Exchange Rate Policy

Important Definitions

Exchange Rate = The value of one country's currency in terms of another currency

Exchange Rate Determination

Determined by demand and supply of a country's currency assuming free floating exchange rate

Demand:
Downward sloping:

- Depreciation of domestic currency ⇒ X cheaper in terms of foreign currency, ↓ cost of FDI into domestic country, speculators expect domestic currency to rise in future ⇒ ↑Qd of domestic currency

Components of Demand:

- Foreign firms and consumers who want to buy G&S produced in Singapore (Exports)
- Foreign firms and households who want to invest in Singapore (FDI or foreign portfolio investment i.e. hot money)
- Currency traders/speculators

Non-exchange rate determinants of Demand:

- Economic expansion in foreign country ⇒ ↑ real NY of foreign country ⇒ ↑DD for G&S ⇒ ↑DD for X of domestic country ⇒ ↑DD for domestic currency
- Inflation in domestic country lower relative to foreign countries ⇒ Domestic G&S relatively cheaper, c.p. ⇒ ↑Qx + ↓Qm ⇒ ↑DD for domestic currency
- Δ in tastes and preferences of foreigners
- ↑i/r in domestic country ⇒ Hot money inflow ⇒ ↑DD for domestic currency
- ↑ in conduciveness of business environment ⇒ ↑FDI into domestic country
    - Political stability
    - Availability of labour
    - Cost of production
- Δ in expectations of currency traders
    - Expected future performance of domestic economy
    - Political stability
    - Policies implemented by government

Non-exchange rate determinants of Supply:

Upward sloping:

- Appreciation of domestic currency ⇒ M cheaper in terms of domestic currency, ↓ cost of FDI out of domestic country, speculators expect foreign currency to rise in future ⇒ ↑Qs of domestic currency

Components of Supply:

- Singapore firms and consumer who want to buy G&S produced in the rest of the world (Imports)
- Singapore firms and households who want to invest in UK
- Currency traders/speculators

Non-exchange rate determinants of Supply:

- Δ in tastes and preferences of domestic consumers
- ↓i/r in domestic currency ⇒ Hot money outflow ⇒ ↑SS of domestic currency
- ↓ in conduciveness of business environment ⇒ ↑FDI out of domestic country as firms seek other countries to invest in
- Δ in expectations of currency traders

Foreign Exchange Market Intervention

Fixed exchange rate
What: Fix external value of domestic currency at a specific rate of exchange to another country's currency by controlling the demand/supply of its domestic currency

Purpose: To minimise uncertainty and to prevent fluctuations in its country's exchange rate esp with key trading partner

Example: HK$ fixed at HK$7.80 per US$

Managed float exchange rate
What: Compromise between fixed and free float exchange rate by allowing country's currency to freely fluctuate within a band while the Central Bank intervenes to prevent excessive fluctuations outside the band

Example: SG$ managed float of nominal effective exchange rate (SNEER)

Singapore Central Bank (MAS)
Primary objective: To promote price stability as a sound basis for sustained economic growth in the long run via exchange rate centred monetary policy

Policy stance: Gradual and modest appreciation of the Singapore dollar

How:

- SGD managed against a trade-weighted basket of currencies of major trading partners and competitors (measured by SNEER)
- Allowed to fluctuate within an undisclosed band due to difficulty in fixing SNEER permanently
- If exchange rate moves out of band, MAS steps intervenes by buying or selling foreign exchange to prevent excessive fluctuations

<u>Reason for choice of exchange rate policy</u>
Intro:

- i/r and er are alternative monetary policy tools
- Primary objective of MAS is to promote price stability to achieve sustained economic growth in the long run

Body 1: Open Economy Trilemma/**Theory of impossible trinity**

- Out of the 3: control over i/r, control over er and open financial account, only 2 can be chosen
- Open financial account allows money to be brought in and out of the country freely
- This is key for Singapore in promoting international trade which is essential for Singapore in ensuring economic growth
- Hence, it is a choice between control over interest rates and exchange rates
- This is because assuming an open financial account is chosen, if central bank chooses to fix i/r below the global i/r by increasing money supply ⇒ Hot money outflow ⇒ $\uparrow SS_{SGD}$ ⇒ Depreciation of SGD
- However, if central bank tries to fix exchange rate as well ⇒ Have to use foreign reserves to buy SGD ⇒ ↓ money supply ⇒ ↑i/r
- ∴ Impossible to fix both interest rate and exchange rate if open financial account is fixed ⇒ Need to choose 1 of the 2

Body 2: er has a greater impact on AD than i/r in Singapore

- i/r affects C and I
- er affects X and M
- Small domestic economy ⇒ Highly dependent on external sector
- X & M are the largest components of AD in SG with X+M≈400% of Singapore's GDP
- Greatest impact on DD pull inflation ⇒ Greatest effectiveness in achieving aim of price stability

Body 3: er can moderate imported inflation whereas i/r cannot

- SG is a small, resource-poor nation ⇒ Depends greatly on imported goods and raw materials ⇒ Price taker in global market
- In the event of import-push inflation, SG can appreciate SGD ⇒ ↓Pm in terms of SGD ⇒ Moderate import-push inflation

Conclusion: Singapore chooses to control er, conceding control of i/r

Exchange Rate Policy

Depreciation policy (Expansionary)

How it works:

- Central bank purchases foreign reserves using domestic currency ⇒ ↑SS of domestic currency ⇒ Depreciation of domestic currency
    - Able to accumulate foreign reserves as well
- Depreciation of domestic currency ⇒ {Constant Px in terms of domestic currency but ↓Px in terms of foreign currency ⇒ Exports now cheaper to foreign consumers ⇒ ↑Qx} + {↑Pm in terms of domestic currency ⇒ Imports now more expensive to domestic consumers ⇒ ↓Qm as domestic consumers substitute more expensive imports with domestic substitutes} ⇒ Extent to which Qx increases and Qm decreases depends on PEDx and PEDm respectively ⇒ Assuming MLC holds ↑(X-M) ⇒ m.t.p. ↑ in AD via multiplier effect ⇒ ↑ real NY and ↓cyclical UnN since labour is a derived demand
    - Short term policy to mitigate the fall in AD due to fall in X
- ↑(X-M) ⇒ Improvement in BOT ⇒ Improvement in current account ⇒ Improvement in BOP position

Limitations:

- Conflicts with other macro objectives
    - Depreciation of domestic currency ⇒ ↑P of imported goods + ↑P of imported raw materials in terms of domestic currency ⇒ ↑CPI + ↑COP ⇒ ↓AS (upward shift) ⇒ ↑GPL ⇒ Inflation
    - ↑AD + ↑COP may lead to wage-price spiral ⇒ Worsen inflation ⇒ May even lead to ↓ real NY if serious
    - ↑COP ⇒ ↓ expected rate of return from I ⇒ Deter FDI ⇒ ↓I ⇒ ↓AD
    - ∴ Cannot be used in the long term, can only be used in the short term/<u>once off</u> to offset significant ↓AD due to economic recession

- Effectiveness of depreciation policy to ↑(X-M) may be moderated
    - ↑ inflation relative to foreign countries ⇒ ↓ price competitiveness of exports ⇒ ↑ in (X-M) may be moderated
- Short-term policy only
    - Singapore might be perceived to be trying to take an unfair trade advantage ⇒ Might invite retaliation by trading partners and spark off a situation of a currency war due to poor global economic environment (i.e. Countries lower their own exchange rates to re-level playing field)
- Time lag due to J curve effect
    - In the short run, demand for exports and imports may be price inelastic ⇒ MLC may not hold in the short run ⇒ May even lead to ↓(X-M) in the short run ⇒ ↓AD + Worsening of BOP position
        - Time lag for consumers to change consumption patterns and preferences
        - Firms have to fulfill prevailing contracts
- Imperfect info

Appreciation policy
How it works:

- Central bank purchases domestic currency using foreign reserves ⇒ ↑DD of domestic currency ⇒ Appreciation of domestic currency
- Appreciation of domestic currency ⇒ {Constant Px in terms of domestic currency but ↑Px in terms of foreign currency ⇒ Exports now more expensive to foreign consumers ⇒ ↓Qx as foreign consumers substitute more expensive imports with their own domestic goods} + {↓Pm in terms of domestic currency ⇒ Imports now cheaper to domestic consumers ⇒ ↑Qm} ⇒ Extent to which Qx decreases and Qm increases depends on PEDx and PEDm respectively ⇒ Assuming MLC holds ↓(X-M) ⇒ ↓AD ⇒ ↓GPL assuming economy is operating within intermediate range of AS curve ⇒ ↓ inflation (demand-pull)
- Appreciation of domestic currency ⇒ ↓P of imported goods + ↓P of imported raw materials in terms of domestic currency ⇒ ↓CPI + ↓COP ⇒ ↑AS (downward shift) ⇒ ↓ inflation (cost-push)
- SG is a small, resource-poor nation ⇒ Depends greatly on imported goods and raw materials ⇒ Price taker in global market
- Stronger SGD ⇒ {↑FDI as firms earn increased profits in terms of domestic currency if they build a revenue centre in Singapore ⇒ ↑ funds for I} + {↑ optimism in the economy ⇒ ↑ business confidence} ⇒ ↑ I
- *Addresses both cost-push and demand-pull inflation

Limitations:

- Time lag due to J curve effect
    - In the short run, demand for exports and imports may be price inelastic ⇒ MLC may not hold in the short run ⇒ May even lead to ↑(X-M) in the short run ⇒ ↑AD ⇒ Worsen DD-pull inflation in the short run
- Need to finance with foreign reserves ⇒ Depletion of foreign reserves ⇒ ↓ ability to support strength of currency in the future
- Does not effectively address the root cause of inflationary pressures, in the long run, need for supply-side policies to ensure sustained economic growth
- Conflicts with other macro objectives
    - Assuming Singapore economy is operating in the intermediate range, ↓(X-M) ⇒ ↓AD ⇒ ↓ real NY + ↑UnN
        - BUT, in the long run, low stable inflation is key to ensuring stable and sustained economic growth in the long run (See benefits of low, stable inflation)
    - ↓(X-M) ⇒ Worsening BOT ⇒ Worsening current account ⇒ Worsening BOP position
- Imperfect info