

Financial Sanctions and Russian Trade

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Introduction

- As ingredients of geoeconomics (Clayton, Maggiori and Schreger, 2023, 2024), trade sanctions extensively studied while financial sanctions much less explored empirically
- We highlight the effects of financial sanctions on Russian trade
 - ▶ SWIFT sanctions
 - ▶ Western banks' withdrawal
 - ▶ Trade sanctions
- Western countries deploy both financial and trade sanctions
 - ▶ Why do both exist?
 - ▶ How do they jointly shape trade?
 - ▶ Can non-Western countries bypass financial sanctions?

Preview

- Financial sanctions reduce Russia trade with both Western and non-Western countries
 - ▶ in contrast, Western trade sanctions generally induce trade diversion to non-Western countries
 - ▶ extensive margin much more important than intensive margin
 - ▶ heterogeneity in Western banks' withdrawal
- The effects on Russian trade with non-Western countries are milder than trade with Western countries
 - ▶ **amplification** in trade with the West: financial and trade sanctions reinforce each other
 - ★ financial sanctions on Russia → Western firms' reduced incentives to pay costs to bypass trade sanctions, e.g., lobby
 - ▶ **mitigation** in trade with the Non-West: increasing use of partner currencies (Renminbi, in particular) mitigates financial sanctions' effects
 - ★ China's CIPS (the counterpart of CHIPS+SWIFT); Russia's SPFS...

Roadmap

- Literature
- Institutional background
- Data and descriptive statistics
- Baseline estimates
- Considering trade sanctions
- Bypassing using partner currencies

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Literature

- Trade sanctions

- ▶ Clayton, Maggiori and Schreger (2023, 2024), Korovkin and Makarin (2023), Egger, Syropoulos and Yotov (2024), Egorov et al. (2025), and Felbermayr et al. (2025), Spiro, Wachtmeister and Gars (2024), Li et al. (2024), Korovkin, Makarin and Miyauchi (2024), Lastauskas, Proškute and Žaldokas (2025), De Souza et al. (2024), Nigmatulina (2022)

- Financial sanctions

- ▶ **theory**: Clayton, Maggiori and Schreger (2024), Bianchi and Sosa-Padilla (2023a,b), Itskhoki and Mukhin (2022)
- ▶ **empiric**: Efung, Goldbach and Nitsch (2023), Besedes, Goldbach and Nitsch (2023)

Our paper: **micro-level empirical analysis on SWIFT sanctions and Western banks' (voluntary) withdrawal**

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Institutional Background - SWIFT Sanctions

- “The financial nuclear weapon” coined by French Minister of Finance
- SWIFT sanctioned banks: %18.15 (%23.76) of Russian import transactions (value) and %34.42 (%32.83) of Russian export transactions (value) in 2016

Table 1: SWIFT Sanctioned Russian Banks

Panel A: First-round Bank List, published on 1 March 2022
Bank Otkritie
Novikombank
Promsvyazbank
Bank Rossiya
Sovcombank
Vnesheconombank (VEB)
VTB Bank
Panel B: Second-round Bank List, published on 3 June 2022
Sberbank
Credit Bank of Moscow
Joint Stock Company Russian Agricultural Bank, JSC Rosselkhozbank

Institutional Background - Western Banks' Withdrawal

- Major Western banks were under public pressure to exit Russia
- March 10, 2022, Goldman Sachs the first major Western investment bank to announce a plan
 - ▶ The same day by JPMorgan Chase; days later Citi decided to wind down Commercial Banking business
- EU-headquartered banks also revealed intentions to scale back operations in Russia, e.g., Deutsche Bank on March 11, 2022
- ...
- Western banks: > 46.8% (38.7%) of Russian import and 26.5% (19.4%) of Russian exports in terms of transaction count (value) in 2016

Institutional Background - Trade Sanctions

- E.U. and U.S. major trade restrictions against Russia in 2022 and 2023: export controls, import bans and MFN removal
 - ▶ E.U. COUNCIL REGULATION documents with various revisions
 - ▶ U.S. Export Administration Regulations (EAR) with various revisions, Executive Orders, Proclamations, and OFAC Determinations
 - ▶ some are coordinated, some more idiosyncratic
 - ▶ other Western countries often follow E.U. or U.S.
- **Export controls**: dual-use, for oil refining, aviation, maritime, luxury, for industrial capacities etc.
- **Import bans**: iron and steel products, seafood, coal and other solid fossil fuels, crude oil or petroleum products, gold etc.
- **US tariff increase**: MFN removal, aluminum, and some other products
- We extract **timing** and **product codes** from these sanctions

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- Russian customs' transaction-level database 2016-2023
 - ▶ sourced from Yixun, a vendor based in China
 - ▶ trade with all partners except Eurasian Economic Union members
 - ▶ Russian firm tax id, transaction value, date, product code, partner country and [invoicing currency](#)
 - ▶ 2016 and 2017 data with [transaction bank](#) information
- Bank balance sheet from Central Bank of Russia
- Sanction information collected from E.U. and U.S. public sources

Transaction Banks

- 82.76% export transactions report a transaction bank, while 94.00% import transactions report a transaction bank in 2016
- Top 10 banks in Russian import: 60.14% of the transactions
- Top 10 banks in Russian export: 64.22% of the transactions
- No important role for Chinese banks back then
 - ▶ the biggest four Chinese banks only accounted for 0.47% of Russian export transactions and 0.27% of import transactions in 2016

Top 10 Transaction Banks in Russian Import

Table 2: Top 10 Transaction Banks in Russian Import

Bank name	Transaction count	Count share	Foreign bank?	SWIFT Ban?
Citibank	2109687	14.63%	Yes	Yes
Sberbank	1316413	9.13%		
Raiffeisenbank	995042	6.90%	Yes	
Deutsche Bank	933500	6.47%	Yes	
UniCredit Bank	925214	6.41%	Yes	Yes
HSBC	678226	4.70%	Yes	
VTB Bank	524791	3.64%		
Royal Bank of Scotland	450206	3.12%	Yes	
Alfa-Bank	410943	2.85%		
Credit Agricole CIB	330889	2.29%	Yes	

Top 10 Transaction Banks in Russian Export

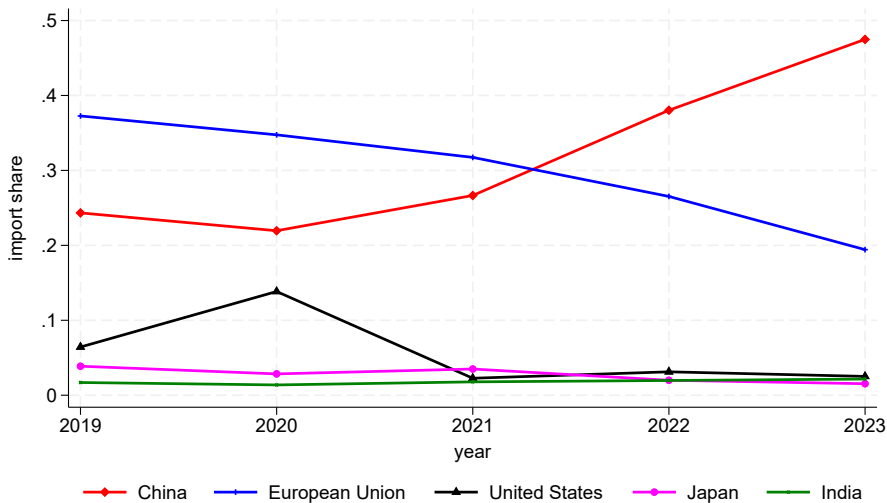
Table 3: Top 10 Transaction Banks in Russian Export

Bank name	Transaction count	Count share	Foreign bank?	SWIFT ban?
Sberbank	528461	22.88%		Yes
Raiffeisenbank	251528	10.89%	Yes	
CMRbank	144109	6.24%		
VTB Bank	134012	5.80%		Yes
Citibank	132096	5.72%	Yes	
Gazprombank	81853	3.54%		
UniCredit Bank	80243	3.47%	Yes	
PJSC Promsvyazbank	55110	2.38%		Yes
Otkritie Bank	40765	1.76%		Yes
Alfa-Bank	35532	1.54%		

Distribution of Transaction Banks at Firm-Country Level

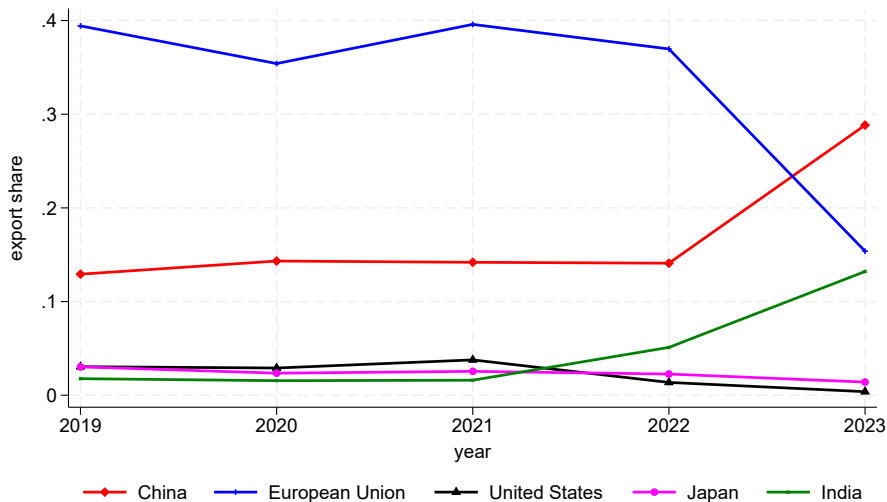
- For either imports or exports, nearly 90% of the firm-country pairs only use one transaction bank. 8% pairs with two transaction banks
- Define **main transaction bank** b of a firm f with trade mode export or import at the firm-country level as the bank that accounts for the largest value share at this level
- 93.8% maintained the same main bank from 2016h1 (first half of 2016) to 2016h2, and 91.2% maintained the same main bank from 2016h1 to 2017h1
- Relationship banking: Amiti and Weinstein (2011), Chodorow-Reich (2014), Paravisini et al. (2015), Huber (2018)

Russian Import Share by Partners



World Top 5 Economies

Russian Export Share by Partners



World Top 5 Economies

Russian Main Import and Export Goods

Table 4: Top 5 Russian Export and Import Sections in 2020

Panel A: Import			
Section Name		Section Code	Share
Machinery, Appliances, Electrical Equipment		16	30.41%
Vehicles, Aircraft, Vessels		17	13.16%
Products of the Chemical or Allied Industries		6	11.89%
Pulp of Wood, Paper		10	10.52%
Base Metals and Articles of Base Metals		15	5.59 %
Panel B: Export			
Section Name		Section Code	Share
Mineral Products		5	30.41%
Base Metals and Articles of Base Metals		15	13.16%
Pearls, precious stones, precious metals		14	11.89%
Products of the chemical or allied industries		6	10.52%
Vehicles, Aircrafts, Vessels		17	5.59 %

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Baseline Regression Setting

$$\ln y_{bckt} = \alpha_{bckm} + \delta_{ckt} + \beta_1 * SWIFT_{1bt} + \beta_2 * SWIFT_{2bt} \\ + \beta_3 * West_bank_b * Post_war_t + \epsilon_{bckt}, \quad (1)$$

- y_{bckt} is the bank b -country c -product k -month t import (export) value
- $SWIFT_{jbt}$ is a dummy variable that corresponds to those Russian banks that were subject to SWIFT sanction in round j at time t
- $West_bank_b$ is a dummy variable that equals 1 if bank b is a major bank that operated in Russia with the ownership by Western countries
- $Post_war_t$ is a time dummy denoting whether time t is post the Russo-Ukrainian War (i.e., $t \geq \text{March 2022}$)
- Individual fixed effects α_{bckm} with additional seasonality subscript m
- Product-country-time fixed effects δ_{ckt} controls demand and supply factors at the product-country-time level including Western trade sanctions against Russia implemented at the product level

Baseline Estimates

Table 5: Effects of SWIFT Sanction and Western Banks' Withdrawal on Russian Trade Value

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Russian Import				Russian Export		
	all sample		West	non-West		all sample	West	non-West
swift sanction 1	-0.175*** (0.018)	-0.277*** (0.032)	-0.277*** (0.032)	-0.079*** (0.019)	-0.056* (0.031)	-0.209*** (0.062)	-0.209*** (0.062)	0.001 (0.034)
swift sanction 2	-0.190*** (0.015)	-0.457*** (0.024)	-0.457*** (0.024)	0.062*** (0.017)	-0.096*** (0.031)	-0.190*** (0.068)	-0.190*** (0.068)	-0.069** (0.033)
West bank post war	-0.524*** (0.021)	-0.670*** (0.028)	-0.670*** (0.028)	-0.316*** (0.028)	-0.167*** (0.042)	-0.255*** (0.096)	-0.255*** (0.096)	-0.141*** (0.046)
swift sanction 1* non-West		0.198*** (0.037)				0.210*** (0.069)		
swift sanction 2* non-West		0.519*** (0.029)				0.121* (0.072)		
West bank post war *non-West		0.353*** (0.041)				0.114 (0.105)		
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	3059388	3059388	1966693	1092695	370952	370952	104801	266151
R ²	0.853	0.854	0.862	0.828	0.951	0.951	0.959	0.945

Standard errors in parentheses clustered at the product level

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Western Banks' Heterogeneous "Exit"

Table 6: Foreign Banks' Asset Growth 21-23

Bank name	2021 Asset	2023 Asset	Asset Growth
HSBC	0.09	0.03	-62.25%
Credit Agricole CIB	0.05	0.02	-59.20%
Deutsche Bank	0.13	0.07	-46.14%
Citibank	0.71	0.59	-16.12%
Commerzbank	0.07	0.06	-12.79%
ING Bank	0.11	0.10	-11.89%
UniCredit	1.21	1.12	-7.34%
Raiffeisenbank	1.59	2.04	28.19%
Agricultural Bank of China	0.01	0.02	51.21%
Bank Intesa	0.09	0.16	72.58%
OTP Bank	0.15	0.35	140.76%
China Construction Bank	0.02	0.06	204.87%
ICBC	0.09	0.38	303.57%
J.P. Morgan Bank	0.05	0.27	371.86%
Bank of China	0.10	0.51	401.03%

Notes: The unit of asset is trillion Rubles. The whole Russian banking sector asset growth rate is 29.54% between 2021 and 2023. Data source: Central Bank of Russia.

Western Banks' Heterogeneous "Exit" (cont.)

Table 7: Effects of SWIFT Sanction and Western Banks on Russian Trade Value by Western Banks' Extent of Exiting

	(1)	(2)	(3)	(4)	(5)	(6)
		Russian Import			Russian Export	
	all sample	West	non-West	all sample	West	non-West
swift sanction 1	-0.175*** (0.018)	-0.276*** (0.032)	-0.079*** (0.019)	-0.056* (0.031)	-0.209*** (0.062)	0.001 (0.034)
swift sanction 2	-0.191*** (0.015)	-0.457*** (0.024)	0.061*** (0.017)	-0.096*** (0.031)	-0.190*** (0.068)	-0.069** (0.033)
Contracting West bank post war	-0.551*** (0.022)	-0.699*** (0.029)	-0.336*** (0.029)	-0.170*** (0.043)	-0.252*** (0.098)	-0.144*** (0.046)
Expanding West bank post war	-0.113*** (0.040)	-0.219*** (0.050)	-0.016 (0.087)	0.020 (0.125)	-0.368 (0.310)	0.113 (0.150)
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y
Observations	3059388	1966693	1092695	370952	104801	266151
R ²	0.853	0.862	0.828	0.951	0.959	0.945

Standard errors in parentheses clustered at the product level

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

By Different Groups of Partners - Russian Import

Table 8: Effects of SWIFT Sanction and Western Banks' Withdrawal on Russian Import Value by Partners

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	E.U.	U.S.	Other West	Russian import China	India	Turkey	CIS	Other Non-West
swift sanction 1	-0.274*** (0.033)	-0.758*** (0.160)	-0.276*** (0.060)	-0.047** (0.020)	0.211* (0.127)	-0.007 (0.075)	-0.252** (0.117)	-0.426*** (0.072)
swift sanction 2	-0.550*** (0.028)	-1.353*** (0.145)	0.232*** (0.053)	0.089*** (0.019)	-0.019 (0.111)	0.049 (0.073)	-0.326** (0.140)	-0.158*** (0.059)
West bank post war	-0.619*** (0.028)	-1.811*** (0.146)	-1.161*** (0.069)	-0.424*** (0.030)	-0.130 (0.120)	0.328*** (0.072)	0.299* (0.156)	-0.528*** (0.082)
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1684574	69535	212584	762313	21452	106327	12839	189764
R ²	0.861	0.851	0.868	0.799	0.885	0.858	0.835	0.900

Standard errors in parentheses clustered at the product level

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

By Different Groups of Partners - Russian Export

Table 9: Effects of SWIFT Sanction and Western Banks' Withdrawal on Russian Export Value by Partners

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	E.U.	U.S.	Other West	China	Indian Export	Turkey	CIS	Other Non-West
swift sanction 1	-0.092 (0.095)	-0.417*** (0.070)	-0.129 (0.154)	0.135 (0.112)	-0.435* (0.231)	-0.193 (0.165)	0.079 (0.054)	-0.091* (0.049)
swift sanction 2	-0.254*** (0.089)	-0.078 (0.114)	-0.017 (0.158)	-0.072 (0.096)	-0.934*** (0.321)	-0.245* (0.146)	-0.019 (0.048)	-0.097** (0.043)
West bank post war	-0.218** (0.087)	-0.591* (0.306)	-0.215 (0.258)	0.239 (0.151)	0.201 (0.184)	-0.001 (0.164)	-0.130** (0.058)	-0.222*** (0.059)
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	78020	17416	9365	16566	2904	6651	93817	146213
R ²	0.960	0.941	0.922	0.905	0.916	0.963	0.932	0.943

Standard errors in parentheses clustered at the product level

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Intensive Margin: Firm-Product-Country Level Regression

Table 10: Effects of SWIFT Sanctions and Western Banks' Withdrawal on Russian Firms' Trade

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Russian import			Russian export				
	all sample	West	Non-West	all sample	West	Non-West		
swift sanction 1	-0.036*** (0.008)	-0.009 (0.013)	-0.006 (0.013)	-0.052*** (0.011)	-0.038* (0.023)	-0.042 (0.042)	-0.037 (0.043)	-0.039 (0.024)
swift sanction 2	-0.015* (0.007)	-0.019 (0.013)	-0.018 (0.013)	-0.014 (0.009)	0.002 (0.026)	-0.017 (0.044)	-0.024 (0.045)	0.008 (0.029)
West bank post war	-0.176*** (0.011)	-0.202*** (0.013)	-0.201*** (0.013)	-0.123*** (0.018)	-0.055* (0.031)	-0.136* (0.074)	-0.149** (0.075)	-0.031 (0.031)
swift sanction 1* non-West		-0.041** (0.017)				0.007 (0.044)		
swift sanction 2* non-West		0.008 (0.015)				0.025 (0.050)		
West bank post war *non-West		0.080*** (0.023)				0.101 (0.076)		
Product-Firm-Country f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Bank-Season f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	6704672	6704672	4308768	2395534	893825	893825	214820	678580
R ²	0.830	0.830	0.836	0.810	0.921	0.921	0.937	0.911

Standard errors in parentheses clustered at the product level

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Extensive Margin

Table 11: Effects of SWIFT Sanction and Western Banks' Withdrawal on Russian Trade Firm Number

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Russian Import				Russian Export		
	all sample		West	non-West		all sample	West	non-West
swift sanction 1	-0.048*** (0.007)	-0.129*** (0.011)	-0.129*** (0.011)	0.027*** (0.004)	-0.032*** (0.009)	-0.112*** (0.017)	-0.112*** (0.017)	-0.003 (0.010)
swift sanction 2	-0.143*** (0.007)	-0.346*** (0.010)	-0.346*** (0.010)	0.049*** (0.005)	-0.085*** (0.012)	-0.170*** (0.029)	-0.170*** (0.029)	-0.065*** (0.011)
West bank post war	-0.197*** (0.008)	-0.300*** (0.011)	-0.300*** (0.011)	-0.052*** (0.007)	-0.057*** (0.012)	-0.061* (0.034)	-0.061* (0.034)	-0.052*** (0.011)
swift sanction 1* non-West		0.156*** (0.011)				0.108*** (0.020)		
swift sanction 2* non-West		0.395*** (0.011)				0.105*** (0.027)		
West bank post war *non-West		0.248*** (0.011)				0.009 (0.033)		
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	3059648	3059648	1966859	1092789	371288	371288	104979	266309
R ²	0.842	0.844	0.846	0.841	0.928	0.928	0.876	0.935

Standard errors in parentheses clustered at the product level

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Joint Financial and Trade Sanctions - Russian Import

	(1)	(2)	(3)	(4)	(5)	(6)
	Russian Import					
	West			Non-West		
swift sanction 1	-0.247***	-0.200***	-0.218***	-0.090***	-0.083***	-0.068***
swift sanction 2	-0.310***	-0.272***	-0.408***	0.008	0.005	0.047***
West bank post war	-0.554***	-0.443***	-0.566***	-0.350***	-0.318***	-0.284***
both E.U. and U.S. export control	-0.409***	-0.141***		0.295***	0.308***	
only E.U. export control	-0.139**	-0.013		0.135***	0.118***	
only U.S. export control	-0.257***	-0.143		0.080**	0.130***	
swift sanction 1*both E.U. and U.S. export control		-0.271***	-0.303***		-0.006	-0.004
swift sanction 1*only E.U. export control		-0.142*	-0.166*		0.017	0.013
swift sanction 1*only U.S. export control		-0.082	-0.136		-0.076*	-0.111**
swift sanction 2*both E.U. and U.S. export control		-0.234***	-0.211***		-0.015	0.069
swift sanction 2*only E.U. export control		-0.145**	-0.176**		0.138***	0.139***
swift sanction 2*only U.S. export control		-0.071	-0.149**		-0.060	-0.064
West bank post war*both E.U. and U.S. export control		-0.672***	-0.523***		-0.062	-0.037
West bank post war*only E.U. export control		-0.281***	-0.323***		-0.046	-0.066
West bank post war*only U.S. export control		-0.303***	-0.283***		-0.215***	-0.220***
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y
Country-Time f.e.	Y	Y	N	Y	Y	N
Country-Product-Time f.e.	N	N	Y	N	N	Y
Observations	2410869	2410869	1966693	1274382	1274382	1092695
R ²	0.824	0.824	0.862	0.802	0.802	0.828

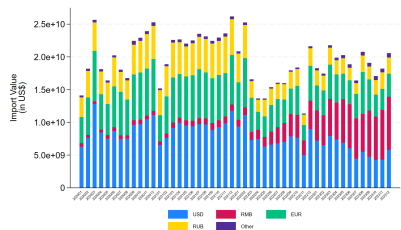
Joint Financial and Trade Sanctions - Russian Export

	(1)	(2)	(3)	(4)	(5)	(6)
	Russian Export					
	West		Non-West			
swift sanction 1	-0.060	-0.050	-0.182***	-0.025	-0.064**	-0.038
swift sanction 2	-0.117**	-0.104*	-0.176*	-0.023	-0.037	-0.060
West bank post war	0.034	0.017	-0.245***	-0.124***	-0.134***	-0.205***
both E.U. and U.S. import ban	-0.044	-0.080		0.399***	0.402***	
only E.U. import ban	-0.294***	-0.302***		-0.057**	-0.113***	
only U.S. import ban	-0.005	-0.003		-0.009	0.058	
U.S. tariff	-0.171*	-0.168*		-0.148**	-0.141**	
swift sanction 1*both E.U. and U.S. import ban		-0.481*	-0.524***		-0.010	-0.100
swift sanction 1*only E.U. import ban		-0.040	0.216		0.125***	0.163**
swift sanction 1*only U.S. import ban		-0.107	0.172		-0.049	0.140
swift sanction 1*U.S. tariff		0.004	-0.016		0.001	-0.003
swift sanction 2*both E.U. and U.S. import ban		0.320**	-0.102		-0.136	-0.190*
swift sanction 2*only E.U. import ban		0.007	0.019		0.123***	0.183***
swift sanction 2*only U.S. import ban		-0.060	0.223		-0.195	0.043
swift sanction 2*U.S. tariff		-0.008	-0.012		-0.007	-0.019***
West bank post war*both E.U. and U.S. import ban		0.228	0.001		0.233	0.111
West bank post war*only E.U. import ban		0.042	-0.327*		0.014	0.059
West bank post war*only U.S. import ban		0.159	0.235		-0.111	0.252
West bank post war*U.S. tariff		-0.001	0.011		0.001**	0.012
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y
Country-Time f.e.	Y	Y	N	Y	Y	N
Country-Product-Time f.e.	N	N	Y	N	N	Y
Observations	232318	232318	104801	462873	462873	266151
R ²	0.930	0.930	0.959	0.914	0.914	0.945

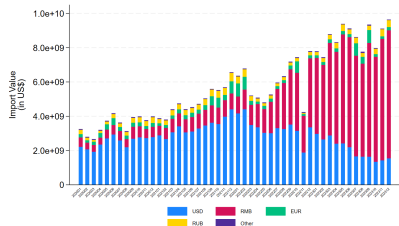
Roadmap

- Literature
- Institutional background
- Data and descriptive statistics
- Baseline estimates
- Considering trade sanctions
- Bypassing using partner currencies

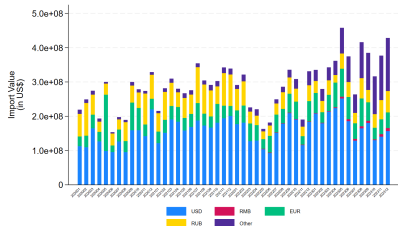
Russian Import Invoicing Currency



All

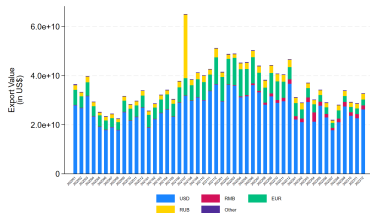


China

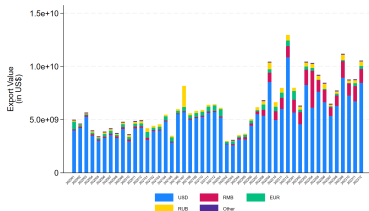


India

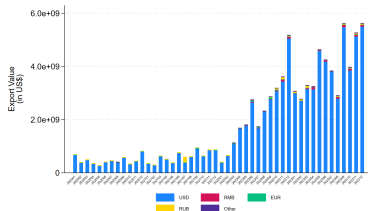
Russian Export Invoicing Currency



All



China



India

Public news citing official data: RMB was used to [settle](#) 75% of Russia's trade with China in the first half of 2023 (matching our import but not export [invoicing](#) statistics)

Bypassing Financial Sanctions - Russian Import

Table 12: Using Partner Currency to Mitigate Financial Sanctions' Impacts

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-West	China	India	Turkey	CIS	Other Non-West
swift sanction 1	-0.182*** (0.024)	-0.154*** (0.027)	0.206 (0.136)	-0.007 (0.075)	-0.253** (0.117)	-0.441*** (0.074)
swift sanction 2	-0.085*** (0.021)	-0.097*** (0.027)	-0.040 (0.115)	0.050 (0.072)	-0.330** (0.142)	-0.158*** (0.061)
West bank post war	-0.321*** (0.030)	-0.485*** (0.033)	-0.122 (0.121)	0.335*** (0.070)	0.294* (0.156)	-0.545*** (0.083)
swift sanction 1*partner cur sh	0.211*** (0.032)	0.173*** (0.034)	0.011 (0.227)	0.177 (0.309)	0.000 (.)	0.078 (0.285)
swift sanction 2*partner cur sh	0.298*** (0.030)	0.309*** (0.034)	0.175 (0.265)	0.046 (0.542)	-1.270 (1.690)	-0.791** (0.346)
West bank post *partner cur sh	-0.037 (0.045)	0.108** (0.047)	-0.021 (0.322)	0.214 (0.494)	0.000 (.)	-0.210 (0.248)
partner currency share	-0.027* (0.015)	-0.036** (0.015)	0.060 (0.133)	0.153 (0.104)	1.527 (1.622)	-0.149 (0.092)
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y
Observations	1092695	762313	21452	106327	12839	189764
R ²	0.828	0.799	0.885	0.858	0.835	0.900

Standard errors in parentheses clustered at the product level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Bypassing Financial Sanctions - Russian Export

Table 13: Using Partner Currency to Mitigate Financial Sanctions' Impacts

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-West	China	India	Russian Export Turkey	CIS	Other Non-West
swift sanction 1	-0.013 (0.033)	0.100 (0.126)	-0.506** (0.235)	-0.131 (0.169)	0.077 (0.054)	-0.104** (0.049)
swift sanction 2	-0.074** (0.034)	-0.069 (0.124)	-1.058*** (0.323)	-0.239* (0.140)	-0.021 (0.048)	-0.102** (0.043)
West bank post war	-0.156*** (0.045)	0.247** (0.110)	0.157 (0.184)	0.103 (0.170)	-0.135** (0.058)	-0.241*** (0.059)
swift sanction 1*partner cur sh	0.218 (0.210)	0.048 (0.262)	0.000 (.)	-8.292*** (1.067)	0.000 (.)	1.825*** (0.534)
swift sanction 2*partner cur sh	0.033 (0.183)	0.014 (0.246)	0.000 (.)	-4.059*** (0.419)	0.000 (.)	1.405 (1.202)
West bank post*partner cur sh	0.160 (0.214)	-0.195 (0.236)	0.000 (.)	-3.560*** (0.285)	0.410*** (0.047)	-0.267 (0.352)
partner currency share	0.386*** (0.130)	0.441*** (0.137)	-4.629*** (0.927)	4.556*** (0.125)	-0.577 (0.499)	0.071 (0.484)
Bank-Product-Country-Season f.e.	Y	Y	Y	Y	Y	Y
Product-Country-Time f.e.	Y	Y	Y	Y	Y	Y
Observations	266151	16566	2904	6651	93817	146213
R ²	0.945	0.906	0.918	0.963	0.932	0.943

Standard errors in parentheses clustered at the product level.

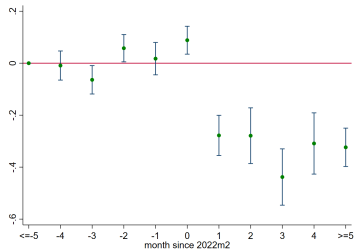
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Conclusion

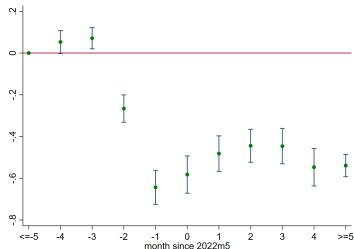
- We investigate the impacts of financial sanctions (SWIFT sanctions and Western banks' withdrawal) on Russian trade
- Financial sanctions reduce Russian trade with both Western and non-Western countries
 - ▶ extensive margin $>$ intensive margin
 - ▶ heterogeneity in Western banks' winding down
- The effects of financial sanctions on trade with Western countries is greater than that with Non-Western countries
 - ▶ in trade with Western countries, financial and trade sanctions amplify each other
 - ▶ in trade with Non-Western countries, increasing use of partner currencies mitigate financial sanctions' impacts

Appendix

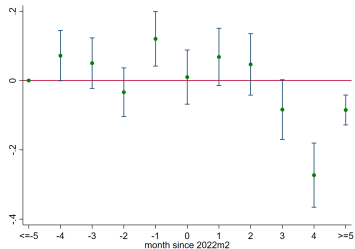
Dynamic Responses - SWIFT Sanction on Russian Import



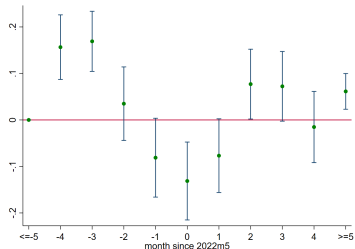
(a) SWIFT Sanction 1: Import from West



(c) SWIFT Sanction 2: Import from West

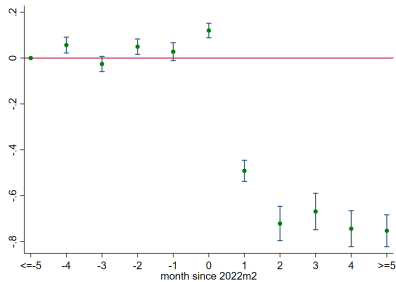


(b) SWIFT Sanction 1: Import from Non-West

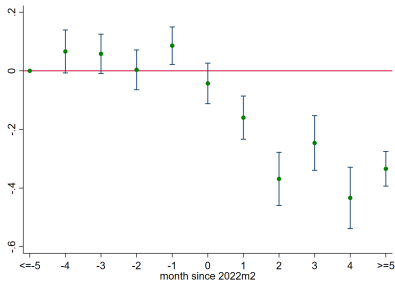


(d) SWIFT Sanction 2: Import from Non-West

Dynamic Responses - Western Banks' Withdrawal on Russian Import

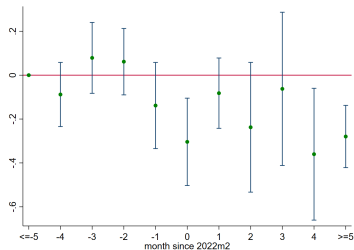


(e) Western Banks' Withdrawal on Russian Import from West

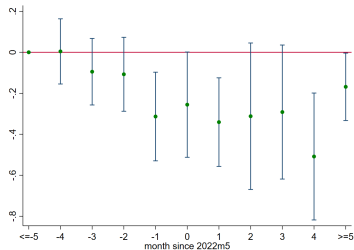


(f) Western Banks' Withdrawal on Russian Import from Non-West

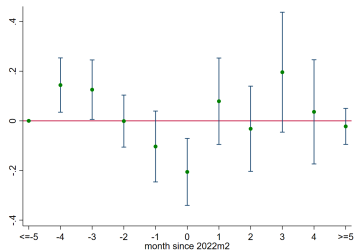
Dynamic Responses - SWIFT Sanction on Russian Export



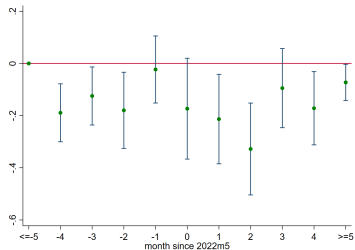
(a) SWIFT Sanction 1: Export to West



(c) SWIFT Sanction 2: Export to West

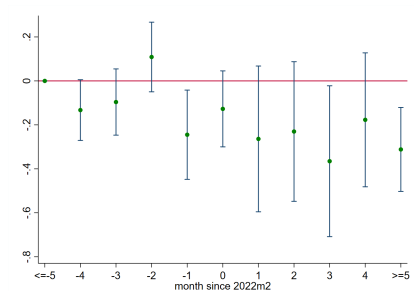


(b) SWIFT Sanction 1: Export to Non-West

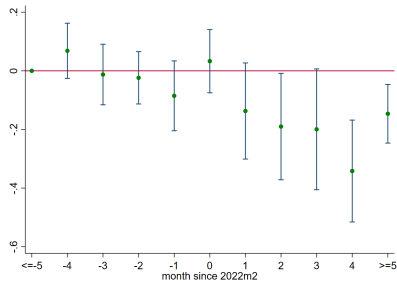


(d) SWIFT Sanction 2: Export to Non-West

Dynamic Responses - Western Banks' Withdrawal on Russian Export



(e) Western Banks' Withdrawal on Russian Export to West



(f) Western Banks' Withdrawal on Russian Export to Non-West

Role of External Finance Dependence

	(1)	(2)	(3)	(4)	(5)	(6)
	all sample	Russian Import West	Non-West	all sample	Russian Export West	Non-West
swift sanction 1	-0.068** (0.031)	-0.168*** (0.050)	0.046 (0.034)	-0.183*** (0.046)	-0.491*** (0.097)	-0.079 (0.050)
swift sanction 2	-0.188*** (0.025)	-0.383*** (0.039)	0.033 (0.029)	-0.089* (0.053)	-0.100 (0.091)	-0.072 (0.057)
West bank post war	-0.401*** (0.030)	-0.490*** (0.045)	-0.272*** (0.040)	-0.113* (0.063)	-0.198** (0.084)	-0.074 (0.072)
swift sanction 1*EFD	-0.306*** (0.059)	-0.354*** (0.106)	-0.310*** (0.072)	0.454*** (0.130)	1.028*** (0.239)	0.214* (0.120)
swift sanction 2*EFD	-0.039 (0.057)	-0.253** (0.099)	0.077 (0.061)	0.043 (0.115)	-0.834*** (0.243)	0.091 (0.120)
West bank post war*EFD	-0.396*** (0.063)	-0.579*** (0.109)	-0.149* (0.077)	-0.172 (0.139)	0.279 (0.212)	-0.349* (0.177)
Observations	2756305	1800907	955398	282915	69979	212936
R ²	0.849	0.859	0.820	0.946	0.956	0.941

Standard errors clustered at the product level in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$