Commodity Trade and the Carry Trade: A Tale of Two Countries

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Summary of the paper and Roadmap

- **Motivation**
  - persistent differences in interest rates across countries
  - account for much of the profitability of currency carry trade
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- **Comments**:
  - what does Australian trade look like?
  - what if we make this "a tale of three countries"?

Australian Trade at a Glance

Source: Australian Government, Department of Foreign Affairs and Trade

Australia and Japan

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Australia and US

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Take-aways

- Australia is net exporter of commodities
- Imports final goods and services from
  - US (primarily)
  - Japan
  - (not including China...)

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- Imports final goods and services from
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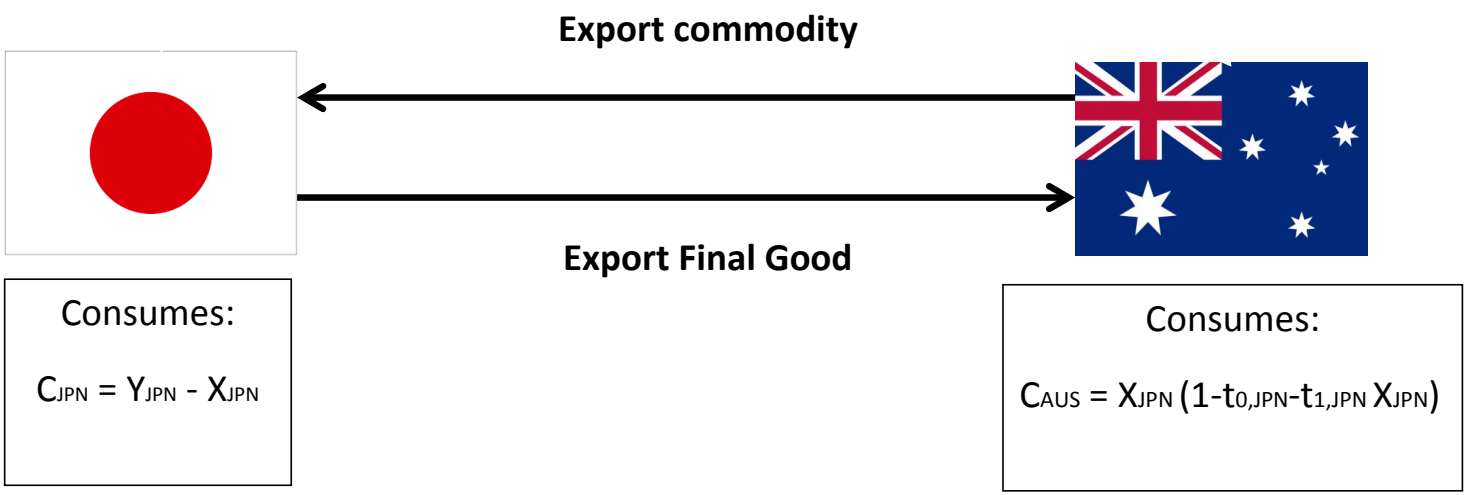
- What happens if we extend the baseline model to include the US?

The Model

The Model


Export commodity
Export Final Good
Consumes:
$C_{JPN} = Y_{JPN} - X_{JPN}$
Consumes:
$C_{AUS} = X_{JPN}(1-t_{0,JPN}-t_{1,JPN}X_{JPN})$

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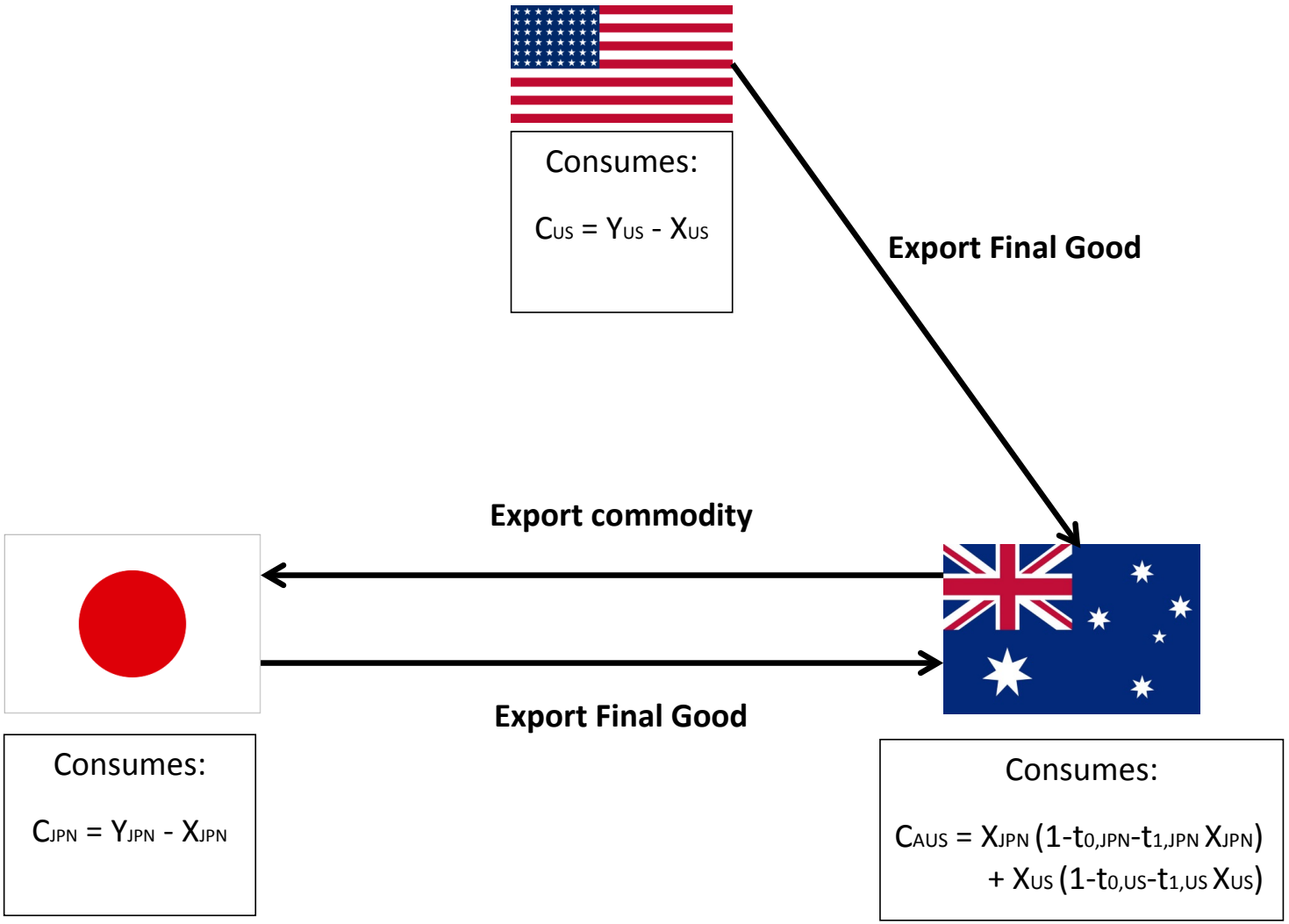
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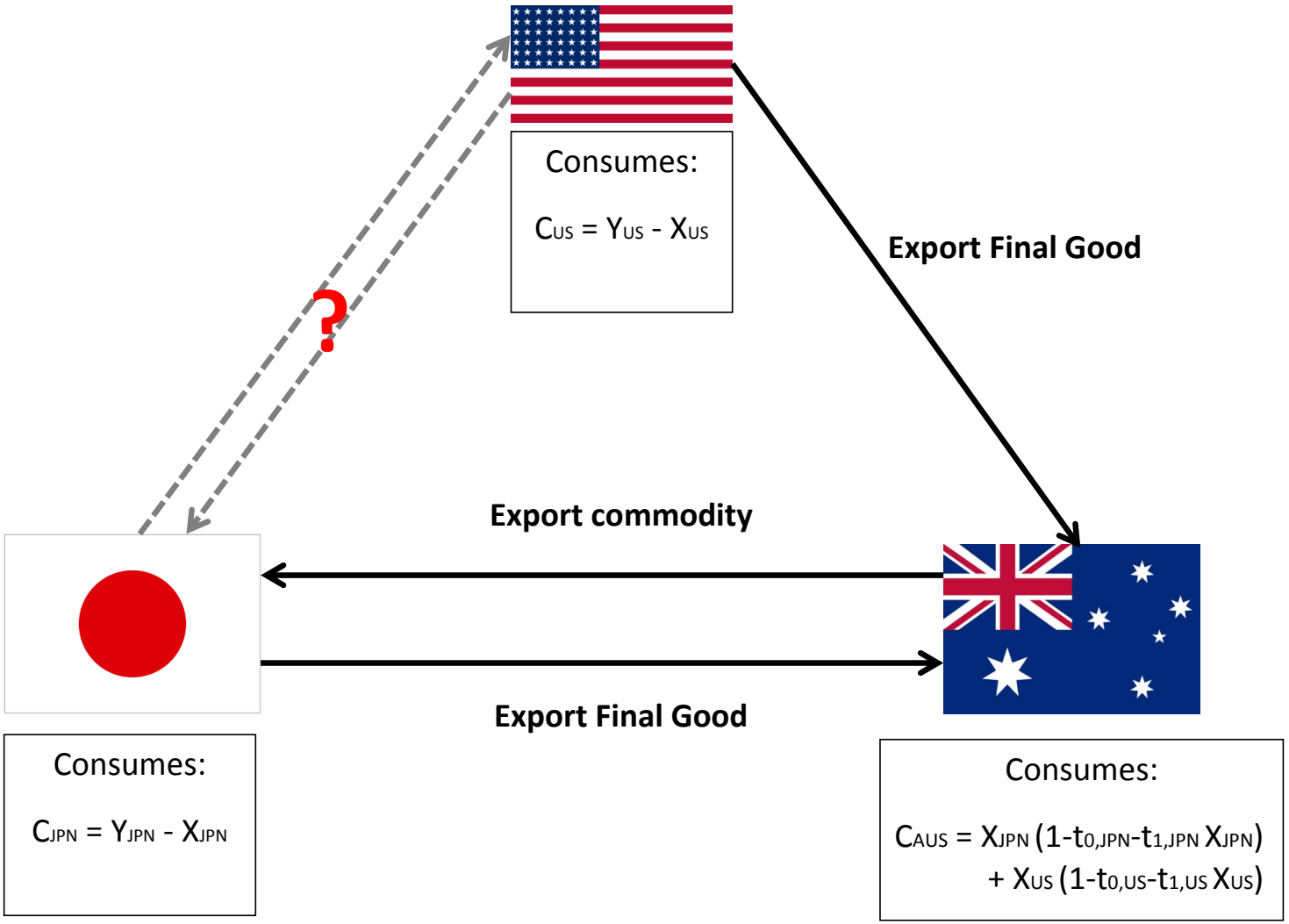
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Planner's problem

Choose $\{X_{JPN}\}$ and $\{X_{US}\}$ to maximize

$$E_0\left[\sum_{t=0}^{\infty}\beta^t\left(\frac{C_{AUS,t}^{1-\gamma}}{1-\gamma}+\lambda_{JPN}\frac{C_{JPN,t}^{1-\gamma}}{1-\gamma}+\lambda_{US}\frac{C_{US,t}^{1-\gamma}}{1-\gamma}\right)\right]$$

where

$$\begin{aligned}
C_{AUS,t} &= X_{JPN,t}\left(1-\tau_{0,JPN}-\tau_{1,JPN}X_{JPN,t}\right)+ \\
&\quad X_{US,t}\left(1-\tau_{0,US}-\tau_{1,US}X_{US,t}\right) \\
C_{JPN,t} &= Y_{JPN,t}-X_{JPN,t} \\
C_{US,t} &= Y_{US,t}-X_{US,t}
\end{aligned}$$

Calibration

- Four equally likely states

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- Two countries

	State 1	State 2	State 3	State 4
Y_{JPN}	Y_{Hi}	Y_{Lo}	$\frac{Y_{Hi}+Y_{Lo}}{2}+2\varepsilon$	$\frac{Y_{Hi}+Y_{Lo}}{2}-2\varepsilon$

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$\longrightarrow$ For each state, the total world output is unchanged.

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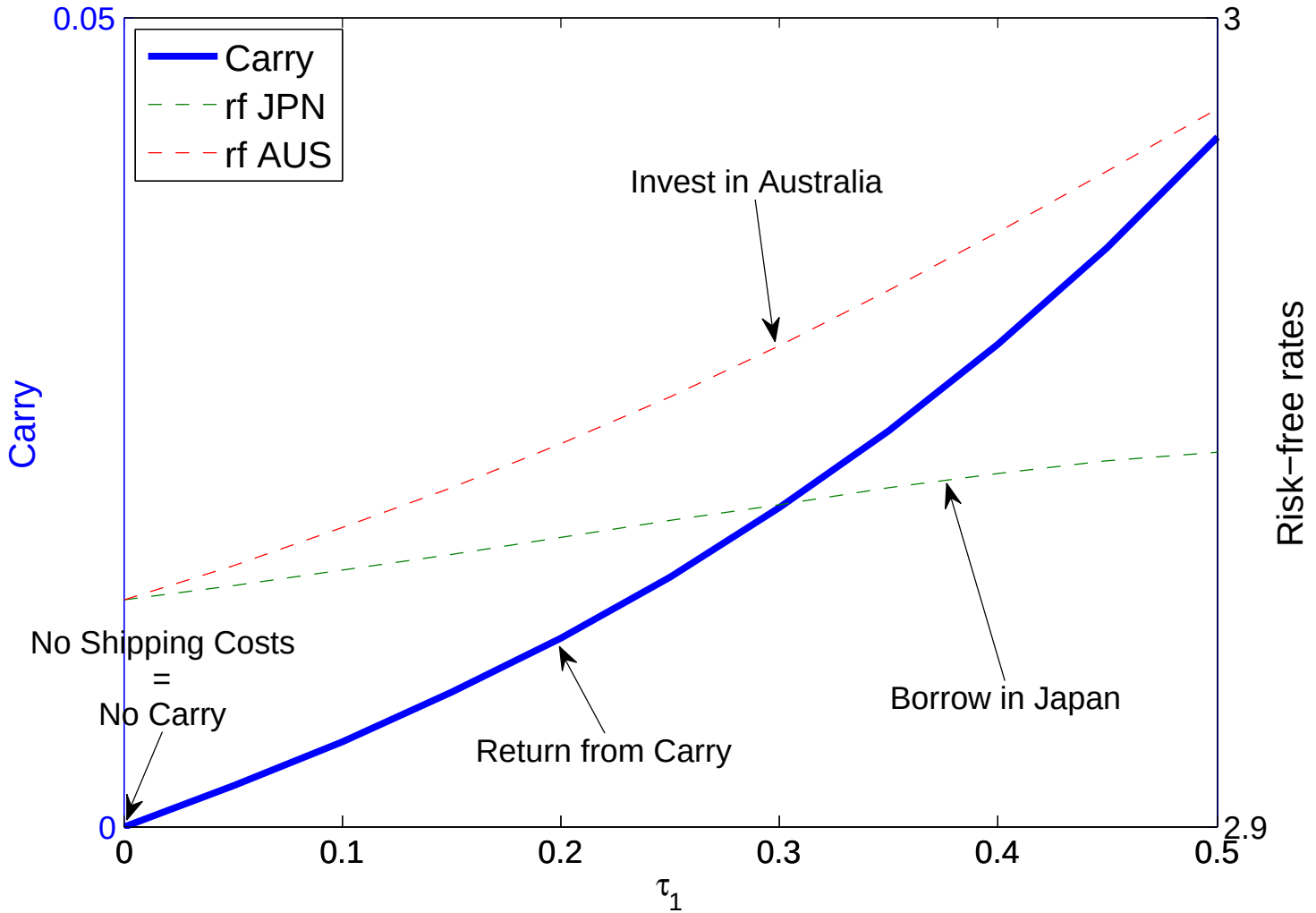
- Show results for increasing values of $\tau_{1,JPN} = \tau_{1,US}$.

Results: two countries



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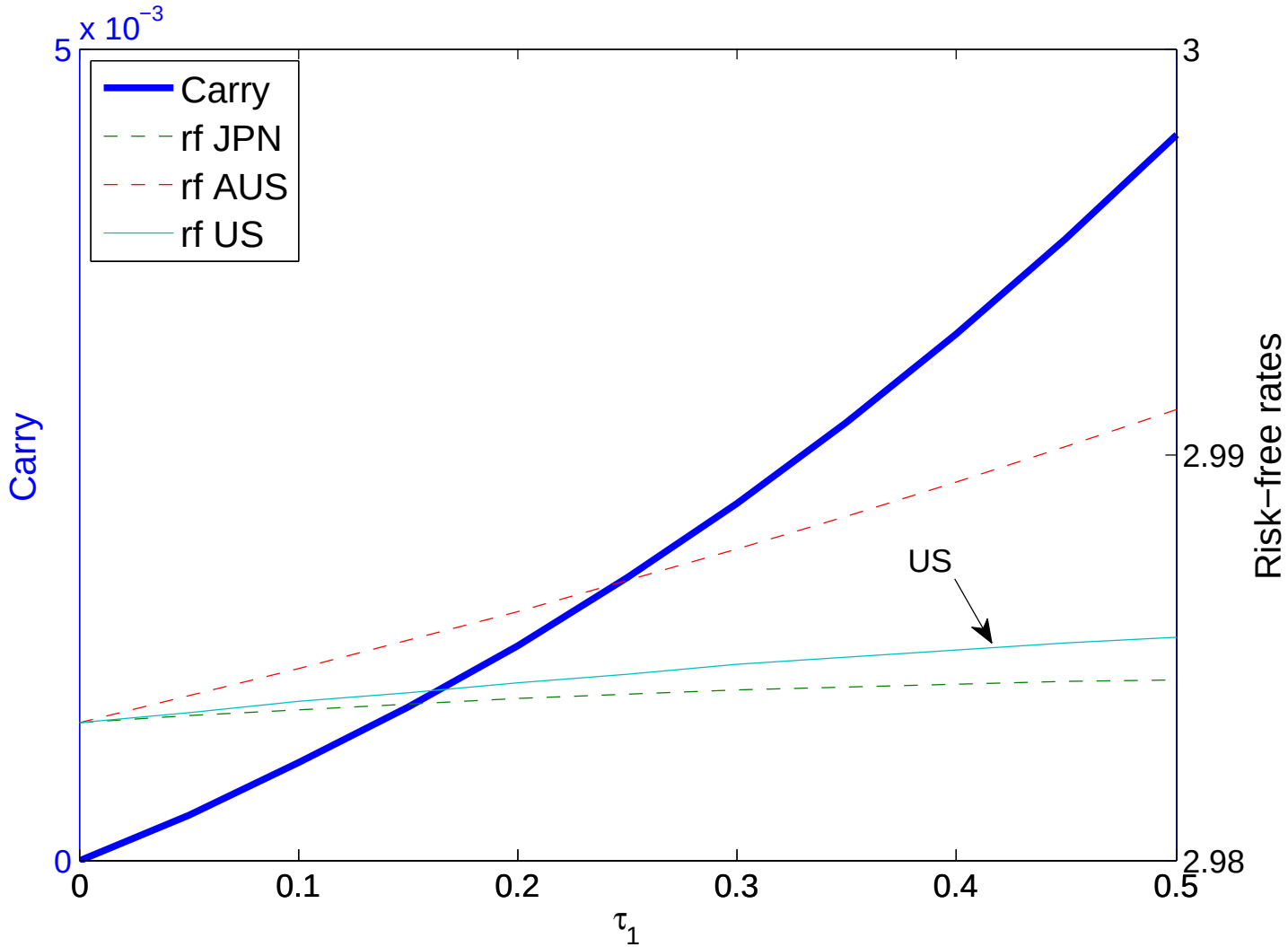

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- Extensions:
  - heterogenous shipping capacity
  - relative country size
  - heterogenous bilateral trade agreements
  - ...

Concluding Remarks

- There is a lot more in the paper
  - include disaster risk
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- There is a lot more in the paper
  - include disaster risk
  - a very well executed empirical analysis
- A great paper:
  - A fresh look at the returns from carry trade
  - Bridge the gap between int'l trade and int'l finance literatures