Discussion of

International Reserve Management under Rollover Crises

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IMF

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The views expressed herein are those of the authors and should not be attributed to the IMF, its Executive Board, or its management.

The *want* operator

- Understand joint behavior of debt and reserves to manage rollover risk
  - … focusing on case with rollover risk only

- Tradeoff
  - buying reserves: increases V_R^+ and V_R^- but also V_D
  - reducing debt: increases debt prices at the time of the buyback

Main result

Sell any initial reserves to buy back debt, only purchase when exiting the crisis zone

…on the equilibrium path of a MPE

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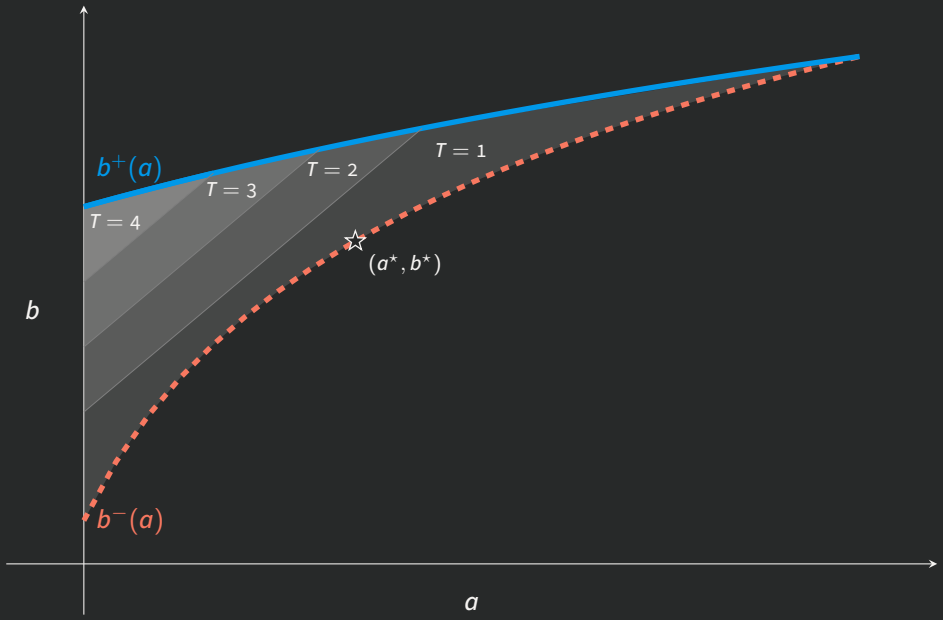
How it works

Never pick interior points



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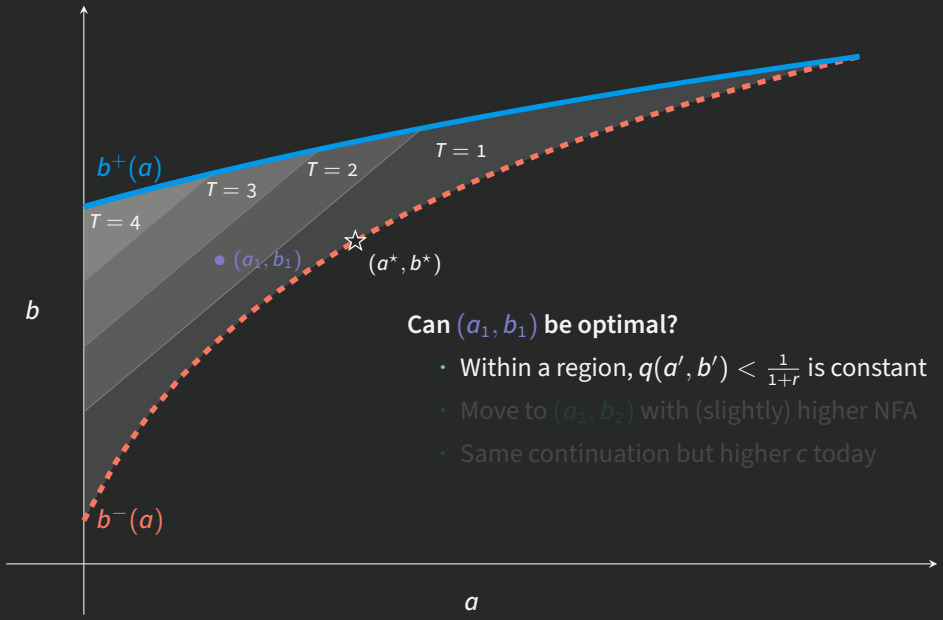

Can (a_1, b_1) be optimal?

- Within a region, $q(a', b') < \frac{1}{1+r}$ is constant
- Move to (a_2, b_2) with (slightly) higher NFA
- Same continuation but higher c today

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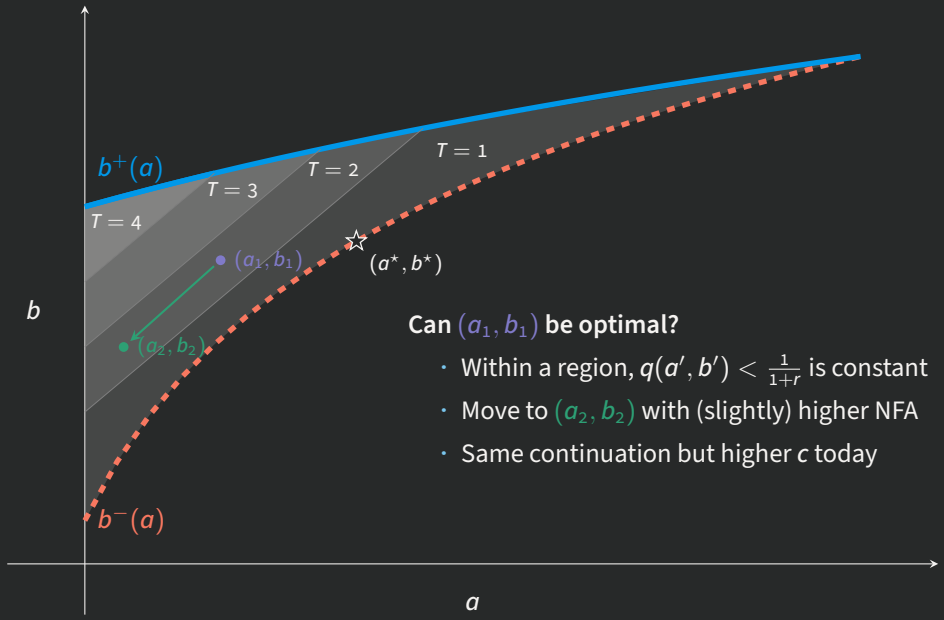

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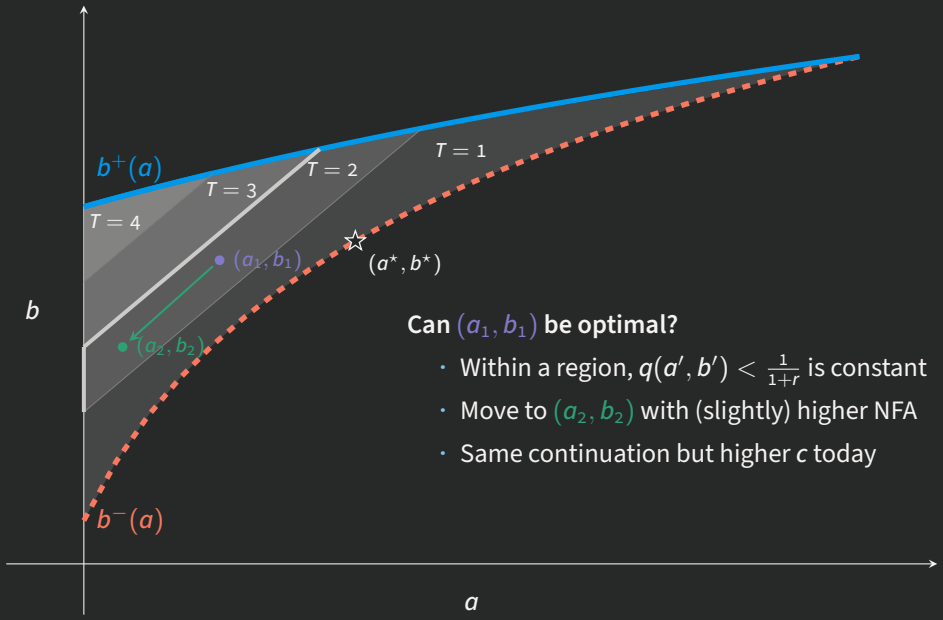

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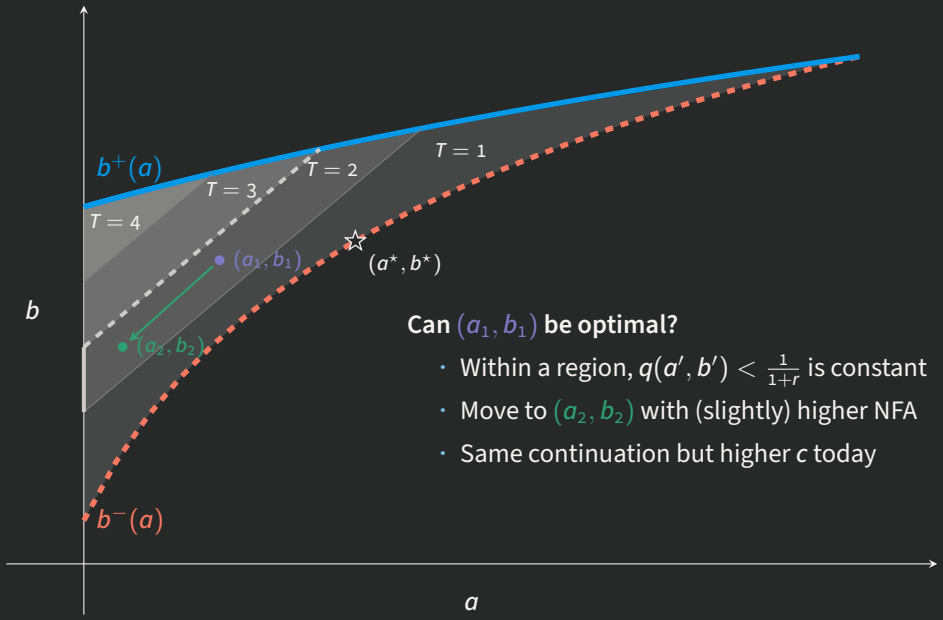

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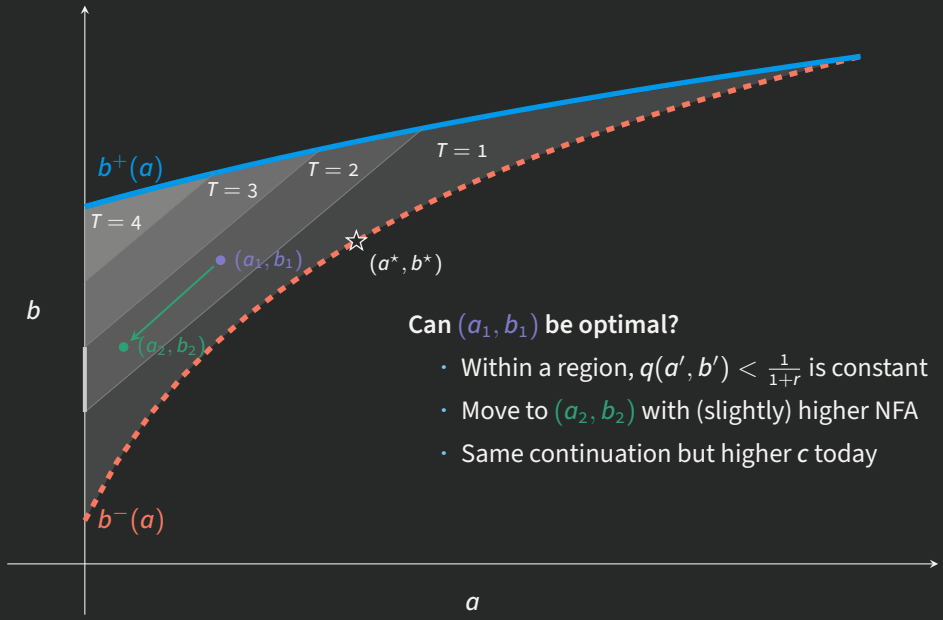

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Comments

Models to understand models to understand the world

Main result [sell ***all*** **reserves, buy debt back, jump to** $(a^\star, b^\star)$] **feels very discontinuous**

- Can you solve the model in continuous time?
  - … would prevent moving (a, b) keeping q constant
  - … Bornstein (2020) describes the numerical algorithm needed in detail
- Can you characterize ranges of δ (or β) at which different parts hold?
  - … already know that for one-period debt and consols, $b^-(a)$ is linear
  - … interpret the range of δ as maturities or period length

General qualms and math suggestions

- Timing matters: investors know both b' and a'
  - … can you solve the model with debt issuance first, reserve accumulation later?
- Proof strategy suggestions
  - … establish monotonicity *and concavity* of $b^-(a)$ first, then conditions for $\partial b^-(0) > 1$
  - … get $a^\star > 0$ and bounds on δ as corollary
  - … what are the slopes of the iso-T boundaries? relate to optimal $a = 0$

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Policy implications

Should the IMF tell countries to accumulate reserves?

- [This paper] To avoid rollover risk, better to buy debt back
- This model predicts reserve accumulation at end of successful programs
  - … when conditionality is weakest
  - … empirical validation?

- Predictions in an MPE: what about optimal path with commitment?
  - … program conditionality could enforce reserve and/or debt targets
- What about insurance for shocks, currency crises?
- Using IMF resources to buy back the debt changes the seniority structure of the debt
  - … critical to draw policy lessons
- What about burden sharing?
  - … Buying back the debt could bail out creditors if ζ materializes
  - … Is constant λ appropriate?

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Conluding remarks

Concluding remarks

- Deep investigation of one force underlying models of rollover risk
  - … and how a government might optimally address it
- Sharp characterization of decision times and maturity structure for main result
  - … although a bit buried in the proof of proposition 4
- The paper sets the stage for thinking about IMF precautionary programs
  - … would like to see an application with real shocks and ex-ante optimal reserve path