inflation. Thus, the PC is vertical.

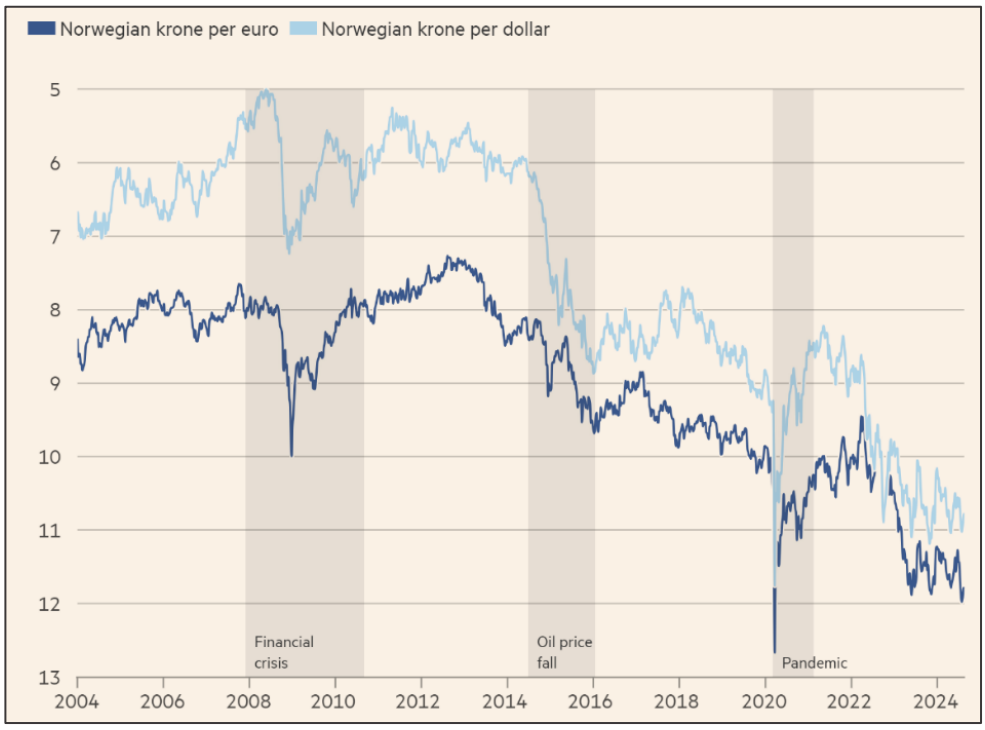


2.2.2 L mkt regs:

* min wage	* work week (hours)	* overtime pay
* hiring/firing practices	* pension benefits	

These regulations can increase the cost of labor, which results in an increase in the cost of production sending the AS curve to the left. If the regulatory changes were made permanent it could change the natural rate of unemployment, shifting Y_n to the left at a higher rate of inflation, where $P_1 = P_1^e$. Y_n' is associated with a higher natural rate of unemployment.

2.3 In 2024, the Norwegian krone was the worst performing currency of the top 10 traded currencies (*Financial Times*, 16 Aug 2024). The krone was at record lows against the US



dollar and euro, excluding its value during the pandemic (see chart). This is despite the country being one of the richest in Europe, and that it regularly maintains twin surpluses in the government budget and in trade. In 2024, it had among the lowest unemployment rates, and like the US and eurozone had inflation rates that exceeded the 2% target (3.5% compared with 2.95% in the US and 2.4% in the euro zone). Norway's economy is small with few tradable assets foreigners want to buy, a net importer of manufactured goods and a net exporter of oil and gas. Use this information to think about factors that affect exchange rates when answering.

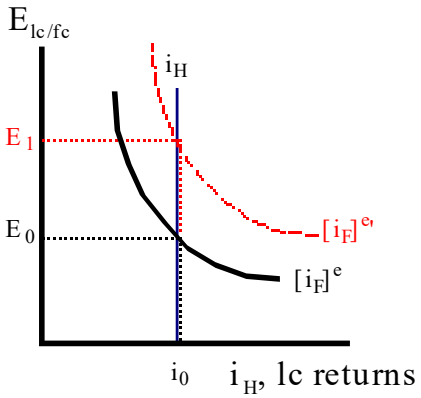
2.3.1 Explain the role that the exchange rate plays in the balance of payments. Is there anything there that you could argue might have affected the krone? (5 pts)
2.3.2 Could changes in expectations help to explain the weak value of the krone relative to the dollar and euro? Be specific. (10 pts)

2.3.1 Quality of the answer depends on what is argued.

E is the mechanism by which the BOP is brought into balance.
BOP = BOT – net K-inflow – ΔR

The E,P relation is PPP and is related to BOT. The E,i relation is related to i-rate parity and is related to the K-inflows and K-outflows. There is probably nothing in the background info that would suggest the BOT is an issue. Norway has a BOT surplus where its export of oil and gas exceeds the value of imports of manufactured goods. Inflation in Norway is higher than either the US and euro zone. That could be a reason for affecting PPP and i-rate parity. But more likely, the issue is probably related to K-flows. The background info notes that Norway has too few assets that foreign investors might be interested in. Running a BOT surplus means that Norway has investible funds that can → an increase demand for foreign assets, decreasing the kr value.

2.3.2 Expectations can help explain the weak value of the krone. If K-outflows increased, then it could force up E (decrease in lc) even at prevailing i-rates. Focus on the K-mkt part of the story. Could also show a graph of the currency market where there is an ↑D for foreign currency assets which sends E up (↓kr value). If it expectations, then E can increase at all rates of interest.



Part 3. Answer the questions related to the macroeconomic scenario described. (30 pts total)

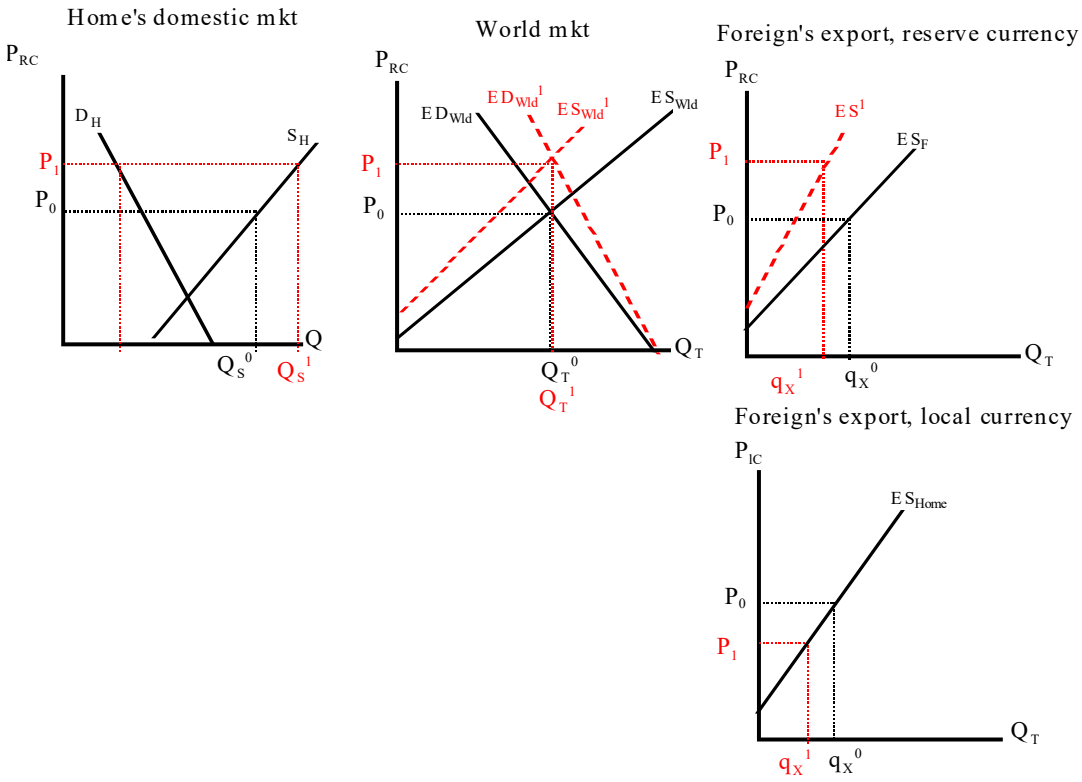
Suppose a multinational corporation has a parent company in its home country (Home) and foreign direct investment (FDI) to produce its well-known branded product in a foreign country (Foreign). FDI allows the parent company to move some production from one location to another in response to international economic developments. Home and Foreign export this product to the rest of the world, and trade in this product is denominated in the currency of Home.

3.1 If Home's currency depreciates, how might the total trade of this product be affected on the world market? How might Home and Foreign's exports be affected? (Ignore transport costs and assume that production of the product is produced with locally sourced inputs.) Use a simple partial equilibrium model to analyze the effects of the exchange rate change on world trade (i.e., the world market) and in Foreign's domestic market. (10 points)

3.2 Suppose Home's central bank took action to depreciate the currency. How would the depreciation of Home's currency affect Home's general macroeconomic equilibrium? Use the Mundell-Fleming IS-LM-BP and AA-DD models to show your result. Make your assumptions explicit. (15 pts)

3.3 Would the partial equilibrium result from 3.1 be consistent with the general equilibrium result from 3.2? Explain. (5 pts)

3.1



Depends on the relative magnitudes of the shifts of ES and ED on the world mkt. In the middle panel, the quantity trade is unchanged suggesting the loss in market share by foreign is offset exactly by Home. Production in Home increases and decreases in Foreign.

3.2

1] ↑MS

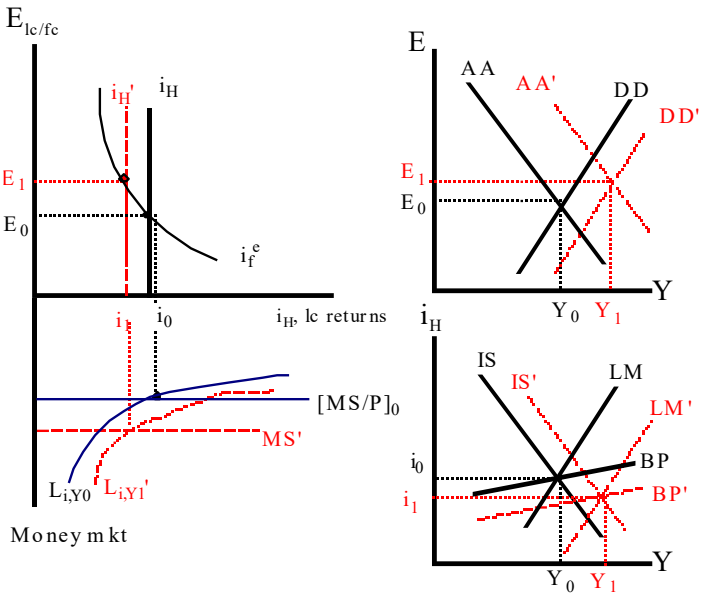
CB sells lc to buy fc, which causes value of lc to decrease r.t. fc.

↑MS → ↑ AA → ↑E and
↑MS → ↑ AA → ↓i

2] goods mkt

↑E → ↑ DD → ↑Y, E = E_1
↓i → ↑I → ↑Y, i = i_1

3] BP: ↑E → ↑ DD → ↑Y, i = i_1



3.3 In Home, the depreciation of the currency lead to an increase in export of the branded good and to exports overall (general eqlbm) relative to imports. Export earnings increased for the particular good. In general there was an ↑(X-M). so, the partial equilibrium results can be consistent with the general equilibrium results.