MONETARY THEORY IN COUNTRIES WITH LIMITED FINANCIAL MARKETS

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First lecture: Monetary theory in countries with limited financial markets

a) From the QTM to the Taylor rule
b) From Keynes to Minsky: The creation and destruction of money and the role of financial institutions
c) The Monetarist Circuit Theory

I. A. **Money is neutral and** exogenous

Money is determined outside the economic system by the central bank

MV = PQ ➔ P = MV/Q, **M** affects **prices, given V and Q**,

The rate of interest is a real variable (determined by savings and investment)

Money only affects prices (inflation is a demand variable)

Savings determines investment and income at an equilibrium rate of interest

Governments are the only agent that can be in debt with the central bank

$M_t = M_{t-1}$ + Gov. spending – T yield $- (Gb_t - Gb_{t-1})$

I. B. Money is neutral and endogenous: Austro-German Economic theory (Wicksell) and the financial cycles

Central banks determine the monetary interest rate (*i*) and commercial banks are price takers

i is set around to the natural interest rate (r)➔ financial cycles

i < r ➔ ↑ lending ➔ ↑I ➔ I =S, but if Y > Y* ➔ gold reserves ↓ + accumulative *p* …. *i* ↑

i > *r*➔ ↓lending ➔ ↓I ➔ Y < Y* ➔ deflation and gold reserves accumulate ↓ …. *i* ↓

I.C The Taylor Rule: Central bank interest rate determination under conditions of globalisation

Monetary rule a function of real (natural) interest, inflation and productive gaps

$$\boldsymbol{i_t = \pi_t + r^*_t + \alpha_\pi (\pi_t - \pi^*) + \alpha_y (Y_t - Y^*)}, \text{ where } \alpha_s > 0$$

if $\boldsymbol{\alpha_\pi}$ **and** $\boldsymbol{\alpha_y = 0}$

$i_t - \pi_t = r^*_t$ (monetary interest rate in real terms is equal to real interest rate)

Exchange rate plays an important role in developing economies. It is determined by **capital flows** by interests rates **differentials** (uncovered interest rate parity)

$er = f(i - i_f)$

Problems of the Taylor Rule

- The determination of potential income (Y*), the objective inflation rate (π^*) and the natural interest rate, r^*_t
- The Taylor Rule guarantees floor yield rates in the capital market and set out the conditions for financial inflation

Problems in developing economies: Fear to float syndrome, Calvo, 2000

- The Taylor rule in LA is set through and intermediate objective (exchange rate stability) due to the magnified pass-through effect to domestic prices: imported prices of intermediate and final goods pushes up domestic prices more than proportionally and LA economies are unable to substitute imported goods for domestic production (industrialisation problems)
- ECLAC explained LA dependence by the centre –periphery dichotomy through **the deterioration in the terms of trade** (structural current account deficits is due to peripheral economies specialisation, raw materials exports and import capital and intermediate goods. These economies are import and export price takers, lack technological advances to industrialise their economies (Primary Export model, ISI, and Export led model)
- The exchange rate doesn't respond to the uncovered interest parity because capital flows are not always elastic to exchange rate movements, (direct intervention)
- Exchange rate stabilisation policies require policies that limit economic activity to reduce imports or increase higher interest margins along direct intervention
- In the globalised period central bank's intervention has taken place through high external reserves, direct intervention in the exchange rate market, and sterilisation mechanism that limit the monetary base

II. An opposite paradigm: **endogenous and non-neutral money**

The relation savings – investment is replaced by the FIS argument

Money is created by banks and guaranteed by state money or responds to industrial liquidity needs (financial market redistribute unused money among capitalists)

Money creation takes place through different means: circular flow (Kalecki and circuitist) or through banks backed by financial market (funding mechanism and financial innovation)

Main assumptions

I = S ex post (instead of ex-ante)

Money (debts) is not neutral and rate of interest is a monetary variable

The velocity of money or of deposits is not fixed (Keynes and Kalecki –speculation activity or changes in money velocities provides the required liquidity)

Dissents

Money endogeneity:

It's a function of state money; financial innovation (Minsky), or changes of interest rate or the velocity of deposits, (Kalecki).

Interest rate determination

Keynes put forward the liquidity preference theory (uncertainty), which drains liquidity out of the system

Minsky explains it through Financial Instability Hypothesis (business cycles)

Kelechi argues that it is a distribute variable (balances the financial markets). Doesn't affect investment

Circuitists also argue that is it a distribute variable but is determined by the central bank (Ms is perfectly elastic or is administered variable)

Developing Countries main features

ISI period: money depended **directly on the state money** (credit to bank and to governments), capital markets were unexistent

In the globalised period, money is related to foreign reserves coupled with sterilisation mechanism, *i.e.*, **international capital markets** play a key role in liquidity provision at the expense of public costs

II. A Keynes (GT) : State money and interests drain financial system liquidity (Capital markets limit economic growth

$I = f(P_{K,} P_I)$ or $I = f(MEC, i_{LT})$

Finance is available if $P_K > P_I$ ➔ ↑Investment ➔ ↑Income ➔ ↑S_r (if $i_{LT} < i_{ST}$) ➔ S_F

The key issue is that r**eal** savings are transformed into **financial** savings (bonds and shares that annuls bank credits) and it depends in the expectations of long term interest rate

Is it based on **Anglo-Saxon financial system**: banks provides short term credit and capital market long-term finance (US, UK). In **banks based system**, commercial banks provide credits that are destroyed by compensatory mechanism (public banks and trusts) and central bank administer liquidity (legal reserve requirement or taxes on unused money balances)

The liquidity preference plays a key role in closing the financial circle. It is determined by agents **present expectations of future interest rates** (highly volatile –psychological factors). If LP is high ➔ i_{LP+1} expected to rise ➔ P_B expected to fall ➔ savings are hoarded ➔ banks debts are not cancelled, economic downturn. Keynes brakes **the direct relation between interest rates and investment through speculation**

Conclusion: Government need to guarantee **full employment investment spending** and **rentiers payments needs to be limited** (Pasinetti "fair" rate of interest, Smithin small real interest and Kansas zero interest rate)

II.B Kalecki: Money is owned by capitalists and firms owns financial assets from previous periods + Oligopolistic market structure

Money is defined as the money of capitalist

Higher volume of income is met by changes in the rate of interest or the velocity of money. The supply of money is elastic because capitalist starts the circuit with money

The rate of interest brings the money markets into equilibrium, equates new financial needs between different markets. Main problem of economic growth is the excess of liquidity savings

In developing economies idle money dollarizes the economy or is channelled to luxury consumption (usually imported goods, see Kaldor 1959) Taxes on unused monetary balances almost inexistent.

Main assumptions

a. Capitalists earn what they spend and workers spend what they earn (i.e., capitalist don't decide over profits decide over spending))

Causality goes from **capitalist spending** ($I+C_K$) to ***gross profits***

- **How are profit are determined?**

Three sectors: Capital goods production, capitalist consumption goods and salaries production goods (very important for LA economies that did not develop K goods production and high profits leakages through C_K)

Gross Profits (after tax) = $I + C_K$ Investment highly unstable variable and C_K stabilises the profit equation

Gross profits = $P_I + P_{II} + P_{III} = P_I + W_I + P_{II} + W_{II}$

Sector III production determined by wages levels of the other sectors, therefore $P_{III} = W_I + W_{II}$

And workers spend what they earn ($W_{III} = C_W$)

In developing economies, sector I is almost non existent

b. Increasing risk concept: Oligopolistic structure dominates (unequal distribution of firms external finance)

The most important prerequisite for becoming an entrepreneur is the ownership of capital. **➔ The higher the firms size ➔ higher firms savings and higher access of credits**

Firms' external capital is **finite** **and it is subjected to increasing risk**

1) The greater the investment in relation to the entrepreneurial capital, greater the risk in the event of unsuccessful business ventures

2) The heavier the borrowing the greater is the danger of bankruptcy and the need to pay external debts not related to income results (banks credits)

Developing economies capital market therefore unused money balances don´t circulate to other capitalist

The rate of interest is a distributive variable: does not no affect the amount of spending but can modifies its composition. If investment is finance by liquid reserves (S_F) ➔ profits of other Kist rise and the liquid reserves are passed to other capitalists; and if demanded banks credits ➔ I and S expands so as **banks deposits**. The investing capitalists are able **to float bonds** in the same extent to repay banks credits. Toporowski, 2012, SOAS; WP: 172

Monetary circulation is the way money **circulates** and the velocity of money circulation guarantees liquidity: If ΔY ➔ velocity of circulation of deposits rises (also the rate of interest rise). Production is determined by demand that can be limited by income but **cannot be frustrated by a liquidity shortage**

Developing economies with reduced capital markets suffer from inelasticity of supply of basic necessitates: higher wages can lead to higher inflation due to supply shortages. Governments need to put in circulation ***idle*** funds and prevent luxury consumption or capital flight (tax policy)

II. C Minsky: financial instability hypothesis (uncertainty -debt structure) and increasing risk

Based on Keynes uncertainty (with different views), Kalecki's increasing risk and Fisher debt deflation.

Financial cycles are related to investment spending, **leverage rates**, financial debt structures, which creates processes of financial inflation and deflation.

In Minsky (1975) words "the deeper cause of business cycles in an economy with the financial institutions of capitalism is **the instability of portfolios and financial interrelations**" (1975, p. 57)

The sequential relations goes from uncertainty ➔ changing expectations ➔ financial portfolio instability ➔ Income instability

Financial structure: banks provide finance to firms and capital markets annuls bank credits (financial innovation). In developing economies (LA) financial market liquidity is provided by external markets, thereby foreign markets play a key role in financial liquidity (requires sterilization mechanisms)

- Investment determinant

$I = f(P_I, P_K, \mathbf{dLR})$

*d*LR: Leverage rate respect to a normal value (firms debts structure –covered, speculative and ponzi financial structures): I spending ↑, leverage rate ↑, deviating from a normal level, borrowers and lenders risks ↑ (moving from covered to speculative and to ponzi schemes)

P_I = *f*(direct cots, profit margin (direct cost)). The ***lenders increasing risks moves*** *as* I expands

P_K = *f*(expected returns, interest rates). The ***borrower increasing risks as I expands (subjective price)***

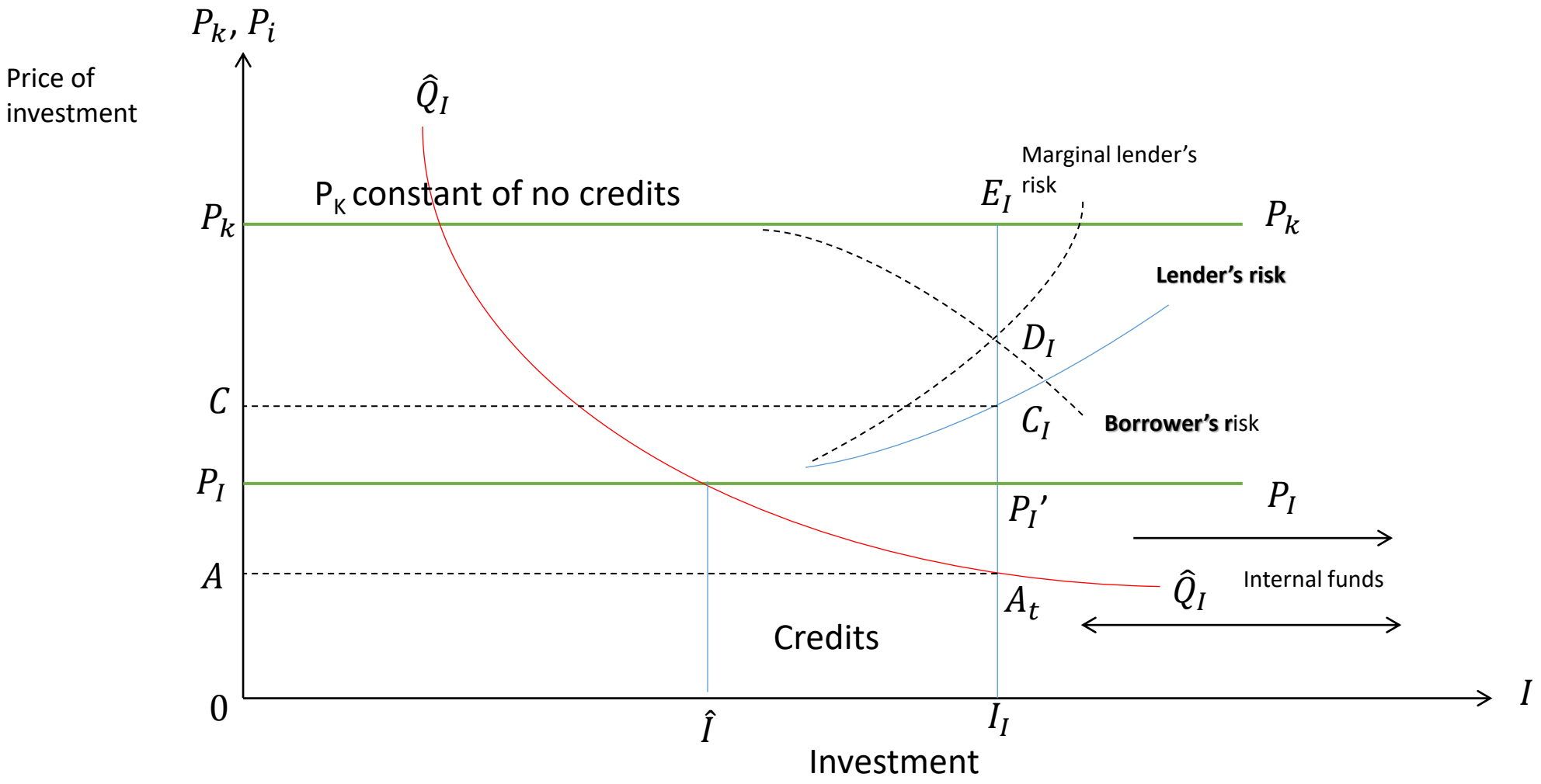
*d*LR: financial structures

Interest rates is a monetary variable (cyclical) and determined by commercial banks

Main problem: Minsky analysis in short-termed and cannot be transferred automatically to macroeconomic levels since not considered the impact of investment on profits that can pay off credits, limiting leverage rates.

Alternative explanation: Financial cycles due to net capital inflows and outflows, explained by institutional factors (pension funds, investment banks, insurance funds, firms' treasury activity)

The financing Behaviour of a Representative Firm



II.D Circuitists: debt creation and destruction (influx and efflux)

• Money **is intrinsically endogenous** (banks debts) and non-neutral (related to productive activity)

The rate of interest **is a monetary variable**, set by central banks that accommodates commercial banks reserve requirement. The rate of interest is a distributive variable and only affects the margin between profits and interests (not affect investment). Commercial banks are *price takers* whose interest rates are determined by central bank interest plus a margin, (Rochon, 2001, 2003)

Bank interest rates are considered **pure rents,** with no real resource counterpart (not explained how interest go back to the productive sector)

Financial Institutions: bank-based system

• **French version**

Banks accommodate **solvent** enterprises liquidity demand. Credit demand determines its supply, rate of interest is infinitely elastic or it's an administered variable

Influx phase: **Money creation**

Solvent Credits demand ➔ bank credits ➔ bank deposits ➔ firms debt ➔ Family income (Production takes place hiring labour force and intermediate goods : Money is intrinsically linked to production

• **Eflux phase: Money destruction**

•Families spend their income, firms income rises, debts are annulled and the monetary circuit terminates (central banks interest need to remain constant)

Central bank function

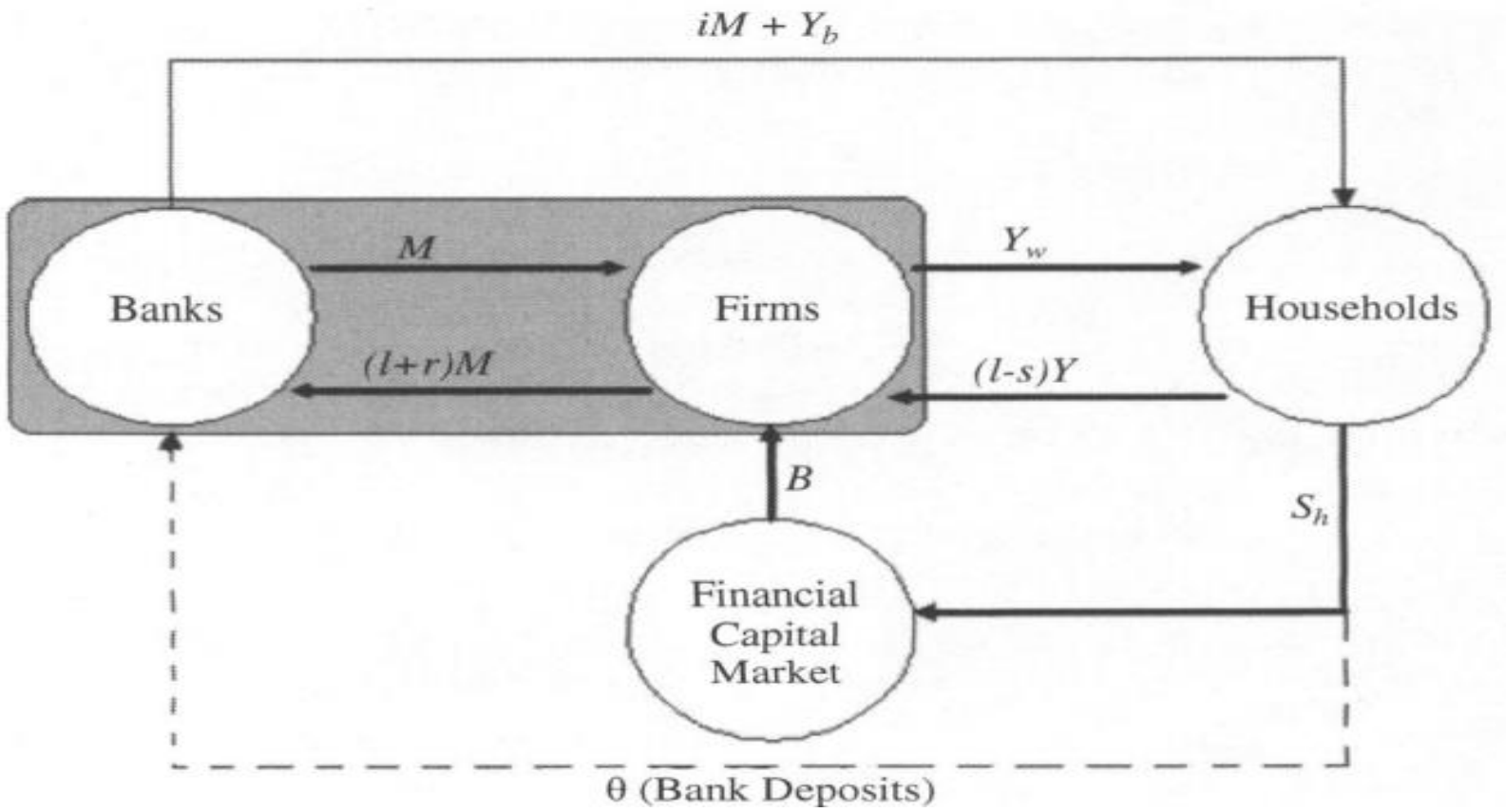
Accommodate commercial bank liquidity requirements (Lender of ***first*** resort) and organise compensation mechanisms

Main disequilibria factors

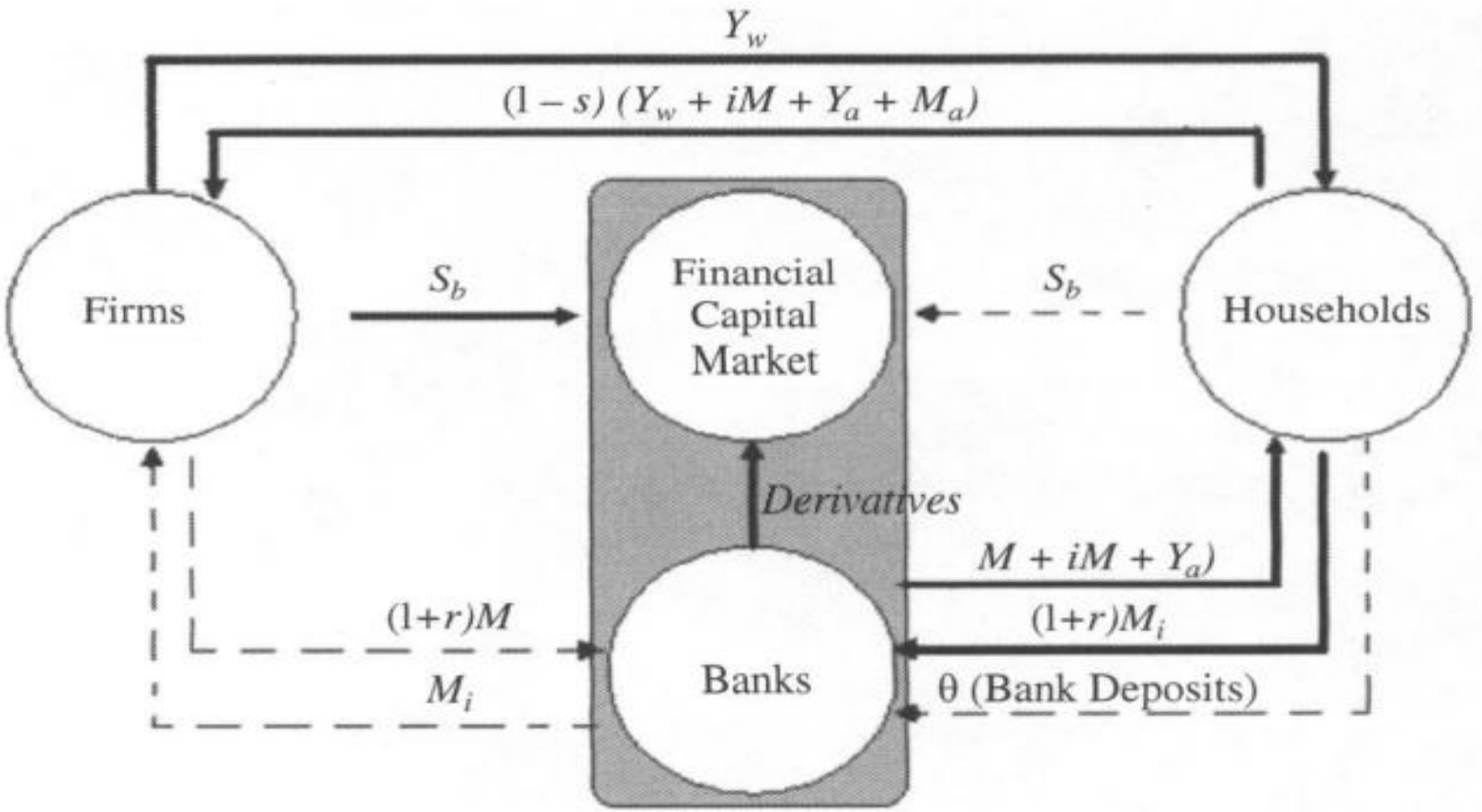
• Central bank changes in the rate of interest specially if it affects profit margin, creating macro-uncertainty

Micro-uncertainties: production can be interrupted (Rochon, 2006)

Monetary circuit under conditions of reduced capital mobility, Seccareccia. 2012-13



Monetary Circuit under conditions of high capital mobility (Seccareccia): Banks lend to households. In LA consumer credits has increased but are not very important. Foreign financial liquidity play an important role



Conclusions in terms of developing countries

- In the ISI period, the main problem of the monetary circuit is that debts were not fully destroyed because capital market are underdeveloped, tax structure were weak with increasing unused (idle) monetary balances. In addition internal markets are small because wages were very low (high income and wealth concentration) and the state creates and destroys money.
- Government responsible for investment expenditure, financed through compensatory mechanism (public trust, development banks). High import coefficient in the capital and intermediate goods sectors and domestic savings very low because of luxury capitalist consumption (mainly imported which meant income leakages)
- Globalisation period (financial capital dominance) has two main shortcoming in LA:
  Low investment coefficients financed (mainly) by foreign capital and domestic capital markets remain feeble
  The current account remained in deficit, foreign reserves (FDI and FPI) crucial coupled with sterilisation mechanism.

Economic growth highly dependend on
external events: Exports continued to depend primary goods and **maquila** (low value added manufacture sectors – that can be technological sophisticated)