Regulation of Multinational Banks
A theoretical Inquiry

The Changing Geography of Banking
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MOTIVATION

Multinational banks (MNBs) are more and more important actors …

- In US (2003) foreign banks: 20 % of banking assets
- Latin America, around 42 % of bank assets controlled by MNBs
- Central Europe, proportion of total bank assets owned by foreign MNBs from 8 % in 1994 to 70 % in 2005.

… and complex firms …

- An example of MNB

Bank of Credit and Commerce International (BCCI) in 1991

- Parent BCCI Holdings in Luxemburg
- Controlled: BCCI S.A: in U.K. 47 units in **15 countries**,
  BCCI Overseas**:** in New York, 63 units in **28 countries**,
  other units in **30 countries**.

- Majority holders: Emir and Government in Abu Dhabi,

- Management locations: Abu Dhabi.

and a huge international failure…

QUESTION

A positive analysis of regulation of MNB

- How national regulations interact?

- How an MNB can profit of lack of international coordination?

Representation form for foreign units

- How does it affect regulators' and MNBs' activities?

RELATED LITERATURE

Capital regulation

Harr and Rønde (2004) and Loranth and Morrison (2003): branch v/s subsidiary

Acharya (2002) capital requirements and closure policy, harmonization

Coordination issues

Dell'Ariccia and Marquez (2005) international coordination in regulation

Dalen and Olsen (2003) lack of coordination with subsidiary MNB

Calzolari (2001) and (2004) issues on international regulation

Information

Repullo (2001) foreign take-over by a domestic bank with branch MNB

Holthausen and Rønde (2002) regulators' info. sharing in branch MNBs,

Modelling choice

Mailath and Mester (1994): deposit insurance and intervention

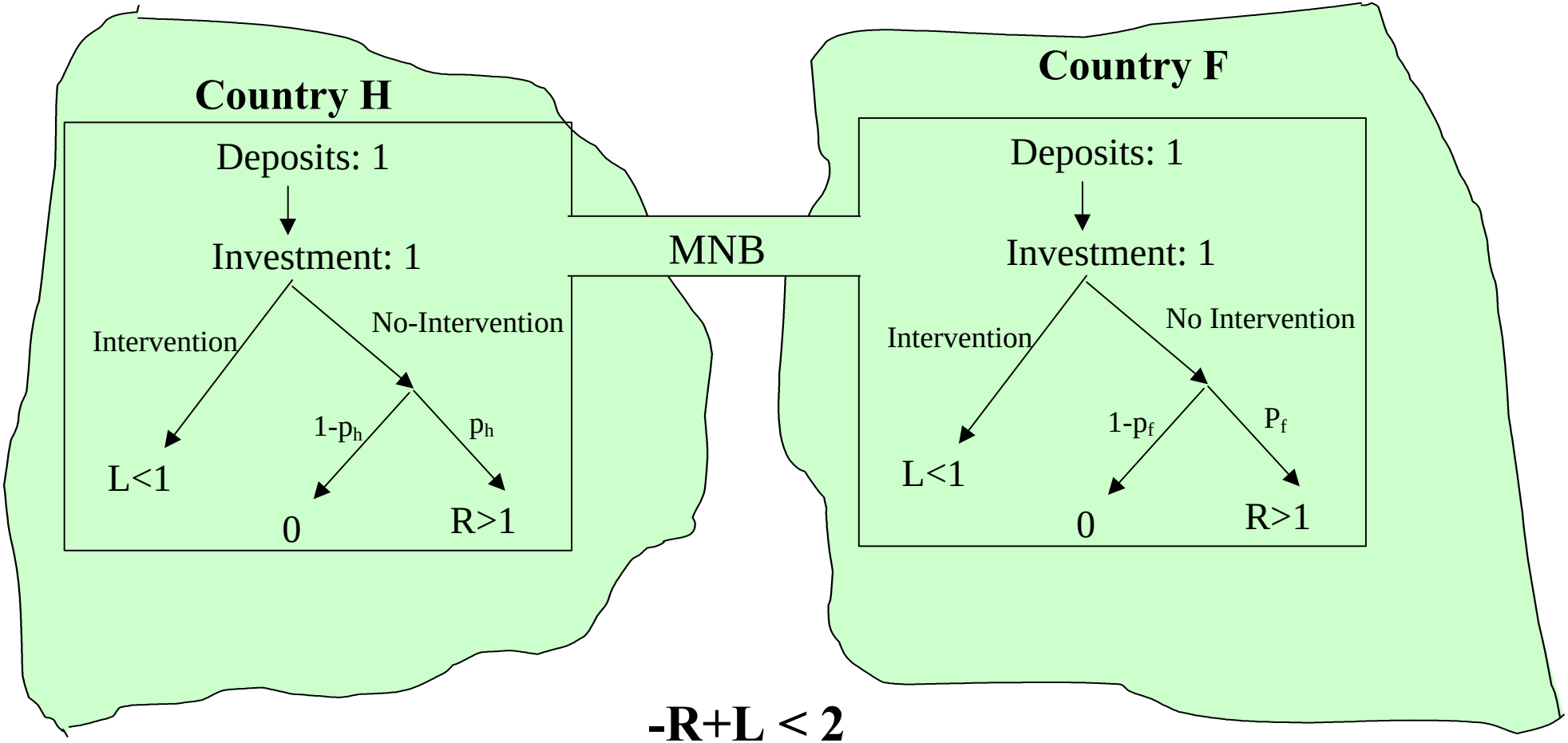
PLAN OF PRESENTATION

- The base model
- Positive analysis of prudential regulation of a MNB

---------- BUILDING ON THE BASE MODEL ----------

- Choice of incorporation induced by regulation
- Regulatory monitoring
- Welfare maximizing regulators and bank's lobbying

THE BASE MODEL



-R+L < 2

- uncorrelated projects

Managers' objective

Assume that she invests in both projects so as to run an MNB. (profit maximization; private benefits, etc).

Regulatory Activity

Monitoring activity $\Rightarrow$ Information acquisition

Prudential regulation $\Rightarrow$ Intervention, ring fencing

Deposit Insurance $\Rightarrow$ The regulator in charge covers shortfall between liabilities and assets of an insolvent MNB's units.)

Regulators' objectives

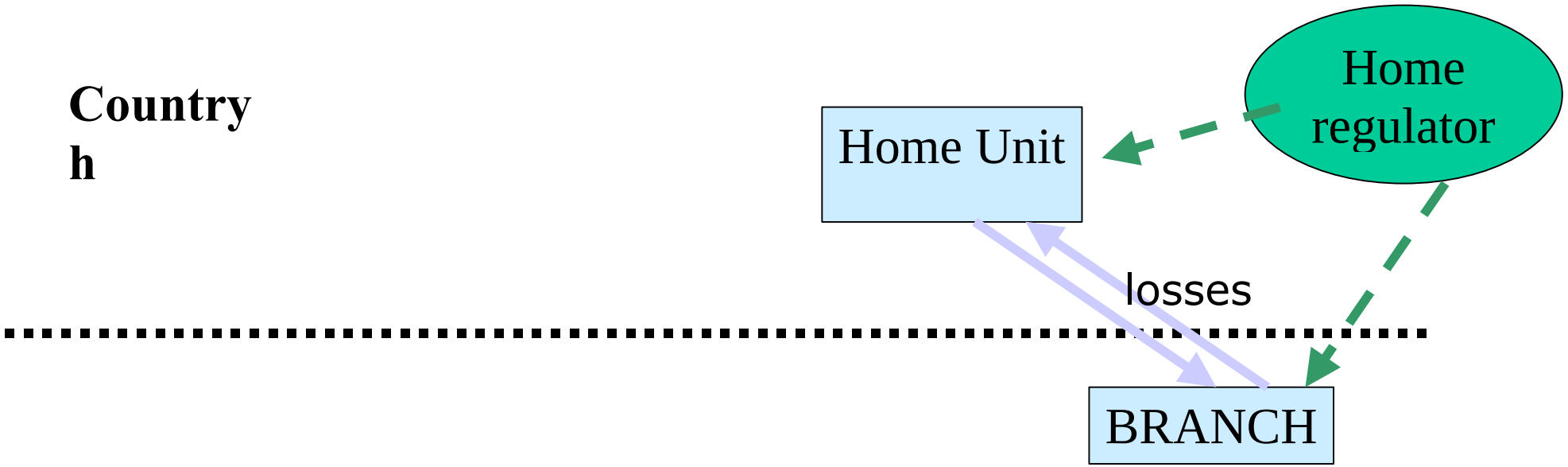
Regulators **minimize insurance costs** in the base model

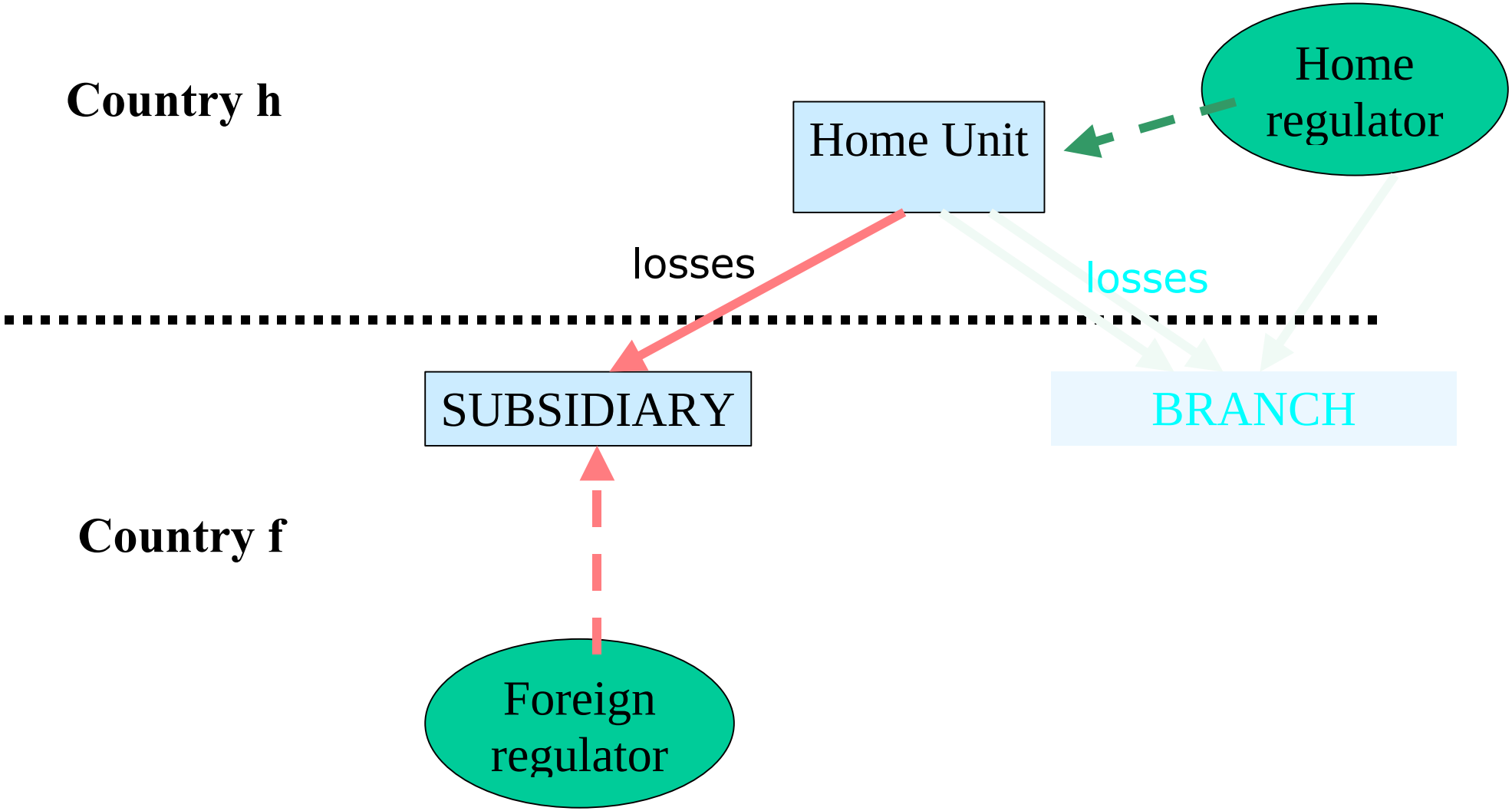
e.g. in US Federal Deposit Insurance Corporation Improvement Act (1991)

Extension: regulators are also **interested in profits**

Foreign Unit Representation Forms: Subsidiary V/S Branch

1. Effects on liability





→ in both cases, *local depositors* are *senior* for local assets.

(Foreign Unit Representation Forms: Subsidiary V/S Branch)

2. Effects on Regulators' jurisdiction (Current EU)

- *Subsidiary-MNB*: each national regulator is in charge and responsible for local unit

- *Branch-MNB*: home regulator is in charge and responsible for all units

PRUDENTIAL REGULATION OF A MNB

How does liability structure and number of regulators interact?

(1) *Liability effect*

Shared liability among units gives higher incentives for intervention than when units are legally separate.

(2) *Coordination effect*

Responsibility to insure depositors in both countries reduces incentives for intervention → internalization of costs a decision in a given country has on the other.

PRUDENTIAL REGULATION OF A MNB

Shared liability –equity stake effect

If $d_f=I$, unit h can only rely on its assets

If $d_f=O$, unit h may benefit from residual assets, lowering expected costs of any decision

- Shared liability: having an equity stake in the other unit which value depends on the decision on the home unit.
- its value is higher for intervention as the regulator can benefit from it (upon foreign success) with certainty ($p_f(R-1)$)

-with continuation this claim is only "good" if the home unit fails: $(1-p_h)\ p_f(R-1)$

⇩

An **equity-stake effect**: $d_f=O$ tends to induce $d_h=I$

PRUDENTIAL REGULATION OF A MNB

Lack Coordination – multiple regulators

If $d_f=I$, if $d_h=O$ and h pays, reduces regulator's cost in f by $(R-1)$

↳ intervention in h better if $-(1-L) \geq -(1-p_h)1+p_h(R-1)$

i.e. if $L \geq p_h R$.

If $d_f=O$, same effect though less prevalent as use of home located residual assets happens with probability less than 1.

Implications for branch and subsidiary regulation

I: Proposition (Comparing regulators with subsidiary-MNB)

(i) Softer foreign regulation induces tougher home regulation;

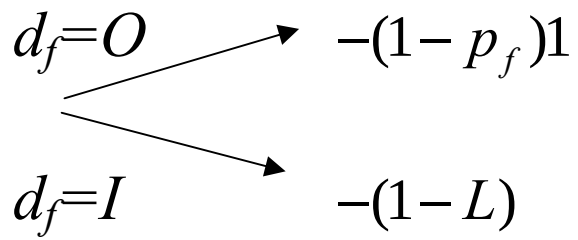
(ii) Home regulator is tougher than foreign regulator.

Tougher Regulation = intervention more probable (i.e. for larger set of parameters)

Softer Regulation = intervention less probable (i.e. for smaller set of parameters)

Intuition:

Regulator *f*



A dominant strategy: intervention if $L \geq p_f$.

Regulator *h*

- Her decision depends on the decision of foreign regulator (strategic interaction)

If $d_f=O$, home regulator may benefit from foreign assets:

foreign located residual assets value more with $d_h=I$ than with $d_h=O$

- With $d_h=I$ foreign assets value $p_f(R-1)$
- With $d_h=O$ they value $(1-p_h)p_f(R-1)$

II: Proposition (Comparing regulations)

Home unit faces softer regulation with branch rather than subsidiary

Intuition:

Isolate liability from coordination effect (2 regulators and with symmetric liability as in a branch-MNB)

Lack of coordination:

- more intervention in unit *h*: home regulator of subsidiary MNB does not *internalises benefits of home assets on foreign costs*

Liability effect:

- more intervention in unit *h*: home-assets cannot be used in *f,* so foreign regulator softer in subsidiary than with symmetric liability structure → more intervention in *h.*

- III: Proposition (Comparing regulations)

Foreign unit faces softer regulation with branch than subsidiary if $p_h \leq \hat{p}_h$ *and vice versa if* $p_h \geq \hat{p}_h$.

Liability effect:

Shared liability makes the regulator of a branch MNB tougher on f → more intervention

Coordination effect:

Intervention eliminates the possibility of subsidizing losses in h with foreign assets f → less intervention in f

The balance changes with prospects on home unit:

if p_h small, intervention at home, (2) prevails ⇨ reg. softer;

if p_h increases, (1) prevails ⇨ reg. tougher.

IV: MNB's choice of representation

If $p_h \leq Max\{\hat{p}_h, p_f\}$, *the banker prefers branch representation, otherwise subsidiary.*

Looking for empirical validation … (MNBs in South America and Central Europe are subsidiary, whilst in Asia they are branches)

EXTENSIONS OF THE BASE MODEL

1. Information acquisition (base model plus monitoring)

-home regulator in subsidiary monitors less than foreign regulators (substitutes)

-information is more valuable in branch MNBs.

1I. Welfare-maximizing regulators and bank-lobbying

Regulators care about intervention costs AND $a_i \Pi$ total MNB's profit, where $a_i \leq 1$

- complex strategic interaction: no pure strategy equilbrium.

-Ceteris paribus, the MNB lobbies more the home regulator (or prefers to concentrate ownership in the home country).

- Qualitatively the analysis remains true also when regulators care for profits

CONCLUSIONS AND "TAKE HOME MESSAGE"

In this paper we shows the effects of the representation form on regulators' incentives to intervene and to monitor

- different organizational forms generate very different regulatory responses for the same level of information and induce different levels of monitoring

- **liability structure** between bank units and regulator's responsibility towards foreign depositors (**issues on coordination**) play a crucial role in explaining these differences