Essay Question 5:

A low rate of inflation is a key macroeconomic policy objective for most governments. During the first quarter of 2020, interest rates in most countries throughout the world fell to very low levels.

(a) Explain why a rise in interest rates is used as a macroeconomic policy tool to control inflation in some countries but not in Singapore. [10]

(b) Discuss whether a change in interest rates in other countries is likely to have a significant impact on Singapore's domestic and external economy. [15]

Part (a) Suggested Answer

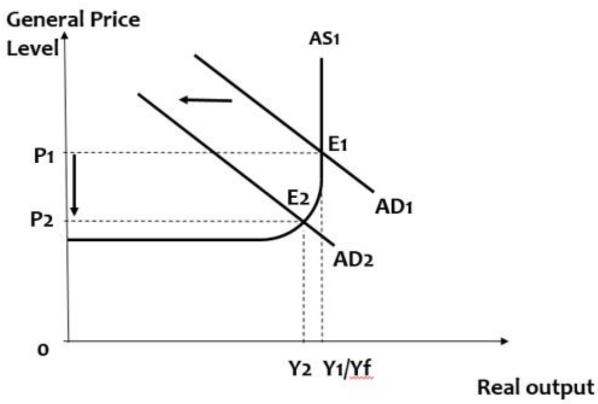
Introduction

- **[recognise that interest rate is a tool of monetary policy (MP) and define MP]** Interest rate is one of the main tools of monetary policy used by large economies such as US, UK, the Eurozone and Japan. Monetary policy is the manipulation of monetary variables such as money supply, interest rate and the exchange rate to influence aggregate demand to achieve macroeconomic objectives such as economic growth, price stability, full employment and a favourable BOT.
- **[note the difference between choice of MP between other countries and SG]** However, the choice of instrument depends on the nature of the economy.

Development #1: Explain why a rise in interest rates is used as a macroeconomic policy tool to control inflation in some countries like the US

- For many large countries such as the US / UK which depends on domestic demand such as domestic consumption and investment to drive growth, it is relatively easier to implement contractionary monetary policy (raising interest rates) as compared to a contractionary fiscal policy to address the problem of demand-pull inflation due to overheating. This is because it is relatively easier to adjust interest rates than to approve of changes in government spending and taxation, the latter is often facing more resistance from the public especially when the government is trying to cut back on public spending and increase taxes.
- Interest rates represent the cost of borrowing as well as the returns to savings, which the Central Bank aims to control to regulate the level of borrowing and hence AD in the economy. For example, the Central Bank (Federal Reserve) can deliberately raise interest rates to prevent overheating of the economy and achieve price stability. When interest rate increases, households will decrease consumption for two reasons:
  - The returns on saving money has risen or the opportunity cost of spending has increased. Hence, households will be incentivised to save rather than spend.
  - The cost of borrowing money for expensive purchases (such as houses and cars) has risen. Hence, households would not be attracted to borrow money to fund these purchases.

A rise in interest rates also implies a rise in the cost of borrowing for firms to finance their investment spending. As such, projects with lower expected returns will now appear unprofitable. Hence, firms will be less willing to invest, resulting in a decrease in the volume of investment, which in turn decreases investment expenditure.



With a decrease in C and I, this will lead to a decrease in AD, ceteris paribus. The fall in income from the initial fall in AD causes a fall in income-induced consumption resulting in a further decrease in AD. As one's reduction in spending reduces income of another there will be multiple decreases in AD until a new equilibrium is reached whereby real output decreases by a multiplied amount from Y1 to Y2 and GPL decreases to P2 as seen as in the figure, thus reducing inflationary pressure due to overheating of the economy.

Development #2: Explain why interest rates is not used as a macroeconomic policy tool to control inflation in SG

Explain why SG does not use interest rates [any 1 point]

- **Changing interest rates result in instability in exchange rates**

If SG were to vary its interest rate, this would cause a significant impact on the exchange rate. This is because hot money, which is short term capital in search of higher returns and monetary stability, would flow out of a SG if its interest rates were to be lowered. This increases the supply of SGD in the foreign exchange market which would cause the exchange rate to depreciate. A depreciation of the exchange rate brings about an increase in the price of imports in domestic currency, worsening imported inflation as unit COP persistently increases given that Singapore relies heavily on imported raw materials.

- **SG is a price taker for interest rates → difficult to target interest rates**

As SG is a financial centre, it has open capital markets which makes it difficult to target interest rates. If the MAS were to raise interest rates, a significant amount of hot money would enter SG. This would increase the supply of loanable funds which would reduce interest rates. Thus, it would be difficult to vary the interest rates away from that of foreign interest rates as any change would be thwarted by the inflow or outflow of hot money in the economy.

- **Demand for investment is interest rate inelastic in SG**

The interest rate inelasticity for the demand for investment makes interest policy less effective. Even if SG were able to change its interest rates, the extent of the impact on AD would be small as the MEI tends to be interest rate inelastic. This means that a fall in interest rates would mean that the cost of borrowing is lower, and thus previously unprofitable investment project may now be profitable. The volume of investment thus increases, leading to greater investment expenditure. However, since MEI is interest inelastic as majority of investment in SG is due to FDI and foreign firms may not borrow locally, this leads to a less than proportionate rise in the volume of investment. Thus, investment expenditure would increase to a small extent only. Therefore, impacts on AD would not be significant.

Explain why exchange rate is chosen by SG as its main tool of monetary policy to control inflation

Singapore is a small and open economy and its characteristics are the underlying reasons for its choice of tool of monetary policy.

- Small: Limited natural resources, small domestic demand
- Open: Dependent on imported raw materials, external demand is relatively larger

Exchange rate policy is able to curb imported inflation and demand-pull inflation

Imported inflation is one of the main sources of cost-push inflation in SG. As a resource poor country, SG is very dependent on imported factors of production e.g. oil and other raw materials. If import prices were to rise, it would significantly affect the cost of production of domestic firms, raising the GPL to a large extent which is a concern to the government as it affects both export competitiveness and the cost of living. In such a case, MAS can strengthen (revalue) the currency to reduce the price of imports (measured in domestic currency), thus reducing cost of production for firms, and thus the GPL as well. In comparison, interest rate policy is unable to directly address imported inflation.

Moreover, as an open economy, trade is an important engine of growth for SG and thus a policy such as exchange rate policy that can influence X and AD, would be more effective in controlling demand-pull inflation. Revaluing the SGD would raise export prices (in foreign currency) and lower import price (in SGD). Assuming PEDx>0, demand for SG exports would fall as SG exports are relatively more expensive resulting in a fall in X. In addition, as price of imports falls in terms of SGD, domestic households substitute imports for domestically produced goods and services causing a fall in Cd. (X-M) and Cd decrease overall, resulting in a fall in AD helping to curb demand-pull inflation.

Now, since export revenue makes up a very large proportion of the total demand in SG, the impact of a decrease in (X-M) will result in a substantial fall in AD more effectively curbing demand-pull inflation. In comparison, interest rate policy tends to only impact C and I which may make up a smaller proportion of total demand. The impact on AD would be smaller than the impact of exchange rate policy.

Conclusion

In summary, due to the difference in the nature of the economy, different countries have different preferred tools for monetary policy.

Marking Scheme

Level	Knowledge, Application, Understanding, and Analysis	Marks
L3	For a well-developed analytical explanation on interest rate policy used to control inflation in some countries and why exchange rate is used in the context of the Singapore economy.	**8-10**
L2	For an undeveloped answer (lacking analysis) OR an answer lacking in scope (e.g. only discusses why interest rate policy is used)	**5-7**
L1	For an answer which shows some knowledge of what is interest rate policy or a list of unexplained reasons.	**1-4**

Additional resource by MAS: Monetary Policy and the Economy
https://www.mas.gov.sg/-/media/MAS/Monetary-Policy-and-Economics/Education-and-Research/Education/Explorer/Economics-Explorer-3--Monetary-Policy-and-the-Economy.pdf

(b) Discuss whether a change in interest rates in other countries is likely to have a significant impact on Singapore's domestic and external economy. [15]

Introduction

- To determine whether a change (fall) in interest rates in other countries such as US would overall benefit SG's domestic and external economy, we would have to weigh the benefits and costs to the economy relating to economic growth, inflation, unemployment as well as the balance of trade (BOT).

Development #1: Impact on SG's external economy

<u>Positive Impact on BOT</u>

- A fall in interest rates, for example in US, would mean that the cost of borrowing decreases → previously unprofitable investment project may now be profitable → rise in volume of investment → increase investment expenditure
- In addition, ↓i/r → ↓cost of borrowing to households → ↑spending on big ticket items on credit such as cars → ↑C
- Since I and C both rise → ↑AD in US as AD=C+I+G+(X-M), ceteris paribus
- Assuming US economy has spare capacity → ↑AD → multiplied ↑real NI in US
- As NI↑ in US → ↑purchasing power of US citizens → ↑demand for goods and services including those imported from SG (assuming those goods are normal goods) → ↑X in SG
- With a ↑X in SG → ↑ value of (X-M) → improvement of the current account (CA) → ceteris paribus, this would <u>improve SG's balance of trade (BOT) hence CA and thus balance of payments (BOP)</u> (For SG, this would increase SG's trade surplus)

Evaluate:
[Extent – Criterion: Context/Strength of trade partnership between US & SG]

- As this is a fall in the interest rate of US which is a close trading partner of SG, the ↑X will be significant → leading to <u>significant</u> increase in SG's trade surplus
- AS US has the world's largest economy, every interest rate moves the Federal Reserve will affect other countries' interest rates. ↓i/r by Fed → other countries will likely follow suit → expansionary effects → many countries' demand for SG goods will rise → leading to <u>significant</u> increase in SG's trade surplus

<u>Negative Impact on BOT</u>

- However, with a ↑X in SG → ↑ value of (X-M) → ↑AD in SG as AD=C+I+G+(X-M), ceteris paribus → assuming the SG economy is initially at the intermediate range of AS → (don't have to repeat adjustment process) → ↑GPL
- Moreover, assuming SG is an interest rate price taker, SG's i/r will also fall when US reduces their i/r → ↑AD due to ↑C, I → concern of ↑AD would be the <u>sustained rise in GPL</u> if SG lacks idle resources
- In addition, with i/r falling in many economies → ↑AD in other economies → ↑GPL → rise in price of imported raw materials from these countries → sustained increase in unit COP & thus GPL→ ↑imported inflation in SG

- With inflation, price-competitiveness of SG goods worsens → imports relatively cheaper in SGD → ↑DD for imports → ↑M. At the same, assuming PEDx > 1, rise in price of SG exports causes more than proportionate fall in quantity demanded caused → ↓X → ↓ (X-M) → worsening of the current account (CA) → ceteris paribus, this would worsen SG's BOT hence CA and thus balance of payments (BOP) (For SG, this would decrease SG's trade surplus)

Evaluate:
[Extent – Criterion: Context] With economies world-wide suffering from the pandemic in 2020, AD is likely to be low and so economies including SG should have some degree of spare capacity to accommodate the rise in AD as a result of low interest rates without causing severe demand-pull inflation. Hence the adverse impact explained earlier could be muted and less significant given the context in 2020.

Development #2: Impact on SG's domestic economy
Positive growth and decrease demand deficient unemployment due to expansionary effect of other economies → ↑ SOL

- With a ↑X in SG due to ↑Y in US as a result of the Federal Reserve cutting i/r as explained earlier → ↑ value of (X-M) → ↑AD in SG as AD=C+I+G+(X-M), ceteris paribus → assuming the SG economy is initially at the intermediate range of AS → (don't have to repeat adjustment process) The rise in income from the initial rise in AD causes a rise in income-induced consumption resulting in a further increase in AD. As one's spending becomes another's income there will be multiple increases in AD until a new equilibrium is reached → ↑GPL and ↑real output by a multiplied amount → positive economic growth in SG though multiplier effect is dampened
- Positive growth is beneficial for the SG economy due to a rise in real national income which suggests that purchasing power and thus the quantity of goods enjoyed by individuals increases. Thus, material well-being and therefore standard of living has improved.
- With a rise in real output in SG → ↑AD_L → ↓demand deficient unemployment
- ↓unemployment → ↑income for those unemployed → ↑material well-being and thus SOL (can also link to non-material well-being↑)

[Extent – Criterion: Size of External Demand/Nature of SG economy]

- As SG is an open economy with a relatively large external demand → ↑X will impact SG's AD to a large extent → leading to significant positive growth in SG.
- The significance is further strengthened by the strong trade partnership between SG & US and the world multiplier effect where other countries benefit in the same way SG does and in turn has greater purchasing power for SG exports.

Negative Impact on Domestic Economy + Evaluation

- Although the strong rise in AD due to rise in X as a result of US's economic growth reinforced by SG's C&I rising since it is an interest rate taker of the lower world interest rates might cause SG to suffer from DD-pull inflation, it is likely to be insignificant due to AD being low in 2020 during the pandemic affording room for some increase in AD without causing severe demand-pull inflation.

Conclusion/Synthesis

- **[E/Opinion]** Being an open economy, SG is highly affected by what happens in other economies around the world. A change in interest rates in other countries which tends to have a closer trading relation with SG is likely to have a more significant impact on Singapore's domestic and external economy.
- **[E/Criterion: Nature of SG economy]** Due to the openness of the Singapore economy and trade links between Singapore and the US for instance (US is SG's 4th major trading partner in 2021), changes in interest rates in the US will have an impact on the Singapore economy.
- **[E/Reasoning]** The extent of impact on the Singapore economy hinges on the extent of dependence of Singapore on exports to US and whether there is sufficient spare capacity in the Singapore's economy to benefit from the increase in exports to USA should there be a fall in interest rates. The impact of a fall in interest rate in US may impact the SG economy more significantly as the SG economy is more interlinked with the US economy than for instance Bangladesh economy since there is more trade between SG and US compared to with Bangladesh. Hence, the fall in interest rate in US is more likely to impact the SG economy more.

Marking Scheme

Level	Knowledge, Application, Understanding, and Analysis	Marks
L3	For an analytical discussion of the possible effects, both positive and negative, of the changes in interest rates on the SG economy (domestic and external)	8-10
L2	For an answer that is largely descriptive (lacking analytical rigor) OR lacking in scope.	5-7
L1	An answer which lists some of the possible effects (with not much explanation)	1-4
Level	**Evaluation**	**Marks**
E3	For a well-reasoned judgement based on economic analysis with an overall summative conclusion on the extent/significance of the explained impact on the economy based on a specified criterion.	5
E2	For an attempt at judgement on the extent/significance of the explained impact on the domestic and external economy respectively that is either underdeveloped or lacking a summative conclusion.	3 – 4
E1	For an unexplained judgement.	1 - 2