ANGLO-CHINESE JUNIOR COLLEGE
JC2 Economics

H2	**EXTERNAL MACROECONOMIC ISSUES** Exchange Rate & Balance of Payments

Section	Contents	Page

References:

1. ***Principles of Economics:*** *Case, Fair & Oster, 11th edition, chapter 35*
2. ***Principles of Economics,*** **Asian *Edition***: *Mankiw, Quah & Wilson, chapter 31*
3. ***Economics:*** *John Sloman & Alison Wilde, 7th edition, chapter 25*

UNIT SUMMARY

Most countries trade with and have financial transactions with the rest of the world. With economies being open to trade and capital flows, no economy operates in a vacuum and economic events in one country can have significant repercussions on the economies of other countries.

Recall that the strength of a country's aggregate demand (AD) is not only dependent on consumption, investment and government expenditure on domestic goods & services, but also on exports of both goods and services. Apart from international trade, capital and financial flows between countries also have a major impact on the performance of an economy. The global economic inter-connectedness makes countries vulnerable to economic volatilities, particularly for the highly open economy of Singapore.

This unit examines the relationship between a country's balance of payment and its macroeconomic aims. It is essential to examine a country's balance of payment because macroeconomic issues arise due to a **confluence of internal and external factors** many of which are often **interrelated**.

The complexity and relatedness of domestic and external macroeconomic problems makes them difficult to solve and policy decisions will also involve **hard choices and constraints.** The choice of economic policies adopted by governments will depend on their **economic priorities** and the **economic characteristics** of their countries.

LEARNING OUTCOMES:

Students will have an understanding of the following:

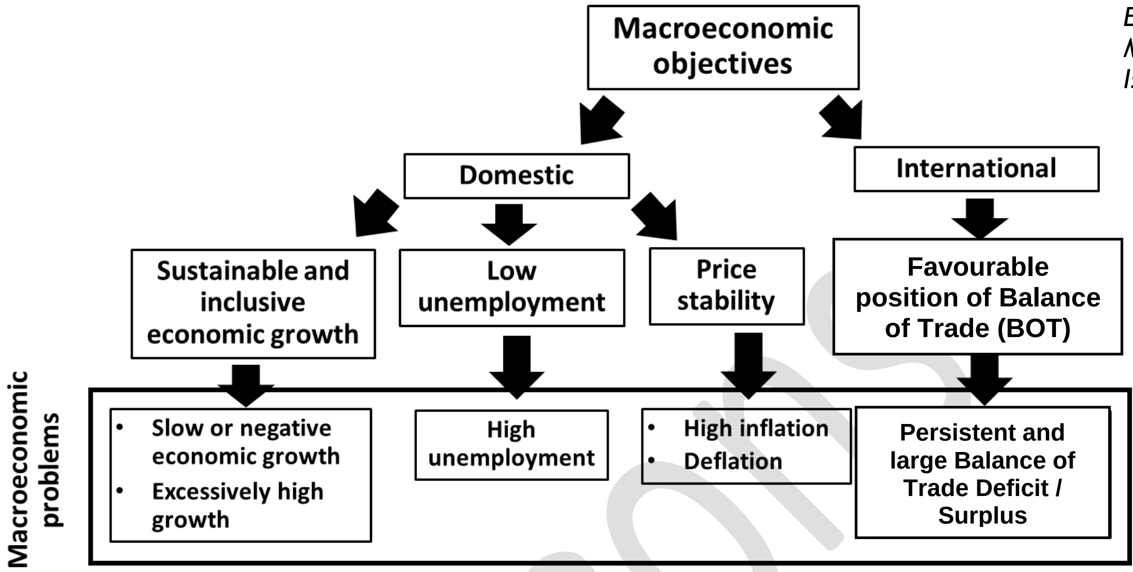
- Determinants of a country's exchange rate
- Current, capital & financial accounts of Singapore balance of payments
- Causes of balance of trade (BOT) disequilibrium
- Role of foreign direct investment (FDI) and its impact on the Singapore economy
- Consequences of balance of trade deficit and surplus from perspectives of different economic agents (households, producers and governments)

Essential Questions:

1. What causes external imbalances in a country's balance of trade and exchange rate?
2. How would such external imbalances impact a government's objective in attaining macroeconomic goals?

SECTION 1: OVERVIEW OF EXTERNAL MACROECONOMIC ISSUES

SLS Lesson: "*Overview of External Macroeconomic Issues*"



In this set of notes, we will be studying the **4th macroeconomic objective (Favorable Balance of Trade)** and its related problems. It is important to understand the **causes** and the **consequences** of this problem and how it can impact the domestic macroeconomic objectives.

As the Balance of Trade is heavily influenced by the exchange rate between currencies, it is first important to understand the **determinants of the exchange rate**.

The Balance of Trade is a component within the Balance of Payments. While the focus of the external macroeconomic objective in our syllabus is on Balance of Trade only, knowledge of the key components of the Balance of Payments account will help us understand the implications and effects of changes in the BOT better.

Later in the term, we will learn about the policies used by governments to address the problems of having an unfavourable position of Balance of Trade.

1. Causes of the problem → 2. Consequences of the problem → 3. Policies to address the problem

Article: South Korea's Rising Trade Deficit with China

South Korea's growing imports of secondary battery materials and intermediate goods from China were blamed for South Korea's trade balance with China which is expected to post its first deficit in 31 years. According to the Bank of Korea (BOK) on Dec. 20, South Korea's trade balance with China posted a deficit of US$18 billion through November this year. The balance of trade has been in deficit every month this year, starting with a US$3.9 billion deficit in January. As the overall trade deficit hit US$14.31 billion through last month, South Korea's trade deficit with China accounts for a significant portion.

While South Korea imported raw materials from China and sold intermediate products which South Korea made with the raw materials to China, the game has begun to change as China began to invest heavily to boost its self-sufficiency in intermediate products. At the same time, the two countries' roles have been completely reversed as Korean secondary battery producers rely on China for most of their raw materials and import intermediate materials such as batteries from China. "In terms of secondary batteries, China exports a lot to the rest of the world because of its technological superiority and price competitiveness," said a BOK official.

Accordingly, voices are growing that South Korea needs to expand its exports from intermediate goods to consumer goods, develop technology and diversify its import and export markets in order to respond to the reversed trade situation with China.

Source: Business Korea, 21 Dec 2023

Pre-Lecture Questions:

(a) Explain the reason why South Korea's balance of trade deficit is growing.

(b) What are some ways for South Korea to reduce its trade deficit?

(c) What are some likely consequences for South Korea's economy should they fail to do so?

SECTION 2: EXCHANGE RATE

2.1 EXCHANGE RATE DETERMINATION

International trade and capital flows (foreign direct investment, financial investment and other funds) between countries require the use of exchange rates for conversion between different currencies. This section explains how the exchange rate of a currency changes and is determined. The concepts of appreciation and deprecation will be explained too.

SLS Lesson: “*Exchange Rate Determination*”

The exchange rate of a currency is its price in terms of other currencies. It is the external price of a currency.

Exchange rate is primarily determined by demand and supply conditions in the foreign exchange market (forex market). Even if there is central bank's intervention in influencing the exchange rate, this intervention will usually be done through intervention in the forex market (through the buying and selling of the domestic currency).

How Is Exchange Rate Determined?

To understand how exchange rate is determined in a floating exchange rate system, apply your knowledge of the working of markets. Recall that:

- Demand curve in a market is downward sloping + rightward shift of demand (increase) applies upward pressure on equilibrium price and quantity (appreciation).
- Supply curve is upward sloping + rightward shift of supply (increase) applies downward pressure on equilibrium price and quantity (depreciation).
- Changes in demand and supply conditions cause disequilibrium condition → price and output move towards new equilibrium point.

Factors affecting demand and supply for currencies:

a. Export demand
   - If exports become more competitive, foreigners buy domestic currency to purchase exports, leading to a rise in demand for domestic currency.

b. Import demand
   - If income rises leading to an increase in import expenditure, households sell domestic currency and buy foreign currency to buy imports, leading to a rise in supply of domestic currency.

c. Short term capital flows (hot money)
   - Hot money refers to refers to funds such as purchase of shares or deposits in banks. These flows depend on relative interest rates between countries and expectations on exchange rate movements.
   - Higher interest rate relative to other countries' interest rates will attract short term capital inflows and increase the demand for domestic currency.
   - More capital outflows will cause rising supply of currency.

d. Long term capital flows
   - These refer to purchases of physical assets and foreign direct investment between countries. These flows depend very much on

the expected returns (profitability) of capital investment in the country. Returns to investments are affected by factors such as government policies, costs of production and political stability.

- Sound profit, economic and political fundamentals will attract long term capital inflows and increase demand for currency.
- However, if there is relocation of investment to other countries, rising outlow of long term capital will cause rising supply of currency.

This section uses the case of SGD exchange rate in terms of MYR in explaining how the exchange rate is determined. The exchange rate of Singapore Dollar (SGD) with respect to Malaysian Ringgit (MYR) is determined by the interaction between the demand for SGD and supply of SGD in the forex market.

What determines demand for SGD?

Demand in SGD is created when these happen:

- Malaysians or MYR holders want to buy SGD to pay for Singapore's exports to Malaysia.
- Capital inflows into Singapore from Malaysia, e.g. FDI into Singapore, holders of MYR selling the MYR and buying SGD.

Hence, more exports from Singapore to Malaysia → increase in demand (rightward shift) of DD for SGD in forex market.

What determines supply of SGD?

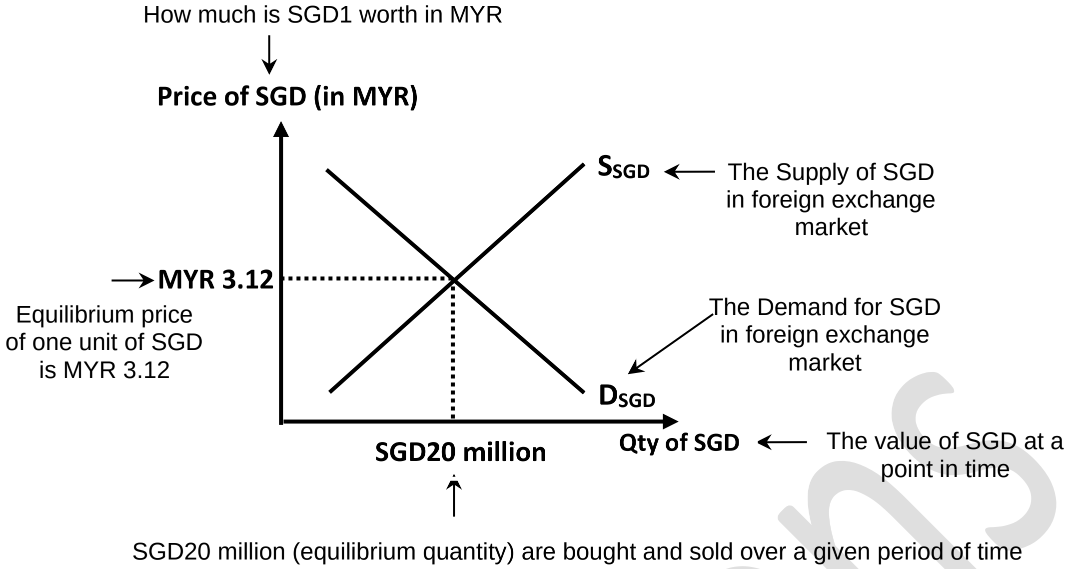
Supply of SGD in the forex market comes from these cases:

- Singaporeans paying for Malaysian exports of goods and services.
- Capital inflows into Malaysia from Singapore, e.g. Singapore firms investing in Malaysia, holders of SGD selling the currency and buying MYR instead.

<u>Equilibrium exchange rate</u>

Changes in demand and/or supply conditions in the foreign exchange market will cause changes in the equilibrium exchange rate. Figure 1 below refers to the forex market between SGD and MYR. The intersection between the DD and SS of SGD is the equilibrium exchange rate of SGD in terms of MYR

Figure 1: The Market for Singapore Dollars (SGD)

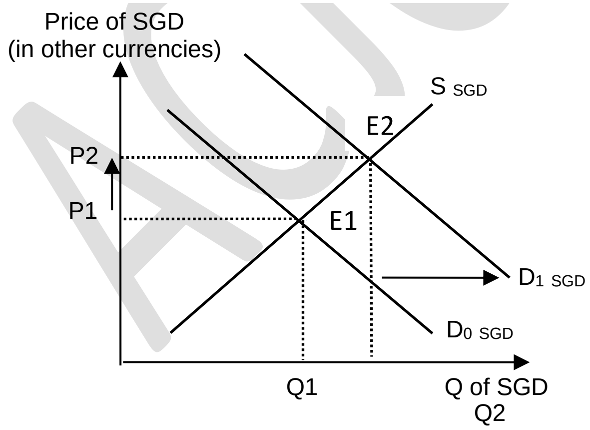


Appreciation of SGD (currency strengthens):

Appreciation refers to an increase in the exchange rate of a currency (in terms of another or other currencies). When SGD appreciates in terms of MYR, it means that more MYR is needed to buy one SGD.

Figure 2 below shows the effect on SGD's exchange rate if there is an increase in demand for Singapore's exports. This would lead to an increase in DD for SGD **(more SGD bought by foreigners in foreign exchange to buy SG's goods and services).** Hence, the **SGD appreciates.**

Figure 2: DD for SGD increases



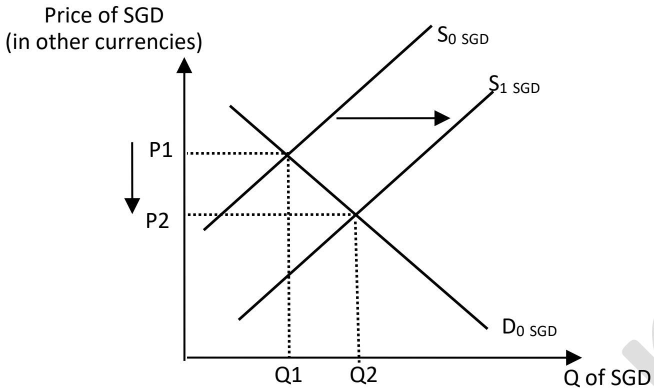
Depreciation of SGD (currency weakens):

Depreciation refers to a decrease in the exchange rate of a currency (in terms of another or other currencies). When SGD depreciates in terms of MYR, it means that less MYR is needed to buy one SGD.

Figure 5 below shows the effect on SGD's exchange rate if Singapore is demanding more foreign goods and services. This would lead to an **increase**

in SS of SGD (more SGD sold by Singaporeans to buy foreign currency) Hence, the SGD depreciates.

Figure 3: SS for SGD increases



The exchange rate of a currency in terms of a **group** of other currencies is expressed as the **Nominal Effective Exchange Rate (NEER)**. Just like the price index, NEER is the weighted average of a currency in terms of basket of currencies. The **Singapore Nominal Effective Exchange Rate (SNEER)** shows the movement of SGD in terms of a weighted basket of currencies of Singapore's major trade partners.

2.2 IMPORTANCE OF EXCHANGE RATE STABILITY

A strong and stable exchange rate usually reflects sound economic fundamentals of a country. This relationship can be explained with 2 examples that follow:

- Healthy and stable economic growth → attracts foreign direct investment → steady capital inflows into country → high/rising demand for currency in forex market → strong exchange rate.
- Strong export demand due to competitiveness of goods and services produced → high demand for currency in forex market → strong exchange rate.

Moreover, with a stable exchange rate, macroeconomic performance can be enhanced. With stable exchange rates, there is certainty of import costs and prices, lending to greater confidence in production, consumption, and investment decisions by firms.

While currency depreciation can boost economic growth due to more price competitive exports to the rest of the world, continuous and severe depreciation will raise domestic inflation (due to higher priced imports) and may harm the confidence in the currency, economy and the government.

Different exchange rate regimes

As exchange rate can have significant impact on a country's macroeconomic performance, the **central bank**[1] of a country may intervene

[1] *A country's **central bank** is the institution that governs the state's financial policies, such as in the management of domestic inflation through interest rate or*

in the foreign exchange market. The exchange rate of the domestic currency is still determined by market forces but the central bank may determine the direction and extent of exchange rate fluctuations through different degrees of market interventions.

The government can manipulate the demand and supply for their domestic currency by using their **foreign reserves**. Foreign reserves refer to foreign currency deposits held by the government. The government can use these foreign reserves to buy up their own domestic currency (thus increasing demand for home currency), or accumulate foreign reserves by selling their own domestic currency.

Note:
*The government's foreign reserves is **NOT** the same as the government budget reserves which you learnt in the previous topic, "The Government Budget".*

Different countries' government may choose to adopt different exchange rate regimes ranging from fixed to fully flexible for different reasons.

There are three types of exchange rate regimes:

a) Fixed exchange rate regime → Government intervenes heavily to maintain the exchange rate at only a fixed rate (no fluctuation)
b) Managed float regime → Government has some degree of intervention with some allowance for exchange rate to fluctuate slightly.
c) Floating exchange rate regime → Government has minimal to no intervention. Exchange rate allowed to fluctuate according to market forces.

In the next chapter on government policies, students will learn a more detailed explanation and analysis of the choice and implications of each kind of regime on the economy.

2.3 IMPACT OF EXCHANGE RATES ON AN ECONOMY

Exchange rate affects an economy's AD and AS. Subsequently, these have consequences on the country's GDP, GPL and trade balance of the economy. This happens through the effects on these variables:

- Prices of exports in foreign currencies
- Prices of imports in domestic currency
- Domestic and foreign costs of foreign direct investment

For example, when USD **depreciates**:

- Prices of US exports in foreign currencies decrease (because foreigners have to fork out less of their currencies for a given export price.)
- Prices of US imports in USD rise (because US will now use more USD to exchange for foreign currencies for a given import price,).
- Production costs of foreign investment into US become lower.

The macroeconomic effects of exchange rate can be conceptually explained through the effects on AD and AS. The table below explains the effects in the context of depreciation. For an appreciation, the opposite effect would happen.

exchange rate policy and the overseeing of the banking system and financial markets.

Changes caused by depreciation and the effects on the economy	
Impact on AD through exports	Export prices in foreign currencies fall (but remain unchanged in home currency) → Prices of domestic country's exports will appear cheaper. Quantity demanded for exports will increase. → X increases, leading to increase in AD and actual growth, depending on current state of economy.
Impact on AD through foreign direct investements	Costs of foreign direct investments (such as cost of labour and raw materials) in the country are lowered → attracts more investments into the country → Investment expenditure increases, leading to increase in AD and actual growth, depending on current state of economy. Increase in investments may also increase the productive capacity and LRAS. However, whether foreign direct investments increase may also depend other investment pre-requisites such as quality of labour, infrastructure, economic and political stability are considered sound. A sudden and drastic depreciation of currency may signal an unstable economy and drive away investments instead.
Impact on SRAS	Increase in price of imported resources → raise costs of production → decrease in SRAS → higher general price level (cost push inflation) + fall in GDP. This imported inflation due to currency depreciation will be more severe if a country is more import dependent, e.g. case of Singapore where there is a lack of natural resources.
Impact on trade balance (X-M)	Recall that export revenue (X) and import expenditure (M) is calculated by taking the respective prices multiplying the quantity of it sold and bought. We can use elasticity concepts to determine the overall effect on X and M. For example, when there is a **depreciation in the USD**, the quantity demanded of US exports will increase as it is now relatively cheaper in foreign currencies. Whether **export demand is price elastic or inelastic**, **X will increase** as revenue of exports received in US is calculated in USD, in which there was no change**.** The more price elastic the demand is, the greater the increase in X. However, when there is a depreciation in USD, the quantity demanded for foreign imports into US will decrease because it is now relatively more expensive in USD. • **If import demand is price elastic,** the increase in price leads to a more than proportionate

Reminder: There is no direct impact on AD through M. For a detailed explanation, please refer to the ***Intro to Macro*** *annex.*

	decrease in quantity imported. In this case, **M will decrease.** • **If import demand is price inelastic**, the increase in price leads to a less than proportionate decrease in quantity imported. In this case, **M will increase**. *(This case is more likely for countries which import a lot of resources).* Combining the effects of (X-M) as explained above, whether (X-M) increases or decreases overall depends on the combined elasticities of export and import demand. **Using the case of a depreciation, (X-M) will increase if the combined elasticities of export and import are more than 1.** In economics, this is referred as the **Marsall-Lerner condition.** **<u>Marshall Lerner Condition:</u>** **If PED_X + PED_M > 1,** **a depreciation of currency will improve a country's trade balance.** This condition only needs to be considered when explaining the effects on BOT due to a change in exchange rate.
Impact on circular flow of income (H2 only)	Similar to the analysis above, depreciation affects the injections and withdrawals into the economy through export revenue, import expenditure, and investments. Depreciation increases export revenue, resulting in an increase in injections into the economy. It will also reduce import expenditure (if PEDM>1), reducing the withdrawals from the economy. As mentioned previously, investments may also increase, further increasing injections. With an increase in injections and decrease in withdrawals, there would be an increase in the circular flow of income.

Key Learning Points in Section 2:

✓ The exchange rate is determined by the demand and supply of a currency which depends on the export demand, import demand and short term and long term capital flows.

✓ The macroeconomic performance can be impacted positively and negatively when exchange rate changes. It is therefore important to maintain a stable exchange rate.

✓ Governments may have to intervene to various extents depending on their objectives.

SECTION 3: BALANCE OF PAYMENTS AND BALANCE OF TRADE

SLS Lesson:
“Balance of Payments: Definition, Components and Rationale for a Healthy Balance of Payments ”

3.1 BALANCE OF PAYMENTS: DEFINITION AND COMPONENTS

The Balance of Trade (BOT) is a component within the Balance of Payments (BOP). Before we understand the causes and consequences of an unfavourable balance of trade, we will first unpack the key components of the Balance of Payments.

The <u>balance of payments</u> (BOP) of any country records the <u>receipts</u> from and <u>payments</u> for all economic transactions between a country and the rest of the world over a period of time (usually a year).

It shows the total value of receipts from international transactions minus the total value of payments for international transactions in a year.

Balance of payments accounts are records of a country’s international transactions (with other countries). These international transactions are recorded under the **current account** and the **capital and financial account**.

Transactions are recorded either as **credit or debit entries**:
- All payments ***received from overseas*** (export revenues, capital inflows) are ***credit*** entries.
- All payments ***made to other countries*** (import expenditures, capital outflows) are ***debit*** entries.

(i) <u>Current Account</u>

The **current account** keeps track of the receipts from sales of goods and services to foreigners, payments for goods and services made to foreigners, and income flows between foreigners and domestic agents.

The current account comprises both the visible account and the invisible account. The goods balance and the services balance make up the balance of trade.

Note that reported data may sometimes take balance of trade to only include the goods balance.

Visible Account	
Goods Balance	This records the value of imports and exports of physical goods. Exports result in an inflow of money and are therefore a credit item. Imports result in an outflow of money and are therefore a debit item. A surplus in goods balance is when export revenue exceeds import expenditure. A deficit in goods balance is when import expenditure exceeds export revenue. This account is also known as the ***Balance of Trade in Goods***, or the ***Visible Account***.

Invisible Account	
Services balance	This records the imports and exports of services such as consulting services and tourism. Expenditure on a holiday overseas would be a debit, since it represent an outflow of money, whereas a purchase by a foreign student on domestic services would be considered a credit. This account is also known as the Balance of Trade in Services.
Primary income balance	This consists of the income that domestic residents earn from, less that they pay to, the rest of the world form working (e.g. wages) and from financial investments (e.g. dividends)
Secondary income balance	This consists of current transfers in cash or in kind, between residents and non-resident. Some examples of current transfers are: • Workers' remittances are current transfers made by employees to residents of another economy. • A resident making a contribution to social security and pension scheme in another economy for his/her employment in that economy are also recorded as current transfers.

(ii) Capital and financial account

The **capital and financial account** keeps track of the capital and financial transactions between the home country and the rest of the world.

Capital Account	
Capital transfers	Transactions where one party has transferred ownership of something to another party without receiving anything specific in return. • Forgiveness of debt such that borrower does not have to pay back what they borrowed • Grants for capital projects such as foreign aid to build infrastructure • Transfer of assets between residents and non-residents
Acquisition/disposal of non produced/non-financial assets	Transactions that involve intangible assets and rights to use land or water. Intangible assets includes brand names, copyrights, and trademarks. The use of land and water includes for mining or fishing.

Financial Account	
Direct investment (FDI)	Financial transactions related to long-term capital investment in a business (e.g. purchase of machinery, buildings, and factories). This is also known as **foreign direct investment.** Direct investment is compiled according to the asset/liability principle. Generally, outward direct investment is treated as an asset while inward direct investment is treated as a liability. An asset is treated as a credit entry while a liability is treated as a debit entry. For example, if a Singaporean firm purchases factories in China, this is considered as an asset to Singapore.
Portfolio investment	The purchase of equity or debt (shares or bonds) in a business. In contrast to direct investment, portfolio investment occurs when the investor does not have an influence in the operation of the business.
Other short-term monetary movements (hot money)	Loans and deposits into overseas banks made by individuals and financial institutions represent an outflow of money, and vice-versa. This is also known as **hot money**. These are common between international financial centres to take advantage of differences in countries' interest rates and changes in exchange rates.

(iii) **Net errors and omissions** allows for statistical discrepancy in the collection and compilation of data.

(iv) **The official financing account** shows the change in the country's **foreign reserve assets.** Reserve assets show the stock of and changes in Singapore' foreign reserves holdings. They consist of Singapore's official holdings of monetary gold and foreign exchange assets

The following table shows statistics on Singapore's Balance of Payments compiled by the Singapore Department of Statistics.

Table 1: Singapore's Balance of Payments (S$ million)

	Balance of Payments	2022	Explanation
A	**Current Account Balance**	**124,410**	
	Goods Balance	188,236.80	Export of goods are larger than imports thus a **surplus** on Singapore's **goods (visible) balance.**
	Export of Goods	799,006.80	
	Imports of Goods	610,770	
	Services Balance	45,001.20	Export of services are larger than import of services thus a **surplus** on the **services balance.**
	Export of Services	401,544.40	
	Imports of Services	356,543.20	
	Primary Income Balance	-103,590.50	A deficit in the primary income balance shows that outflow of income generated from foreign investments and employment in the country is larger than the inflow of income generated from overseas
	Secondary Income Balance	-5,237.50	A deficit in the secondary income balance implies that the outflow of current transfers is greater than the inflow.
B	**Capital and Financial Account Balance**	279,380	**A *surplus* in the capital and financial account** implies that acquisition of foreign financial assets by Singapore residents is more than the Singapore assets purchased by foreigners.
C	**Net Errors and Omissions**	**-2,461.50**	Statistical discrepancy
D	**Overall Balance (A-B+C)**	**-157,431.50**	The **Balance of Payment** is in a **deficit**, causing a corresponding decrease in Reserve Assets
E	**Reserve Assets**	**-157,431.50**	The BOP deficit leads to a decrease in assets, as indicated by a negative sign.

Note: The calculation of the Balance of Payments is not required for the A-levels

Balance of Payments Equilibrium

When inflow of receipts and outflow of payments in and out of the country are equal, a country's balance of payments is said to be in **equilibrium**. In the real world, the balance of payments is often in disequilibrium, i.e. there is a balance of payments surplus or deficit.

Balance of payment surplus	Balance of payment deficit
A BOP surplus means there is ***net inflow of receipts into the country*** (inflow of receipts into the country > outflow of payments out of the country).	A BOP deficit means there is ***net outflow of payments out of the country*** (outflow of payments out of the country > inflow of receipts into the country).
A balance of payments surplus may be due to a surplus in the current account and/or a surplus in the capital financial account	A balance of payments deficit may be due to a deficit in the current account and/or a deficit in the capital financial account.

Note: *While having an understanding of the BOP is important, **for our syllabus, we will focus on a favourable balance of trade as the external macroeconomic objective of the government.** Our focus will be on explaining the cause and consequences of a balance of trade surplus / deficit.*

3.2 Rationale for a Healthy Balance Of Trade

Typically, an economy is said to have a healthy balance of trade when it is facing a small balance of trade (BOT) surplus. **A balance of trade surplus** occurs when the total value of country's total exports of good and services exceeds the value of its total imports of goods and services.

Benefits of a small balance of trade surplus:

(a) Small BOT surplus help to increase the country's national income as export revenue is usually increasing, thereby **increasing AD** and hence resulting in **economic growth**.

(b) With small BOT surplus, this could lead to a higher net inflow of foreign currencies from net export revenue. This would lead to an appreciation of the domestic country's currency. If the government wants to keep their exchange rate stable, it would accumulate these foreign currencies by selling their domestic currency reserves. These accumulation of foreign reserves would be useful in maintaining **strong and stable currency exchange rate** in times when their domestic currencies are depreciating. This applies only to governments adopting a fixed or managed float exchange rate regime.

(c) Small BOT surplus generally occurs in a period of external economic stability, leading to **positive business confidence**. Also, with strong currency due to a BOT surplus, imported raw materials are cheaper in domestic currency and profits remunerated back to home country will be high in foreign currencies. These will attract foreign investment, creating more job opportunities, leading to **higher employment and economic growth.**

3.3 CAUSES OF BALANCE OF TRADE DEFICIT

SLS Lesson: "Causes of *Balance of Trade Deficit*"

Since BOT is the value of a country's exports of goods and services (X) minus the value of its imports of goods and services (M), for a given period of time, this means that any factors affecting either the exports revenue and/or imports expenditure would bring about changes to the overall BOT.

Generally, a country's BOT is said to be **improving** if it is experiencing an increasing surplus or a smaller deficit. On the other hand, a country's BOT is said to be **worsening** if it is experiencing a decreasing surplus or a larger deficit. In this section, we will be explaining the causes of a worsening BOT.

Factor	Explanation
Relative Economic Growth Rates	A rise in national income of the home country relative to the rest of the world (ROW) countries would raise purchasing power of home country residents relative to ROW residents. For the home country, the demand for imports would increase relative to its exports.
Relative Inflation Rates	The following may occur when prices in home country rises more rapidly than in the ROW. • ROW buy less of home country's exports. • Residents in the home country turn from buying increasingly expensive domestic goods to the relatively cheaper foreign goods.
Relative exchange rates (home country's currency appreciating)	Appreciation of the home country's exchange rate will result in: • Home country's exports becoming more expensive in its trading partner's currency. Consequently, quantity of exports demanded would fall. • Home country's imports becoming cheaper in its own domestic currency. This could cause a substitution effect where households consume less local goods and services and switch tor imported goods and services instead. As posited by the Marshall-Learner Condition (see Section 2.3), the trade balance will worsen after appreciation if the sum of the import and export price elasticities of demand is price elastic.
Government Policies	• Trade partners may erect barriers to trade. Such **protectionist** stance may be supported by import tariffs (taxes on imported goods) and trade quotas. The use of such policy tools worsen the BOT for the home country. The home country would be able to export fewer goods

Note: Protectionism refers to government policies that restrict international trade to help domestic industries. We will learn more about such policies in future topics.

	to the trade partner, thus may experience a decline in their export revenue. • Industrialisation and other economic development programmes initiated by the government may also affect the BOT e.g. development projects may require heavy importation of capital goods.
Long-term Structural Changes	Trade partners may develop their own substitutes to imports. Such development would worsen the BOT of primary exporters those products. The nature and quality of a competitor's product from other countries may change. For example, Japan has shifted from producing low-qualtiy simple manufactured goods in the 1950s to producing high-quality sophisticaled manufactured goods. This may worsen the BOT of countries selling similar products as their X decreases, since demand would have shifted to Japan.
Imbalances in a country's capital and financial account	An inflow of capital would results in an increase in demand for the home country's currency in the foreign exchange (Forex or FX) market. The increase in demand would result in an appreciation of the currency. In turn, causing BOT to worsen as explained previously (see Exchange Rate above).
Physical Capital Losses	Such losses may be due to outright physical damage e.g. earthquakes, floods etc, which will require increase in imports for capital reconstruction. The country's exports may also fall due to destruction of its industries, thus possibly worsening the current account.

Note to students: The above causes may also cause an improvement in BOT for the country in the opposite direction. As an exercise, students can run through the above examples and consider how a surplus might occur instead.

3.4 CONSEQUENCES OF BALANCE OF TRADE DEFICIT

The following explains the **impact of BOT deficit** on the economy, producers, and households.

SLS Lesson: "*Balance of Trade Deficit: Consequences*"

3.4.1 Impact on Economy:

(a) Contractionary effect on economy

A balance of trade deficit is often associated with a fall in export revenue, which would reduce aggregate demand, resulting in the fall of national output and employment.

(b) Depreciation of currency (for country's adopting floating exchange rates)

The lower demand for export will cause a lower demand for the country's currency in the exchange rate market. At the same time, there is an increase in supply of the country's currency due to the higher demand for imports, resulting in higher amount of domestic currency exchanged for foreign currencies to pay for the imports. These rise in supply and fall in demand of the country's domestic currency in the foreign exchange market would therefore lead to depreciation of the exchange rate.

This can be especially detrimental to economies such as Singapore, which rely heavily on imported raw materials and food. The depreciated exchange rate could contribute to higher input costs and hence, imported inflation. As such, governments in these countries may intervene in the exchange rate market.

(c) Increasing external debt / depletion of foreign reserves (for countries adopting a managed float or fixed exchange rate)

As a persistent BOT deficit would cause a depreciation of currency as explained in the above point, countries which need to maintain their exchange rates for various reasons would have to find ways to finance the deficit and prevent their currency from depreciating extensively.

Countries may have to deplete their foreign reserves in order to increase the demand of their currency artificially.

Countries without sufficient foreign reserves may have to engage in borrowing from foreign lenders through the sale of government securities or from the International Monetary Fund (IMF). These borrowed sum can be used to purchase the domestic currency These actions will result in accumulation of external debt. This may be detrimental to the economy as firms and foreign investors will see it as a sign of a weakening economy, affecting business confidence further.

3.4.2 Impact on Households:

(a) Decrease in standard of living

As mentioned above, a persistent BOT deficit will lead to a depreciation of currency (in countries adopting a floating exchange rate), causing an increase in price of imported goods and resources in domestic currency. This can possibly lead to imported inflation, thereby eroding households' purchasing power and material SOL.

The contractionary effect on national output arising from BOT deficit would lead to rise in unemployment rate and fall in household income. Purchasing power falls resulting in falling consumption and a worse standard of living. With weak consumer sentiments, there would possibly be a rise in savings and further fall in consumption, leading to a further contraction of the economy.

3.4.3 Impact on Firms:

(a) Fall in production and investment

A BOT deficit signals that local producers in general are selling fewer goods and services due to weak foreign demand and lower domestic demand as households spend more on imports. This reduces revenue and hence profits earned by firms. Thus, firms may reduce investment and cut production, resulting in rise in unemployment.

Depreciation of the currency due to the persistent BOT deficit may also cause a rise in production costs for countries reliant on imported resources. This may cause such firms' profts to fall even more. To cut losses, some firms may relocate their production plants to countries with cheaper input costs, leading to unemployment and further contraction of the economy.

> **Think about it!**
>
> Is a BOT surplus always desirable?
>
> Refer to the annex to learn about some negative consequences of a large BOT surplus.

3.5 DESIRABILITY OF BALANCE OF TRADE DEFICIT

When assessing the undesirability or extent of negative impact of a country's Balance of Trade deficit, the following aspects should be considered:

Root Cause and Duration of BOT deficit

A country may incur a BOT deficit because of the need to import raw materials and capital equipment for production and economic development. In this case, once the country develops and productive capacity increases, it will be able to increase its productivity and hence increase its export competitiveness, thereby improve its BOT and experience higher growth rates in the long run.

A country that imports a high volume of goods and services may boost current living standards because it may allow consumers to enjoy a greater variety and quality of consumer goods and services, otherwise not available in their domestic country. However, the heavier reliance on foreign goods and services may reduce the domestic firms' ability to produce and expand (since their goods/services are lewess favourable than the foreign imports), which can result

in lower profits for firms and possibly, higher unemployment rate.

High BOT deficit could also be due to the country's uncompetitive exports relative to the global market, resulting in a fall in AD. A country's rising costs and falling productivity due to lack of past investment on technology and training of workers will lower its export competitiveness in the international market, thus worsening the country's BOT.

Volume of the deficit

If the BOT deficit is of a high volume, it is likely that it is financed by borrowing from foreign lenders (as explained in the previous section). In this situation, the country has a high external debt, where an increasing share of the government's funds must be paid out to foreigners to service the debt in the future. This may leave fewer available funds for development of the country and improvement in households' standard of living.

In a worse situation, when the country is at risk of defaulting the high external debts, investors confidence will be dampened, leading to huge capital outflows. This will cause the currency to depreciate rapidly, further worsening confidence levels and contracting the economy.

3.6 CAUSES OF CAPITAL & FINANCIAL ACCOUNT DEFICIT

Recall that there are 2 main components of the balance of payments; the current account and the capital financial account.

While the focus of the H2 Economics syallabus is **to explain the causes and consequences of a balance of trade deficit/surplus, students are still required to understand the causes of capital and financial account deficit / surplus for completeness of knowledge.**

The following possible reasons may be used to explain changes in the Capital & Financial Account:

Differences in expected rate of return on investments

Both direct and portfolio investment will be influenced by the expected return on the capital investment. If higher returns can, or are expected to be earned by investing in the assets in another country, then there will be an outflow of capital, leading to an improvement to the country's capital account.

A country's expected rate of return in investments, or its investment prospect, is affected by various factors such as government policies such as taxes, costs of production and political stability.

Relative interest rates

If a country's interest rates are higher than overseas, the country's returns from short-term financial investments are higher than other countries'. There will be an increase in short-term capital inflows into the country, hence leading to an improvement in the country's financial account.

Expected movements in the exchange rates

Short-term investment includes savings account and government bonds. Movement of financial capital to such investments is extremely sensitive to expectations of changes in exchange rates.

Destabilising speculation and capital flight may occur when there is expectation of a depreciation of the domestic currency. When speculators expect the exchange rate to fall, they will convert their assets to another currency to avoid capital loss. This results in capital outflow, leading to a worsening in the country's BOP capital and financial account.

Capital flight caused by political/economic instability

Owners of capital in countries anticipating political/economic instability will often move assets to countries that are relatively stable, hence causing capital outflow and worsening of the country's BOP capital account, e.g. Thailand during in the 1997 financial crisis.

Key Learning Points in Section 3:

- ✓ The Balance of Payments is made up of the current and capital account.
- ✓ The goods balance and the services balance make up the balance of trade (BOT).
- ✓ A healthy BOT is one which of a small surplus. This would lead to several macroeconomic benefits.
- ✓ Several factors may worsen or improve the BOT.
- ✓ The worsening or improvement in BOT would lead to negative or positive impacts on the economy, households and firms.
- ✓ Whether a BOT deficit is undesirable is dependent on the root cause, duration and volume of the deficit.

END OF TOPIC REFLECTION

Students should be able to		Checklist
1	Explain how different causes affect a country's exchange rate (i.e. appreciate or depreciate)	
2	Explain the macroeconomic impacts of a change in exchange rate on an economy	
3	Explain the importance of exchange rate stability to a country	
4	Define Balance of Payment (BOP) and identify the different components	
5	Explain how different causes affect a country's BOT (i.e. improve or worsen)	
6	Explain the consequences of a BOT deficit on • Economy • Households • Producers	
7	Evaluate whether a particular country's BOT deficit is undesirable	

Annex: CONSEQUENCES OF A BALANCE OF TRADE SURPLUS:

The following explains the impact of BOT surplus on the economy, producers, and households.

<u>Impact on Economy</u>

(a) Expansion of the economy with possible inflation

A BOT surplus is often regarded as a symbol of national economic success, as it means an increasing net export, and hence an injection into the circular flow of income which, through the multiplier effect, will increase the national income further. However, it is not always beneficial to have persistent and huge BOT surplus. When an economy is at or near full employment, a persistent and huge BOT surplus will lead to demand-pull inflation.

(b) Appreciation of currency

For a country with a floating exchange rate, a rise in demand for that country's exports will lead to an increase in demand for that country's currency. In addition, a fall in demand for imports from foreign countries would mean that less of the domestic currency is exchanged for foreign currencies. This would reduce the supply of the domestic currency in the foreign exchange market. Both an increase in the demand and decrease in the supply of the domestic currency in the foreign exchange market would lead to an appreciation of the currency.

A large & persistent BOT surplus that results in an extensive appreciation of the country's currency may decrease its exports competitiveness and make imports cheaper in home currency in the long term. With falling export demand and as local consumers switch from domestically produced goods to cheaper imports, unemployment rate may rise.

In addition, an appreciation of currency, can also cause decrease in price of imported goods and resources in domestic currency. This can possibly lead to deflation arising from a fall in cost of production thereby improving households' purchasing power.

<u>Impact on Households</u>

Improvement in standard of living

The expansionary effect on national output arising from BOT surplus would lead to decrease in unemployment rate and increase in household income. Purchasing power increases resulting in rise of consumption and improving standard of living. With strong consumer sentiments, there would possibly be a rise in consumer expenditure leading to a further expansion of the economy.

<u>Impact on Firms</u>

Impact on investments and profits

A BOT surplus signals that local producers in general are selling more goods and services due to strong external demand and higher domestic demand as households spend more on domestic goods and services. This increases revenue and hence profits earned by firms. Thus, firms may increase investment and raise production, resulting in fall in unemployment