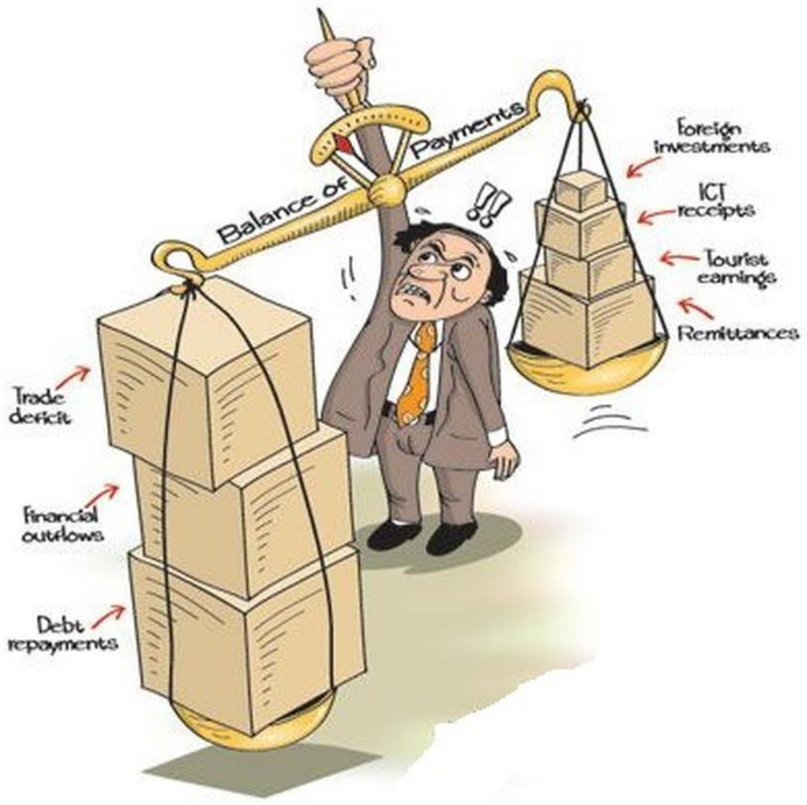
Balance of Payments

The balance of payment

The **balance of payments (BOP)** of a country is a record (usually a year) of all transactions between the residents of the country and the residents of all other countries.

- Its role is to show:
  - all payments received from other countries, called **credits**
  - all payments made to other countries, called **debits**.
  - Over a year, all inflows of payments (credits) must exactly equal the outflows of payments (debits); the sum of all credits is equal to the sum of all debits.



Demand & supply of a currency V.S the balance of payments

- **Inflows** of money from abroad (credits) – foreigners buy domestic currency
  - foreign demand for domestic currencies.
  - Foreign supply of all other currencies given up to buy domestic currencies.

- **Outflow** of money to other countries (debits) – residents sell domestic currency
  - Supply of domestic currencies
  - Demand for foreign currencies

The structure of the balance of payments

The balance of payments consists of 3 accounts:

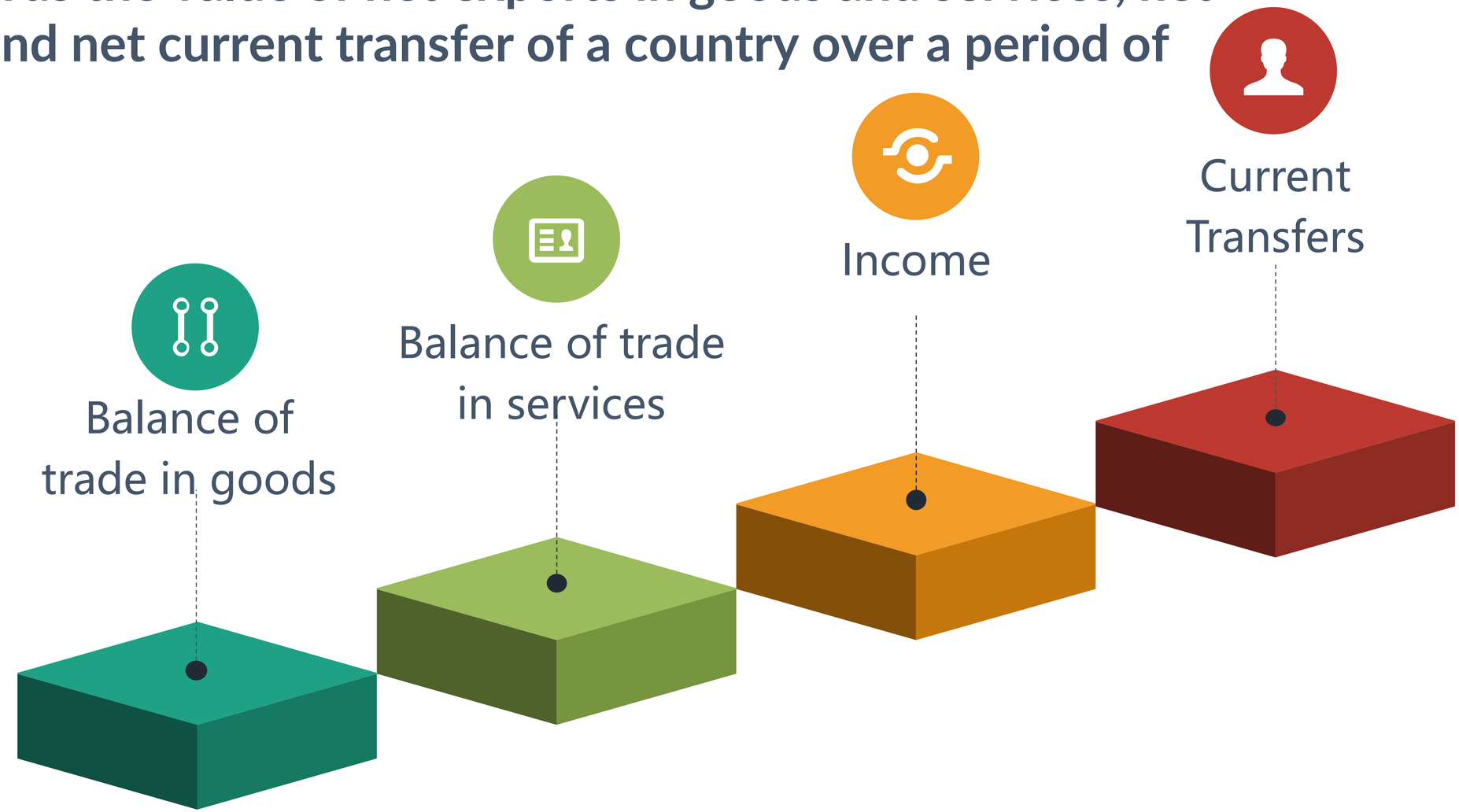
1. The current account
2. The capital account
3. The financial account

- Credit – Inflow of money (**plus** sign)
- Debit – Outflow of money (**minus** sign)
- Added all up:
  - If credit > debit, positive value → surplus
  - If credit < debit, negative value → deficit

Current account	
1 Exports of goods	+ 40
2 Imports of goods	– 65
Balance of trade in goods (items 1 + 2)	**– 25**
3 Exports of services	+ 25
4 Imports of services	– 15
Balance of trade in services (items 3 + 4)	**+ 10**
Balance of trade in goods and services (items 1 + 2 + 3 + 4)	**– 15**
5 Income (inflows minus outflows)	– 6
6 Current transfers (secondary income) (inflows minus outflows)	+ 1
Balance on current account (items 1 + 2 + 3 + 4 + 5 + 6)	**– 20**
Capital account	
7 Capital transfers (inflows minus outflows)	+ 0.7
8 Transactions in-produced, non-financial assets (inflows minus outflows)	+ 0.3
Balance on capital account (items 7 + 8)	**+ 1**
Financial account	
9 Foreign direct investment (FDI; inflows minus outflows)	+ 23
10 Portfolio investment (inflows minus outflows)	– 4
11 Reserve assets (official reserves)	+ 1
12 Official borrowing	– 1
Balance on financial account (items 9 + 10 + 11 + 12)	**+ 19**
Balance (sum of all items from 1 to 12)	**0**

The Balance of Payment
1. Current account

Current account: A subaccount of the balance of payments that records the value of net exports in goods and services, net income and net current transfer of a country over a period of time.

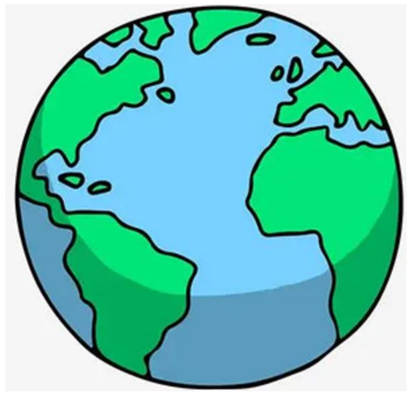


The Balance of Payment

1. Current account

a. Balance of trade in goods

Balance of trade in goods = Exports of goods – Imports of goods



Value of goods exports

payment received in local currency
→ Credit (money inflow), plus sign

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Trade deficit

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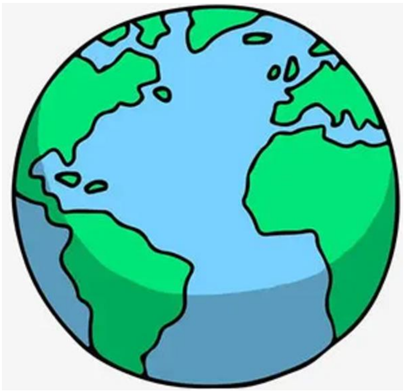
Trade surplus

Value of goods imports

payment paid in foreign currency
→ debit(money outflow), minus sign

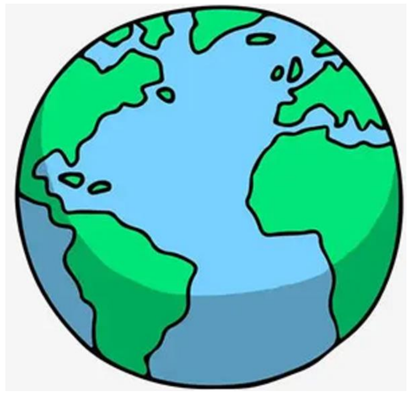


The Balance of Payment

1. Current account

b. Balance of trade in services

Balance of trade in services = Exports of services – Imports of services



Value of services exports

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Trade deficit

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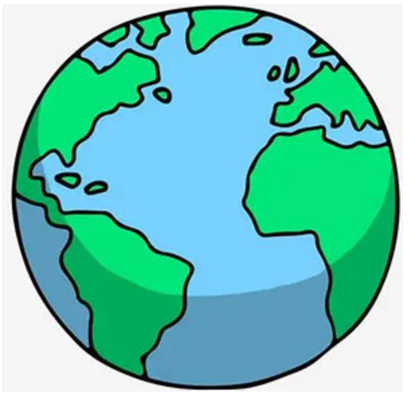
Trade surplus

Value of services imports



payment received in local currency
→ Credit (money inflow), plus sign

payment paid in foreign currency
→ debit(money outflow), minus sign

* Examples of services: insurance, tourism, transportation, consulting and so on.

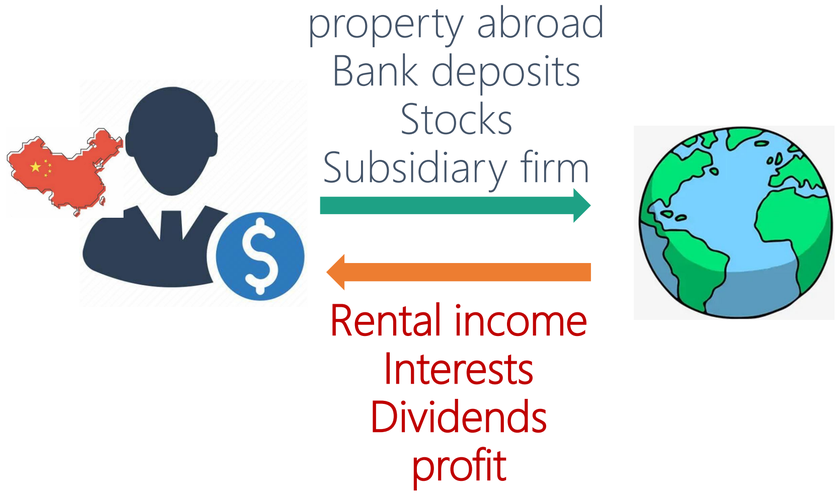
→Balance of trade in goods and services (net exports in GDP)
The trade balance is the most important part of the current account in most countries

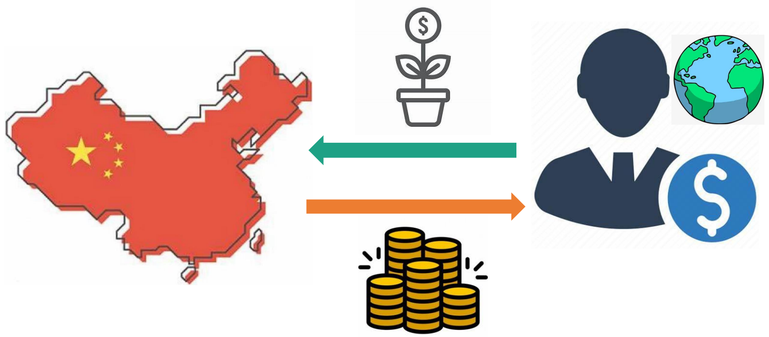
The Balance of Payment

1. Current account

c. Income

Balance of income = Income **inflow** – Income **outflow**





* Income consists of the inflows and outflows of payments to the factors of production.

The Balance of Payment

1. Current account

d. Current Transfer

gifts

Military support

remittances

Foreign aids

Government

Firms

NGO

Individuals

Current transfers are the inflows and outflows of money that are not made in exchange for trade or any corresponding output.

Balance of current transfer

= Current transfer inflow – current transfer outflow

The Balance of Payment
1. Current account

Current account		
1	Exports of goods	+ 40
2	Imports of goods	– 65
Balance of trade in goods (items 1 + 2)	Deficit ←	**– 25**
3	Exports of services	+ 25
4	Imports of services	– 15
Balance of trade in services (items 3 + 4)	Surplus ←	**+ 10**
Balance of trade in goods and services (items 1 + 2 + 3 + 4)	Deficit ←	**– 15**
5	Income (inflows minus outflows)	– 6
6	Current transfers (secondary income) (inflows minus outflows)	+ 1
Balance on current account (items 1 + 2 + 3 + 4 + 5 + 6)	Deficit ←	**– 20**

Balance on current account = **balance of goods/services** **+** **Net Income** **+** **Current transfer**

Negative – current account deficit (excess supply) →-20

- The quantity of boples supplied > the quantity of boples demanded
  (-65-15-6=-86) (+40+25+1=+66)
  II II
- Debits created by Boplanders > Credits created by foreigners

The Balance of Payment
2. The capital account

a. Capital transfers

- Investment grants (money given as a gift by governments to finance physical capital)
- Debt forgiveness (when debt is cancelled),
- Non-life insurance claims, the claims due under contracts in respect of non-life insurance, that is, the amounts which insurance enterprises are obliged to pay in settlement of injuries or damage suffered by persons or goods (including fixed capital goods).

b. transactions in non-produced, non-financial assets

It consist mainly of the purchase or use of natural resources that have not been produced (land, mineral rights, forestry rights, water, fishing rights, airspace and electromagnetic spectrum)

2. The capital account

Capital account	
7 Capital transfers (inflows minus outflows)	+ 0.7
8 Transactions in-produced, non-financial assets (inflows minus outflows)	+ 0.3
Balance on capital account (items 7 + 8) Surplus ←	**+ 1**

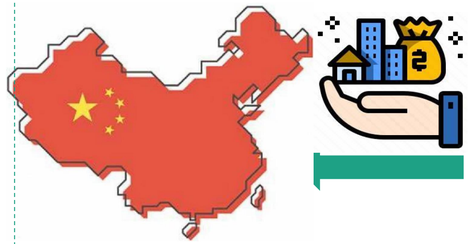
The capital account is relatively small compared to the current account and financial account.

3. The financial account

Transaction relate to the change in ownership of assets, that is cross-border investments.

a. foreign direct investment

- it includes investments in productive facilities, consisting of physical capital, such as buildings and factories, undertaken by multinational corporations.



- **Inflows** – direct investment by foreigners domestically (credit)

- **Outflows** – domestic investment to other countries (debits)

b. Portfolio investment

- investments in financial capital, such as stocks and bonds, government debt and debentures (corporate debts)
  - Inflows – foreigner's investment domestically (credit)
  - Outflows – domestic investment in other countries. (debits)

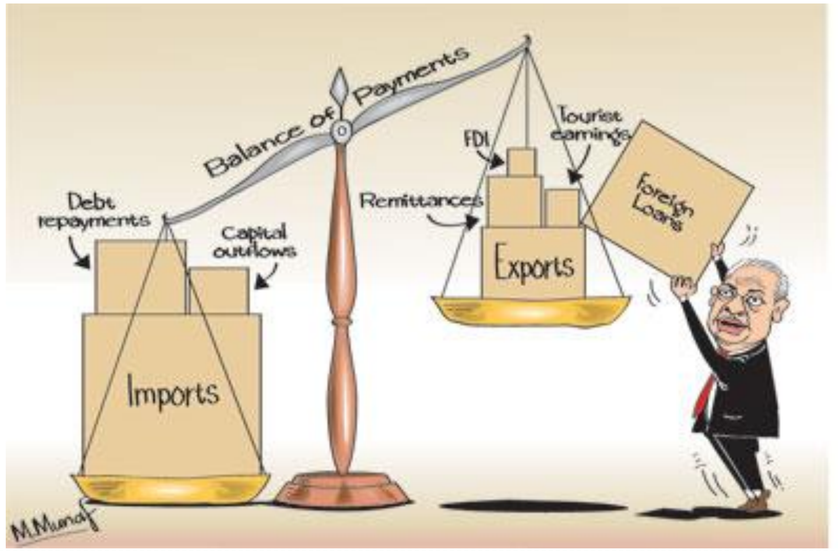
3. The financial account

c. Reserve assets (official reserves)

- It refers to foreign currency reserves that the central bank can buy or sell to influence the value of the country's currency.
  - Inflows – central bank sells dollars and buys domestic currency. (credit)
  - Outflows – central bank buys dollars and sells domestic currency. (debits)

d. Official borrowing

- It refers to government borrowing from abroad.
  - Inflows - borrowing by government from foreign lenders. (credits)
  - Outflows – loans to foreign government. (debits)



3. The financial account

Financial account	
9 Foreign direct investment (FDI; inflows minus outflows)	+ 23
10 Portfolio investment (inflows minus outflows)	– 4
11 Reserve assets (official reserves)	+ 1
12 Official borrowing	– 1
Balance on financial account (items 9 + 10 + 11 + 12)	**+ 19**

In reality

- In reality, it is extremely difficult to record every single transaction between one country and all other countries.
- To make the sum of all credits equals the sun of all debits, the real-world balance of payment account use an item called '**errors and omissions**' to create an equality between the sum of credits and the sum of debits.

- Sometimes, economists will use the term 'capital account' to refer to both the capital and financial accounts.

The interdependence between the accounts

The overall BOP must always balance because in the long-run a country can spend only what it earns.

→ **The sum of all the items = 0**

→ **Sum of all credits = Sum of all debits**

→ **Deficits** (-20) **are matched by surpluses** (+20).

- All Credits in BOP → creates demand for the currency
- All debits in BOP → creates supply of the currency
- Exchange rates are always determined by currency demand and supply, in all exchange rate systems.

→At the point where currency demand equals currency supply, it is also the case that the sum of credits is equal to the sum of debits. Therefore deficits must match surpluses.

Current account	
1 Exports of goods	+ 40
2 Imports of goods	– 65
Balance of trade in goods (items 1 + 2)	**– 25**
3 Exports of services	+ 25
4 Imports of services	– 15
Balance of trade in services (items 3 + 4)	**+ 10**
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Balance on financial account (items 9 + 10 + 11 + 12)	**+ 19**
Balance (sum of all items from 1 to 12)	0

The interdependence between the accounts

China

Current account X > M (surplus)

With CA surplus, China is buying from foreigners less than what it sells to them.

- Production: on the PPC
- Consumption: inside its PPC

Financial account Inflow<Outflow(deficit)

BOP zero

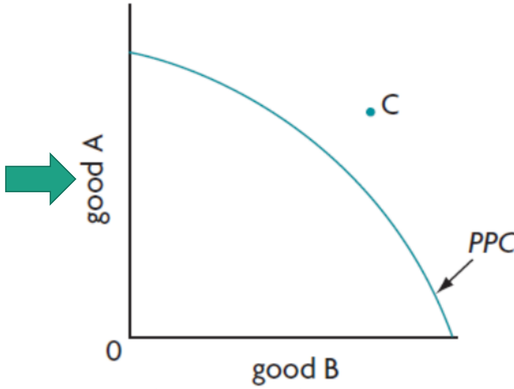
CA surplus: the country is accumulating foreign exchange (as it earns more foreign exchange from exports than it pays out to buy imports), which it can use to buy assets abroad (FDI or portfolio investments, including loans to other countries) → the financial account reflects investments in foreign countries undertaken to dispose of the extra foreign exchange.

United States

Current account X < M (deficit)

With CA deficit, USA is buying from foreigners more than what it sells to them.

- Production: on the PPC
- Consumption: outside its PPC



Financial account Inflow<Outflow(surplus)

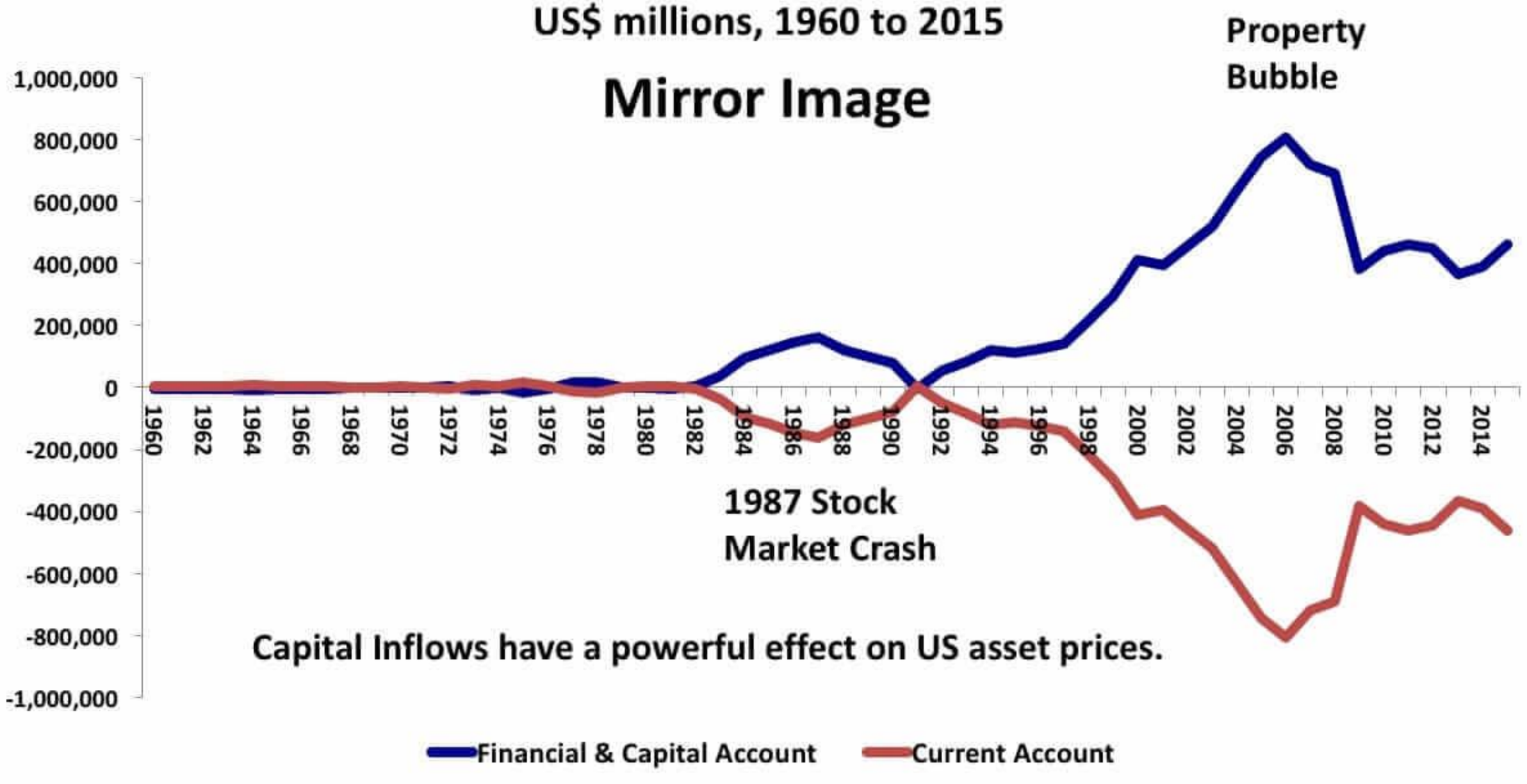
BOP zero

Current account deficit: the country consumes more than it produces. the financial account is a reflection of the need to finance that deficit;

US Balance Of Payments

The Current Account = The Financial and Capital Account

US$ millions, 1960 to 2015



Calculation

- Study the data below for country L and answer the questions that follow.

Item	Amount
Trade in goods	-$18.3bn
Trade in services	-$21.8bn
Net income	-$6.7bn
Net current transfers	-$5.6bn

a. Calculate the value of the balance of trade for country L.

b. Calculate the value of the current account for country L.

Calculation

The data below show data from country J's balance of payments.

Item	$ billions	Item	$ billions
Exports of goods	235	Capital transfers	26
Exports of services	320	Foreign direct investment	65
Imports of goods	-440	Income	20
Imports of services	-235	Current transfer	-30
Trade in non-produced, non-financial assets	20	Portfolio investment	38

a. Calculate the value of country J's current account balance.
b. Calculate the value of the financial account for country J.
c. Calculate the value of the capital account for country J.
d. Calculate the value of errors and omissions on the balance of payments for country J.

The BOP and exchange rates

Balance of payments

Everything that is recorded in the balance of payments creates a demand for or supply of a domestic currency.

A zero balance in the BOP means there is a balance between the demand for and supply of a currency

Exchange rates

Currency demand and supply determines the value of domestic currency in all exchange rate system

The current account and exchange rates in a floating exchange rate system

- Assume U.S and EU only trade with each other, so whenever there is a supply of $, this would be for the sole purpose of buying €, vice versa.
- The demand of dollars would therefore represent a credit to the US economy and a debit to the EU economy.
- Initial equilibrium exchange rate: €0.67=$1 ($1.5=€1):

If Euro zone countries' demand for imports from the US increases…

- **For dollar - In figure a:**
  - the demand for dollars increase →the demand curve shifts to the right from D1 to D2.
  - At the initial equilibrium exchange rate €0.67=$1, there is excess demand for dollar.
  - The US has a **surplus on its current account (excess credits) →imbalance**
  - The dollar appreciates to €0.90=$1
  - In U.S: imports(debit) ↗, exports(credit)↘ until the **current account surplus is eliminated**.
- **For euro - In figure b:**
  - The supply of euros increase →the supply curve shifts to the right from S1 to S2.
  - At the initial equilibrium exchange rate $1.5=€1, there is excess supply of euro.
  - The euro zone countries have a **current account deficit (excess debits) →imbalance**
  - The euro depreciates to $1.11=€1
  - In EU: imports(debit) ↘, exports(credit) ↗ until the **current account deficit is eliminated**.
- **As a free floating exchange rate market should always find equilibrium, this means that debits and credits in both countries balance of payments will be equal.**

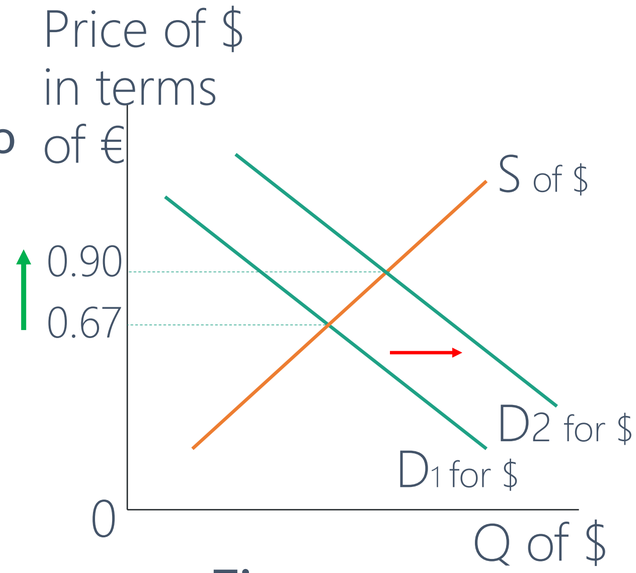


Figure a

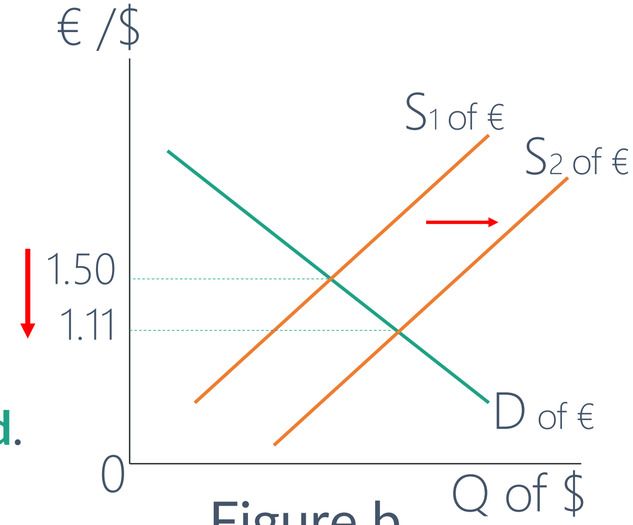


Figure b

The current account and exchange rates in a floating exchange rate system

- Under floating exchange rates,
  - when there is a **deficit** in the current account, market forces create a downward pressure on the currency exchange rate.
  - When there is a **surplus** in the current account, market forces create an upward pressure on the currency exchange rate.

  → As a result, exchange rate changes **automatically eliminate current account deficits and surpluses**, and create a balance in the balance of payments.

The current account and exchange rates in a managed exchange rate system

Compared with floating exchange rate system, a managed float includes periodic interventions by the central bank to influence exchange changes.

- For Bopland, BOP = Current account + Capital account + Financial account excluding reserve assets

  = (-20)+1+18= -1 billion

  → BOP deficit

- If in a free floating exchange rate system, the bople would have depreciated.
- In managed exchange rate system, to avoid depreciation and maintain the bople's exchange rate, the central bank sold dollars and bought 1 billion boples, therefore offsetting the deficit of -1 billion boples (reserve assets +1 billion)
- OR central bank could buy 0.5 billion boples → the bople will depreciate less than under a freely floating system.

Current account	
1 Exports of goods	+ 40
2 Imports of goods	– 65
Balance of trade in goods (items 1 + 2)	**– 25**
3 Exports of services	+ 25
4 Imports of services	– 15
Balance of trade in services (items 3 + 4)	**+ 10**
Balance of trade in goods and services (items 1 + 2 + 3 + 4)	**– 15**
5 Income (inflows minus outflows)	– 6
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Balance on current account (items 1 + 2 + 3 + 4 + 5 + 6)	**– 20**
Capital account	
7 Capital transfers (inflows minus outflows)	+ 0.7
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Balance on capital account (items 7 + 8)	**+ 1**
Financial account	
9 Foreign direct investment (FDI; inflows minus outflows)	+ 23
10 Portfolio investment (inflows minus outflows)	– 4
11 Reserve assets (official reserves)	+ 1
12 Official borrowing	– 1
Balance on financial account (items 9 + 10 + 11 + 12)	**+ 19**
Balance (sum of all items from 1 to 12)	**0**

18

The current account and exchange rates in a fixed exchange rate system

Country A has a fixed exchange rate,

- if excess debits persist in the long term, the central bank can keep selling dollars and buying domestic currency, creating the necessary credits to match the excess debits → maintain the fixed exchange rate.
- **Threat**: country A could run out of dollars to sell one day in the future.

→Country A must find **other ways** to increase credits or decrease debits to maintain a balance:

- increase credits (inflow):
  - Increase interest rates (attracting foreign financial investment)
  - Borrow from abroad
- Decrease debits(outflow):
  - Limit imports (through contractionary fiscal and monetary policies or trade protection)
  - Exchange control

In a fixed exchange rate system, the balance of payments are made to balance by policies that change currency demand or supply in order to keep the exchange rate fixed.

The financial account and exchange rates

- Financial account is mostly a reflection of current account, but it can exert an important influence on the exchange rate.

Example: Country X with a financial account surplus (current account deficit) is experiencing high rates of inflation

- Central bank of country X raises interest rates (contractionary monetary policy)
  - ✓ higher interest rates attract an inflow of financial capital into country X
    - additional credits in FA corresponding to increased currency demand.
  - ✓ Domestic investors now prefer financial investments in the domestic market
    - decreased debits in FA corresponding to a fall in currency supply.
  - → an excess of currency demand over supply (excess credits)

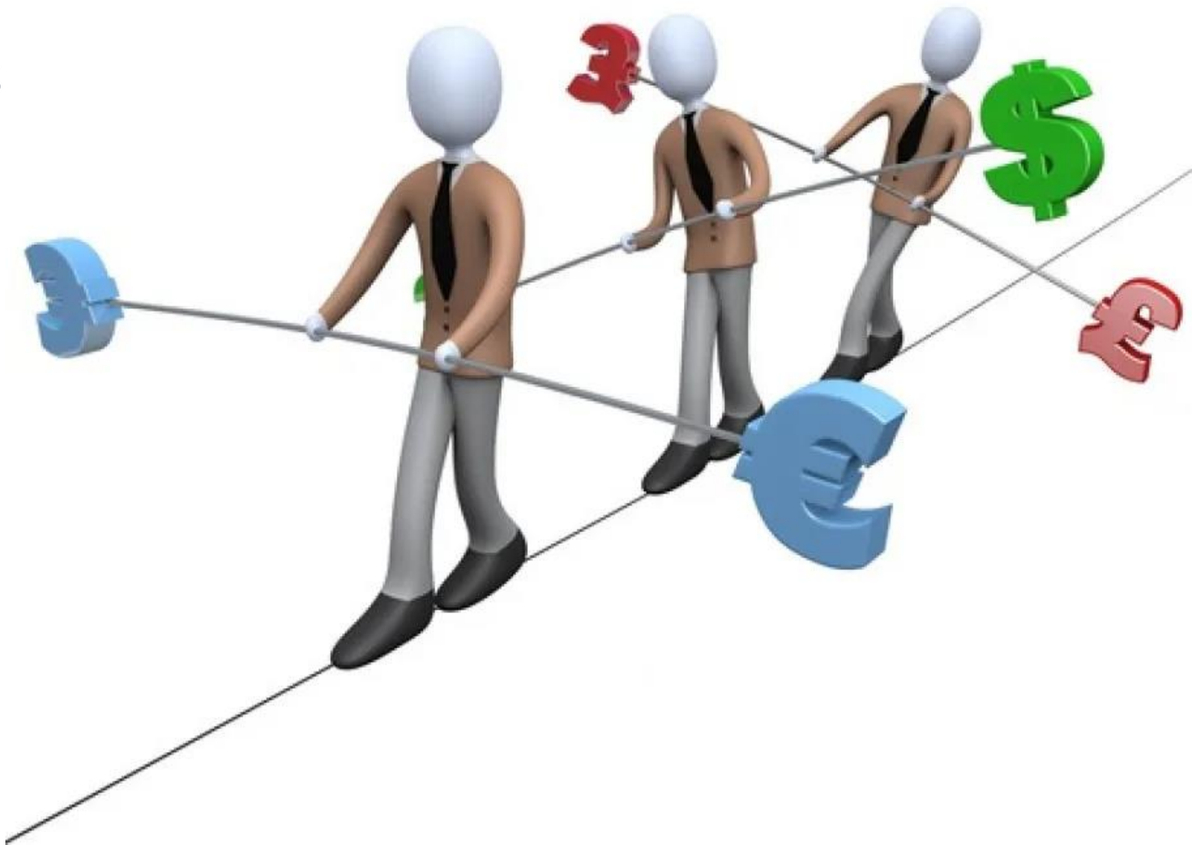
→the excess credits will cause an appreciation of the currency of country X. (CA remains unchanged)

➢ Vice versa, an excess of debits over credits in the event of an outflow of financial capital would cause a depreciation of the currency.

Comparing and contrasting exchange rate systems （AO3)

We will compare fixed and floating exchange rate systems in following perspectives:

1. Degree of certainty for stakeholders
2. The role of foreign currency reserve
3. Correction of current account imbalances
4. Effects on inflation
5. Flexibility offered to policy-makers
6. Effects on speculation



Comparing and contrasting exchange rate systems

1. Degree of certainty for stakeholders

Fixed exchange rates

- High degree of certainty for firms, consumers and the government.

→**Easier for businesses to plan**:

- future investments domestically and abroad
- sales of their products to other countries (exports)
- costs of imported inputs and other activities.

→**Easier for consumers to plan**:

- Travel abroad
- Purchases of imported goods and services
- Financial investments in other countries

→**Easier for government to plan**:

- Purchase of imported goods and services
- Payments of interest and capital on foreign loans, and so on.

- Fixed exchange rate favor international trade. It makes it possible to calculate the price of goods and services in different countries accurately.

Floating exchange rates

- stakeholders cannot be sure what the value of currencies will be in the future. → higher uncertainty.
- Negative effects on trade and investment flows due to an inability to plan accurately for the future.
- Large and abrupt exchange rate change can cause serious problems for countries that depends heavily on export

  → possibility of financial crisis

2. The role of foreign currency reserves

Fixed exchange rates

- To maintain an fixed exchange rate, it requires sufficient supplies of reserves of foreign currencies.
- Problems can arise if central bank do not have enough reserves to carry out the necessary interventions.

Floating exchange rates

- No need for central banks to hold foreign currency reserves.

2. Comparing and contrasting exchange rate systems

3. Correction of current account imbalances

Fixed exchange rates

- Large or persistent current account deficits as well as external shocks require large quantities of foreign currency reserves or access to foreign borrowing.
- If these are not readily available, the country will have to resort to:
  - Contractionary policies
  - trade protections
  - Exchange controls

  →Possible negative consequences
- Eventually, the country may have to devalue its currency.

Floating exchange rates

- It can adjust automatically to excess demand or supply of the domestic currency, thus bringing about a balance in the BOP.
- A CA deficit is eliminated through currency depreciation
- A CA surplus is eliminated by currency appreciation.
- Easy adjustment to external shocks.

2. Comparing and contrasting exchange rate systems

4. effects on inflation

Fixed exchange rates

If a country has a rate of inflation higher than its trading partners:

- The foreign demand for exports falls
- the domestic demand for imports rises

→current account deficit (there is no possibility of the current account deficit being corrected through depreciation)

- The country are encouraged to use fiscal policy to maintain a low and stable rate of inflation to maintain their export competitiveness.
- If using contractionary policy → recession

Floating exchange rates

- The current account deficit can be corrected through currency depreciation.
- Depreciation leads to higher costs of imports → possibility of cost-push inflation.

5. Flexibility offered to policy-makers

Fixed exchange rates

Fixed exchange rates do not offer flexibility to policy makers.

- Interest rate increases attract financial investments but have contractionary effects in the domestic economy.
- Extensive borrowing may lead to high levels of debt.
- Contractionary fiscal and monetary policies may create a recession and unemployment.
- Trade protection results in increased inefficiency in production, increased domestic and global misallocation of resources, and may result in retaliation.

Floating exchange rates

- Floating exchange rates offer greater flexibility to policy-makers.
- Policy-makers does not need to respond to BOP problems, and can be carried out in accordance with domestic priorities.

6. Effects on speculation

Fixed exchange rates

- Speculation is limited since the exchange rate cannot move up or down.
- When people believe that a country may devalue or revalue its currency, it may have room for speculation.

Floating exchange rates

- Currency speculation which occurs under floating exchange rates can be destabilizing.
- If speculators expect a currency to depreciate, they will sell the currency and cause it to depreciate more than it otherwise would.

Evaluation of managed exchange rates

Advantages:

- Compared with fixed exchange rates, it offers flexibility to pursue policies according to the needs of the domestic economy. Economies can adjust more easily to shocks
- Compared with floating exchange rates, the government have the opportunity to prevent very sudden and large exchange rate fluctuations.
- It makes currency speculation more difficult.

Disadvantages:

- It cannot do enough to prevent large currency fluctuations, which are especially damaging to economies highly dependent on exports.
- The managed float cannot eliminate large trade imbalances.
- It offers countries the opportunity to ‘cheat’ by undervaluing their currencies and gaining an unfair competitive advantage.

Monetary Union

Monetary Union involves a far greater degree of integration than a common market, and occurs when the member countries of a common market adopt a **common currency** and a **common central bank** responsible for monetary policy.

- The most famous example: 'Euro zone countries' started from 1999. currently it consists of 15 countries. The European Central Bank responsible for monetary policy for all the member countries.
- 'Convergence Requirements' of member countries:
  - Limiting their rate of inflation
  - Limiting their budget deficit to 3% of GDP
  - Limiting their government debt to 60% of GDP, and so on.

- **The monetary union is like a system of fixed exchange rate in some ways, the member countries adopt a single currency, it is as though they permanently fix the value of their currencies against each other, without any possibility of revaluating or devaluating their currencies.**

Advantages of Monetary Union (AO3)

1. A single currency eliminates exchange rate risk and uncertainty.

- A common currency is used. It eliminates the risks associated with international trade due to exchange rate fluctuations and uncertainties.
- Benefits for importers and exporters, consumers and investors, thereby encouraging trade and investments across boundaries.
- More efficient allocation of resources.

2. A single currency encourages price transparency.

- **Price transparency** refers to the ability of consumers and firms to compare prices in all the countries that have adopted a common currency without having to make exchange rate calculations and conversions.
- Households, firms and tourists can easily compare the price of goods/services across different member states with currency conversions or dealing with fluctuations in the exchange rate.
- It can also promote competition and efficiency.

Advantages of Monetary Union (AO3)

3. A single currency eliminates transaction costs

- No conversion cost charged by banks.
- It results in significant savings that have the effect of encouraging trade, investments and international financial flows of all kinds.

4. A single currency promotes a higher level of inward investment

- **Inward investment** refers to investments from outsiders towards the member countries with a common currency.
- Inward investment increase due to the absence of currency risk within an expanded market, resulting in greater economic growth.
- Positive impact on economic growth and employment.

Advantages of Monetary Union (AO3)

5. Low rates of inflation give rise to low interest rates, more investment, increased output.

- Member countries committed to maintaining a low rate of inflation.
- More foreign direct investment between members of the monetary union and more inward investments from non-member countries
- Membership of a monetary union should be good for economic growth and job creation in the long-term.

Disadvantages of Monetary Union (AO3)

1. A single currency involves loss of domestic monetary policy as an instrument of economic policy.

- For EU zone countries, monetary policy is the responsibility of the European Central Bank, the objective being price stability for the region as a whole.
- Member countries cannot carry out its own monetary policies even under particular circumstances (higher or lower inflation, unemployment, etc., than the average of the euro zone countries).

2. Monetary policy pursued by the single central bank will impact differently on each member country, depending on its own particular circumstances.

- Different countries have different degrees of inflation, unemployment, etc.
- The actions taken by the common central bank in a monetary union will have an asymmetric impact on different countries owing to their varying circumstances.

Disadvantages of Monetary Union (AO3)

3. A single currency involves loss of exchange rates as a mechanism for adjustment.

- If a member country has a trade deficit with another member country, it no longer has its own national currency that could depreciate (in a flexible exchange rate system) or devaluate (in a pegged system) in order to correct the imbalance.
- With independence, outside of a monetary union, the country can depreciate its currency during a recession or to combat a current account deficit. (not possible in monetary union)

4. Fiscal policy is constrained by the convergence requirements.

- In EU, total public debt cannot be greater than 60% of GDP, the budget deficit of any year cannot be greater than 3% of GDP.

* Some refer it as an advantage because it promotes fiscal discipline, others view it as an disadvantage of authority restriction of the government.

Disadvantages of Monetary Union (AO3)

5. A single currency overseen by the single central bank involves loss of national governments authority in economic policy-making.

- Member countries are bound by agreements with other member states, no central bank for each member countries in its own.
- Authority is transferred away from democratically elected national governments towards an independent body that may be unelected.

→They have to give up the freedom and flexibility to adjust macroeconomic policies.

→They lose the autonomy to deal with their own specific economic problems.

- Possibility of a ‘fiscal union’ – higher form of economic integration with a central fiscal body with authority over all member countries.

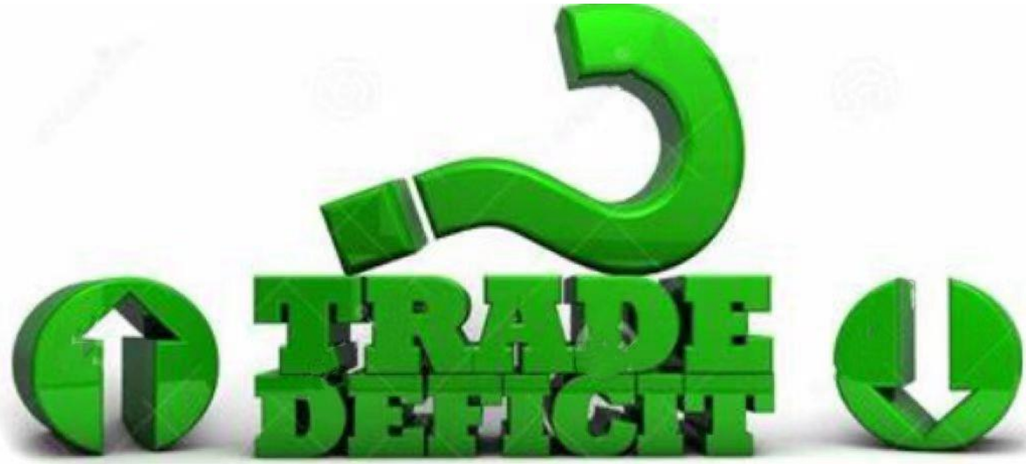
Disadvantages of monetary union (AO3)

6. Changeover costs

- There are setup and conversion costs involved in establishing a monetary union.
- E.g. for EU members permanently converted to using the euro, there were costs of:
  - Printing the new currency
  - Getting rid of the old currencies
  - Updating price lists and menus
  - Adjusting software for bank accounts and stock market investments
  - Converting vending machines and car parking meters, and so on.
- There are also setup costs and running costs associated with establishing the European Central Bank.

Current account deficits

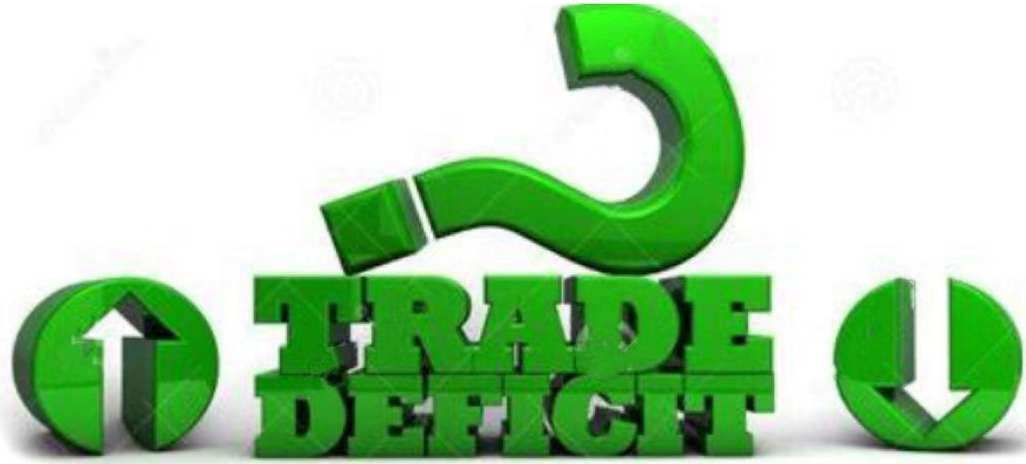
- **Current account deficits** are paid for by **financial account surpluses**, since the central bank does not have endless amounts of foreign currency reserves to pay for a current account deficit, it must do so either through loans or by selling some of its physical or financial assets.
- Both methods result in inflows of foreign exchange. So an long term and persisting current account deficit may pose several problems.



Consequences of persistent current account deficits (AO3)

1. Effects on exchange rates: depreciating exchange rate.

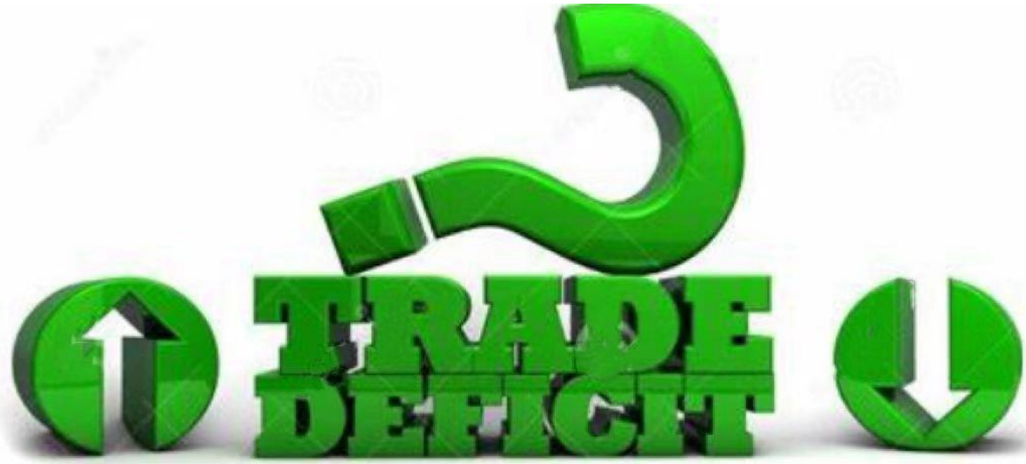
- A current account deficit puts a downward pressure on the exchange rate → currency depreciation → imported inflation
- If there is a risk of default, the downward pressure on the currency is much stronger because people don't want to hold currencies whose value is expected to fall further. →the currency becomes vulnerable to speculation.



Consequences of persistent current account deficits (AO3)

2. Possible need for higher interest rates to attract foreign financial investments, leading to recession.

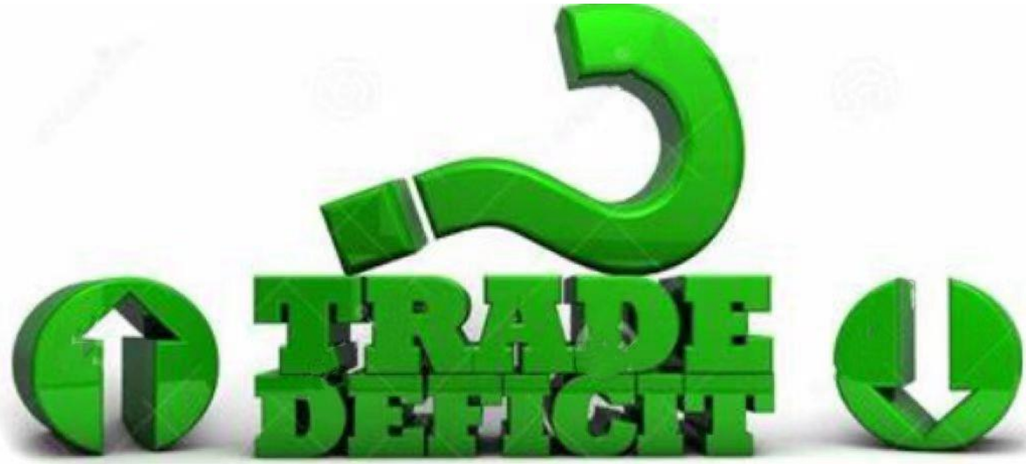
- If a country has difficulty getting loans, it may have to increase its interest rates to attract financial investments.
- Higher interest rates discourage domestic investment and consumption spending → possibility of recession



Consequences of persistent current account deficits (AO3)

3. Foreign ownership of domestic assets

- If a country sells domestic assets to foreigners (stocks, real estate, etc.) to acquire inflows of funds in the financial account, it may eventually lead to loss of control over its assets.



Consequences of persistent current account deficits (AO3)

4. Increasing levels of debt

- If a country borrows over long periods of time, it runs the risk of accumulating so much debt that it may be unable to pay it back. (risk of default)

→Significant currency depreciation

→Difficulties of getting more loans

→Painful demand-side policies

5. Cost of paying interest on loans

- Opportunity cost of interest payment.

Consequences of persistent current account deficits (AO3)

6. Fewer imports of needed capital goods

- Interest payments on loans also use up scarce foreign exchange earnings (from exports) that could have been used on imports of capital goods or other inputs for production.

Consequences of persistent current account deficits (AO3)

7. Poor international credit ratings

- Countries with large and persistent current account deficits have low credit ratings, making it more difficult to get more loans in the future.
- Under such circumstances, a country may have to raise its interest rates to attract foreign financial capital → recession
- If there is a belief that the currency may depreciate substantially, or that the economy will not perform well in the future, the investor may be unwilling to continue to invest in the country, or they may even sell their assets.

→ Significant and rapid depreciation of the domestic currency.

Consequences of persistent current account deficits (AO3)

8. Painful demand management policies

- Contractionary monetary and fiscal policies have the effect of lowering incomes, which in turn lead to lower imports that may help to reduce the current account deficit.

9. Possibility of lower economic growth

- If loans accumulate over long periods of time, the cumulative impacts of the above may mean lower economic growth.

Consequences of persistent current account deficits (AO3)

10. Lower standard of living in the future

- Paying back the debt requires a financial account deficit, corresponding to a current account surplus.
- To pay back the loans, the local population must consume less than they produce, giving rise to a decline in their standard of living.
- Countries that sell off their assets do not have to pay back loans, but if they want to regain possession of their domestic assets, they still have to consume less than the amount they produce in the future.

* Borrowing can also lead to economic growth, if per capital output and income increases, it is possible to have increased consumption even as loans are being paid back. But it requires:

  - The current account deficit remains relatively small
  - Borrowed funds are used to finance imports of capital goods and other inputs needed in production.
  - Some production is geared towards export industries so that exports increase, making export earnings increase.

Policies to correct persistent current account deficits(AO3)

Policies to correct persistent current account deficits

1. Expenditure reducing policies (reductions in aggregate demand)

- Expenditure reducing policies try to influence the levels of imports and exports by reducing domestic expenditures through lower aggregate demand.
- Actions: contractionary fiscal policy (reduce government spending and/or increase taxation levels) and contractionary monetary policy (raise interest rates)
- Contractionary policies reduce aggregate demand, shifting AD to the left → reduced output and incomes →lower demand for imports
- Reduced aggregate demand →lower rate of inflation → domestic goods become more competitive → exports increase

➢Lower imports and higher exports → reduced current account deficit.

limitations

- Reductions in AD will lead to reduced economic growth and higher unemployment, which may create a recession in the domestic economy.
- Risk that higher interest rates (contractionary monetary policy) leads to currency appreciation, which may discourage exports and encourage imports, partly cancelling out the effects of the policies.

Policies to correct persistent current account deficits

2. Expenditure switching policies – trade protection

- It attempt to switch consumption away from imported goods and towards domestically produced goods.
- Actions: tariffs, quotas, embargo, domestic subsidy, etc.
- Trade protection can reduce the current account deficit by directly restricting imports.

limitations

- Higher domestic prices of protected goods for consumers, Lower domestic consumption
- Higher price of imported capital goods and other production inputs → Inflationary effects.
- Inefficiency and a domestic and global resource misallocation of resources.
- Retaliation - Other countries may retaliate with their own barriers, creating a spiral of protectionist policies with serous consequences on global trade and global growth.
- WTO rules

Policies to correct persistent current account deficits

3. Expenditure switching policies – Depreciation

- The government or central bank may allow the currency to depreciate, in which case it encourages exports (cheaper for foreigners) and discourages imports (more expensive to domestic buyers.
- Actions:
  - central bank reduce the interest rates, increase the money supply
  - Sell domestic currency reserves

Limitations

- Higher import prices due to the lower value of the currency often result in higher domestic inflation.
- Higher price of imported capital goods and other production inputs →higher cost of production of domestic firms → higher price for consumers
- Possibility of recession.
- Retaliation or currency wars
- Marshall-lerner condition

Policies to correct persistent current account deficits

4. Supply-side policies to increase international competitiveness (price and quality)

- **Actions**: Market-oriented and interventionist supply side policies
- **Effects:**
  - Market-oriented supply side policies → lower costs of production for firms, increase efficiency → domestic firms become more competitive in global markets → increase exports
  - Interventionist supply-side policies → increase in potential output and economic growth, and can also promote industries that produce for export. → increase exports
  - Higher quality, lower price for domestic produced goods/services → domestic consumers switch from imported goods to domestic produced goods/services → decrease imports.
- Supply-side policies shift the SRAS and LRAS curves to the right, resulting in lower rates of inflation

Limitation

- Time lags.
- Costly with huge opportunity cost
- No guarantee of success

Marshall-lerner condition and J-curve

U.S Import > Export
Current account deficit

↓

Government intervention → Currency depreciation/devaluation

↓

- Higher price for importing goods → Qm ↘
- Lower price for exporting goods → Qx ↗

↓

Reduced current account deficit

- The **Marshall-Lerner condition** is a condition that, if satisfied, allows devaluation or depreciation to lead to an improvement in a country's balance of trade (and therefore in its current account)

Condition → $PED_x + PED_m > 1$

*PED_m – the depreciating/devaluating country's price elasticity of demand for imports.

*PED_x – foreigner's price elasticity of demand for the country's exports.

What really matters is not the quantity, but value of imports and exports (Price*Quantity)

Recall: Elasticity and total revenue

- When demand is **elastic** (price elastic goods),
  - When price increases → there will be proportionally larger decrease in Qd → total revenue will decrease
  - When price decreases → there will be proportionally larger increase in Qd → total revenue will increase

- When demand is **inelastic** (price inelastic goods),
  - When price increases → there will be proportionally smaller decrease in Qd → total revenue will increase
  - When price decreases → there will be proportionally smaller increase in Qd → total revenue will decrease

Elasticity and international trade

For import:

- If $PED_m > 1$, elastic of demand,
  - Currency depreciation → importing goods price increase → a proportionally larger decrease in quantity imported → total value of imports decrease
- If $0 < PED_m < 1$, inelastic of demand,
  - Currency depreciation → importing goods price increase → a proportionally smaller decrease in quantity imported → total value of imports increase

→ **The larger the PED for imports, the greater the scope for improvement in a trade deficit.**

For export:

- If $PED_X > 1$, elastic of demand,
  - Currency depreciation → exporting goods price decrease → a proportionally larger increase in quantity exported → total value of exports increase
- If $0 < PED_X < 1$, inelastic of demand
  - Currency depreciation → exporting goods price decrease → a proportionally smaller increase in quantity exported → total value of exports decrease

→ **The larger the PED for exports, the greater the scope for improvement in a trade deficit.**

Example

PED

Initial exchange rate 10 RMB = 1 dollar

- U.S exporting cell phone, 100 units * $500/unit，exporting revenue $50,000 — 0.1
- U.S importing bicycle, 1000 units*$60/unit, importing cost $60,000 — 0.1

→**Current account deficit: $60,000-$50,000=$10,000**

US government intervention → dollar depreciate 10%; ¥10=$1 ➔ ¥9=$1

For US exporting cell phone,

- original price in China: ¥5000, after $ depreciation, price in China=500*9= ¥4500
- %ΔP=10% → PED=%ΔQ/%ΔP(10%) → %ΔQ= PED*%ΔP = 0.1*10% = 1%
- Unit of exports after depreciation = 100*101%=101 units
- Exporting revenue is $500 * 101 units = $50,500

For US importing bicycle,

- Original price in China: ¥600, after $ depreciation, price in US = 600/9 = $66.7
- %ΔP=11% → PED(0.1)=%ΔQ/%ΔP(11%) → %ΔQ = 0.1 * 11% = 1.1%
- Unit of imports after depreciation = 1000*(100%-1.1%)= 989 units
- Importing expenditure is $66.7 * 989 units = $65,966.3

→**Current account deficit: $65,966.3-$50,500 = $15,466.3**

	PED	PED	PED
Initial exchange rate 10 RMB = 1 dollar			
U.S exporting iPhone, 100 unit * $500/unit， exporting revenue $50,000	0.1	0.6	1.1
U.S importing bicycle, 1000 unit*$60/unit, importing cost $60,000	0.1	0.7	1.4
→**Current account deficit: $60,000-$50,000=$10,000**			
US government intervention → dollar depreciate 10%; ￥10=$1 ➔ ￥9=$1			
For US exporting iPhone,			
• original price in China: ￥5000, • after $ depreciation, price in China=500*9= ￥4500			
• %ΔP=10% → PED=%ΔQ/%ΔP(10%) → **%ΔQ**= PED*%ΔP	0.1*10%=1%	0.6*10%=6%	1.1*10%=11%
• Unit of exports after depreciation = 100*(1+ %ΔQ)=	101 units	106 units	111 units
• Exporting revenue = Price * unit of exports	$50,500	$53,000	$55,500
• **For US importing bicycle,**			
• Original price in China: ￥600, • after $ depreciation, price in US = 600/9 = $66.7			
• %ΔP=11% → PED(0.1)=%ΔQ/%ΔP(11%) → **%ΔQ**= 1.1%	0.1*11%=1.1%	0.7*11%=7.7%	1.4*11%=15.4%
• Unit of imports after depreciation = 1000*(100%- %ΔQ) =	989 units	923 units	846 units
• Importing expenditure	$65,966.3	$61,564.1	$56,428.2
→**Current account deficit:**	**$15,466**	**$8,564**	**$928.2**

The Marshall-Lerner condition

It is not necessary for both PEDx and PEDm to be larger than one for a devaluation or depreciation to result in a smaller trade deficit.

- If **the sum of the PEDs for imports and exports is greater than 1**, i.e. $PED_m+PED_x>1$, devaluation/depreciation will improve the trade balance (will make a trade deficit smaller)
- If the sum of the two PEDs is less than 1, devaluation/depreciation will worsen the trade balance (will make a trade deficit bigger)
- If the sum of the two PEDs is equal to 1, devaluation/depreciation will leave the trade balance unchanged.

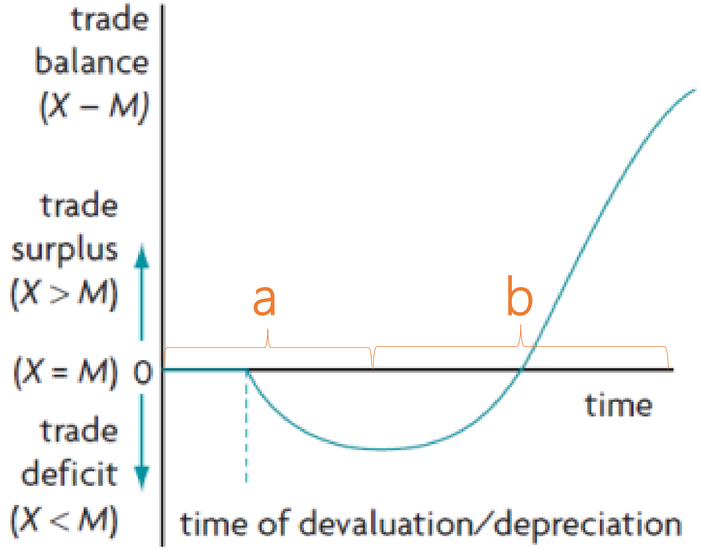
J curve effect

J curve effect: A devaluating/depreciating country may see a worsening trade balance in the period immediately following the devaluation or depreciation of its currency; later, the trade deficit will begin to shrink, and the trade balance will begin to improve, provided the Marshall-Lerner condition holds.

J-curve effect

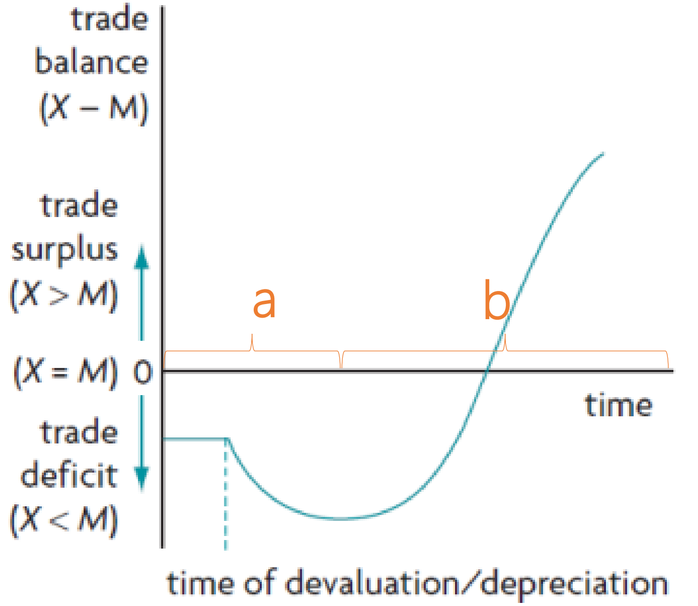
- Vertical axis: the balance of trade (X-M)
- Horizontal axis: time
- Figure a: start with X=M
- Figure b: start with trade deficit X<M

a Value of exports is equal to value of imports at time of devaluation/depreciation



- At period **a** (immediately following a currency devaluation or depreciation, price elasticities of demand for imports and exports are very low, the Marshall-Lerner condition is not satisfied: $PED_m+PED_x <1$. → the balance deteriorates →the downward-sloping portion of the J-curve
- As time passes, during period **b**, PEDs for imports and exports increase. When it comes the point $PED_m+PED_x >1$, the trade balance begins to improve.
  →the upward-sloping portion of the J-curve

b Trade deficit at time *of* devaluation/depreciation



Reasons for initial low PEDs - time lags

There are **time lags (time delays)** between devaluation/depreciation and its effects on quantities of exports and imports demanded.

- Time needed for buyers to become aware of the price changes
- Prior commitments
- Time needed to place new order
- Particular preferences of buyers that need time to change.

Empirical Evidence shows:

- Over short periods of time (less than six months), most manufactured goods have PEDs that are too low to satisfied the Marshall-Lerner condition ($PED_m + PED_x < 1$)
- In a period of more than six months and less than a year, the PEDs for most products have increased to the point that the Marshall-Lerner condition is satisfied. ($PED_m + PED_x < 1$)

Consequences of persistent current account surpluses (AO3)

1. Low domestic consumption

- Production > consumption, Lower consumption levels and lower standards of living for the population.

2. Insufficient domestic investment

- The financial account deficit means that funds are leaving the country, resulting in a risk of insufficient domestic investment, limiting economic growth prospects.

3. Appreciation of the domestic currency

- A current account surplus puts an upward pressure on the value of the currency, which can lead to lower exports and higher imports (reduced net exports) → lower aggregate demand → lower the rate of economic growth

Consequences of persistent current account surpluses (AO3)

4. Inflation rate

- Higher AD due to increased net exports → demand-pull inflation
- If current account surpluses leads to currency appreciation:
  - Lower aggregate demand due to reduced net exports puts a downward pressure on demand-pull inflation.
  - Further lower import prices put a downward pressure on cost-push inflation.

5. Employment

- Unemployment may decrease in firms that enjoy lower import costs due to the appreciation.

Consequences of persistent current account surpluses (AO3)

6. Reduced export competitiveness

- Higher price level due to demand-pull inflation and the domestic currency appreciation, exports become more expensive to foreigners → lower export competitiveness

7. Possibility of retaliation by trading partners through trade barriers

- Current account surpluses in some countries correspond to current account deficits in other countries.
- Persistent current account surpluses may prompt the deficit countries to impose trade restrictions to reduce their imports from the surpluses countries.