

ECO 403 – L0301

Developmental Macroeconomics

Lecture 8

Balance-of-Payment Crises

The Capitalist Economic System

- **Capitalism** is basically an **unstable** economic system
 - **Disequilibrium** is the norm, and **equilibrium** is the exception
- **Keynesian** theory helped in the development of better economic policies to stabilize **economic cycles**
 - After the Great Depression, **institutions** and **regulatory systems** were created to reduce effects of **crises**
- **Capitalists** are motivated by the possibility of making **profits**, and profits are expressed in sums of **money**
 - Therefore, a **capitalist** economy is a **monetary** economy since it cannot work without money
 - This was the view of **Keynes** as well as of **Marx** before him

Finances, Uncertainty, and Crises

- Main difference between *Keynesian* and *neoclassical* economics is the importance attached to *uncertainty*
- Following Keynes, *Minsky* developed the theoretical connection between *finances*, *uncertainty*, and *crises*
 - Before him, literature on business cycles tended to focus on the *real production side*
 - Minsky identified *financial fragility* as the agent of *crises*
- Growing *instability* of financial system due to increasing *autonomy* of credit and financial instruments from real economy
 - Minsky showed that *financial crises* are *endogenous* to the capitalist system

Indebtedness and Financial Fragility

- Capitalist economies go through *boom-bust cycles* and *financial crises* are a particular moment of these cycles
- *Indebtedness* and *financial fragility* tends to worsen in the boom phase of the cycle
 - Credit *conditions* also tend to be relaxed during booms
- Over the course of an expansion, debtors go from a “*hedge*” to a “*speculative*” and to a “*Ponzi*” condition
 - *Hedge* condition: Full *liquidity* and *solvency* are preserved
 - *Speculative* condition: *Liquidity* is compromised (only interest can be paid)
 - *Ponzi* condition: Both *liquidity* and *solvency* are compromised (not even interest can be paid)

Endogenous Financial Crises

- Post-war government **regulation** reduced financial **instability**
 - But **regulations** are continuously subvert by **profit-seeking** financial institutions
 - Regulatory system should thus continuously **adapt** to private sector's **innovations** (Minsky)
 - But the system has instead gone through a process of **deregulation** since the 1980s
- **Unregulated** financial markets tend endogenously to move towards the **Ponzi** condition
- For Minsky, financial **crises** are essentially the result of excessive **indebtedness**
 - But they may also derive from a **currency** mismatch

Endogenous Financial Crises (cont'd)

- For developing countries, major **financial** crises do not arise from **banking** crises but from **balance-of-payment** crises
- **Balance-of-payment** crises are confined to developing countries because they become **indebted** in **foreign** currency
- **Orthodox** economists argue that **currency** crises occur only in countries with a **fixed** exchange rate
 - But investors' **confidence** does not end gradually, but rather in a **sudden** way
- In the expansion phase, governments and firms become **indebted** through the formation of a credit **bubble**
 - A **Ponzi** condition eventually arises
 - When **bubble** burst, credit is **suddenly** suspended

Endogenous Financial Crises (cont'd)

- **Balance-of-payment** crises are due to current account **deficits** and accumulation of foreign **debt**
 - Investors lose **confidence** and credit is suspended
 - **Liquidity** constraint is related to the country's **short-term** ability to honour its current **obligations**
 - This is associated with the **speculative** condition
 - **Solvency** constraint is related to the country's **long-term** ability to honour its **obligations**
 - This is a **structural** problem associated with a **Ponzi** condition
- Failure to attend either of these **constraints** will lead to **financial** crisis

Neoclassical Explanation of Balance-of-Payment Crises

- Three generations of *neoclassical* models of *balance-of-payment* (or *currency*) crises
 - **First generation:** Crises due to the central bank *setting* a non-equilibrium value for the *exchange rate*
 - **Second generation:** Crises cannot be foreseen by simply examining *macroeconomic* indicators
 - **Third generation:** Crises due to excessive *financing*
- These models fail to identify the main *cause* of *currency* crises: The *growth* cum *foreign savings* policy
 - This policy causes the *currency* to appreciate and the *foreign debt to GDP* ratio to rise

Neoclassical Explanation of Financial Crises

- **Financial** crises are believed to originate in **banking**, not in **balance of payments**
 - Different in developing countries because foreign **debt** is in **foreign currency**
- **Banking** and **balance-of-payment** crises may happen together
 - Domestic firms get indebted in **foreign currency** with local **banks** acting as **intermediaries**
 - When **balance-of-payment** crisis breaks, **banking** crisis breaks simultaneously
 - Firms cannot **repay** banks and banks cannot **rollover** their debts due to suspension of **international credit**

Neoclassical Explanation of Financial Crises (cont'd)

- **Private agents** are assumed “**rational**” and thus unable to endanger the economy
 - But the **public sector** cannot be assumed to be **rational**
 - Neoclassical theory considers excessive **current account deficits** to be the consequence of **budget deficits**
 - Optimal **intertemporal** decisions on **savings** and **investment** ensure an equally **optimal balance** in the **current account**
 - Therefore, the **culprit** here is the **government**
- According to this view, **current account deficits** should not be a matter of concern while **budget deficits** should

Neoclassical Explanation of Financial Crises (cont'd)

- But it cannot be assumed that the *private sector* is always in equilibrium and that the *public sector* always acts irresponsibly
 - Therefore, there could be a *balanced budget* and still a *current account deficit* due to excessive private spending
- Liberal orthodoxy recommends developing countries control *budget deficits*, while it welcomes *current account deficits*
 - But this may leave the private sector unbalanced, and the currency *overvalued*
- But according to neoclassical theory, only “*bad quality*” *current account deficits* should be a matter of concern
 - That is, when it increases due to *budget deficits*

Foreign Savings and Financial Crises

- **Financial** crises in developing countries are the result of exchange rate **populism**
 - **Growth** cum **foreign saving** policy
 - Exchange rate as **anchor** to achieve **inflation** target
- **Balance-of-payment** crisis breaks when foreign creditors lose **confidence** and suspend **rollover** of debts
- **Foreign creditors'** decision is conditioned by the **expected** return, $E(R)$, from the **credit** operation
 - $E(R)$ also depends on the **probability** of the loan being paid back
 - When $E(R) < 0$ the flow of finance is ruptured

Foreign Creditor's Decision

- The foreign creditor's *expected return* refers to the expected return differential from making the loan *abroad* or at *home*:

$$E(R) = PK[(1 + i) - (ER^e - ER)] - K(1 + i^*)$$

where P = probability of the loan being paid back, K = amount lent in foreign currency, ER = exchange rate at the time of the loan, ER^e = expected exchange rate at the end of the loan, i = interest rate, and i^* = international interest rate

- The foreign creditor will make the loan (and continue rolling over the debt) as long as $E(R) > 0$
 - But the sign of $E(R)$ depends on the probability P
 - And P depends on the country's *liquidity* and *solvency* conditions

Foreign Creditor's Decision (cont'd)

- Suppose $K = 1$, then:

$$E(R) = P[(1 + i) - (ER^e - ER)] - (1 + i^*)$$

- Further suppose $i = i^* = 0.1$, $ER = 1.1$ and $ER^e = 1$, then:

$$E(R) = P[(1 + 0.1) - (1 - 1.1)] - (1 + 0.1) = 1.2P - 1.1$$

- Therefore, $E(R) > 0$ for $P > 1.1/1.2 \cong 0.9167$
- Therefore, foreign creditors will continue rolling over the debt as long as $P > 0.9167$
- But if $P < 0.9167$, then foreign creditors will stop rolling over the debt and a *currency crisis* will ensue

Foreign Creditor's Decision (cont'd)

- The ER^e also influences the foreign creditor's decision:
 - If ER^e rises, expected return (in foreign currency) falls
 - To avoid losses (due to **depreciation** of the domestic currency), capital inflows cease and capital outflows increase
 - This contributes to the **depreciation** of the currency (i.e., self-fulfilling prophecy) and causes a **balance-of-payment (currency) crisis**
- When a **growth cum foreign saving** policy is adopted, high and continuous **current account deficits** follow
 - High substitution of **foreign** for **domestic** savings takes place
 - Negative effect on **liquidity** and **solvency** constraints
 - Foreign **financial fragility** is followed by **currency crisis**

Budget Deficits and Currency Crises

- Excessive public spending and ***budget deficits*** may contribute to ***currency crises***, but:
 - ***Currency crises*** could happen even if there is ***fiscal balance*** and low ***government debt***
 - The ***twin deficit*** does not always occur
- An ***overvalued*** currency causes a ***current account deficit*** even if ***fiscal budget*** is balanced
 - ***Overvalued*** currency stimulates greater ***imports*** financed by foreign currency
 - ***Current account deficit*** is due here to excessive ***private sector spending*** (something neoclassical theory doesn't pay enough attention to)

Currency Crises, Banking Crises, and Budget Deficits

- **Currency crisis** may be accompanied by **banking crisis** since banking system mediates between foreign lenders and domestic borrowers
 - Banks are pressured by foreign creditors to **repay** loans
 - Banks stop **rolling over** their loans to private sector
 - Private sector becomes **unable to pay** back loans
 - **Banking crisis** ensues
- Since the **government** might bail out the **banks** to save the system, the government might move into a **fiscal deficit**
 - But the government **deficit** is here the **outcome** and not the **cause** of the currency **crisis**

Creditors' Evaluation of a Country's Liquidity and Solvency

- Creditors conventionally use the ratio between *foreign debt* and *exports* (D/X) to evaluate a country's *solvency*
 - Comfortable situation if $D/X < 2$
 - Uncertain situation if $2 < D/X < 4$
 - Critical situation if $D/X > 4$
- The key is to estimate how the *growth* cum *foreign savings* policy may affect D/X
- **Liquidity** constraint is defined as the discrepancy between the country's *short-term* foreign *debt* (D_{ST}) and its international *reserves* (R)
 - Low level of *liquidity* if $D_{ST}/R < 1$

Impact of Growth cum Foreign Savings on Liquidity

- Consider the arbitrage equation where the **expected profit rate** or **return** on investment (r) is:

$$r = r_f + e + p$$

where r_f is the international interest rate, e is the expected devaluation of the domestic currency, and p is the risk premium

- **Foreign capital** will flow into the country as long as:

$$r > r_f + e + p$$

- Let's evaluate the impact of the adoption of a **growth cum foreign savings** policy

Impact of Growth cum Foreign Savings on Liquidity (cont'd)

- Initially the domestic *rate of interest* might be quite *high* and the *currency* quite *undervalued*, and thus:

$$r > r_f + e + p$$

- A process of *indebtedness* and currency *appreciation* coincides with the early phase of the liquidity cycle
 - Liberalization of capital account allows local financial institutions to raise funds in *foreign currency*
 - This foreign currency is then sold to the central bank and banks' *reserves* increase
 - Excess reserves are invested in securities or used to give new *loans* to private sector

Impact of Growth cum Foreign Savings on Liquidity (cont'd)

- Capital *inflows* in excess of those needed to finance the *current account deficit* allow the accumulation of international *reserves*
 - This gives the wrong impression of lower foreign *vulnerability*
- Accumulation of *reserves* is followed by an increase in *money* supply
 - According to neoclassical theory, the *rate of interest* would fall and capital *inflows* would slow down
 - But this is not what happens

Impact of Growth cum Foreign Savings on Liquidity (cont'd)

- The process continues and the systemic *risk* increases
 - Creditors monitor the increase in D/X
 - New loans only finance *debt repayments* now
 - Since there is a *current account deficit*, foreign *reserves* fall
 - As R fall, D_{ST}/R increases and at some point lose *confidence*
 - When they do, the economy goes into *crisis*
- Creditors are subject to “*herd behaviour*” and it takes a relatively short period of time for a crisis to materialize
 - It takes only the decision of a single large creditor to trigger the herd behaviour