Valuing an International Lender of Last Resort by Pedro Gete

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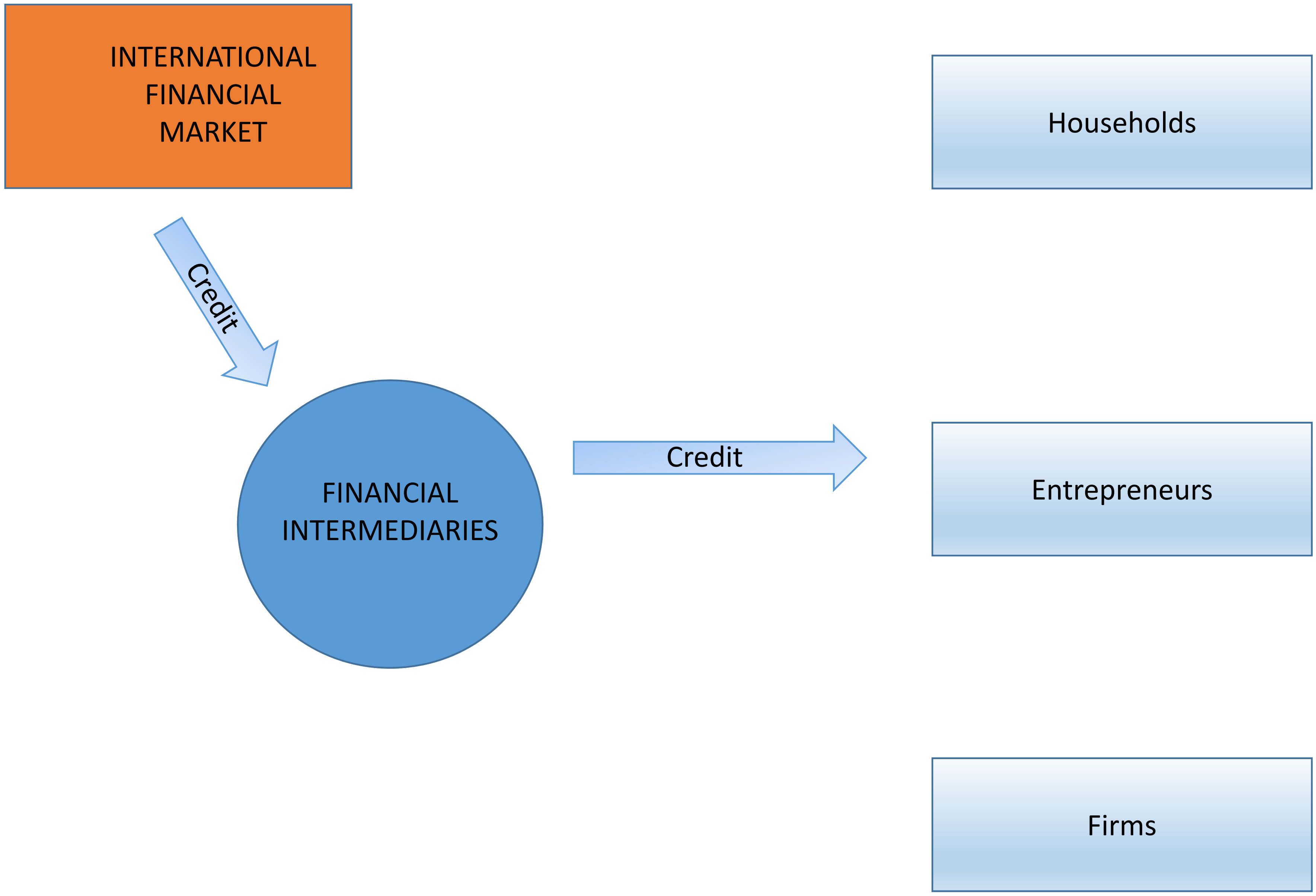
Overview

- **Motivation**
  - small-open economies limited in ability to act as LOLR
    - ★ dollarization (more generally, fixed exchange rate)
    - ★ balance sheet mismatch (dollarized debt)
- **Solutions**
  - self-insurance through reserve accumulation
  - financial or capital control regulation
  - **this paper:** international credit lines
- **Main results**
  - quantitative model of financial frictions
  - access to credit lines mitigates effects of negative shocks

Model: ingredients

- Infinite horizon-environment
  - small-open economy populated by
    - households
    - financial intermediaries (FI)
    - entrepreneurs
    - competitive firms
- Perfectly competitive, risk neutral international financial market (IFM)
- FI's intermediate between IFM and domestic entrepreneurs
  - both entrepreneurs and FI's subject to idiosyncratic productivity shocks
  - non-contingent credit leads to inefficient bankruptcies
    - fraction of assets lost


INTERNATIONAL FINANCIAL MARKET
Credit
FINANCIAL INTERMEDIARIES
Credit
Households
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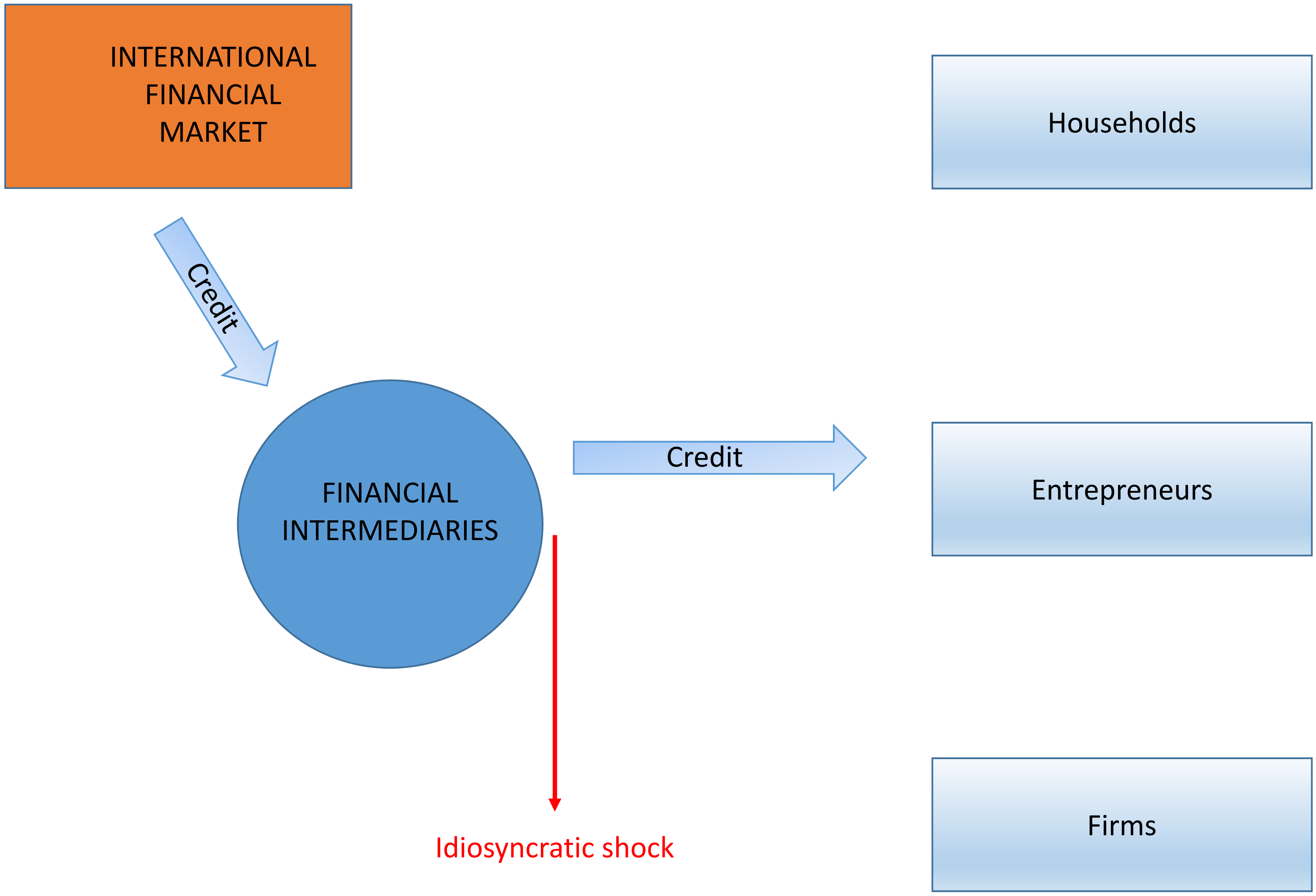
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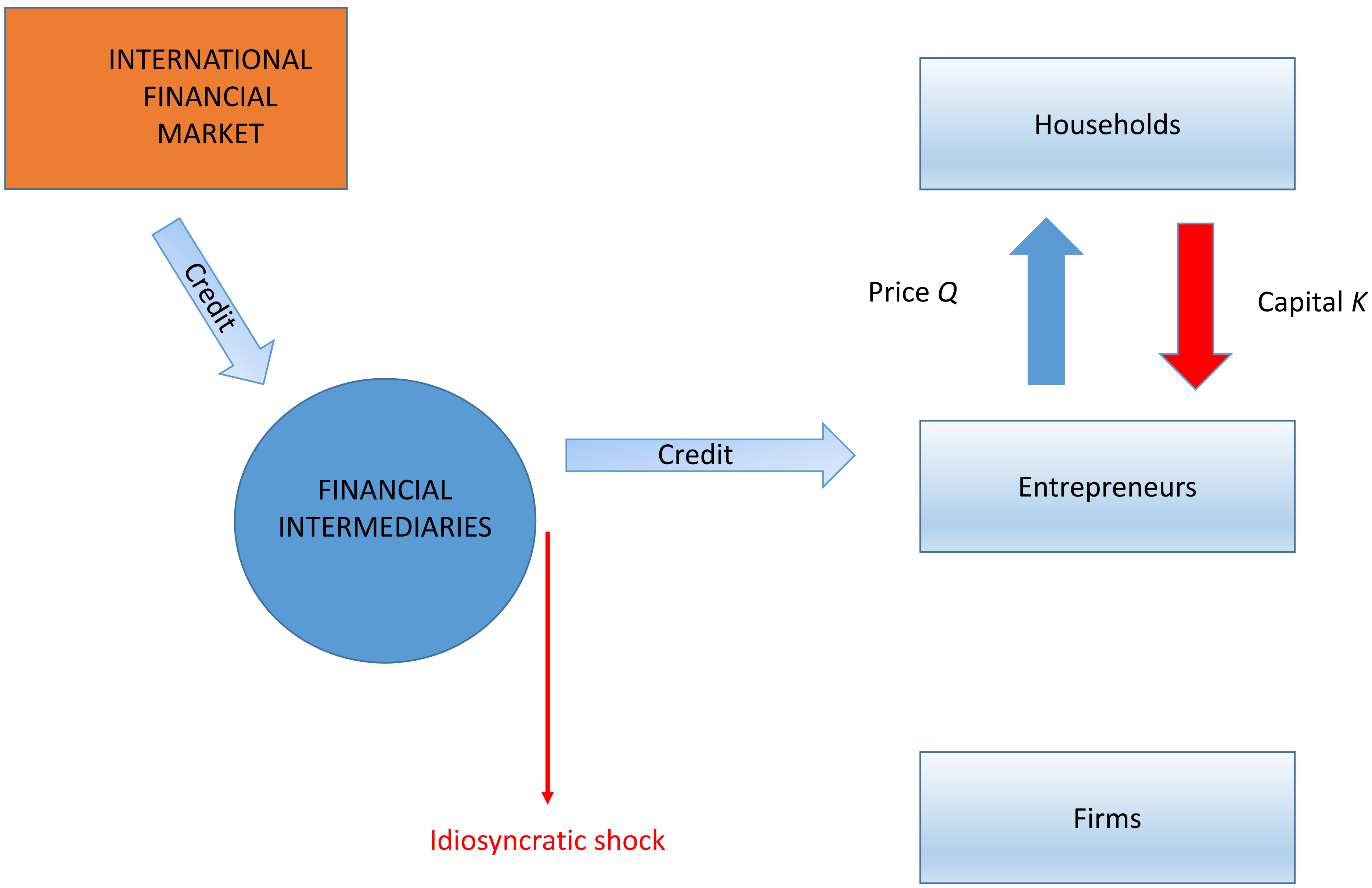
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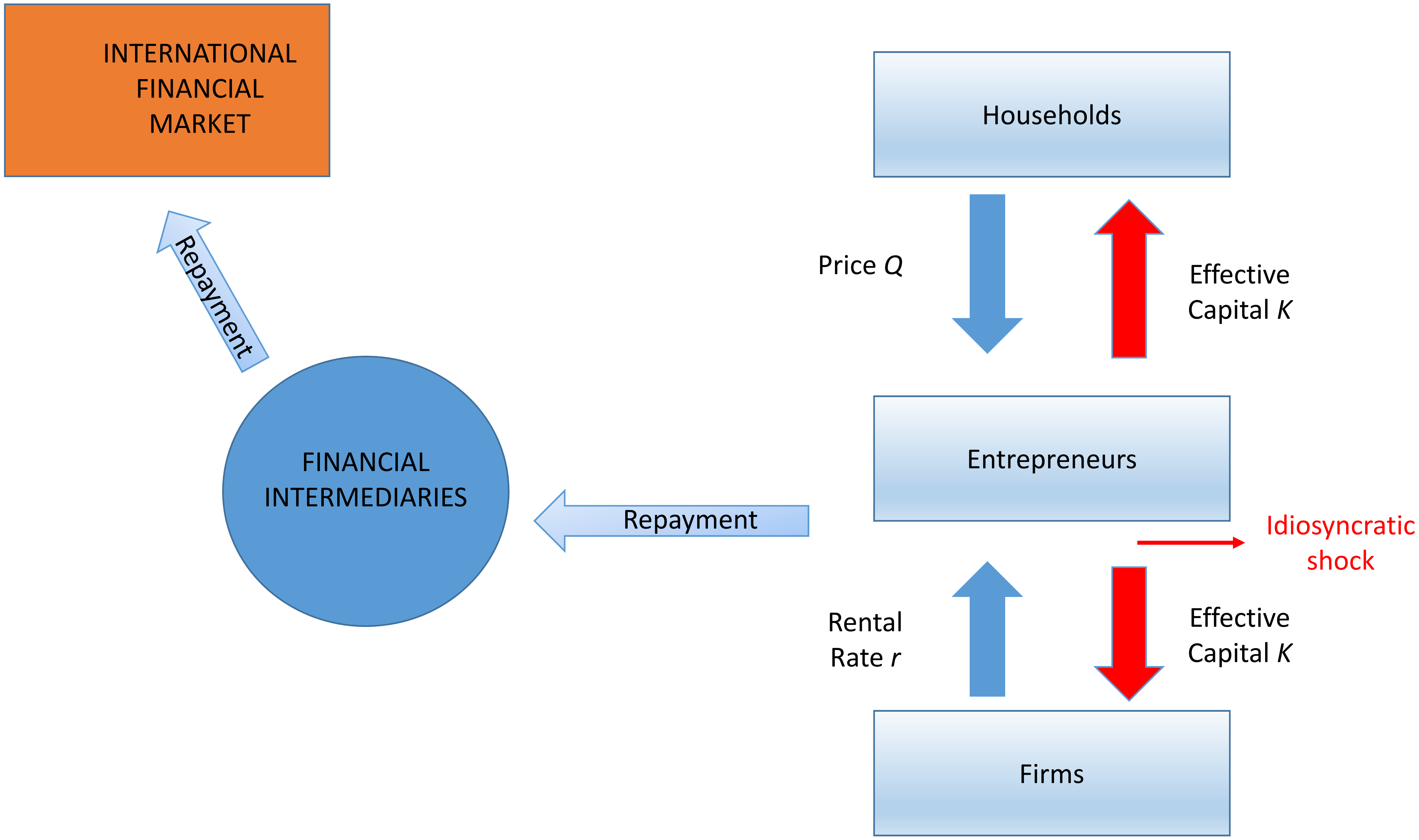

INTERNATIONAL FINANCIAL MARKET
Repayment
FINANCIAL INTERMEDIARIES
Repayment
Households
Price Q
Effective Capital K
Entrepreneurs
Idiosyncratic shock
Rental Rate r
Effective Capital K
Firms

Main result

- **Aggregate shock:** $\uparrow$ variance of FI shock (or negative TFP shock)
  - greater risk of FI bankruptcy
  - increase in spread charged by IFM
  - pass through: increase in spread charged to entrepreneurs
  - fall in credit and in the price of capital
    - amplification effect of shock
- **Credit line:**
  - access to funds at a fixed spread over international interest rate
    - LIBOR plus 150 basis points
  - mitigates adverse effect of shock
    - smaller drops in consumption, investment and employment
    - gain of 0.09% of steady state GDP
- **Comparison with self-insurance through reserve accumulation**

Comment I: the environment

- **Where does inefficiency of bankruptcy come from?**
  - assets partially lost in procedure (e.g. legal costs)
    - no asymmetric information
  - costly state verification
    - ex post, costly to verify FI's productivity
    - gives rise both to debt contract and cost of bankruptcy

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- **How do losses compare with the gains?**
  - how much should country pay IADB in normal times?
  - how does it compare with country's gain?
    - ★ **i.e., how much do we have to transfer banks in exchange for** 0.09% **of GDP**

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  - in reality: government, who then provides lending to banks
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  - mitigate cost by taxing credit ex ante
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  - how does this affect country's crisis prevention / regulatory efforts? (Ostry et al. (2007))
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Comment IV: (Valuing...) a LOLR

- **Why is this about LOLR?**
  - more generally, access to state-contingent insurance markets
  - analysis applicable to smoothing of any adverse shock (e.g. terms of trade)
- **LOLR**
  - provision of liquidity in times of crises
    - prevent liquidity problems from becoming full-fledged solvency crises
    - classic interpretation: multiple equilibria (e.g. Calvo (1988), Cole and Kehoe (2000))
- **Alternative version of model** (Gertler-Kiyotaki (2014))
  - banks can use new borrowing to cancel old debts
  - gives rise to self-fulfilling crises
    - banks with weak fundamentals vulnerable
    - run on banking system leads to default of banks
  - access to credit line looks a lot more like LOLR
    - how large does it have to be to rule out "bad" equilibria?