

# Discussion of “Individual versus Aggregate Collateral Constraints and the Overborrowing Syndrome”

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# Private Capital Flows into Emerging Markets

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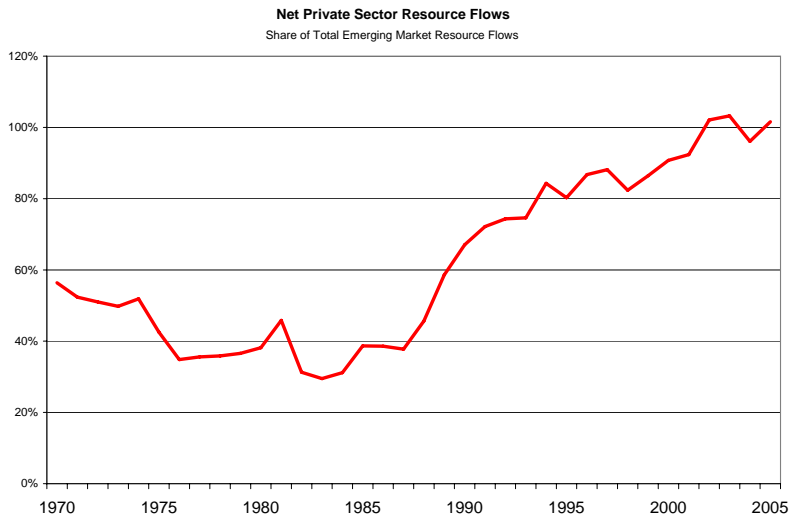
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# Is This Good for Welfare?

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- ▶ On the one hand:
  - ▶ Governments may (often?) poorly allocate capital
  - ▶ Private sector has better incentives in allocating capital

# Is This Good for Welfare?

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- ▶ On the one hand:
  - ▶ Governments may (often?) poorly allocate capital
  - ▶ Private sector has better incentives in allocating capital
- ▶ On the other hand:
  - ▶ Private sector may not internalize the effect of its borrowing on aggregate interest rates and/or incentives of sovereign to default/repudiate/nationalize

# Existing Literature

- ▶ Tells us that the answer depends on (1) the source of financial frictions, and the sophistication of (2) financial markets and (3) government policy

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# Existing Literature

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- ▶ Tells us that the answer depends on (1) the source of financial frictions, and the sophistication of (2) financial markets and (3) government policy
- ▶ For example:
  - ▶ sovereign risk + sophisticated financial markets yield **efficient borrowing** (Wright 06), while government policy can offset unsophisticated markets (Kehoe & Perri 04)
  - ▶ resident default risk + sophisticated financial markets yield **underborrowing** (Jeske 06) but a simple government policy yields **efficient borrowing** (Wright 06)

# This paper

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- ▶ This paper asks a related, but slightly different, question about the importance of having sophisticated international financial markets
- ▶ In particular, the paper asks:
  - ▶ How much is lost if financial markets make lending decisions on the basis of country characteristics, instead of on the merits of individual borrowers?
  - ▶ Markets cannot discriminate between borrowers

# The paper finds

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- ▶ Martín's conclusion is “not that much”!
- ▶ In particular:
  - ▶ in some environments, borrowing levels are independent of the lending arrangements of international financial markets
  - ▶ in other environments, borrowing levels can differ, but are found numerically to be similar
  - ▶ However, this finding is sensitive to certain assumptions.  
BIG ASSUMPTION: all residents identical
  - ▶ If residents are heterogeneous, get **overborrowing**

# In my discussion

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- ▶ I'll present a very simple environment to:
  - ▶ Illustrate some of the points of the paper
  - ▶ Point to some details I was a little bit confused about
  - ▶ Suggest how the main result of the paper can be strengthened
    - ▶ If we change the way domestic financial markets work, no overborrowing even with heterogeneous agents
    - ▶ But there will still be welfare consequences

# A Simple Example

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- ▶ Simplest model of international borrowing.
- ▶ A small open economy exists for two periods  $t = 1, 2$
- ▶ Country has unit measure of residents who maximize

$$U(C_1) + \beta U(C_2)$$

- ▶ All residents is endowed with  $Y_1 = Y_2 = Y$
- ▶ Gross world interest rate  $R^*$  such that  $\beta R^* < 1$ 
  - ▶ Don't have to worry about endogenous discount factor

# Without borrowing constraints

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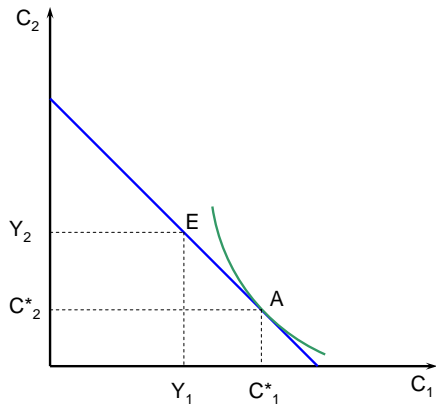
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# Individual Borrowing Constraints

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- ▶ Borrow at world interest rate  $R^*$  up until borrowing constraint  $\kappa$
- ▶ International financial markets *somewhat* sophisticated: non-linear pricing
- ▶ But only somewhat ... no discrimination across agents
- ▶ As all agents are identical, there are no gains to domestic bond trade: doesn't matter if we have a domestic bond market. **Important!**

# Individual Borrowing Constraints

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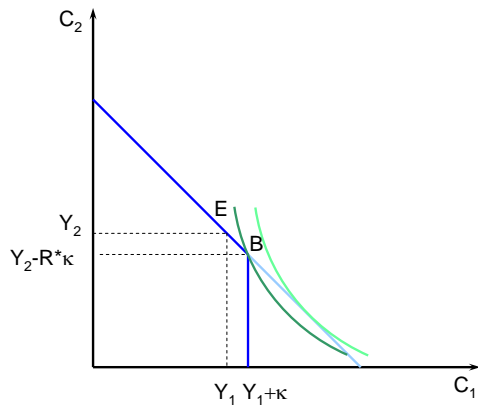
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# Aggregate Borrowing Constraints 1

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- ▶ Idea is that international financial markets set overall limit on lending to country
- ▶ Prices must adjust to constrain individual borrowing
- ▶ Because domestic interest rates must rise, someone makes pure profits:
  - ▶ Borrow at  $R^*$  and lend at some higher  $R$
  - ▶ To begin, assume international financial markets make pure profits

# Aggregate Borrowing Constraints 1

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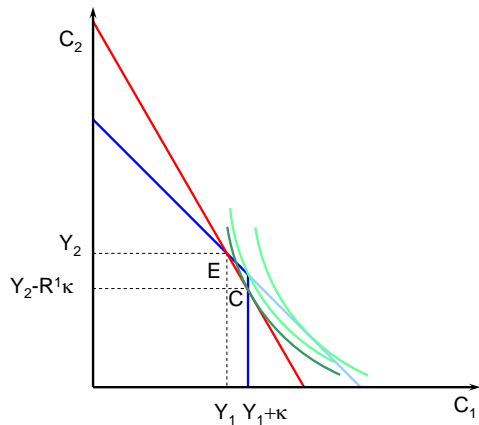
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# Aggregate Borrowing Constraints 2

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- ▶ Instead, suppose domestic agents make pure profits.

How?

- ▶ Suppose a development bank borrows at world rate, and lends at domestic rate, distributing these profits to households in a lump-sum way

# Aggregate Borrowing Constraints 2

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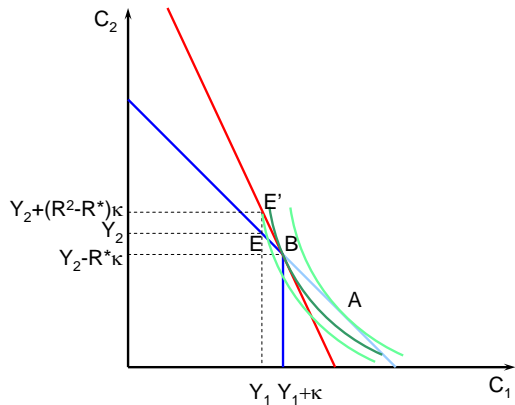
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# Main Result

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- ▶ If domestic agents capture rents, allocation (and capital flows) under an aggregate constraint are the same as under individual borrowing constraints
- ▶ Moreover, even if domestic economy cannot appropriate rents, numerical results show difference is probably small
- ▶ Conclusion: if financial markets lend only on the basis of macro variables, borrowing is the same (or very similar ... depending on details of markets)

# Limits to Main Result

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- ▶ But is this result all that surprising?
- ▶ Model assumed all residents alike ...
- ▶ might expect that, with identical residents, whether markets limit lending to individuals, or to country as a whole, should not make much of a difference
- ▶ What if residents heterogeneous?

# Adding Heterogeneity

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- ▶ Suppose half of residents are endowed with  $Y_1 = Y, Y_2 = 0$  (“savers”) and half with  $Y_1 = 0, Y_2 = Y$  (“borrowers”)
- ▶ With aggregate borrowing constraints, no change in allocation (borrowers do all the borrowing, but same aggregate amount)
- ▶ With individual borrowing constraints of same size, savers borrowing constraint is slack, and aggregate borrowing level is reduced.
  - ▶ Aggregate constraints generate **overborrowing!**

# Strengthening the Result

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- ▶ That is as far as Martín goes
- ▶ But note with individual borrowing constraint, MRS not equalized within economy
- ▶ That is, there are gains to opening a domestic bond market
- ▶ But, if this is done, overborrowing disappears!
- ▶ Even “savers” borrow internationally at  $R^*$  in order to re-lend domestically at a higher interest rate
- ▶ Allocations and welfare may still differ (wealth effects)

# Conclusions

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- ▶ The efficiency of lending to private agents in emerging market countries is becoming increasingly important
- ▶ One potential inefficiency is lending on the basis of aggregate, and not individual, merits
- ▶ With identical residents, is it surprising that an inability to lend on an individual basis makes little difference?
- ▶ It would be surprising if it makes little difference with heterogeneous residents!
  - ▶ Domestic financial markets may make a difference