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Discussion of  
Valuing the Stock of External Sovereign Debt

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# The paper(s)

- Great research agenda
  - Very topical
  - Empirics on sovereign debt is lagging behind
  - Needed: Better measurement of debt stocks and debt relief
  - Access to DRS, one of the richest data sources (a miracle!)
  - Takes discounting and present value seriously
  - Theory & Empirics

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# The paper(s)

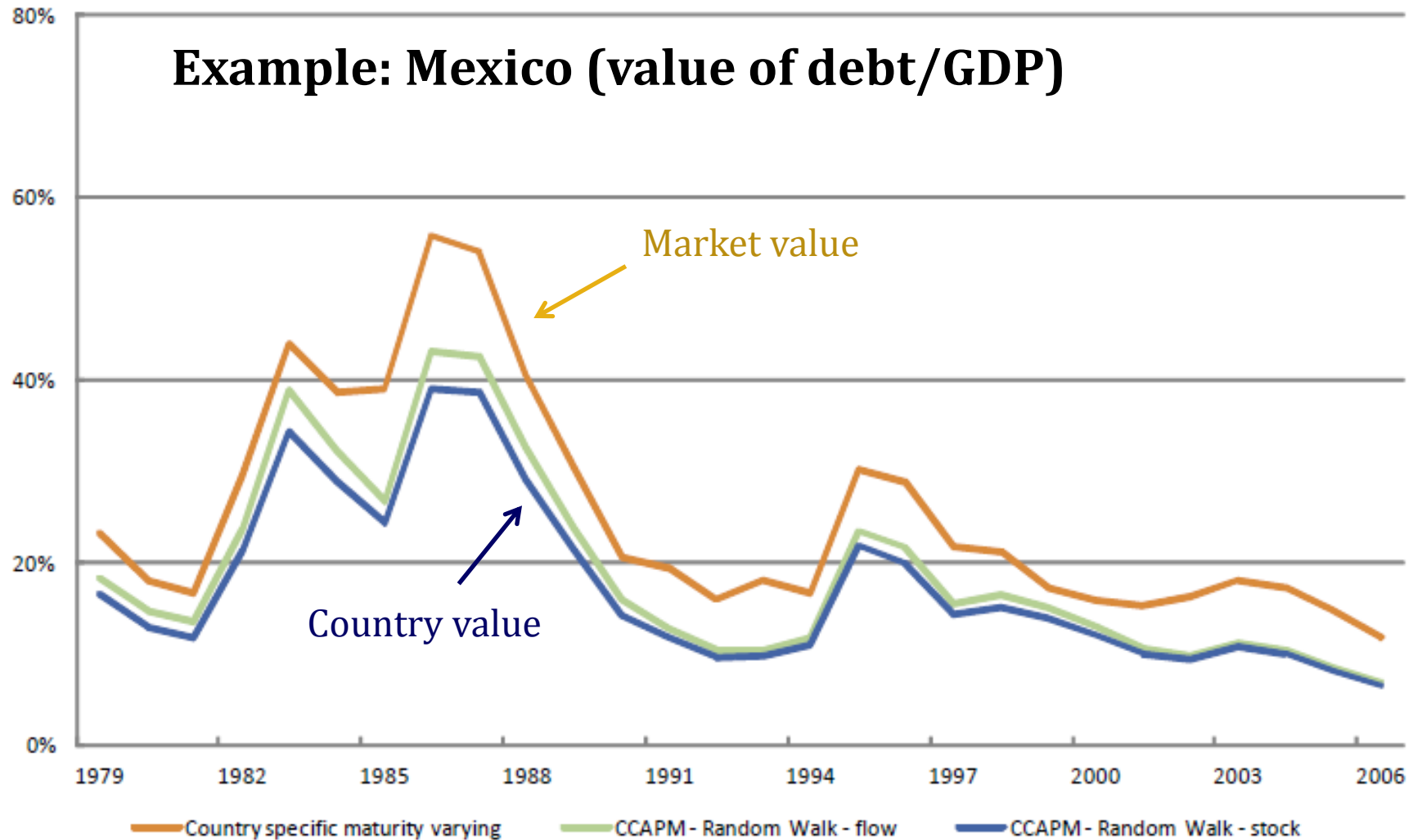
## Paper 1: “The Stock of External Sovereign Debt“

- New measure: Zero coupon equivalent debt stock
- Important new stylized facts and implications for theory
  - Comparability of debt levels of 100 developing countries
  - Insights on debt composition (interest vs principal, private vs official, maturity)

## Paper 2: “In for a Penny, In for 100 Billion Pounds“

- Two questions on debt relief:
  - 1) Is it efficient? 2) Is it welfare improving?
    - Answer to 1: in most cases, no (discounting)
    - Answer to 2: in most cases, yes (consumption heterogen.)

# Efficiency of Debt Relief $(r_{country} > r_{market})$



# 1) Welfare and Debt Overhang

## **Traditional Literature: Debt overhang, Debt Laffer curve**

- Country perspective or creditor perspective

Older debate (1980s debt crisis):

- Classic models by Krugman (1989), Sachs (1989), Froot, Rogoff
- Welfare: Helpman (1989), Cleassens & Diwan (1989)

Recent debate (HIPCs, Europe & US):

- Overhang Hangover (Gourinchas & Imbs 2007)
- Disincentive effects of HIPC debt relief (Easterly 2002)
- Reinhart and Rogoff (2010, 2012): Debt and growth (90%)

Overall: Incentive problems and debt overhang still taken seriously  
Concern of serial default: Cycles of relief – borrowing – relief

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# 1) Welfare and Debt Overhang

## **This paper: Redistribution plays main role**

- Efficiency considerations secondary
- Paper very upfront about what it does and does not do, caveats
- But, could improve by discussing other views, previous findings

## **Main comment: discuss literature in more detail**

- One example. You conclude:
  - Huge welfare benefits of debt relief for HIPCs
  - Little benefits (or even world welfare loss) for EMEs
- Arslanalp and Henry (2006, JEP): opposite conclusion, HIPC debt relief inefficient, problem bad institutions

## **Furthermore: Aid vs Debt Relief**

- Why not send aid instead? Easterly, Sachs, Cordella/Missale (2011)

## 2) Discounting: Haircuts vs Debt Relief

First part of the paper: DRs plays key role

### What is the proper discount rate?

#### (i) Market discount rates (Haircuts)

- DRs observable. Consensus in literature
- This paper: impute market DRs (improves Cruces & Trebesch 2012, similar rationale as in Borri and Verdelhan 2012)
  - Here: Account for term structure

#### (ii) Country discount rates (Debt Relief)

- DRs not observable. No consensus
- Earlier papers: Use 10% rate or lower
  - IMF, World Bank, OECD, Depretis Chauvin/Kraay (2005): 7.25%
  - Sturzenegger/Zettelmeyer (2007): borrowing rate in “normal” times
- Here: Impute Country DRs with consumption forecasts (CCAPM)

# High Country Discount Rates: Application

- You conclude:  $r_{country} > r_{market}$  (opposite of SZ 2007)
- Debt reduction inefficient in middle income countries
- Empirically observed patterns?
  
- If high DRs are true: Why do countries not “Megaswap” all the time?
  - Megaswap: Push all maturities far out and pay  $>10\%$  coupon
  - If country DRs high: Great deal for debtors. Creditors like it too (ZCE  $\uparrow$ )
  - But: Megaswap now in court, very few similar cases: Greece July 2011
  
- Government behavior at odds with high imputed DRs
  - Countries restructure and borrow at low interest rates



## How Important is the Discount Rate?

- More generally: We tend to think DRs very important
- But in distress: Maturities shorten, countries in arrears
  - Broner et al. (2012), Arellano & Ramanarayanan (2012)
- What happens to haircuts if we increase DRs by 50% (1 s.d.)?
- 22 EME cases since 1998: Haircut increases from 34% to 42%

	Our Haircut	Our DR	"Country" DR	"Country" Haircut	Amount (m US\$)	Debt Relief/ GDP (%)
Russia 2000	50.8%	12.5%	18.7%	57.3%	31,943	9.3%
Ecuador 2000	38.3%	17.3%	25.9%	43.5%	6,700	18.3%
Uruguay 2003	9.8%	9.0%	13.5%	15.4%	3,127	2.8%
Argentina 2005	76.8%	10.4%	15.5%	83.2%	60,572	36.4%
Ecuador 2009	67.7%	13.0%	19.4%	54.6%	3,190	3.0%
Greece 2012 /1	64.8%	15.3%	23.0%	62.8%	199,210	56.8%

1/ amount in Euro. Data on Greece from Zettelmeyer, Trebesch and Gulati (2012)

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→ Discount rates might not be sufficient to evaluate efficiency of debt relief

In debt restructuring context: Effect of DRs sensitive to deal characteristics

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## Data and Robustness

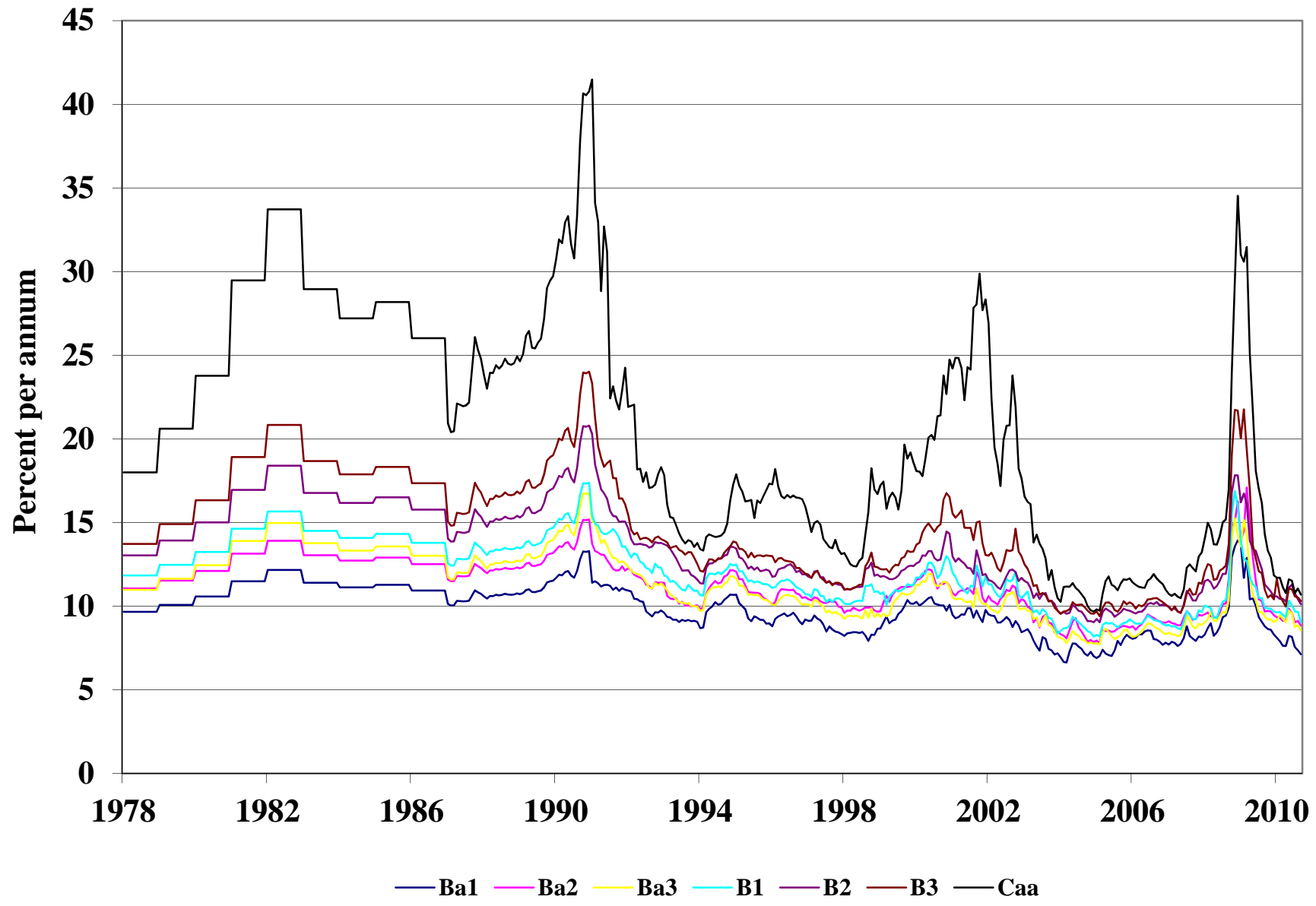
- **Show the beauty...** more summary stats, tables, figures
  - Aggregate picture. Why not more country breakdowns? (relevance of interest vs principal? maturity structures?)
- **Discuss assumptions** and potential data limitations
  - What exactly are interest rate, exchange rate assumptions?
  - Data is debtor reported. Is this a problem in the context of debt relief estimation? (see Depetris Chauvin/Kraay 2005)
- **Maybe benchmark to**
  - Published GDF series: “Present value of external debt”.
  - Dikhanov (2004): “Historical Present Value of Debt in Developing Countries.”

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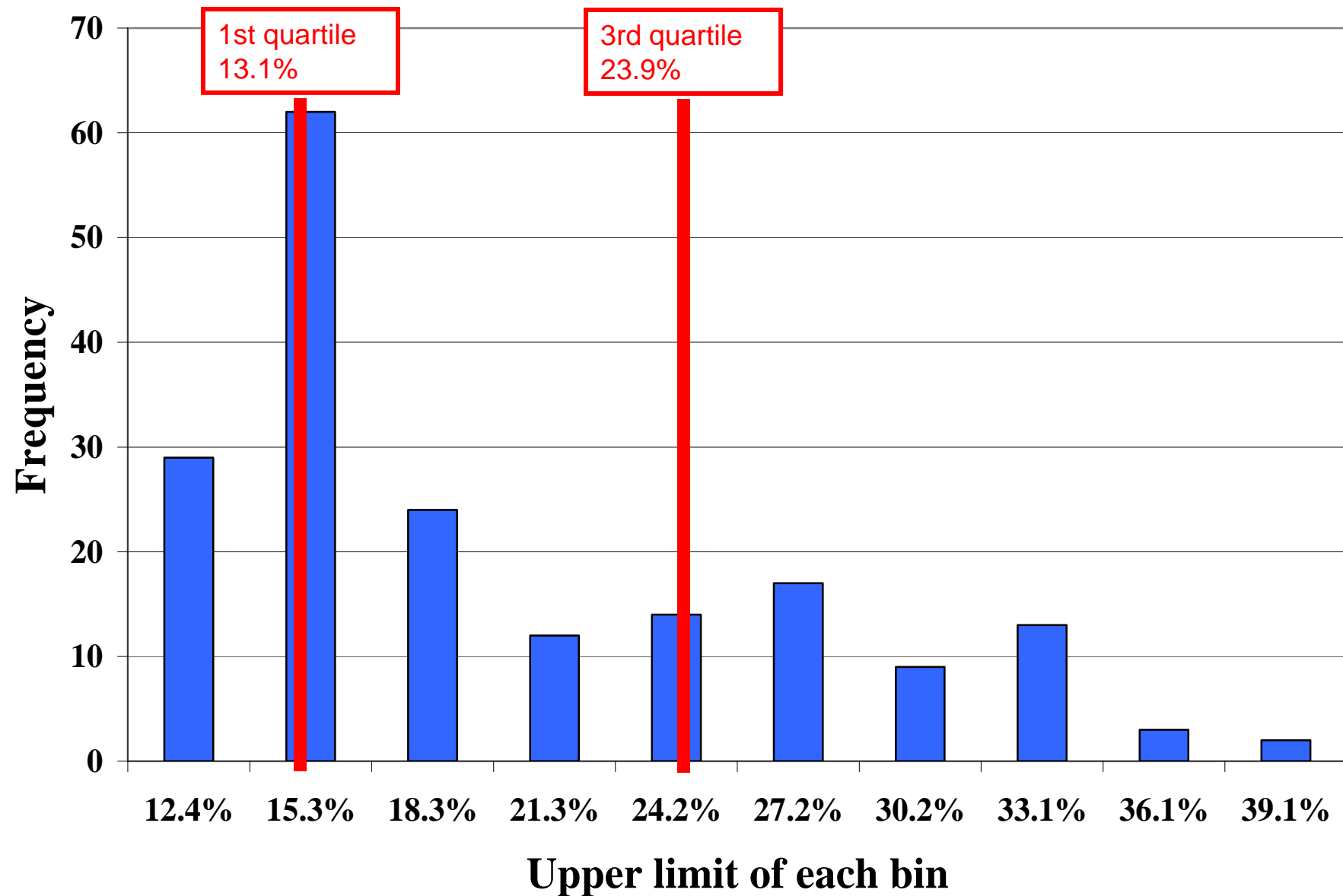
# Conclusion

- Overall: Important contributions and great research agenda
- Second paper could be improved by adding details and by more benchmarking to existing literature

# Cruces/Trebesch (2012): Imputed Market DRs



# HISTOGRAM OF IMPUTED DISCOUNT RATES



# IMPUTED DISCOUNT RATES (BY COUNTRY)

