

# Discussion of “*On Wars, Sanctions and Sovereign Default*” by Javier Bianchi and César Sosa-Padilla

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1. Russia's circumstances at the beginning of the war (Data)
2. Challenges to standard quantitative theory
  - Implications for reserves accumulation
  - Implications for debt sustainability
3. An alternative approach to delays
  - Geopolitical externalities
  - The value of war as private information
  - Can you stop the war?

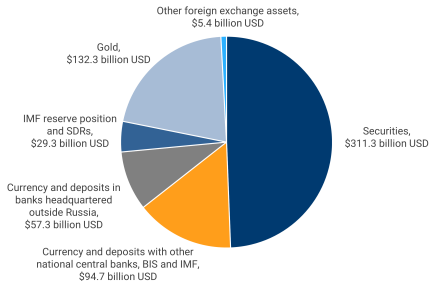
# Positions at the start of the war – Net creditor country



2021 GDP: 1,779 Billion USD

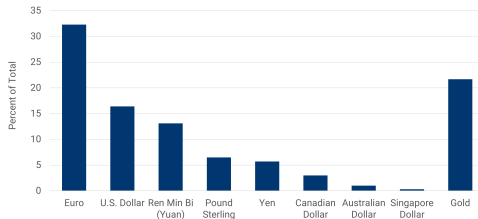
# Reserves composition

**Foreign exchange reserves**  
instrument composition, January 2022



Source: IMF, International Reserves and Foreign Currency Liquidity

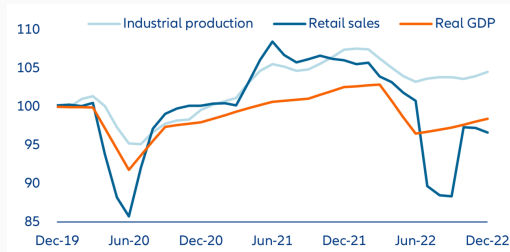
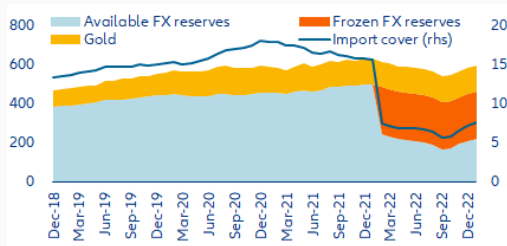
**Russia's foreign exchange reserves:**  
Currency composition  
June 2021



Source: Central Bank of Russia

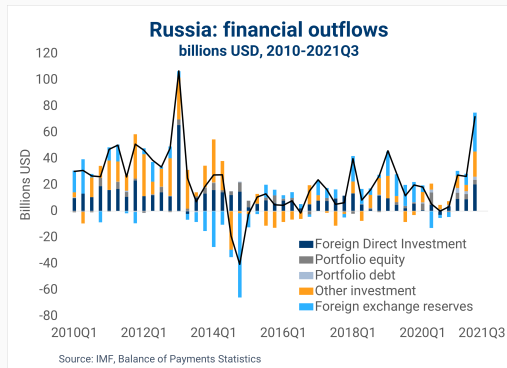
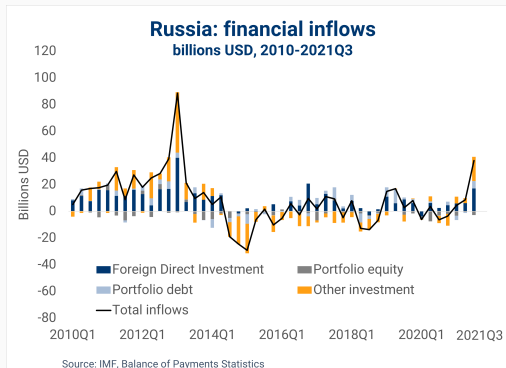
Milesi-Ferretti, 2022. *“Russia’s external position: Does financial autarky protect against sanctions?”* Brookings

# How much was frozen?



Allianz SE, 2023. "Russia's war economy"

# Inflows and outflows before the war



Milesi-Ferretti, 2022. *“Russia’s external position: Does financial autarky protect against sanctions?”* Brookings

## Challenges to standard quantitative theory

# Why do indebted sovereigns accumulate reserves (*and* debt)?

Bianchi et al., 2018, *“International Reserves and Rollover Risk”*, AER

- Borrowing to buy reserves: reallocates resources across states next period, conditional on not defaulting
- Sovereign gets to keep reserves in default: self-insurance, consumption smoothing during market exclusion

Devereux and Wu, 2022, *“Foreign Reserves Management and Original Sin”*

- Exchange rate management & mitigating original sin
- Use reserves to learn against global cycle, to enhance LC debt demand



# Which costs support defaultable debt in equilibrium?

Common approach in the quantitative literature:

- endowment or productivity loss
- convex  $\Rightarrow$  default in “bad times”

Microfoundations?

Mendoza and Yue, 2012, “*A General Equilibrium Model of...*”, QJE

- imported intermediate goods (w/ less productive domestic substitutes)
- subject to working capital constraint
- sovereign and private sector excluded from fin markets in default

If already excluded, what is left?

Reputation? Value of market access? Expectations of 2014 replay?

## An alternative approach to delays

# An alternative geopolitical externality model

Flow utility to Russia:

$$u(c^R(s)) + w_R \cdot \mathbb{1}_{\text{war}}, \quad \frac{\partial c^R(s)}{\partial s} \leq 0$$

Flow utility to US:

$$u(c^U(s)) - w_U \cdot \mathbb{1}_{\text{war}}, \quad \frac{\partial c^U(s)}{\partial s} \leq 0$$

with

- $s$ : sanctions intensity, US choice,
- $w_R$ : benefit of continued war to Russia, private info to Russia,
- $w_U$ : cost of continued war to the US, public information,
- $\mathbb{1}_{\text{war}} = 1$  if the war continues, 0 if it ends.

# Stopping the war?

Russia stops the war if  $s \geq s^*$ , defined by

$$u(c^R(s^*)) + w_R = u(c^R(0))$$

US can credibly threaten sufficient sanctions if

$$u(c^U(0)) - w_U \leq u(c^U(s^*))$$

(For simplicity, assume  $w_U$  and  $c^U(s)$  are such that US prefers to end the war at any feasible  $s$ .)

# Sanctions delay as bargaining with private information

Finding  $s^*$ , the smallest  $s$  which ends the war, at minimum cost to US?

$w^R$  is private information to Russia. Assume known  $\beta^R$  and  $\beta^U$ .

Start with a low  $s$  and increase it over time, such that

- Russia has no incentive to delay stopping the war

$$u(c^R(s_t)) + w_R + \beta^R V_{\text{war}}^R(s_{t+1}) \leq u(c^R(0)) + \beta^R V_{\text{no war}}^R \quad \text{if } s_t \geq s^*$$

- the US is willing to incur costs. Increase  $s_0$  and/or  $s_{t+1}/s_t$ ?
  - Additional cost from  $c^U(s_t)$  while war continues,
  - Cross  $s^*$  faster.

Costly equilibrium delays as screening in bargaining (uninformed party proposes)

- Fudenberg et al., 1985. *"Infinite-horizon models of bargaining with one-sided incomplete information"*. In: Roth (Ed), Game-Theoretic Models of Bargaining

Application to sovereign default renegotiation

- Bai and Zhang, 2012. *"Duration of sovereign debt renegotiation"*, JIE

The view from Poli Sci and IR

- Powell, 2002. *"Bargaining Theory and International Conflict"*, ARPS