

# International Capital Markets and Wealth Transfers

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## Summary: literature

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- Points to asymmetric risk appetite: U.S. investors more risk tolerant.
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- Logical conclusion: **U.S. wealth share**  $\downarrow$  (Maggiori, '17, Sauzet, '22).

Flipside: **reserve currency paradox** (RCP).

- U.S. wealth share  $\downarrow$  + consumption home bias  $\Rightarrow$  USD should **depreciate**.
- In practice: USD **strongly appreciates** in times of global crises.

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This paper:

- Strong USD appreciation  $\Rightarrow$  value of U.S. (equity) assets  $\uparrow$  in crisis.
- $\Rightarrow$  Could dominate: i.e.  $NFA_t^{US} \downarrow$  but U.S. wealth share  $\uparrow$
- $\Rightarrow$  Circumvents the paradox.
- Model to rationalize it based on **deep (good-level) risk appetites**.
- Matches **currency risk premia**, and asset pricing moments.

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- Important point. ( $\Rightarrow$  Need to integrate **nominal** exchange rate?)
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Outline:

- Drilling down on the mechanisms.
- What are the shocks?
- Patterns of the wealth share.
- Other comments.

# Main comment 1: mechanisms, relative prices $S_t$

This model

$$\frac{p_{US,t}}{p_{RoW,t}} = \left( \frac{G_{US,t}}{G_{RoW,t}} \right) \left( \frac{Y_{RoW,t}}{Y_{US,t}} \right)$$

“Global” model (EZ-CES-home bias)

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(Note: global risk appetite does not impact real exchange rate.)

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$$f_{US,t}^W \equiv \frac{W_{US,t}}{W_t^{US} + W_t^{RoW}} = \frac{NFA_t^{US}}{W_t^{US} + W_t^{RoW}} + \frac{S_{US,t}}{S_{US,t} + S_{RoW,t}} \equiv nfa_t^{US} + f_{US,t}^S$$

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## Main comment 1: mechanisms, questions

Overall, mechanisms and main findings do seem to depend a lot on **specification of preferences**:

- Elasticity of substitution across goods ( $\theta$ ),
- Home bias in consumption aggregator itself (vs. only in habits),
- Potentially EIS ( $\psi$ ) via its impact on price-dividend ratios.

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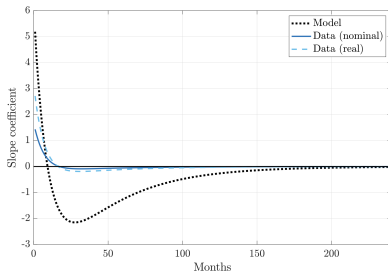
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- Are the results reinforced, muted, reversed?
- Is the “reserve currency paradox” arising again?
- Do deep habits still reinforce the solution to the paradox stemming from relative output changes, or does it get reversed?
- Side benefit: avoids **“ad-hoc” definition** of price indices (they depend on basket weights while consumption aggregator does not).

## Main comment 1: mechanisms, currency risk premia

Model reproduces:

- **Deviations from UIP:** slope coef.  $> 0$  as risk premium  $\neq 0$ .
- **Predictability reversal:** slope coef. turns  $< 0$  as horizon  $\uparrow$ .



**Difficult to obtain! Suggestion:** tell us more about mechanism.

- Stems from **stochastic volatility**, and its relatively low persistence.
- Precautionary motive important: **habits are crucial?**



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**Question:** what are those in practice?

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**Question:** can we **measure** them?

- Can they be **distinguished** from shocks to relative output?
- Showing the impact of the various shocks/state variables **separately** could be helpful here: global output ( $Y_t$ ) vs. output shares ( $x_{i,t}$ ) vs. deep habits vs. stoch. vol.

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Empirically: NBER recessions or episodes with most exchange rate action are **global in nature**.

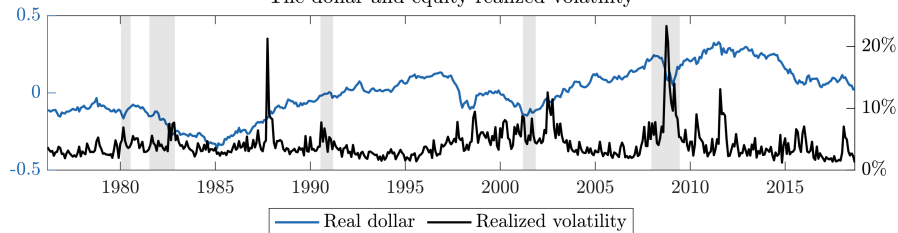
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**Suggestion:** clarify whether those are local or global phenomena.

If local: what is a **typical example**?

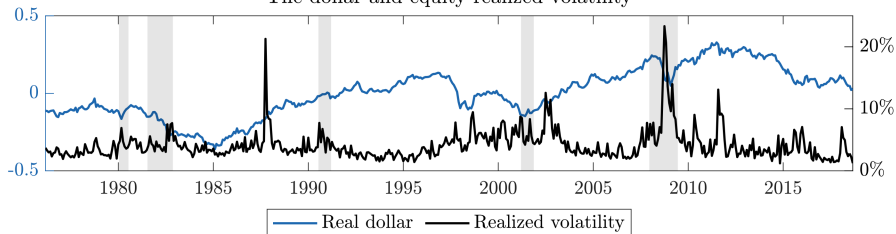
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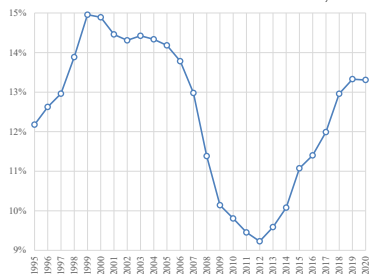
- Prime example of **exorbitant duty role** of the United States.
- NBER recession with the **largest USD appreciation** (and largest spike in volatility).
- Main such episode for which we also have **wealth data**.

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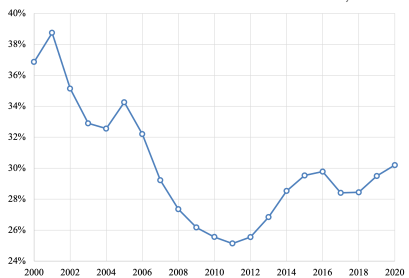
U.S. share of world wealth ( $f_{US,t}^W$ )



Source: Market-value national wealth, WID

[Details & Altern.](#) (Sauzet, 2022)

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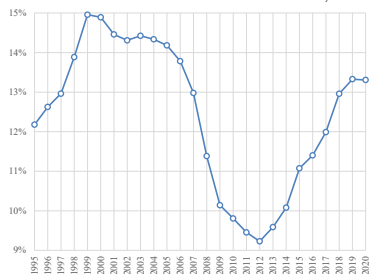


Source: Davies et al. (2008, 2011), CS (2021)

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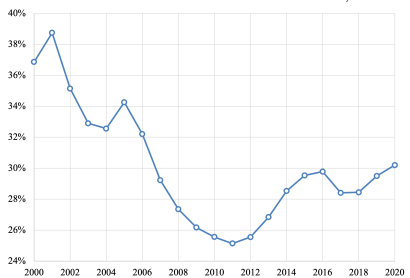
U.S. share of world wealth ( $f_{US,t}^W$ )



Source: Market-value national wealth, WID

[Details & Altern.](#) (Sauzet, 2022)

U.S. share of world wealth ( $f_{US,t}^W$ )



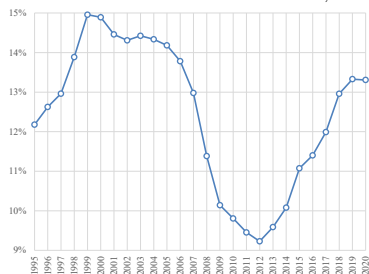
Source: Davies et al. (2008, 2011), CS (2021)

[Details & Altern.](#) (Sauzet, 2022)

⇒ U.S. wealth share **strongly decreased**.

## Main comment 3: patterns of the U.S. wealth share

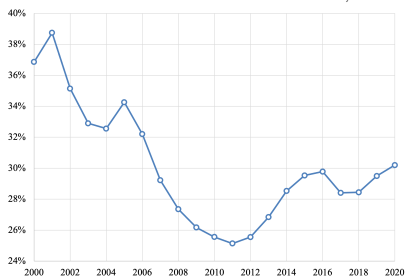
U.S. share of world wealth ( $f_{US,t}^W$ )



Source: Market-value national wealth, WID

[Details & Altern.](#) (Sauzet, 2022)

U.S. share of world wealth ( $f_{US,t}^W$ )



Source: Davies et al. (2008, 2011), CS (2021)

[Details & Altern.](#) (Sauzet, 2022)

⇒ U.S. wealth share **strongly decreased**.

- **Exorbitant duty** in action?
- This is despite large USD appreciation ⇒ suggests substantial duty?
- U.S. holds a lot of foreign equity (home bias  $\ll$  100%)? Other assets (equity share ↓)? Portfolio reallocation? *Etc.*

## Other comments

Terminology: “wealth transfer [...] *due to* currency appreciations”.

- More of a *concomittance* (of rel. div. &  $f_t^S$ ) in such real models?
- Introducing proper **nominal** exchange rate could be interesting?

Calibration & moments.

- $\gamma > 1$ ? For realistic risk premia (3.3%, small for habit vs. data 6.3%).
- Average country-specific factor  $\bar{X} = 1$  for all countries?
- **NFA > 0 on average** (data:  $NFA \ll 0$ ), and moves very little?
- Average  $C$  and portfolio biases, wealth share? Dynamics? Realistic?
- $G_{i,t}$  moves little on average?

Paper mentions that this is about **developed** countries: evidence for countries other than the U.S.? (Relatedly: regressions with *global* vol.?)

Are markets **complete** even with stochastic volatility?

- What is the “global insurance contract”?
- Exploring incomplete markets from global shocks could be interesting.



## Conclusion

This paper:

- Strong USD appreciation  $\Rightarrow$  value of U.S. assets  $\uparrow$  in crisis.
- $\Rightarrow$  Could dominate: i.e.  $NFA_t^{US} \downarrow$  but U.S. wealth share  $\uparrow$  (less “duty”)
- Model to rationalize it based on **deep (good-level) risk appetites**.
- Matches **currency risk premia**, and asset pricing moments.

Main comments/questions:

- **Generality** of the results when moving beyond special case?
- Clarify what are shocks, **local vs. global**. (Is duty not about global?)
- Important point. ( $\Rightarrow$  Need to integrate **nominal** exchange rate?)
- Not easy to match currency risk premia.

$\Rightarrow$  Great paper, thank you for the opportunity to discuss!

# Appendix

## Relative prices Back

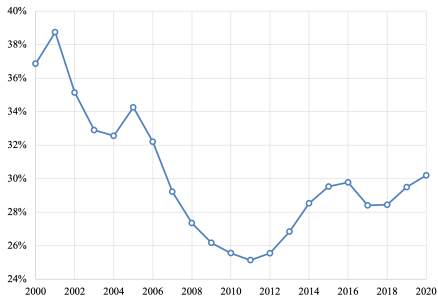
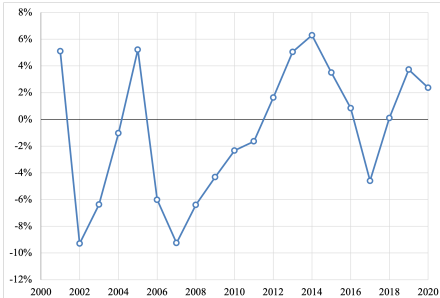
In the “global model” (EZ-CES-home bias, Sauzet, 2022):

$$\frac{P_{US,t}}{P_{RoW,t}} = S_t^{\frac{1}{\theta}} \left( \frac{Y_{RoW,t}}{Y_{US,t}} \right)^{\frac{1}{\theta}}$$

with

$$S_t \equiv \frac{\alpha J_t^{US} f_{US,t}^W + (1 - \alpha) J_t^{RoW} \mathcal{E}_t^{\theta - \psi} (1 - f_{US,t}^W)}{(1 - \alpha) J_t^{US} f_{US,t}^W + \alpha J_t^{RoW} \mathcal{E}_t^{\theta - \psi} (1 - f_{US,t}^W)}$$

# Pattern of the U.S. wealth share (Sauzet, 2022) [Back](#)

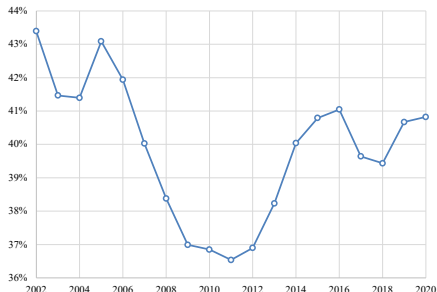
(a) U.S. share of world wealth ( $x_t$ )(b) Change in U.S. wealth share ( $dx_t/x_t$ )

**Notes:**  $x_t$  is measured as the share of world wealth held by U.S. households. Wealth is defined as the marketable value of financial assets plus non-financial assets (principally housing and land) less debts. World wealth includes all countries for which appropriate data is available. Data is from Davies (2008), Davies et al. (2011), and as updated in Crédit Suisse (2021).

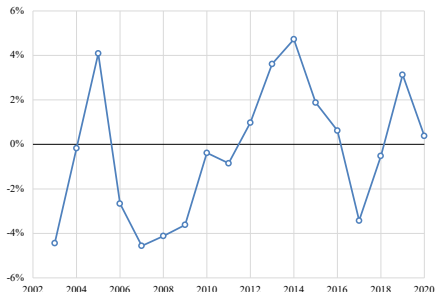
# Pattern of the U.S. wealth share (Sauzet, 2022) [Back](#)

**Figure:** Empirical pattern of the allocation of wealth (financial wealth only)

(a) U.S. share of world wealth ( $x_t$ )



(b) Change in U.S. wealth share ( $dx_t/x_t$ )

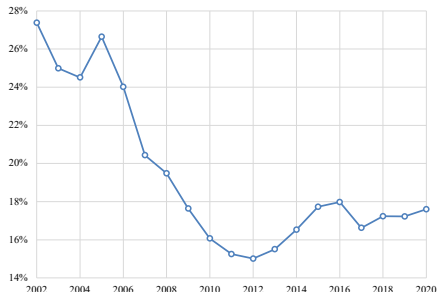


**Notes:**  $x_t$  is measured as the share of world wealth held by U.S. households. Wealth is defined as the marketable value of financial assets less debts. World wealth includes all countries for which appropriate data is available. Data is from Davies (2008), Davies et al. (2011), and as updated in Crédit Suisse (2021).

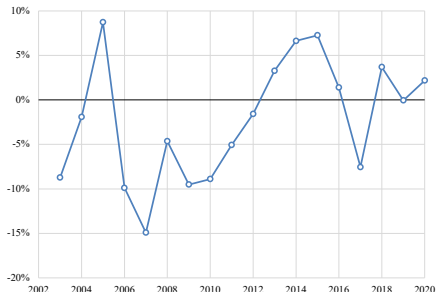
# Pattern of the U.S. wealth share (Sauzet, 2022) [Back](#)

**Figure:** Empirical pattern of the allocation of wealth (non-financial wealth only)

(a) U.S. share of world wealth ( $x_t$ )



(b) Change in U.S. wealth share ( $dx_t/x_t$ )



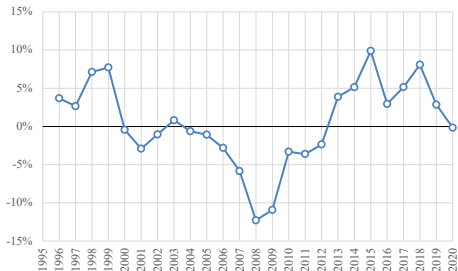
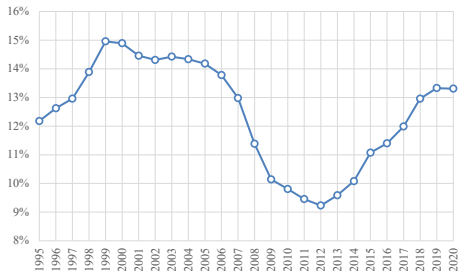
**Notes:**  $x_t$  is measured as the share of world wealth held by U.S. households. Wealth is defined as the marketable value of non-financial assets (principally housing and land) less debts. World wealth includes all countries for which appropriate data is available. Data is from Davies (2008), Davies et al. (2011), and as updated in Crédit Suisse (2021).

# Pattern of the U.S. wealth share (Sauzet, 2022) [Back](#)

**Figure:** Empirical pattern of the allocation of wealth (alternative measure)

(a) U.S. share of world wealth ( $x_t$ )

(b) Change in U.S. wealth share ( $dx_t/x_t$ )



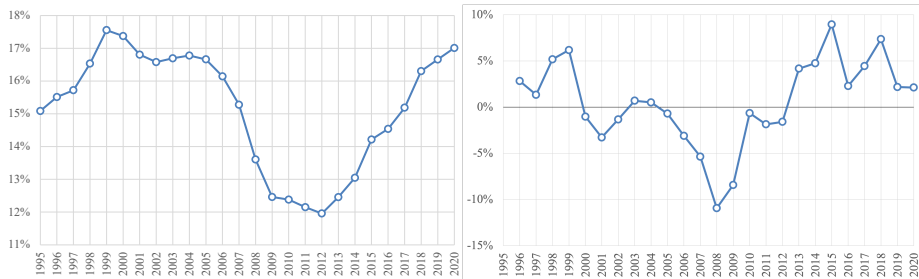
**Notes:**  $x_t$  is measured as the share of world wealth held by the U.S. Wealth is defined as the market value of national wealth. Data is from the World Inequality Database.

# Pattern of the U.S. wealth share (Sauzet, 2022) [Back](#)

**Figure:** Empirical pattern of the  $x_t$  (alternative measure, private wealth only)

(a) U.S. share of world wealth ( $x_t$ )

(b) Change in U.S. wealth share ( $dx_t/x_t$ )



**Notes:**  $x_t$  is measured as the share of world wealth held by U.S. households. Wealth is defined as the market value net private wealth. Data is from the World Inequality Database.