Has the US exorbitant privilege become a rich world privilege? Rates of return and foreign assets from a global perspective, 1970-2022

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Ongoing public debate

What are the cross-country distributional effects of financial globalization?

- Unfair Global Financial System
  - Global South complains about the high cost of honoring their external debt (Kenya's president, William Ruto, New Global Financial Pact summit in Paris, 23rd June 2023)

- Unequal Global Monetary System: too central role of US dollar
  - Questioned: "why are all countries obliged to make their trade backed by the dollar? Why can't we trade in our own currency?" (Lula da Silva -Brazil's president- Shanghai, April 13th 2023)
  - Contested: BRICS+ proposal of group's currency

- Not new and not only a Global South complain:
  - Centrality of US anticipated by Keynes' proposal of an International Clearing Union (1944)
  - Pointed out in the 1960s by European countries (Eichengreen, 2011)

This paper

We document the winners and losers of financial globalization for the 1970-2022 period

- 216 economies
- **Privilege**:
  rates of return received on foreign assets - rates of return paid on foreign liabilities > 0

  This is a paper about yields.

  $$i^A - i^L = \frac{FKI^A}{A} - \frac{FKI^L}{L}$$
- We also examine the mechanisms behind the results
  - We expose all the main line of thoughts that could explain the privilege

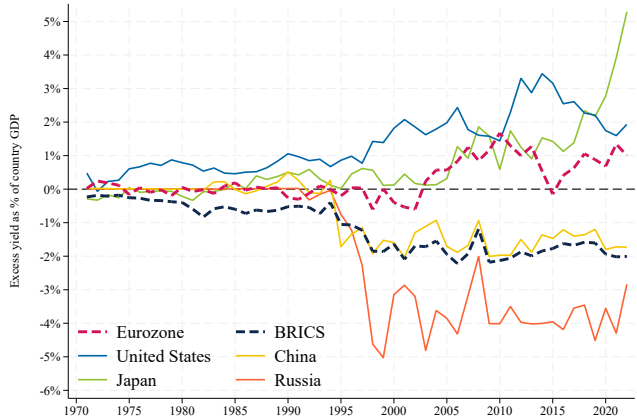
Preview of results

We document that the rich world is privileged in the current global financial and monetary system

- Net income transfers from the poorest to the richest
  - Equals to 1% of the GDP of top 20% countries (and 2% of GDP for top 10% countries)
- The privilege alleviates the current account balance of the richest
  - Deteriorates CA of the bottom 80% by 2-3% of their GDP
  - Need to compensate with trade surplus or new debt
- Rich world accessing cheaper borrowing rather than investing in better assets
  - Both for public debt and for private sector debt

US privilege has become a Rich world privilege, financed by the BRICS

Excess yields income, as a share of country GDP

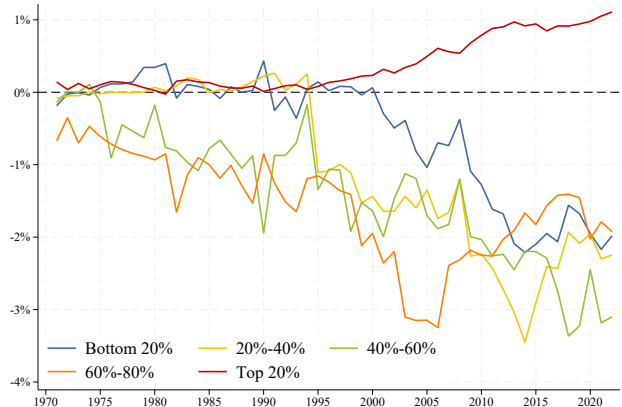


Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ Tax havens correction ▸ Raw data

Excess yield income as a share of GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



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Related literature

- Exorbitant privilege:
  - Gourinchas and Rey (2007) start the US exorbitant privilege literature
  - US centered:

    Atkeson, Heathcote, and Perri (2022); Curcuru, Dvorak, and Warnock (2008); Curcuru, Thomas, and Warnock (2009, 2013); Forbes (2010); Gourinchas and Rey (2022); Lane and Milesi-Ferretti (2007, 2009); Meissner and Taylor (2006); Obstfeld and Rogoff (2005); **?**
  - Other than US studies:

    Rogoff and Tashiro (2015) finds a Japanese privilege, Habib (2010) studies 49 countries from 1981-2007, Darvas and Hüttl (2017) studies 56 countries with coverage depending on the country, Adler and Garcia-Macia (2018) studies 52 countries in 1990-2015, Meissner and Taylor (2006) studies G7 economies
  - Our contribution: Study the whole world and the complete realm of wealth (including offshore), contrasting benefits of the privilege with losses for ROW.

- Dominant currencies on trade invoicing and safe-asset determination:

  Bertaut, Curcuru, Faia, and Gourinchas (2024); Farhi and Maggiori (2018); Gopinath et al. (2020); Gopinath and Stein (2018); Gourinchas and Rey (2022); Hassan (2013); He, Krishnamurthy, and Milbradt (2019); Maggiori (2017)

Roadmap

Motivation

Data

NFA accumulation: Current account vs Valuation changes
- G8 vs BRICS

Unequal rates of return
- G8 vs BRICS

Total excess returns
- Risk adjusted returns

Public vs private returns

Conclusion

Data

216 economies from 1970-2022.

- National accounts:
  Wid.world + regional statistical offices for small tax havens islands (i.e. Bonaire from CBS Netherlands)
- Foreign wealth: The External Wealth of Nations (Lane & Milesi-Ferretti, 2018)
- Foreign capital income: The IMF BOP, UN SNA and OECD.
- Trade: IMF BOP + Gravity (Conte, Cotterlaz, Mayer, et al., 2022).
- Current account (rest) and capital account: IMF BOP
- Public debt :
  International Debt Statistics (WB), Arslanalp and Tsuda (2012); Avdjiev, Hardy, Kalemli-Özcan, and Servén (2017); Mauro, Romeu, Binder, and Zaman (2015)

Data caveats

- We do not have perfect nor extremely detailed data as other studies
  - Gourinchas and Rey (2022) uses quarterly data from the US for 1952-2016.
  - Bertaut et al. (2024) rely on security level data for the US.

Still necessary to study the global context given the magnitude of the transfers, even if done with aggregated yearly macro data.

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  Still necessary to study the global context given the magnitude of the transfers, even if done with aggregated yearly macro data.

- We do not have directional data on capital or income flows
  - "Net" transfers from poor to rich countries are reached by netting the global aggregates, thus ensuring that whatever is won in one side has been necessarily lost in another. We cannot assess intermediate steps of these transfers.
  - Netting 50+ years globally is not straightforward. We try two methods
    1. Following the hidden wealth literature
       Corrections for offshore wealth (Alstadsæter et al., 2018; Zucman, 2013)
       Corrections for missing profits (Tørsløv et al., 2018; Wier & Zucman, 2022)
    2. Simply correcting proportionally

    We end choosing 2, although results are almost identical for both and are very similar when applying no correction either.

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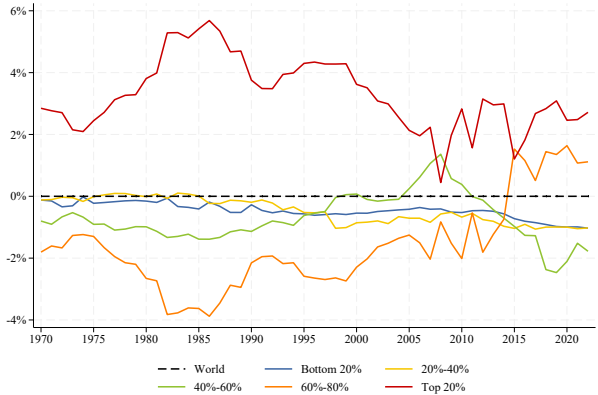
Richer countries are net creditors while poor countries are net debtors

Net foreign assets as a share of world GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Assets ▸ Liabilities ▸ TH correction ▸ Raw data ▸ Group GDP ▸ Regional ▸ Countries ▸ Transition matrix ▸ GDP shares

Methodology: identifying capital gains and losses

$$NFA_t - NFA_{t-1} = \underbrace{TB_t + NKI_t + NLI_t + NCT_t}_{\text{Current Account}} + KA_t + KG_t$$

Foreign wealth accumulation is the result of trade balance, net foreign income and capital gains and losses (which are unobserved but can be estimated as a residual term from other observed variables)

TB_t = Trade Balance, NKI_t = Net foreign Capital Income, NLI_t = Net foreign Labor Income,

NCT_t = Net Current Transfers, NFA_t = Net Foreign Assets, KG_t = Capital Gains (unobserved)

Capital gains and losses

Hypothesis 1: *Rich countries receive a return premium because every now and then they loose their investments abroad due to expropriation or default from governments in the Global South. In effect, the excess yield is an illusion once capital gains and losses are taken into account.*

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Capital gains/losses is the difference between the cumulated current account and the NFA positions in market value (offshore wealth included).

$$KG_t = NFA_t - \left(NFA_{t_0} + \sum_{s=1}^{t} (CA_t + KA_t) \right)$$

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Fact: Rich countries experience positive capital gains

- Evidence that they are on average not losing their investments, thus the ”compensation” narrative does not hold.

▸ Stylized facts

Rich countries cumulate foreign wealth with investment income and capital gains

Decomposition 1970-2022

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/ GDP(1970)
Bottom 20%	-6%	-54%	-1%	-24%	-18%	-144%	-21%	4%	1%	130%	19%	0%	0	2	460%
20-40%	-3%	-28%	0%	-36%	-14%	-59%	-3%	4%	-1%	68%	10%	2%	0	3	812%
40-60%	-16%	-27%	-2%	-45%	-6%	14%	-9%	5%	-1%	45%	11%	-38%	1	9	937%
Next Top 20%	-8%	4%	-2%	-38%	-11%	33%	-10%	1%	0%	20%	0%	9%	4	19	447%
Top 20%	6%	2%	1%	15%	5%	-10%	9%	-1%	0%	-18%	-3%	4%	16	69	439%

▸ Decomposition by subperiods

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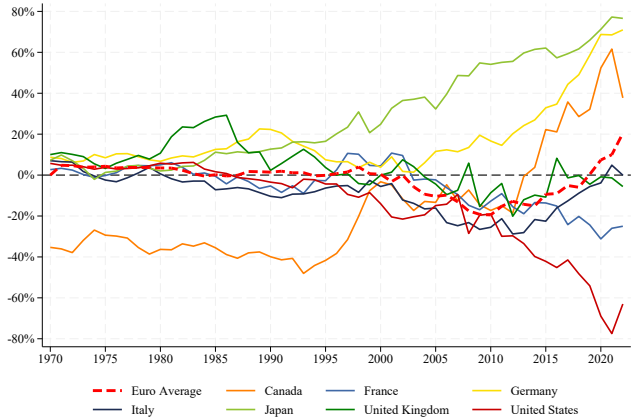
Very diverse patterns of foreign wealth accumulation among the rich

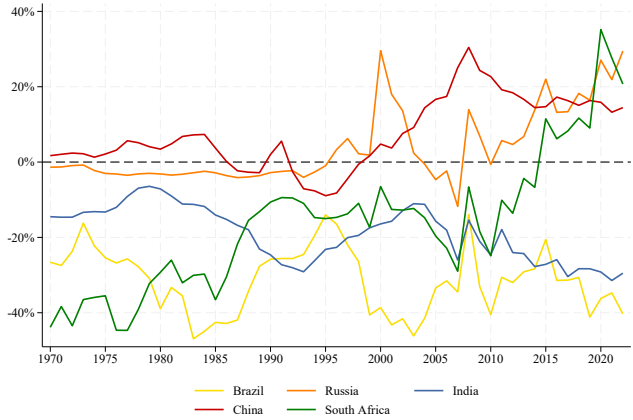
Net foreign assets as a share of country GDP



▸ Tax havens correction ▸ Raw data

Very diverse patterns also among the BRICS

Net foreign assets as a share of country GDP



▸ Tax havens correction ▸ Raw data

Financial privilege and trade deficit of rich countries are paid by trade surpluses and financial losses of BRICS

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
Countries	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/ GDP(1970)
Canada	-35%	38%	-9%	-3%	-31%	46%	-37%	10%	0%	0%	2%	60%	1	2	382%
France	3%	-25%	1%	49%	-3%	-45%	35%	21%	2%	-61%	-2%	-23%	1	3	290%
Germany	9%	71%	3%	16%	23%	173%	-57%	0%	-3%	-48%	-22%	-14%	2	5	260%
Italy	7%	0%	3%	1%	-16%	28%	-2%	6%	0%	-26%	-6%	11%	1	2	232%
Japan	7%	77%	2%	36%	43%	50%	-41%	1%	0%	-11%	-10%	8%	1	4	309%
United Kingdom	10%	-6%	3%	29%	12%	-155%	104%	-2%	-3%	-29%	-7%	42%	1	3	294%
United States	6%	-63%	1%	50%	-15%	-110%	22%	-1%	0%	-14%	0%	4%	7	27	410%
Eurozone	5%	16%	2%	12%	0%	41%	8%	4%	0%	-31%	-8%	-12%	5	16	301%
Total G8	4%	-20%	1%	34%	-5%	-49%	16%	1%	0%	-19%	-4%	4%	15	52	353%
Brazil	-27%	-40%	-5%	-69%	-33%	51%	-52%	0%	0%	6%	0%	61%	0	2	548%
China	2%	14%	0%	-21%	7%	45%	-11%	-1%	0%	5%	7%	-16%	1	16	2834%
India	-15%	-30%	-1%	-24%	-10%	-94%	31%	0%	0%	47%	-1%	21%	0	3	1452%
Russia	-1%	29%	0%	-81%	6%	225%	-66%	-7%	0%	-13%	-19%	-16%	1	2	295%
South Africa	-44%	21%	-13%	-59%	-26%	66%	-22%	-16%	0%	-26%	-4%	119%	0	0	342%
Total BRICS	-9%	5%	-1%	-31%	0%	41%	-14%	-2%	0%	9%	3%	-2%	2	24	1249%

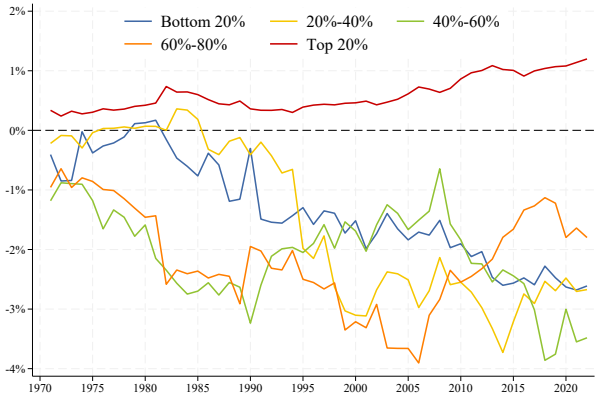
▸ Decomposition by subperiods

Roadmap

Only rich countries receive positive net foreign capital income

Net foreign capital income as a share of group GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Regional ▸ Tax havens correction ▸ Raw data

Methodology: decomposing excess return

$$NKI_t + KG_t = (i_t^A \times A_{t-1} - i_t^L \times L_{t-1}) + (k_t^A \times A_{t-1} - k_t^L \times L_{t-1}) \qquad \text{(Total net return)}$$

$$r_t^A = i_t^A + k_t^A \qquad \textit{and} \qquad r_t^L = i_t^L + k_t^L \qquad \text{(Total rate of return)}$$

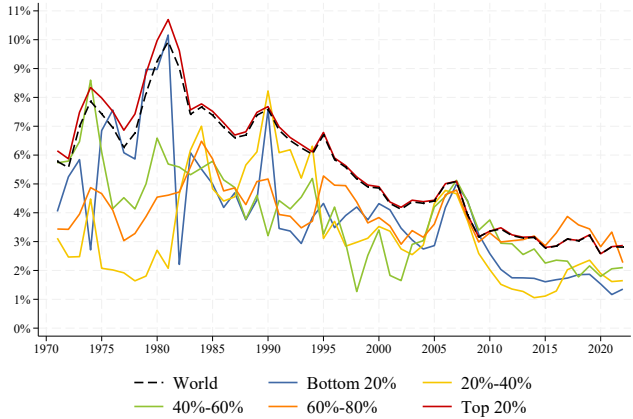
$$r_t^A - r_t^L = \underbrace{(i_t^A - i_t^L)}_{\text{excess yield}} + \underbrace{(k_t^A - k_t^L)}_{\text{excess rate of KG}} \qquad \text{(Total Excess returns)}$$

With

- A = Assets, L = Liabilities
- $i_t^A = \frac{FKI_t^A}{A_{t-1}}$ and $i_t^L = \frac{FKI_t^L}{L_{t-1}}$ = yields
- $k_t^A = \frac{KG_t^A}{A_{t-1}}$ and $k_t^L = \frac{KG_t^L}{L_{t-1}}$ = rates of capital gain

Returns on foreign assets have decreased for every income group...

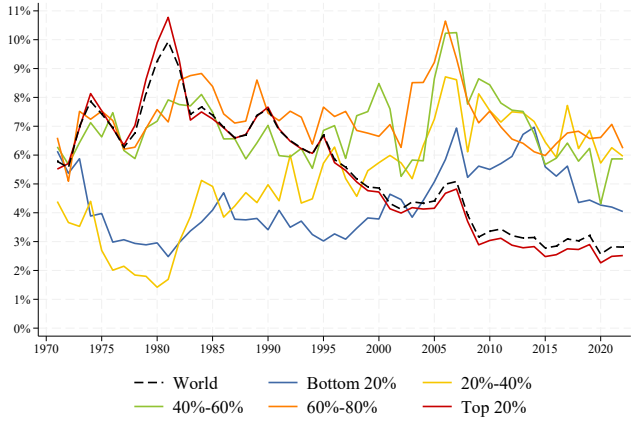
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Regional ▸ Tax havens correction ▸ Raw data

...but returns on foreign liabilities have only decreased for the richest

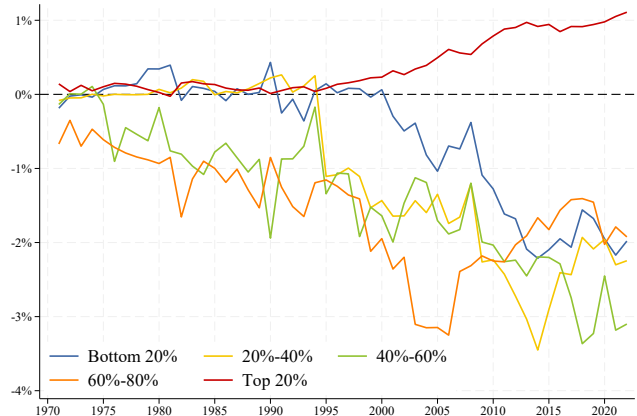
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Regional ▸ Tax havens correction ▸ Raw data

Excess yield income as a share of GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ Differential ▸ Regional ▸ Tax havens correction ▸ Raw data ▸ No CHN

Average net foreign capital income and excess yield as a % of GDP

	Net KI	Exc. yield	Net KI	Exc. yield	Net KI	Exc. yield	Net KI	Exc. yield
	US		Eurozone		UK		Japan	
1970-1999	0.80%	0.74%	0.10%	-0.04%	1.82%	0.82%	0.69%	0.14%
2000-2009	1.30%	1.85%	0.03%	0.38%	1.60%	1.65%	1.90%	0.68%
2010-2022	1.47%	2.42%	0.72%	0.88%	0.14%	0.25%	3.66%	2.04%
	Switzerland		Canada/AUS/NZ		Top 10%		Next top 10%	
1970-1999	4.55%	0.44%	-2.92%	-0.38%	0.77%	0.38%	-0.46%	-0.67%
2000-2009	5.45%	0.42%	-2.12%	-0.95%	1.30%	1.20%	-1.18%	-1.33%
2010-2022	3.53%	0.15%	-0.38%	0.27%	1.75%	1.77%	-0.74%	-1.07%

Countries grouped according to national income per capita quintiles, weighted by population. E.g. top 20% countries include exactly the top 20% of the world population (1.6 billion out of 7.8 billion in 2020) living in the countries with highest per capita income. In 2020: main top 20% countries include Australia, Canada, Finland, France, Germany, Switzerland, the U.S., and the U.K. Western Europe countries include Austria, Belgium, Denmark, France, Italy, Netherlands, Switzerland, and the U.K. Rest of top 20% exclude the U.S. and Western Europe, include countries as Australia, Canada, Israel, Japan, Qatar, and South Korea.

Decomposition of the privilege

Hypothesis 2: *Rich countries receive a positive excess return by investing in more profitable assets, i.e. the excess yield comes mostly from higher rates of return on their foreign assets.*

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We compare the rates of return for each country group with the world's average

$$i^B_c - i^B_{world} = \sum_\rho \left(\underbrace{\alpha_{\rho,c} \times (i^B_{\rho,c} - i^B_{\rho,world})}_{\text{Return effect}} + \underbrace{(\alpha_{\rho,c} - \alpha_{\rho,world}) \times i^B_{\rho,c}}_{\text{Composition effect}} \right)$$

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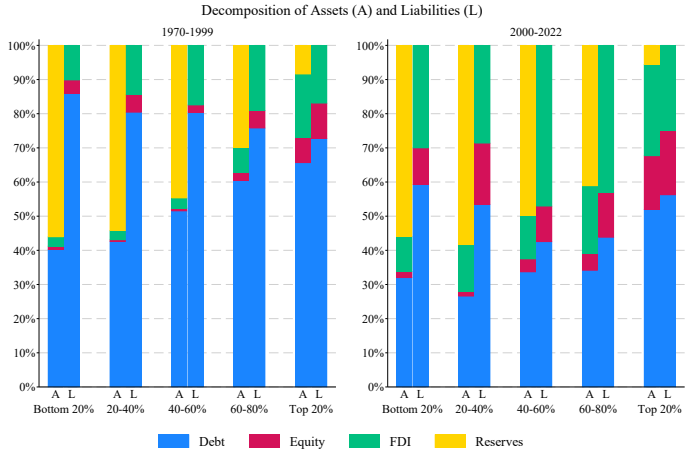
Fact: Rich countries' return on foreign assets is -for almost every asset class- lower than the world's average.

- Privilege comes from cheaper borrowing.
  Their return on foreign liabilities is also lower than the world's average.

Rich countries hold less central bank reserves and less FDI liabities



Financial derivatives, Other investment and Offshore wealth is contained in Debt. Reserves excludes gold.

▸ Assets ▸ Liabilities ▸ Whole period ▸ Top 20 ▸ Quintiles

Composition effect does not contribute much to the privilege

Quintile	Period	Total assets			Equity		Debt		FX Res.	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Bottom 20%	1970-1999	-0.06%	0.06%	-0.11%	0.00%	0.01%	-0.04%	-0.13%	0.10%	0.00%	0.01%
	2000-2022	0.01%	0.06%	-0.05%	0.00%	0.05%	-0.03%	-0.04%	0.13%	-0.03%	-0.06%
20%-40%	1970-1999	0.01%	0.06%	-0.05%	0.00%	0.00%	-0.04%	-0.06%	0.11%	0.00%	0.01%
	2000-2022	0.09%	0.10%	-0.01%	0.00%	0.01%	-0.03%	0.03%	0.15%	-0.02%	-0.04%
40%-60%	1970-1999	-0.04%	0.07%	-0.11%	0.00%	0.01%	-0.04%	-0.12%	0.12%	-0.01%	0.00%
	2000-2022	-0.03%	0.13%	-0.15%	-0.06%	0.12%	-0.07%	0.20%	0.29%	-0.03%	-0.47%
60%-80%	1970-1999	-0.02%	0.02%	-0.05%	0.00%	0.01%	-0.02%	-0.05%	0.06%	-0.01%	-0.01%
	2000-2022	0.02%	0.12%	-0.10%	-0.02%	0.06%	-0.08%	0.17%	0.25%	-0.03%	-0.33%
Top 20%	1970-1999	0.04%	0.03%	0.02%	0.00%	-0.01%	0.02%	0.02%	-0.01%	0.01%	0.00%
	2000-2022	0.07%	0.07%	0.00%	0.02%	-0.01%	0.04%	-0.03%	-0.01%	0.02%	0.04%

Note: Excess composition is defined as the difference with the world average asset class weight within the asset class times (asset class) groups' return rate, as a share of GDP. Columns (2)-(4) represent the sum of columns (5)-(11).

Return effect : Privilege comes from cheaper liabilities

Quintile	Period	Total assets			Equity		Debt		FX Res.	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Bottom 20%	1970-1999	1.02%	-0.13%	1.15%	0.01%	0.01%	-0.05%	1.03%	0.00%	-0.01%	0.07%
	2000-2022	-1.05%	-0.22%	-0.83%	0.00%	-0.39%	-0.03%	-0.20%	-0.05%	0.02%	-0.70%
20%-40%	1970-1999	0.49%	-0.32%	0.80%	0.04%	-0.01%	-0.14%	0.61%	-0.07%	-0.01%	0.21%
	2000-2022	-1.81%	-0.27%	-1.54%	0.00%	-0.79%	-0.04%	-0.62%	-0.07%	-0.03%	-0.99%
40%-60%	1970-1999	-0.23%	-0.31%	0.08%	0.02%	-0.05%	-0.16%	0.41%	-0.02%	-0.01%	-0.44%
	2000-2022	-2.50%	-0.38%	-2.12%	0.36%	-1.18%	-0.07%	-0.73%	0.04%	-0.22%	-0.77%
60%-80%	1970-1999	-0.66%	-0.51%	-0.15%	0.00%	-0.12%	-0.31%	0.07%	-0.05%	-0.07%	-0.13%
	2000-2022	-2.05%	-0.12%	-1.93%	0.04%	-0.81%	0.03%	-0.80%	0.16%	-0.17%	-0.71%
Top 20%	1970-1999	0.16%	0.20%	-0.04%	0.01%	0.02%	0.11%	-0.08%	0.02%	0.02%	0.02%
	2000-2022	**0.73%**	0.06%	0.67%	-0.01%	0.29%	0.00%	0.26%	-0.03%	0.04%	0.26%

Note: Return effect is defined as the difference with the world's average return rate within the asset class times assets (liabilities), expressed as a fraction of GDP. Columns (2)-(4) represent the sum of columns (5)-(11).

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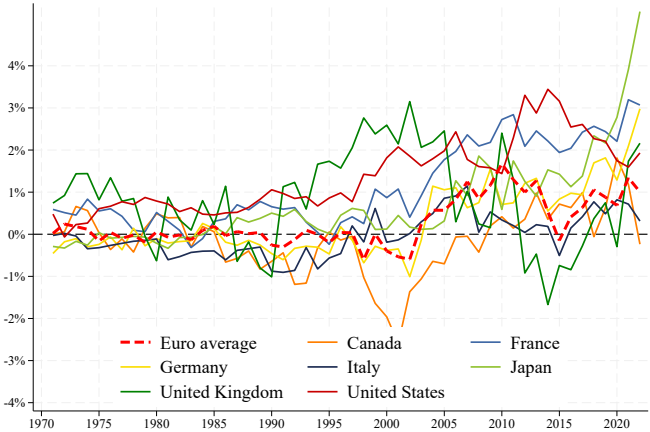
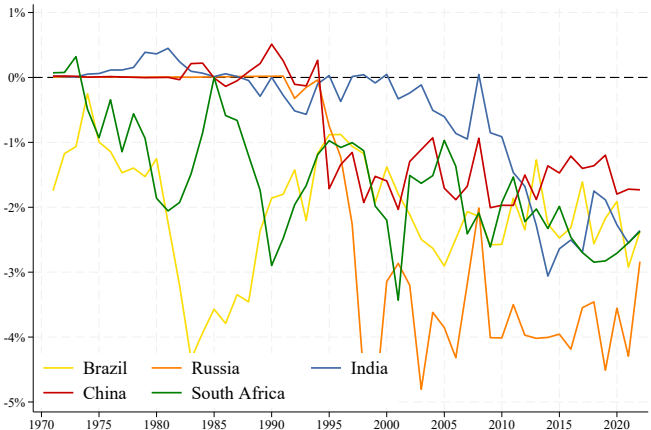
Excess yields income of the Euro vs G7 countries, as a share of country (Eurozone) GDP



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP.
Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ NFKI ▸ Euro IMS ▸ Euro excess yield ▸ Euro vs G7 excess yield ▸ TH correction

Excess yields income as a share of country GDP, BRICS



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ Other developing ▸ NFA ▸ Excess yield ▸ TH correction ▸ Tipping point

Return effect explains financial gains for G7

		Total assets			Equity		Debt		Reserves	FDI	
	Period	**Privilege**	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Composition effect											
Canada	2000-2023	0.41%	0.37%	0.04%	0.60%	0.03%	-0.62%	0.24%	-0.01%	0.39%	-0.23%
Germany	2000-2023	0.19%	0.47%	-0.29%	-0.03%	0.10%	0.63%	-0.50%	0.00%	-0.12%	0.11%
France	2000-2023	0.11%	0.63%	-0.53%	-0.10%	0.04%	0.87%	-0.73%	0.00%	-0.14%	0.17%
United Kingdom	2000-2023	0.18%	1.06%	-0.88%	-0.12%	0.07%	1.69%	-1.41%	-0.01%	-0.50%	0.46%
Italy	2000-2023	-0.30%	0.10%	-0.40%	0.13%	0.07%	0.04%	-0.58%	0.00%	-0.07%	0.11%
Japan	2000-2023	-0.29%	-0.03%	-0.26%	-0.04%	-0.23%	0.17%	-0.12%	0.05%	-0.21%	0.09%
United States	2000-2023	0.13%	0.16%	-0.03%	0.19%	-0.02%	-0.15%	-0.05%	0.00%	0.13%	0.04%
Total G7	2000-2023	-0.04%	0.13%	-0.17%	0.06%	0.01%	0.16%	-0.28%	-0.01%	-0.08%	0.10%
Return effect											
Canada	2000-2022	-0.78%	-1.14%	0.36%	0.39%	0.13%	0.01%	-0.74%	-0.01%	-1.54%	0.97%
Germany	2000-2022	0.77%	0.09%	0.68%	-0.23%	-0.23%	0.34%	0.27%	0.00%	-0.02%	0.64%
France	2000-2022	2.45%	0.12%	2.33%	0.12%	0.60%	0.31%	0.97%	0.00%	-0.31%	0.75%
United Kingdom	2000-2022	3.01%	1.29%	1.72%	0.77%	0.36%	-0.95%	1.14%	-0.02%	1.48%	0.22%
Italy	2000-2022	-0.34%	-0.35%	0.01%	-0.56%	-0.18%	0.33%	-0.05%	-0.01%	-0.11%	0.24%
Japan	2000-2022	1.23%	1.05%	0.17%	0.47%	-0.37%	-0.10%	0.74%	0.10%	0.58%	-0.20%
United States	2000-2022	2.39%	1.13%	1.26%	-0.34%	0.51%	0.42%	-0.09%	-0.01%	1.06%	0.84%
Total G7	2000-2022	1,72%	0,64%	1,08%	-0,08%	0,23%	0,20%	0,20%	0,01%	0,51%	0,65%

Expensive liabilities explain financial losses for BRICS

		Total assets			Equity		Debt		Reserves	FDI	
	Period	**Privilege**	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Composition effect											
Brazil	2000-2023	0.07%	0.16%	-0.09%	-0.01%	-0.03%	-0.05%	0.31%	0.15%	0.07%	-0.37%
China	2000-2023	0.19%	0.24%	-0.04%	-0.06%	0.08%	-0.10%	0.26%	0.43%	-0.04%	-0.38%
India	2000-2023	0.12%	0.18%	-0.06%	0.00%	-0.21%	-0.03%	0.12%	0.24%	-0.02%	0.04%
Russia	2000-2023	-0.15%	0.06%	-0.21%	-0.01%	0.04%	-0.06%	0.16%	0.11%	0.03%	-0.41%
South Africa	2000-2023	0.47%	0.42%	0.05%	0.59%	-0.34%	-0.25%	0.68%	0.01%	0.06%	-0.29%
Total BRICS	2000-2023	0.09%	0.15%	-0.07%	-0.02%	0.00%	-0.09%	0.24%	0.29%	-0.03%	-0.30%
Return effect											
Brazil	2000-2022	-1.65%	-0.14%	-1.51%	0.00%	-0.33%	0.15%	-0.71%	0.07%	-0.36%	-0.48%
China	2000-2022	-0.98%	0.32%	-1.30%	0.27%	-0.77%	0.09%	-0.31%	0.22%	-0.25%	-0.22%
India	2000-2022	-0.76%	0.16%	-0.92%	0.00%	-0.32%	0.09%	-0.10%	0.00%	0.07%	-0.51%
Russia	2000-2022	-2.96%	0.51%	-3.46%	0.04%	-0.81%	0.29%	-0.57%	-0.13%	0.30%	-2.08%
South Africa	2000-2022	-2.54%	-0.64%	-1.90%	-0.05%	-0.67%	0.27%	-0.99%	-0.01%	-0.86%	-0.25%
Total BRICS	2000-2022	-1,27%	0,16%	-1,43%	0,05%	-0,59%	0,14%	-0,41%	0,14%	-0,17%	-0,43%

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NFA accumulation: Current account vs Valuation changes
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Total excess returns
- Risk adjusted returns

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Total excess returns

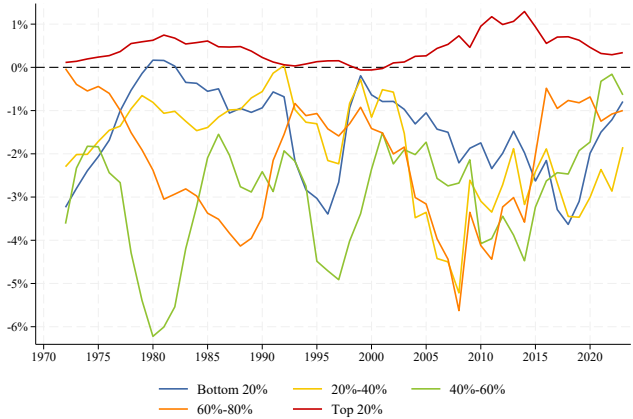
- Total excess returns are calculated as

$$r_t^A - r_t^L = \underbrace{(i_t^A - i_t^L)}_{\text{excess yield}} + \underbrace{(k_t^A - k_t^L)}_{\text{excess rate of KG}} \qquad \text{(Excess returns)}$$

- $KG^A = A_t - A_{t-1} - Flow_t^A$
- $k_t^A = \frac{KG_t^A}{A_{t-1}}$ and $k_t^L = \frac{KG_t^L}{L_{t-1}}$ = rates of capital gain
- Total Excess return is still positive for the richest countries $\rightarrow$ privilege persists

Total Excess returns as a share of group GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



Graph shows total excess returns (excess yields + excess rate of KG) smoothed using a 5-year moving average.

▸ Total excess returns G8 ▸ Total excess returns BRICS ▸ Table

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Risk adjusted returns

Hypothesis 3: *Rich countries receive a return premium to compensate for the volatility of returns on their foreign assets; thus, the risk-adjusted yield is lower for wealthier nations.*

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- We showed that richest countries profit from capital gains $\rightarrow$ we know that on average they offset any potential investment losses.

- We now analyze their Return-to-Volatility (RV) ratio $= \frac{r^B}{sd^B}$
  - Intepretation: return per unit of risk
  - Similar to Sharpe ratio but without risk free asset
  - $\uparrow$ RV on assets = better risk-adjusted returns.
  - $\uparrow$ RV on liabilities = paying more per unit of risk

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Fact: Rich countries' assets are more than compensated per unit of risk, with respect to the rest of the world.

Return-to-Volatility Ratio

Return-to-Volatility Ratio

Quintile	Period	Avg rate/sd	Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Bottom 20%	1970-1999	Avg rate/sd	20%	131%	8%	62%	62%	120%	-26%	-54%	136%
	2000-2023	Avg rate/sd	46%	108%	25%	64%	38%	89%	28%	94%	131%
20%-40%	1970-1999	Avg rate/sd	-12%	169%	104%	102%	55%	162%	-51%	6%	8%
	2000-2023	Avg rate/sd	1%	72%	7%	51%	-54%	31%	21%	15%	94%
40%-60%	1970-1999	Avg rate/sd	66%	187%	103%	108%	93%	180%	-17%	36%	163%
	2000-2023	Avg rate/sd	86%	110%	49%	50%	30%	152%	56%	80%	86%
60%-80%	1970-1999	Avg rate/sd	181%	291%	141%	82%	112%	271%	13%	161%	131%
	2000-2023	Avg rate/sd	92%	100%	40%	56%	8%	181%	82%	136%	75%
Top 20%	1970-1999	Avg rate/sd	321%	323%	251%	192%	294%	268%	105%	151%	147%
	2000-2023	Avg rate/sd	88%	85%	47%	54%	83%	82%	55%	74%	63%

▸ G8 ▸ BRICS

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- Richest countries pay less than the world's average nowadays
  Very poor countries also pay less than average, thanks to official lenders

→ We isolate the private privilege
  - We exclude reserves, loans granted and external public assets from total assets (and their accrued income)
  - We exclude public sector external debt from total liabilities (and their accrued income)

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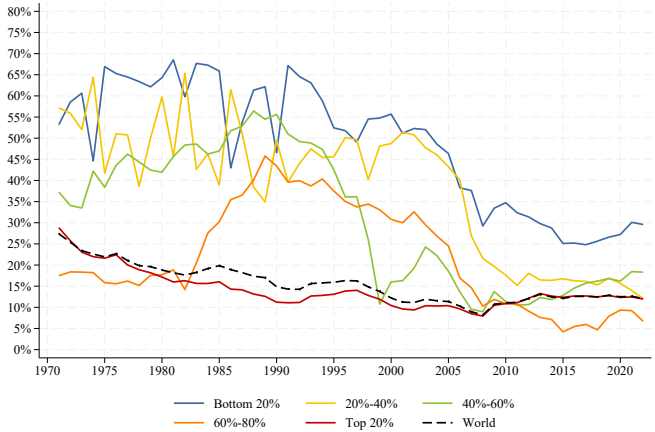
→ We isolate the private privilege
  - We exclude reserves, loans granted and external public assets from total assets (and their accrued income)
  - We exclude public sector external debt from total liabilities (and their accrued income)

Fact: The privilege of rich countries is even higher.
  - Market result? Sovereign ceiling.

12% of the world external liabilities are public debt

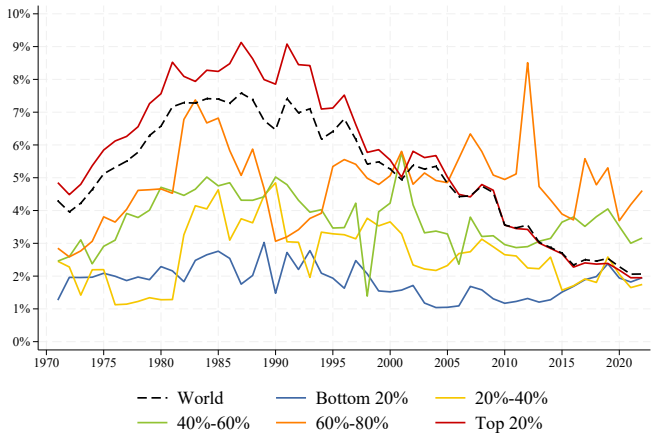
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Ratio total debt

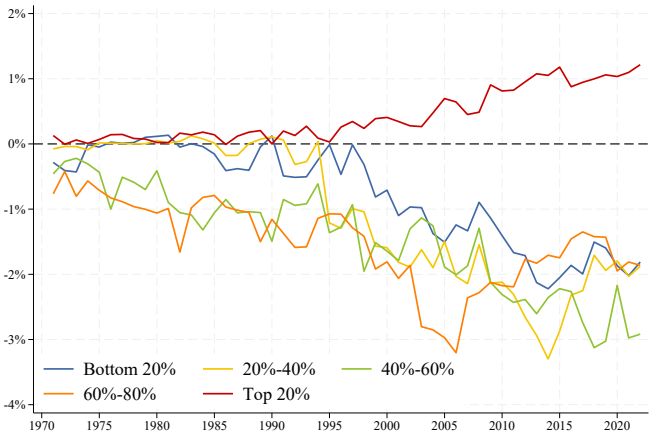
Returns paid on public external debt have decreased for top 20%

Countries grouped by quintiles according to per capita national income (weighted by population)



Private privilege as a share of GDP

Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Return rates

Mechanisms

Hypothesis 5: *The excess yield of rich countries comes from their centrality in the monetary and financial system. Issuing reserve currencies allow them to benefit from lower rates of return on their liabilities (public and private).*

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- Results rooted in the centrality of rich countries in the monetary and financial system
- High demand for financial claims issued by rich countries $\rightarrow$ decreases their cost of borrowing
- We cannot disentangle the various mechanisms at play, combination of factors:

Mechanisms

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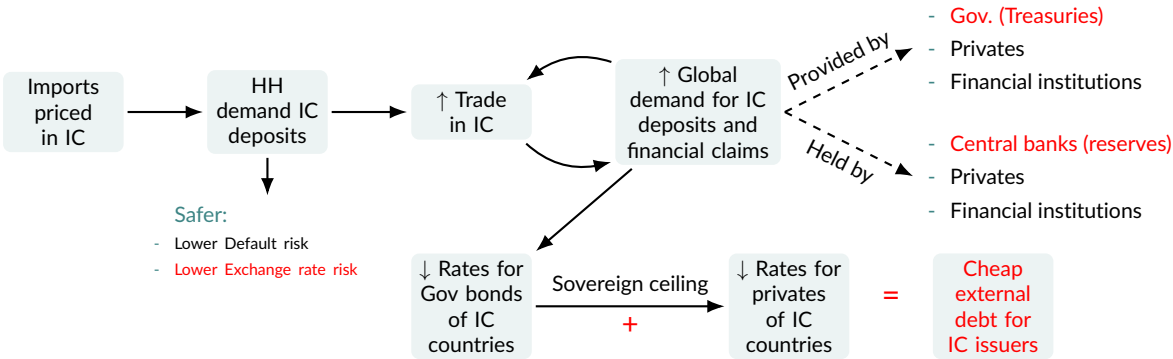
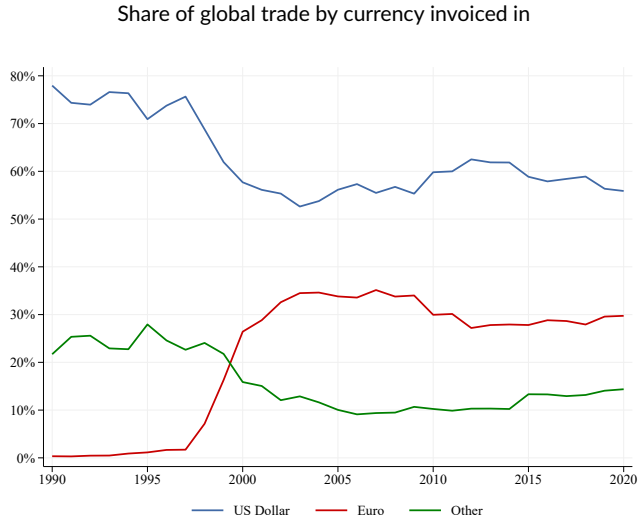
- Results rooted in the centrality of rich countries in the monetary and financial system
- High demand for financial claims issued by rich countries $\rightarrow$ decreases their cost of borrowing
- We cannot disentangle the various mechanisms at play, combination of factors:
  1. Issuance of international reserve currencies, which are demanded globally.
  2. Macroprudential rules tend to consider public and private assets issued by rich countries as safer than other assets (reinforced post-2008)
  3. Tax and security (avoid rare disasters a la Barro at home) reasons from global South wealth holders
  4. Savings glut, surplus of global savings then global interest rates decrease

All of this accompanied by strong financial and monetary institutions, stable currencies and liquid markets.

Mechanism: the need for international currencies (IC) = cheap debt for issuers

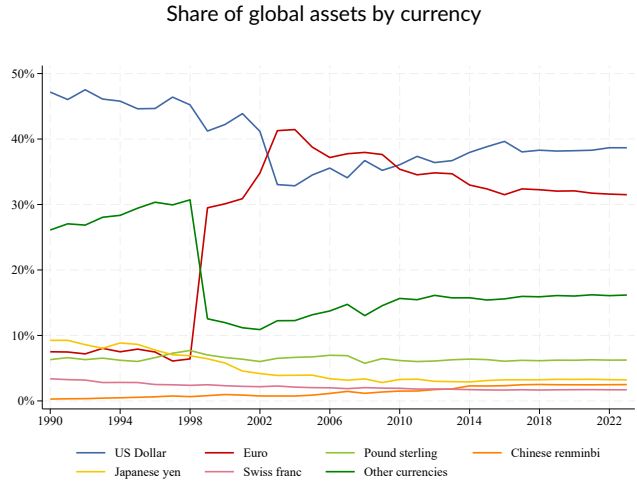


Most of trade is invoiced in US dollars or Euros



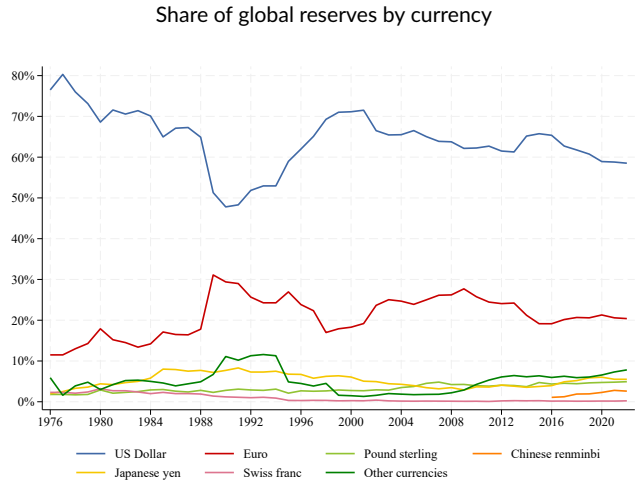
Author's calculations using Boz et al. (2020). EUR includes legacy currencies.

Most of foreign assets are held in US dollars or Euros



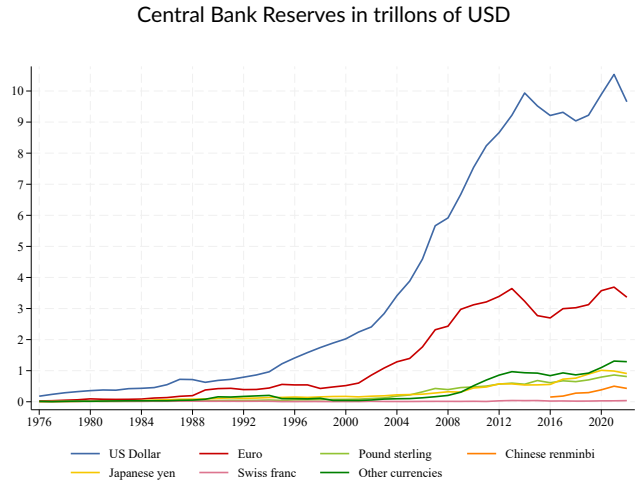
Source: Author's calculations based on A. Bénétrix, Gautam, Juvenal, and Schmitz (2019); A. S. Bénétrix, Lane, and Shambaugh (2015). Euro includes legacy currencies.

Most of reserves are held in US dollars



Source: IMF Annual Reports (1984, 1986-1988, 1990, 1999) and IMF Currency Composition of Official Foreign Exchange Reserves (COFER) (1995-2022). Deutsche marks, French francs, Dutch guilders and ECUs are included in the Euro before 1999.

Mechanism 2: Central Bank reserves have increased since the GFC



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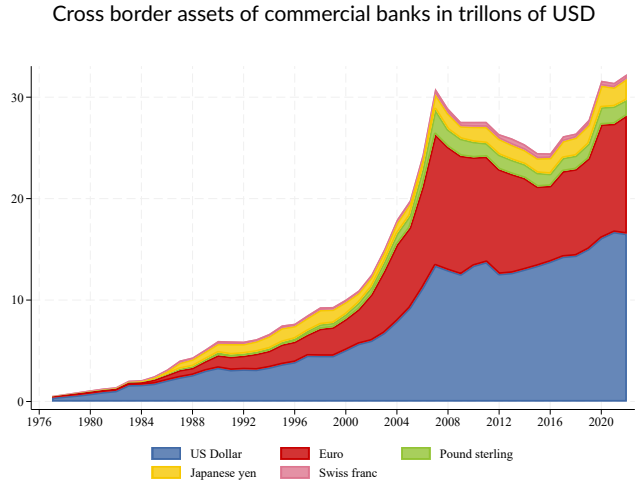
Cross border commercial banks' assets have reached pre-crisis levels



Source: Authors' computation drawing from Bank for International Settlements (2024).

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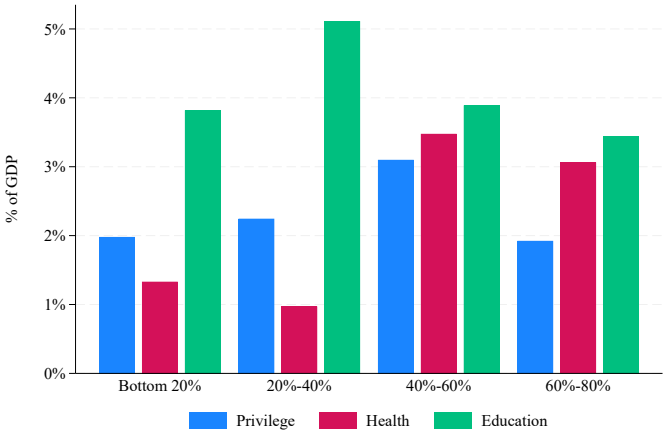
Summary

- Rich countries do enjoy a privilege on their net foreign assets.
  - Issuers of international reserve currencies.
  - Bankers of the world.
- Net income transfers from the poorest to the richest
  - Equals to 1% of the GDP of top 20% countries (and 2% of GDP for top 10% countries)
- The privilege alleviates the current account balance of the richest
  - Deteriorates CA of the bottom 80% by 2-3% of their GDP
- Divergence in the process of foreign capital accumulation, important implications for
  Unequal paths to development
  The international monetary and financial system

Human capital investment vs financial losses (2022)

Countries grouped by quintiles according to per capita national income (weighted by population)



Policy implications

- **Reform of the international financial system:**

  Introduce a clearing system where countries get taxed if their excess foreign capital income is above 0.05% GDP

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  To use in international transactions, would change the equilibrium of the monetary system. More complex.
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- **Reforming IMF governance**

International censitary system: share of voting power in IMF

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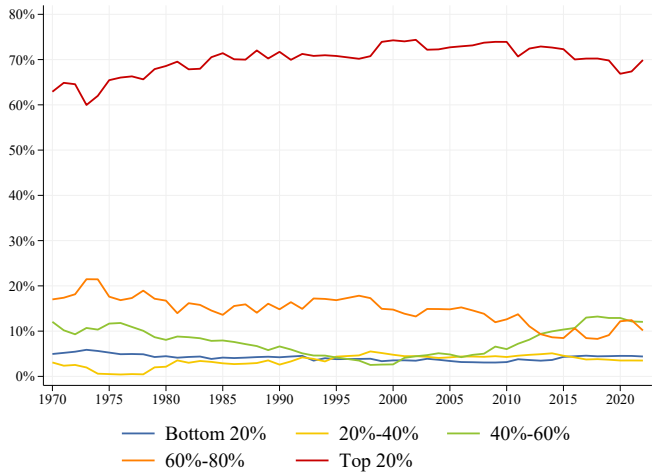

Towards a More Egalitarian System

- Governance of major international financial institutions needs to be redesigned.
- Decouple financial contributions from voting power.

$$\text{Current IMF CQS} = (\alpha \times \text{GDP} + \beta \times \text{Openness} + \delta \times \text{Variability} + \gamma \times \text{Reserves})^K$$

- Richer countries should contribute more than ROW, both in absolute terms and as a share of their GDP.
- Voting formula should incorporate democratic variables alongside monetary factors, ensuring developing countries have a stronger voice in decision-making.

  Proposal: Adjust voting formula to include:

$$\theta \times \text{Population} - \zeta \times \text{Emissions Gap} + \phi \times \text{Female Labor Income Share}$$

Gracias !

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Countries by quintile - 1970 I

- **Bottom 20%:** Bangladesh, Burkina Faso, Burundi, Central African Republic, China (47%), Ethiopia, Gambia, Guinea, Equatorial Guinea, Haiti, Indonesia, Cambodia, Kosovo, Laos, Lesotho, Montenegro, Mali, Myanmar, Malawi, Nepal, Rwanda, Somalia, South Sudan, Timor, Vietnam.

- **20%-40%:** China (53%), India (53%).

- **40%-60%:** Afghanistan, Benin, Bolivia, Bhutan, Botswana, Democratic Republic of Congo, Congo, Cote d'Ivoire, Cameroon, Colombia (12%), Cape Verde, Estonia, Egypt, Eritrea, Grenada (TH), Ghana, Guatemala, Guinea-Bissau, Honduras, India (47%), Kenya, Kiribati, Comoros, South Korea, Sri Lanka, Liberia, Lithuania, Latvia, Morocco, Madagascar, Macedonia, Mongolia, Mauritania, Mauritius (TH), Maldives, Niger, Nigeria, Nicaragua, Papua New Guinea, Philippines, Pakistan, Palestine, Paraguay, Solomon Islands, Sudan, Sierra Leone, Senegal, El Salvador, Syria, Swaziland, Chad, Togo, Thailand, Tunisia, Tonga, Tanzania, Uganda, Saint Vincent and the Grenadines (TH), Yemen, Zimbabwe.

Countries by quintile - 1970 II

- **60%-80%:** Antigua and Barbuda (TH), Anguilla (TH), Albania, Armenia, Angola, Argentina, Azerbaijan, Bosnia and Herzegovina, Barbados (TH), Bulgaria, Bahrain (TH), Brunei, Brazil, Belarus, Belize (TH), Chile, Colombia (88%), Costa Rica, Cuba, Curaçao (TH), Cyprus (TH), Czech Republic, Germany, Djibouti, Dominica, Dominican Republic, Algeria, Ecuador, Estonia, Egypt, Eritrea, Spain, Ethiopia, Finland, Fiji, Micronesia, Gabon, Georgia, Gibraltar (TH), Greenland, Greece, Guyana, Hong Kong (TH), Croatia, Hungary, Ireland (TH), Isle of Man (TH), Iraq, Iran, Jamaica, Jordan, Japan (40%), Kyrgyz Republic, Saint Kitts and Nevis (TH), Kazakhstan, Lebanon (TH), Saint Lucia (TH), Libya, Moldova, Marshall Islands (TH), Macao (TH), Montserrat, Malta (TH), Mexico, Malaysia, Mozambique, Namibia, Oman, Panama (TH), Peru, Poland, Portugal, Palau, Romania, Serbia, Saudi Arabia, Seychelles (TH), Singapore (TH), Slovenia, Slovak Republic, Suriname, Sao Tome and Principe, Turks and Caicos Islands (TH), Tajikistan, Turkmenistan, Turkey, Trinidad and Tobago, Tuvalu, Taiwan, Ukraine, Uruguay, Uzbekistan, Venezuela, British Virgin Islands (TH), Vanuatu, Samoa, South Africa, Zambia.

- **Top 20%:** Andorra (TH), United Arab Emirates, Austria, Australia, Aruba (TH), Belgium (TH), Bermuda (TH), Bonaire, Saint-Eustache et Saba (TH), Bahamas (TH), Canada, Switzerland (TH), Germany, Denmark, Finland, France, United Kingdom, Guernsey (TH), Israel, Iceland, Italy, Jersey (TH), Japan, North Korea, Kuwait, Cayman Islands (TH), Liechtenstein (TH), Luxembourg (TH), Monaco (TH), New Caledonia, Netherlands (TH), Norway, Nauru, New Zealand, French Polynesia, Puerto Rico (TH), Qatar, Russia, Sweden, San Marino, Sint Maarten (Dutch part) (TH), United States.

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Countries by quintile - 2000 I

- **Bottom 20%:** Afghanistan, Bangladesh, Burkina Faso, Burundi, Central African Republic, Eritrea, Ethiopia, Ghana, Guinea, Guinea-Bissau, India (55%), Kyrgyz Republic, Cambodia, Laos, Liberia, Moldova, Madagascar, Mali, Myanmar, Malawi, Mozambique, Niger, Nepal, Rwanda, Sierra Leone, Somalia, South Sudan, Chad, Togo, Tajikistan, Tanzania, Uganda, Vietnam, Yemen, Zambia.

- **20%-40%:** Armenia, Angola, Azerbaijan, Benin, Democratic Republic of Congo, Congo, Cameroon (50%), Gambia, Indonesia, India (45%), Kenya, Comoros, Mongolia, Mauritania, Nigeria, Papua New Guinea, Pakistan, Sudan, Senegal, Sao Tome and Principe, Timor, Ukraine, Uzbekistan, Zimbabwe.

- **40%-60%:** Bhutan, Cameroon (50%), China (94%), Djibouti, Georgia, Haiti, Sri Lanka, Lesotho.

- **60%-80%:** Albania, Bosnia and Herzegovina, Bulgaria, Bolivia, Brazil, Botswana, Belarus, Belize (TH), Cote d'Ivoire, China (6%), Colombia, Costa Rica, Cuba, Cape Verde, Dominican Republic, Algeria, Ecuador, Estonia, Egypt, Fiji, Micronesia, Gabon, Equatorial Guinea, Guatemala, Guyana, Honduras, Hungary, Iraq, Iran, Jamaica, Jordan, Kiribati, Kosovo, Kazakhstan, Lebanon (TH), Lithuania, Latvia, Morocco, Montenegro, Marshall Islands (TH), Macedonia, Mauritius (TH), Maldives, Malaysia, Namibia, Oman, Panama (TH), Peru, Poland, Portugal, Palau, Romania, Serbia, Saudi Arabia, Seychelles (TH), Singapore (TH), Slovenia, Slovak Republic, Suriname, Sao Tome and Principe, Turks and Caicos Islands (TH), Tajikistan, Turkmenistan, Turkey, Trinidad and Tobago, Tuvalu, Taiwan, Ukraine, Uruguay, Uzbekistan, Venezuela, British Virgin Islands (TH), Vanuatu, Samoa, South Africa, Zambia.

Countries by quintile - 2000 II

- **Top 20%:** Andorra (TH), United Arab Emirates, Antigua and Barbuda (TH), Anguilla (TH), Austria, Australia, Aruba (TH), Barbados (TH), Belgium (TH), Bahrain (TH), Bermuda (TH), Brunei, Bonaire, Saint-Eustache et Saba (TH), Bahamas (TH), Canada, Switzerland (TH), Chile, China (23%), Costa Rica, Curaçao (TH), Cyprus (TH), Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Guernsey (TH), Gibraltar (TH), Greenland, Greece, Hong Kong (TH), Croatia, Hungary, Ireland (TH), Israel, Isle of Man (TH), Iceland, Italy, Jersey (TH), Japan, Saint Kitts and Nevis (TH), South Korea, Kuwait, Cayman Islands (TH), Liechtenstein (TH), Luxembourg (TH), Latvia, Monaco (TH), Macao (TH), Montserrat, Malta (TH), Mauritius (TH), New Caledonia, Netherlands (TH), Norway, Nauru, New Zealand, Oman, Panama (TH), French Polynesia, Poland, Puerto Rico (TH), Portugal, Palau, Qatar, Romania, Saudi Arabia, Sweden, Singapore (TH), Slovenia, Slovak Republic, San Marino, Sint Maarten (Dutch part) (TH), Turks and Caicos Islands (TH), Trinidad and Tobago, Taiwan, United States, Uruguay, British Virgin Islands (TH).

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Countries by quintile - 2020 I

- **Bottom 20%:** Afghanistan, Burkina Faso, Burundi, Central African Republic, Congo, Ethiopia, Guinea, Haiti, North Korea, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, South Sudan, Syria, Chad, Togo, Yemen, Zimbabwe.

- **20%-40%:** Bangladesh, Benin, Bhutan, Bolivia, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Eswatini, Ethiopia, Gambia, Ghana, Guinea-Bissau, India, Kenya, Kiribati, Lesotho, Mauritania, Nigeria, Papua New Guinea, Senegal, Sudan, Tanzania, Timor, Zambia.

- **40%-60%:** Angola, Belize (TH), Botswana, Cambodia, Comoros, Dominica (TH), Dominican Republic, El Salvador, Fiji, Guatemala, Honduras, Jamaica, Laos, Maldives, Micronesia, Mongolia, Morocco, Myanmar, Namibia, Nepal, Nicaragua, Pakistan, Philippines, Saint Vincent and the Grenadines (TH), Sao Tome and Principe, Solomon Islands, Tajikistan, Tonga, Tunisia, Ukraine, Vanuatu, Vietnam, Zimbabwe.

- **60%-80%:** Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, China (77%), Cuba, Dominica, Dominican Republic, Grenada (TH), Guyana, Kazakhstan, Lebanon (TH), Saint Lucia (TH), Montenegro, Mexico (88%), Malaysia, Russia, Seychelles (TH), Turkey, Tuvalu, Saint Vincent and the Grenadines (TH).

Countries by quintile - 2020 II

- **Top 20%:** Andorra (TH), United Arab Emirates, Antigua and Barbuda (TH), Anguilla (TH), Austria, Australia, Aruba (TH), Barbados (TH), Belgium (TH), Bahrain (TH), Bermuda (TH), Brunei, Bonaire, Saint-Eustache et Saba (TH), Bahamas (TH), Canada, Switzerland (TH), Chile, China (23%), Costa Rica, Curaçao (TH), Cyprus (TH), Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Guernsey (TH), Gibraltar (TH), Greenland, Greece, Hong Kong (TH), Croatia, Hungary, Ireland (TH), Israel, Isle of Man (TH), Iceland, Italy, Jersey (TH), Japan, Saint Kitts and Nevis (TH), South Korea, Kuwait, Cayman Islands (TH), Liechtenstein (TH), Lithuania, Luxembourg (TH), Latvia, Monaco (TH), Macao (TH), Montserrat, Malta (TH), Mauritius (TH), New Caledonia, Netherlands (TH), Norway, Nauru, New Zealand, Oman, Panama (TH), French Polynesia, Poland, Puerto Rico (TH), Portugal, Palau, Qatar, Romania, Saudi Arabia, Sweden, Singapore (TH), Slovenia, Slovak Republic, San Marino, Sint Maarten (Dutch part) (TH), Turks and Caicos Islands (TH), Trinidad and Tobago, Taiwan, United States, Uruguay, British Virgin Islands (TH).

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List of tax havens

List of Tax Havens: Andorra, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Bahrain, Barbados, Belgium, Belize, Bermuda, Bonaire, St. Eustatius, and Saba , British Virgin Islands, Cayman Islands, Cyprus, Curacao, Gibraltar, Grenada, Guernsey, Hong Kong, Ireland, Isle of Man, Jersey, Lebanon, Liechtenstein, Luxembourg, Macao, Malta, Marshall Islands, Mauritius, Monaco, Netherlands, Panama, Puerto Rico, Seychelles, Singapore, Sint Maarten, St. Kitts and Nevis, St. Lucia, St. Vincent & Grenadines, Switzerland, Turks and Caicos.

Transition Matrix						
1970 Quintiles	**2022 Quintiles**					**Total**
	Q1	Q2	Q3	Q4	Q5	
Q1	13 61.90%	2 9.52%	4 19.05%	2 9.52%	0 0.00%	21
Q2	2 100.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	2
Q3	25 39.68%	2 3.17%	25 39.68%	4 6.35%	7 11.11%	63
Q4	9 9.89%	3 3.30%	29 31.87%	9 9.89%	41 45.05%	91
Q5	0 0.00%	0 0.00%	0 0.00%	0 0.00%	39 100.00%	39
Total	49 22.69%	7 3.24%	58 26.85%	15 6.94%	87 40.28%	216

The table shows a transition matrix by quintiles of per capita national income.

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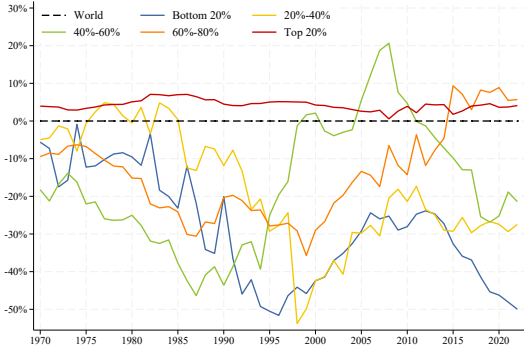
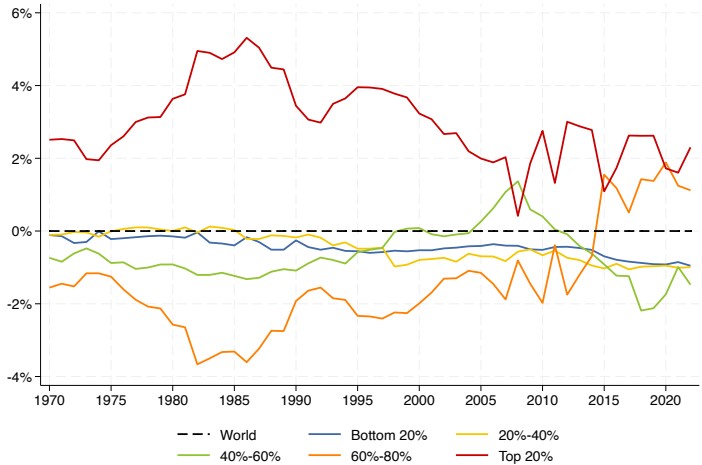
Net foreign assets as a share of group GDP



Graph shows average net foreign assets. Simple averages by group. Countries grouped by quintiles according to per capita national income (weighted by population). E.g. top 20% countries include exactly the top 20% of the world population (1,6 billion out of 7,8 billion in 2020) living in the countries with highest per capita income. In 2020: main top 20% countries include Australia, Canada, Finland, France, Germany, Japan, Switzerland, the U.S. and the U.K. Main 60%-80% countries include Argentina, China, Russia and Turkey. Main 40%-60% countries include Algeria, Bolivia, Brazil, Iran, Turkmenistan, Ukraine, Venezuela and Vietnam. Main 20%-40% countries include Bangladesh, India, Kenya and Nigeria. Main bottom 20% countries include Afghanistan, Cameroon, Congo, Myanmar, South Sudan and Zimbabwe.

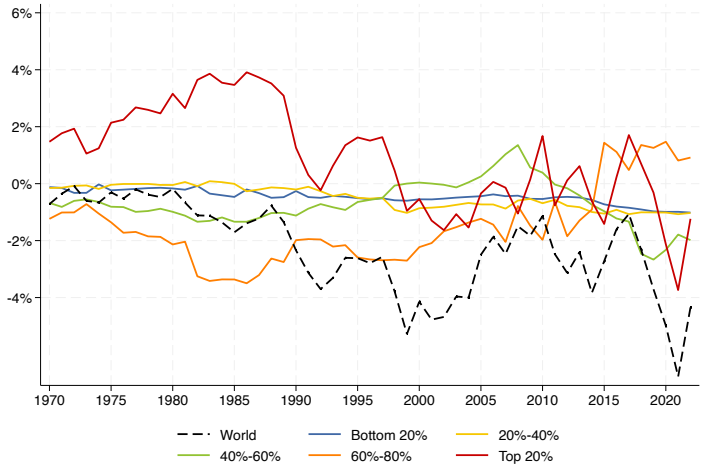
▸ Assets ▸ Liabilities ▸ With tax havens correction ▸ back

Net foreign assets as a share of world GDP, with tax havens correction



back

Net foreign assets as a share of world GDP (raw data)



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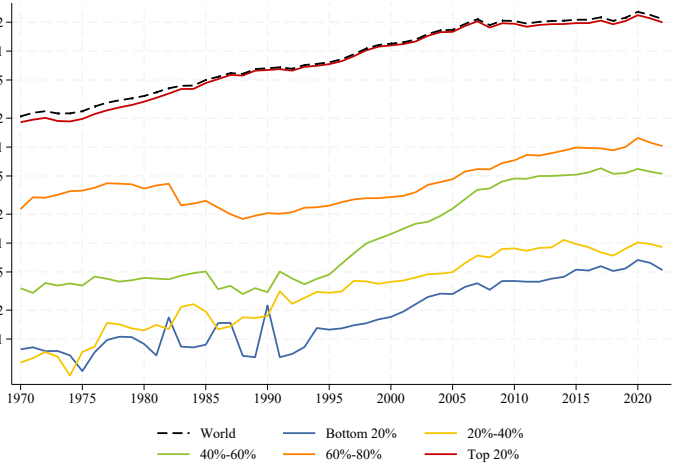
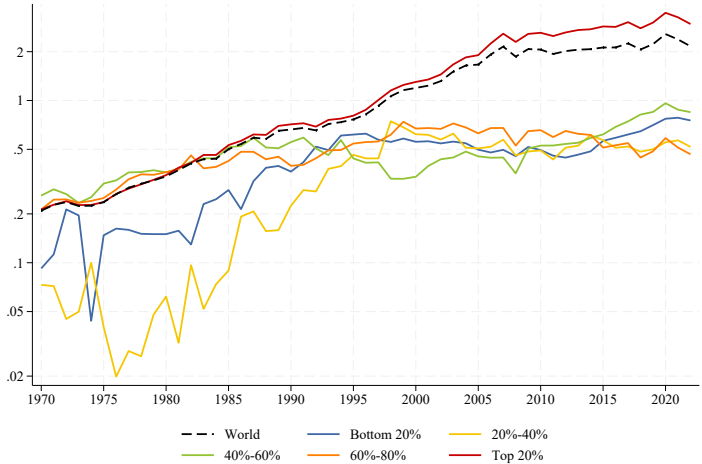
Gross foreign assets as a share of world GDP (log scale)



back

Gross foreign liabilities as a share of world GDP (log scale)



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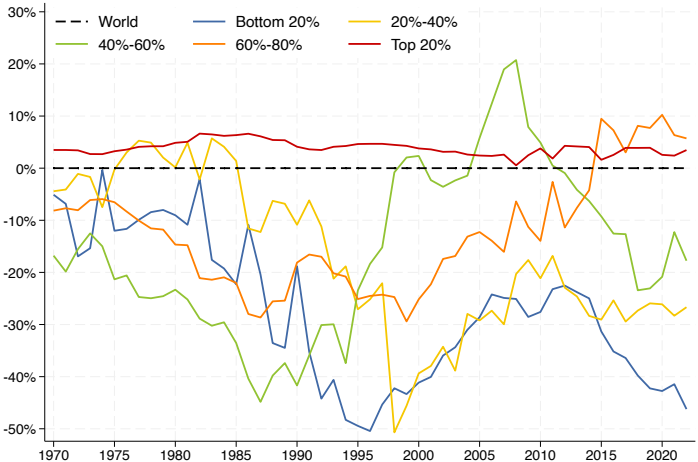
Net foreign assets as a share of group GDP, with tax havens correction



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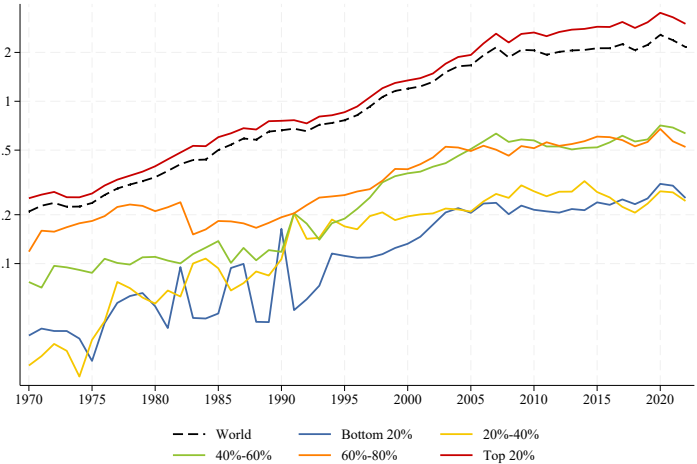
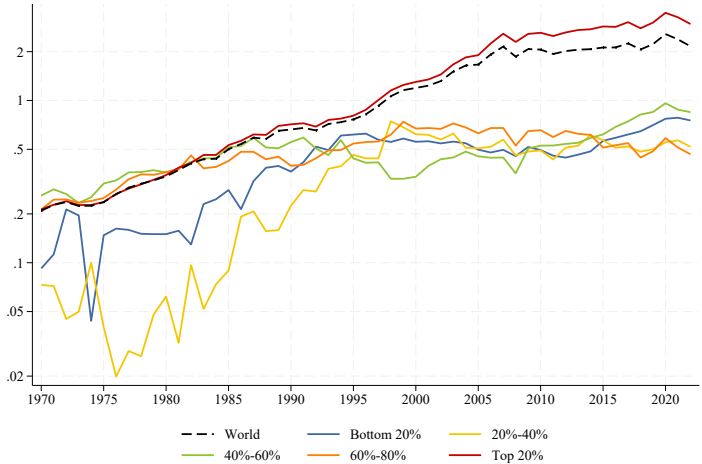
Gross foreign assets as a share of group GDP (log scale)



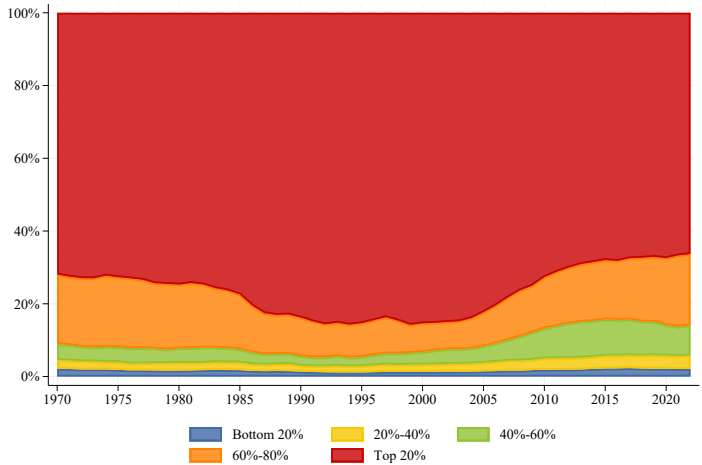
back back Decomposition

Gross foreign liabilities as a share of group GDP (log scale)



back back Decomposition

Share of global GDP per income group



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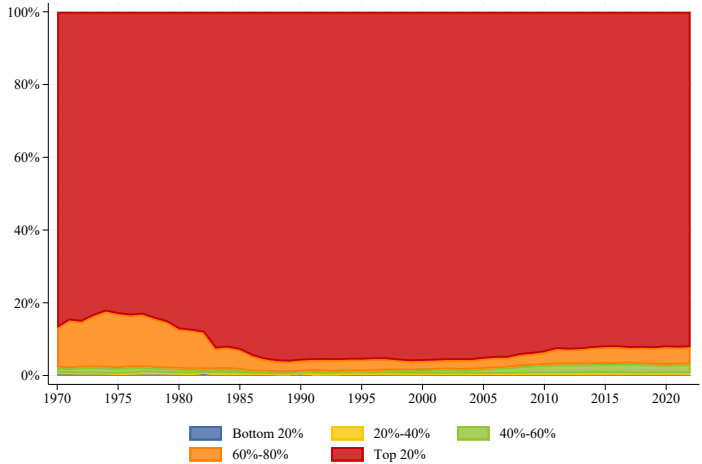
Share of global gross foreign assets per income group



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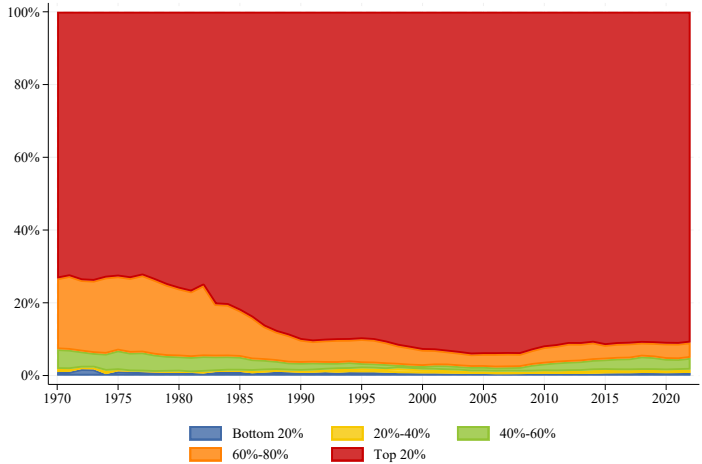
Share of global gross foreign liabilities per income group



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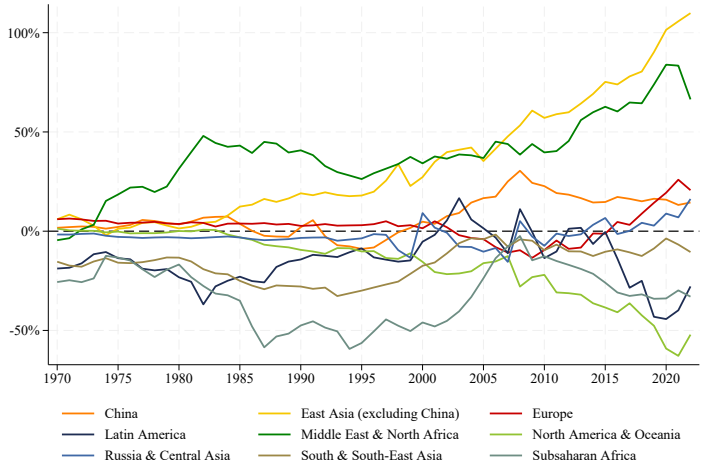
Net foreign assets as a share of regional GDP



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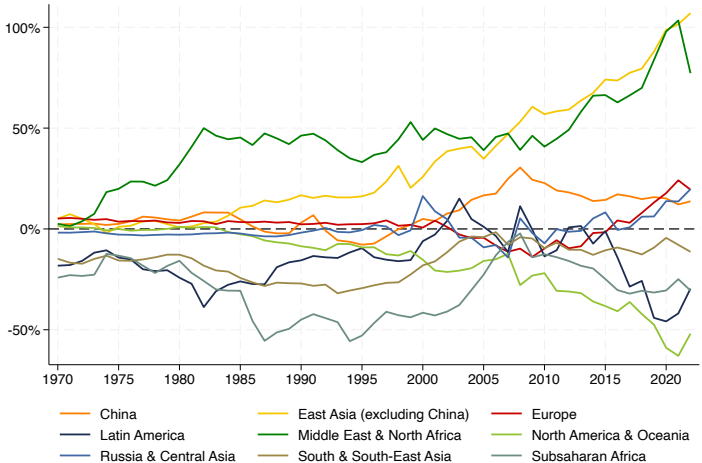
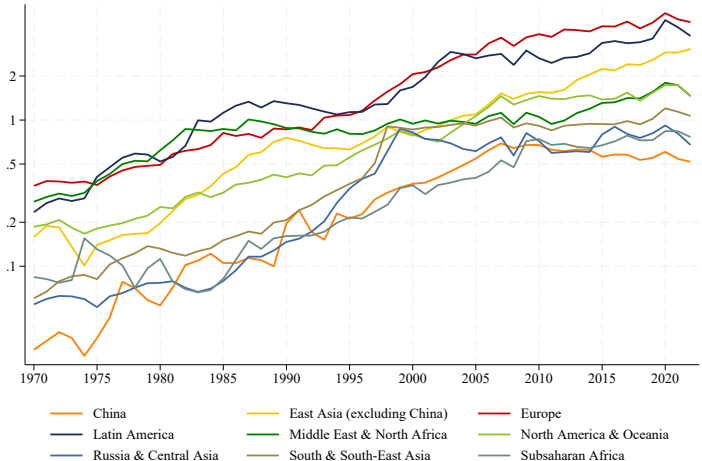
Net foreign assets as a share of regional GDP, with tax havens correction



back

Gross foreign assets as a share of regional GDP (log scale)



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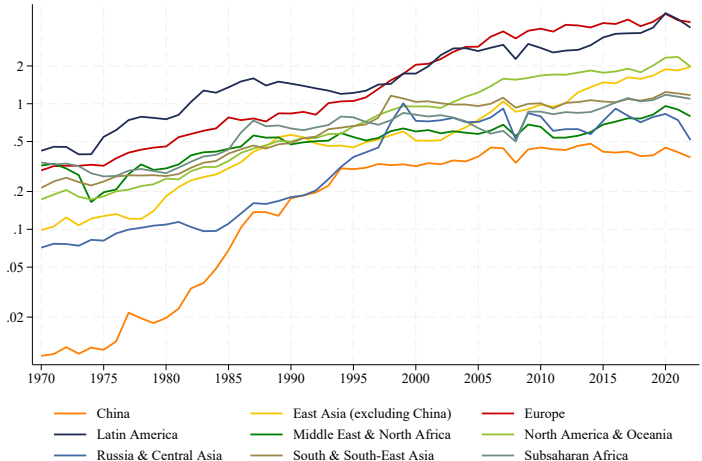
Gross foreign liabilities as a share of regional GDP (log scale)



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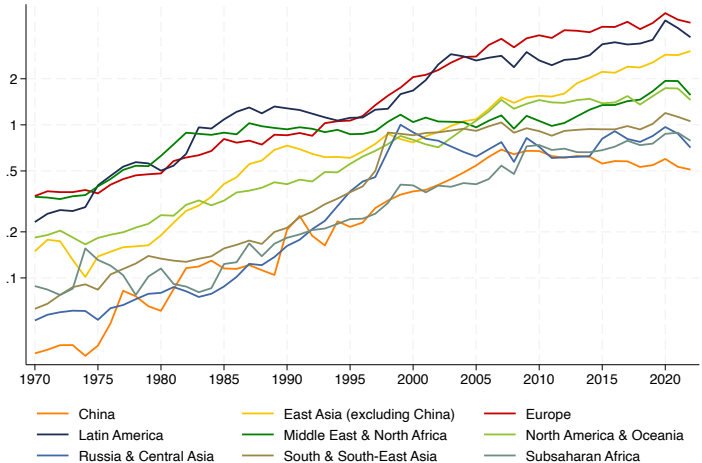
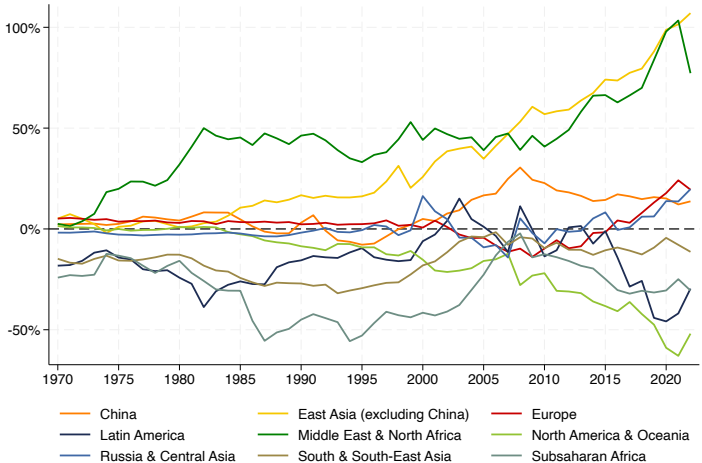
Gross foreign assets as a share of regional GDP, with tax havens correction (log scale)



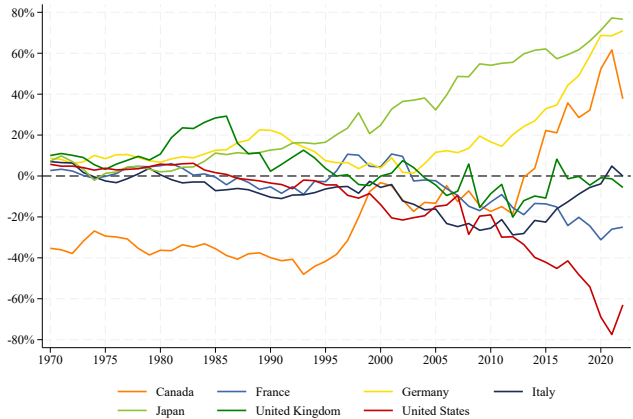
back

Net foreign assets as a share of regional GDP, with tax havens correction



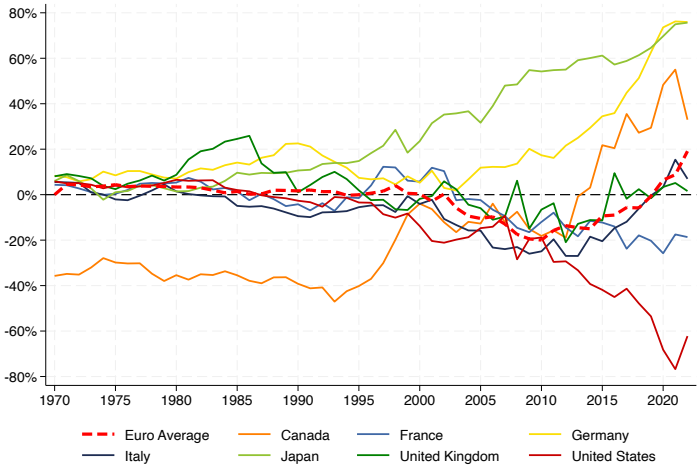
back

Net foreign assets as a share of country GDP, G7 countries



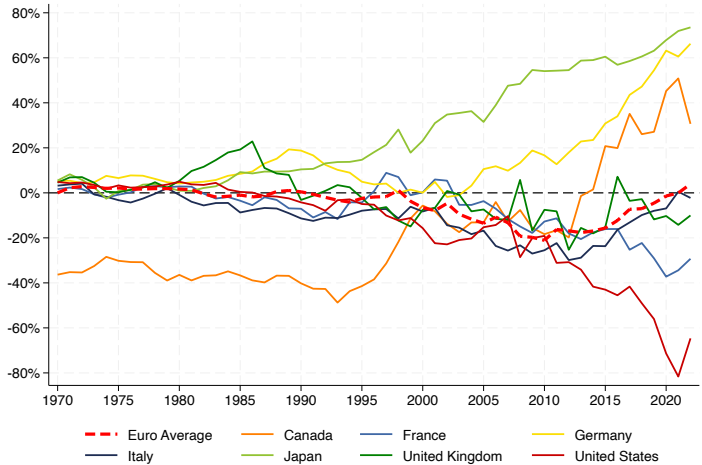
back

Net foreign assets as a share of country GDP with tax havens correction, G7 + Euro



back

Net foreign assets as a share of country GDP , G7 + Euro (raw data)



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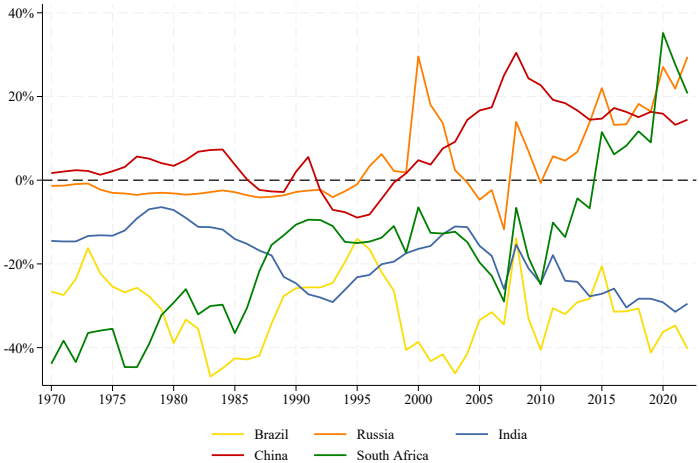
Net foreign assets as a share of country GDP, BRICS



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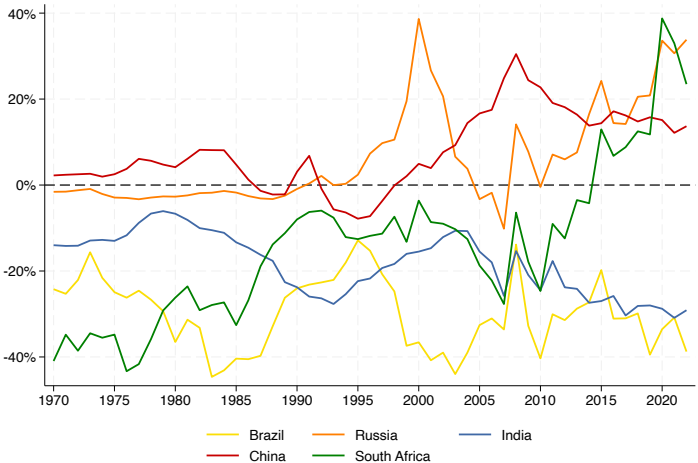
Net foreign assets as a share of country GDP with tax havens correction, BRICS



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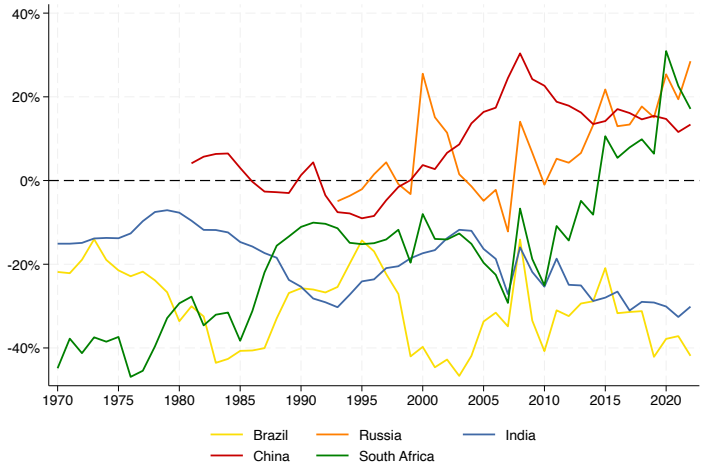
Net foreign assets as a share of country GDP, BRICS (raw data)



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	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
Bottom 20%	-6%	-45%	-3%	1%	-20%	-50%	-27%	0%	2%	60%	12%	-20%	0	1	189%
20-40%	-3%	-46%	-1%	-6%	-11%	11%	-11%	0%	-2%	24%	12%	-62%	0	1	335%
40-60%	-16%	2%	-5%	-14%	-13%	-4%	0%	2%	0%	24%	10%	2%	1	3	339%
Next Top 20%	-8%	-27%	-6%	-31%	-30%	-3%	15%	4%	0%	35%	-5%	-5%	4	6	139%
Top 20%	6%	2%	2%	2%	6%	-3%	3%	-1%	0%	-8%	-1%	2%	16	45	285%
	NFA-GDP ratios		**Decomposition of 2012 NFA-GDP ratio**										**Real GDP trillions 2023 USD**		
Quintile	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/ GDP(2000)
Bottom 20%	-45%	-24%	-26%	-8%	-19%	-94%	-24%	1%	1%	100%	20%	24%	1	2	172%
20-40%	-46%	-24%	-27%	-21%	-14%	-19%	-20%	3%	-2%	56%	11%	10%	1	2	168%
40-60%	2%	-2%	1%	-21%	-3%	20%	-1%	2%	-1%	26%	10%	-34%	3	7	236%
Next Top 20%	-27%	-13%	-14%	-39%	-20%	21%	4%	3%	0%	29%	-2%	4%	6	11	195%
Top 20%	2%	0%	2%	8%	6%	-9%	5%	-1%	0%	-13%	-2%	5%	45	56	125%
	NFA-GDP ratios		**Decomposition of 2022 NFA-GDP ratio**										**Real GDP trillions 2023 USD**		
Quintile	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/ GDP(2012)
Bottom 20%	-24%	-54%	-17%	-19%	-5%	-85%	-5%	3%	1%	65%	5%	3%	2	2	142%
20-40%	-24%	-28%	-16%	-23%	-4%	-51%	11%	2%	0%	33%	3%	17%	2	3	144%
40-60%	-2%	-27%	-1%	-28%	-3%	-3%	-9%	4%	-1%	24%	2%	-11%	7	9	117%
Next Top 20%	-13%	4%	-8%	-15%	0%	21%	-12%	0%	0%	3%	2%	14%	11	19	165%
Top 20%	0%	2%	0%	9%	1%	-4%	6%	0%	0%	-8%	-1%	-1%	56	69	123%

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Decomposition 1970-2000

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
Countries	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
Canada	-35%	-3%	-14%	-8%	-49%	54%	-23%	6%	0%	-2%	1%	33%	1	1	254%
France	3%	4%	1%	9%	1%	-6%	32%	5%	1%	-18%	-2%	-19%	1	2	225%
Germany	9%	4%	4%	-5%	15%	71%	-34%	-1%	-1%	-35%	-6%	-4%	2	4	203%
Italy	7%	-6%	3%	-8%	-6%	8%	13%	3%	0%	-4%	-1%	-15%	1	2	218%
Japan	7%	25%	3%	4%	13%	45%	-26%	0%	0%	-5%	-6%	-1%	1	4	273%
United Kingdom	10%	0%	5%	20%	19%	-42%	34%	-2%	-2%	-12%	-1%	-19%	1	2	210%
United States	6%	-14%	2%	16%	0%	-38%	10%	-1%	0%	-6%	0%	2%	7	17	265%
Eurozone	5%	-2%	2%	-1%	3%	10%	9%	2%	0%	-15%	-2%	-11%	5	11	222%
Total G8	4%	-5%	2%	9%	2%	-11%	7%	0%	0%	-9%	-1%	-3%	15	36	246%
Brazil	-27%	-39%	-8%	-42%	-26%	26%	-24%	0%	0%	4%	0%	32%	0	1	342%
China	2%	5%	0%	-8%	0%	4%	13%	0%	0%	4%	10%	-19%	1	3	554%
India	-15%	-16%	-4%	-1%	-11%	-25%	-7%	-1%	0%	30%	0%	3%	0	1	395%
Russia	-1%	30%	-1%	-16%	0%	51%	-45%	-1%	0%	-3%	7%	38%	1	1	164%
South Africa	-44%	-6%	-21%	-27%	-35%	84%	-15%	-23%	1%	-12%	-5%	44%	0	0	210%
Total BRICS	-9%	-3%	-3%	-15%	-8%	15%	-7%	-1%	0%	6%	6%	5%	2	7	348%

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Decomposition 2000-2012

	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
Countries	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/ GDP(2000)
G7 + Eurozone															
Canada	-3%	-19%	-3%	-11%	-44%	67%	-30%	8%	0%	0%	1%	-7%	1	2	126%
France	4%	-15%	4%	29%	0%	-22%	34%	12%	2%	-47%	-3%	-24%	2	3	116%
Germany	4%	20%	3%	2%	17%	131%	-52%	-1%	-2%	-42%	-13%	-25%	4	4	114%
Italy	-6%	-29%	-6%	-3%	-13%	7%	5%	4%	1%	-17%	-4%	-3%	2	2	101%
Japan	25%	56%	23%	14%	28%	59%	-35%	1%	0%	-7%	-9%	-16%	4	4	107%
United Kingdom	0%	-20%	0%	32%	15%	-102%	67%	-2%	-2%	-21%	-4%	-4%	2	3	119%
United States	-14%	-30%	-11%	35%	-6%	-87%	15%	-1%	0%	-11%	0%	37%	17	21	124%
Eurozone	-2%	-13%	-2%	7%	-1%	23%	8%	2%	1%	-25%	-5%	-20%	11	13	117%
Total G8	-5%	-16%	-4%	22%	-2%	-35%	10%	1%	0%	-15%	-3%	10%	36	43	120%
Brazil	-39%	-32%	-25%	-50%	-28%	39%	-31%	0%	0%	5%	0%	59%	1	2	152%
China	5%	18%	2%	-16%	5%	33%	4%	-1%	0%	8%	9%	-26%	3	9	281%
India	-16%	-24%	-8%	-7%	-10%	-69%	11%	-1%	0%	44%	-1%	17%	1	2	212%
Russia	30%	5%	17%	-45%	1%	140%	-46%	-5%	0%	-5%	-14%	-38%	1	2	174%
South Africa	-6%	-14%	-4%	-38%	-31%	61%	-17%	-17%	3%	-18%	-3%	51%	0	0	149%
Total BRICS	-3%	4%	-1%	-23%	-3%	34%	-6%	-1%	0%	10%	3%	-9%	7	15	225%

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Decomposition 2012-2022

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/ GDP(2012)
G7 + Eurozone															
Canada	-19%	38%	-16%	7%	6%	-12%	-13%	3%	0%	0%	1%	61%	2	2	119%
France	-15%	-25%	-14%	25%	-3%	-27%	5%	11%	0%	-21%	1%	-2%	3	3	111%
Germany	20%	71%	18%	15%	8%	63%	-13%	0%	-1%	-12%	-12%	4%	4	5	113%
Italy	-29%	0%	-27%	3%	-4%	22%	-7%	3%	0%	-10%	-2%	23%	2	2	106%
Japan	56%	77%	53%	24%	18%	-7%	-8%	0%	0%	-4%	-2%	3%	4	4	105%
United Kingdom	-20%	-6%	-17%	0%	-1%	-75%	51%	0%	-2%	-12%	-4%	53%	3	3	118%
United States	-30%	-63%	-24%	24%	-10%	-44%	11%	0%	0%	-5%	0%	-14%	21	27	125%
Eurozone	-13%	16%	-12%	7%	0%	23%	2%	2%	0%	-10%	-4%	8%	13	16	116%
Total G8	-16%	-20%	-13%	17%	-4%	-22%	8%	0%	0%	-7%	-2%	1%	43	52	120%
Brazil	-32%	-40%	-30%	-23%	-8%	15%	-24%	0%	0%	1%	0%	28%	2	2	105%
China	18%	14%	10%	-13%	4%	29%	-14%	-1%	0%	1%	2%	-3%	9	16	182%
India	-24%	-30%	-14%	-20%	-4%	-61%	27%	1%	0%	24%	0%	19%	2	3	173%
Russia	5%	29%	5%	-41%	6%	98%	-24%	-3%	0%	-8%	-6%	3%	2	2	103%
South Africa	-14%	21%	-12%	-26%	2%	8%	-7%	0%	-2%	-10%	-1%	70%	0	0	110%
Total BRICS	4%	5%	2%	-17%	2%	20%	-10%	-1%	0%	3%	1%	4%	15	24	160%

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Roadmap

Data

Foreign wealth

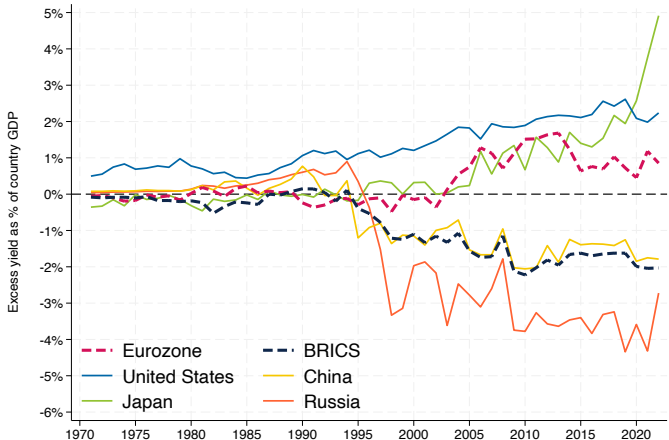
Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

Excess yields income as a share of country GDP, with tax havens correction



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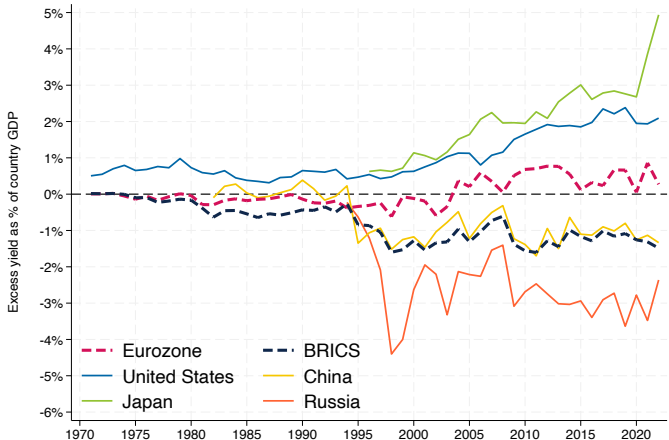
Excess yield income as share of GDP, G8 vs BRICS (raw data)



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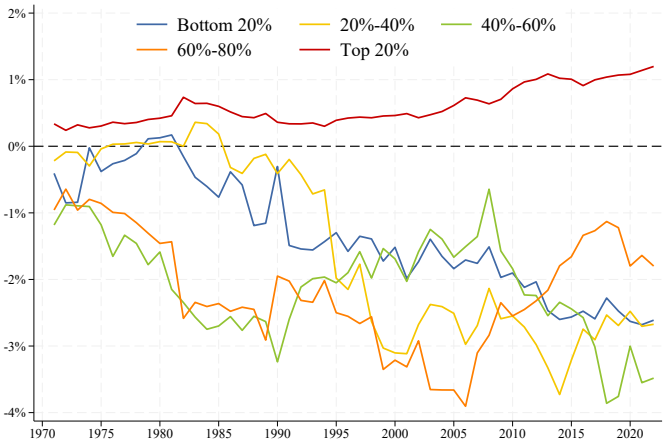
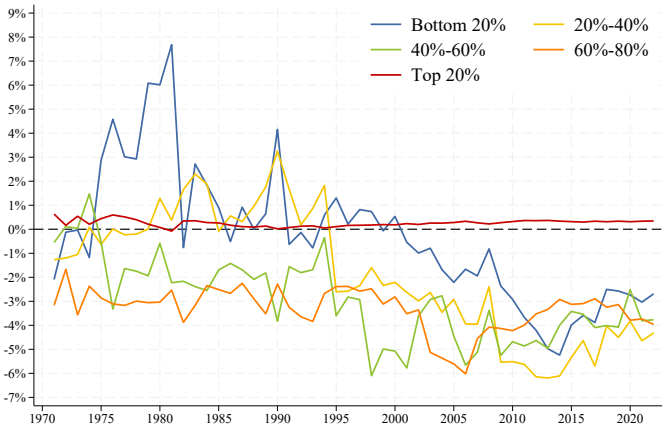
Net foreign capital income as a share of group GDP



Countries grouped according to national income per capita quintiles, weighted by population.

▸ Regional ▸ without TH correction

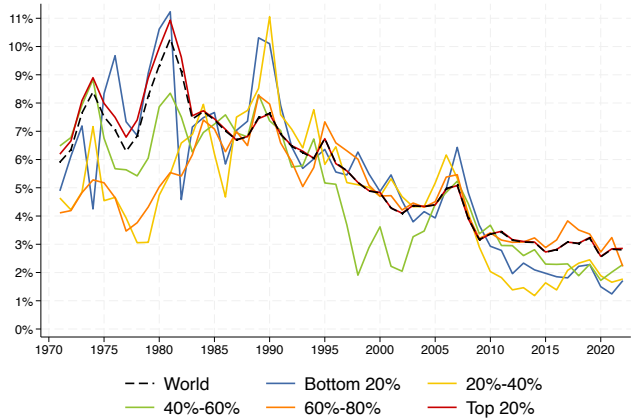
Excess yields per income group



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.
Countries grouped according to national income per capita quintiles, weighted by population.

▸ Regional ▸ with TH correction ▸ back

Returns on foreign assets per income group, with tax havens correction



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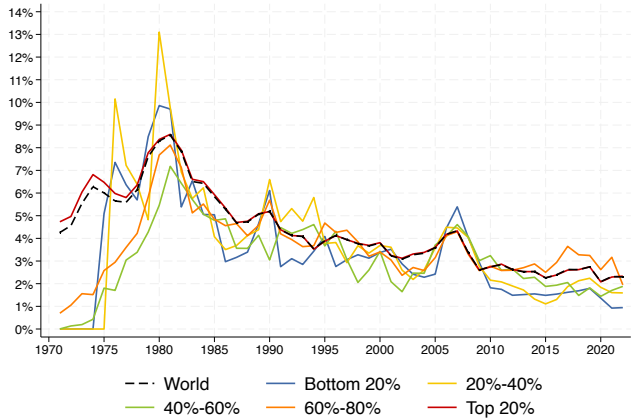
Returns on foreign assets per income group (raw data)



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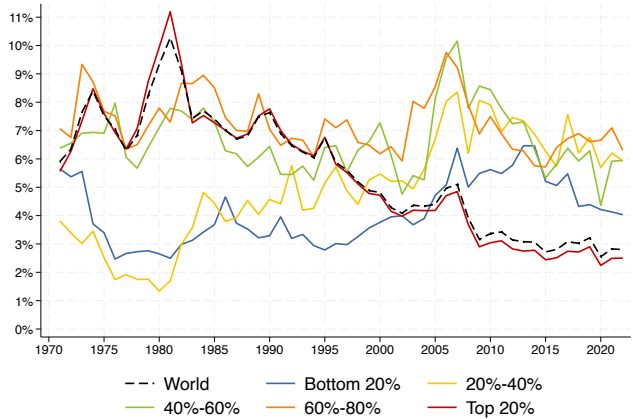
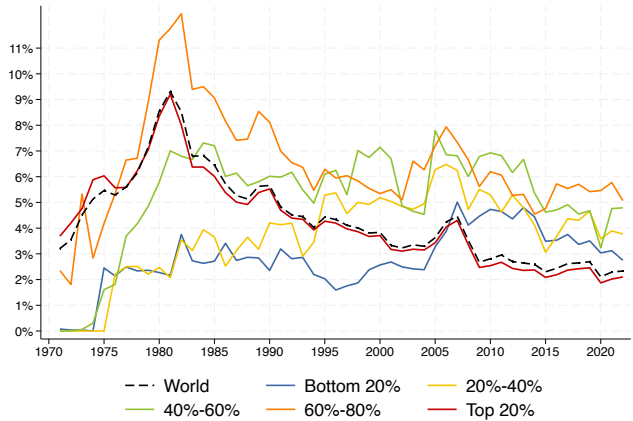
Returns on foreign liabilities per income group, with tax havens correction



back

Returns on foreign liabilities per income group (raw data)



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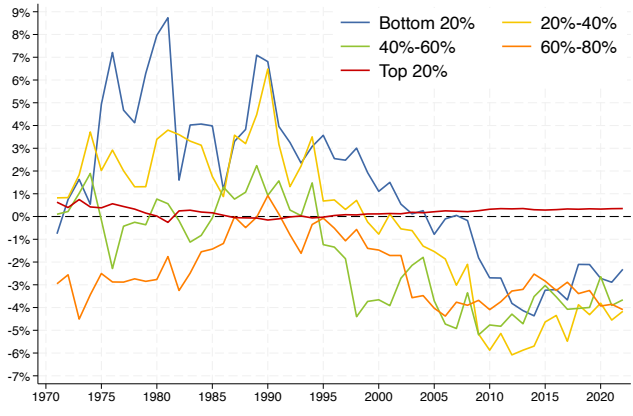
Excess yields per income group, with tax havens correction



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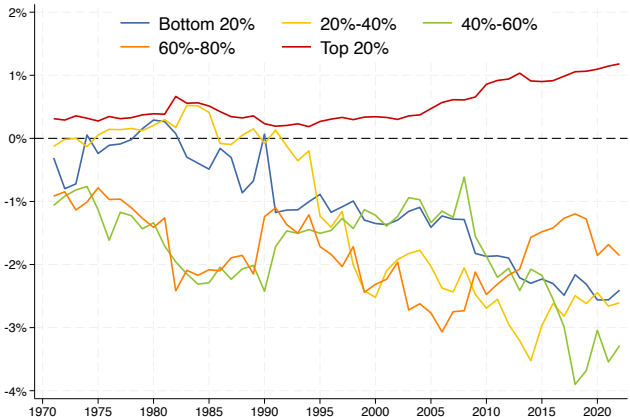
Net foreign capital income as a share of GDP, with tax havens correction



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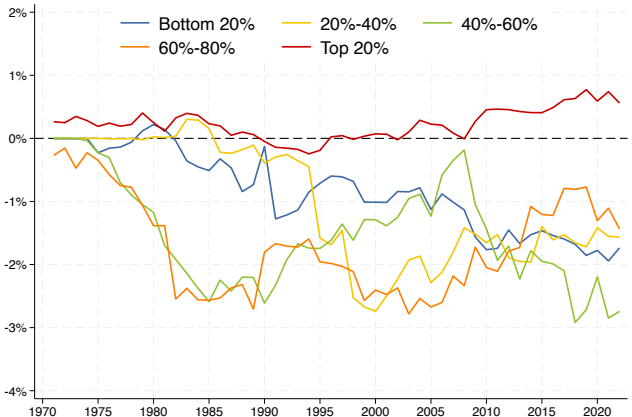
Net foreign capital income as a share of GDP (raw data)



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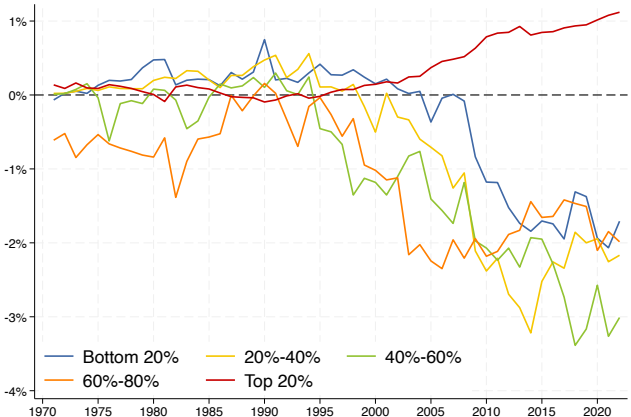
Excess yield as a share of GDP, with tax havens correction



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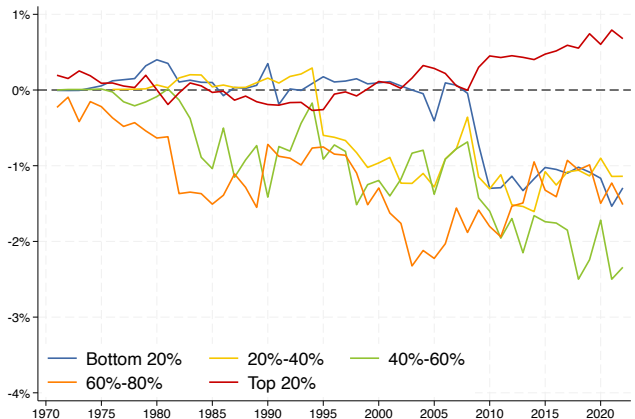
Excess yield as a share of GDP (raw data)



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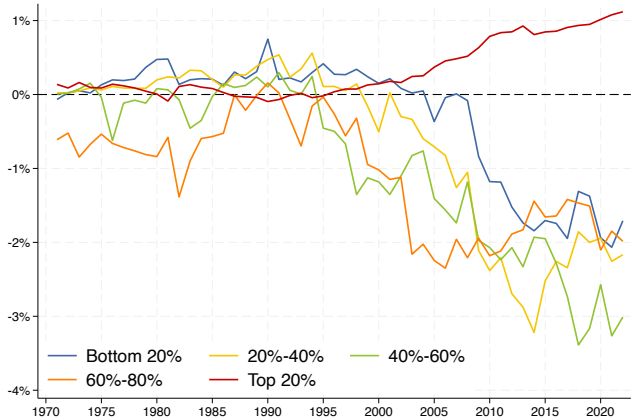
Excess yield as a share of GDP, with tax havens correction



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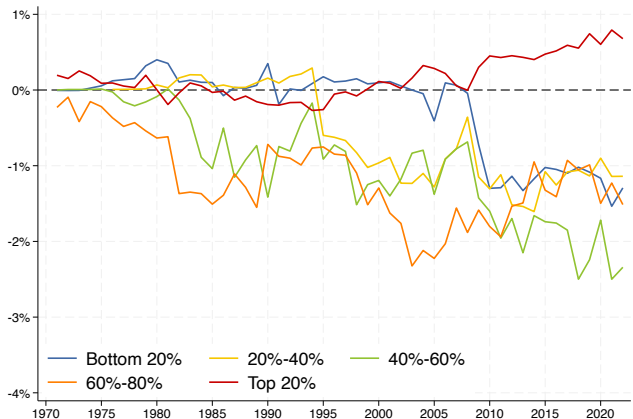
Excess yield as a share of GDP (raw data)



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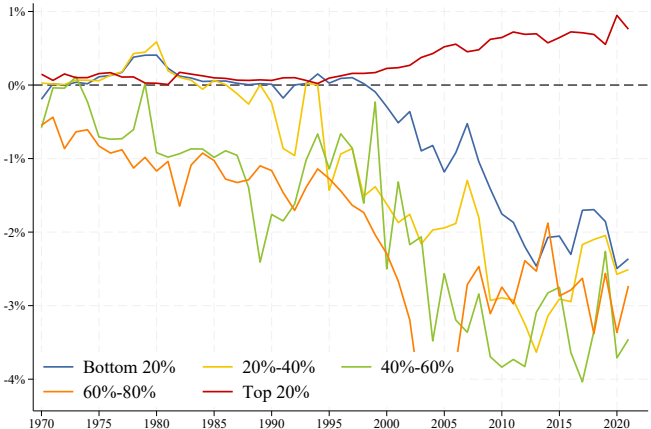
Scenario A: Chinese reserves only in USD



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative). Countries grouped according to national income per capita quintiles, weighted by population.

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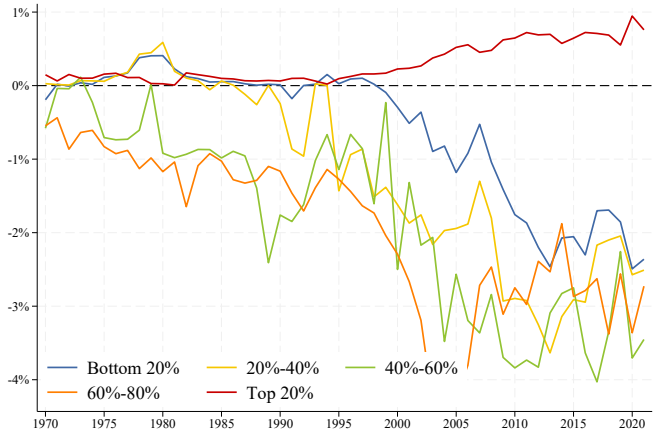
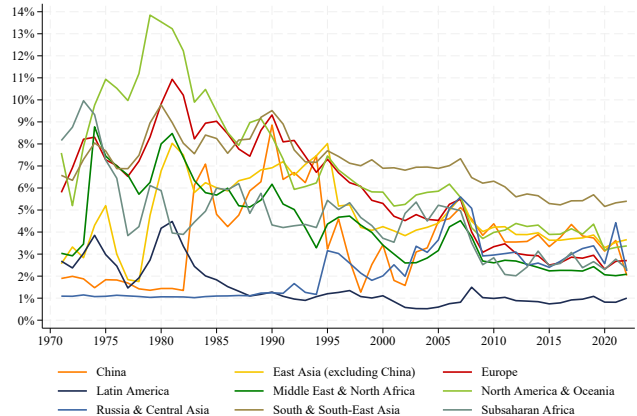
Scenario B: Chinese reserves in USD (70%), EUR (20%), JPY (10%)



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative). Countries grouped according to national income per capita quintiles, weighted by population.

Returns on foreign assets per region



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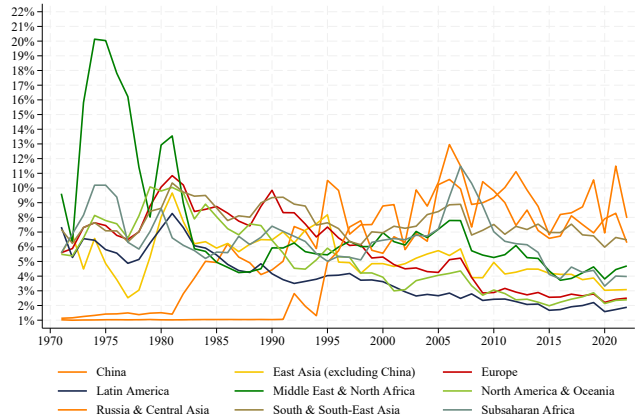
Returns on foreign liabilities per region



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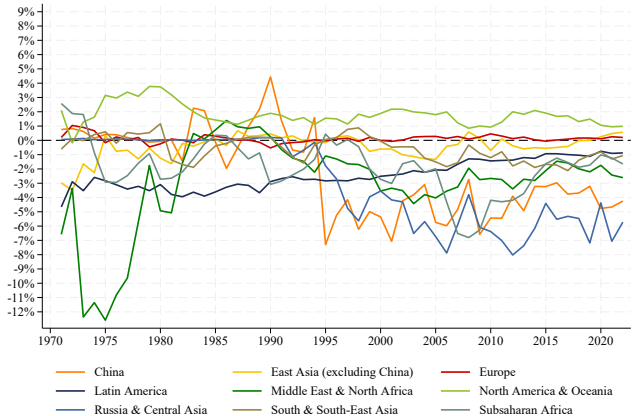
Excess yields per region



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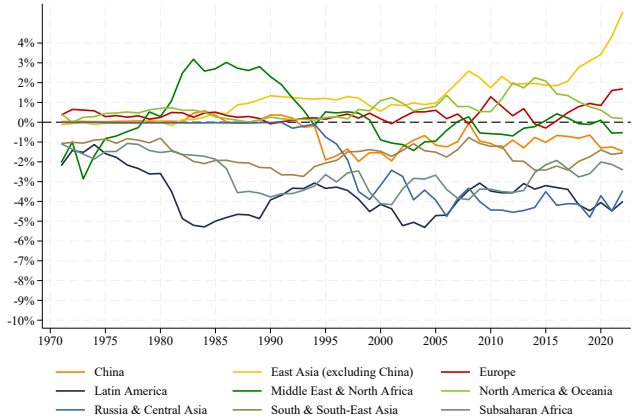
Net foreign capital income as a share of region GDP



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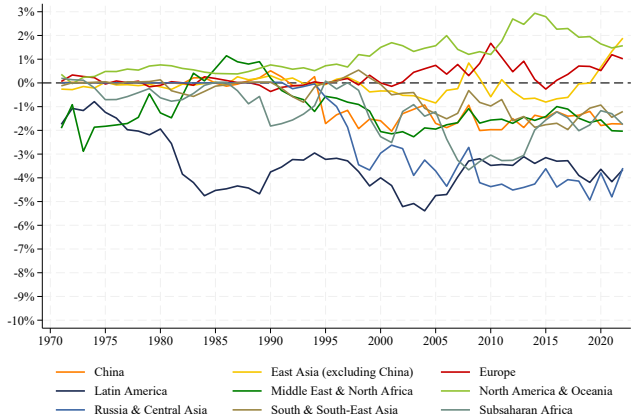
Excess yield as a share of region GDP



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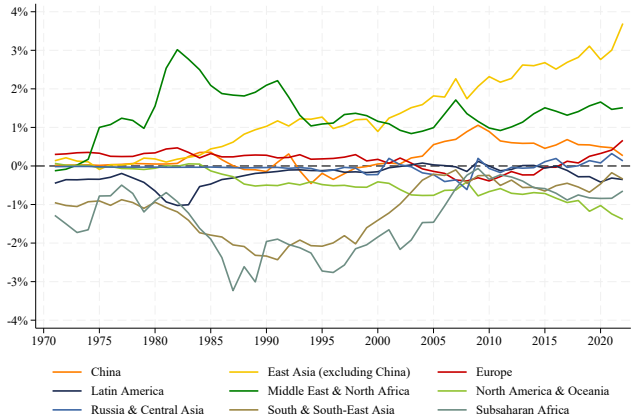
Net foreign capital income minus excess yield income as a share of region GDP



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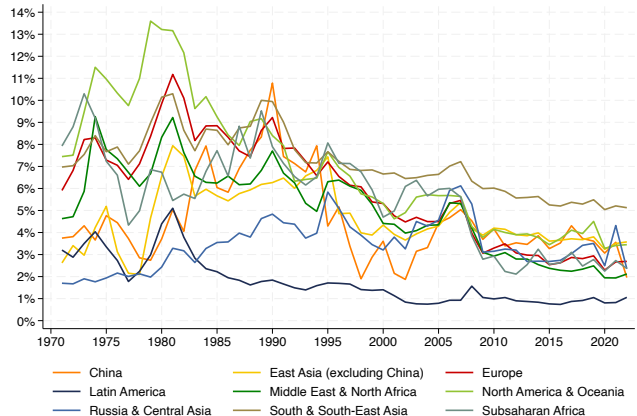
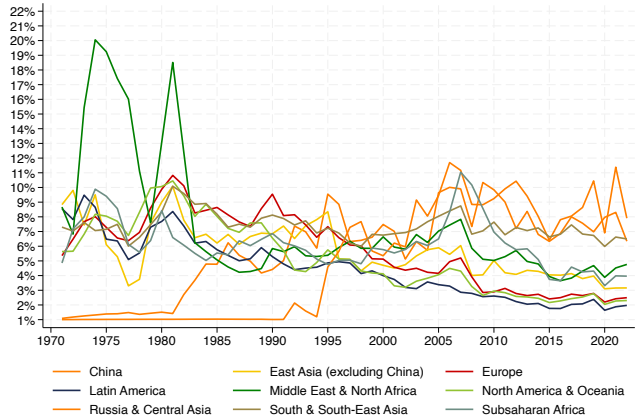
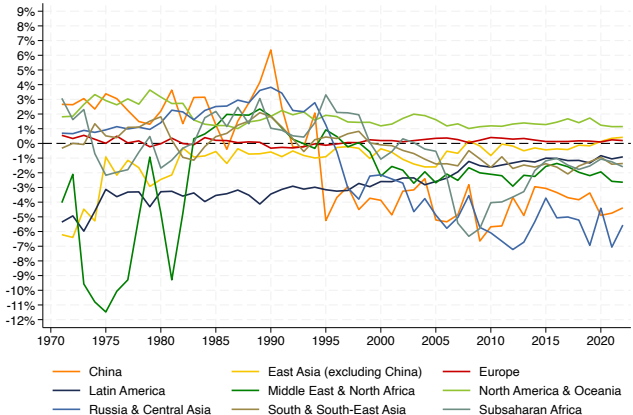
Returns on foreign assets per region, with tax havens correction



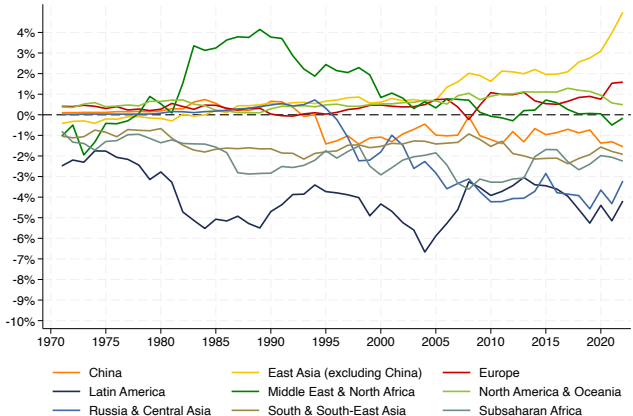
Returns on foreign liabilities per region, with tax havens correction



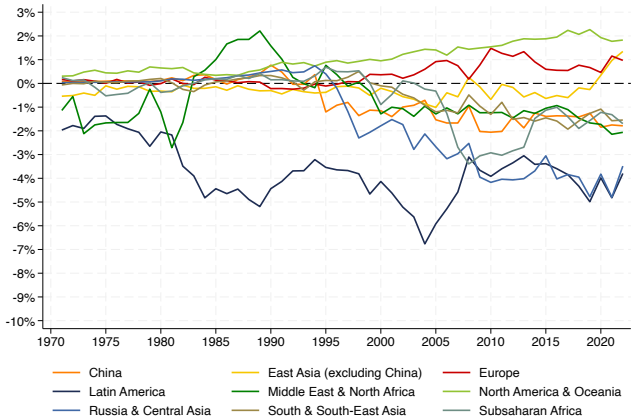
Excess yields per region, with tax havens correction



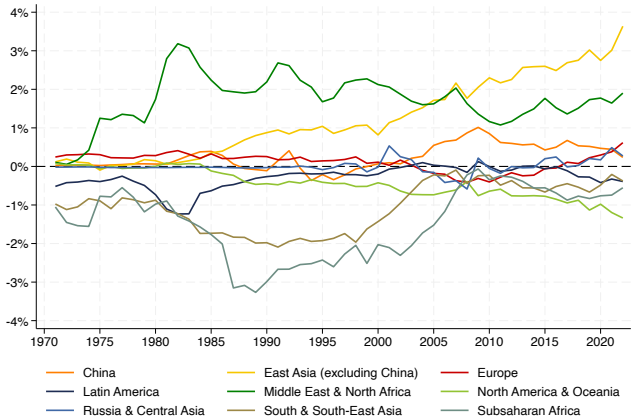
Net foreign capital income as a share of region GDP, with tax havens correction



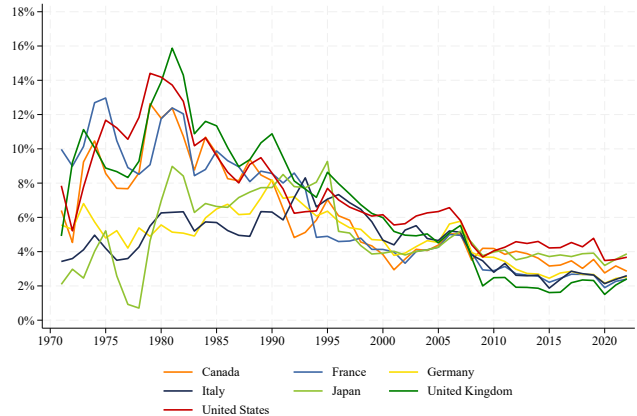
Excess yield as a share of region GDP, with tax havens correction



Net foreign capital income minus excess yield income as a share of region GDP, with tax havens correction



Returns on foreign assets, G7 countries



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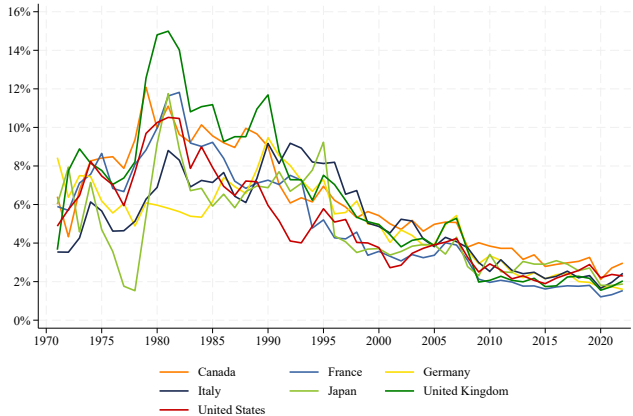
Returns on foreign liabilities, G7 countries



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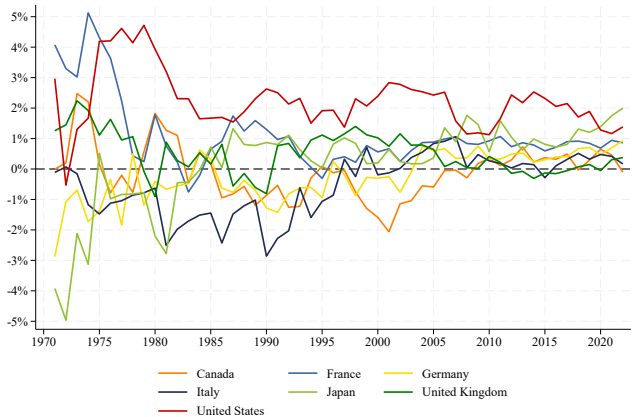
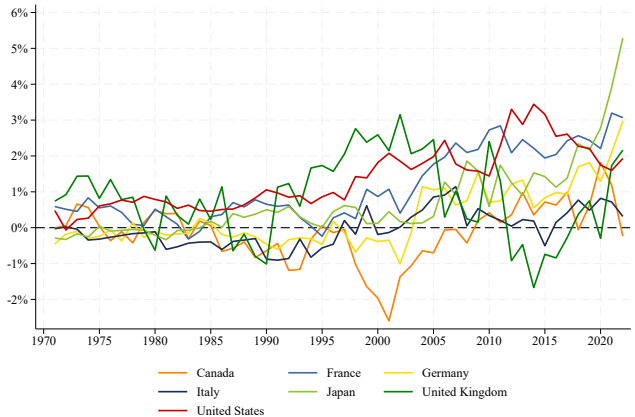
Excess yields, G7 countries



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.

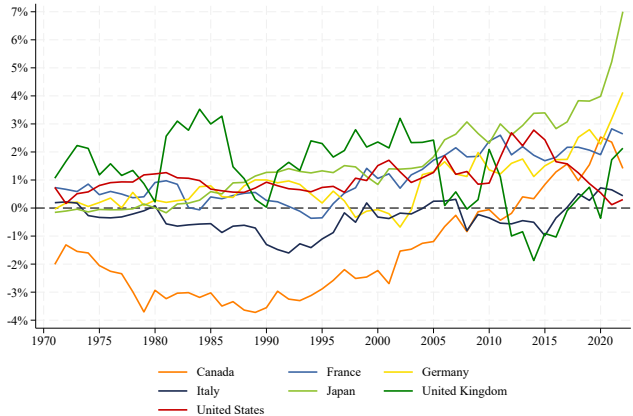
▸ NFA

Excess yields as a share of country GDP, G7 countries



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

Net foreign capital income as a share of country GDP, G7 countries



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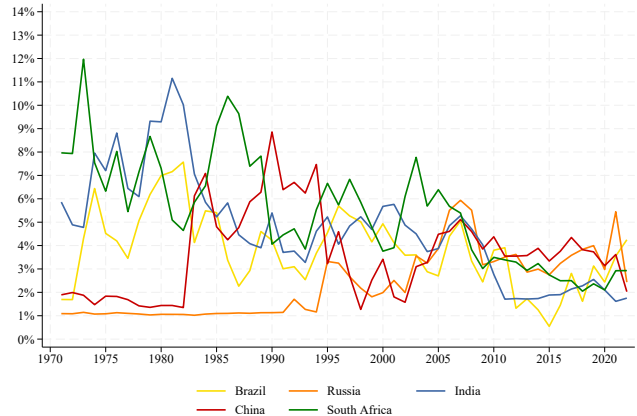
Returns on foreign assets, BRICS



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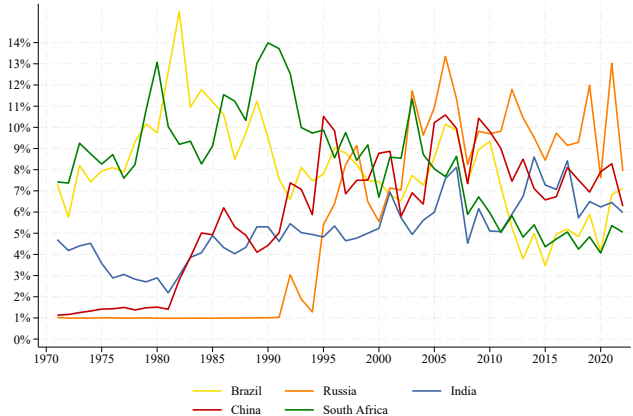
Returns on foreign liabilities, BRICS



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Average net foreign capital income and excess yield income as a % of GDP

	Net KI	Excess yield	Net KI	Excess yield	Net KI	Excess yield
Period	Bangladesh		D.R. Congo		Ethiopia	
1970-1999	-0.34%	0.21%	-1.92%	-1.24%	-0.40%	0.05%
2000-2009	-1.03%	-0.25%	-5.89%	-4.87%	-0.26%	0.12%
2010-2023	-1.17%	-1.07%	-3.70%	-3.43%	-0.52%	-0.38%
	Indonesia		Nigeria		Pakistan	
1970-1999	-3.11%	-1.13%	-2.28%	-1.70%	-1.67%	-0.35%
2000-2009	-3.46%	-1.92%	-3.99%	-3.71%	-2.67%	-1.39%
2010-2023	-3.06%	-2.54%	-3.54%	-3.37%	-1.78%	-0.67%

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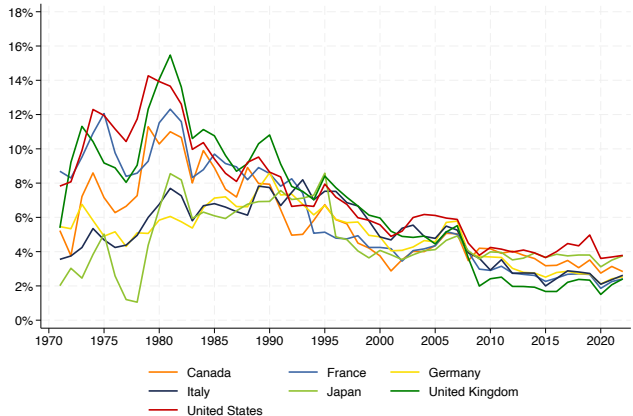
Rich countries can accumulate more debt before recording net negative KI

	i^A	i^L	Tipping point	True ratio L/A		i^A	i^L	Tipping point	True ratio L/A
G7					**BRICS**				
Canada	2.86%	2.96%	97%	80%	Brazil	4.25%	7.12%	60%	157%
Germany	2.53%	1.60%	158%	78%	China	2.03%	6.28%	32%	76%
France	2.40%	1.54%	156%	108%	India	1.75%	5.97%	29%	205%
United Kingdom	2.41%	2.04%	118%	100%	Russia	2.44%	7.94%	31%	74%
Italy	2.60%	2.43%	107%	97%	South Africa	2.93%	5.04%	58%	80%
Japan	3.87%	1.87%	206%	66%					
United States	3.68%	2.29%	160%	151%					

Tipping point $= \frac{i^A}{i^L}$

Amount of liabilities with respect to assets that a country can hold before receiving negative net foreign capital income. ▸ back

Returns on foreign assets, with tax havens correction, G7 countries



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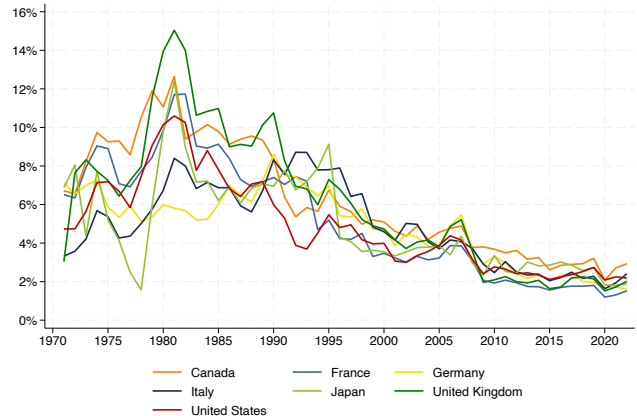
Returns on foreign liabilities with tax havens correction, G7 countries



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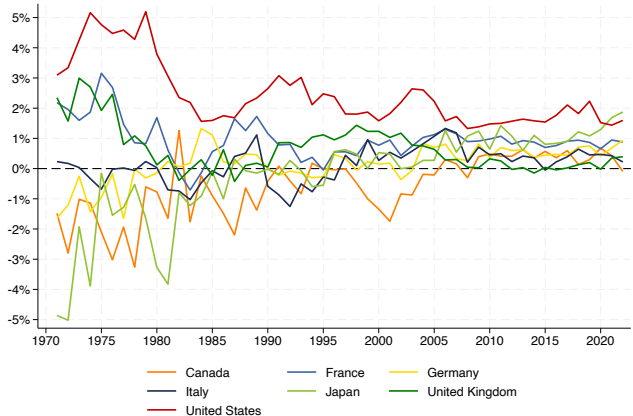
Excess yields with tax havens correction, G7 countries



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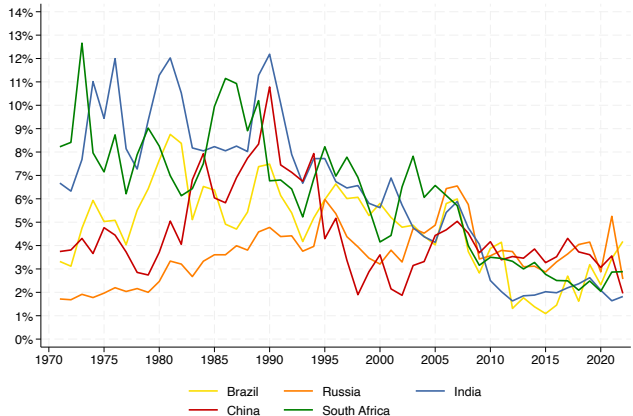
Returns on foreign assets with tax havens correction, BRICS



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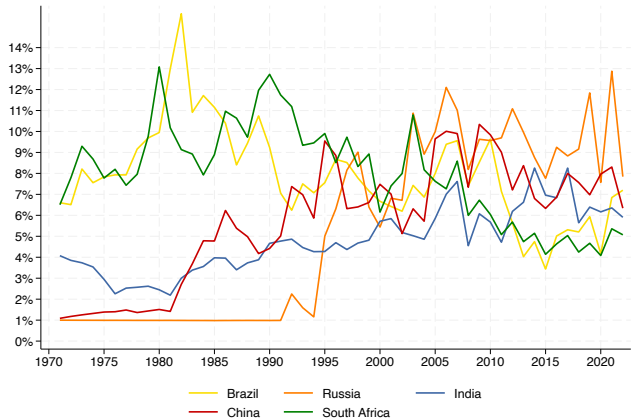
Returns on foreign liabilities with tax havens correction, BRICS



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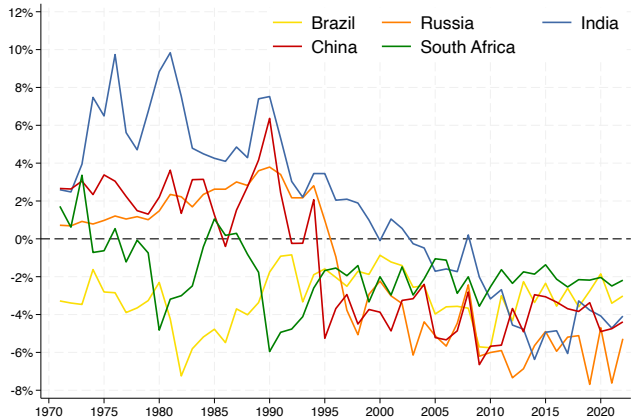
Excess yields with tax havens correction, BRICS



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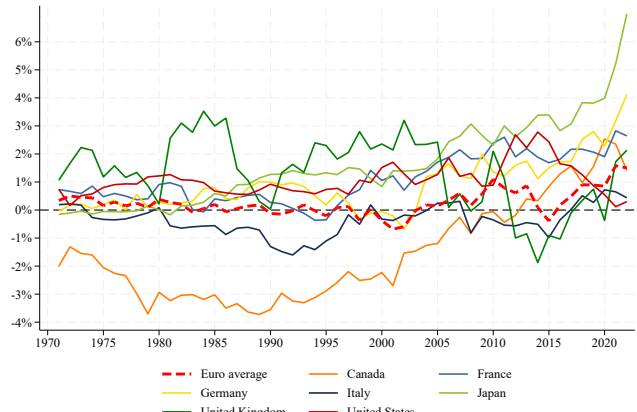
Net foreign capital income as a share of country (Eurozone) GDP



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Total Rates of returns and volatility

Quintile	Period	Avg rate/SD	Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Bottom 20%	1970-1999	Avg rate	2.09%	8.35%	2.51%	17.27%	11.24%	7.45%	-3.51%	-15.09%	14.54%
		SD	(0.11)	(0.06)	(0.32)	(0.28)	(0.18)	(0.06)	(0.14)	(0.28)	(0.11)
	2000-2023	Avg rate	2.06%	6.13%	4.45%	18.31%	1.70%	3.05%	1.51%	8.83%	10.15%
		SD	(0.04)	(0.06)	(0.18)	(0.29)	(0.04)	(0.03)	(0.05)	(0.09)	(0.08)
20%-40%	1970-1999	Avg rate	-1.69%	13.76%	18.21%	25.04%	9.61%	15.22%	-9.80%	1.12%	0.81%
		SD	(0.14)	(0.08)	(0.17)	(0.24)	(0.17)	(0.09)	(0.19)	(0.17)	(0.10)
	2000-2023	Avg rate	0.04%	6.18%	1.91%	15.86%	-3.62%	1.67%	1.02%	1.73%	10.64%
		SD	(0.04)	(0.09)	(0.27)	(0.31)	(0.07)	(0.05)	(0.05)	(0.11)	(0.11)
40%-60%	1970-1999	Avg rate	3.05%	13.78%	27.77%	19.13%	6.68%	14.49%	-1.23%	4.82%	12.90%
		SD	(0.05)	(0.07)	(0.27)	(0.18)	(0.07)	(0.08)	(0.07)	(0.13)	(0.08)
	2000-2023	Avg rate	2.89%	8.43%	13.54%	21.13%	1.52%	8.06%	2.01%	7.34%	6.31%
		SD	(0.03)	(0.08)	(0.27)	(0.43)	(0.05)	(0.05)	(0.04)	(0.09)	(0.07)
60%-80%	1970-1999	Avg rate	5.03%	10.88%	20.24%	15.55%	5.31%	11.07%	0.94%	13.79%	10.18%
		SD	(0.03)	(0.04)	(0.14)	(0.19)	(0.05)	(0.04)	(0.07)	(0.09)	(0.08)
	2000-2023	Avg rate	3.53%	7.87%	7.78%	15.95%	0.29%	7.01%	2.94%	10.89%	7.29%
		SD	(0.04)	(0.08)	(0.20)	(0.29)	(0.04)	(0.04)	(0.04)	(0.08)	(0.10)
Top 20%	1970-1999	Avg rate	11.88%	10.97%	19.76%	17.18%	11.91%	9.79%	6.32%	11.62%	12.01%
		SD	(0.04)	(0.03)	(0.08)	(0.09)	(0.04)	(0.04)	(0.06)	(0.08)	(0.08)
	2000-2023	Avg rate	6.28%	6.00%	8.78%	8.49%	5.67%	5.16%	1.87%	7.54%	6.55%
		SD	(0.07)	(0.07)	(0.19)	(0.16)	(0.07)	(0.06)	(0.03)	(0.10)	(0.10)

▸ G8 ▸ BRICS ▸ back

G8 (1970-1999)

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Canada	1970-1999	Avg rate	10.58%	10.59%	16.24%	12.28%	10.80%	10.23%	8.67%	9.37%	11.67%
		SD	(0.06)	(0.05)	(0.17)	(0.19)	(0.05)	(0.04)	(0.04)	(0.09)	(0.10)
Germany	1970-1999	Avg rate	10.13%	10.84%	19.89%	19.05%	11.05%	8.92%	5.51%	5.73%	21.68%
		SD	(0.10)	(0.13)	(0.14)	(0.28)	(0.13)	(0.13)	(0.13)	(0.12)	(0.27)
France	1970-1999	Avg rate	11.86%	12.38%	23.00%	36.60%	11.98%	11.04%	12.48%	6.79%	18.89%
		SD	(0.07)	(0.09)	(0.12)	(0.26)	(0.11)	(0.07)	(0.16)	(0.16)	(0.35)
United Kingdom	1970-1999	Avg rate	14.22%	13.98%	19.55%	20.44%	14.69%	13.09%	9.29%	10.73%	14.91%
		SD	(0.07)	(0.07)	(0.15)	(0.17)	(0.08)	(0.08)	(0.45)	(0.11)	(0.21)
Italy	1970-1999	Avg rate	5.87%	8.43%	21.34%	41.37%	4.54%	7.06%	8.53%	6.73%	10.04%
		SD	0.10	0.12	0.26	0.64	0.12	0.11	0.17	0.13	0.20
Japan	1970-1999	Avg rate	7.51%	-0.38%	13.32%	-4.05%	6.97%	0.20%	9.62%	6.57%	-7.21%
		SD	0.07	0.12	0.09	0.29	0.08	0.10	0.07	0.08	0.12
United States	1970-1999	Avg rate	14.14%	10.04%	24.59%	17.98%	11.04%	7.61%	10.08%	16.81%	14.07%
		SD	0.08	0.06	0.19	0.15	0.05	0.03	0.09	0.15	0.20
Eurozone	1970-1999	Avg rate	13.25%	13.57%	21.02%	22.36%	14.15%	11.94%	8.49%	8.92%	14.65%
		SD	0.06	0.07	0.08	0.08	0.07	0.07	0.09	0.09	0.14

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G8 (2000-2022)

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Canada	2000-2022	Avg rate	6.72%	6.42%	10.06%	9.80%	7.37%	5.28%	4.16%	5.13%	7.58%
		SD	(0.14)	(0.14)	(0.20)	(0.27)	(0.06)	(0.06)	(0.05)	(0.16)	(0.21)
Germany	2000-2022	Avg rate	4.81%	4.91%	4.79%	11.18%	4.52%	4.58%	2.59%	6.98%	3.74%
		SD	(0.09)	(0.11)	(0.17)	(0.30)	(0.10)	(0.10)	(0.04)	(0.08)	(0.13)
France	2000-2022	Avg rate	4.40%	3.95%	5.67%	4.91%	4.24%	4.18%	4.10%	4.90%	4.82%
		SD	(0.09)	(0.10)	(0.20)	(0.18)	(0.10)	(0.11)	(0.05)	(0.08)	(0.11)
United Kingdom	2000-2022	Avg rate	5.90%	5.03%	9.35%	7.69%	5.74%	4.67%	3.07%	6.21%	5.78%
		SD	(0.10)	(0.10)	(0.18)	(0.19)	(0.13)	(0.12)	(0.10)	(0.09)	(0.12)
Italy	2000-2022	Avg rate	4.37%	3.83%	5.03%	5.30%	4.03%	3.52%	2.28%	5.04%	5.49%
		SD	0.10	0.11	0.15	0.22	0.10	0.11	0.04	0.09	0.12
Japan	2000-2022	Avg rate	8.63%	10.34%	11.96%	5.83%	10.44%	13.72%	4.13%	5.79%	10.60%
		SD	0.06	0.09	0.26	0.22	0.09	0.10	0.04	0.05	0.14
United States	2000-2022	Avg rate	7.64%	5.14%	10.19%	9.64%	7.38%	4.37%	1.32%	8.82%	4.66%
		SD	0.10	0.07	0.22	0.16	0.14	0.08	0.07	0.17	0.15
Eurozone	2000-2022	Avg rate	6.19%	6.28%	6.93%	6.77%	4.82%	4.99%	1.86%	9.10%	9.29%
		SD	0.10	0.10	0.17	0.15	0.09	0.10	0.04	0.15	0.16

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BRICS (1970-1999)

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Brazil	1970-1999	Avg rate	10.46%	9.25%	11.43%	13.92%	6.08%	9.98%	10.68%	23.29%	5.54%
		SD	(0.08)	(0.07)	(0.25)	(0.22)	(0.20)	(0.09)	(0.13)	(0.17)	(0.18)
China	1970-1999	Avg rate	-2.87%	26.96%	30.14%	42.73%	11.32%	32.63%	-13.41%	-5.79%	-1.38%
		SD	(0.15)	(0.19)	(0.33)	(0.28)	(0.21)	(0.20)	(0.19)	(0.21)	(0.15)
India	1970-1999	Avg rate	-0.13%	6.39%	15.39%	8.93%	2.32%	6.03%	-1.60%	14.76%	7.61%
		SD	(0.15)	(0.06)	(0.25)	(0.16)	(0.32)	(0.06)	(0.22)	(0.28)	(0.06)
Russia	1970-1999	Avg rate	5.90%	-4.85%	30.20%	-4.47%	3.19%	-9.68%	29.48%	36.09%	73.36%
		SD	(0.05)	(0.08)	(0.07)	(0.85)	(0.05)	(0.12)	(0.14)	(0.13)	(0.33)
South Africa	1970-1999	Avg rate	17.51%	13.71%	25.30%	23.65%	10.83%	15.78%	1.00%	19.68%	16.81%
		SD	(0.15)	(0.15)	(0.25)	(0.53)	(0.18)	(0.11)	(1.46)	(0.20)	(0.43)

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BRICS (2000-2022)

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Brazil	2000-2022	Avg rate	5.06%	7.24%	2.41%	14.84%	1.96%	7.03%	4.89%	8.42%	5.53%
		SD	(0.04)	(0.18)	(0.49)	(0.47)	(0.16)	(0.06)	(0.06)	(0.07)	(0.22)
China	2000-2022	Avg rate	3.86%	9.45%	18.41%	26.23%	1.97%	12.51%	3.12%	8.96%	4.90%
		SD	(0.04)	(0.10)	(0.31)	(0.46)	(0.07)	(0.10)	(0.04)	(0.10)	(0.09)
India	2000-2022	Avg rate	2.10%	5.08%	6.79%	18.52%	-0.17%	-3.29%	1.49%	9.42%	7.19%
		SD	(0.05)	(0.13)	(0.21)	(0.31)	(0.08)	(0.05)	(0.06)	(0.12)	(0.10)
Russia	2000-2022	Avg rate	2.46%	12.43%	19.71%	26.05%	-2.17%	5.71%	4.11%	14.23%	21.58%
		SD	(0.09)	(0.20)	(0.31)	(0.48)	(0.08)	(0.07)	(0.07)	(0.32)	(0.32)
South Africa	2000-2022	Avg rate	12.91%	10.31%	11.39%	9.01%	25.43%	15.54%	5.93%	13.39%	8.14%
		SD	(0.15)	(0.19)	(0.23)	(0.26)	(0.22)	(0.11)	(0.07)	(0.20)	(0.26)

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Countries	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Canada	1970-1999	Avg rate/SD	182%	204%	94%	66%	197%	250%	239%	102%	119%
	2000-2022	Avg rate/SD	50%	46%	50%	36%	124%	92%	77%	33%	37%
Germany	1970-1999	Avg rate/SD	97%	86%	138%	69%	85%	70%	43%	47%	82%
	2000-2022	Avg rate/SD	52%	46%	29%	37%	45%	47%	59%	84%	29%
France	1970-1999	Avg rate/SD	159%	139%	195%	140%	114%	149%	80%	42%	54%
	2000-2022	Avg rate/SD	49%	39%	29%	27%	41%	39%	80%	64%	44%
United Kingdom	1970-1999	Avg rate/SD	207%	191%	131%	119%	175%	158%	21%	97%	72%
	2000-2022	Avg rate/SD	58%	49%	52%	40%	44%	40%	32%	69%	47%
Italy	1970-1999	Avg rate/SD	57%	71%	81%	65%	39%	63%	49%	50%	50%
	2000-2022	Avg rate/SD	43%	34%	34%	24%	39%	33%	64%	54%	45%
Japan	1970-1999	Avg rate/SD	102%	-3%	153%	-14%	92%	2%	133%	83%	-59%
	2000-2022	Avg rate/SD	145%	112%	45%	26%	122%	134%	100%	121%	76%
United States	1970-1999	Avg rate/SD	184%	160%	129%	116%	224%	254%	117%	113%	72%
	2000-2022	Avg rate/SD	74%	72%	46%	59%	53%	56%	19%	52%	32%
Eurozone	1970-1999	Avg rate/SD	217%	203%	267%	279%	209%	167%	90%	97%	104%
	2000-2022	Avg rate/SD	64%	60%	41%	44%	54%	52%	44%	60%	59%

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BRICS

Countries	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Brazil	1970-1999	Avg rate/SD	129%	139%	46%	64%	30%	107%	85%	134%	31%
	2000-2022	Avg rate/SD	114%	40%	5%	32%	12%	113%	75%	124%	26%
China	1970-1999	Avg rate/SD	-19%	144%	90%	154%	55%	165%	-69%	-27%	-9%
	2000-2022	Avg rate/SD	101%	98%	59%	57%	28%	130%	84%	87%	56%
India	1970-1999	Avg rate/SD	-1%	104%	61%	56%	7%	103%	-7%	53%	119%
	2000-2022	Avg rate/SD	44%	40%	33%	61%	-2%	-70%	23%	81%	69%
Russia	1970-1999	Avg rate/SD	120%	-60%	459%	-5%	69%	-84%	211%	277%	226%
	2000-2022	Avg rate/SD	28%	63%	64%	55%	-28%	82%	63%	44%	68%
South Africa	1970-1999	Avg rate/SD	115%	91%	101%	45%	62%	142%	1%	100%	39%
	2000-2022	Avg rate/SD	83%	54%	51%	34%	115%	136%	83%	66%	31%

Return to volatility (RV) is defined as the ratio of the average total return (yields + valuation changes) over the standard deviation of total returns. A higher RV on the asset side of the IIP means better risk-adjusted returns. Conversely, a higher RV on the liability side means the country is paying more relative to its risk.

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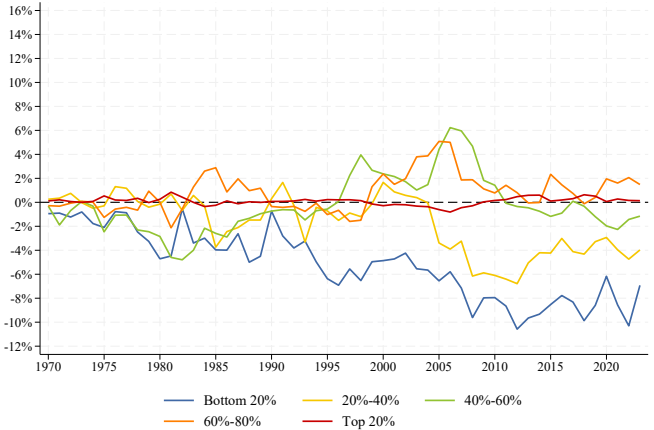
To complete the current account we use:

1. Capital income from the estimates above (adds up to zero)
2. Trade balance from CEPII database (drawn from IMF/UNCOMTRADE)
   - We use bilateral exports. We assume imports from A to B = exports from B to A so that the data is squared.
   - When adding up, by construction, global aggregates add up to zero.
3. Compensation to employees, other primary income, secondary income and capital account from IMF BOP.
   - None of these components add up to zero at the net global level.
   - Moreover, they cross several times the zero line, which impedes solving it using the tax-havens corrections.

   → **Solution**: Decrease credit (debit) proportionally.

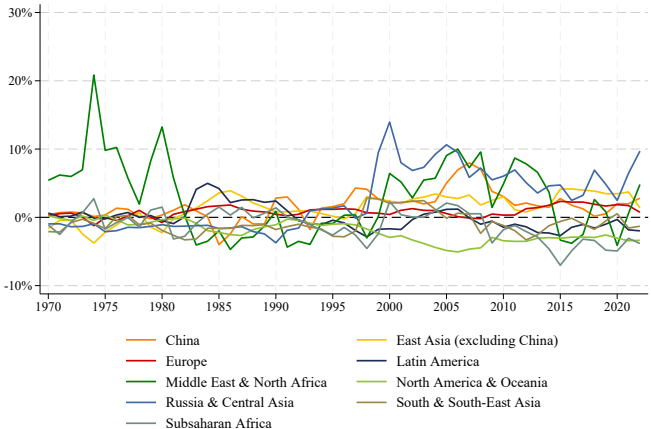
▸ back

Trade balance as a share of group GDP



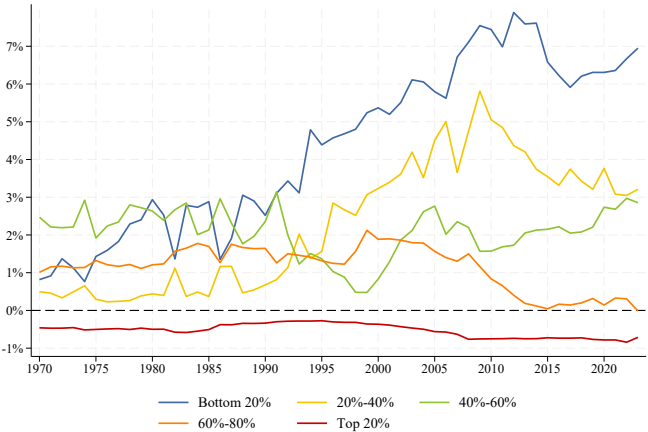
Graph shows group trade deficit/surplus as a share of group GDP.

Trade balance as a share of region GDP



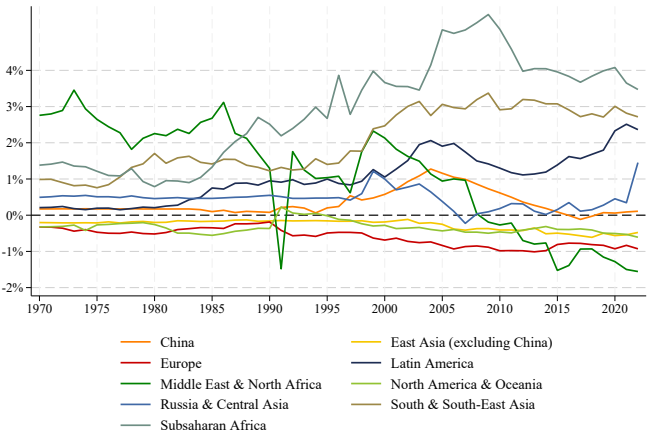
Graph shows group trade deficit/surplus as a share of region GDP.

Net transfers and remittances as a share of group GDP



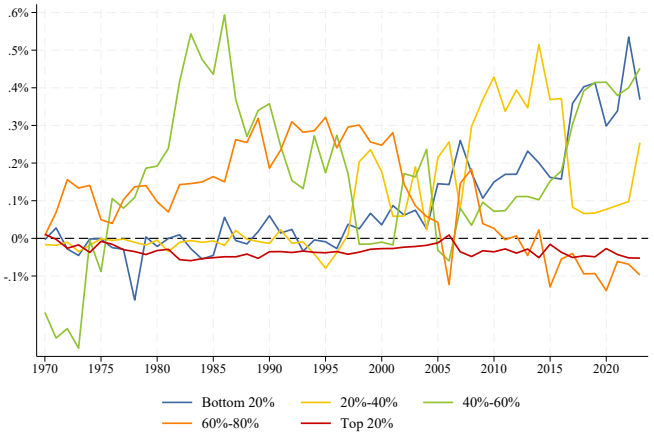
Graph shows group secondary income deficit/surplus as a share of group GDP.

Net transfers and remittances as a share of region GDP



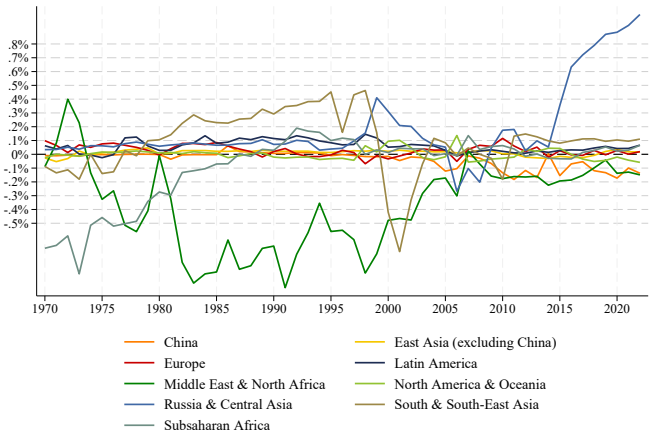
Graph shows group secondary income deficit/surplus as a share of region GDP.

Net compensation to employees as a share of group GDP



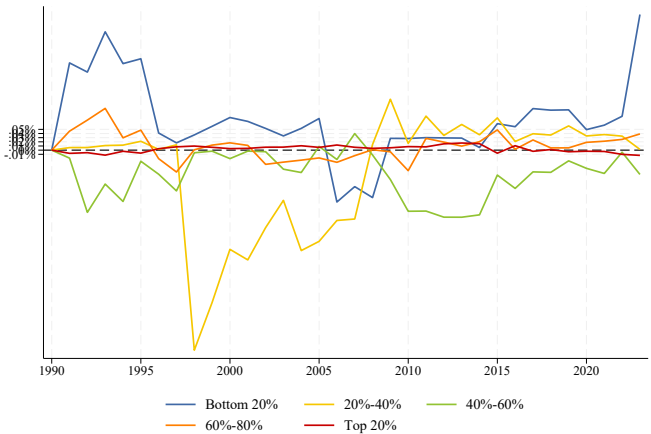
Graph shows group compensation to employees deficit/surplus as a share of group GDP.

Net compensation to employees as a share of region GDP



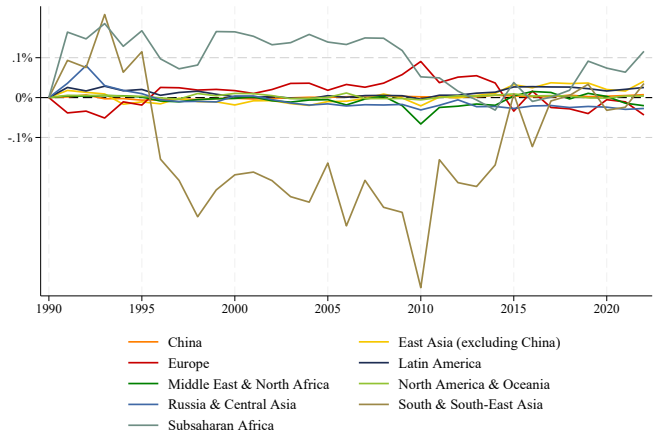
Graph shows group compensation to employees deficit/surplus as a share of region GDP.

Net other primary income as a share of group GDP



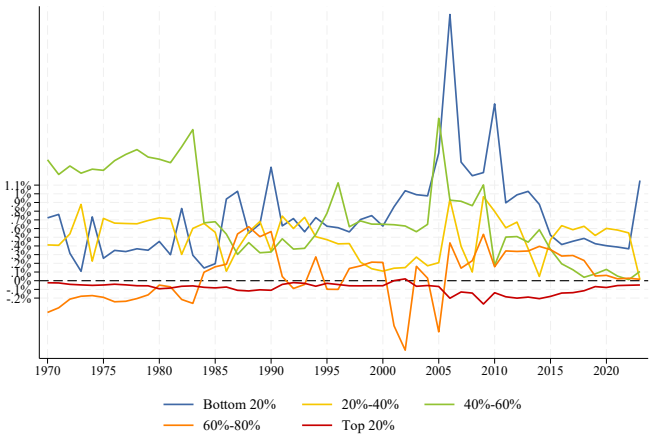
Graph shows group other primary income deficit/surplus as a share of group GDP.

Net other primary income as a share of region GDP



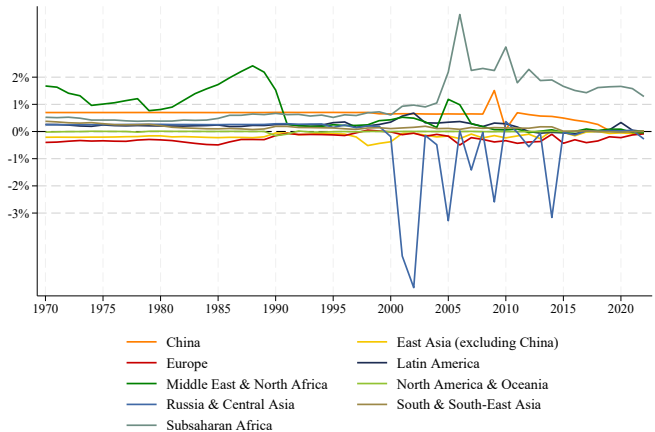
Graph shows group other primary income deficit/surplus as a share of region GDP.

Net capital account as a share of group GDP



Graph shows group capital account deficit/surplus as a share of group GDP.

Net capital account as a share of region GDP



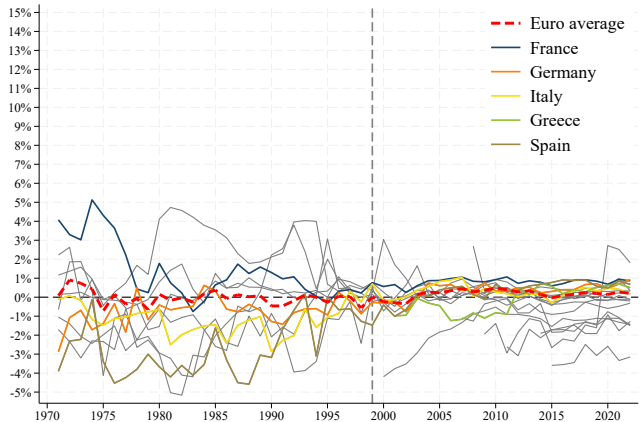
Graph shows group capital account deficit/surplus as a share of region GDP.

The Euro in the International Monetary System

- Second most widely used currency in terms of the share of global payments (36,7%, right behind the 38,7% of the US dollar).
- Official currency of the 19 euro area members states, and also 60 countries and territories outside the EU have chosen to use the euro or to peg their currency to it.
- Share of exports invoices in Euro is almost 47% while it is around 40% for the dollar (Boz et al., 2020)
  - If intra-euro area transactions were excluded, the share of the Euro would fall to 30% vs 50% USD.

▸ IMS ▸ back

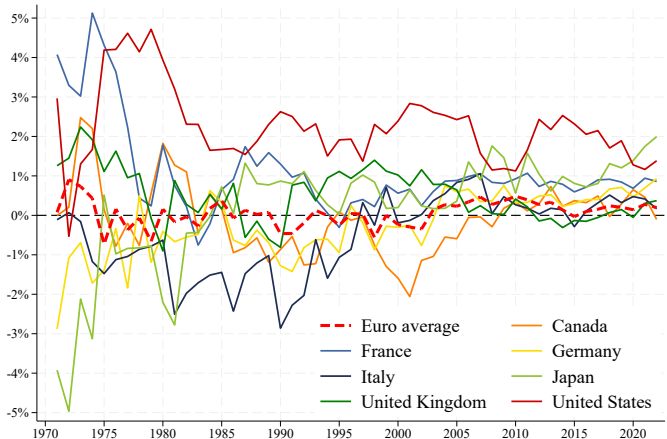
Has the Euro solved the historic concerns of the European countries ? Real excess yields



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities. Before Eurozone was created only founders are included: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Other Eurozone countries are included since the year they joined: Greece (2001), Slovenia (2007), Cyprus (2008), Malta (2008), Slovakia (2009), Estonia (2011), Latvia (2014), and Lithuania (2015).

back

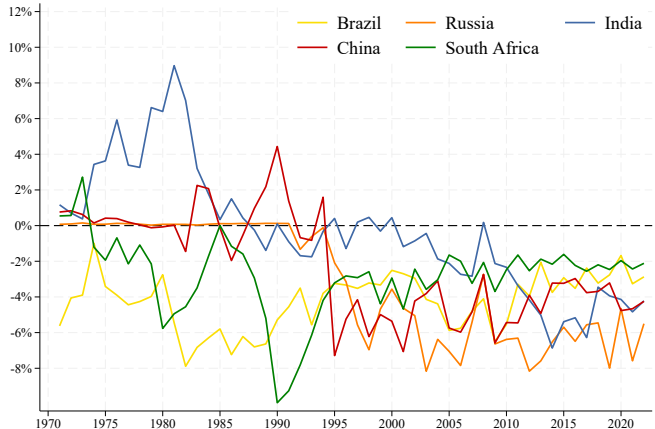
Excess yields of the Euro vs G7 countries



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.

back

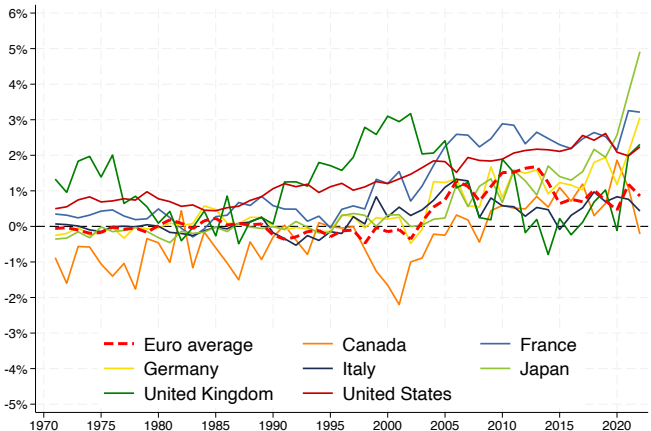
Excess yields, BRICS



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.

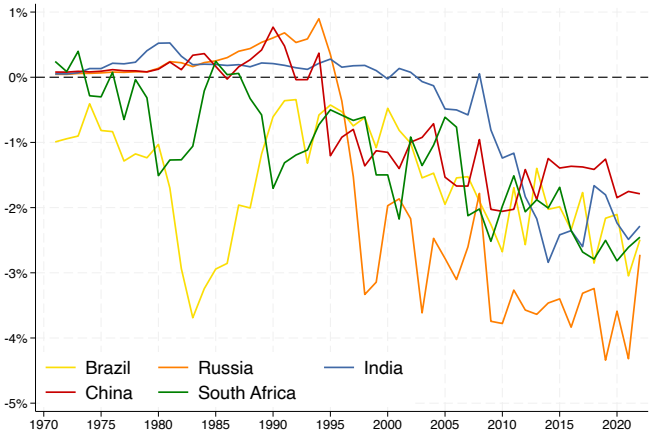
▸ NFA ▸ back

Excess yields income with tax haven correction, Euro vs G7



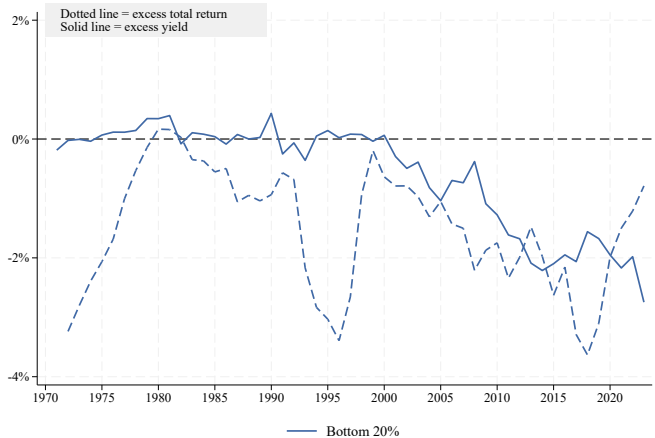
back

Excess yields income with tax haven correction, BRICS



back

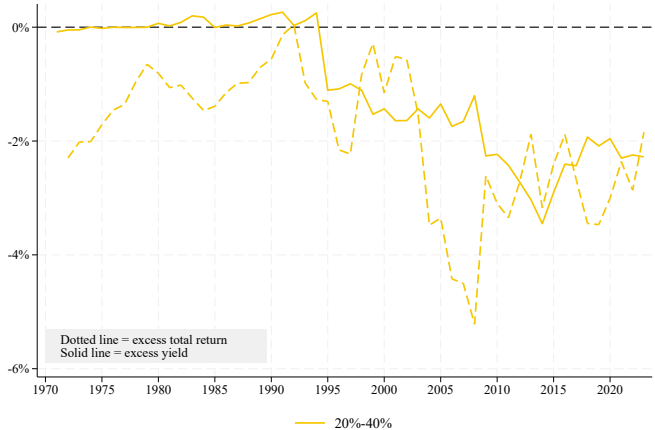
Total Excess returns as a share of group GDP - Bottom 20%



Dotted line is the total excess return, Solid line is the excess yield.

back

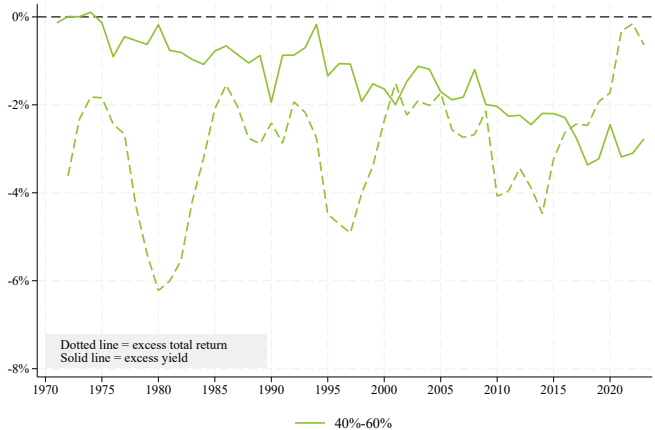
Total Excess returns as a share of group GDP - 20%-40%



Dotted line is the total excess return, Solid line is the excess yield.

back

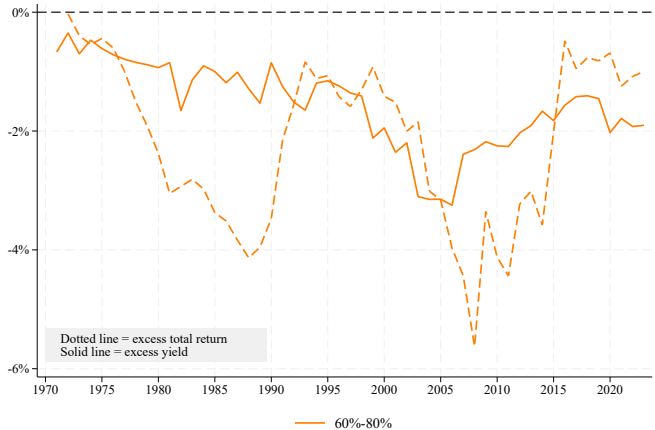
Total Excess returns as a share of group GDP - 40%-60%



Dotted line is the total excess return, Solid line is the excess yield.

back

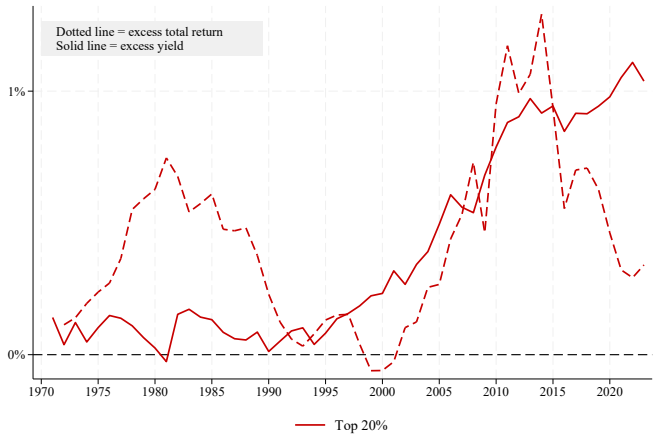
Total Excess returns as a share of group GDP - 60%-80%



Dotted line is the total excess return, Solid line is the excess yield.

back

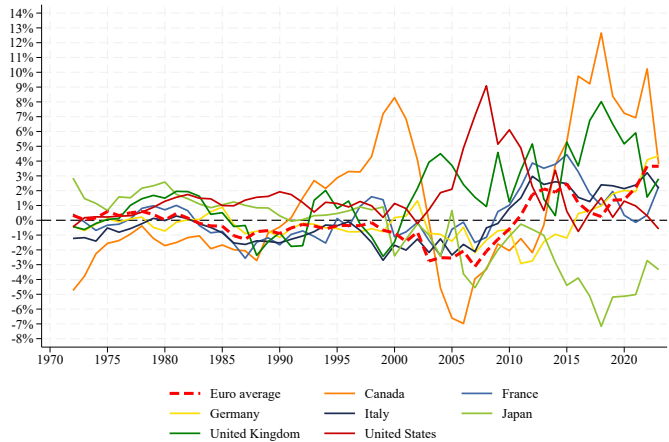
Total Excess returns as a share of group GDP - Top 20%



Dotted line is the total excess return, Solid line is the excess yield.

back

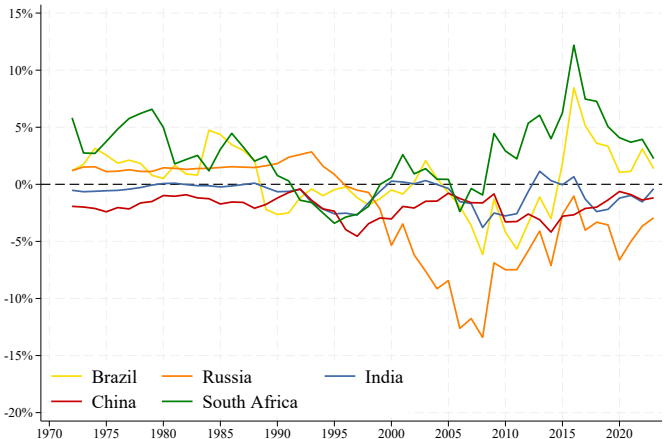
Total Excess returns as a share GDP, G8



Lines smoothed using a 5-year moving average.

back

Total Excess returns as a share GDP, BRICS



Lines smoothed using a 5-year moving average.

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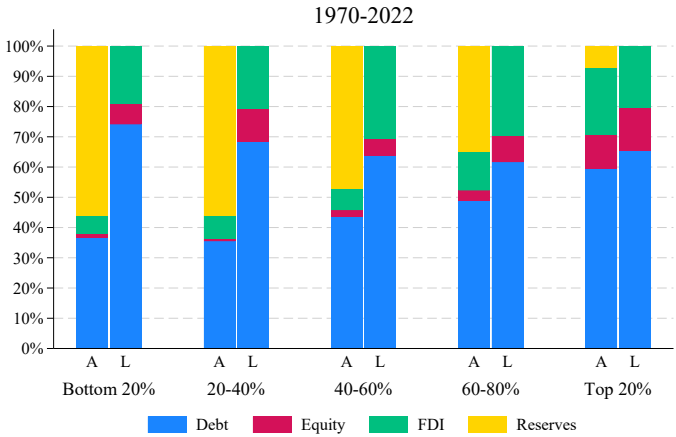
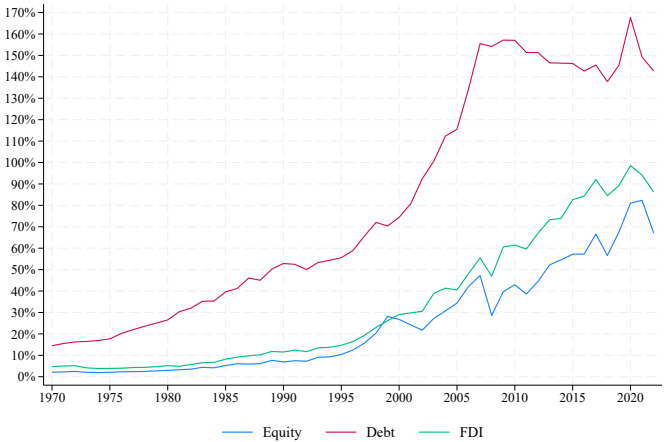
Rich countries hold less reserves and less FDI liabities



Financial derivative and Other investment in Debt. Reserves excludes gold.

back

Liabilities decomposition as a share of GDP, top 20%



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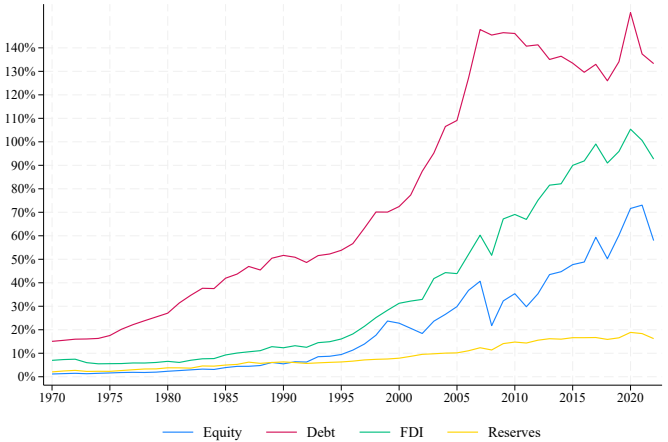
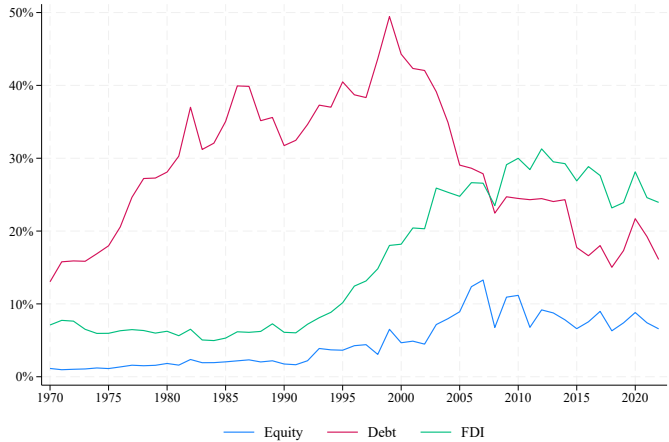
Assets decomposition as a share of GDP, top 20%



back

Liabilities decomposition as a share of GDP, 60-80%



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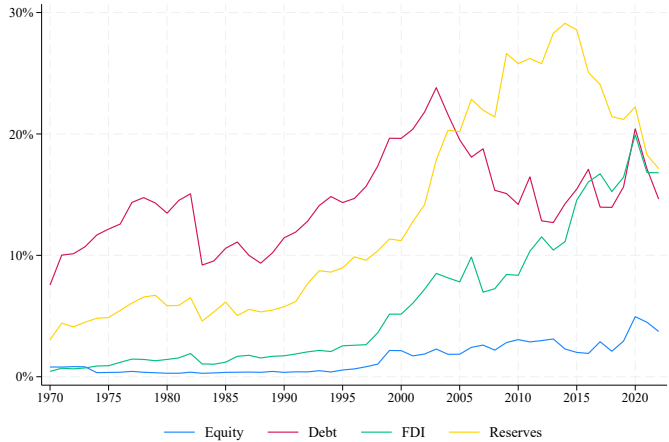
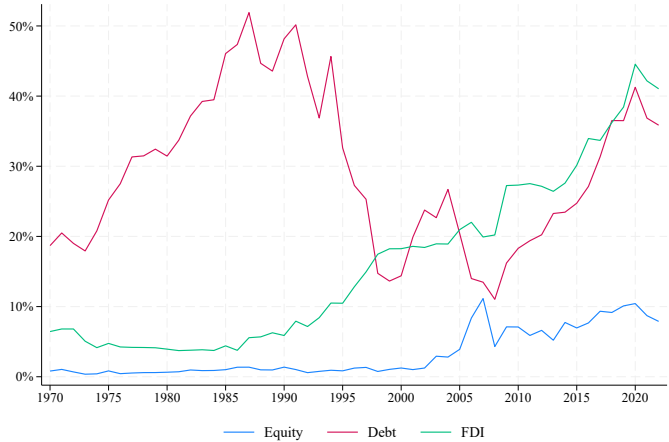
Assets decomposition as a share of GDP, 60-80%



back

Liabilities decomposition as a share of GDP, 40-60%



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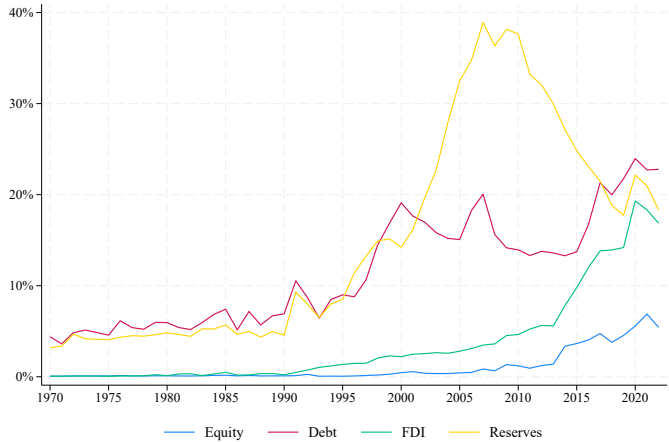
Assets decomposition as a share of GDP, 40-60%



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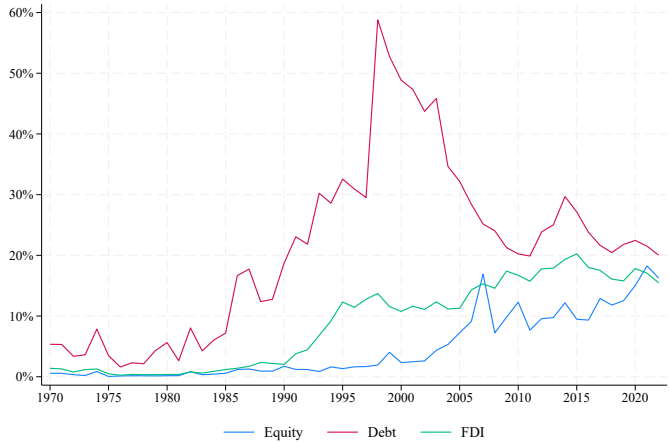
Liabilities decomposition as a share of GDP, 20-40%



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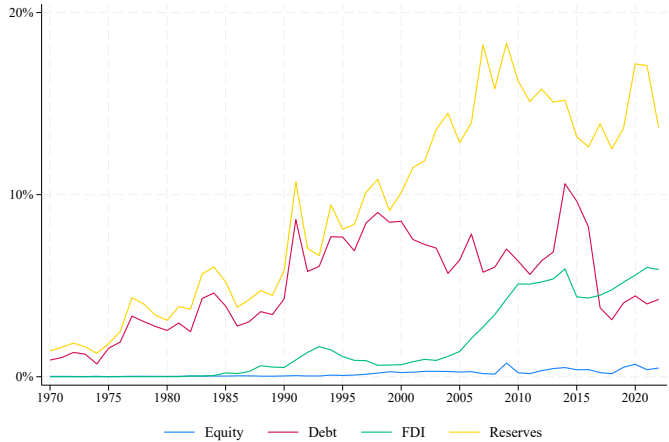
Assets decomposition as a share of GDP, 20-40%



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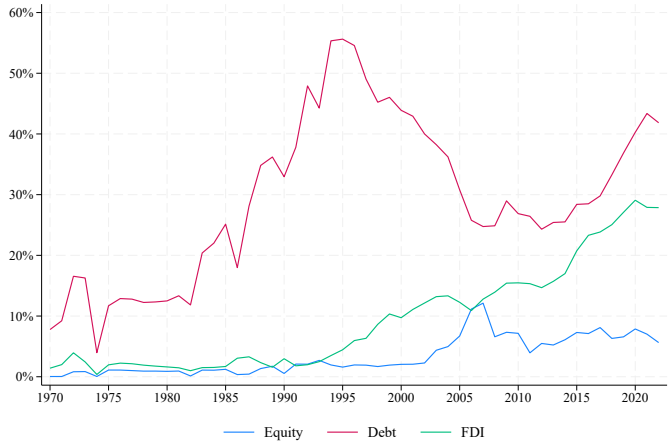
Liabilities decomposition as a share of GDP, Bottom 20%



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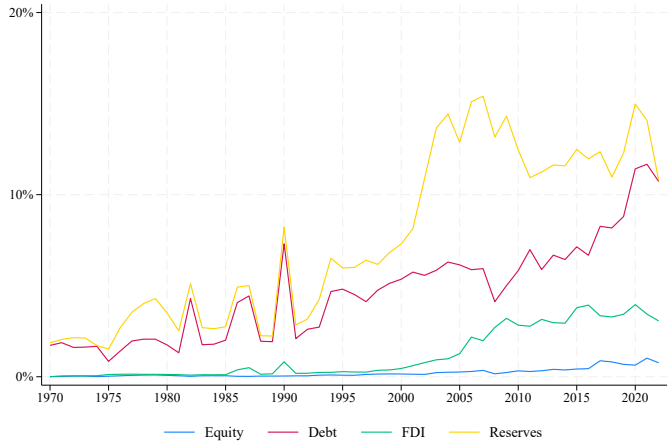
Assets decomposition as a share of GDP, Bottom 20%



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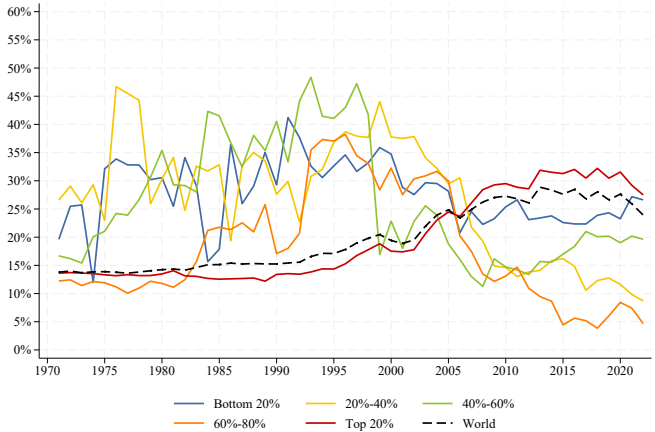
Share of external public debt in total public debt



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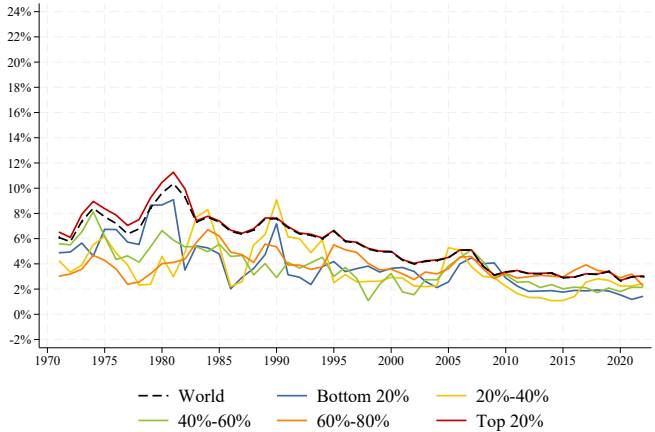
Returns received on private external assets



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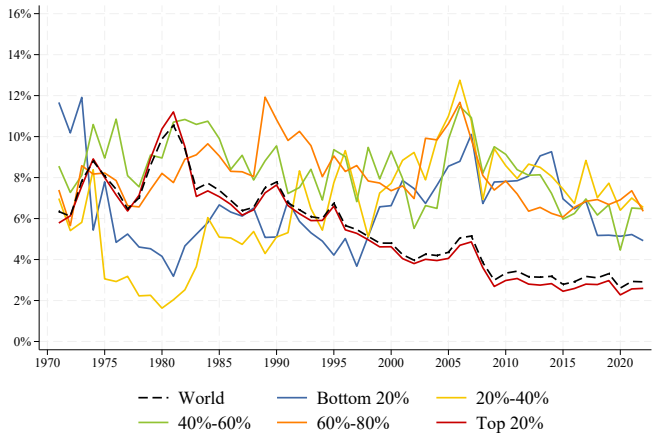
Returns paid on private external debt



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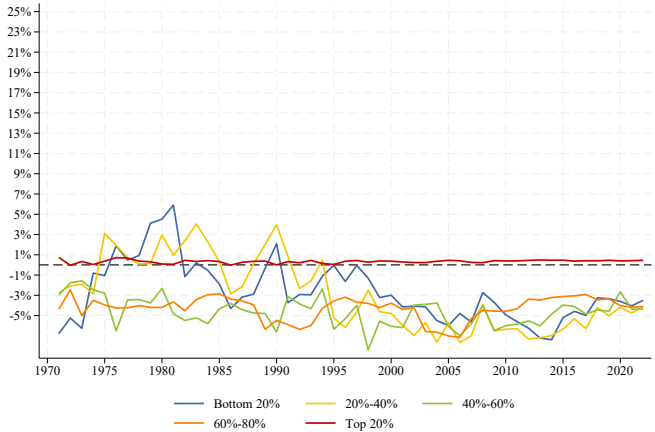
Private return differential



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Mechanisms: international currencies (IC) are at the core of results

International currencies	*Store of value*	*Medium of exchange*	*Unit of account*
Governments	International reserve holdings	Foreign exchange intervention	Anchor for pegging LC
Private	Currency substitution	Invoicing trade and financial transactions	Denominating trade and financial

Ito and Chinn (2013); Kenen (1983) back

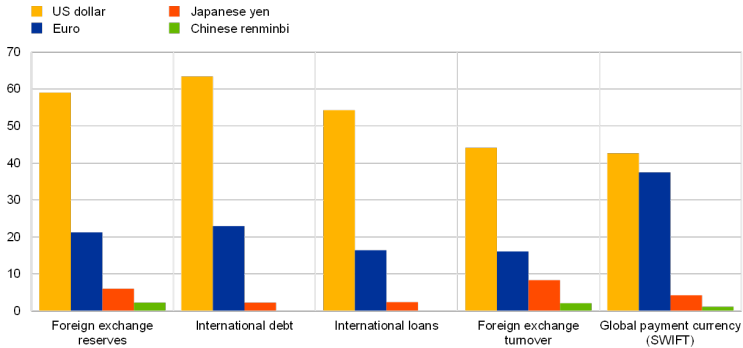
Mechanisms: international currencies (IC) are at the core of results

International currencies	*Store of value*	*Medium of exchange*	*Unit of account*
Governments	International reserve holdings	Foreign exchange intervention	Anchor for pegging LC
Private	Currency substitution	Invoicing trade and financial transactions	Denominating trade and financial

Following Ito and Chinn (2013); Kenen (1983)

Ito and Chinn (2013); Kenen (1983) back

The International Monetary System



Graph taken from The international role of the Euro, June 2021 (ECB). Sources: BIS, IMF, SWIFT and ECB calculations.

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