**Chapter 15 – Exchange Rate**

Content Teaching

1. Concept of exchange rate

2. Determinants of exchange rate

3. Explain how the depreciation of exchange rate affects the economic performance of a country

4. Explain how our exchange rate monetary policy works to achieve the aims of government. ( gradual modest appreciation / zero appreciation)

5. Why is exchange rate mp policy of great significance to sg?

6. Essay 1

7. Essay 2

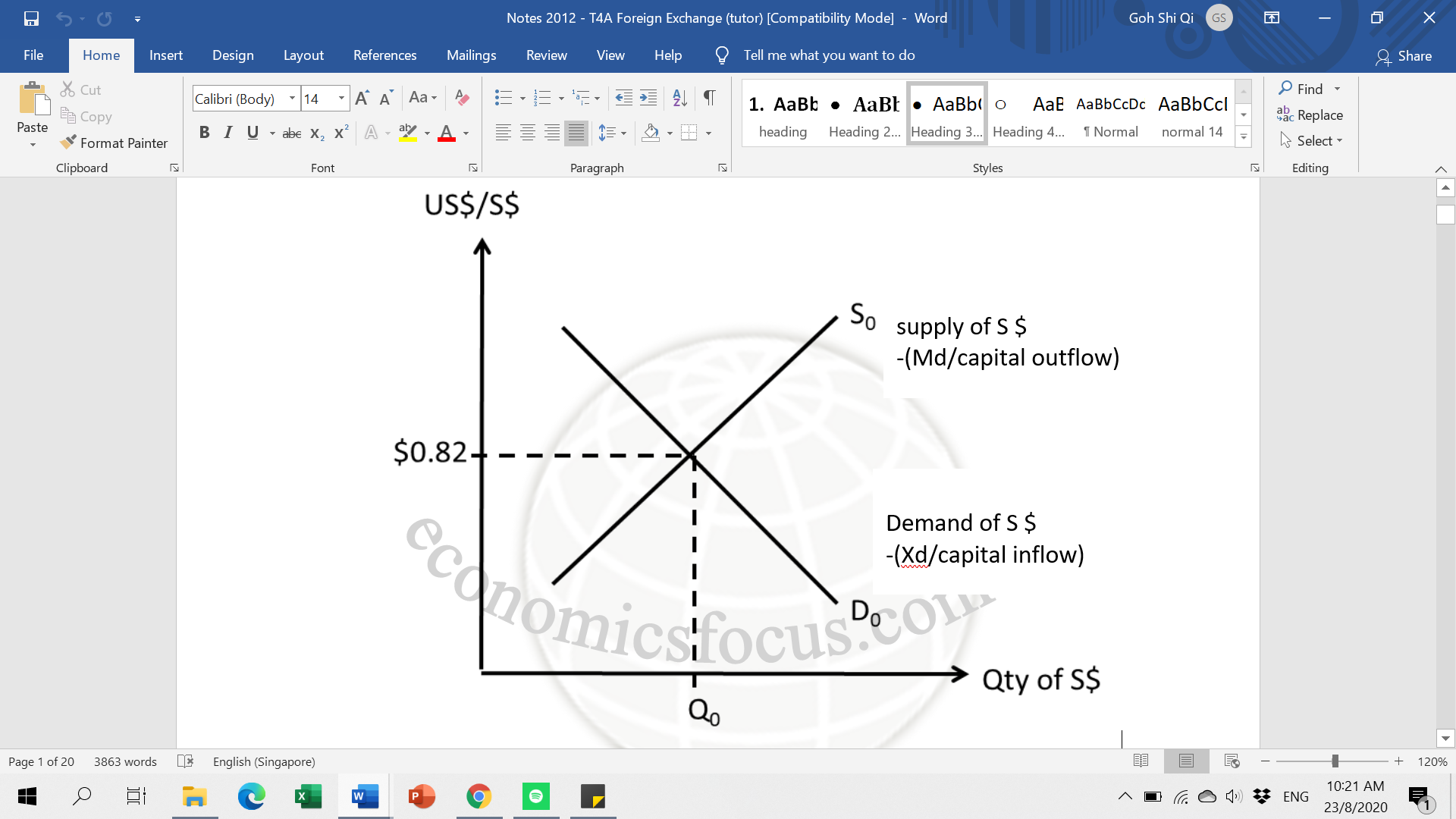
8. CSQ 1

9. CSQ 2

**1. Concept of exchange rate**

1.1 Exchange Rate (ER)

• The foreign exchange rate is the price of a currency in terms of another currency. It is the external value or price of a country’s currency. [S$1 – US$0.82/ US$1 –S$1.22; (1/0.82))



1.2 Demand for Currency (Change in Xd/ Capital inflow)

• Downward sloping on ER to quantity of currency axis

Currency is demanded by:

o Foreigners who wants to buy goods produced domestically (Export dd)

o Foreign firms or individual looking to invest domestically (FDI)

o Currency traders who believe that future value of domestic current will appreciate/ take advantage of interest rate differentiation (affected inflow of hot money)/equity transaction (increase in XD – increase in dd for S$)

1.3 Supply of Currency (Change in import demand/ Capital outflow)

• Upward sloping on ER to quantity of currency axis

• Currency is supplied by: (Increase in Capital outflow – Increase in Supply of S$)

o Local firms and individuals who are buying foreign goods (import dd)

o Local firms and individuals who are looking to invest in foreign nations (FDI outflow)

O Currency traders who believe that the local currency will depreciate in future/ take advantage of interest rate differentiation (affected inflow of hot money)/equity transaction)

1.4.Market Equilibrium for FOREX

• Refers the level of exchange rate which is at equilibrium when the demand of FOREX is met by the supply of forex

1.5.Appreciation of currency

• An increase in value of one currency relative to another currency as a result of the increase in market demand for or the reduction in the supply of currency in the forex market. (↑dd for local $/↓ss of local S$)

1.6.Depreciation of currency

• A decrease in value of one currency relative to another currency as a result of the fall in the demand for or the increase in the supply of the currency in the forex market. (↓dd for local $/ ↑ss of local S$)

Revaluation – the government will raise the value of the exchange rate through direct regulation ( lower the price of imports in local value)

Devaluation – the government will lower the value of exchange rate through direct regulation (lower the price of exports in foreign value)

1.7.Floating/Flexible ER system

• The flexible exchange rate system determines the exchange rate based on the demand and supply of currency in local or foreign currency in the foreign exchange market.

**2. Determinants of exchange rate**

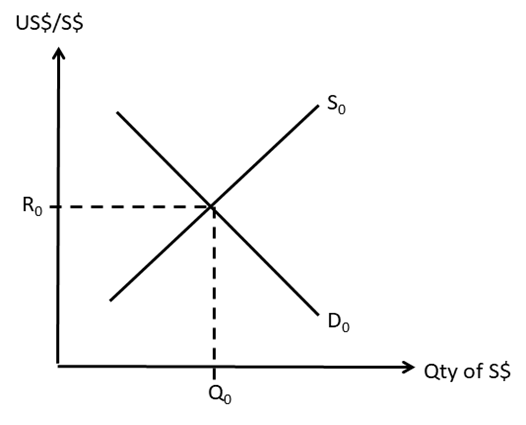
2.1 How exchange rate is determined under the flexible exchange rate system?

2.1.1 Introduction

- Definition of flexible exΔ rate

- Main Body (Explain why S$ has appreciated – due to ↑dd for S$ / ↓ss of S$)

2.1.2 State that the intersection of Dd & Ss of S$ in the forex market will determine exΔ rate.



Dd for S$ → Xd/ Capital inflow/Singaporeans’ remittance/Foreign govt expenditure in Singapore

Ss of S$→ Md/ Capital outflow / Foreign workers’ remittances/Singapore govt expenditure abroad

2.1.3 State market forces of dd and ss of local currency in forex market are determined by export dd and capital inflow for dd for S$ and import dd and capital outflow for SS of S$.

2.1.4 State that the export dd and import dd are caused by the following factors:

a) relative inflation rate

• US experience inflation

* Px of US goods ↑ -SG decrease MD fr US, decrease ss of S$ (SG Imports less) – Appreciation of S$
* Pm is relatively expensive → increase Md fr US → increase XD fr SG -Increase DD of S$ → Appreciation of S$

b) relative change in income level of the trading countries

• NY of US more than in NY for SingaporeXd from US/Md from US for Singaporedd for S$/ss of S$appreciation of S$

c) taste and preference

d) government purchase – affected by the economic development of US$

2.1.5 State the capital inflow and outflow are affected by the following factors:

a) change in interest rate (ST) – gains from savings

b) speculation (ST) – gain from flow of funds/equity transactions

c) return on FDI

If the exΔ rate is in the context of S$→ appreciation → state govt intervention is one of the reasons for rise of exΔ rate.

2.2 Determination of Exchange Rate (Under flexible ER system)

Factors affecting Demand for and Supply of currency

• Change in demand for local goods and services

• Change in relative interest rates between countries

• Expectation change in future value of domestic currency relative to foreign

• Change in return on capital investment (revenue – cost of production)

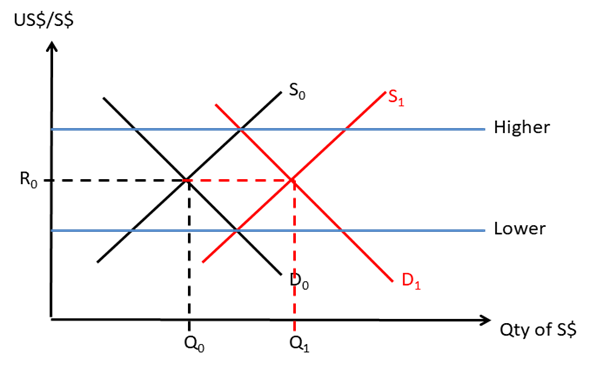
• Change in cost of production

• Change in taste and preference of foreign consumers

2.3 Managed-Float Exchange Rate System

• In this exchange rate system, the central banks occasionally enter foreign exchange markets to adjust their official holdings to moderate major swings in the exchange rates. The central bank may attempt to raise and lower exchange to influence the economic activities so as to achieve the economic aims of the government by directly increase the demand and supply of the local currency to influence the exchange rate.

• For Singapore, the exchange rate management policy is used to set the exchange rate whereby the government directly intervenes in the forex market through direct buying and selling of S$ and foreign currency



• The central bank will set a range for the exchange rate to fluctuate within and will only intervene to manipulate the exchange rate if the rate rise above the upper band or falls below the lower band. If the government decides not intervene, it will adopt a neutral stance to allow the exchange to rise or fall. In doing so, the central bank will raise or lower the band.

• It may take a neutral stance on the direction of change in the exchange, allowing it to appreciate or depreciate if the rate of change in the exchange rate is favourable to the economy. Let the market forces decide as the extreme depreciation of S$ may mean that excessive amount of S$$ is needed to uphold exchange rate.

Decrease in reserve of forex used to uphold the S$

Exchange rate position S$ - gradual modest appreciation of S$ or zero appreciation of S$ . – slow rate appreciation / allow exchange rate to stay high but disallow further appreciation

• To appreciate the exchange rate so as to dampen the imported inflation, the MAS needs to increase the demand for S$ by buying S$ and selling of foreign currency. To depreciate the exchange rate so as to lower down the cost of FDI and price of export, the MAS needs to increase the supply of the S$ by selling S$ and buying of foreign currency.

o Indirect method of intervention – trade restriction → ↓Md→ ↓SS of S$ → appreciation

o The use of monetary and fiscal policy to regulate the FOREX method – (↓AD→ ↓ NY→ ↓Md (MPM≠ΔMd/ ΔNY) → ↓ SS of S$ →Appreciation)

o Use interest rate to influence capital flow – affect exchange rate

2.4 Monetary Exchange Rate Policy

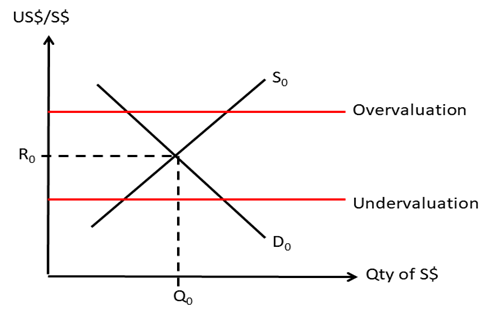
• How exchange rate monetary policy curb imported inflation? (conducted by Indonesia, Vietnam, India) (using money supply to affect interest rate so to affect exchange rate and achieve the aim to curb imported inflation or raise export competitiveness)

* i/r↑capital inflow (hot money)→↑dd for local $→Appreciation of local $→ Pm in local $ cheaper→↓COP/↓COL→curb imported inflation
* Evaluation: Capital gain from speculation of currency→ Appreciation →induces speculator to sell local $ in forex market→↑SS of local $→depreciation→Pm in local $ will increase again – effect in curbing imported inflation is short-lived

/→The policy is introduced with ST capital control in selling local $

2.5 Over-valuation refers to the condition where the exchange rate pegged by the government is above the market-determined exchange rate. The purpose of the over-valuation is to curb the imported inflation.

2.6 Under-valuation refers to the condition where the exchange rate pegged by the government is below the market-determined exchange rate. The purpose of the under-valuation is to increase the price-competitiveness.



**3. Explain how the depreciation of exchange rate affects the economic performance of a country**

Reasons for ER regulation

3.1 To reduce the uncertainty in trade

• As value of currency changes, so will prices of exports and imports. Uncertainty that arises from this change will cause traders to trade less as it will be difficult to ascertain the price level of resources and goods as cost of production cannot be stabilized which will undermine profitability. With stable trading activities, it will encourage production which will induce growth of employment and national income

• Deter long-term international investment (FDI depends on XD/MD – MNCs will invest in countries with efficient and capable export capacity)

3.2 To prevent speculative movements of “hot money”

• Fluctuation of exchange rates encourages speculative movements → currency to appreciate or depreciate → further destabilize the exchange rate (Asian Currency Crisis) → which will undermine growth of the trading and investment activities

• E.g. if people speculate that S$ is going to fall and speculative activity is not checked, the S$ will drop even further

• Government intervenes in the foreign exchange market to smoothen out such speculative movements.

3.3 To correct BOP deficit/surplus

– if the government set or manage the exchange rate, it will ignore the condition of BOP disequilibrium as the impact of BOP disequilibrium will not affect exchange rate and cause economic impacts

• Persistent BOP deficit → net outflow of foreign currencies → country incurs debts to correct the deficit → flight of capital of currency will take place if investors lose their confidence and hence hinders economic growth.

• Deficit – BOP →Depreciation →↑ BOP deficit → Depreciation (flexible) → Pm↑→ Imported inflation → ExΔ Rate management → Appreciation → Solution → Focus @ BOP Deficit

• Exchange rate depreciation will also undermine Singapore status as a wealth management centre as the value of saving by foreigners will decrease in the future if there is depreciation

• Surplus – BOP→ Appreciation

• Persistent BOP surplus → net inflow of gold and foreign currencies → cause inflationary pressures in host countries

• Appreciation will encourage excessive inflow of fund → leading to ↓ in MS in local money market →↓ i/r→↑dd for assets → asset-based inflation

Solution→ Devaluation → ↓ Px→↑Xd → solve problem the of loss of export competitiveness and prevent inflow of hot money

• Under free market forces, the pressure of a BOP disequilibrium is taken by the rate of exchange

Automatic adjustment to equilibrium under flexible exchange rate system

o BOP deficit: the rate will depreciate to eliminate the deficits – (depn → Px↓→↑ Xd)

o BOP surplus: the rate will appreciate until it reaches a new equilibrium level ( appn→ Pm↓→↓ Cost of imports)

OSelf-correcting or flexible exΔ rate

(i) Pedx + Pedm > 1 → short term

1. SR, Pedx + Pedm < 1

LR, Pedx + Pedm > 1 (Marshall Lerner condition is satisfied)

2. Degree of substitution is lesser for Singapore → High value added production

(ii) Holding Capital flow constant

* Balance of payments disequilibrium will be corrected automatically only if the Marshal-Lerner condition is present (Pedx + Pedm >1). Therefore, if there is severe BOP disequilibrium; the monetary authorities may have to resort to monetary and fiscal policies. To do so, the government will adopt a gradual and modest appreciation of exchange rate.

3.4 To neutralize short run pressure on the exchange rate

• Frequent short-run changes can have serious repercussions in the domestic economy

o If the value of the S$ depreciates, imports become dearer and this can cause home prices to rise leading to inflation

o A rise in S$ makes the country’s exports much dearer and so exporting firms may lose its competitiveness; and if export demand is elastic, they will lose orders, cut production and lay off workers → UN+

• Official intervention will avoid short run fluctuations, maintain international competitiveness and prevent imported inflation that will raise the cost of living and production.

3.5 Effects of Appreciation of Exchange Rate

3.5.1 Effects of Balance of Trade

• Appreciation of exchange rate→ PX increase and PM decreases → decrease in quantity demanded of export and increase in quantity demanded of impost:

o PED(M) + PED(X) > 1: the BOT will worsen (SR)

o PED(M) + PED(X) < 1: the BOT will improve (LR)

3.5.2 BOP Improvement (Surplus)

• Appreciation of exchange rate makes investment more worthwhile. This increases inflow of foreign capital.

• The cost of the value of FDI will be higher due to the appreciation of exchange rate. The cost of foreign business operation locally will be higher.

3.5.3 Effects on Local Production and Employment

• As both the decrease in export demand and increase in imports will lead to a lower local production, the employment level in the economy will be reduced.

3.5.4 Effects on Economic Growth

• Appreciation will increase import of capital equipment from other countries at a lower cost. This will enable the economy to expand its production capacity and raise its technological development to attain higher level of economic growth.

3.5.5 Effects on Cost of Living and Standard of Living

• Appreciation will make imports cheaper, local consumers are able to buy more foreign products and standard of living is improved.

**4. Explain how our exchange rate monetary policy works to achieve the aims of government. ( gradual modest appreciation / zero appreciation)**

. Singapore ER system (in conjunction with MP)

4.1 Characteristics of Singapore ER system

1. Managed-float Exchange Rate System

2. Trade-weighted effective rate (a basket of forex)

→ Provide a stable and strong exrate

→ Ensuring external stability

3. Strategy of the exchange rate management policy in Singapore

* Gradual and modest appreciation
* Will help to curb imported inflation contributed by rising price of resources to global market – this will help to dampen the cost of production and cost of imports (lower cost of living will prevent wage increment – together with lower cost of imports → lower cost of production – will help maintain export price competitiveness

- Singapore can still maintain export competitiveness despite appreciation a rise in exchange rate is gradual and our demand of exported good is price –inelastic (Px↑ → Xd is price-inelastic – decrease in export demand is less than proportionate – total revenue of export will increase)

- Zero Appreciation – exchange rate is kept high but disallowed to appreciate further as focused in 2009

- Government needs to continue to maintain export competitiveness – therefore, prevents any further rise in exchange rate to keep rice of exports low

- Strong exchange rate is not the cause of fall in export demand as the cause of fall in Xd in 2009 is due to reduction in national income which will reduce their import demand

4.2 Aims

• Price Stability (Curb imported inflation, lower cost of foreign workers)/help lower income group to sustain purchasing power

• Sustainable economic growth → Expansion of resource capacity → increase imports

• Full employment → Sustain Xd/ FDI

4.3 Reasons for Policy Tool

• Small economy: Dependent on external sector

• Openness: Vast network of international financial linkages and existence of large external trade and service sector. Capital mobility is high and domestic interest is heavily influenced by external interest rates

• Singapore practises managed float exchange rate and allows free capital movement (Financial Centre) – dampen the effect of fluctuation of the exchange rate on the financial sector – maintain future value of saving for foreigners

4.4 Singapore’s ER System

• Singapore dollar (SGD) is pegged against a trade-weighted basket of currency of major trading partners and allowed to float within a certain bandwidth of ER. As long as ER floats within the region, the Monetary Authority of Singapore (MAS) does not intervene.

4.5 Using ER to Combat Inflation

• During inflation, MAS allows SGD to appreciate.

• Cost of imported inputs for production will decrease, dampening the effects of a cost-push inflation

• PX increases and PM decrease, assuming Marshal-Lerner condition, the overall net export will decrease, AD will decrease and a demand-pull inflation can be curbed. (Pedx is price inelastic → low degree of substitution, high valued production)

4.6 Using ER to Attain Economic Growth and Employment

• MAS allows SGD to depreciate, which will help to raise Xd/FDI to prevent economic downturn

• Price of export demand and cost of FDI will decrease and this will stimulate an increase in export demand and foreign direct investment which will raise the aggregate demand and thus, raise national income, full employment and production.

**5. Why is exchange rate MP policy of great significance to sg?**

(Why do small countries like Singapore worry about exchange rate fluctuation?)

Reasons for Singapore government to conduct managed-float exchange rate system

a) High degree of reliance on external export demand and foreign direct investment for employment and the fluctuation of exchange rate will affect the price of exports and cost of FDI which will influence the level of export demand and Foreign Direct Investment.

b) High degree of imports of resources due to lack of natural endowment will mean that the cost of imports is a great influence on the cost of living and cost of production. There is a need to maintain appreciation of exchange rate to curb cost of import to lower cost of living and maintain standard of living and lower cost of production to maintain competitiveness.

c) Our need to maintain financial stability and to develop our banking and financial monetary sector which is critical industry to the economy. Preventing exchange fluctuation will help to maintain return on financial and capital investment and thus, ensures the development of the financial and banking sector.

d) Need an exchange rate manipulator to ensure ext. stability to help Singapore to attain the aim of EG and prevent the problem of UN+.

e) i. Main focus of the economy – External stability – (↑Xd/ ↓FDI)

ii. Main aim of the economy – Economic growth

iii. Main problem of the economy – Solve UN+

ExΔ rate stability is needed to ensure external stability.

6. Essay Question 1

**Explain why the value of the Singapore dollar against foreign currencies has been appreciating in recent months and discuss whether changes in the exchange rate are of economic significance. [25]**

Introduction

The appreciation of SGD against other currencies can be cause by an increase for demand of SGD and/or decrease in supply of SGD in the ER market. The appreciation of ER affects the economy of Singapore significantly because she depends heavily on the manufacturing export market for income.

Main Body

**1.** **Factors affect the rise in demand and fall in supply of SGD**

a. A rise in demand of SGD could be due to increase in export demand and increase capital inflow.

b. Increase in export demand will increase the amount of domestic currency demanded to pay for our exports.

c. On the other hand, a decrease in supply of SGD is due to a fall in import demand. When import demand is low, Singaporeans would not release SGD in return for foreign currencies to complete the transaction.

d. On the other hand, a spike in inflow of capital will cause a rise in demand for SGD and the reverse for an outflow of capital.

e. Capital inflow, in the short term, is affected by the change in interest rates. When rates are higher, return to capital is higher and more capital flows in. When rates are low, returns are also low and capital flows out.

f. In the long run, the expected profitability of business opportunities within Singapore attracts funds from external investor. When sentiments are positive, more funds will flow in; vice versa.

**2.** **Impact of appreciation on export and BOT**

a. When there is an appreciation of SGD, relative price of exports will increase in foreign countries and price of imports in Singapore will decrease. This will decrease quantity demanded of export and increase in quantity demanded of import.

B. Since quantity of exports is reduced and quantity of import increases, the expenditure of import will rise and revenue from export falls. In the short run, ED(M) + ED(X) is less than 1 (elastic). Therefore BOT will worsen.

**3.** **Impact of appreciation on FDI and BOP**

a. The cost of the value of FDI will be higher due to the appreciation of exchange rate. The cost of foreign business operation locally will be higher. Depending on the degree of appreciation, FDI will remain the same or fall.

b. If FDI falls as funds are being pulled out of the Singapore, BOP will enter into deficit.

**4.** **Impacts of appreciation on local production and employment**

a. As both the decrease in export demand and increase in imports will lead to a lower local production, the employment level in the economy will be reduced.

**5.** **Impacts of appreciation on economic growth/AD/NY**

a. Appreciation will increase import of capital equipment from other countries at a lower cost. This will enable the economy to expand its production capacity and raise its technological development to attain higher level of economic growth.

**6.** **Impacts of appreciation on cost of living and standard of living**

a.Appreciation will make imports cheaper, local consumers are able to buy more foreign products and standard of living is improved.

b. For Singaporean consumer which buys many foreign products, cost of living dwindles and they can enjoy more imported goods for a given level of income. Hence standard of living improves.

**7.** **Impact of appreciation on distribution of income**

a. As appreciation causes the export demand to fall, owners of export oriented production factors will earn less than before.

b. On the other hand, increase in import demand will cause a fall in consumption of domestic goods. Domestic producers will earn less than before.

c. Depending on the degree that affects export factor owners and domestic producers, distribution of income will be more equitable.

7. Essay Question 2

**"Unlike Singapore which chooses exchange rate for its monetary policy and free capital flows, USA chooses interest rate monetary policy and free capital flows to manage the economy."**

**(a) Compare how exchange rates are determined in Singapore and USA. [10] (VJC Prelim 2012 Q4)**

Introduction

• Definition of exchange rate

• State that the exchange rate policies for USA and Singapore differ as USA adopts a flexible exchange rate system while the Singapore adopts a managed-float exchange rate system.

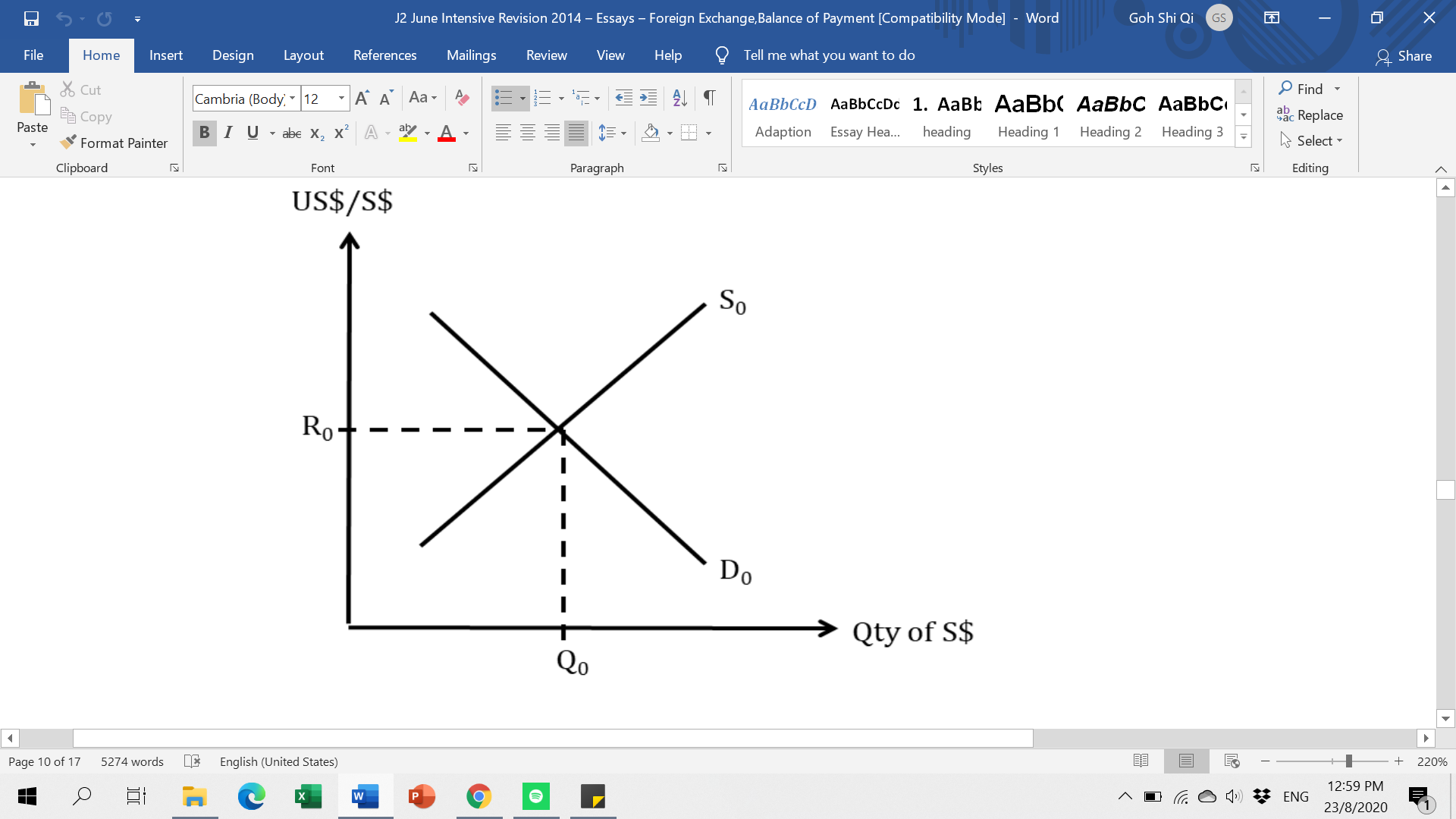
Main Body

**1) Explain how the exchange rate system is determined under US** (Flexible exchange rate system)

The flexible exchange rate system determines the exchange rate based on the demand and supply of currency in local or foreign currency in the foreign exchange market.

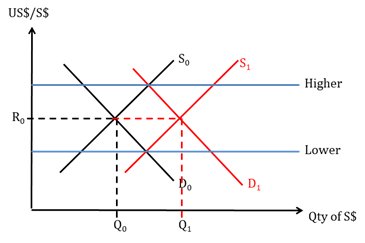
State that the intersection of Dd & Ss of S$ in the forex market will determine exchange rate

For demand side, the main factors affecting the demand for currency would be the export demand, inflow of hot money and inflow of investment. As for the supply side, the main factors affecting the supply of currency would be the import demand, outflow of hot money and outflow of investment. Therefore, for economic variables like interest rate and inflation rate would affect exchange rate indirectly as they affect the factors affecting the demand and supply of the local currency in the forex market.



As seen from the diagram, the exchange rate is determined at R0, where demand and supply will intersect.

**2) Explain how the exchange rate system is determined under Singapore** (Managed-float exchange rate system)



As for the managed-float exchange rate, the central bank (MAS) will set a range for the exchange rate to fluctuate within and will only intervene to manipulate the exchange rate if the rate rises above the upper band or falls below the lower band. If the government decides not to intervene, it will adopt a neutral stance to allow the exchange to rise or fall. In doing so, the central bank will raise or lower the band.

It may take a neutral stance on the direction of change in the exchange, allowing it to appreciate or depreciate if the rate of change in the exchange rate is favourable to the economy and thus, allowing the market forces to influence exchange rate. It will let the market forces decide as the extreme depreciation of S$ may mean that an excessive amount of S$$ is needed to uphold the exchange rate.

To appreciate the exchange rate so as to dampen the imported inflation, the MAS needs to increase the demand for S$ by buying S$ and selling of foreign currency. To depreciate the exchange rate so as to lower down the cost of FDI and price of export, the MAS needs to increase the supply of the S$ by selling S$ and buying of foreign currency.

**3) Identify and evaluate the differences between US and Singapore exchange rate systems**

• Both allow the market forces of demand and supply of the economy to determine the exchange rate but Singapore’s system needs to be regulated occasionally to maintain the exchange rate within a range

• Singapore exchange rate system is determined on a basket of currency while US exchange rate is determined as a singular currency

• The focus of Singapore’s exchange rate system is to ensure the stability of trading prices to stabilize trading and production activities while the US adopts the floating exchange rate system to reflect the economic and trading activities on the exchange rate so that they will self-adjust independently to attain external stability.

• Singapore managed-float exchange rate system requires a large pool of foreign currency reserves to ensure the stability of the exchange rate, thus incurring high opportunity cost on maintaining reserve seen in term of other economic uses. On the other hand, US exchange rate system will require a large pool of foreign currency reserve but it is destabilizing to allow autonomous correction.

Conclusion

Both exchange rate systems have their strengths and weaknesses and they serve their aims to ensure that there is greater external stability for their economies.

8. CSQ: HCI 2019 H2 Economics Prelim Question 1

**US-China Trade war**

**Table 1: Change in Chinese Yuan per US dollar from 2013 to 2016**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **2013** | **2014** | **2015** | **2016** |
| Exchange Rate (Yuan per USD) | 6.15 | 6.16 | 6.28 | 6.64 |

Source: *Focus Economics*

**Extract 1: US fights for protectionism**

Tapping into economic discontent, President Donald Trump has argued for protectionism and asserted that decades of free trade policies were responsible for the collapse of the American manufacturing industry and its ballooning trade deficit. He has been feeding on the perception among many Americans that globalisation has brought more pain than gain. For example, globalisation has brought cheap consumer goods into the country, costing domestic jobs and depressing wages. Outsourcing of jobs to cheaper markets has also been a concern.

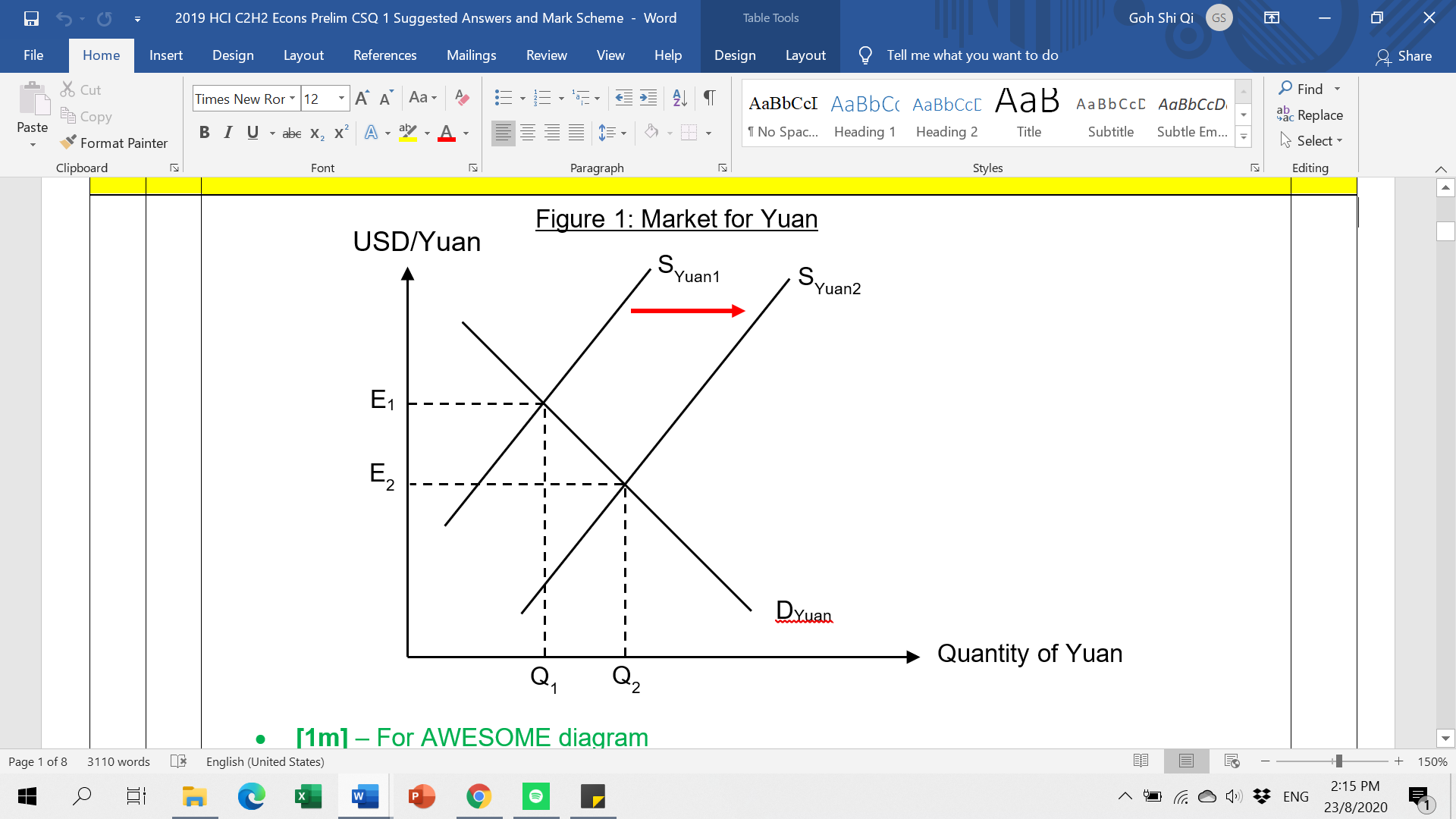
President Trump wants to renegotiate the North American Free Trade Agreement (NAFTA) which lowers trade barriers between the US, Canada and Mexico and rejected claims that the deal has helped the US economy create more jobs and reduce trade deficit by opening up export markets. He has also argued that since China joined the World Trade Organisation (WTO), Americans have witnessed the closure of more than 50,000 factories and the loss of tens of millions of jobs. He wants the US government to label China a “currency manipulator” and has lambasted the rapidly growing Asian economy for “unfair subsidy behaviour”.

Source: *The Guardian*, 9 November 2016

(a) (i) State what happened to the nominal exchange rate of the Chinese Yuan between 2013 and 2016. [1]

The Yuan depreciated [1m] (against the US dollar).

(ii) With a relevant diagram, explain how intervention by the Chinese government could have led to the change identified in (a)(i). [3]



Chinese government sells Yuan. Increased supply of Yuan in foreign exchange market, causing the Yuan to depreciate, as shown by the fall in exchange rate in Figure 1 from E1 to E2, where less units of USD is needed to exchange for a unit of Yuan.

(b) Explain how “currency manipulation” mentioned in Extract 1 might widen US’ trade deficit with China. [2]

In Extract 1, “currency manipulation” refers to the deliberate weakening of the Yuan against the USD by the Chinese government/central bank.

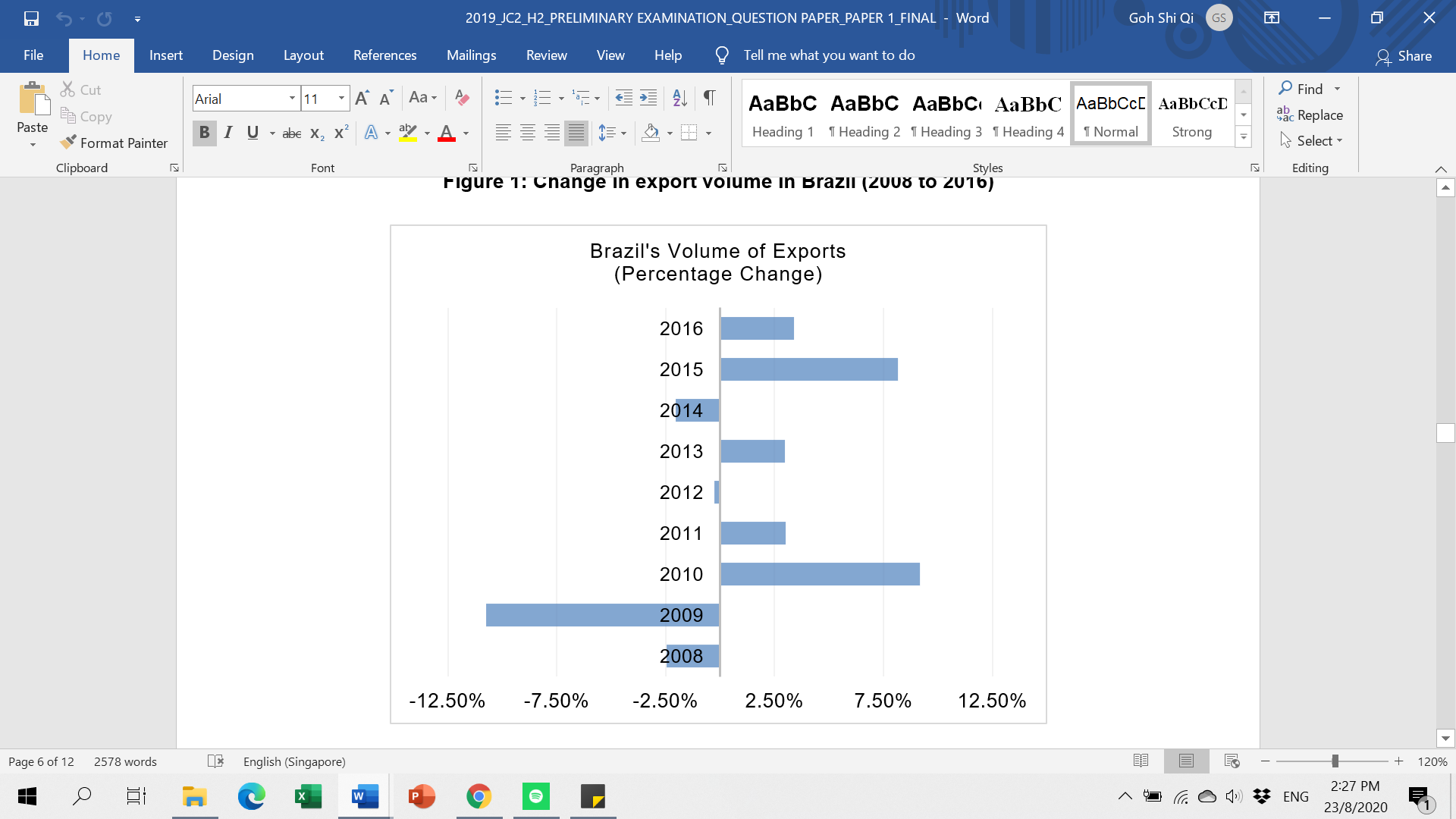
By depreciating the Yuan against the USD, US exports to China would be more expensive in Yuan. If the demand for US’s exports to China is price elastic, there would be a more than proportionate fall in quantity demanded for US’s exports and hence US export revenue would fall, widening US’s trade deficit with China [1m].

By depreciating the Yuan against the USD, US imports from China would be cheaper in USD. If the demand for US’s imports from China is price elastic, there would be a more than proportionate rise in quantity demanded for US’s imports and hence US import spending would rise, widening US’s trade deficit with China [1m].

9. CSQ: TJC 2019 H2 Economics Prelim Question 2

**Question 2: The Economics of Sports**

Figure 1: Change in export volume in Brazil (2008 to 2016)



Source: The World Bank, accessed August 2019

(i) With reference to Figure 1, describe the trend in Brazil’s volume of exports from 2008 to 2016. [2]

General trend [1]: Brazil’s volume of exports generally increased from 2008 to 2016

Refinement [1], any 1 of the following:

• fluctuated during the period

• largest fall in export volume from 2008 to 2009

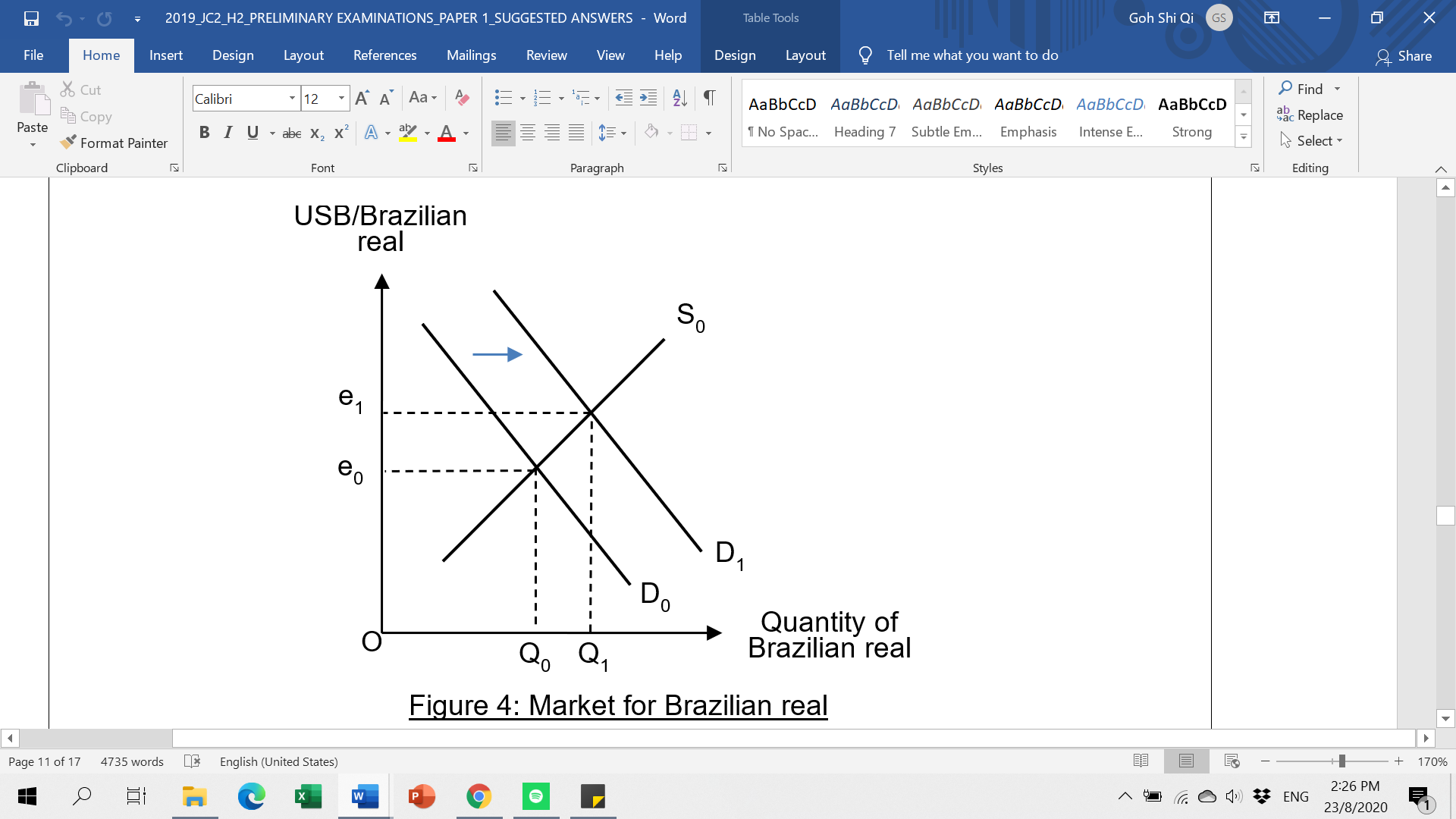
• greatest increase in 2010

(ii) With the aid of a diagram, explain how the general trend above could have affected the external value of the Brazilian real. [3]

Increase in demand for the Brazilian real [1]: As Brazil’s export volume generally increased from 2008 to 2016, there will be a general increase in the demand for the Brazilian currency in the same period. This is represented by a rightward shift of the demand curve for Brazilian real from D0 to D1 in Figure 4.

Appreciation of the Brazilian real [1]: The increase in the demand for the Brazilian currency puts an upward pressure on the external value of the Brazilian currency and

results in an appreciation of the Brazilian real, represented by the increase in price of Brazilian real from P0 to P1.



Accurate diagram showing increase in demand for the Brazilian currency and the appreciation of the Brazilian currency. [1]