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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May 12, 2024

Roadmap

Motivation

Data and methodology

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

Unequal rates of return
- G8 vs BRICS

Total excess returns

Public vs private returns

Conclusion

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**: we focus on the difference between rates of return received on foreign assets vs rates of return paid on foreign liabilities

$$i^A - i^L = \frac{FKI^A}{A} - \frac{FKI^L}{L}$$

- We include wealth hidden offshore (results are robust excluding it)
- We also examine the mechanisms behind the results
  - Better investment decisions vs cheaper debt
  - Public external assets/debt vs private external assets/debt

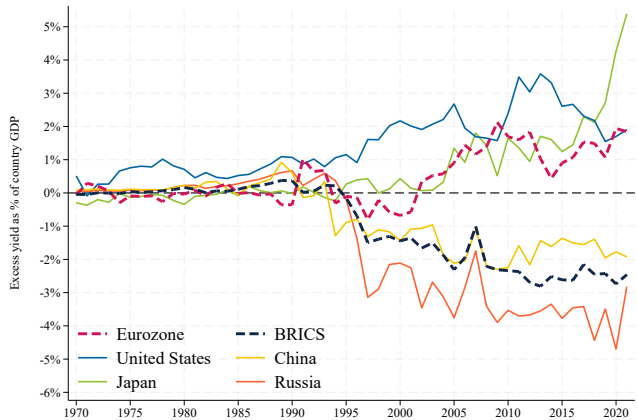
Preview of results

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 riskier 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

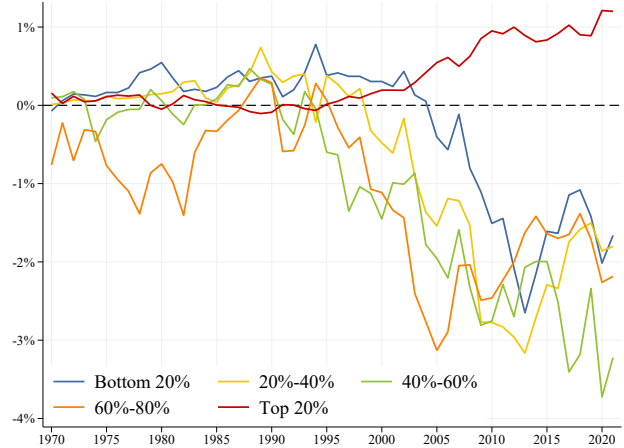


Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP.
Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ Without 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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Hypothesis that would justify the existence of a privilege

H1. 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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H4. The excess yield of rich countries comes mostly from low interest rates in their public debt.

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H5. The excess yield of rich countries comes from lower rates of return on their financial liabilities (both public and private), reflecting cheap access to credit for wealth holders from rich countries.

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:

  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)
  - Our contribution: Provide a link between dominant currencies and exorbitant privilege literature.

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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 (**?**)

  Corrections for offshore wealth (Alstadsæter, Johannesen, & Zucman, 2018; Zucman, 2013)

- Foreign capital income: The IMF BOP, UN SNA and OECD.

  Corrections for missing profits (Tørsløv, Wier, & Zucman, 2018; Wier & Zucman, 2022)

- Trade: Gravity Conte, Cotterlaz, Mayer, et al. (2022) (IMF DOTS, UN COMTRADE),

- 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)

▸ Corrections

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)

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

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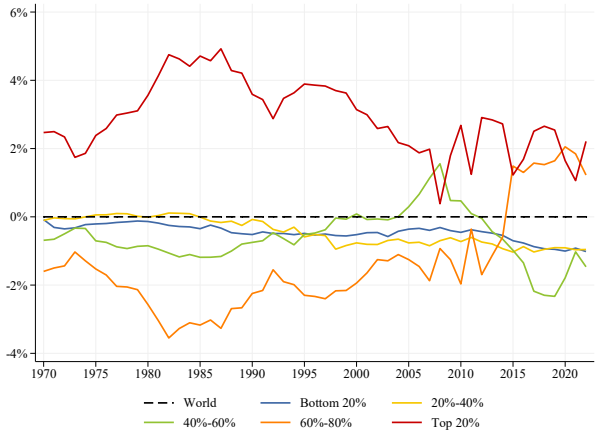
Richer countries are net creditors while poor countries are net debtors

Net foreign assets as a share of world GDP

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



▸ Assets ▸ Liabilities ▸ Without TH correction ▸ Group GDP ▸ Regional ▸ Countries ▸ Transition matrix

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).

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Fact: Rich countries experience important capital gains

- Evidence that they are on average not losing their investments, thus not need to be compensated.

▸ Stylized facts

Rich countries run trade deficit but this is more than compensated by investment income and capital gains

Decomposition 1970-2022

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
Quintile	b(1970)	b(2022)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/ GDP(1970)
Bottom 20	-4%	-49%	-1%	-36%	-122%	4%	0%	112%	9%	-14%	0	2	517%
20-40	-4%	-27%	-1%	-42%	4%	4%	1%	74%	6%	-73%	0	4	765%
40-60	-17%	-17%	-2%	-49%	85%	5%	0%	43%	4%	-104%	1	9	1130%
Next Top 20	-9%	6%	-1%	-36%	51%	2%	0%	18%	1%	-28%	3	20	610%
Top 20	3%	3%	1%	21%	-23%	-2%	0%	-19%	-1%	26%	14	66	472%

▸ Decomposition by subperiods

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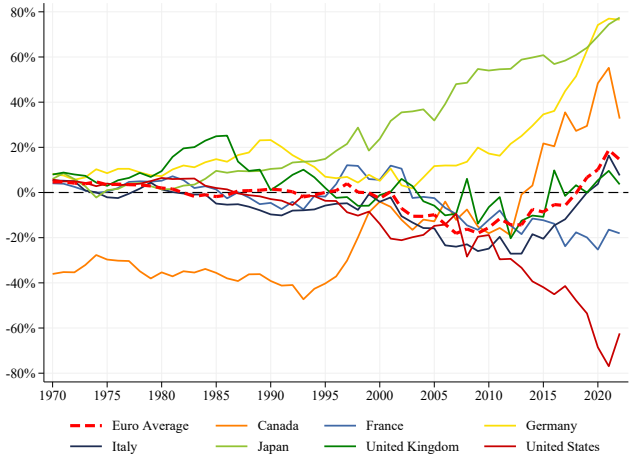
Very diverse patterns of foreign wealth accumulation among the rich

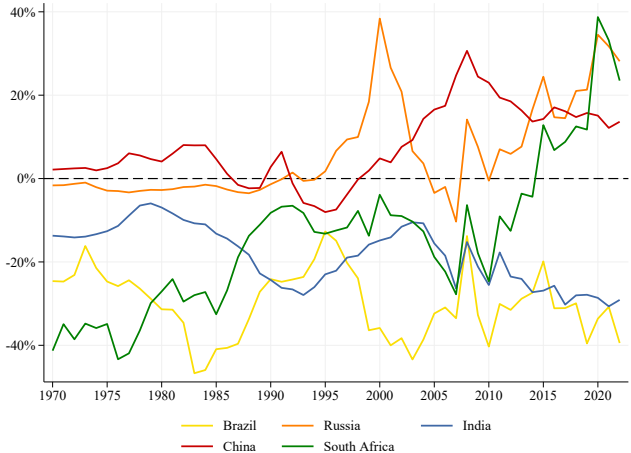
Net foreign assets as a share of country GDP



▸ Without tax havens correction

Very diverse patterns also among the BRICS

Net foreign assets as a share of country GDP



▸ Without tax havens correction

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

Decomposition 1970-2022. Real USD

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
	b(1970)	b(2022)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/ GDP(1970)
G7 + Eurozone													
Canada	-36%	33%	-9%	-21%	19%	-3%	0%	-3%	-1%	52%	1	2	394%
France	4%	-18%	1%	51%	-55%	14%	1%	-47%	0%	16%	1	3	277%
Germany	8%	77%	3%	51%	150%	-1%	-3%	-50%	-9%	-65%	1	4	277%
Italy	5%	8%	2%	-8%	-15%	6%	0%	-23%	-1%	46%	1	2	232%
Japan	6%	77%	2%	71%	74%	0%	-1%	-9%	-4%	-56%	1	4	324%
UK	8%	4%	3%	55%	-147%	-1%	-3%	-30%	-3%	129%	1	3	304%
US	6%	-62%	1%	37%	-88%	-2%	0%	-14%	-1%	3%	6	25	411%
Eurozone	6%	18%	2%	21%	17%	2%	-1%	-33%	-4%	15%	4	12	292%
Total	4%	-21%	1%	34%	-45%	-1%	-1%	-19%	-2%	11%	13	46	356%
BRICS(A)													
Argentina	-15%	30%	-4%	-54%	86%	0%	0%	6%	1%	-4%	0	1	340%
Brazil	-24%	-39%	-4%	-93%	48%	0%	0%	6%	0%	2%	0	2	563%
China	2%	14%	0%	-14%	93%	1%	0%	4%	0%	-71%	1	19	2949%
India	-14%	-29%	-1%	-25%	-54%	0%	0%	50%	0%	1%	0	3	1563%
Russia	-2%	28%	-1%	-46%	261%	-6%	0%	-7%	-7%	-166%	1	3	234%
South Africa	-41%	24%	-13%	-76%	100%	-13%	2%	-15%	-1%	39%	0	0	323%
Total	-7%	7%	-1%	-25%	91%	0%	0%	8%	0%	-65%	3	28	1035%

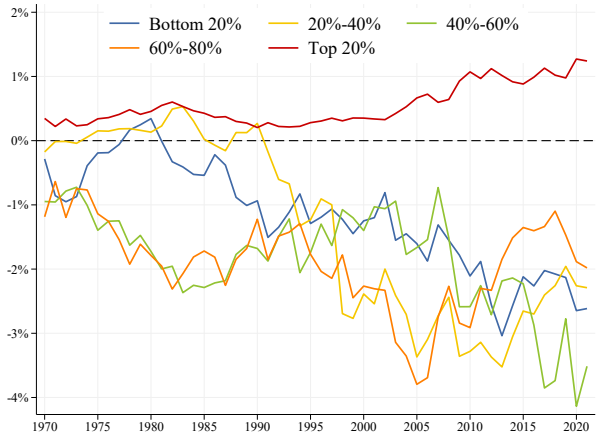
▸ Decomposition by subperiods

Roadmap

Only rich countries receive positive net foreign capital income

Net foreign capital income as a share of group GDP

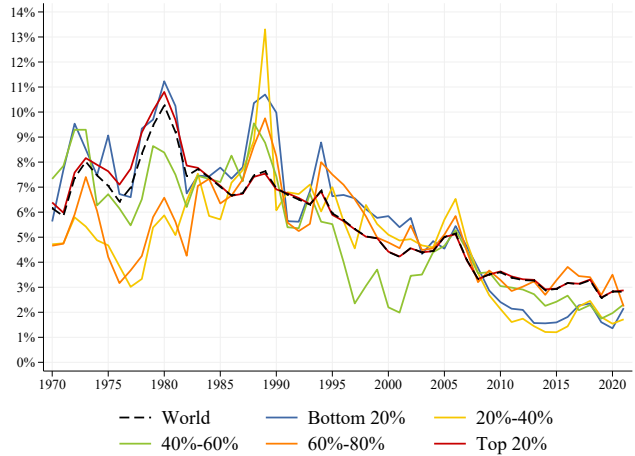
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Regional ▸ without TH correction

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

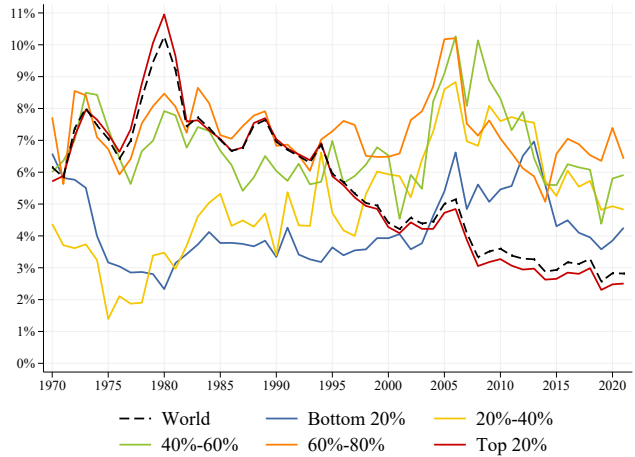
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Regional ▸ without TH correction

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

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



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Excess yield income as a share of GDP

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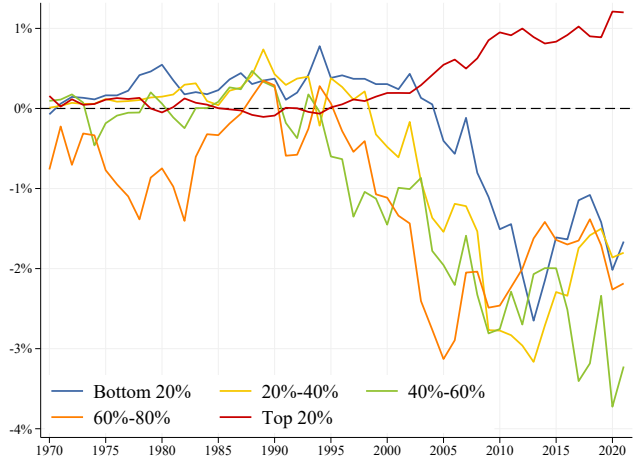

Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

▸ Differential ▸ Regional ▸ without TH 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	0,97%	0,90%	0,07%	-0,06%	1,99%	1,16%	0,50%	-0,02%
2000-2009	1,45%	2,03%	0,26%	0,70%	2,41%	2,52%	2,01%	0,70%
2010-2022	1,48%	2,61%	1,08%	1,33%	0,83%	0,95%	3,30%	2,10%
	Switzerland		Canada/AUS/NZ		Top 10%		Next top 10%	
1970-1999	3,90%	0,13%	-2,63%	-0,08%	0,67%	0,26%	-0,48%	-0,66%
2000-2009	5,71%	1,17%	-1,56%	-0,22%	1,26%	1,20%	-1,10%	-1,29%
2010-2022	3,18%	0,43%	-0,22%	0,35%	1,76%	2,02%	-1,09%	-1,54%

Eurozone includes only founders before its creation: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Countries that joined in subsequent years are included since the year they joined: Greece (2001), Slovenia (2007), Cyprus (2008), Malta (2008), Slovakia (2009), Estonia (2011), Latvia (2014), and Lithuania (2015). In 2020, Western Europe non Eurozone includes countries such as Croatia, Denmark, Sweden, Switzerland and the U.K. Rest of top 20% excludes U.S., Eurozone, Western Europe, Japan, Switzerland, Canada, Australia and New Zealand. Top 10% includes countries such as Australia, Belgium, Canada, France, Germany, Israel, Japan, Norway, Switzerland, the U.K. and the U.S. Next top 10% includes countries such as Chile, Croatia, Greece, Italy, Poland, Portugal, Romania, South Korea and Uruguay.

Evaluating risk

Hypothesis 2: *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 compare the risk in terms of volatility of their yields.
  - We compare within asset class for each country group the standard deviation of the yields with the world's standard deviation

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Fact: Rich countries' assets are less risky than the world average.

Richer countries do not invest in riskier assets

Ratio of standard deviation of country group yields to standard deviation of global yields

Quintile	Period	Total assets		Equity		Debt		FX Res.	FDI	
		Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Bottom 20%	1970-1999	143%	6%	4%	1%	132%	7%	168%	3%	1%
	2000-2022	187%	140%	4%	138%	183%	109%	225%	39%	21%
20%-40%	1970-1999	55%	7%	36%	1%	64%	6%	47%	0%	1%
	2000-2022	92%	71%	2%	0%	101%	69%	73%	32%	7%
40%-60%	1970-1999	163%	89%	28%	1%	150%	97%	164%	303%	8%
	2000-2022	43%	82%	4%	0%	53%	96%	23%	39%	5%
60%-80%	1970-1999	66%	151%	165%	173%	77%	149%	51%	13%	168%
	2000-2022	68%	124%	212%	209%	68%	113%	29%	231%	16%
Top 20%	1970-1999	42%	26%	2%	1%	59%	18%	33%	4%	21%
	2000-2022	67%	73%	77%	0%	63%	93%	27%	41%	160%

Risk is defined as the ratio of standard deviation of yields within asset class to global standard deviation.

Decomposition of the privilege

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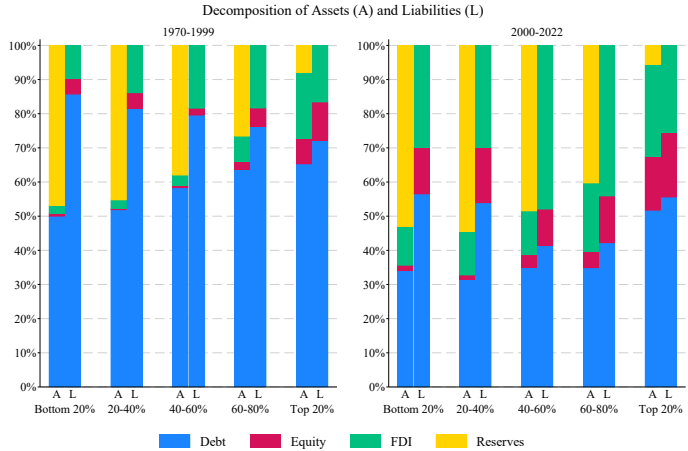
Fact: Rich countries' return on foreign assets is -for almost every asset class- lower than the world's average.

- 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

Composition effect as a share of GDP

Quintile	Period	Total assets			Equity		Debt		FX Res.	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Bottom 20%	1970-1999	-0.12%	0.01%	-0.13%	0.00%	0.01%	-0.07%	-0.15%	0.08%	0.00%	0.01%
	2000-2022	-0.01%	0.03%	-0.03%	0.00%	0.03%	-0.06%	-0.01%	0.12%	0.00%	-0.05%
20%-40%	1970-1999	-0.07%	-0.02%	-0.06%	0.00%	0.01%	-0.08%	-0.07%	0.07%	0.00%	0.01%
	2000-2022	0.01%	0.04%	-0.03%	0.00%	0.02%	-0.06%	0.01%	0.12%	0.00%	-0.06%
40%-60%	1970-1999	-0.08%	0.03%	-0.11%	0.00%	0.01%	-0.05%	-0.11%	0.10%	-0.02%	-0.02%
	2000-2022	-0.14%	0.08%	-0.22%	-0.05%	0.10%	-0.09%	0.14%	0.26%	-0.04%	-0.46%
60%-80%	1970-1999	-0.04%	0.02%	-0.06%	0.00%	0.02%	-0.02%	-0.07%	0.05%	-0.01%	-0.01%
	2000-2022	-0.09%	0.07%	-0.16%	-0.02%	0.05%	-0.10%	0.13%	0.22%	-0.03%	-0.33%
Top 20%	1970-1999	0.04%	0.02%	0.02%	0.00%	-0.01%	0.00%	0.03%	-0.01%	0.02%	0.00%
	2000-2022	0.08%	0.07%	0.01%	0.02%	-0.01%	0.03%	-0.03%	-0.01%	0.02%	0.04%

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 (3)-(5) represent the sum of columns (6)-(12).

Return effect : Privilege comes from cheaper liabilities

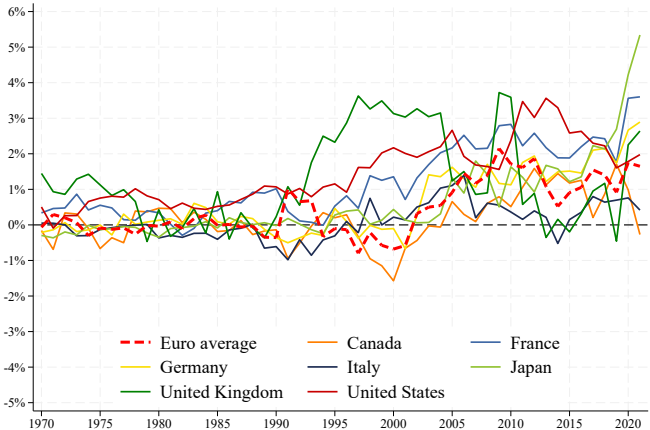
Return effect as a share of group GDP

Quintile	Period	Total assets			Equity		Debt		FX Res.	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
Bottom 20%	1970-1999	1.34%	0.20%	1.14%	0.01%	0.04%	0.17%	0.97%	0.03%	-0.01%	0.13%
	2000-2022	-0.68%	0.14%	-0.82%	-0.01%	-0.26%	0.15%	0.01%	-0.02%	0.02%	-0.57%
20%-40%	1970-1999	0.94%	0.08%	0.86%	0.05%	-0.02%	0.11%	0.65%	-0.07%	-0.01%	0.23%
	2000-2022	-1.67%	0.06%	-1.73%	0.01%	-0.55%	0.11%	-0.21%	-0.03%	-0.03%	-0.97%
40%-60%	1970-1999	0.16%	0.20%	-0.04%	0.04%	-0.07%	0.11%	0.33%	0.01%	0.04%	-0.30%
	2000-2022	-1.76%	0.20%	-1.96%	0.32%	-1.02%	0.04%	-0.39%	0.07%	-0.24%	-0.55%
60%-80%	1970-1999	-0.14%	-0.01%	-0.13%	-0.01%	-0.12%	0.08%	0.06%	-0.02%	-0.06%	-0.07%
	2000-2022	-1.49%	0.24%	-1.73%	0.03%	-0.64%	0.20%	-0.49%	0.18%	-0.17%	-0.60%
Top 20%	1970-1999	0.03%	0.06%	-0.03%	0.02%	0.02%	0.02%	-0.07%	0.01%	0.02%	0.02%
	2000-2022	**0.56%**	-0.06%	0.61%	-0.01%	0.23%	-0.05%	0.16%	-0.04%	0.04%	0.22%

Excess is defined as difference with world's average return rate within asset class times assets (liabilities), expressed as a fraction of group's GDP. Columns (3)-(5) is the sum of columns (6)-(12).

Table of Contents

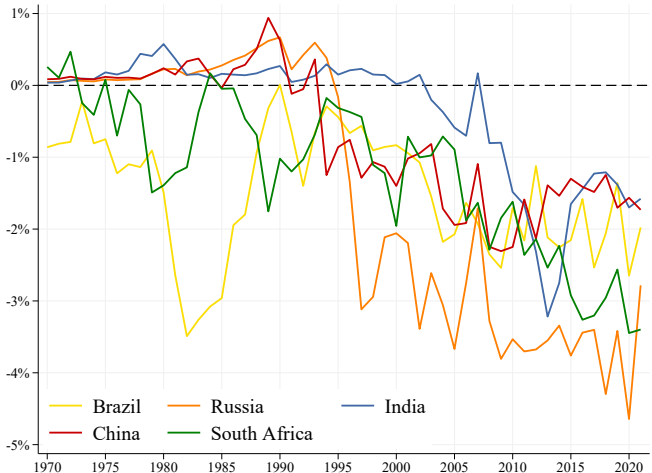
Excess yields income of the Euro vs G7 countries, as a share of country (Eurozone) GDP



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 ▸ Without 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 ▸ Without TH correction ▸ Tipping point

Roadmap

Motivation

Data and methodology

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

Unequal rates of return
- G8 vs BRICS

Total excess returns

Public vs private returns

Conclusion

Total excess returns

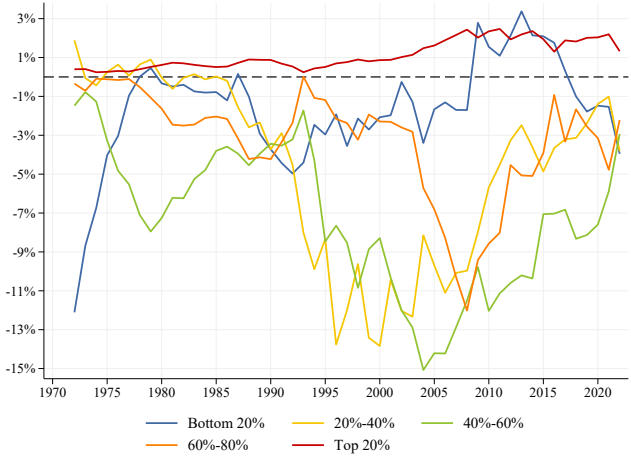
- Total excess returns are calculated as

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

- Capital gains amplify the privilege of the rich $\rightarrow$ Higher total excess returns
- Bottom 20% reverses the negative yield for period 2009-2017.

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.

▸ Excess yield vs excess total return ▸ Total excess returns G8 ▸ Total excess returns BRICS

Roadmap

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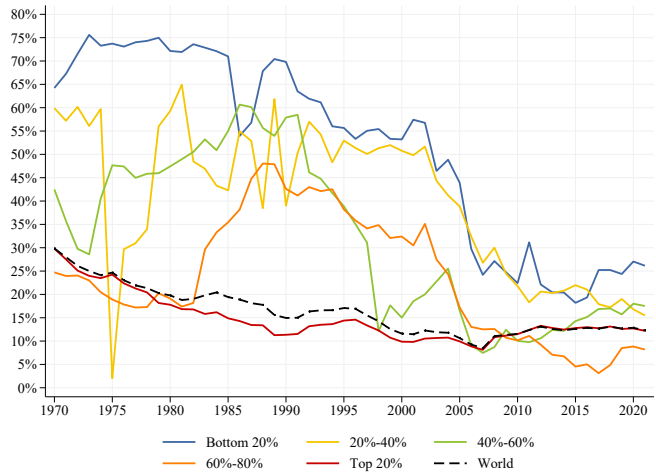
  - We exclude reserves, loans granted and external public assets from total assets (and their accrued income)
  - We exclude public sector external debt from total liabilities (and their accrued income)

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

12% of the world external liabilities are public debt

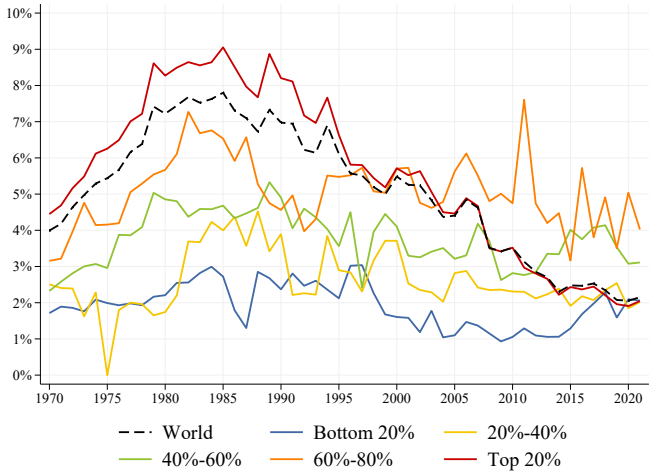
Countries grouped by quintiles according to per capita national income (weighted by population)



▸ Ratio total debt

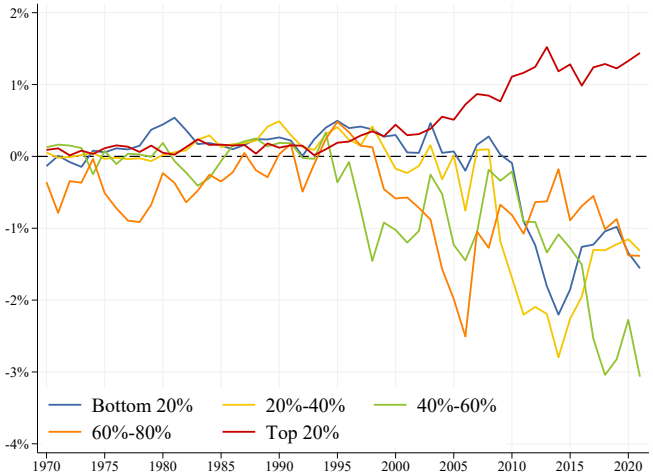
Returns paid on public external debt have decreased for top 20%

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 lower rates of return on their financial liabilities (both public and private), reflecting cheap access to credit for wealth holders from rich countries.*

Mechanisms

Hypothesis 5: *The excess yield of rich countries comes from lower rates of return on their financial liabilities (both public and private), reflecting cheap access to credit for wealth holders from rich countries.*

- 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:

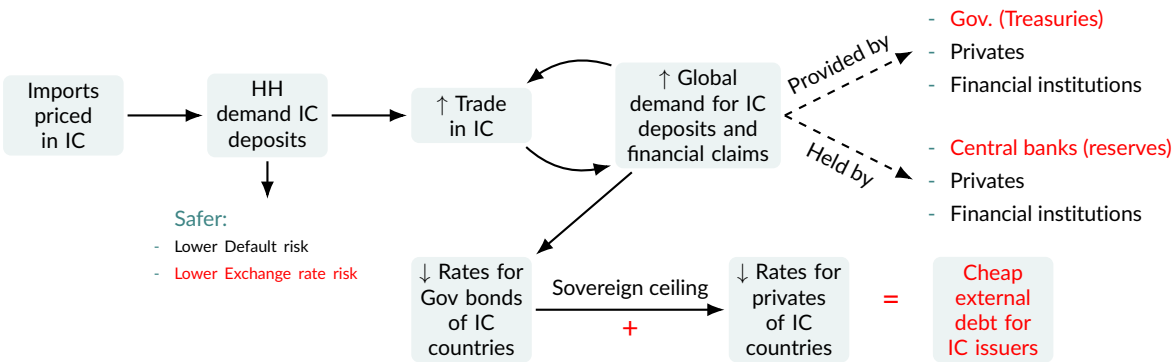
Mechanisms

Hypothesis 5: *The excess yield of rich countries comes from lower rates of return on their financial liabilities (both public and private), reflecting cheap access to credit for wealth holders from rich countries.*

- 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

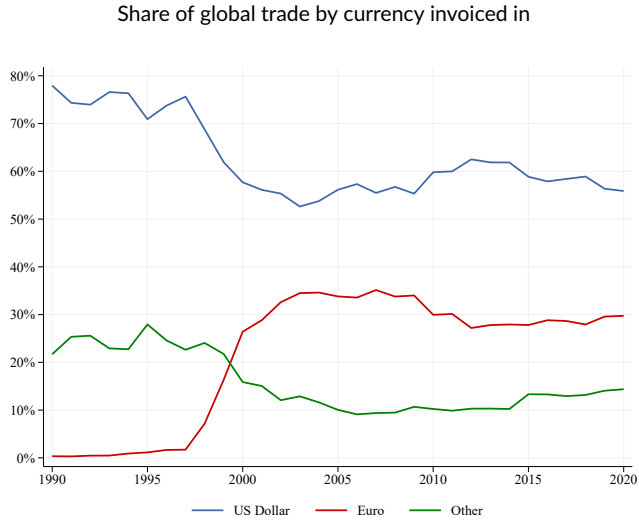
All of this accompanied by strong financial and monetary institutions, stable currencies and liquid markets.

Mechanism 1: the need for international currencies (IC) = cheap debt for issuers



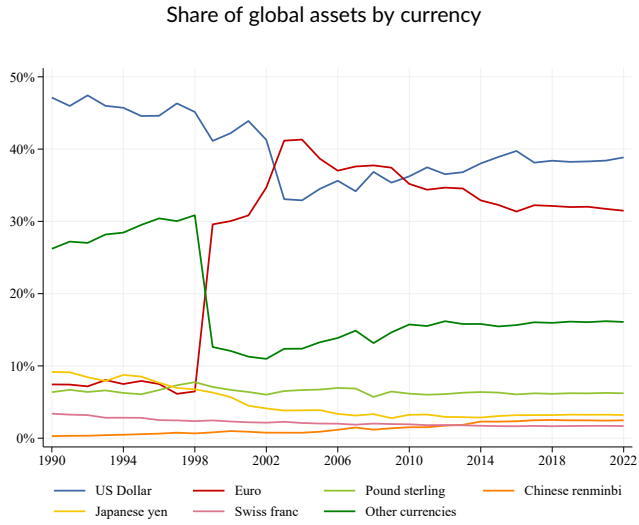
▸ IC

Most of trade is invoiced in US dollars or Euros



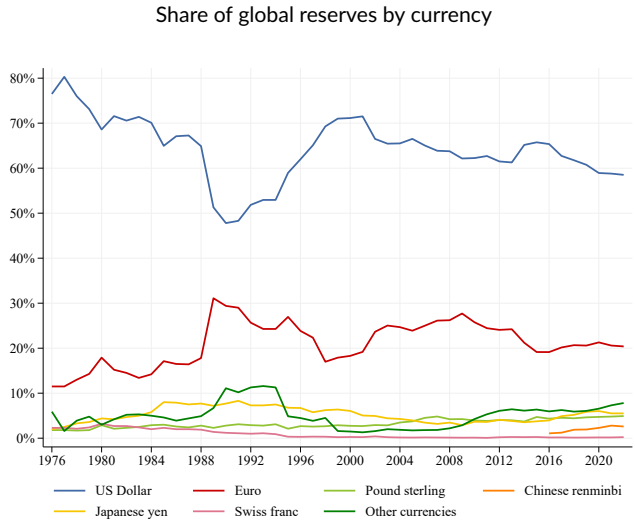
Author's calculations using Boz et al. (2020). EUR includes legacy currencies.

Most of foreign assets are held in US dollars or Euros



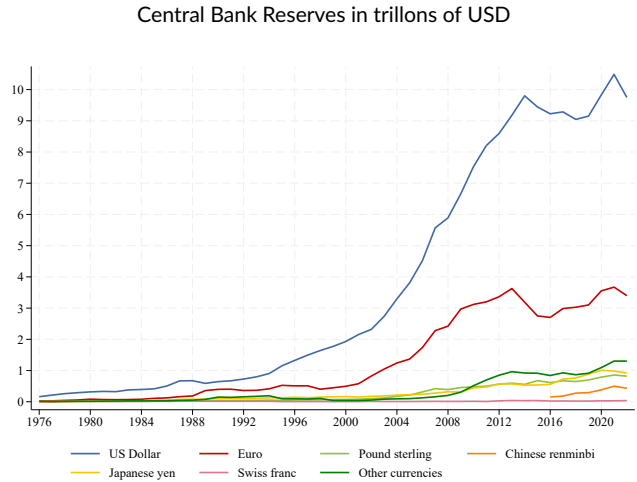
Source: Author's calculations based on A. Bénétrix, Gautam, Juvenal, and Schmitz (2019); A. S. Bénétrix, Lane, and Shambaugh (2015). Euro includes legacy currencies.

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.

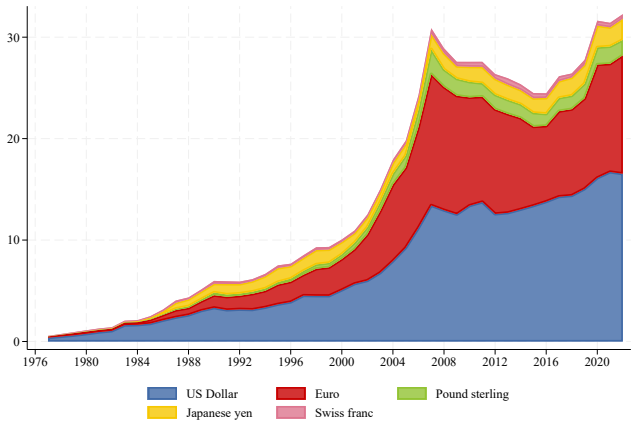
Mechanism 2: Central Bank reserves have increased since the GFC



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.

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

Cross border assets of commercial banks in trillons of USD



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

Roadmap

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

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
  - In the spirit of the International Clearing Union proposal by Keynes at Bretton Woods

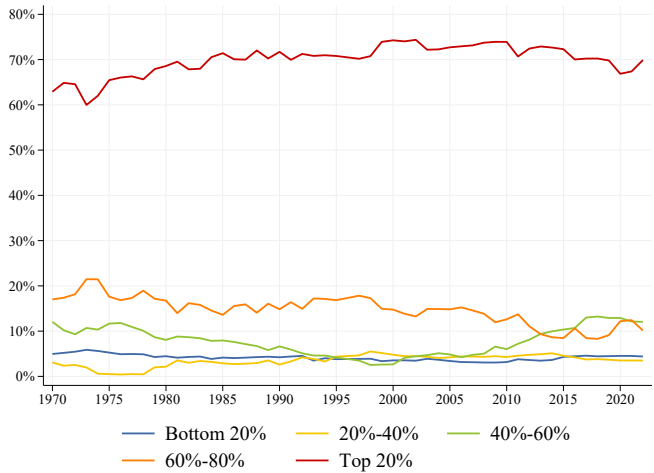
- **Introduction of a global reserve currency:**
  To use in international transactions, would change the equilibrium of the monetary system. More complex.
  - Precedents: Bancor (Keynes), Stiglitz in UN Report (2009).

- **Reforming IMF governance**

All proposals imply the rich (and powerful) countries would lose their privilege.
It is implausible under the current international system, they would have to voluntarily renounce to it.

International censitary system: share of voting power in IMF

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



▸ Contributions

Towards a more egalitarian system

- Governance of major international financial institutions needs to be redesigned
- Separating contributions from voting power
- Richer countries should contribute more than ROW, as an absolute number and as a share of their GDP.

Voting formula should be based on democratic variables besides monetary, to give voices to developing countries in decision making process

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

Proposal: include

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

Thank you!

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Roadmap

Data

Foreign wealth

Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

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.

back

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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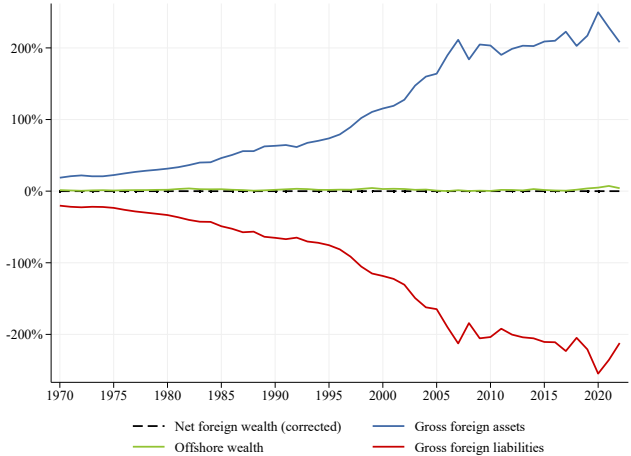
List of tax havens

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.

Global foreign wealth as a share of global GDP



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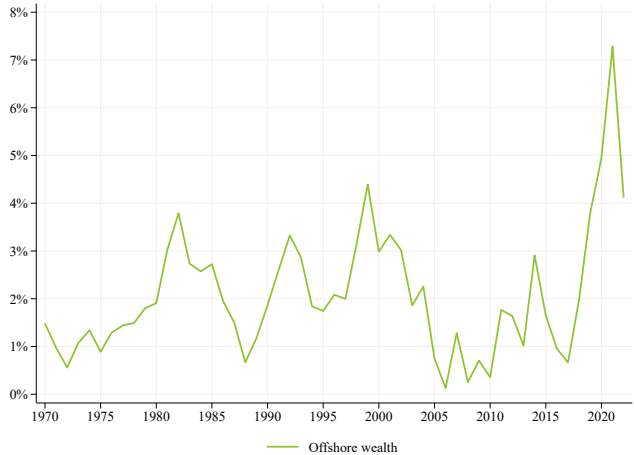
Global offshore wealth as a share of global GDP



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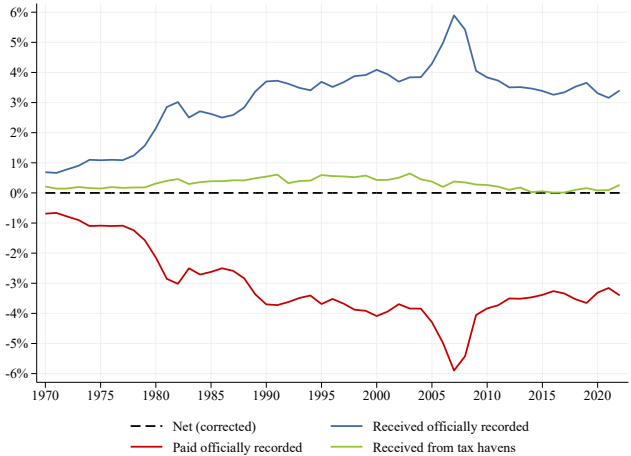
Global portfolio income as a share of global GDP



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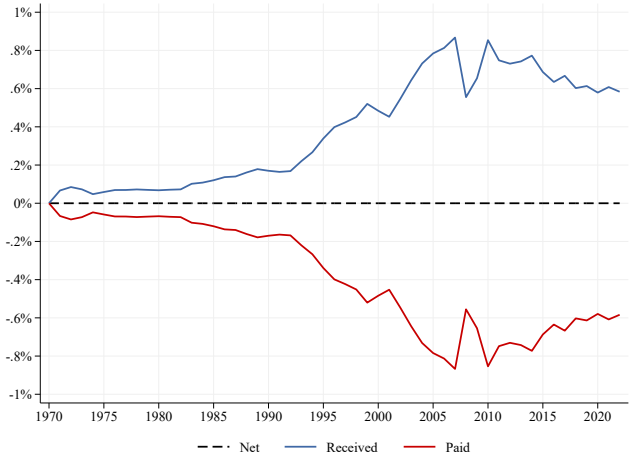
Global reinvested earnings on portfolio investment as a share of global GDP



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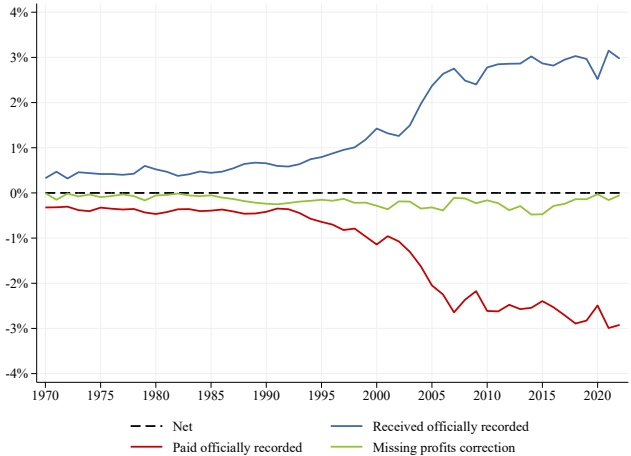
Global foreign direct investment income as a share of global GDP



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Transition matrix

1970 Quintiles	2022 Quintiles					Total
	Q1	Q2	Q3	Q4	Q5	
Q1	16 64%	1 4%	6 24%	2 8%	0 0%	25
Q2	1 100%	0 0%	0 0%	0 0%	0 0%	1
Q3	23 40%	8 14%	19 34%	3 5%	5 9%	58
Q4	5 5%	1 1%	33 35%	11 12%	44 47%	94
Q5	0 0%	0 0%	0 0%	0 0%	38 100%	38
Total	45 21%	10 5%	58 27%	16 7%	87 40%	216

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

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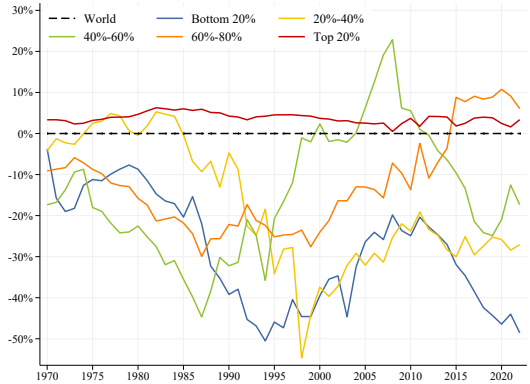
Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

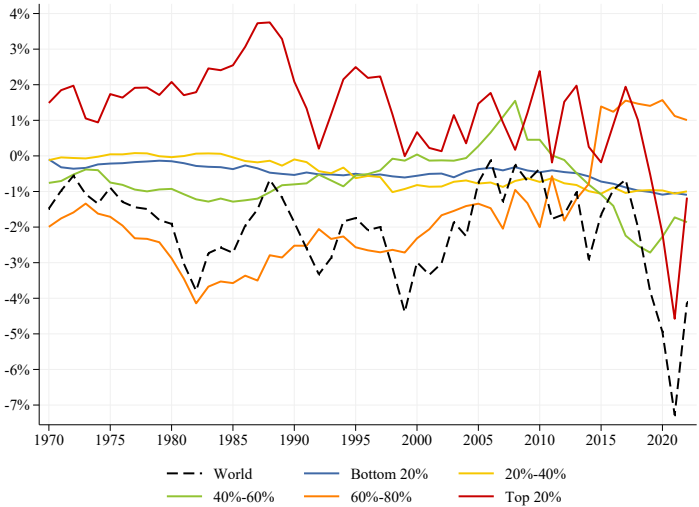
Net foreign assets as a share of group GDP



Graph shows average net foreign assets corrected by offshore wealth. Simple averages by group. All graphs show net foreign assets corrected for offshore wealth. 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. National income does not include FDI income paid correction due to shifted profits.

▸ Assets ▸ Liabilities ▸ Without tax havens correction ▸ back

Net foreign assets as a share of world GDP, without tax havens correction



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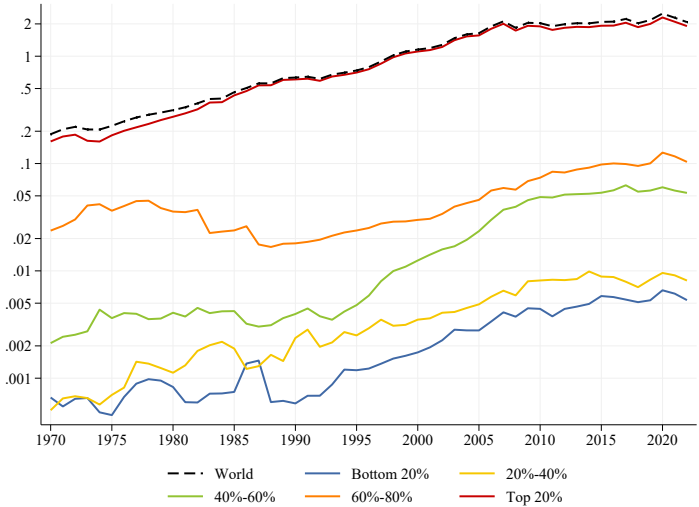
Gross foreign assets as a share of world GDP (log scale)



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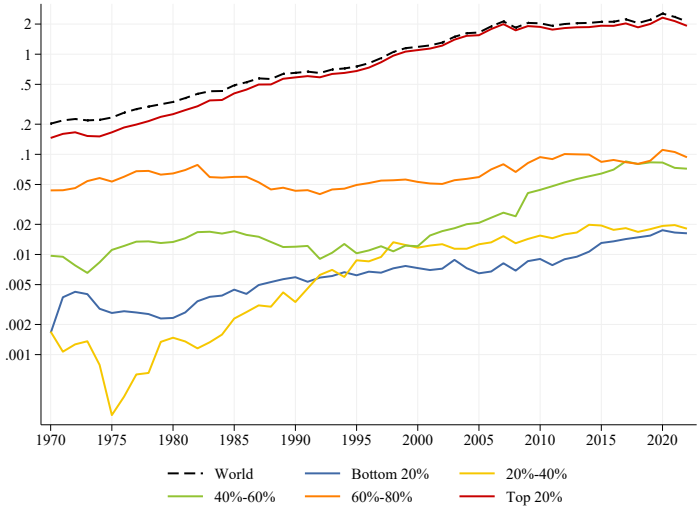
Gross foreign liabilities as a share of world GDP (log scale)



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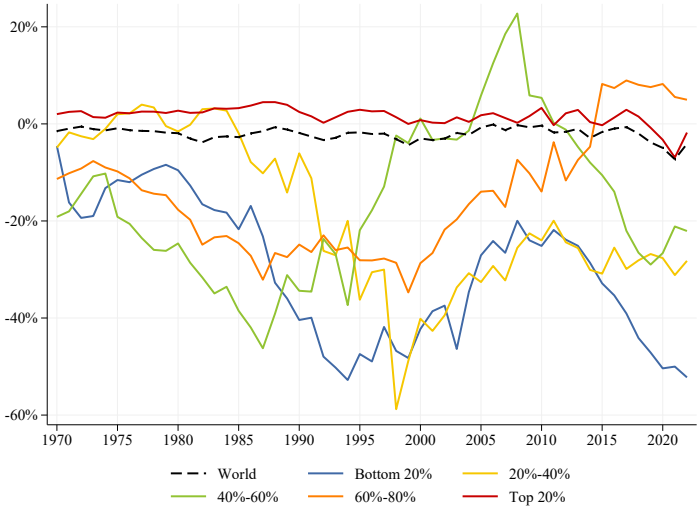
Net foreign assets as a share of group GDP, without tax havens correction



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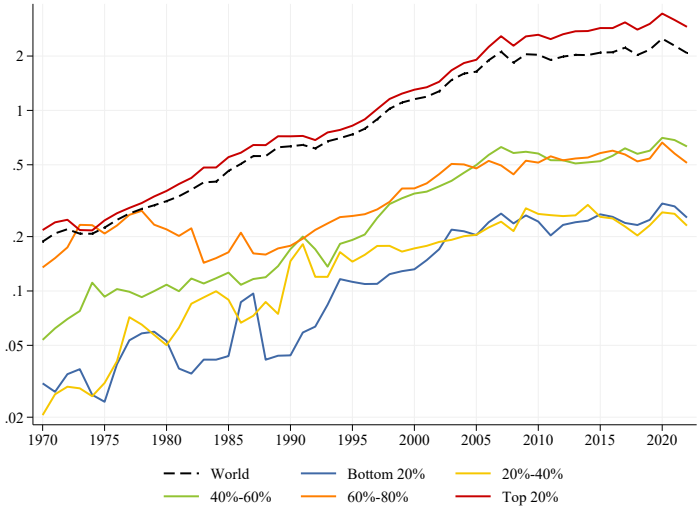
Gross foreign assets as a share of group GDP (log scale)



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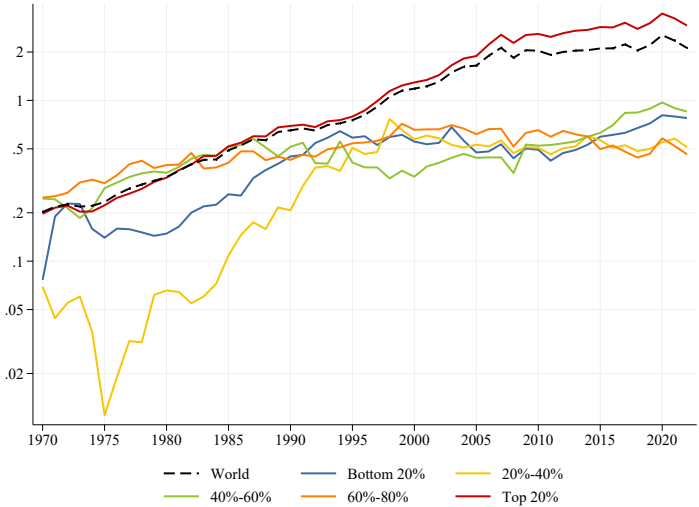
Gross foreign liabilities as a share of group GDP (log scale)



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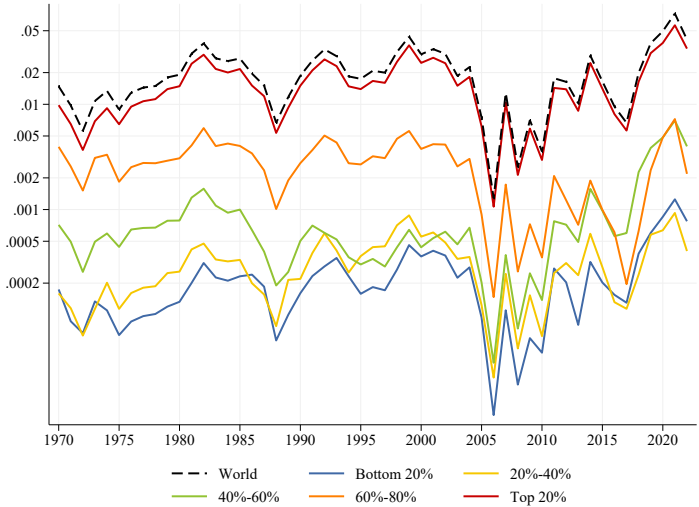
Offshore wealth, as a share of global GDP (log scale)



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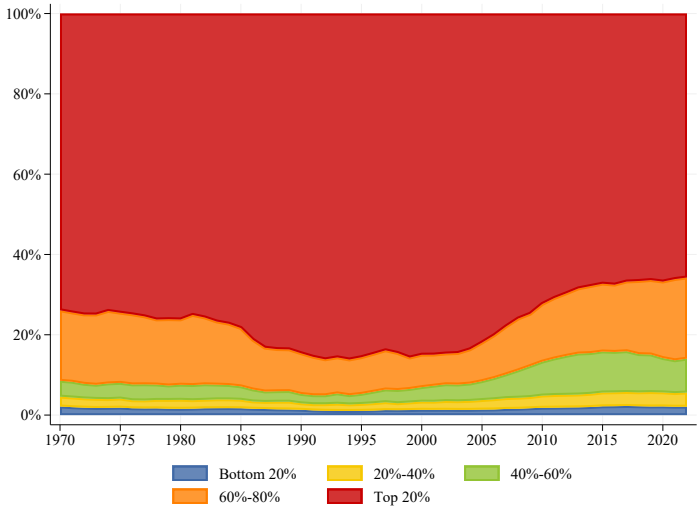
Share of global GDP per income group



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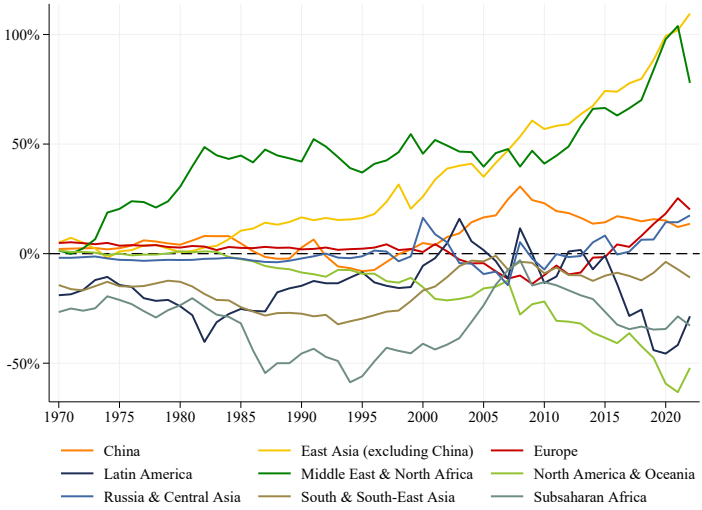
Net foreign assets as a share of regional GDP



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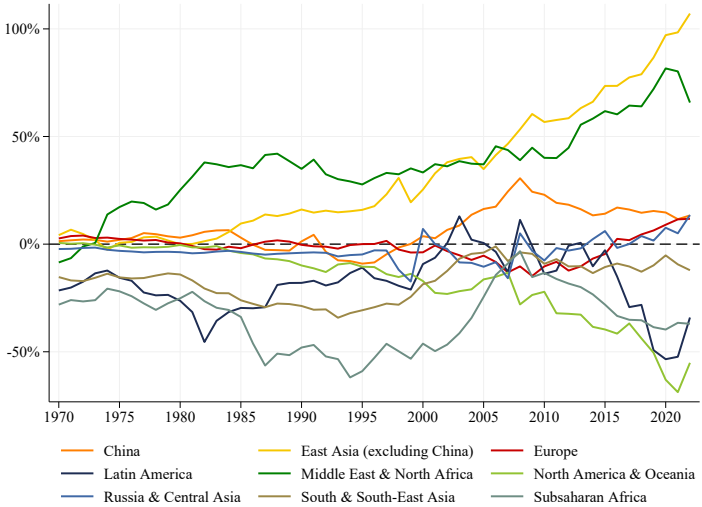
Net foreign assets as a share of regional GDP, without tax havens correction



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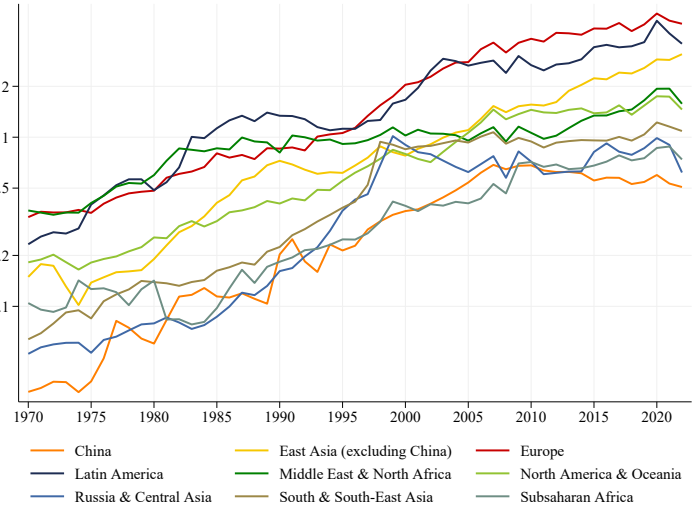
Gross foreign assets as a share of regional GDP (log scale)



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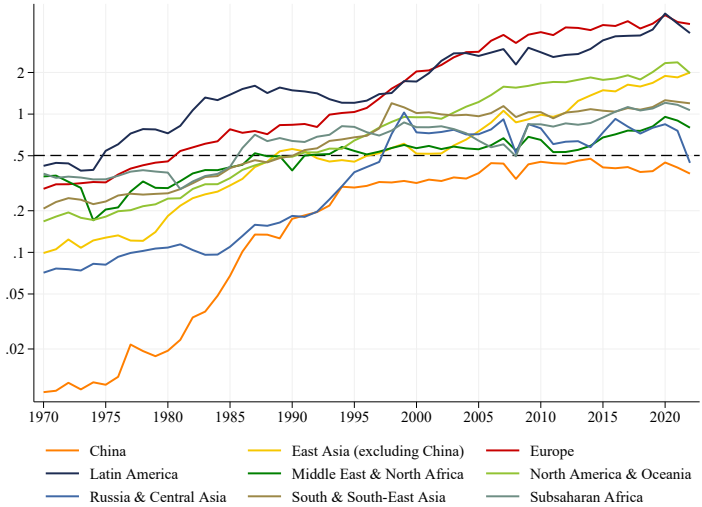
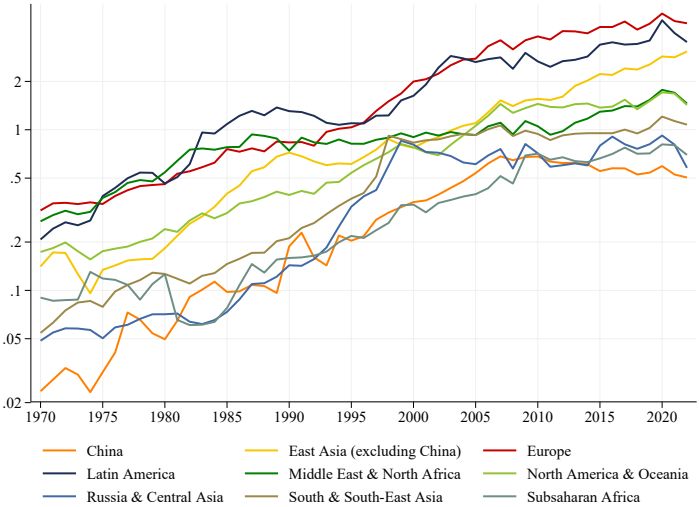
Gross foreign liabilities as a share of regional GDP (log scale)



Gross foreign assets as a share of regional GDP, without tax havens correction (log scale)



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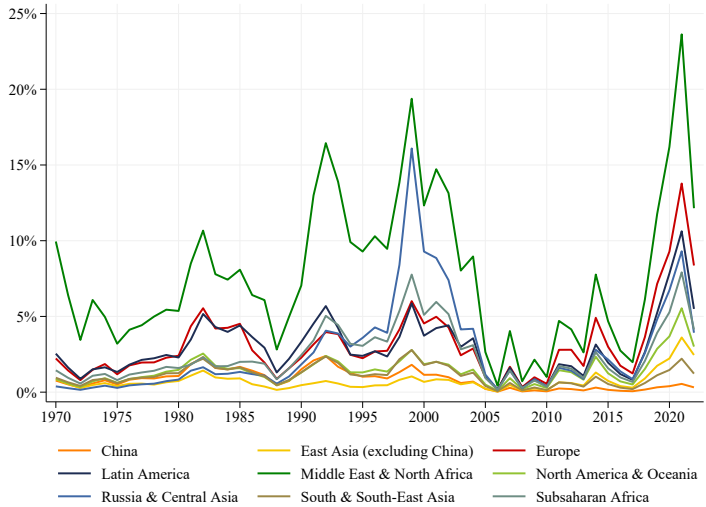
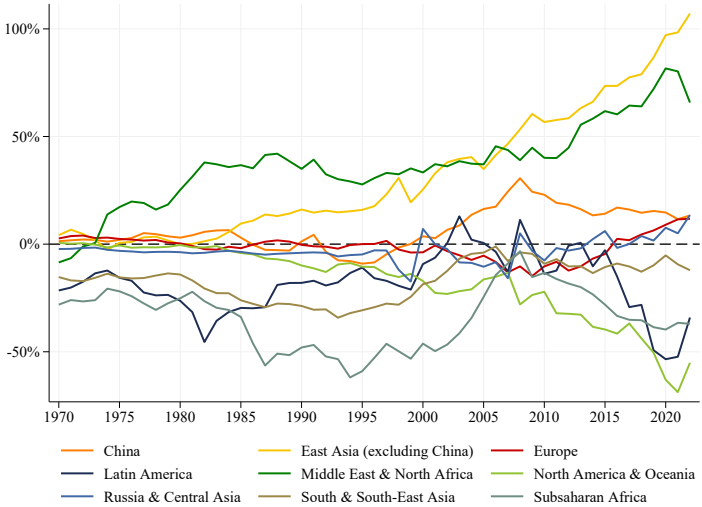
Offshore wealth as a share of regional GDP



Net foreign assets as a share of regional GDP, without tax havens correction



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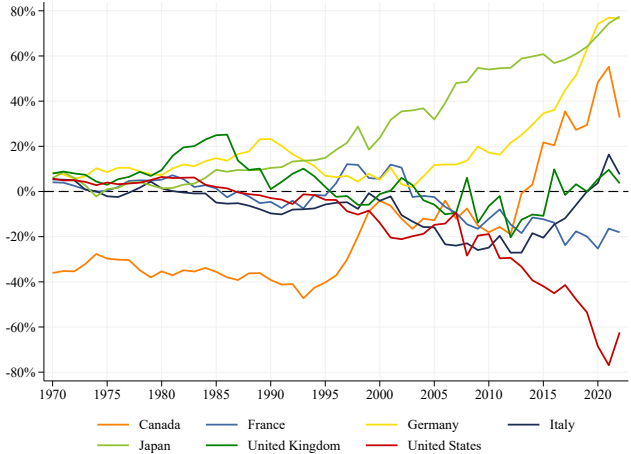
Net foreign assets as a share of country GDP, G7 countries



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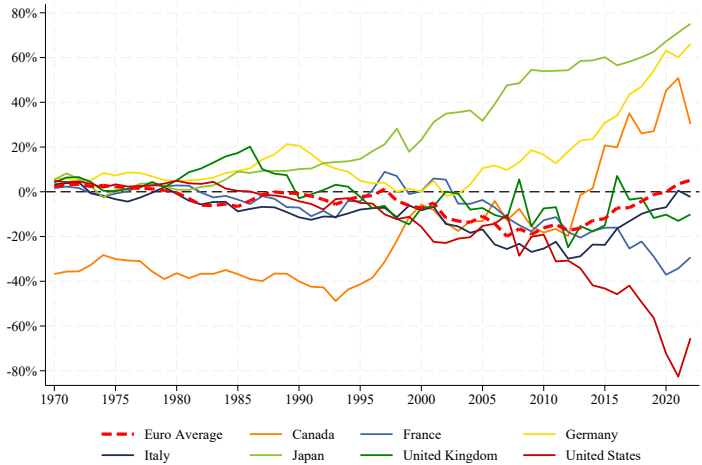
Net foreign assets as a share of country GDP without tax havens correction, G7 + Euro



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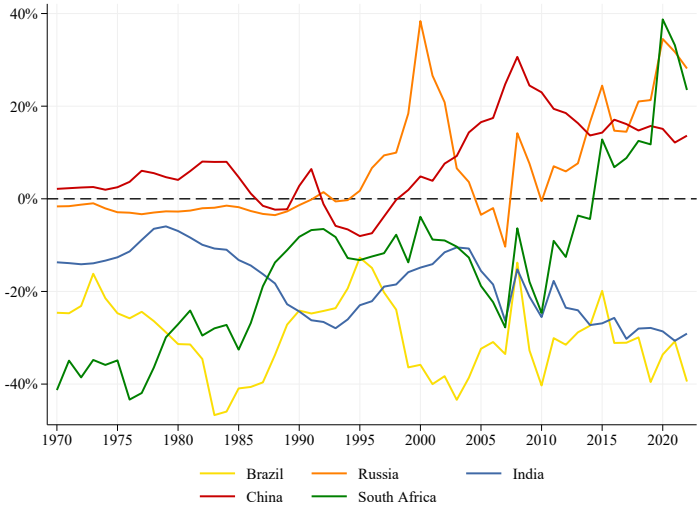
Net foreign assets as a share of country GDP, BRICS



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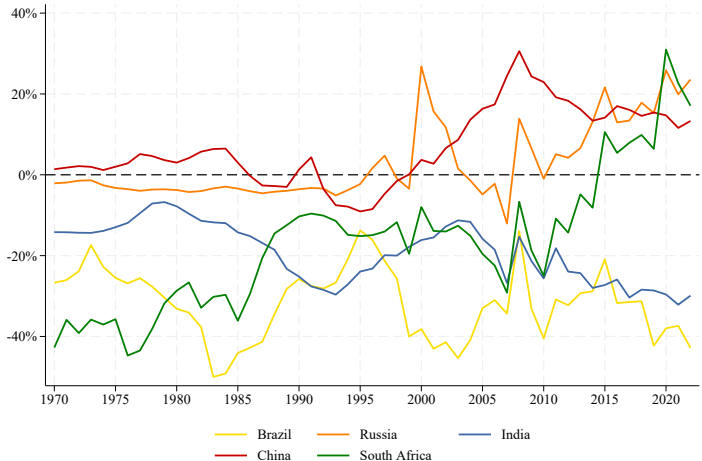
Net foreign assets as a share of country GDP without tax havens correction, BRICS



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Decomposition by subperiods. Real values USD at the end of the period

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP trillions 2022 USD		
Quintile	b(1970)	b(2000)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
Bottom 20	-4%	-40%	-2%	-15%	-53%	0%	0%	64%	5%	-40%	0	1	172%
20-40	-4%	-37%	-2%	-9%	52%	1%	0%	28%	2%	-109%	0	1	233%
40-60	-17%	2%	-7%	-27%	99%	3%	0%	33%	5%	-104%	1	2	255%
Next Top 20	-9%	-24%	-7%	-50%	13%	4%	0%	48%	2%	-34%	3	4	129%
Top 20	3%	4%	1%	6%	-6%	-1%	0%	-8%	0%	11%	14	45	322%

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
Quintile	b(2000)	b(2022)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2022)	GDP(2022)/ GDP(2000)
Bottom 20	-40%	-49%	-13%	-32%	-105%	4%	0%	92%	7%	-2%	1	2	301%
20-40	-37%	-27%	-11%	-40%	-8%	4%	1%	66%	5%	-43%	1	4	328%
40-60	2%	-17%	1%	-44%	66%	4%	0%	36%	3%	-83%	2	9	443%
Next Top 20	-24%	6%	-5%	-26%	50%	1%	0%	8%	0%	-23%	4	20	474%
Top 20	4%	3%	3%	17%	-20%	-1%	0%	-14%	-1%	20%	45	66	146%

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Decomposition 1970-2000

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP trillions 2022 USD		
	b(1970)	b(2000)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
G7 + Eurozone													
Canada	-36%	-4%	-14%	-50%	29%	-1%	0%	-1%	-1%	34%	1	1	264%
France	4%	6%	2%	13%	-24%	0%	1%	-14%	-1%	28%	1	2	221%
Germany	8%	5%	4%	14%	53%	0%	-1%	-29%	-2%	-33%	1	3	220%
Italy	5%	-4%	2%	-10%	-23%	3%	1%	-3%	0%	26%	1	2	217%
Japan	6%	24%	2%	11%	49%	0%	0%	-4%	-3%	-32%	1	3	277%
UK	8%	-1%	4%	39%	-64%	-1%	-1%	-13%	0%	35%	1	2	216%
US	6%	-14%	2%	18%	-33%	-1%	0%	-7%	0%	8%	6	16	266%
Eurozone	6%	1%	3%	3%	-6%	0%	0%	-12%	0%	14%	4	10	227%
Total	4%	-5%	2%	11%	-16%	0%	0%	-8%	-1%	8%	13	33	251%
BRICS(A)													
Argentina	-15%	-13%	-8%	-38%	39%	0%	0%	3%	0%	-10%	0	0	187%
Brazil	-25%	-36%	-7%	-58%	18%	0%	0%	4%	0%	7%	0	1	346%
China	2%	5%	0%	-3%	111%	0%	0%	3%	1%	-108%	1	4	573%
India	-14%	-15%	-3%	-9%	-4%	0%	0%	29%	0%	-27%	0	1	412%
Russia	-2%	38%	-1%	1%	112%	-1%	0%	-1%	4%	-74%	1	1	116%
South Africa	-41%	-4%	-22%	-53%	30%	-19%	1%	-5%	-2%	66%	0	0	190%
Total	-7%	1%	-3%	-15%	79%	-1%	0%	5%	1%	-65%	3	8	285%

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Decomposition 2000-2022

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
	b(2000)	b(2022)	Initial wealth	Investment income	Trade balance	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2022)/ GDP(2000)
G7 + Eurozone													
Canada	-4%	33%	-3%	11%	3%	-3%	0%	-2%	0%	27%	1	2	149%
France	6%	-18%	4%	42%	-38%	15%	0%	-37%	0%	-5%	2	3	125%
Germany	5%	77%	4%	40%	110%	0%	-2%	-28%	-7%	-40%	3	4	126%
Italy	-4%	8%	-4%	2%	6%	3%	0%	-20%	-1%	22%	2	2	107%
Japan	24%	77%	20%	62%	34%	0%	0%	-6%	-2%	-31%	3	4	117%
UK	-1%	4%	-1%	30%	-103%	-1%	-2%	-21%	-2%	105%	2	3	140%
US	-14%	-62%	-9%	27%	-69%	-1%	0%	-10%	-1%	0%	16	25	154%
Eurozone	1%	18%	1%	18%	21%	2%	-1%	-25%	-3%	5%	10	12	129%
Total	-5%	-21%	-3%	27%	-35%	0%	0%	-14%	-1%	6%	33	46	142%
BRICS(A)													
Argentina	-13%	30%	-7%	-37%	64%	0%	0%	5%	0%	5%	0	1	182%
Brazil	-36%	-39%	-22%	-55%	37%	0%	0%	4%	0%	-4%	1	2	163%
China	5%	14%	1%	-12%	75%	1%	0%	3%	0%	-54%	4	19	515%
India	-15%	-29%	-4%	-24%	-52%	0%	0%	43%	0%	8%	1	3	380%
Russia	38%	28%	19%	-51%	225%	-6%	0%	-6%	-9%	-144%	1	3	203%
South Africa	-4%	23%	-2%	-47%	86%	-2%	2%	-12%	0%	-1%	0	0	170%
Total	1%	7%	0%	-22%	73%	0%	0%	7%	-1%	-51%	8	28	364%

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Foreign wealth

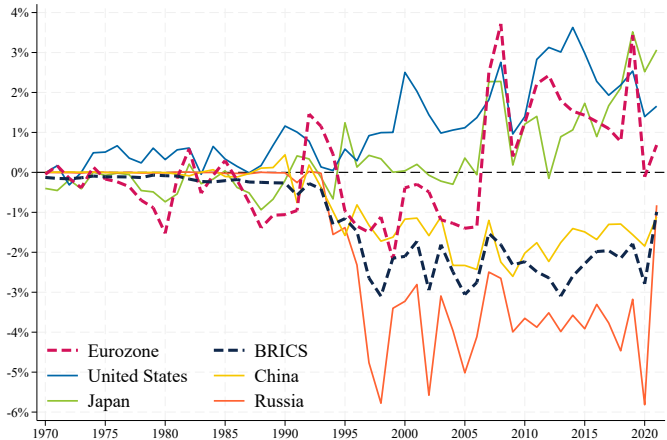
Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

Excess yields income as a share of country GDP, without tax havens correction



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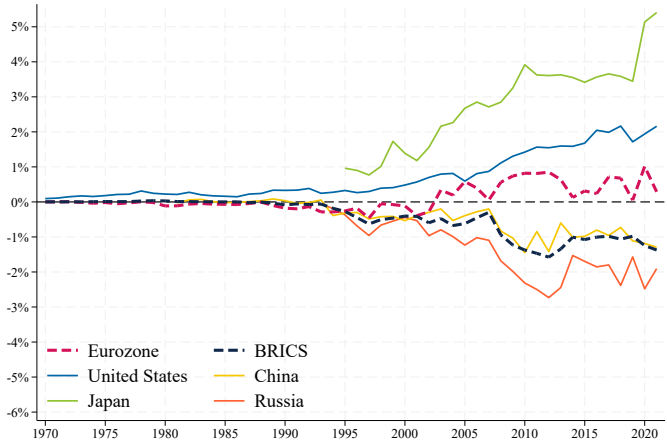
Excess yield income as share of GDP, G8 vs BRICS (raw data)



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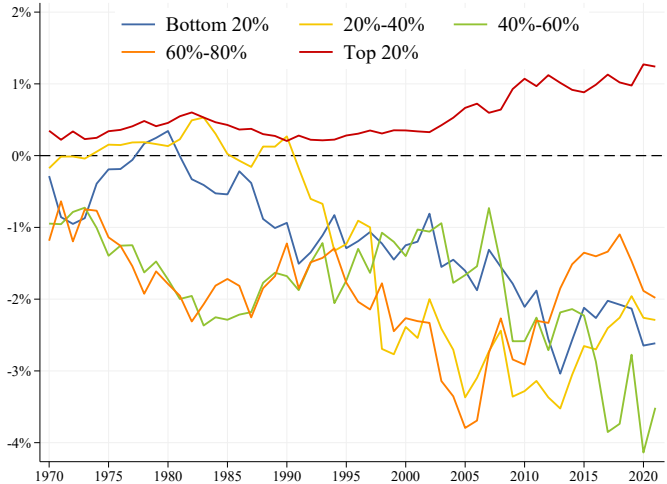
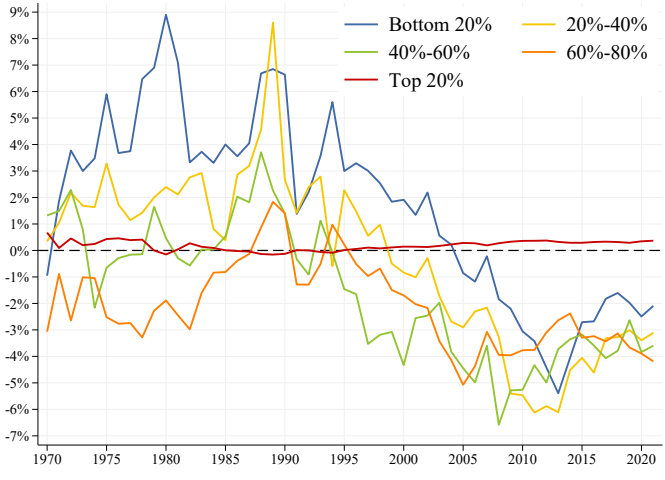
Net foreign capital income as a share of group GDP



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

▸ Regional ▸ without TH correction

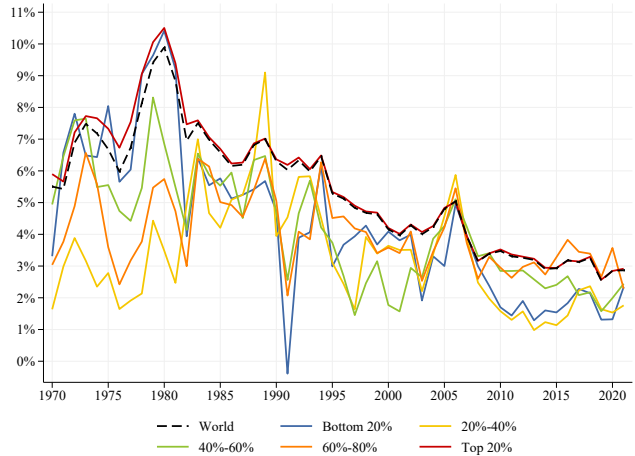
Excess yields per income group



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 ▸ without TH correction ▸ back

Returns on foreign assets per income group, without tax havens correction



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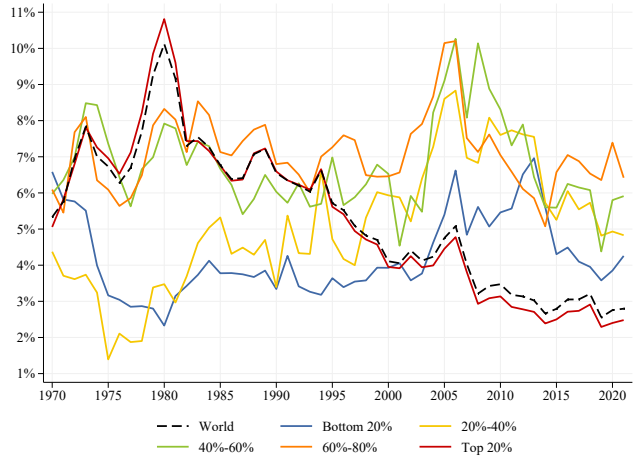
Returns on foreign liabilities per income group, without tax havens correction



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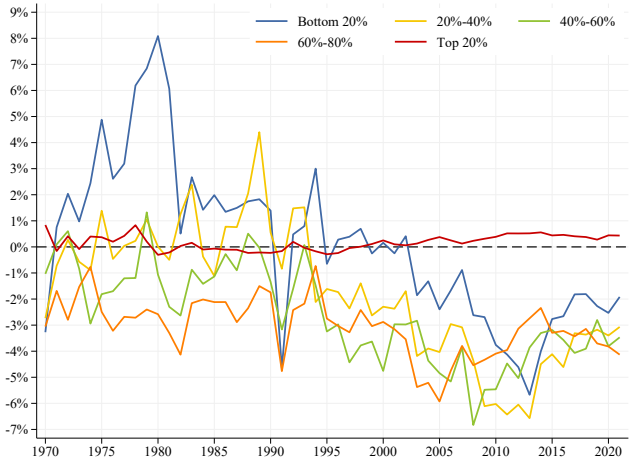
Excess yields per income group, without tax havens correction



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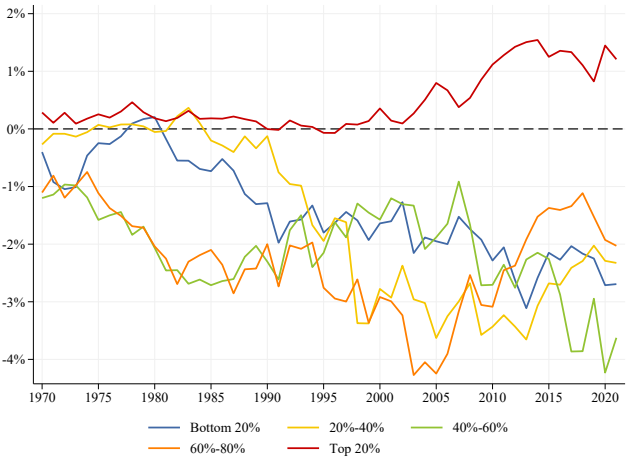
Net foreign capital income as a share of GDP, without tax havens correction



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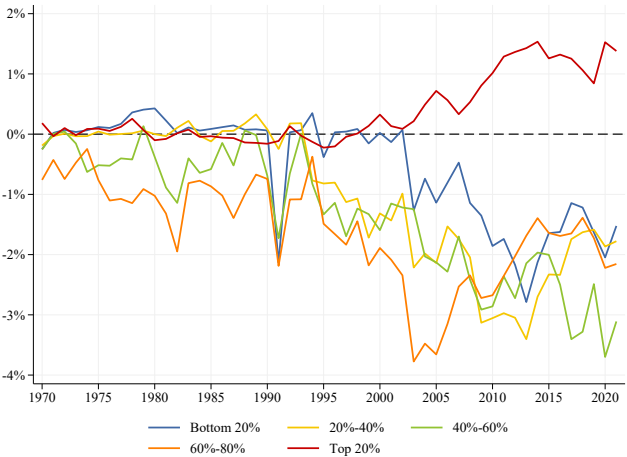
Excess yield as a share of GDP, without tax havens correction



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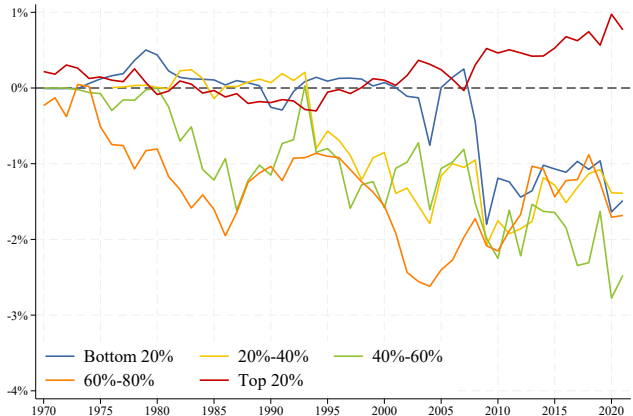
Excess yield as a share of GDP (raw data)



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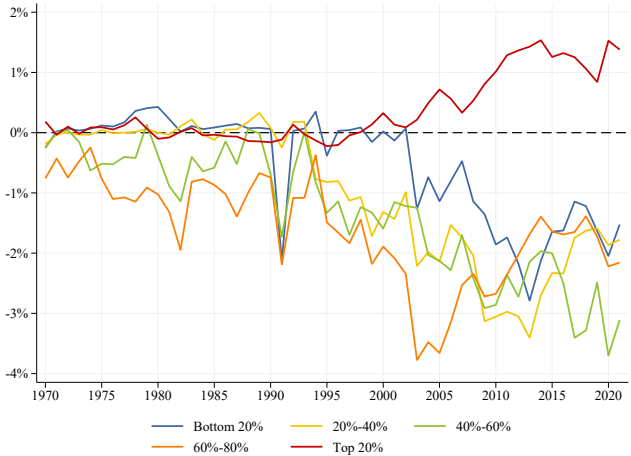
Excess yield as a share of GDP, without tax havens correction



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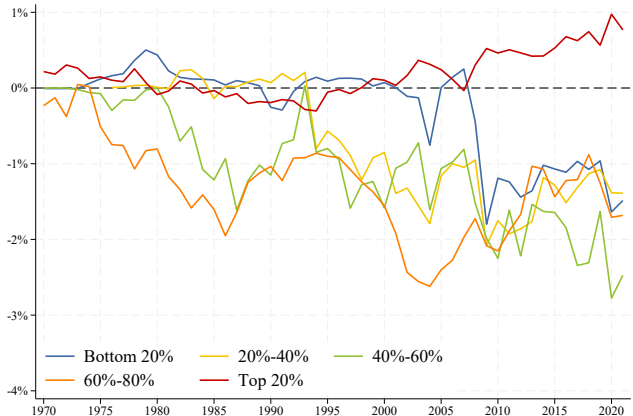
Excess yield as a share of GDP (raw data)



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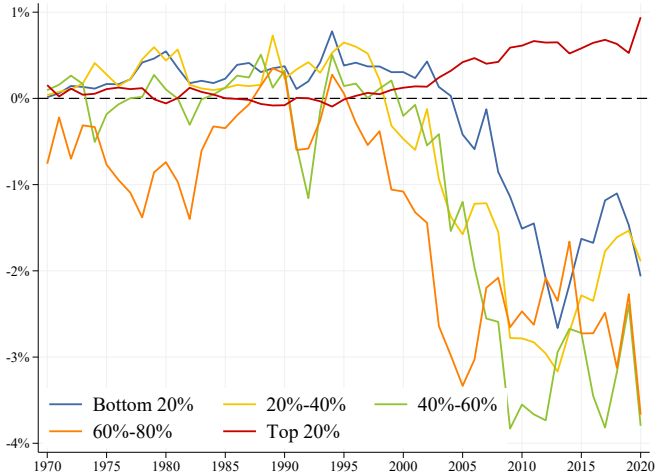
Scenario A: Chinese reserves only in USD



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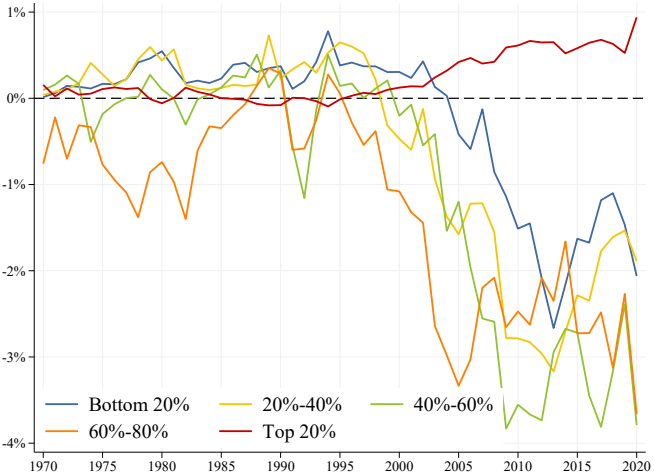
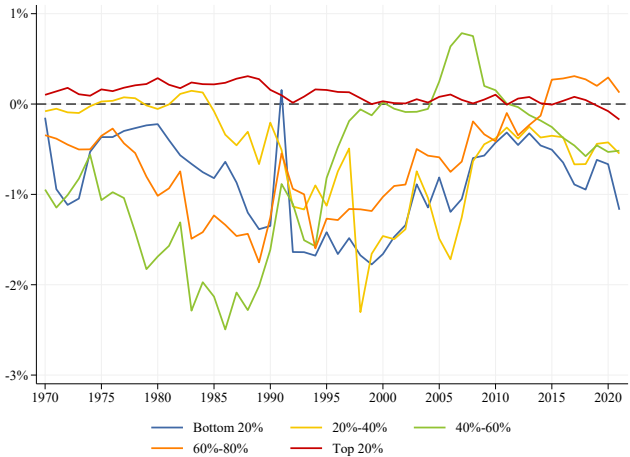
Scenario B: Chinese reserves in USD (70%), EUR (20%), JPY (10%)



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.

Net foreign capital income minus excess yield income as a share of GDP, without tax havens correction



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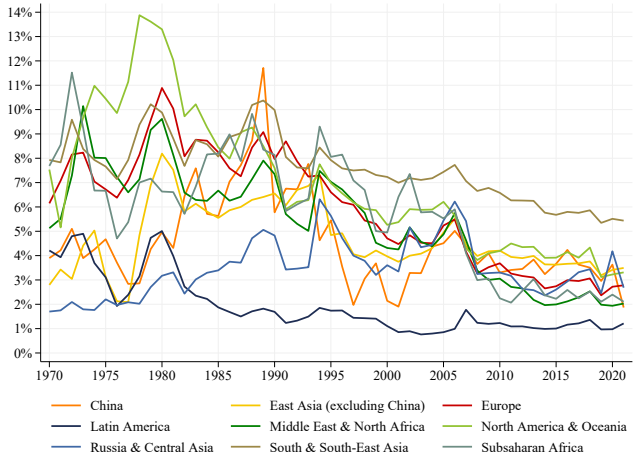
Returns on foreign assets per region



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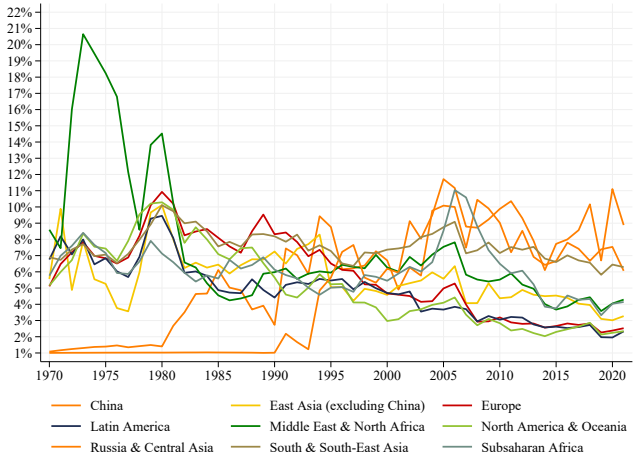
Returns on foreign liabilities per region



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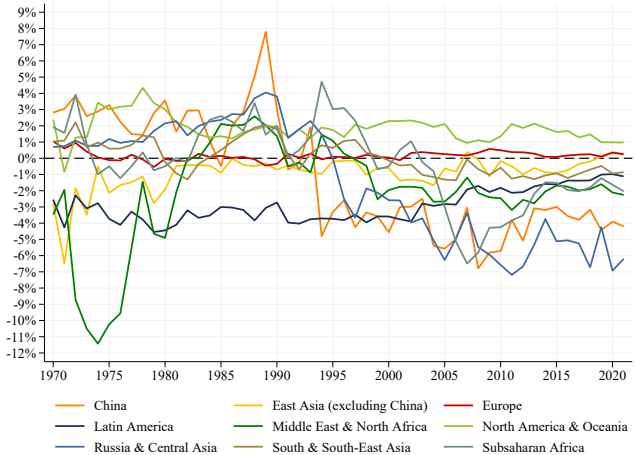
Excess yields per region



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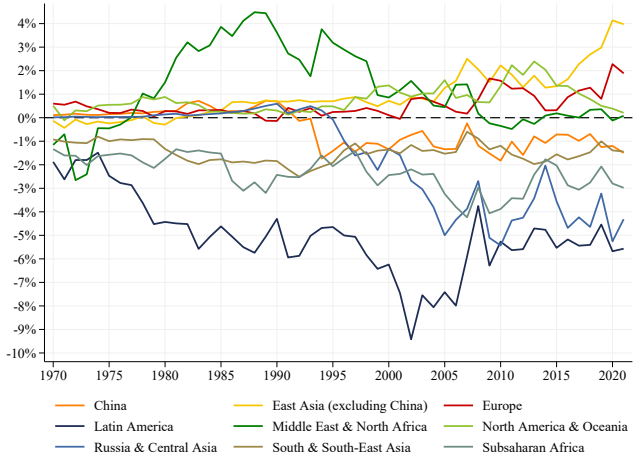
Net foreign capital income as a share of region GDP



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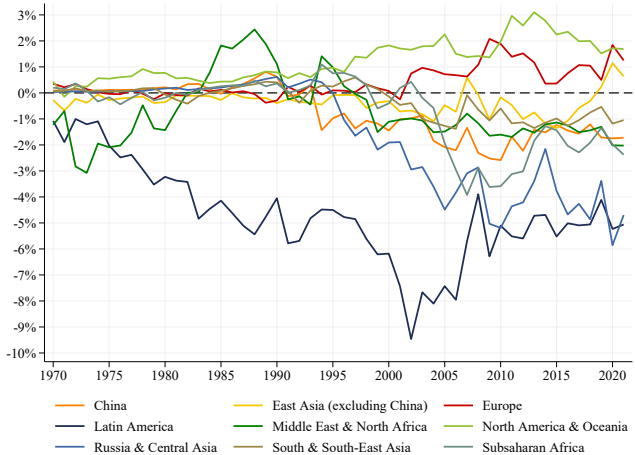
Excess yield as a share of region GDP



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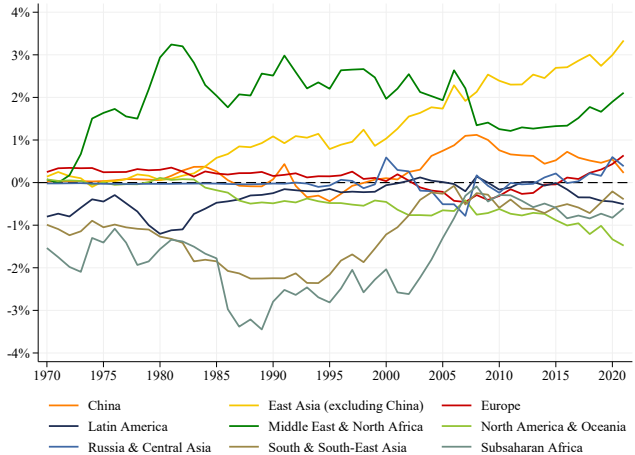
Net foreign capital income minus excess yield income as a share of region GDP



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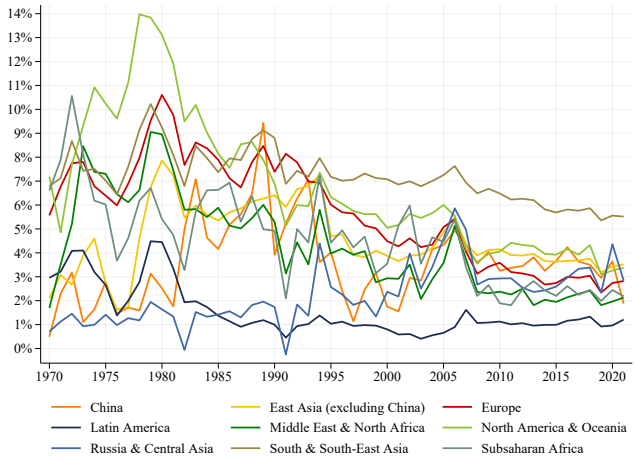
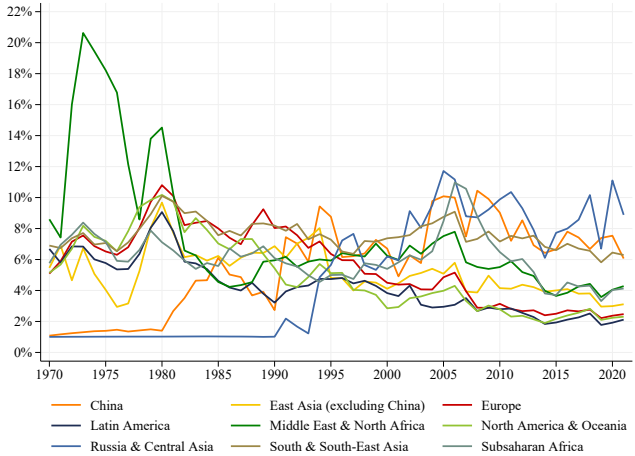
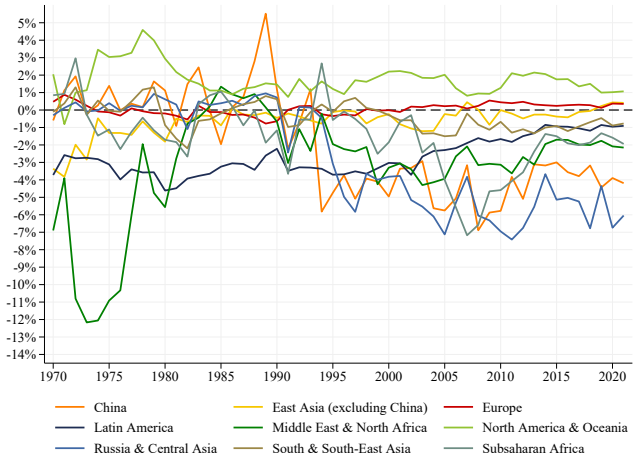
Returns on foreign assets per region, without tax havens correction



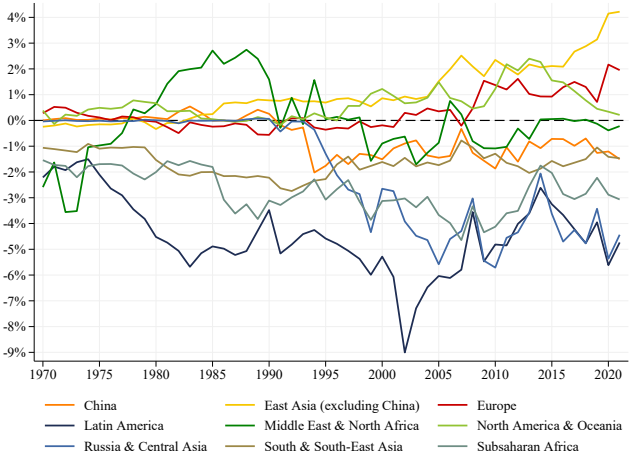
Returns on foreign liabilities per region, without tax havens correction



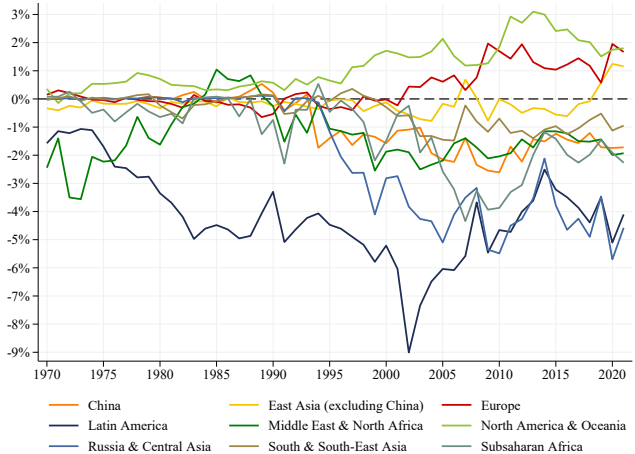
Excess yields per region, without tax havens correction



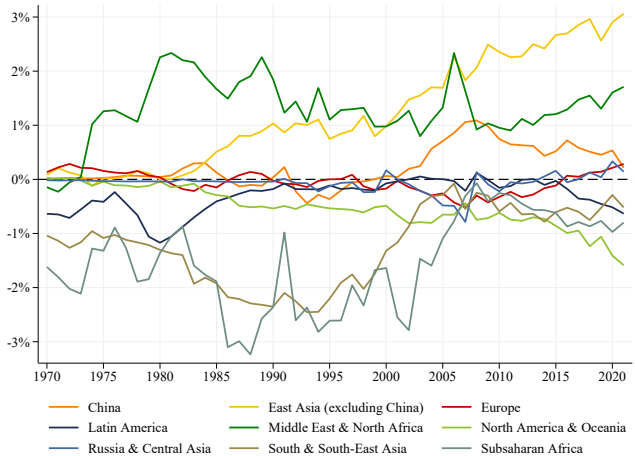
Net foreign capital income as a share of region GDP, without tax havens correction



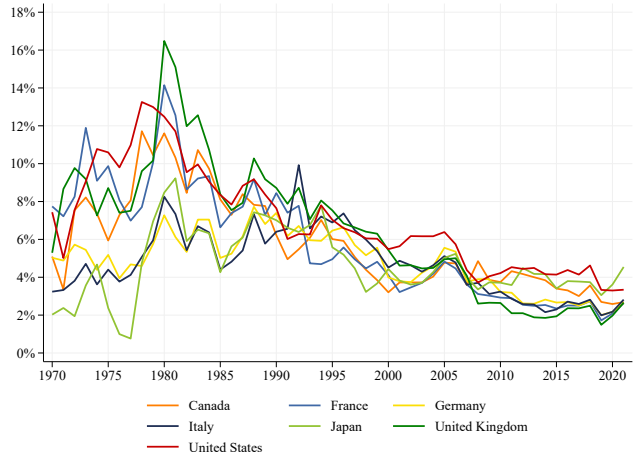
Excess yield as a share of region GDP, without tax havens correction



Net foreign capital income minus excess yield income as a share of region GDP, without tax havens correction



Returns on foreign assets, G7 countries



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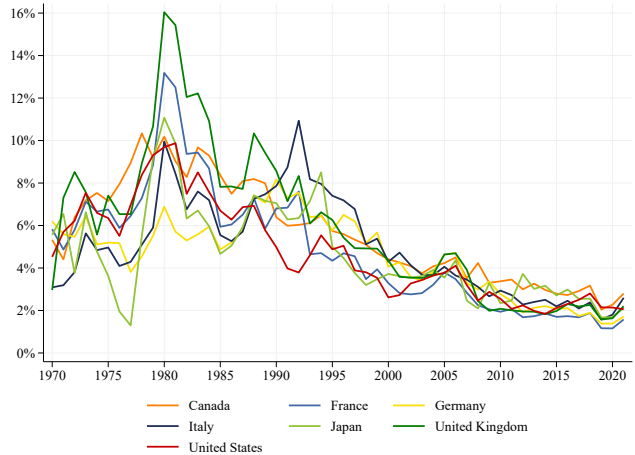
Returns on foreign liabilities, G7 countries



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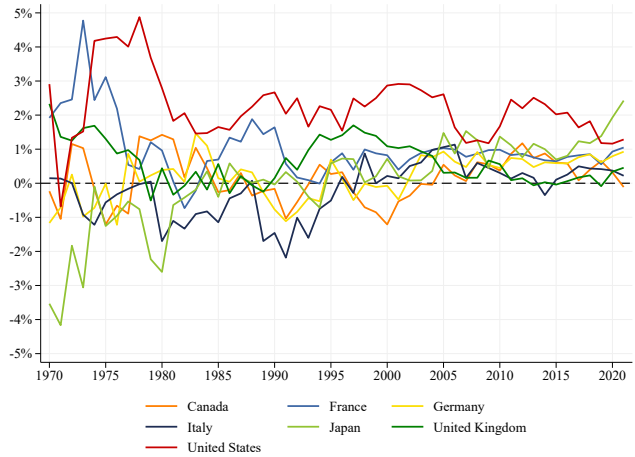
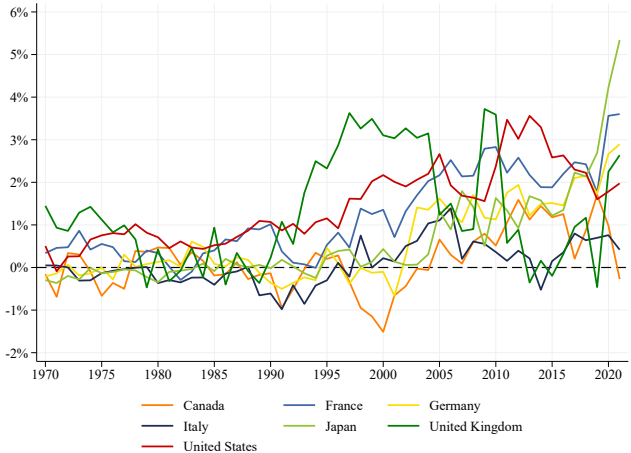
Excess yields, G7 countries



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

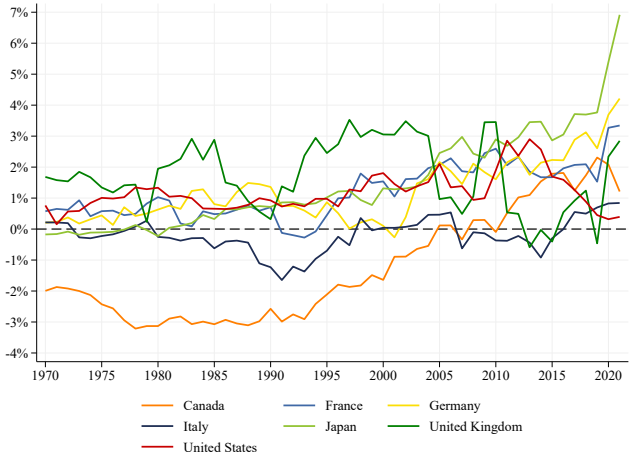
NFA

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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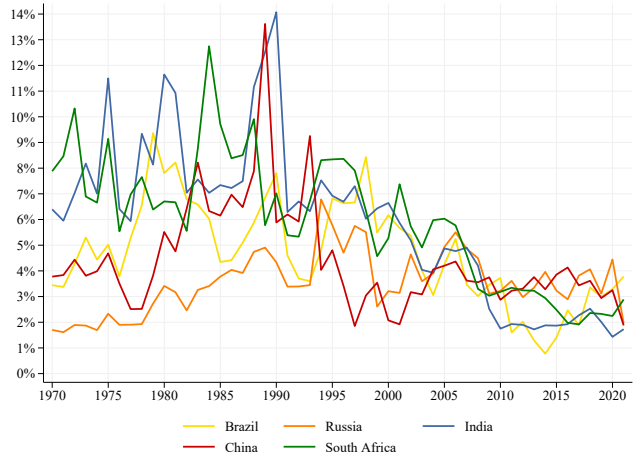
Returns on foreign assets, BRICS



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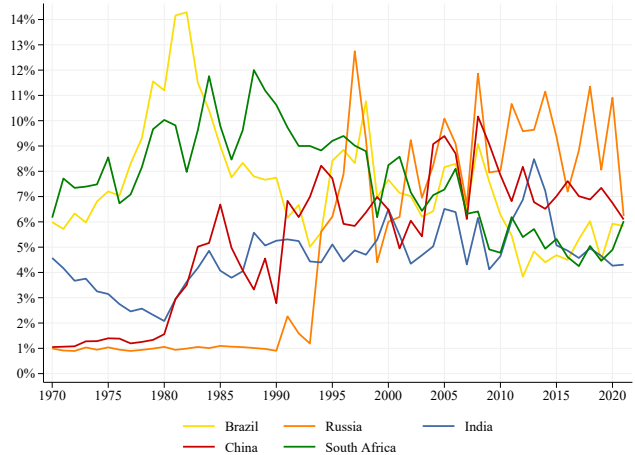
Returns on foreign liabilities, BRICS



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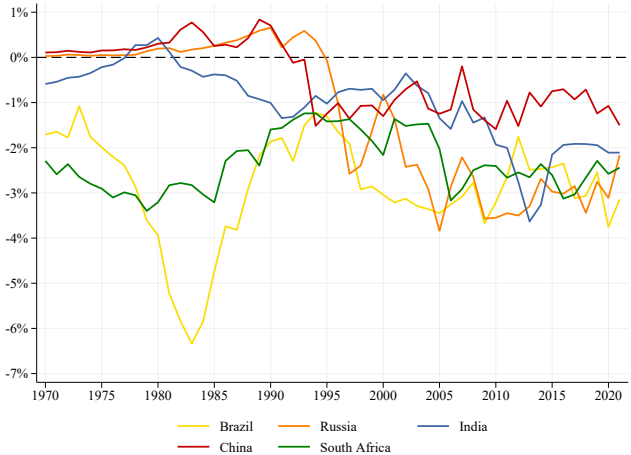
Net foreign capital income as a share of country GDP, BRICS



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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	-0,32%	0,28%	-1,79%	0,13%	-0,34%	0,12%
2000-2009	-1,02%	-0,21%	-4,35%	0,02%	-0,04%	0,29%
2010-2022	-1,28%	-1,17%	-3,81%	-3,23%	-0,52%	-0,25%
	Indonesia		Nigeria		Pakistan	
1970-1999	-3,31%	-0,62%	-1,92%	-0,50%	-1,07%	0,52%
2000-2009	-4,32%	-2,53%	-3,85%	-3,07%	-2,07%	-0,19%
2010-2022	-3,72%	-3,11%	-3,62%	-3,43%	-1,68%	-0,52%

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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	2.69%	2.80%	96%	82%	Brazil	3.78%	5.83%	65%	147%
Germany	2.64%	1.71%	154%	75%	China	1.88%	6.10%	31%	77%
France	2.63%	1.58%	167%	105%	India	1.73%	4.31%	40%	200%
United Kingdom	2.66%	2.20%	121%	98%	Russia	1.96%	6.23%	31%	67%
Italy	2.82%	2.60%	108%	91%	South Africa	2.89%	6.03%	48%	77%
Japan	4.54%	2.12%	215%	66%					
United States	3.34%	2.06%	162%	150%					

Table expresses the amount of liabilities with respect to assets that a country can hold before receiving negative net foreign capital income (its Tipping point). Tipping point is calculated as $\frac{i^A}{i^L}$.

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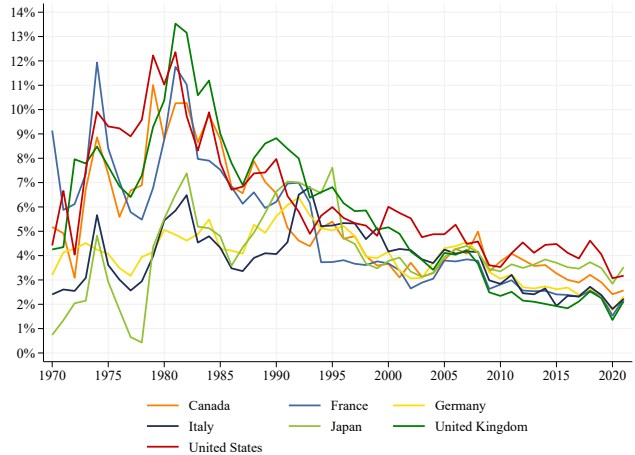
Returns on foreign assets without tax havens correction, G7 countries



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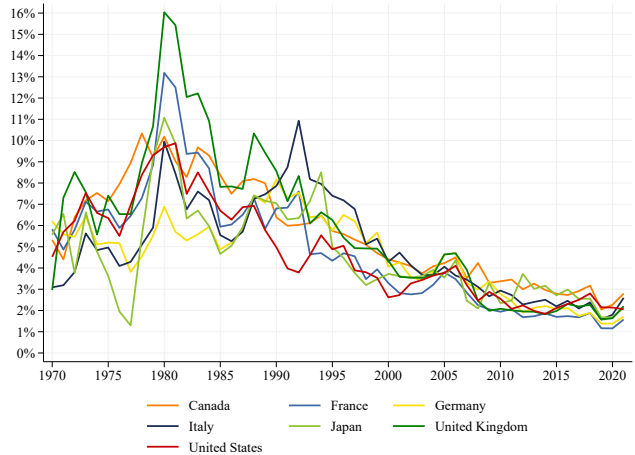
Returns on foreign liabilities without tax havens correction, G7 countries



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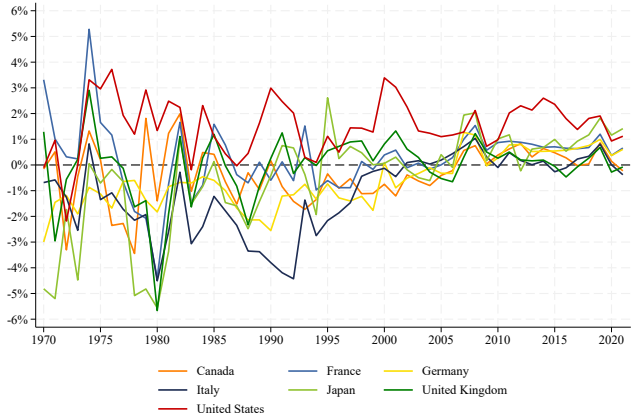
Excess yields without tax havens correction, G7 countries



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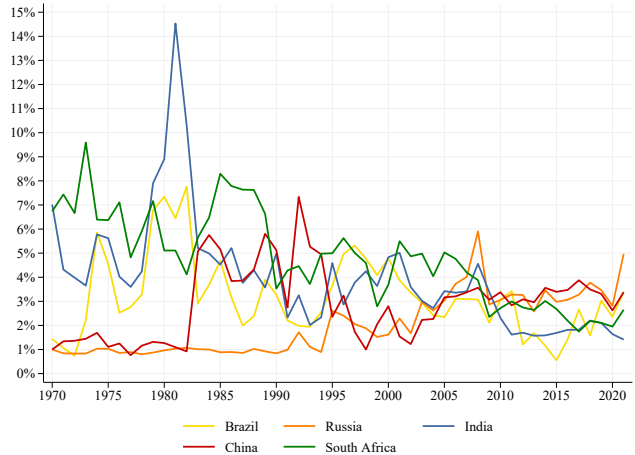
Returns on foreign assets without tax havens correction, BRICS



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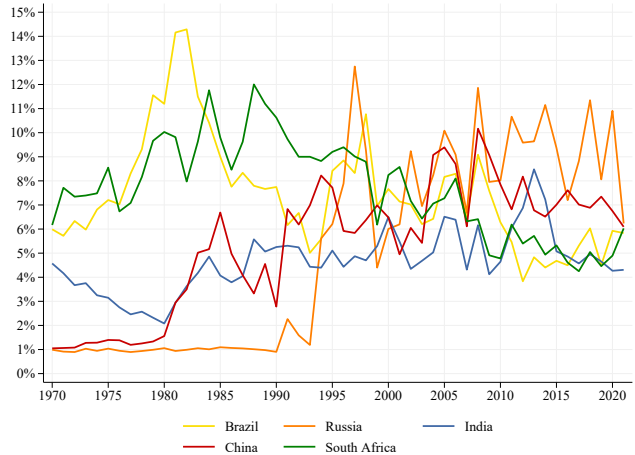
Returns on foreign liabilities without tax havens correction, BRICS



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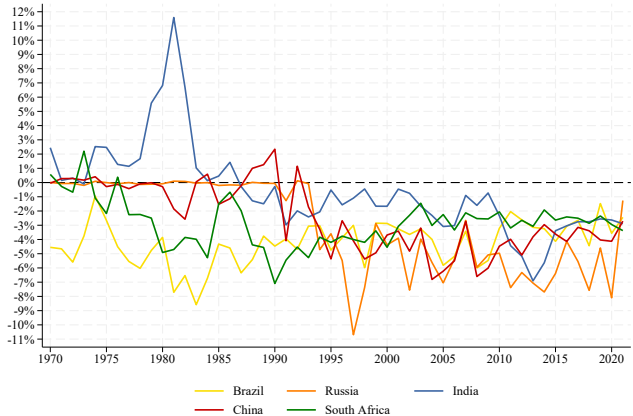
Excess yields without tax havens correction, BRICS



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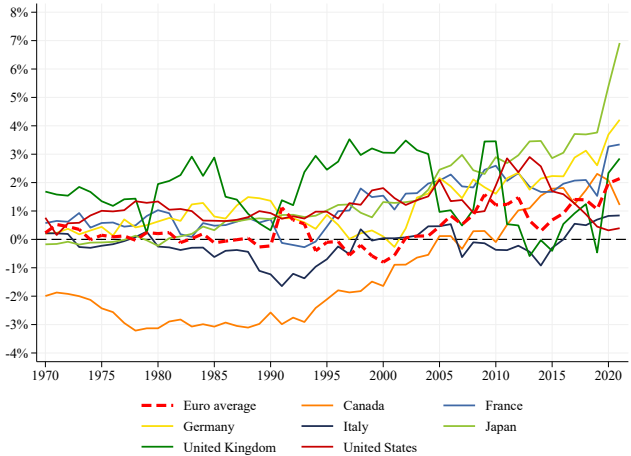
Net foreign capital income as a share of country (Eurozone) GDP



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Roadmap

Data

Foreign wealth

Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

Some data

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.

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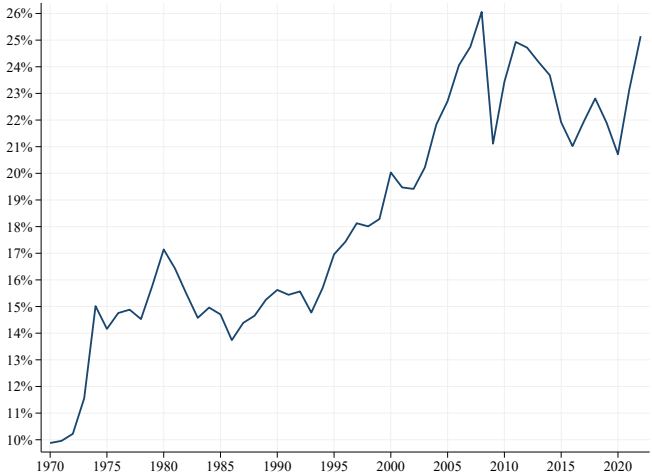
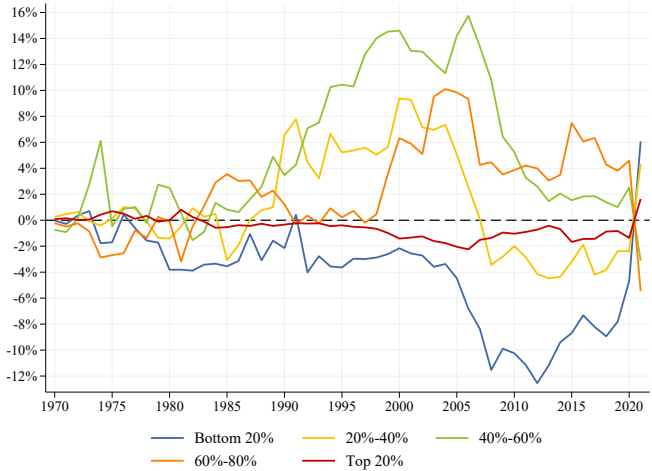
Global exports as a share of global GDP



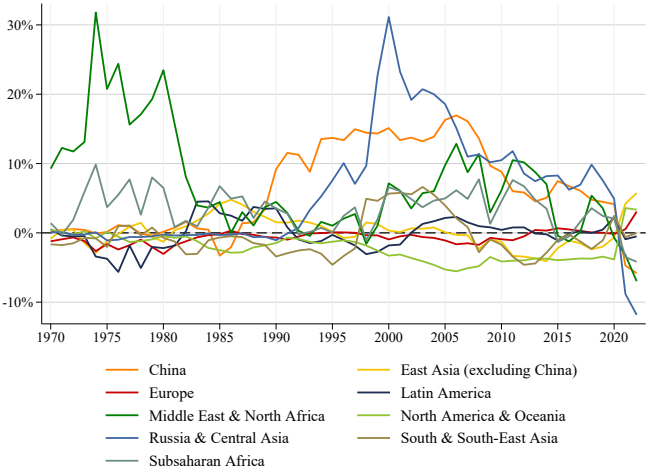
Graph shows global exports as a share of global GDP.
By construction, global imports mirrors this line.

Trade balance as a share of group GDP



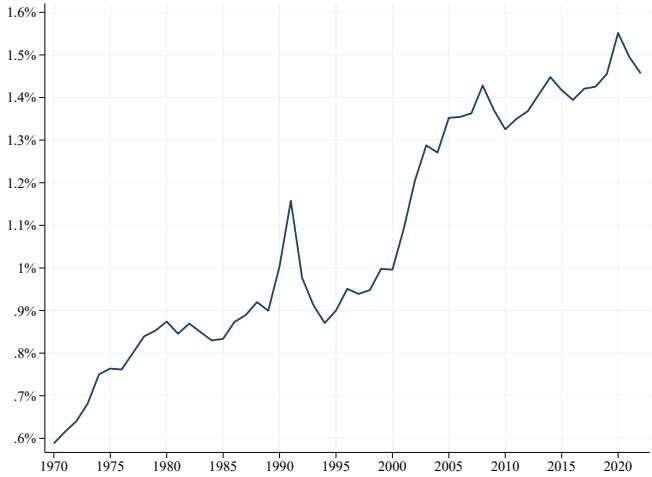
Graph shows group trade deficit/surplus as a share of group GDP.

Trade balance as a share of region GDP



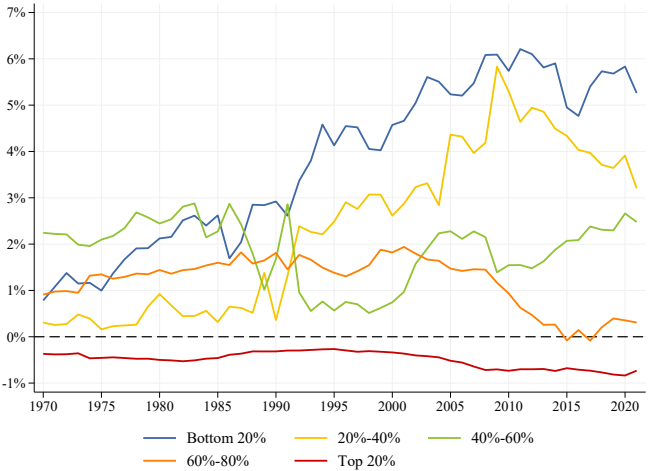
Graph shows group trade deficit/surplus as a share of region GDP.

Global transfers and remittances as a share of global GDP



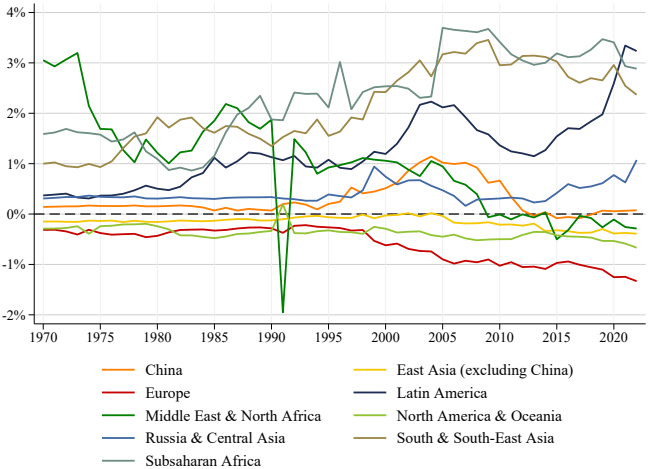
Graph shows global secondary income credit as a share of global GDP.
By construction, global debit mirrors this line. Secondary income credit are inward current transfers (i.e. remittances).

Net transfers and remittances as a share of group GDP



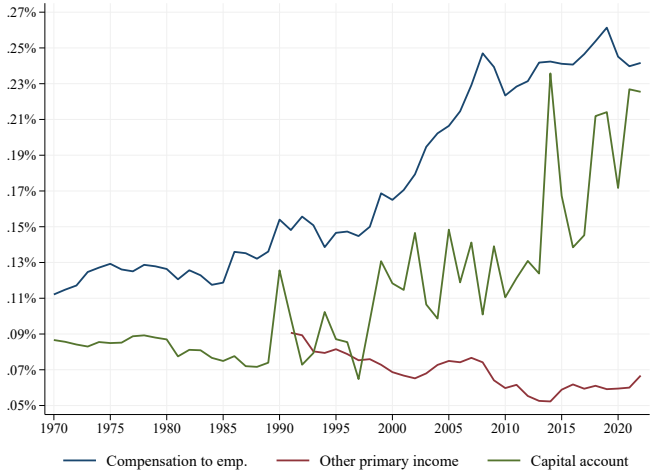
Graph shows group secondary income deficit/surplus as a share of group GDP.

Net transfers and remittances as a share of region GDP



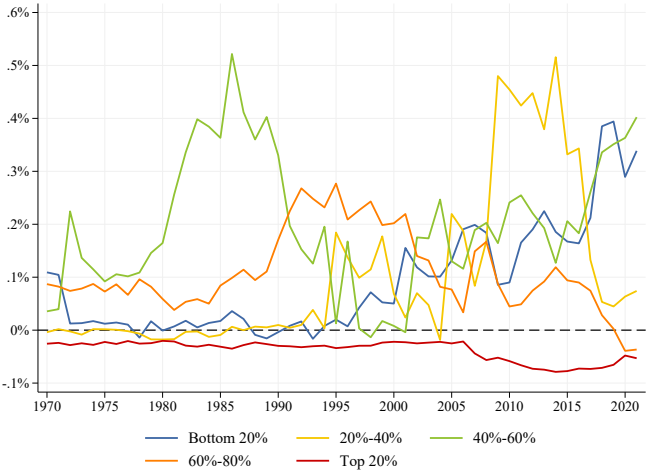
Graph shows group secondary income deficit/surplus as a share of region GDP.

Rest of global CA + KA as a share of global GDP



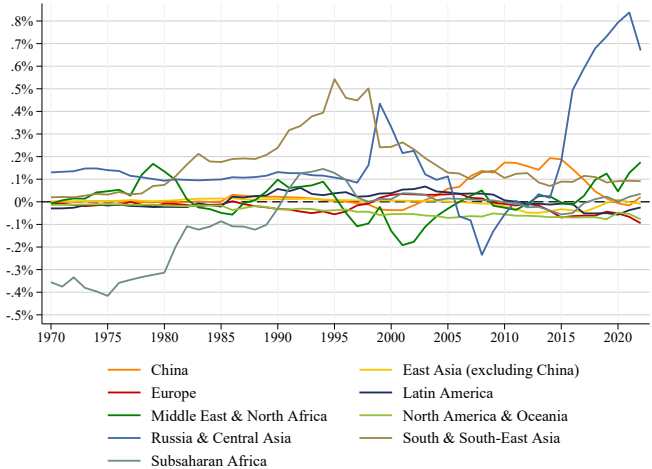
Graph shows global compensation to employees, other primary income and capital account credit as a share of global GDP. By construction, global debits mirror these lines.
Other primary income credits are rent and taxes/subsidies on production. Capital account are acquisitions/disposals of nonproduced, nonfinancial assets, as well as debt forgiveness.

Net compensation to employees as a share of group GDP



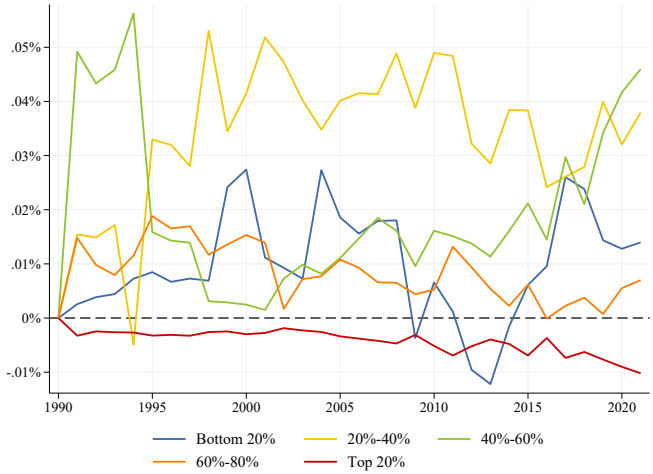
Graph shows group compensation to employees deficit/surplus as a share of group GDP.

Net compensation to employees as a share of region GDP



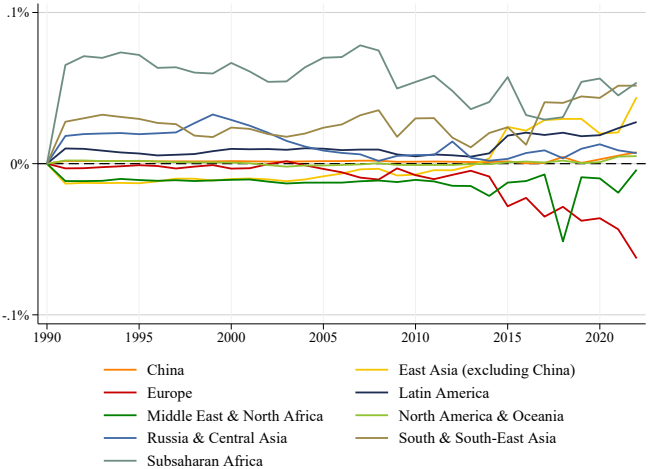
Graph shows group compensation to employees deficit/surplus as a share of region GDP.

Net other primary income as a share of group GDP



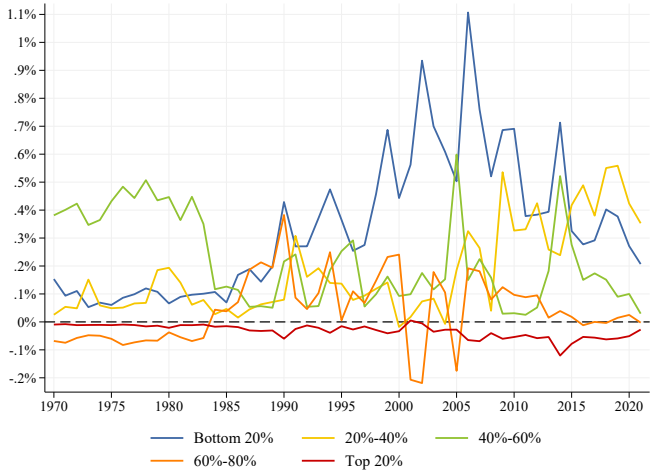
Graph shows group other primary income deficit/surplus as a share of group GDP.

Net other primary income as a share of region GDP



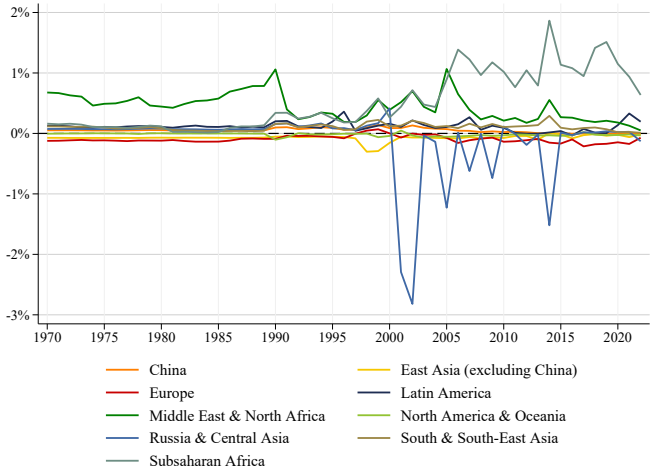
Graph shows group other primary income deficit/surplus as a share of region GDP.

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



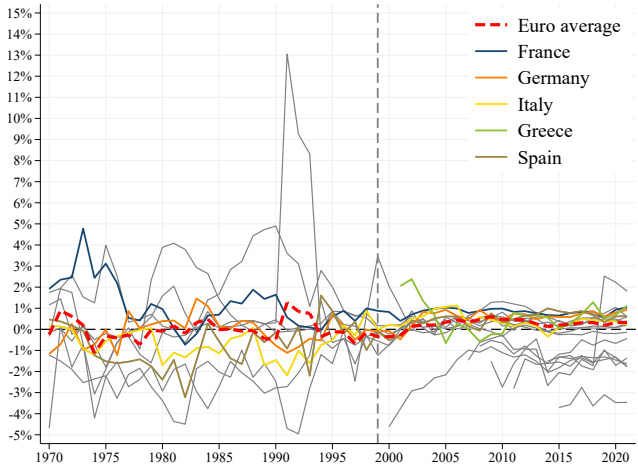
Graph shows group capital account deficit/surplus as a share of region GDP.

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

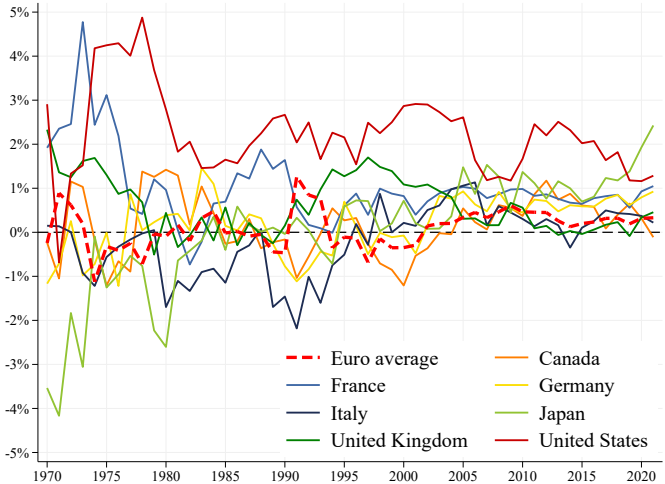
Has the Euro solved the historic concerns of the European countries ? Real excess yields



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).

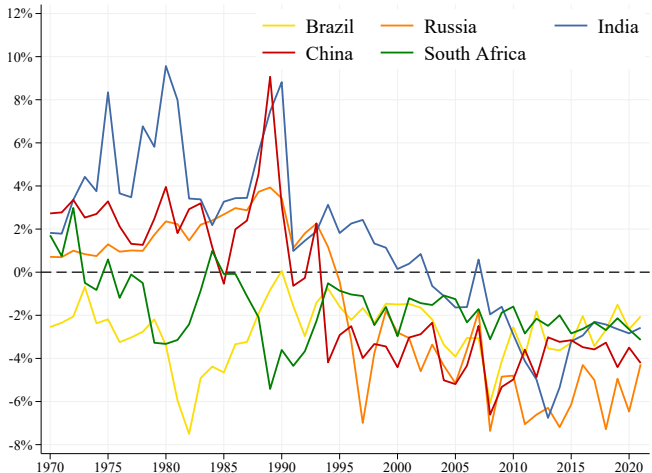
back

Excess yields of the Euro vs G7 countries



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

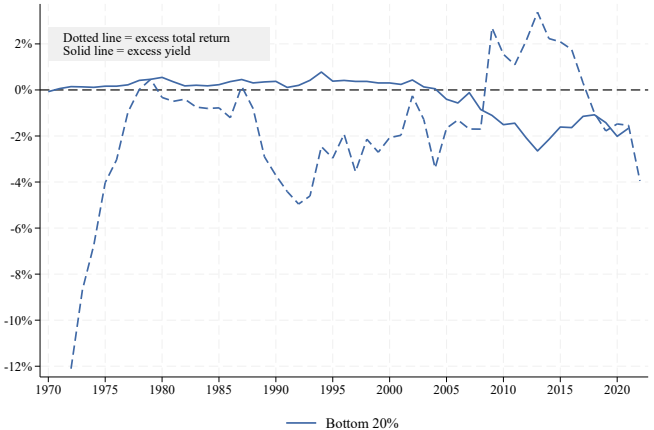
Excess yields, BRICS



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

▸ NFA ▸ back

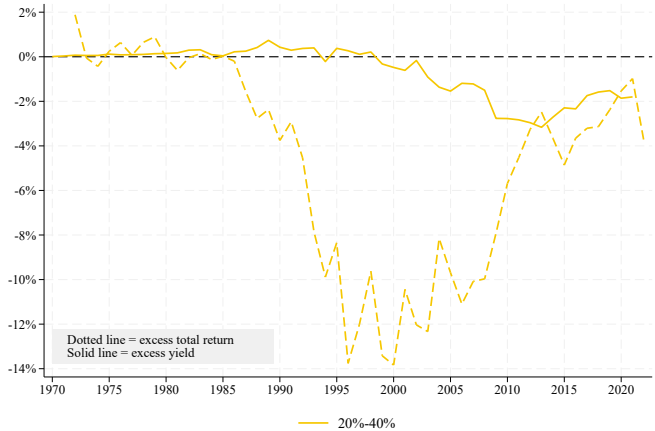
Total Excess returns as a share of group GDP - Bottom 20%



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

back

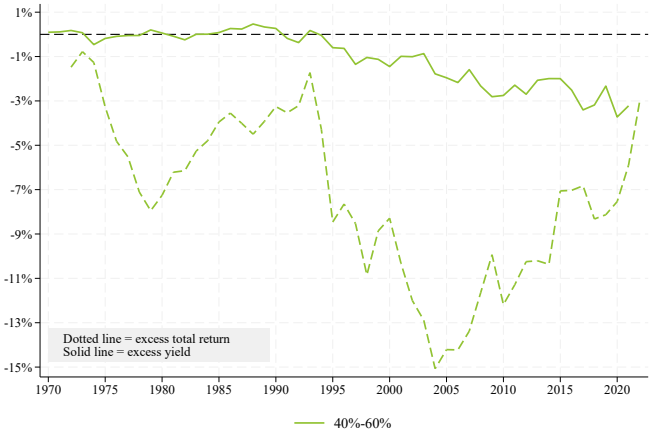
Total Excess returns as a share of group GDP - 20%-40%



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

back

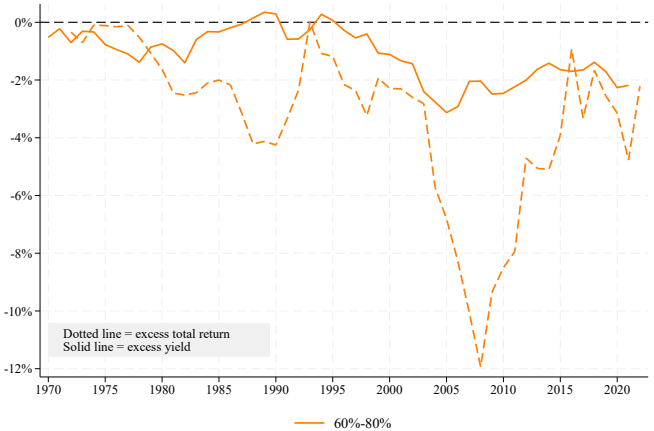
Total Excess returns as a share of group GDP - 40%-60%



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

back

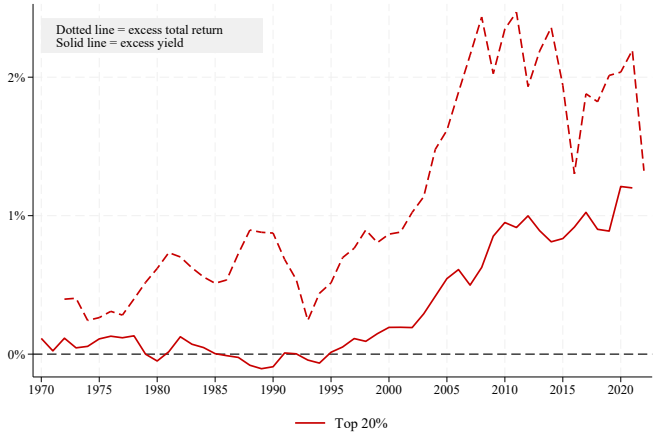
Total Excess returns as a share of group GDP - 60%-80%



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

back

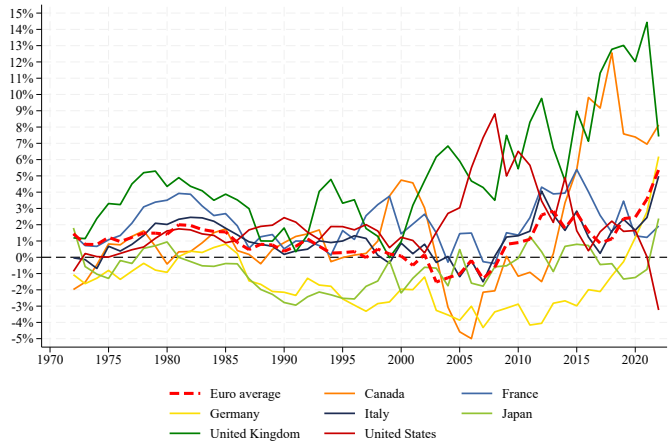
Total Excess returns as a share of group GDP - Top 20%



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

back

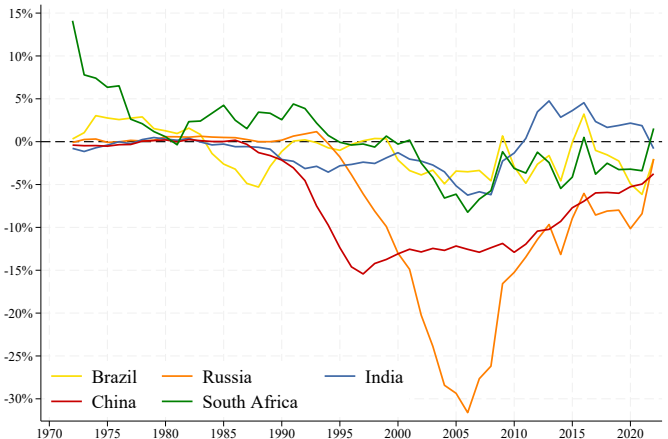
Total Excess returns as a share GDP, G8



Lines smoothed using a 5-year moving average.

back

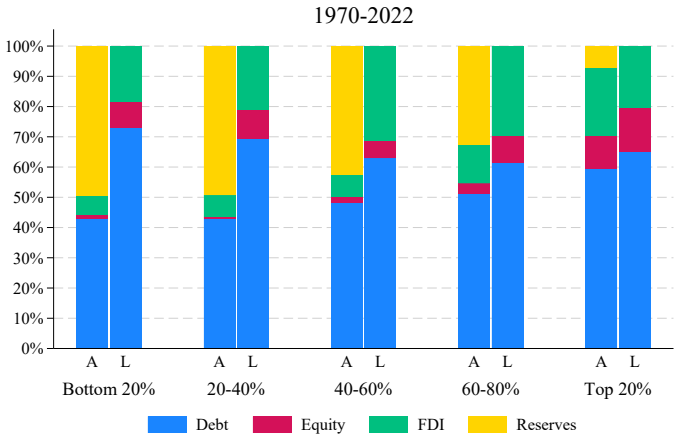
Total Excess returns as a share GDP, BRICS



Lines smoothed using a 5-year moving average.

back

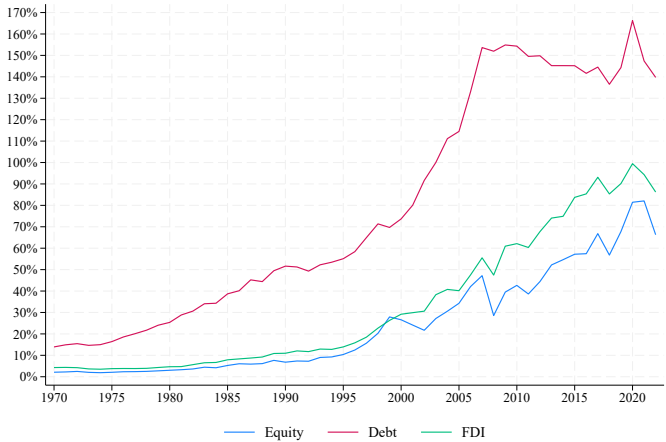
Rich countries hold less reserves and less FDI liabities



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

back

Liabilities decomposition as a share of GDP, top 20%



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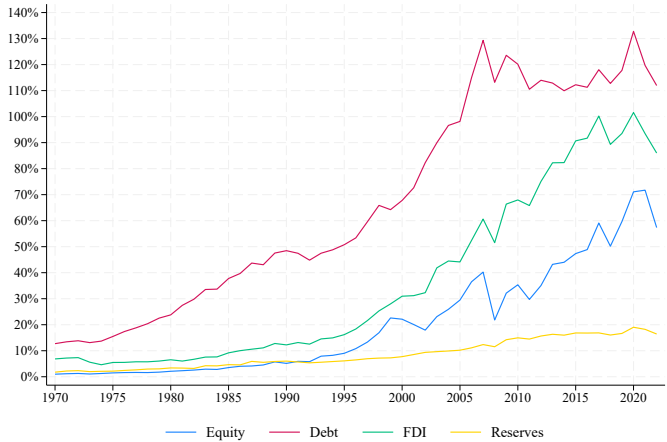
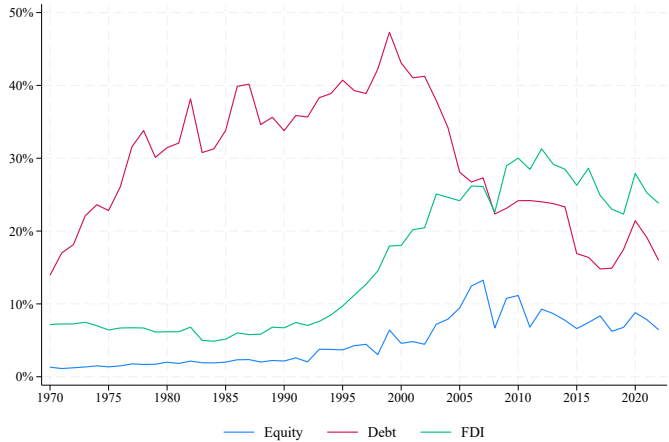
Assets decomposition as a share of GDP, top 20%



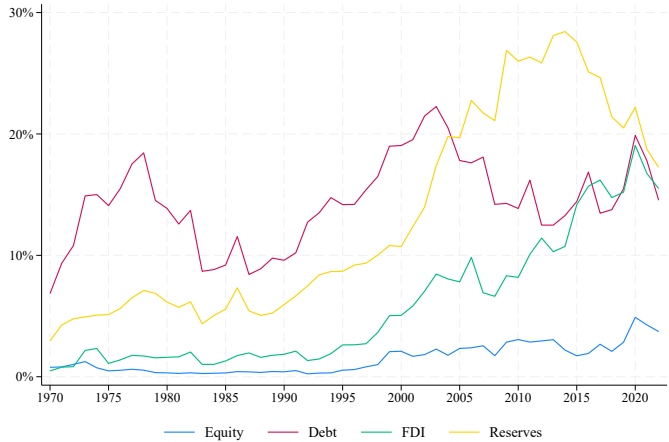
back

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



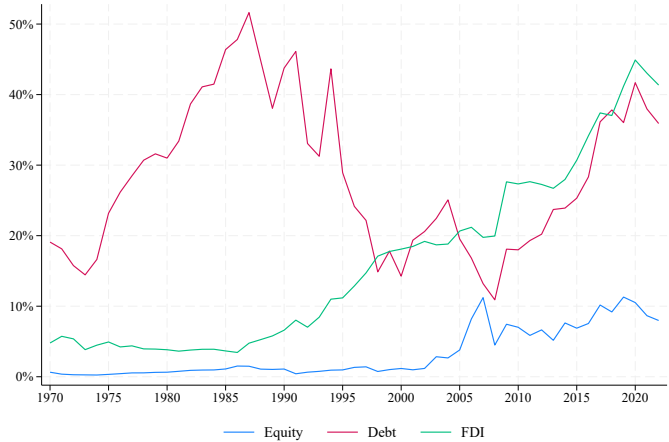
back

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



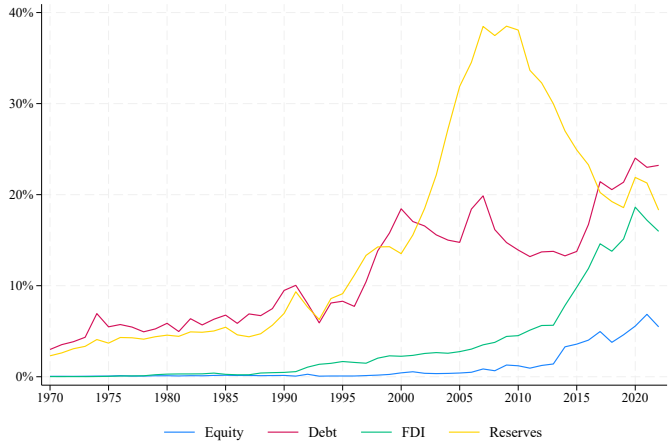
back

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



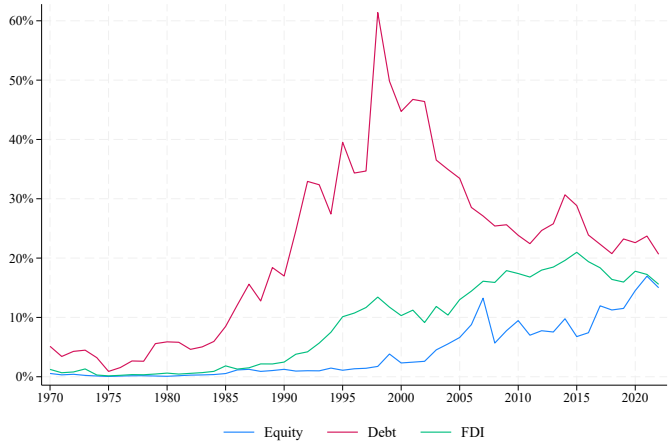
back

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



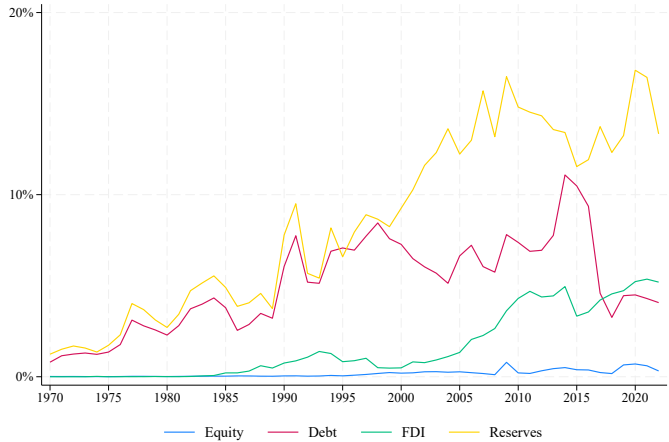
back

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



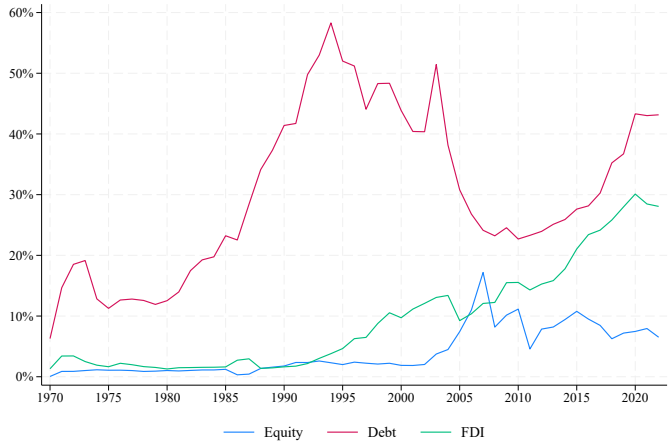
back

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



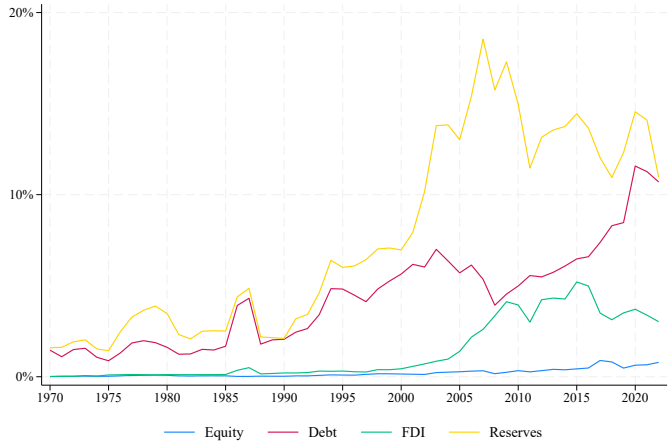
back

Liabilities decomposition as a share of GDP, Bottom 20%



back

Assets decomposition as a share of GDP, Bottom 20%



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Roadmap

Data

Foreign wealth

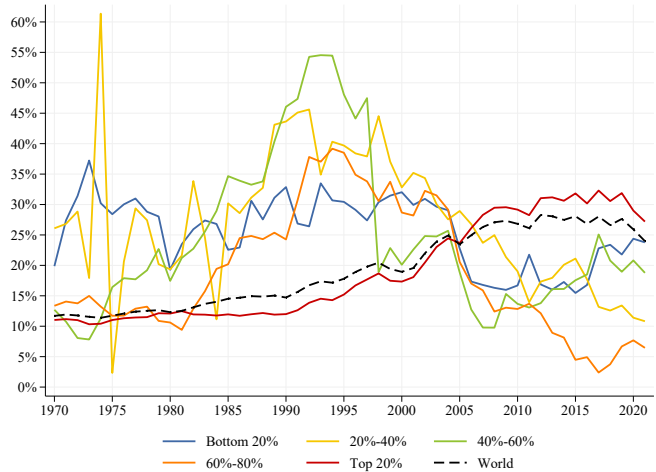
Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

Share of external public debt in total public debt



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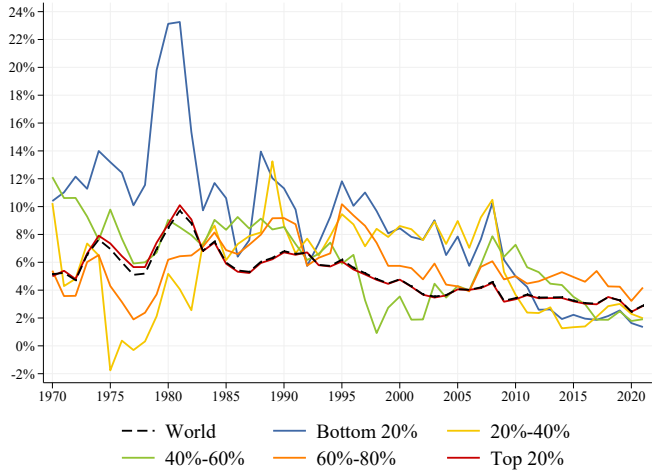
Returns received on private external assets



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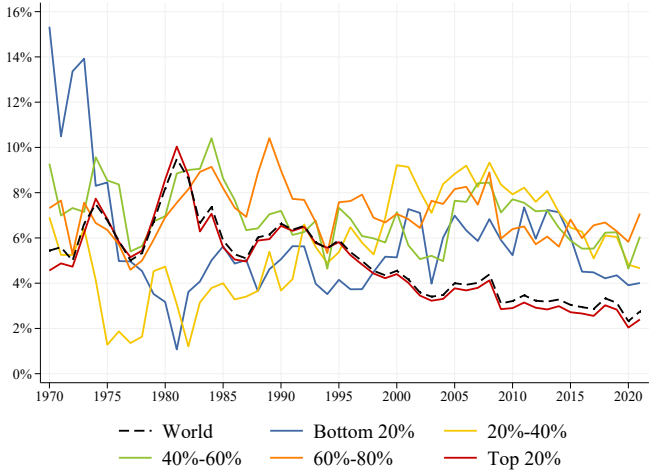
Returns paid on private external debt



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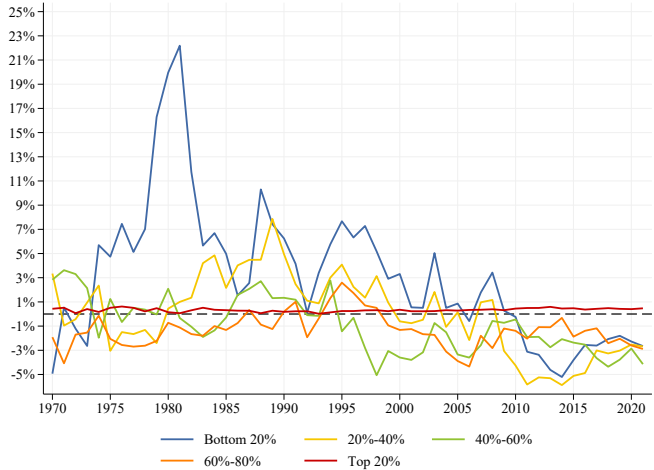
Private return differential



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Roadmap

Data

Foreign wealth

Unequal rates of return

Capital gains and losses

Private vs Public

Mechanism

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

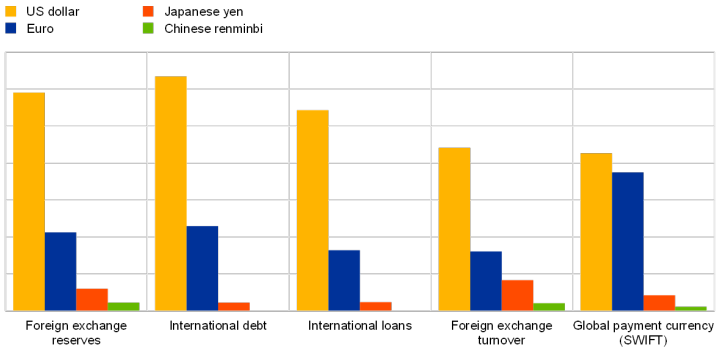
Mechanisms: international currencies (IC) are at the core of results

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



2

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

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