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

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Roadmap

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

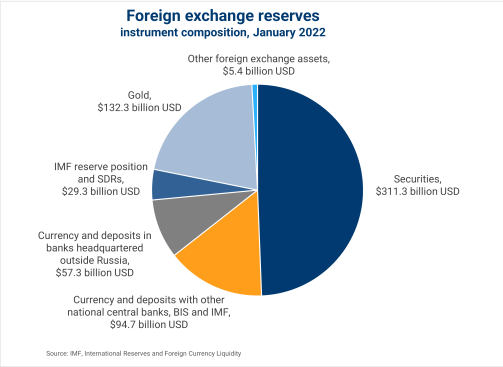
3. An alternative approach to delays
   - Geopolitical externalities
   - The value of war as private information
   - Can you stop the war?

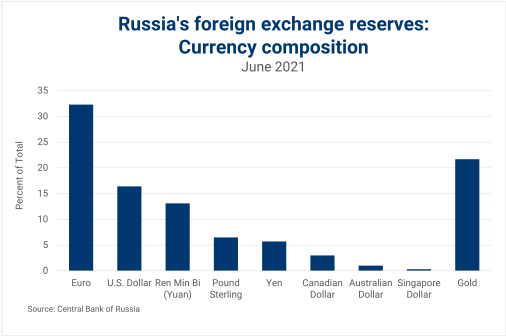
Positions at the start of the war – Net creditor country

2021 GDP: 1,779 Billion USD

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

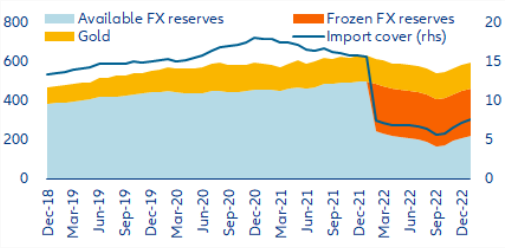
Reserves composition

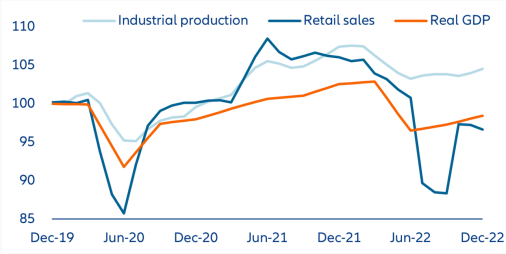




Milesi-Ferretti, 2022. *"Russia's external position: Does financial autarky protect against sanctions?"* Brookings

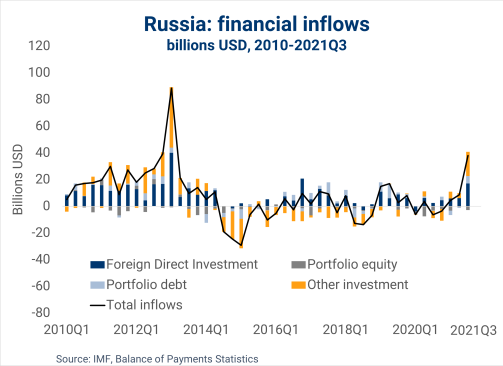
How much was frozen?

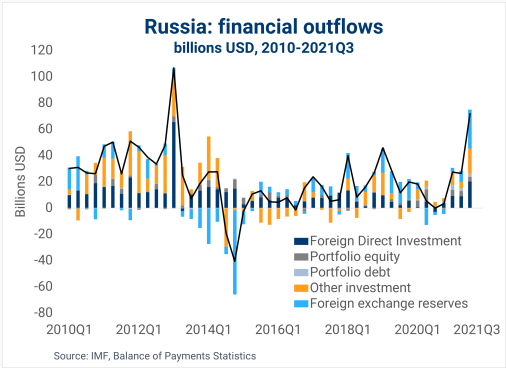




Allianz SE, 2023. *"Russia's war economy"*

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 repeat?

An alternative approach to delays

An alternative geopolitical externality model

Flow utility to Russia:

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

Flow utility to US:

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

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

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

US can credibly threaten sufficient sanctions if

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

(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 β^R and β^U.

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

- Russia has no incentive to delay stopping the war

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

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

Relevant literature

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