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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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Has the US exorbitant privilege become a rich world privilege?

Rates of return and foreign assets from a global perspective, 1970-2022

Gastón Nievas* **Alice Sodano†**

April 17, 2024

Abstract

How have rates of return on foreign assets and liabilities impacted different groups of countries across the financial globalization observed in recent decades? We address this question by combining data from a wide variety of sources, encompassing the entire world (216 economies) for the period 1970-2022. We find that the excess yield - i.e. the gap between returns on foreign assets and returns on foreign liabilities - has increased significantly for the top 20% richest countries (population weighted) since 2000. In effect, the exorbitant privilege of the US that was observed in previous decades has grown in size and scope and has become a rich world privilege. The richest countries have become the bankers of the world, attracting excess savings by providing low-yield safe assets and investing these inflows in more profitable ventures. Such a privilege is translated in net income transfers from the poorest to the richest equivalent to 1% of the GDP of top 20% countries (and 2% of GDP for top 10% countries), alleviating the current account balance of the latter while deteriorating that of the bottom 80% by about 2- 3% of their GDP. We show that rich countries accumulate positive capital gains, which improves their international investment position (IIP), and invest in relative less risky assets with respect to the world, refuting prior beliefs of them earning a return premia to compensate for potential loses and risk undertaken. Our results seem to be explained by the fact that richer countries are issuers of international reserve currencies and are able to access cheaper financing (both for the public and private sector). Our study has implications for the reform of the international monetary and financial system and for the analysis of unequal development paths.

Keywords: Rate of return, capital income, exorbitant privilege, foreign wealth, international monetary system

JEL classification: F30, F33, F60

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1 Introduction

Over the past decades the world has experienced a process of financial integration and capital liberalisation that has permitted an increase in foreign capital accumulation, especially since the 1990s. Gross foreign assets and liabilities have become larger almost everywhere, but particularly in rich countries, and foreign wealth has reached around 2 times the size of the global GDP, or a fifth of the global wealth. The unequal distribution of this external wealth, with the top 20% richest countries capturing more than 90% of total foreign wealth, poses constraints on the poorest countries. Since the initial levels of foreign wealth are positive correlated with its future change, this unequal distribution -all else equal- amplifies the foreign wealth gap.

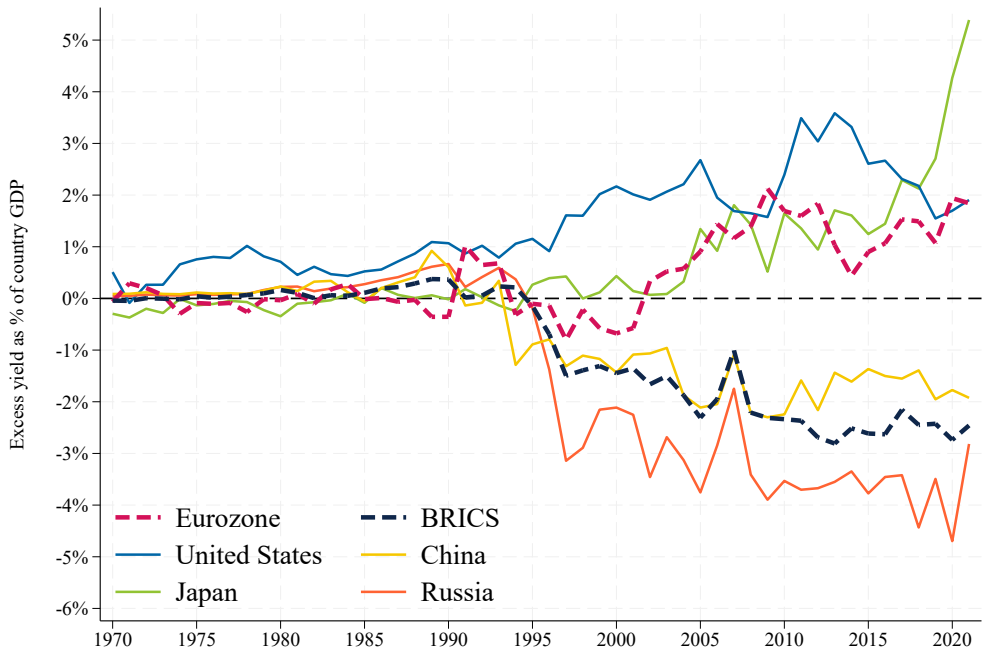
Net foreign assets (NFA) play a significant role in the process of foreign capital accumulation through two channels: the current account (CA) and the valuation channel. The former is depicted through the foreign capital income balance while the latter is the difference between capital gains and losses in external assets and liabilities. Countries with a positive IIP or with higher return on their assets than on their liabilities will tend to receive more income from abroad, alleviating their CA, improving their NFA position. Even if the difference between these two rates is small, large gross foreign asset and liabilities positions magnify its impact on the current account of a country. Countries with capital gains will also experiment an improvement in their NFA position. Hence, the level on NFA, the return rate differential and the capital gain differential will play a significant role in future foreign capital accumulation.

Our contribution in this paper is twofold, we first put together a comprehensive data-set involving the whole world (216 economies) for the past 52 years and accounting for all of the world's foreign wealth, officially recorded and hidden in tax havens, as well as all of the capital income accrued from it (again, officially recorded and tax evaded). Our global dataset is internally consistent, in the sense that global net foreign wealth and global net foreign capital income are permanently equal to zero. The net-zero correction follows the hidden wealth literature started by Zucman (2013) and addresses concerns such as the *dark matter* one of Hausmann and Sturzenegger (2006). The latter study argues that the exorbitant privilege is actually driven by the fact that U.S. foreign assets are miss-measured and, therefore, its true value would suggest a smaller rate of return on foreign assets. Although imperfectly, these issues are accounted for when estimating return rates. In practice, our net-zero correction has a relatively small impact on our findings.

Our second contribution is more substantial, we use this data-set to explore the unequal return rates from a global perspective, shedding light across different income groups. Moreover, we study the drivers of these returns differentials focusing on the excess yield (the difference between return on assets and return on liabilities). We will define a positive excess yield (or positive return differential) as the *privilege*. The main objective is to answer if other rich countries or issuers of international reserve currencies have contested the US role at the center of the international monetary and financial system, and earned a privilege in doing so. We find that the Euro has been a success story in terms of return differentials, recording income flows associated to their excess yield of around 1.5% of its GDP. On the contrary, for the BRICS countries the negative return differential constitutes a yearly burden of in between 2-3% of their GDP (Figure 1).

Figure 1

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

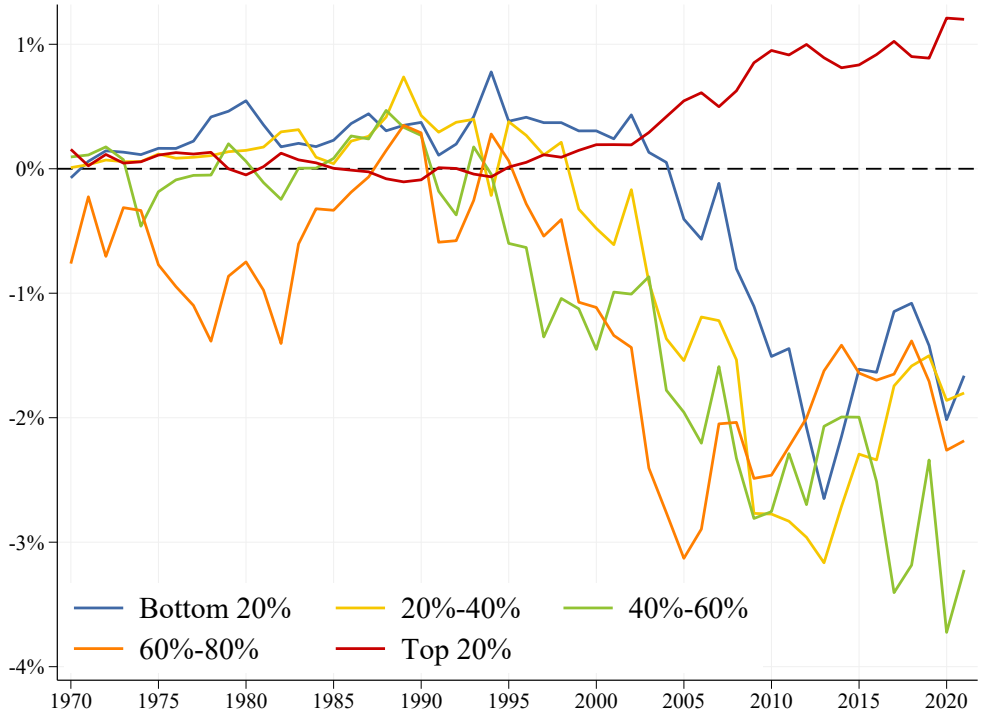


Graph shows excess yields income, which is defined as the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of country GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative). Before Eurozone was created only founders are included: 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).

When grouping the whole world -216 economies- in quintiles of national income per capita, we find that, although return rates on foreign assets have decreased globally, return rates on foreign liabilities have only decreased for the top 20% richest countries. This has allowed them to experience a persistent privilege that resulted in net capital income transfers from the rest of the world of around 1% of their combined GDP (Figure 2). This implies that the rich countries can consistently record trade deficits equal to 1% of their GDP without deteriorating their IIP, and forces the bottom 80% to record trade surpluses or seek for financing to pay the interest accrued from their foreign liabilities. The inequality between the top 10% and the rest of the world is even higher, as the richest countries receive net capital income transfers of almost 2% of their combined GDP as a result of their excess yield.

Figure 2

Excess yield income as a share of 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). 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

There is not much concern in the economic literature about the impact of differential rates of return in national economies, mainly because return rates are seen as the result of a market outcome where riskier ventures need to pay a premium to attract investors while safer -and more liquid- assets will pay lower returns because anyone holding them can change them for a sure amount of cash at any point in time. As such, the fact that richer countries pay less on their debt and are able to use this resources to invest in more profitable ventures abroad is considered a fair equilibrium. We expose four main lines of thought that would justify a positive return differential for rich countries. Namely,

Hypothesis that would justify the existence of a privilege (excess yield):

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.

H2. 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.

H3. 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.

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

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.

We present evidence that disproves each of H1, H2, H3 and H4. Namely, the excess yield of rich countries looks even bigger when we include capital gains and losses (which disproves H1). The yields of rich countries' foreign assets are less volatile (less risky) than the yields of the rest of the world (which disproves H2). The excess yield comes entirely from lower rates of return on rich countries liabilities (which disproves H3). The excess yield remains highly significant after we exclude public debt from the analysis (which disproves H4). This leaves us with H5. Our favoured interpretation is that wealth holders from rich countries are able to access cheap credit because rich countries are issuers of international reserve currencies, which gives rise to various regulatory, political and financial advantages. E.g. prudential rules tend to consider public and private assets issued by rich countries as safer than other assets, so that major global banks are ready to hold these assets in exchange of a lower return. This mechanism has arguably been reinforced following the post-2008 strenghtening of prudential rules. In addition, wealth holders from the global South might increasingly have valued the security, confidentiality and low-tax environment provided by the financial system of the global North (maybe in relation of the fear of rare disasters a la Barro in their own country). In effect, they are ready to provide cheap liquidity to the global North, which ultimately benefits wealth holders from rich countries. While we are not able to disentangle the various mechanisms in a fully satisfactory manner, our key contribution is to pinpoint that future research should focus on H5 and that the amounts of the global transfers involved in this process are truly enormous and have increased significantly over time.

Contrary to economic beliefs, the privilege is not the result of compensating rich countries for undertaking bigger risks or potential loses, nor the result of them investing in more profitable assets, nor the result of poor countries stocking on low yield public bonds. We thus link the positive return differential (privilege) to the position of rich countries in the international economy, explaining the lower returns paid on their liabilities. More dominant players are not only seen as safer havens and required to pay less on their debts, but their currency is demanded to perform international transaction. An increasing global demand for safe assets denominated in main reserve currencies decreases its return rate. We argue that the market outcome explanation seems insufficient to explain the current results and inadequate to contribute to global development and that, instead, the privilege is an institutional outcome.

The unfairness of the international monetary and financial system has become a recent complain of the Global South[1], although not long ago it was a point of conflict in between Global North countries (Eichengreen, 2011). The *exorbitant privilege* term was first coined in the 1960s where, in the aftermath of Bretton Woods, European countries first pointed out to the central, privileged and dominant position that the US was assigned in the international monetary system as issuer of the main international currency. The fact that all currencies needed to be pegged to the US dollar translated in countries seeking to hold reserves in US dollars, and using it for international transactions. This allowed the US to absorb the savings from the rest of the world paying a low rate, and transform them in more profitable ventures, earning a premium in this intermediary role, behaving as the banker of the world. The fear of such problem arising is what inspired Keynes' proposal of the International Clearing Union. The term was first formalized into the economic literature by Gourinchas and Rey (2007b), who defined it as the positive total return differential that the US gets from their net foreign asset position.

The rest of the paper is structured as follows: the following subsection summarizes the existing literature. Section 2 presents the data and definitions used to estimate the return differentials. Section 3 shows stylized facts of NFA accumulation, contrasting the CA with capital gains or losses. Section 4 presents the results on

[1]See Brazilian president Lula's complain of the US dollar dominance or Kenyan president Ruto's call for a more equal financial system.

the unequal rates of return, decomposing the excess yield and computing the total excess return. Section 5 higlihgts the private aspect of the privilege. Section 6 describes the mechanisms behind our results. Section 7 concludes.

1.1 Related literature

The *exorbitant privilege* refers to the phenomenon where total returns on assets surpass total returns on liabilities. This privilege enables the United States to generate net positive investment income from abroad, despite having relatively low foreign assets and high liabilities and, until recently, to run large run CA deficits without proportionally deteriorating the IIP (Atkeson, Heathcote, and Perri, 2022)[2].

The literature was initiated by Gourinchas and Rey (2007a), who observed that the United States maintained a positive income balance despite its increasing net liabilities due to a return differential (which they denominated the *income puzzle*), which in turn allowed them to borrow at a discount in global financial markets.

The authors emphasize the role of the United States as the world's venture capitalist and primary global lender. They highlight the ability of the U.S. to borrow short-term due to foreign demand for liquid dollar assets and simultaneously provide long-term loans and investment funds to foreign firms, which are riskier assets. They note that "the U.S. balance sheet increasingly resembles that of a venture capitalist with high-return risky investments on the asset side" (Gourinchas & Rey, 2007a, p.22). The intermediation margin, defined as the return differential between assets and liabilities, plays a significant role in this context.

Additionally, they underscore the importance of currency denomination, highlighting that being the issuer of the international currency allows the U.S. to denominate its entire stock of liabilities in dollars. This factor becomes particularly significant when analyzing valuation adjustments of U.S. foreign assets, where a depreciation of the dollar, all else being equal, generates capital gains on U.S. asset holdings (valuation channel), increases the return on the net foreign portfolio, and helps boost net exports (trade adjustment channel). This has given rise to the *position puzzle*, where the U.S. NFA is higher than its cumulated current account. In contrast, for emerging markets with dollarized liabilities, a depreciation of the dollar can be destabilizing.

Finally, the authors identified the return differential could arise from either a *return effect* (higher returns within each asset class) or a *composition effect* (an asymmetric balance sheet with more low-yielding liabilities)[3]

Since this seminal paper, most of the literature has focused on the U.S. and, in particular, the debate revolved around how to measure valuation gains to have more accurate estimates of the capital gains, which can be quite contradictory (results on excess yields tend to be more robust across studies).

Curcuru, Thomas, and Warnock (2013) classify this literature into three waves. The first wave emerged during the pre-crisis Great Moderation period and featured prominent papers such as Lane and Milesi-Ferretti (2007), Meissner and Taylor (2006) and Obstfeld and Rogoff (2005). This set of papers estimated a return differential that indicated U.S. investors abroad were able to outperform foreign investors in the U.S., with a significant portion of the differential stemming from higher capital gains rates. However, Curcuru et al. (2013) argue that the results obtained in this wave are overestimated due to an incorrect calculation of the valuation gains, primarily attributed to including "other changes" (OC) in the calculation[4]. One potential takeaway from the first wave of papers is that the U.S. net debt position, while negative, was less detrimental than previously

[2] Nevertheless, the study also demonstrates that the specific privilege relating to the higher returns on assets compared to returns on liabilities, still persists.

[3] Curcuru, Dvorak, and Warnock (2010) proposes a third effect: the timing effect, which is driven by re allocations among different asset classes, where foreigners' returns in the US are harmed when switching between bonds and equities, due to the timing.

[4] "Other changes" refer to changes in position that cannot be attributed to price changes, exchange rate changes, or financial flows (Gohrband and Howell, 2013).

thought because the U.S. earned substantial returns on its foreign positions while paying relatively little to foreigners on their U.S. positions.

The second wave of papers emerged during the pre-crisis period when concerns about a potential U.S. balance of payments (BOP) crisis were prevalent. This wave focused on correcting the inclusion of OC in valuation adjustments to avoid overestimating U.S. returns differentials. Key contributions from this wave include Lane and Milesi-Ferretti (2009), Curcuru, Dvorak, and Warnock (2008), Curcuru, Thomas, and Warnock (2009) and Gourinchas and Rey (2007b). By excluding OC from the calculation of capital gains, these studies estimated significantly lower return differentials and even suggested that the exorbitant privilege may not exist after all.

Finally, the third wave, best represented by Forbes (2010), Habib (2010) and Gourinchas and Rey (2022), brings back the discussion on return differentials. Habib (2010) calculated valuation gains similarly to the first wave, possibly overestimating them, Forbes (2010) analyzed a relatively short period characterized by a depreciating dollar that favored the U.S., and Gourinchas and Rey (2022) reported more modest estimates. Moreover, Atkeson et al. (2022) argues that the position puzzle does not hold anymore.

Despite all of the efforts devoted toward better understanding the U.S. exorbitant privilege, there is still no comprehensive study comparing returns differentials involving the whole world and accounting for all of the foreign wealth stock and income, including the ones hidden from tax offices in tax havens.

Main contributions are: Rogoff and Tashiro (2015), who document an exorbitant privilege for Japan. Darvas and Hüttl (2017) who, using data for 56 countries and over a limited country-specific period, confirm the Japanese privilege and finds a similar one for Switzerland, although does not find such a privilege for the EU. Habib (2010) uses 49 countries between 1981-2007, finding similar results for Japan, Switzerland and the euro area. Adler and Garcia-Macia (2018) study NFA dynamics of 52 economies and provide a decomposition of return differentials into yields, asset price valuation changes, and exchange rate valuation changes over 1990-2015 without taking into account offshore wealth. Importantly, they find evidence that, besides the US, Japan and Switzerland, other reserve-currency countries such as the Euro area and UK have a -low and non significant- positive yield differential. Finally, Meissner and Taylor (2006) turn their attention to the excess returns of other major G7 economies, finding that the UK, France and Japan enjoy a positive return differential (although statistically insignificant for the UK). They also find that Canada and Italy are exposed to a negative return differential. Hünnekes, Schularick, and Trebesch (2019) compares Germany's return rates with those of the G7 countries for the period 1975-2017, finding that German investments abroad underperformed relative to other rich countries.

Our paper also relates to the studies that focus on the International Monetary System and the role of dominant currencies (Eichengreen; Farhi and Maggiori; Gopinath et al.; Gopinath and Stein; Gopinath and Stein; Maggiori, 2011; 2018; 2020; 2018; 2021; 2017).

2 Data and definitions

2.1 Data

By synthesizing and improving upon various sources, we compiled a comprehensive dataset, encompassing 216 economies worldwide and spanning the period from 1970 to 2022. This dataset ensures complete coverage of GDP, price indices, US dollar market value exchange rates, foreign wealth, foreign capital income and the rest of elements of the current account. Appendix A provides a detailed description of the data coverage. While abundant information was available, the process of harmonizing and integrating these diverse data sources, along with ensuring temporal coverage, required several assumptions and entailed meticulous work. Although specific estimated figures are not exempt of imperfections, whenever in doubt, a conservative estimate was selected. Appendix D shows that results hold when using raw data without corrections nor assumptions.

GDP, price index, and exchange rate data were sourced from Wid.world. In cases where any of these variables were missing, such as for the Former Soviet countries prior to the dissolution of the USSR, it was assumed that the variables followed the trajectory of the parent economy. Furthermore, for certain small territories that constitute tax havens (such as Bonaire, St Eustatius, and Saba) the figures were obtained from regional statistics offices (such as CBS Netherlands).

The data on foreign wealth is sourced from "The External Wealth of Nations" (Lane and Milesi-Ferretti, 2018), which provides a standard breakdown of external assets and liabilities based on the Balance of Payments (BOP) Statistics Manual 6. External financial assets and liabilities encompass various components, such as foreign direct investment, portfolio equity, portfolio debt, other investment, and financial derivatives. Notably, foreign exchange reserves are included as financial assets, while gold holdings are excluded. In cases where data coverage is incomplete, countries are assumed to follow the regional trend. Only six countries have been completely imputed using a regional average.[5]

The data on foreign capital income primarily originates from the IMF BOP. In cases where IMF data is unavailable, alternative sources such as the United Nations System of National Accounts (SNA) or OECD statistics are utilized. For missing values, asset class level predictions are made based on foreign capital stocks, GDP in USD, exchange rates, and inflation rates. An Ordinary Least Squares (OLS) regression model is employed, incorporating country-specific fixed effects to account for time-invariant characteristics of each economy, as well as region-year fixed effects to capture unobserved shocks affecting the region uniformly.

Foreign capital income comprises various components, including portfolio and other income received and paid, income received from tax havens, and reinvested earnings on portfolio investment. Foreign direct investment income consists of both, officially recorded income and corrections made for underreported FDI income resulting from profit shifting (Tørsløv, Wier, and Zucman, 2018).

The rest of the current account and the capital account is completed mainly from the IMF Balance of Payments statistics, except for trade in goods and services. Trade figures come from the CEPII database (Conte, Cotterlaz, Mayer, et al., 2022), which are sourced mainly from IMF and Comtrade. Bilateral figures allow us to estimate global aggregates where trade balances add up to zero, meaning that global imports equal to global exports. We do so by the standard methodology of the literature, which is assuming that imports from A to B equal the exports from B to A, ensuring a squared data. For the years 2021 and 2022 this bilateral data is complemented with IMF DOTS. We rely on several sources to get estimates of external public debt and the interest paid on it, namely the International Debt Statistics (World Bank and (Arslanalp and Tsuda; Avdjiev, Hardy, Kalemli-Özcan, and Servén; Mauro, Romeu, Binder, and Zaman, 2012; 2017; 2015). For some exercises, such as the counterfactual results without China in Appendix B, we use bilateral data from FINFLOWS (hosted by the European Commission, combining IMF/OECD data) (Nardo, Ndacyayisenga, Pagano, Zeugner, et al., 2017).

2.2 Corrections

Adjustments were made to ensure that net foreign capital income and net foreign wealth sum up to precisely zero at the global level, which is conditional on the presence of all 216 economies. Corrections followed the principles outlined in the hidden wealth literature, started by Zucman (2013). Including these correction address the *dark matter* critique of Hausmann and Sturzenegger (2006), who argue that the exorbitant privilege is actually driven by the fact that U.S. foreign assets are mismeasured. They suggest that taking into account the *true value* of the U.S. gross foreign assets will provide a lower return differential.

Hidden wealth: One well-documented anomaly in balance of payment statistics is that when summing up net foreign assets or incomes at the global level, the result tends to consistently be negative rather than zero. This

[5] Bonaire, Cuba, Kosovo, Monaco, North Korea, Puerto Rico

implies that the world as a whole is a net debtor, which is impossible. The explanation offered in the literature is that negative imbalances are primarily caused by assets hidden in offshore tax havens, which are recorded as liabilities but never as assets.

To correct this discrepancy, the mismatch was addressed by assigning assets hidden in tax havens, along with their respective foreign income, to each individual country. This allocation methodology follows the approach outlined in Alstadsæter, Johannesen, and Zucman (2018). The list of 41 tax havens is taken from Tørsløv et al. (2018), which builds upon Hines Jr and Rice (1994), and can be seen in Appendix A.2. For countries not included in Tørsløv et al. (2018), the value was completed using the regional average of the offshore wealth-to-GDP ratio. It is important to note that tax havens, with the exception of Belgium, Ireland, and the Netherlands, were not assigned any offshore wealth.

Missing portfolio income: The same methodology as that used for hidden wealth is applied. Importantly, global net wealth and global net portfolio income figures before correction are not proportional, meaning that rate of return on missing assets is not constant throughout the period.

Retained earnings on portfolio investment: The concept of retained earnings on portfolio investment refers to the income that a company retains after paying its suppliers, employees, shareholders, and corporate taxes. This income is also known as "undistributed profits". If a company with undistributed profits has foreign ownership, this flow should be accounted for as part of the national income of the country where the company is located, as well as in the countries of residence of all the owners in proportion to their ownership. However, the System of National Accounts (SNA) only considers this aspect in the context of FDI income, and assumes that the entire flow of undistributed profits belongs to the country where the firm is located in the case of portfolio income. To correct this limitation, we follow the approach outlined in Blanchet et al. (2021), which redistributes the corresponding share of undistributed profits to foreign countries. This correction estimates both the flow of foreign retained earnings that accrue to residents and the flow of domestic retained earnings that accrue to foreigners.

Shifted profits: In contrast to the deficit observed in portfolio income, the world experiences a surplus in FDI income (Tørsløv et al.; Wier and Zucman, 2018; 2022). This surplus can be attributed to profit shifting practices, particularly towards tax havens. In tax havens, foreign firms tend to exhibit significantly higher profits-to-wage ratios compared to local firms, indicating that parent companies from high-tax countries may be shifting profits to them to mitigate their corporate tax liabilities. It is estimated that approximately 40% of multinational profits are shifted through mechanisms such as royalty payments, management fees, and interest payments. Furthermore, profits generated in tax havens often go unrecorded or are under-counted, while tax havens report lower levels of FDI income than what their partner countries record as receiving. Hence, we correct for this discrepancy and we also correct the estimates for the economies that are under-reporting FDI income received following Tørsløv et al. (2018), for the last decades of the period since it is when some of the years show negative aggregate values.

Current and capital account: We ensure trade global aggregates to be consistent by exploiting the well recorded bilateral statistics. We apply what is common practice in the trade literature, computing exports by mirroring imports. This is, in other words, assuming that the recorded imports to country A from country B are equal to the exports from B to A. This allows for global imports to equal global exports in each year. With the other components of the current account (compensation to employees, other primary income, secondary income) and the capital account, the solution to get a consistent global estimate is not so clear, so we opt for decreasing credit (debit) proportionally whenever the net global is different than zero and we report that results hold without such a correction.

2.3 Definitions

The BOP equation is a fundamental accounting identity that summarizes the economic transactions between a country and the rest of the world and it is supposed to ensure that all international transactions are accounted for. The latter means that inflows and outflows balance each other and that, if an economy reports a deficit in one account it must be compensated by a surplus in another account. It is typically represented as follows:

$$CA_t + KA_t + FA_t = 0 \tag{1}$$

Where CA_t is the current account, KA_t is the capital account and FA_t the financial account. The capital account tracks the movements of non-financial (land, copyrights, patents, trademarks, and other intangible assets) and non-produced assets (those that are needed for production but were not produced) between residents and non-residents of an economy. The financial account reports the flow of financial assets and liabilities between an economy and the rest of the world (RoW). It includes items such as direct investment (physical assets and equity stakes in business), portfolio investment (stocks and bonds), other investment (loans, currency and deposits and trade credits).

We are interested in the process of foreign wealth accumulation by countries and the profits derived from it. We focus in the Balance of Payments with a particular interest in the Current Account. Zooming in into the current account, we can express it as:

$$CA_t = TB_t + NY_t + NCT_t \tag{2}$$

Where TB_t refers to the trade balance, the exports of goods and services minus the imports of goods and services, NCT_t is the net current transfers (workers' remittances, donations, tax payments, foreign aid, and grants) and NY_t is the net primary income, which can be further decomposed into capital (NKI_t) and labor income (NLI_t). The change in Net Foreign Assets (NFA) in a given year is given by:

$$NFA_t - NFA_{t-1} = TB_t + NKI_t + NLI_t + NCT_t + KA_t + EO_t + KG_t \tag{3}$$

Where EO_t is commonly referred as the errors and omission term -and we will asume equals zero through the rest of the paper-, and KG_t is the result of capital gain or losses at time t, which can occur due to asset prices changes or exchange rate changes. As capital gains/losses are unobserved, we will estimate them in Section 3 as the difference between the accumulated current and capital account and the NFA position. The total return of net foreign assets in a given year will be given by:

$$NKI_t + KG_t = (i_t^A \times A_{t-1} - i_t^L \times L_{t-1}) + (k_t^A \times A_{t-1} - k_t^L \times L_{t-1}) \tag{4}$$

Where the implied nominal rates of return are i_t^B (yield) and k_t^B (rate of capital gain), with B referring to assets or liabilities. Hence, the implied total return rates can be expressed as

$$\underbrace{r_t^B}_{\text{total rate of return}} = \underbrace{\frac{FKI_t^B}{B_{t-1}}}_{i_t^B\ :\ \text{yield}} + \underbrace{\frac{KG_t^B}{B_{t-1}}}_{k_t^B\ :\ \text{rate of capital gain}} \tag{5}$$

The excess returns will simply be the difference from the returns on assets and the returns on liabilities:

$$r_t^A - r_t^L = \underbrace{(i_t^A - i_t^L)}_{\text{Excess yield}} + \underbrace{(k_t^A - k_t^L)}_{\text{Excess capital gain}} \tag{6}$$

The excess returns will have an heterogeneous impact in the CA, as valuation effects are very volatile and period specific they can have a more short term impact while yields differentials will better portray the long-term dynamics of foreign capital accumulation and the divergent patterns across countries. Replacing Equation 4 and 5 into Equation 3 portrays the important role of excess returns and valuation changes in the process of foreign capital accumulation. For instance, countries with positive excess returns will be able to stabilise their net foreign assets in the long-run. This is a very well documented case for the U.S., which is able to run large trade deficits without having a proportional impact in its NFA position.

$$\begin{aligned} NFA_t - NFA_{t-1} = TB_t + (i_t^A \times A_{t-1} - i_t^L \times L_{t-1}) + (k_t^A \times A_{t-1} - k_t^L \times L_{t-1}) \\ + NLI_t + NCT_t + KA_t \end{aligned} \tag{7}$$

To get a better picture of the differential patterns of rich vs poor countries, countries are grouped by quintiles of net national income weighted per population. When dealing with grouped countries, results will be shown in US current dollars. When studying specific countries, all of the statistics presented are in real 2022 national currency, unless otherwise stated.

3 Net Foreign Assets: Current account vs Capital gains

As stated above, present NFA will determine the future accumulation of gross foreign assets or liabilities through the current account and the valuation channel. The current account channel refers to the net capital income accrued from foreign assets, as expressed in Equation 7. If a country has a positive NFA position (more assets than liabilities) and pays on average the same return rate for both, then more capital income will enter the country each year, alleviating the current account and allowing to record trade deficits or accumulate further foreign wealth.

The valuation channel refers to the valuation changes in foreign assets with respect to the ones in foreign liabilities. All else equal, if foreign assets present capital gains then the NFA of a country improves. Conversely, if foreign liabilities experience capital gains and assets' value remains constant then the NFA worsens. If both change then the impact in NFA will depend in their net differential[6].

As shown in the Appendix Figure A11, global external assets have rised substantially over the past 50 years, going from 20% of the World's GDP in 1970 to 200% in 2022, with a particular acceleration in the 90s. The Great Recession slowed down this rapid increase, but did not stop it. This evolution has been highly unequal across the world, with some countries accumulating very large net negative external positions while others positioning as net creditors. For instance, in 2022 the top 20% richest countries hold 92% of global GFA and 91% of global GFL. This translates in them having positive NFA of as much of 3% of their GDP (Figure 4) or almost 2% of global GDP (Figure 3)[7].

[6]Capital gains/losses are defined as the difference between the cumulated current account and the capital account and the net foreign assets positions in market value, including offshore wealth:

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

[7]If one were to consider the NFA officially recorded, we would wrongly get to the conclusion that the world as a whole is a net debtor, which is intrinsically wrong (Figure A69 in Appendix). Even more, this trend has intensified over the recent decades since tax competition and tax evasion have been byproducts of financial globalization, and offshore wealth has reached almost 10% of the global GDP. Importantly, from the officially recorded statistics one would conclude that the rich countries' IIP has been negative since the late 90s. This would mean that the top 20% of the world are net debtors and that the only country group with positive NFA would be the 4th quintile (60-80% of the income distribution). It is important to note that in the latest years, this group is mainly comprised of China. Hence, the official

Hypothesis 1: *Rich countries deserve a return premia because every now and then they lose their investments abroad due to expropriation or default from governments in the Global South.*

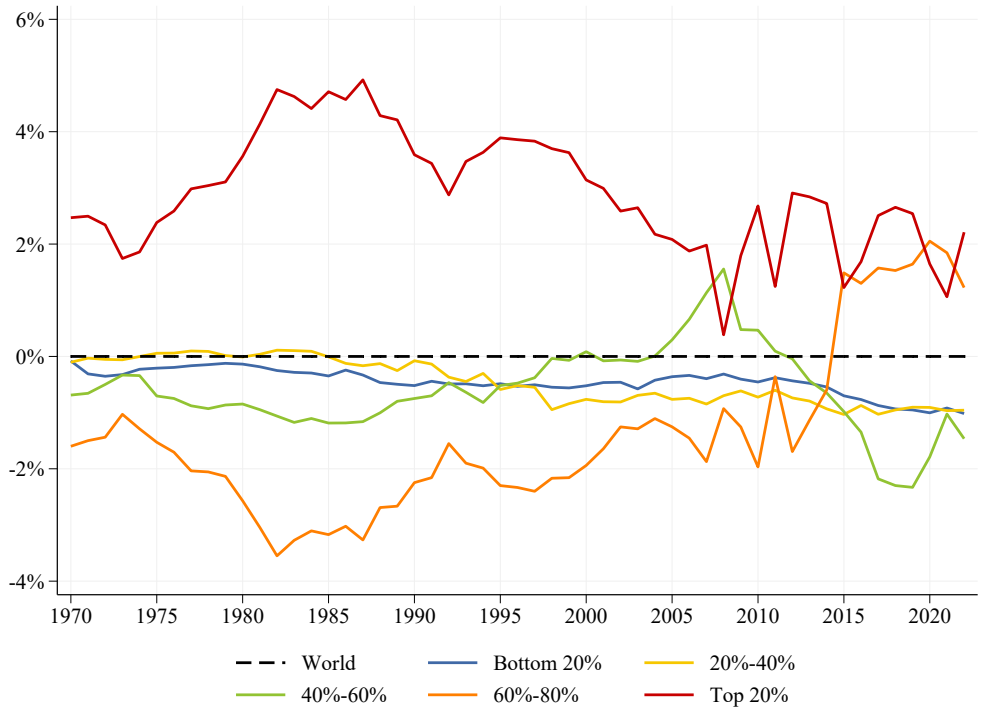
Fact: Rich countries experience capital gains, hence they do not deserve a return premia to compensate for plausible losses.

Contrary to expected, we find that Hypothesis 1 does not hold, rich countries actually enjoy large capital gains, as depicted in Table 1 and Table 2, which provides evidence that they are on average not losing their investments. Further, the positive NFA position of the richest top 20% is primarily explained by substantial capital gains and positive net investment income, despite recording large trade deficits. On the contrary, the NFA positions of the poorest groups of countries are deteriorated by a persistent pattern of capital losses and negative cumulated net investment income, offsetting the positive contribution of the cumulated trade balance and net secondary income. An exception is noted for the bottom 20%, which undergoes a reversal of its negative valuation changes starting from 2010, which can be seen in Figure 12.

figure would imply that in the aggregate China would own the claims on the vast majority of the world, including the rich world. However, we can gain a more comprehensive understanding of the winners and losers of the financial globalization process by using the hidden wealth estimates to correct for offshore wealth (Figure 3). First, by construction, the world aggregate NFA is equal to zero, which is the logical result since every asset owed by someone in the world should be owned by someone else. Second, the rich countries IIP is significantly improved, becoming net creditors. Third, the IIP for the 4 quintile (60-80%) are somehow improved but the positions of 3 quintiles at the bottom are almost unchanged. Correcting for offshore wealth is not only important from a statistical perspective but it also has a meaningful economic reasoning, since it answers the discussed doubts of the true size of the exorbitant privilege of the US posed by Hausmann and Sturzenegger (2006). Finally, this figure suggests that the international balance of power is tilted towards the rich world plus China, who in combination hold the claims on all the debtors.

Figure 3

Net foreign assets as a share of world GDP
Countries grouped by quintiles according to per capita national income (weighted by population)



Graph shows average net foreign assets corrected by offshore wealth. Simple averages by group. All graphs show net foreign assets corrected for offshore wealth. See appendix for uncorrected graphs and robustness checks. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

The fact that the poorest countries are global debtors is not a minor issue for development. First, it could contribute to the flight of resources from the South to the North in the form of net capital income transfers. If they pay on average the same rate of return on assets than liabilities, then having more GFL than GFA will result in negative net capital income. The final net income figure will also depend on the country excess return differential, but in any case having more liabilities than assets contribute to bigger net income outflows. Second, the IIP of a country shifts the international balance of power towards the creditor countries. The latter group are able to impose constraints or conditions on debtor countries in many critical situations. It is not the scope of this paper to analyze the political economy in the relations of debtor and creditor countries, which should be delve with in future research, but we do analyze the income channel in the subsequent section.

Table 1

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%

Table 2

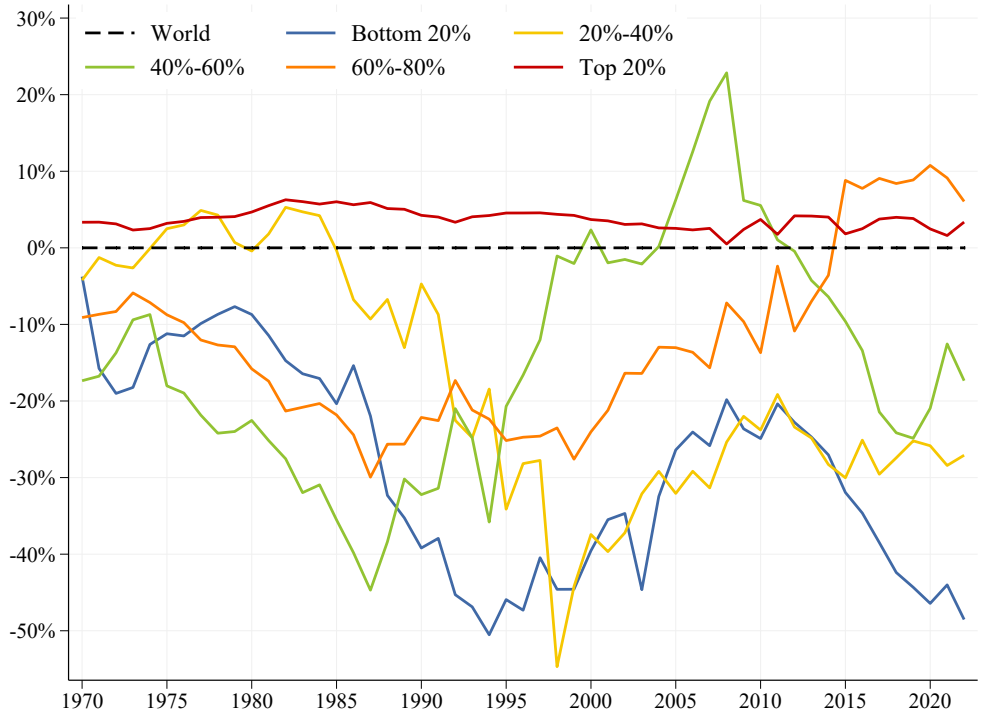
Decomposition by subperiods. Real values USD at the end of the period

	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%

To provide a more accurate understanding of the significance of NFA positions, we show NFA as a share of group's GDP as the denominator instead of the world's GDP. This approach allows us to assess the relative cost or benefit of NFA positions in relation to the size of the debtors' and creditors' economies. As depicted in Figure 4, the rich world holds a positive IIP equivalent to 3% of its combined GDP, while the same figure for the 4th quintile is 6%. It is important to note that behind the aggregate lines presented in these three graphs, there exists considerable heterogeneity among individual countries. The data put toghether allows for a comprehensive case-by-case study, enabling a deeper analysis of specific dynamics.

Figure 4

Net foreign assets as a share of group GDP



Graph shows average net foreign assets corrected by offshore wealth. Simple averages by group. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

In the next subsection, the focus will shift towards examining the main actors in the globalization process, namely the powerful set of rich countries known as the G8 and the most influential emerging economies referred to as the BRICS. Figure A6 in Appendix depicts the world's situation by regions.

3.1 G8 vs BRICS

Although there are no clear patterns in the process of foreign capital accumulation in the G8 (Figure 5) nor in the BRICS countries (Figure 6), there is an outstanding fact: the financial privilege and trade deficit of rich countries are paid by trade surpluses and financial losses of the BRICS (Table 3).

When analyzing the NFA of the G8 in Figure 5, it becomes evident that there is significant heterogeneity among them. Except for the United States and France, the remaining six economies have experienced improvements in their financial accounts over time. A notable case is Canada, which has successfully reversed its net negative NFA position since 2013, thanks to trade surpluses of 19% of their 2022 GDP and capital gains of 52% of its GDP, offsetting a cumulated net negative investment income of 21% of its GDP (Table 3).

In contrast, Japan and Germany consistently exhibit higher NFA-to-GDP ratios, and these ratios have steadily increased over time, despite being the only two G8 economies recording persistent capital losses (Table 3). These two economies have built up significant external assets relative to their GDP, reflecting their strong export-oriented industries and robust international competitiveness. Their ability to accumulate foreign assets has solidified their net creditor positions and reinforced their influence in the global economy. [8]

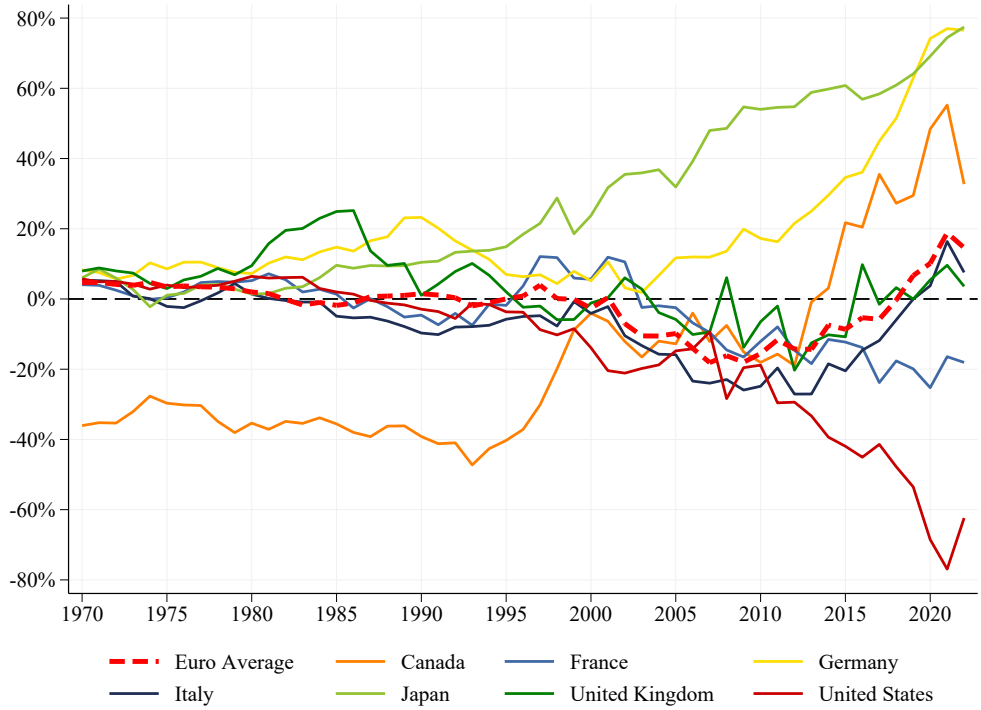
Conversely, the U.S. stands out as the most indebted among the G8 economies, primarily due to its persistent trade deficits. The accumulation of substantial debts over time is a consequence of consistently importing more goods and services than it exports. Although these trade deficits have been apaciguated by moderate capital gains and positive net investnment income, they have led to an increased reliance on foreign financing and a corresponding rise in external liabilities.

The persistently large trade deficits of the United States have led to discussions among macro-economists regarding their financing, where one commonly debated view is that it has come from rapidly growing emerging markets, with China being a prominent example. As depicted in Figure 6, China has consistently maintained a positive net external balance sheet, largely driven by substantial trade surpluses. Its robust export-oriented economy and competitive manufacturing sector have enabled China to accumulate significant foreign assets for 93% of its 2022 GDP, which, in turn, have provided the financial resources to finance the U.S. deficits. The major trade surpluses were enough to compensate for the capital losses (71% of GDP) and negative net investment income (14%).

[8] Appendix Tables 1 and 2 provide the NFA-to-GDP ratios decomposition for the G7 vs BRICS countries over the two subperiods: 1970-2000, 2000-2022.

Figure 5

Net foreign assets as a share of country GDP, G8 economies



Before Eurozone was created only founders are included: 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 contrast, Russia has maintained a creditor position since the dissolution of the USSR -with the exception of the 2005-2007 period-, primarily due to its abundant energy exports. Russia's vast reserves of natural resources, particularly oil and gas, have contributed to a consistent inflow of foreign currency earnings, bolstering its net external position. This has enabled Russia to accumulate foreign assets and operate as a creditor nation, despite net negative investment income and substantial capital losses (Table 1). On the contrary, South Africa has experienced a reversal in its net external position since 2014, shifting from being a debtor to being a creditor country, thanks to an important accumulation of trade surpluses and capital gains of around 39% of their GDP.

On the other hand, both India and Brazil have accumulated more liabilities than assets throughout the entire period under examination. Both countries have recorded important net negative investment income (25% and 93% of their 2022 GDP respectively) which could not be offset by their very small capital gains and. For the case of India, this was aggravated by its accumulated trade deficit. Differently, Brazil recorded trade surpluses of around 48% of its GDP, which were not enough to offset the negative investment income.

The divergent net external positions of the G7 and the BRICS[9] underscore the varying dynamics and economic realities across the major countries of the world. Although the BRICS are certainly not representative of the smaller economies, understanding these trends in net external positions provides insights into the economic relationships, trade patterns, and financial flows between nations with different levels of development in the global economy.

[9]For figures excluding the tax havens correction refer to the Appendix A50 and A51.

Figure 6

Net foreign assets as a share of country GDP, BRICS

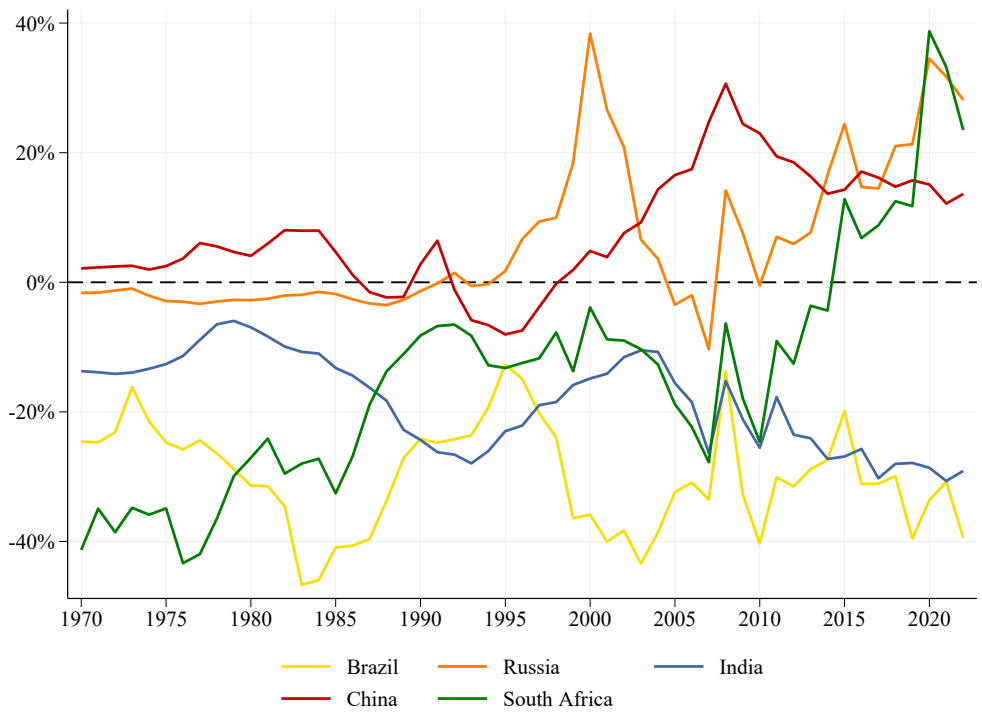


Table 3

Decomposition 1970-2022. Real USD

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
Countries	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%

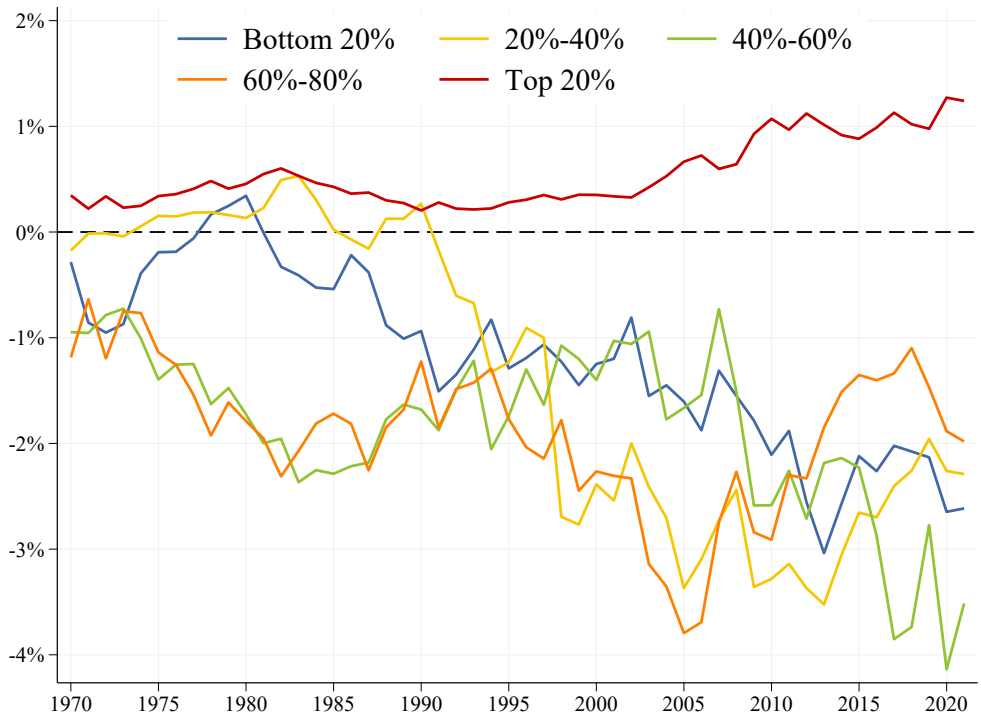
4 Unequal rates of return

As emphasized before, net capital income plays a crucial role in determining the CA balance and, consequently, the change in NFA. It is possible for a country to experience an improvement or deterioration in its CA balance based on the net capital income it receives or pays (see France above).

When a country's gross assets are larger than its gross liabilities and the average rate of return on its assets exceeds the average rate of return on its liabilities, the country generates a net positive income. In this scenario, the income earned on its assets ($i^A \times A$) surpasses the income paid on its liabilities ($i^L \times L$). As a result, the country benefits from a net positive income, contributing to a more favorable NFA position. Figure 7 shows that, for the last decade, each year foreign capital income flows results in a net transfer from poor to rich countries of around 1.2% of the rich's GDP. This big net transfer of resources allows the richest countries to incur in bigger trade deficits without the need to in-debt themselves to finance them. Moreover, it forces the bottom 80% of the world to record trade surpluses to be able to finance such a transfer. If they fail to do so, then they would need to compensate by acquiring more debt, which reinforces the dynamics.

Figure 7

Net foreign capital income as a share of GDP



Graph shows aggregate net foreign capital income, as a share of income group GDP. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Conversely, even if a country possesses larger gross assets than gross liabilities, it can still have a net negative income if it pays more on its liabilities than what it earns on its assets. This can occur if the average rate of return on liabilities is higher than the average rate of return on assets. In such cases, the country's income payments on liabilities outweigh the income received from its assets, resulting in a net negative income and potentially worsening its NFA position (i.e. China or Russia as shown in Table 8).

However, it is worth noting that certain countries, such as the United States, have demonstrated an intriguing phenomenon known as the *income puzzle*. Despite holding more liabilities than assets, these countries manage to generate net positive income. This is possible when the country possesses a sufficient differential return rate, where the income earned on its assets exceeds the income paid on its liabilities, compensating for the negative effect of having more liabilities than assets.

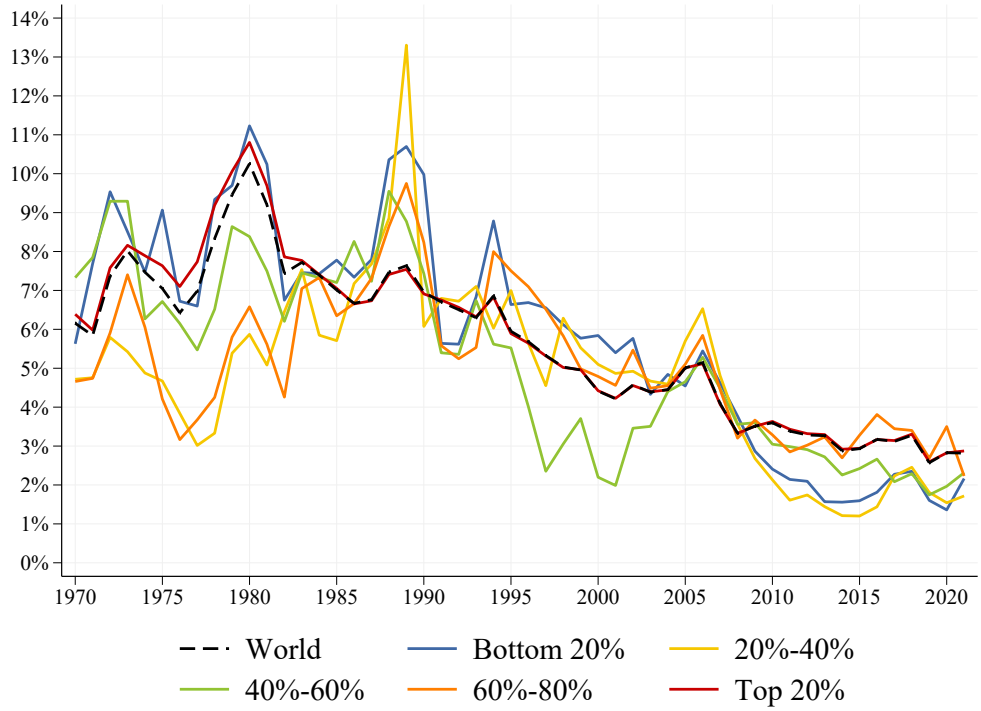
The interplay between net capital income, CA balance, and the composition of assets and liabilities is indeed complex. Factors such as differential return rates, sizes of assets and liabilities, and income flows all contribute to the overall net income position of a country, thereby influencing its NFA.

To gain insights into the impact of return rates on the net external positions of different country groups, we calculate the implied yields as the income received (paid) over assets (liabilities). Equation 5 demonstrates this calculation, and Figure 8 presents the implied yield for gross foreign assets. Notably, global return rates have experienced a significant decline from the 1980s (approximately 10%) to 2022 (around 3%). This decreasing trend in return rate on foreign assets holds true for every country group, regardless of their net national income.

However, the situation differs when considering liabilities, as depicted in Figure 9. Only the richest countries have managed to consistently pay less on their obligations over time, while for the poorest countries (the bottom 40%), the opposite is observed: the return rates on their liabilities have increased. Meanwhile, the middle 40% has experienced relatively stable return rates on their liabilities.

Figure 8

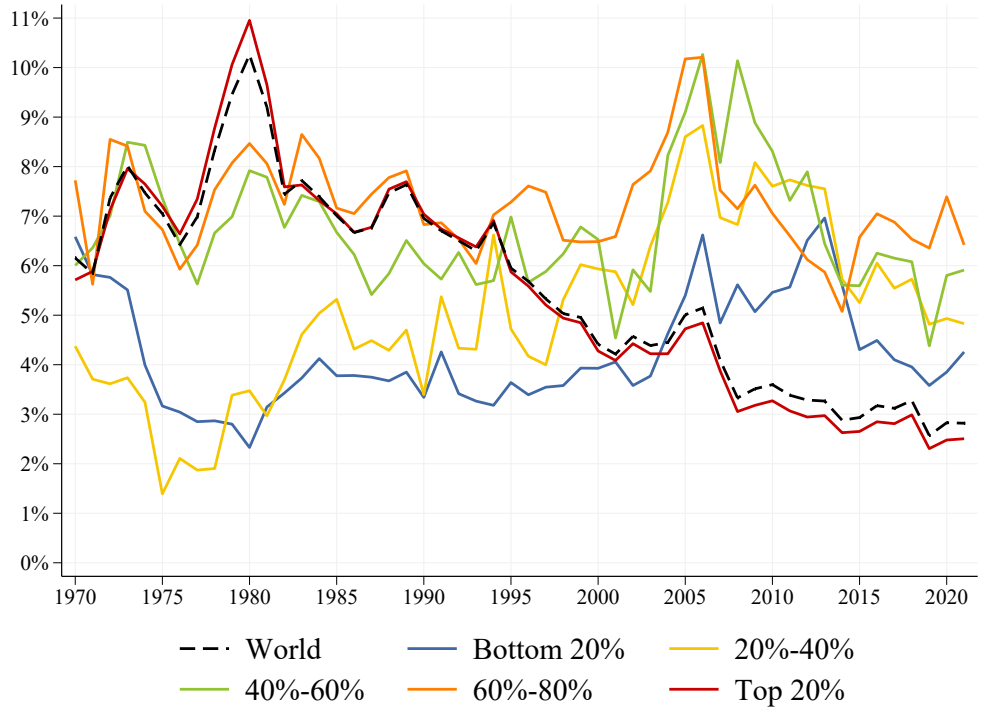
Returns on foreign assets per income group



Graph shows average rate of returns on foreign assets. Simple averages by group. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Figure 9

Returns on foreign liabilities per income group



Graph shows average rate of returns on foreign liabilities. Simple averages by group. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

These findings highlight the divergent patterns in return rates for assets and liabilities across different country groups. Rich countries have benefited from lower payments on their obligations, contributing to their net income position. Conversely, the poorest countries have faced increased costs in servicing their liabilities, impacting their net income position negatively.

This disparity in return rates allowed rich countries to experience a privilege in terms of excess yields. As yields are relatively stable, a positive return differential enables rich countries to accumulate foreign assets at virtually no cost in the long-term. This is because the yield differential, combined with its significant impact on net foreign assets, allows them to reallocate the savings of poorer countries -who demand safe assets- into more profitable -with respect to their own liabilities- ventures, generating differential income gains.

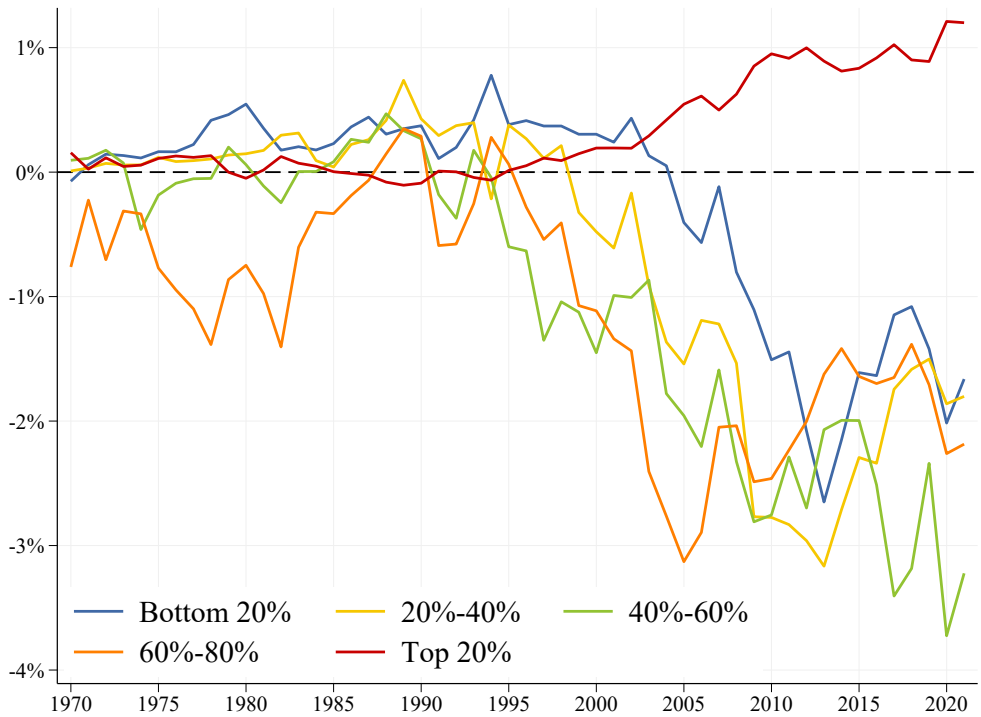
In effect, the central position of rich countries in the international monetary and financial system allows them to function as intermediaries, akin to bankers of the world. This role further reinforces their privilege, as they leverage their advantageous position to attract excess savings (Bernanke et al., 2005) and channel it towards productive investments. This cycle perpetuates their dominance and strengthens their position as key players

in the global economic landscape.[10]

Figure 10 monetizes the excess yields, showing the capital income transfers that are due to the return differentials. The gap between the richest countries and the rest has been widening in the latest decade. In the latest periods the net income transfers from the poorest to the richest that are due to a privileged return differential amounts to 1% of the richest GDP and around 2-3% of the bottom 80's GDP. This improves the CA of the richest while deteriorates the CA of the rest of the world, who will have to compensate with trade surpluses or more debt to finance such transfers. It is a substantial amount, rich countries often claim that their goal is to provide 1% of their GDP as official development assistance to the poorest, instead, they are receiving that transfer thanks to a preferential access to global capital markets. Moreover, the rest of the world cannot spend 2-3% of their GDP in education, health, poverty alleviation, environmental or any other developmental policy that could come up to mind because they have to flow such resources to compensate this differential.

Figure 10

Excess yield as a share of 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). 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

[10]For figures excluding the tax havens correction refer to Appendix A72, A74 and A76; for regional figures A26, A27, A28.

Table 4

	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.

Table 4 zooms in into the Top 20% richest countries and contrasts its net foreign capital income with its excess yield income (privilege). We observe that the privilege country club is indeed extremely exclusive, with the Top 10% enjoying an exorbitant privilege, with gains reaching almost 2% of their GDP, while the Next top 10% incurs in losses of around 1,5% of their GDP due to a negative return differential. These findings highlight the concentration of foreign capital income within a select group of countries, particularly among the wealthiest nations, emphasizes the significant role of the return differential in shaping net capital income.

Importantly, the US, Eurozone and UK's net positive capital incomes are fully explained by the positive return differential they enjoy. Whereas for Japan, the return differential accounts for over two-thirds of its net positive capital income, which is still significant. It is worth noting that Switzerland's privilege seems to be diminishing over time, causing its net foreign capital income to decrease as well. These findings emphasize the critical role of the exorbitant privilege enjoyed by the US and the Eurozone in shaping their net foreign capital income dynamics. The US's ability to mitigate its negative net foreign capital income through its privilege contributes significantly to the overall positive capital income position. It has also been a similar case for the Eurozone countries with the exception that they have managed to revert their negative NFA position in 2017, which has contributed to a higher positive net capital income in the latest years.

These insights further support the notion that the exorbitant privilege and its differential effects on returns play a crucial role in shaping net capital income flows for different countries and income groups. Understanding these dynamics is essential for comprehending the impacts of foreign global wealth distribution and addressing disparities in the international monetary and financial system, which we will attempt in the following sections.

4.1 Excess yield decomposition

To understand where does the rich countries privilege come from we dig deeper into the root of the excess yield. This return differential could come from rich countries investing in more profitable assets than the rest of the world, accessing to lower cost financing (cheaper liabilities) or a combination of both.

Hypothesis 2: *Rich countries are populated with really good investors who manage to receive a positive excess return by stocking on the most profitable assets.*

Fact: Rich countries' return on foreign assets is -for almost every asset class- lower than the world's average. Their return on foreign liabilities is also lower than the world's average, explaining their privilege.

The excess yield is composed by a return and a composition effect, which can be calculated similarly as done in Hünnekes et al. (2019) who expand Gourinchas and Rey (2007a). Specifically, we contrast the difference in yield of two portfolios, the country (or country group) and the world's representative portfolio (world average).

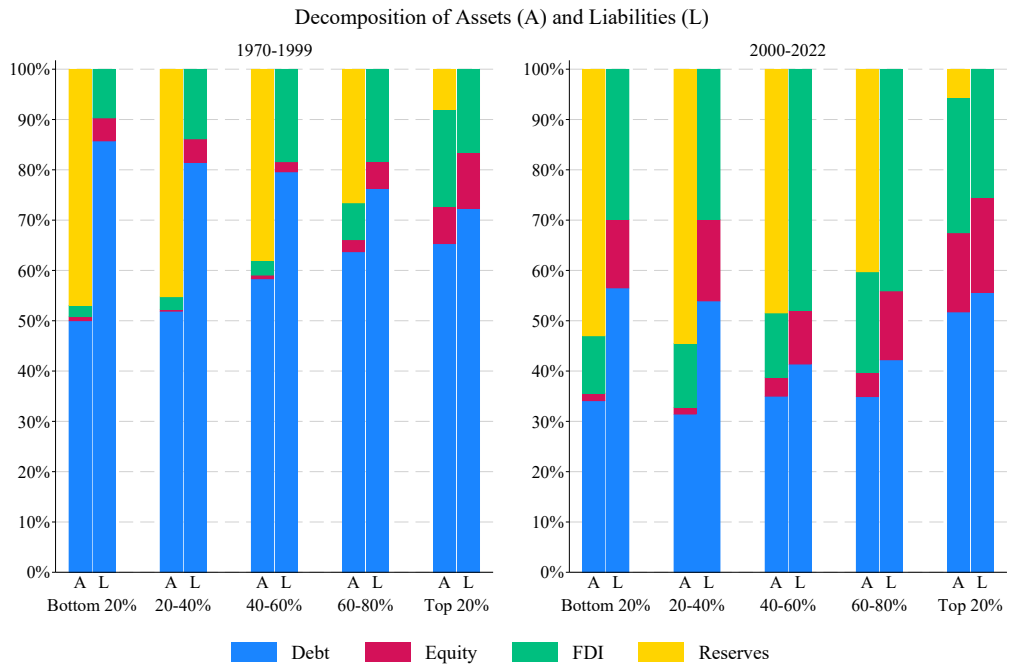
$$i_c^B - i_{world}^B = \sum_{\rho} \left(\underbrace{\alpha_{\rho,c} \times (i_{\rho,c}^B - i_{\rho,world}^B)}_{\text{Return effect}} + \underbrace{(\alpha_{\rho,c} - \alpha_{\rho,world}) \times i_{\rho,c}^B}_{\text{Composition effect}} \right) \tag{8}$$

Where B refers to assets or liabilities, ρ refers to the asset class -equity, debt, reserves (only for assets) or FDI, α_ρ are the weights of each asset class in total assets (liabilities). The return effect measures the importance of differential returns between assets and liabilities within each asset class, and is simply calculated as the impact the yield differential -with respect to the rest of the world- has on the share of each asset class within total assets or liabilities. Further, the composition effect measures how the different weights between gross foreign assets and liabilities may generate excess returns, and is simply calculated by the yield a country makes on a given asset class times difference between a country's assets (liabilities) composition and the world's average.

Understanding these drivers of return differentials provides valuable insights into the economic dynamics and income inequalities within different income groups. By analyzing the composition and performance of assets and liabilities, it becomes possible to gain a deeper understanding of the factors contributing to the observed differential rates of return patterns across various income groups.

Figure 11

Rich countries hold less central bank reserves and less FDI liabilities



Financial derivatives, Other investment and Offshore wealth is contained in Debt. Reserves exclude gold. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Figure 11 shows the average decomposition of assets and liabilities for each income group for two periods. [11] Asset class composition plays an important role in net capital income since they are associated with different return rates, typically FDI and equity being the riskier and more profitable ones while debt and reserves the safest ones. All of the income groups have decreased the share of debt in both, asset and liabilities, although the richest countries have decreased it the least in liabilities. Further, while bottom 80% countries have shifted from debt assets toward reserves, top 20% have also decreased their share of reserves and have replaced them -and debt- by more equity and FDI assets. In sum, the rich world has increased the share of more profitable assets (equity and FDI) and has not decreased by so much the share of less profitable liabilities (debt) which contributes to a positive composition effect as seen in Table 5. Notably, such a positive composition effect is not so substantial.

[11] Appendix Figures A40 to A49 show the evolution of the decomposition of assets and liabilities over time.

Table 5

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). Countries are 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 8 billion in 2022) living in the countries with the highest per capita income. In 2022, 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.

Conversely, the 4th quintile (60-80%) presents a different narrative. Since they hold less equity and debt liabilities than the world average then this contributes positively in their composition effect. In addition, they also hold more foreign reserves assets than the world average. However, this is offset by the fact that they hold a smaller share of their assets in equity, debt and FDI (with respect to the world average) and mainly because they hold a larger share of FDI liabilities. The pattern seems to be very similar for the bottom 60%.

Table 6

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). 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Turning into the return effect in Table 6, we find that most of the privilege of the richest countries come from the return effect. Specifically, in the recent period it is explained by their liabilities being *cheaper* than the world average for each asset class, while their assets are less profitable than the world average for each asset class except for FDI. These results show that the common thinking of richer countries earning the privilege based on better investment decisions (as stated in Hypothesis 2) does not hold.

Examining the poorest quintile, an interesting pattern emerges. In the initial period (driven mainly by India), they experience an exorbitantly positive excess yield, which can be attributed to their accessing to very low cost liabilities -possibly due to preferential rates on external public debt-. However, in the period between 2000 and 2020, there is a reversal in their excess yield that is explained by a balance sheet weighted towards FDI liabilities that pay a higher return than the world average. A reversal was also experienced by the 2nd quintle (20-40%) in the period 2000-2022, due mainly to a large negative FDI return effect as well.

These findings highlight the varying dynamics within different income groups and the influence of asset composition and return effects on return differentials. The top income group benefits from a favorable mix of asset classes -although less importantly- and lower returns on liabilities. This proves wrong the common knowledge that richer countries invest in more profitable assets than the rest of the world.

4.1.1 Evaluating risk

Although we show above that the privilege does not come from richer countries stocking on more profitable assets, it is valid to think that they deserve such positive return differential if they invest in riskier assets. We know from above that they, on average, perceive capital gains over the period, so that they actually offset any potential investment losses. We now turn our attention to how risky this investments are in terms of the yield they provide, so we compare within asset class for each country group the standard deviation of the yields with

the world's standard deviation.

> **Hypothesis 3:** *Rich countries deserve the privilege to compensate for them investing in riskier assets.*

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

The standard deviation of yields is a pivotal metric in finance, serving as a fundamental gauge of investment risk. It quantifies the variability or volatility of an investment's yields over time, encapsulating the essence of risk as the likelihood of deviation from expected outcomes. Investments exhibiting higher standard deviations are deemed riskier, as their yields fluctuate more significantly, making their future performance less predictable. Conversely, a lower standard deviation indicates more stable yields, appealing to risk-averse investors. We show in Table 7 that the top 20% richest countries is the only group whose standard deviation of yields is below the world average for each asset class. Thus, discrediting the idea that they should be paid a positive premia to compensate for the risk taken.

Table 7

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. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

4.2 Total returns

We consolidate our findings on excess yields and valuation changes to examine the evolution of total excess returns, computed as follows:

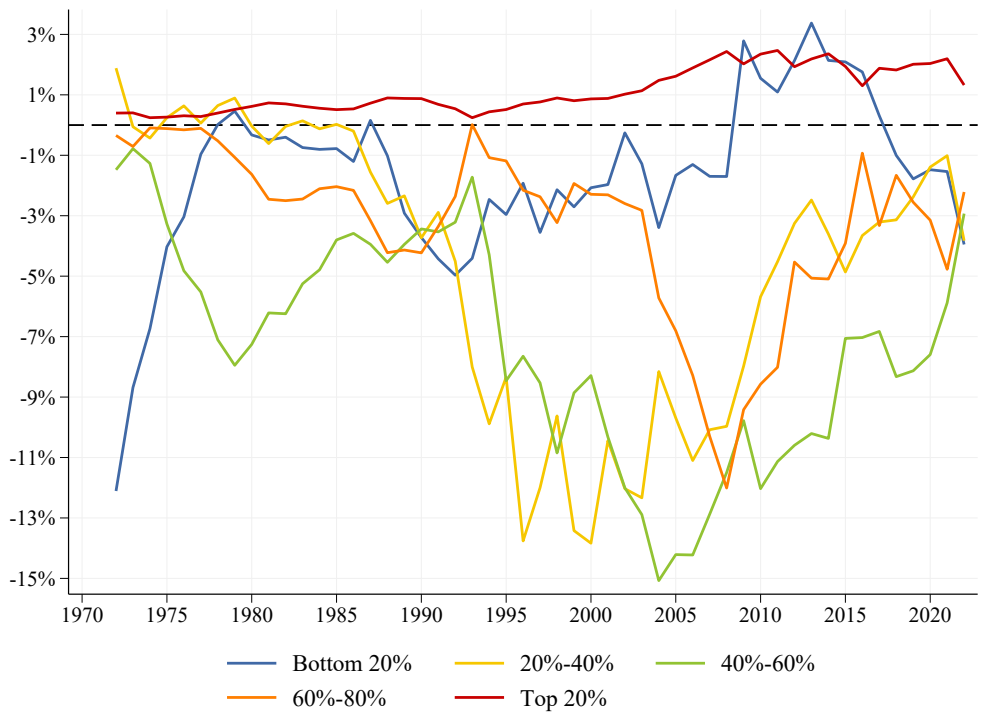
$$r_t^A - r_t^L = \underbrace{(i_t^A - i_t^L)}_{\text{excess yield}} + \underbrace{(k_t^A - k_t^L)}_{\text{excess rate of KG}}$$

where the capital gains (KG) are derived as a residual, as described in Section 3.

Figure 12 monetizes the total excess returns, offering insights not only into the impact of yield differentials but also into the contribution of exchange rates and asset price movements in determining the external positions of the different groups of countries. The top 20% record positive total excess returns over the entire period of interest, corroborating the finding of a rich-world exorbitant privilege, with gains reaching slightly more than 1% of their GDP in 2022. Figure 13 compares the total excess returns to the excess yields analysed above, illustrating that accounting for valuation changes exacerbates the advantage of the richest countries. On the contrary, the bottom 80% shows persistent negative total returns, with the only exception being the poorest 20%, exhibiting positive total excess returns between 2008 and 2015 driven by capital gains. [12]

Figure 12

Total Excess returns as a share of group GDP

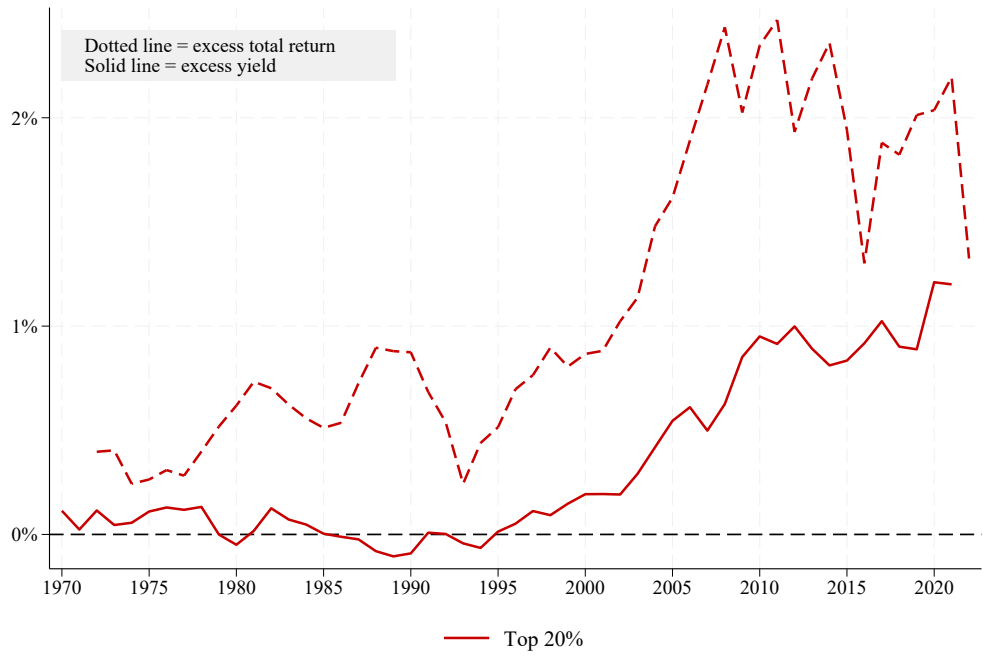


Graph shows total excess returns (5-years moving average), as a share of group GDP. Total excess returns calculated as excess yield income + valuation changes. Countries grouped according to national income per capita quintiles, weighted by population. E.g. top 20% countries include exactly the top 20% of the world population (1,6 billion out of 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

[12] Appendix Figures from A34 to A37 show the comparison between total excess returns and excess yields for each group of countries.

Figure 13

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



Graph shows total excess returns (5-years moving average) and excess yield for the top 20%, as a share of group GDP.

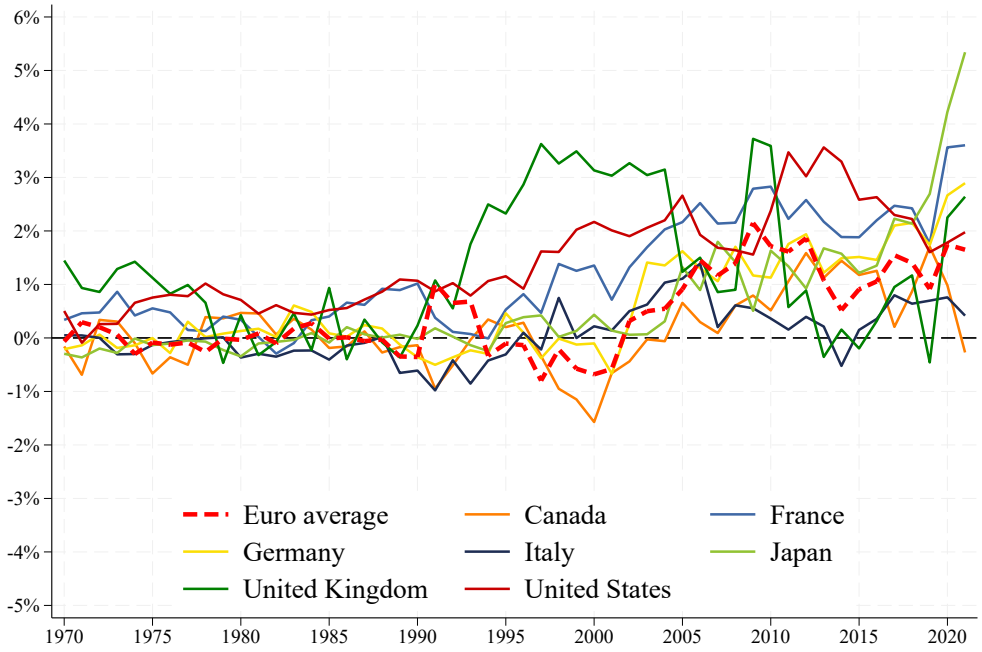
4.3 G8 vs BRICS

While the G8 economies displayed considerable heterogeneity in the evolution of their NFA, they do share a common privilege in the 21st century. The United States, in particular, has enjoyed this privilege consistently throughout the entire period under examination. France and the United Kingdom have also experienced this privilege for the majority of the period, with only a temporary decline observed in the 1980s. Germany, on the other hand, has oscillated around the zero line until 2003. Canada, Japan, and Italy, despite recording a negative return differential at the beginning of the period, managed to reverse this situation and have experienced net positive capital income as a result of their privilege. Notably, the Canadian reversal coincided with an improvement in the NFA, as shown in Figure 5, although it appears to have become negative again for the latest year.

These findings highlight the existence of a privilege shared among the G8 economies in the recent years. The privilege allows these countries to accumulate net foreign assets, even in cases where they run trade deficits. It signifies their ability to attract foreign investment at low rates and generate income from their external assets. Moreover, this privilege has been translated in positive foreign capital income of 1%-4% of their GDP, depending the case (see Figure 14).

Figure 14

Excess yields as a share of country GDP, G8 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). Before Eurozone was created only founders are included: 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).

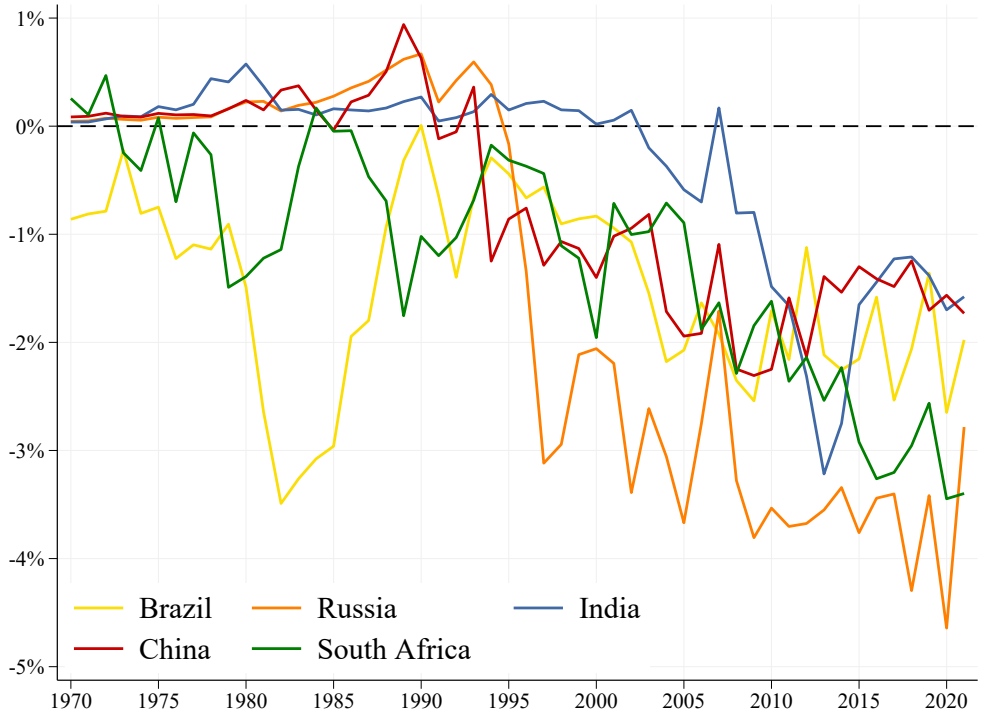
In contrast to the G8 economies, the main developing economies experienced a different narrative in terms of their excess returns. While some of them recorded positive net income in the beginning of the period, these situations gradually decreased over time, eventually reversing in the 2000s. South Africa and Brazil's continuous negative excess yield suggests the burden they face in servicing their external liabilities.

The negative excess yield has translated in a deterioration of their CA, as it lowers the country's net foreign capital income. In some cases its the explanation of the net negative income reported. From Figure 15 we see that this excess yield can be expressed as 1,5%-4,5% of the country's GDP, depending the case. For instance, Russia reports negative net foreign capital income due to its negative excess yield, even when having a positive NFA position (Figure A24).

These findings highlight the converging experiences of developing economies in terms of their rates of return on foreign wealth. Despite BRICS countries having started from different situations, at present they all record substantial losses from a marginal position in the monetary and financial system.

Figure 15

Excess yields 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).

Tipping point

In a very simple exercise to better understand how the NFA and the excess return affect the balance of payments of an economy, we can calculate the tipping point for a given economy as the ratio of gross liabilities to gross assets beyond which $i^A \times A - r^L \times L$ becomes negative (Obstfeld and Taylor, 2004).

In the case of the U.S., the tipping point is calculated as Tipping point $= \frac{L}{A} > \frac{i^A}{i^L} = \frac{3{,}49\%}{1{,}98\%} = 162\%$ This means that the U.S. can afford to have liabilities for 162% the size of its assets before experiencing a negative net foreign capital income. Considering the true ratio of liabilities over assets for the U.S. as 150%, it becomes apparent that the U.S. economy has the capacity to accumulate more debt equivalent to 12% of its gross assets before experiencing a net negative income. This calculation provides valuable insight into the level of indebtedness that the U.S. can sustain while still generating positive net foreign capital income.

Table 8 expands this analysis by comparing the tipping points with the true L/A ratios for each G7+BRICS economies in 2022. The results demonstrate that every G7 economy is currently receiving net positive income, as their tipping points are above their true L/A ratios. Moreover, many of these economies still have significant room to accumulate more debt before reaching a point where they pay more than what they receive. For example, Germany could nearly double its liabilities in comparison to its assets before experiencing a net negative income.

In contrast, the situation is entirely different for the BRICS economies, where each country is currently paying more than what they receive. Reversing this scenario would require substantial efforts for these economies. For

instance, Brazil would need to either reduce its liabilities by more than half or more than double its assets before generating net positive capital income.

These straightforward calculations shed light on the significance of excess return differentials across countries and their profound impact on the development process. They provide a glimpse into the importance of managing liabilities and assets effectively to maintain positive net foreign capital income, which can have significant implications for a country's economic development and financial stability.

Table 8

Tipping point at the end of the period (2022)

	i^A	i^L	**Tipping point**	**True ratio L/A**
		G7		
Canada	2.69%	2.80%	96%	81%
Germany	2.64%	1.71%	154%	75%
France	2.63%	1.58%	167%	105%
United Kingdom	2.66%	2.20%	121%	98%
Italy	2.82%	2.60%	108%	91%
Japan	4.54%	2.12%	215%	66%
United States	3.34%	2.06%	162%	150%
		BRICS		
Brazil	3.78%	5.83%	65%	147%
China	1.88%	6.10%	31%	77%
India	1.73%	4.31%	40%	200%
Russia	1.96%	6.23%	31%	67%
South Africa	2.89%	6.03%	48%	77%

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 $\frac{i^A}{i^L}$.

Excess yield decomposition

In decomposing the excess yields for this set of countries as done before -as the difference with respect to the world's average-, a more comprehensive understanding of the components behind the return differentials emerges. First, it is clear from the comparisons of Table 9 and Table 10 that the return effect plays a more significant role than the composition effect in determining the privilege.

Focusing in the return effect for the G7, Germany and Japan were able to reverse their negative differential in the 2000s. In the case of Germany, this came from a lower return on FDI liabilities with respect to the world average while for the case of Japan this comes from profitable FDI assets and lower return in debt liabilities.

The cases of the US, the UK and France are comparable to each other in the sense that they have managed to significantly amplify their return effect in the 2000s. For France and the UK, this came from significantly lower return debt liabilities. Differently, for the US this was the result of very profitable FDI assets, combined with

a lower return in equity liabilities.

In contrast, the story is different for developing countries, as all of them experience financial losses in the recent period, coming from a negative return differential. A common feature among these economies is that all of them are paying more on their liabilities than the world's average, and this replicates for each asset class. For the case of China, its negative numbers are explained by equity liabilities substantially more expensive, by less profitable FDI assets and by more expensive debt and FDI liabilities. Brazil and South Africa present a similar pattern than China in the latest period. Russia, on the contrary, holds FDI assets that are more profitable than the world's average but not enough to outweight the enormous losses due to FDI liabilities. India's case is comparable to Russia.

Table 9

Return effect as a share of GDP

		Total assets			**Equity**		**Debt**		**Reserves**	**FDI**	
	Period	**Privilege**	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
					G7						
Canada	1970-1999	-0.20%	0.11%	-0.31%	0.30%	0.26%	0.36%	-1.02%	0.06%	-0.62%	0.45%
Canada	2000-2022	-0.78%	-1.14%	0.36%	0.39%	0.13%	0.01%	-0.74%	-0.01%	-1.54%	0.97%
Germany	1970-1999	-0.07%	-0.35%	0.28%	0.04%	-0.05%	-0.09%	0.47%	0.01%	-0.31%	-0.13%
Germany	2000-2022	0.77%	0.09%	0.68%	-0.23%	-0.23%	0.34%	0.27%	0.00%	-0.02%	0.64%
France	1970-1999	0.71%	0.31%	0.39%	0.00%	0.05%	1.23%	-0.72%	0.11%	-1.02%	1.06%
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	1970-1999	0.56%	3.02%	-2.46%	-0.18%	0.04%	1.91%	-1.87%	0.09%	1.20%	-0.63%
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	1970-1999	-0.13%	-0.27%	0.14%	0.09%	0.11%	0.04%	-0.27%	0.03%	-0.44%	0.29%
Italy	2000-2022	-0.34%	-0.35%	0.01%	-0.56%	-0.18%	0.33%	-0.05%	-0.01%	-0.11%	0.24%
Japan	1970-1999	-0.03%	-0.17%	0.14%	0.44%	-0.18%	-0.51%	0.31%	0.01%	-0.11%	0.02%
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	1970-1999	1.01%	0.60%	0.40%	-0.04%	0.05%	0.37%	-0.19%	0.02%	0.25%	0.54%
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	1970-1999	0,47%	0,42%	0,06%	-0,01%	0,03%	0,35%	-0,24%	0,03%	0,05%	0,27%
Total G7	2000-2022	1,72%	0,64%	1,08%	-0,08%	0,23%	0,20%	0,20%	0,01%	0,51%	0,65%
					BRICS						
Brazil	1970-1999	-0.61%	-0.06%	-0.55%	0.00%	-0.02%	0.15%	-0.58%	0.02%	-0.22%	0.05%
Brazil	2000-2022	-1.65%	-0.14%	-1.51%	0.00%	-0.33%	0.15%	-0.71%	0.07%	-0.36%	-0.48%
China	1970-1999	0.70%	-0.02%	0.72%	0.09%	-0.03%	0.03%	0.33%	-0.13%	-0.01%	0.42%
China	2000-2022	-0.98%	0.32%	-1.30%	0.27%	-0.77%	0.09%	-0.31%	0.22%	-0.25%	-0.22%
India	1970-1999	0.71%	0.16%	0.55%	-0.01%	0.08%	0.13%	0.39%	0.03%	0.00%	0.08%
India	2000-2022	-0.76%	0.16%	-0.92%	0.00%	-0.32%	0.09%	-0.10%	0.00%	0.07%	-0.51%
Russia	1970-1999	0.26%	-0.48%	0.74%	0.00%	0.02%	-0.41%	0.63%	-0.02%	-0.05%	0.09%
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	1970-1999	-0.99%	0.03%	-1.02%	-0.10%	-0.86%	0.24%	-0.34%	0.01%	-0.12%	0.18%
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	1970-1999	0,06%	-0,19%	0,25%	0,01%	-0,06%	-0,10%	0,20%	-0,03%	-0,07%	0,11%
Total BRICS	2000-2022	-1,27%	0,16%	-1,43%	0,05%	-0,59%	0,14%	-0,41%	0,14%	-0,17%	-0,43%

Table 10

Composition effect as a share of GDP

		Total assets			Equity		Debt		Reserves	FDI	
	Period	**Privilege**	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
					G7						
Canada	1970-1999	-0.04%	-0.50%	0.46%	0.06%	0.01%	-0.25%	0.54%	-0.01%	-0.31%	-0.09%
Canada	2000-2022	0.34%	-0.11%	0.45%	0.42%	0.03%	-0.32%	0.19%	0.00%	-0.21%	0.23%
Germany	1970-1999	0.06%	0.19%	-0.13%	-0.01%	0.01%	0.17%	-0.14%	0.00%	0.03%	0.00%
Germany	2000-2022	0.31%	0.67%	-0.36%	-0.03%	0.08%	0.59%	-0.41%	0.00%	0.11%	-0.02%
France	1970-1999	-0.14%	-0.05%	-0.09%	0.00%	0.03%	-0.04%	-0.15%	-0.01%	0.00%	0.03%
France	2000-2022	0.23%	0.85%	-0.62%	-0.08%	0.04%	0.76%	-0.69%	0.00%	0.17%	0.02%
United Kingdom	1970-1999	0.09%	0.84%	-0.74%	0.05%	0.06%	0.69%	-0.84%	-0.02%	0.12%	0.04%
United Kingdom	2000-2022	0.21%	1.50%	-1.29%	-0.11%	0.07%	1.16%	-1.25%	0.00%	0.45%	-0.11%
Italy	1970-1999	-0.08%	0.15%	-0.23%	-0.01%	0.01%	0.15%	-0.25%	0.00%	0.01%	0.00%
Italy	2000-2022	-0.18%	0.28%	-0.46%	0.11%	0.07%	0.06%	-0.55%	0.00%	0.11%	0.03%
Japan	1970-1999	-0.06%	0.12%	-0.18%	-0.03%	-0.02%	0.14%	-0.15%	0.00%	0.00%	-0.02%
Japan	2000-2022	-0.12%	0.23%	-0.35%	-0.03%	-0.17%	0.13%	-0.06%	0.04%	0.09%	-0.12%
United States	1970-1999	0.20%	-0.25%	0.45%	0.01%	-0.02%	-0.22%	0.16%	0.00%	-0.03%	0.31%
United States	2000-2022	0.17%	0.10%	0.07%	0.16%	-0.02%	-0.10%	-0.06%	0.00%	0.05%	0.15%
Total G7	1970-1999	0,03%	-0,04%	0,06%	0,00%	0,00%	-0,03%	-0,01%	-0,01%	0,00%	0,07%
Total G7	2000-2022	0,05%	0,27%	-0,22%	0,05%	0,00%	0,13%	-0,24%	-0,01%	0,10%	0,02%
					BRICS						
Brazil	1970-1999	0.01%	-0.09%	0.09%	0.00%	0.00%	-0.12%	0.14%	0.08%	-0.05%	-0.05%
Brazil	2000-2022	-0.45%	-0.35%	-0.10%	-0.01%	-0.02%	-0.09%	0.24%	0.12%	-0.37%	-0.31%
China	1970-1999	-0.04%	-0.02%	-0.02%	-0.01%	0.00%	-0.08%	0.00%	0.08%	-0.01%	-0.03%
China	2000-2022	-0.37%	-0.15%	-0.23%	-0.05%	0.05%	-0.10%	0.14%	0.38%	-0.38%	-0.42%
India	1970-1999	-0.03%	0.02%	-0.05%	0.00%	0.00%	-0.07%	-0.06%	0.08%	0.01%	0.01%
India	2000-2022	0.11%	0.18%	-0.07%	0.00%	-0.14%	-0.06%	0.06%	0.20%	0.04%	0.01%
Russia	1970-1999	0.08%	0.14%	-0.06%	0.00%	0.00%	0.13%	-0.06%	0.00%	0.00%	0.00%
Russia	2000-2022	-0.71%	-0.45%	-0.26%	-0.01%	0.02%	-0.08%	0.12%	0.08%	-0.43%	-0.41%
South Africa	1970-1999	0.01%	-0.36%	0.37%	0.02%	-0.04%	-0.19%	0.34%	0.00%	-0.18%	0.08%
South Africa	2000-2022	-0.15%	-0.09%	-0.06%	0.35%	-0.29%	-0.20%	0.43%	0.00%	-0.25%	-0.20%
Total BRICS	1970-1999	-0,01%	0,00%	-0,01%	0,00%	0,01%	-0,01%	-0,01%	0,02%	-0,01%	-0,02%
Total BRICS	2000-2022	-0,34%	-0,16%	-0,18%	-0,02%	-0,01%	-0,11%	0,15%	0,25%	-0,29%	-0,32%

These findings shed light on the contrasting dynamics between developed and developing countries when it comes to the components driving return differentials. While developed countries leverage their positive return effects cheaper liabilities, developing countries face challenges associated with less profitable assets and more expensive liabilities. The composition effect tends to be very low for most of countries.

Risk

As above, we compare the standard deviation of yields with the global average to understand the risk undertaken by countries. Table 11 shows the ratio of the country's standard deviation of yields per asset class over the standard deviation of the whole world. A higher ratio implies higher volatily (i.e. more risk in the income flows) and a ratio bigger than 100% implies a higher risk than the world's average.

We find that all of the G7 and BRICS countries are exposed to a lower risk with respect to the world for every asset class, with the exception of India's debt assets in the latest period. On average, the BRICS invest in riskier assets relative to the G7.

Table 11

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

		Total assets		**Equity**		**Debt**		**Reserves**	**FDI**	
	Period	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
					G7					
Canada	1970-1999	27%	4%	0%	0%	27%	4%	40%	0%	0%
Canada	2000-2022	17%	13%	0%	0%	37%	31%	10%	1%	0%
Germany	1970-1999	10%	2%	0%	0%	14%	4%	23%	0%	0%
Germany	2000-2022	27%	18%	0%	0%	29%	35%	26%	2%	0%
France	1970-1999	26%	4%	0%	0%	31%	5%	48%	0%	0%
France	2000-2022	23%	13%	0%	0%	34%	24%	21%	1%	0%
United Kingdom	1970-1999	26%	6%	0%	0%	37%	7%	52%	0%	0%
United Kingdom	2000-2022	35%	18%	0%	0%	32%	29%	12%	2%	1%
Italy	1970-1999	14%	4%	0%	0%	22%	5%	36%	0%	0%
Italy	2000-2022	30%	16%	0%	0%	34%	24%	20%	1%	0%
Japan	1970-1999	24%	5%	1%	0%	29%	5%	32%	0%	0%
Japan	2000-2022	10%	11%	0%	0%	15%	15%	7%	2%	2%
United States	1970-1999	28%	4%	0%	0%	25%	4%	29%	0%	0%
United States	2000-2022	25%	10%	0%	0%	35%	23%	15%	1%	0%
Total G7	1970-1999	19%	4%	0%	0%	24%	4%	23%	0%	0%
Total G7	2000-2022	30%	15%	0%	0%	29%	25%	9%	2%	0%
					BRICS					
Brazil	1970-1999	16%	4%	0%	0%	37%	7%	29%	0%	0%
Brazil	2000-2022	39%	30%	0%	0%	75%	44%	29%	2%	1%
China	1970-1999	23%	5%	2%	0%	29%	5%	26%	0%	0%
China	2000-2022	20%	24%	2%	0%	16%	38%	13%	1%	0%
India	1970-1999	21%	2%	0%	0%	52%	2%	33%	0%	0%
India	2000-2022	41%	17%	0%	0%	155%	33%	20%	6%	1%
Russia	1970-1999	14%	5%	1%	0%	17%	6%	19%	0%	0%
Russia	2000-2022	27%	25%	1%	0%	24%	28%	21%	2%	2%
South Africa	1970-1999	20%	4%	0%	0%	60%	5%	54%	0%	0%
South Africa	2000-2022	45%	24%	0%	0%	64%	22%	10%	1%	1%
Total BRICS	1970-1999	13%	2%	0%	0%	22%	3%	14%	0%	0%
Total BRICS	2000-2022	27%	30%	0%	0%	21%	15%	9%	1%	1%

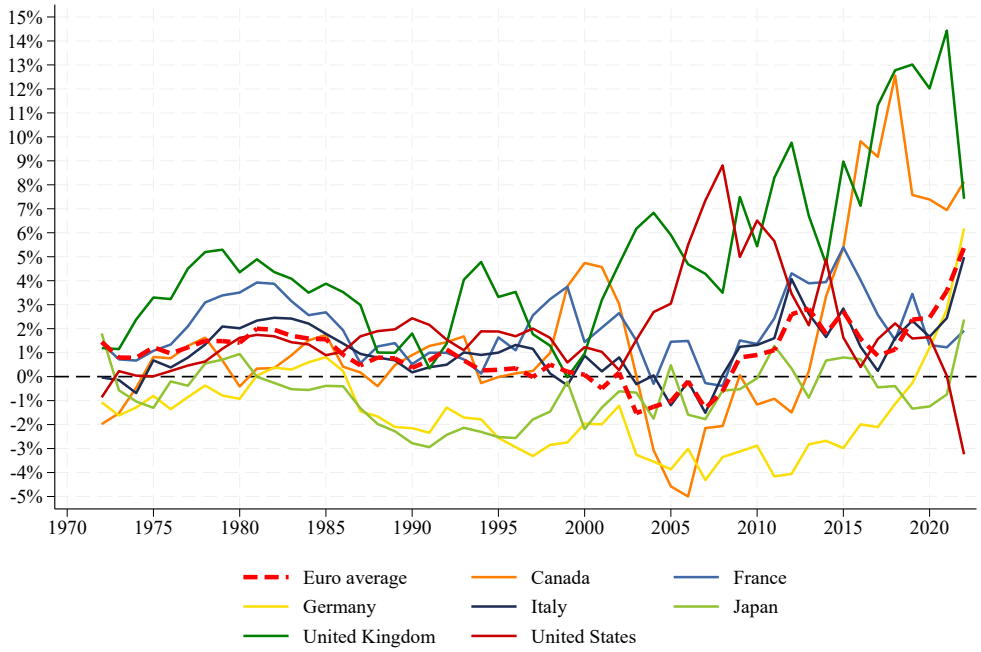
Total returns

Our examination of total returns, combining excess yields with capital gains, reveals a pronounced advantage among G8 economies, albeit with several exceptions. Japan's performance oscillates, generally aligning with the baseline. Post-2018, Germany transitions to positive returns, contrasting with the recent downturns faced by the United States. Notably, Canada and the UK exhibit substantial gains, as illustrated in Figure 16.

In the BRICS grouping, the scenario varies markedly. Around the Global Financial Crisis (GFC), Russia incurs significant losses. Throughout the period analyzed, China consistently underperforms, failing to achieve positive returns. Conversely, Brazil, South Africa, and India demonstrate relative resilience; India, in particular, records commendable gains during the 2010s.

Figure 16

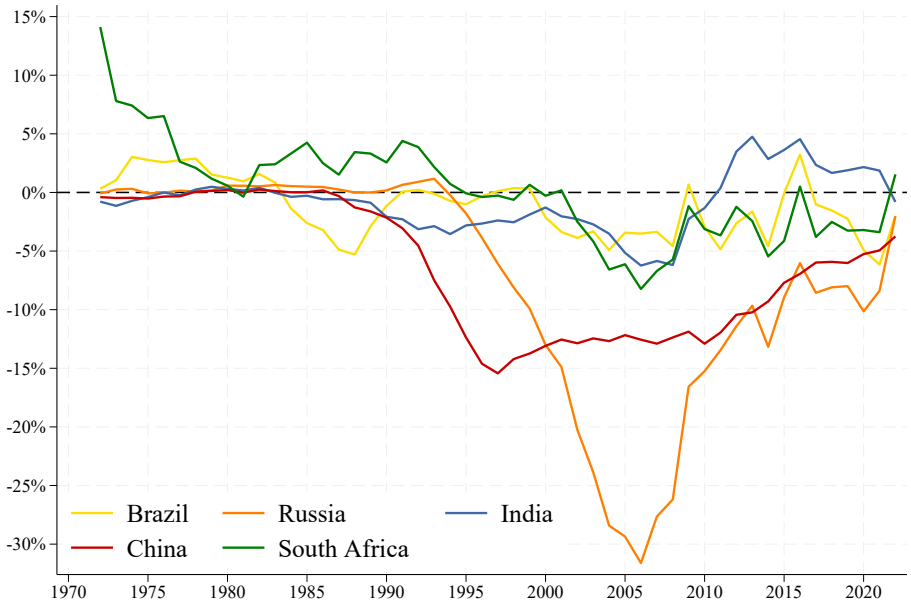
Total Excess returns as a share GDP, G8



Lines smoothed using a 5-year moving average.

Figure 17

Total Excess returns as a share GDP, BRICS



Lines smoothed using a 5-year moving average.

5 The private privilege

One explanation for the exorbitant privilege could be the low-yield sovereign bonds issued by wealthy countries, held as safe reserves by central banks worldwide. This implies that countries accumulating reserves earn low profits, which translates into inexpensive finance for richer nations. We show in 19 that it is true that the richest countries pay on average less on their public external debt, even at rates of the poorest 40% who manage to access very preferential credit lines. However, that lower interest rates on public external debt of wealthy countries are not the primary driver of our findings. Instead, it appears the private sector plays a significant role in the rich countries' privilege.

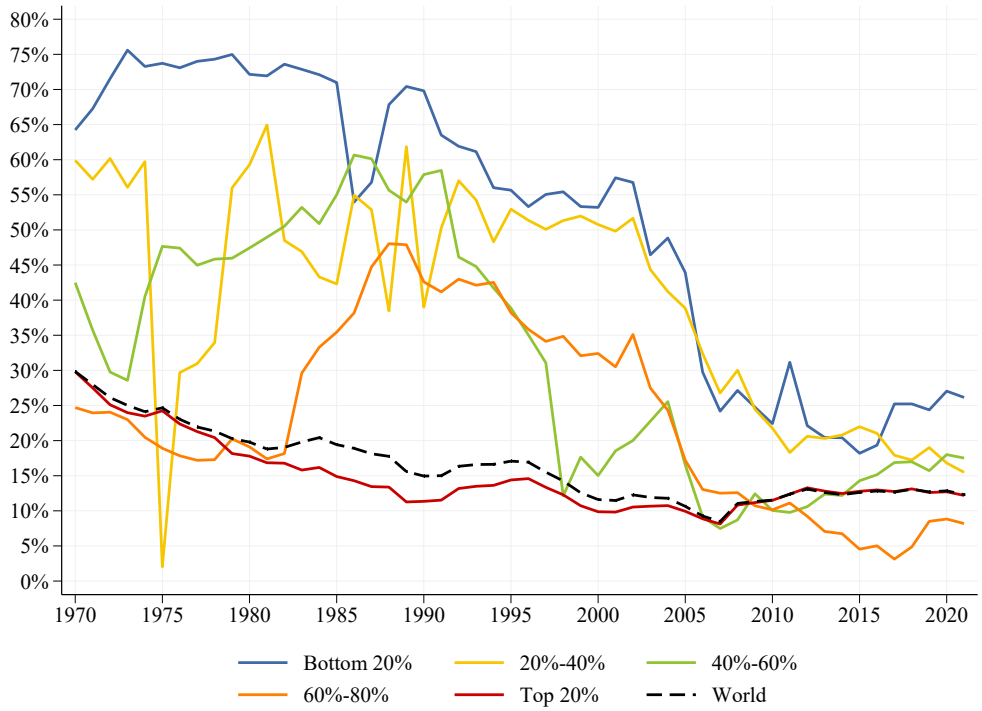
Hypothesis 4: *The privilege of rich countries is driven by low interest rates in their public debt.*

Fact: Isolating from the public sector, the privilege of rich countries is even higher.

By relying on various sources, we estimate the public external wealth and separate our findings from it. Data for developing countries is accessible and reliable, as seen in the International Debt Statistics (IDS) from the World Bank. This data allows for the calculation of total external debt and the interest paid by developing nations.

Figure 18

External public debt as a share of external liabilities



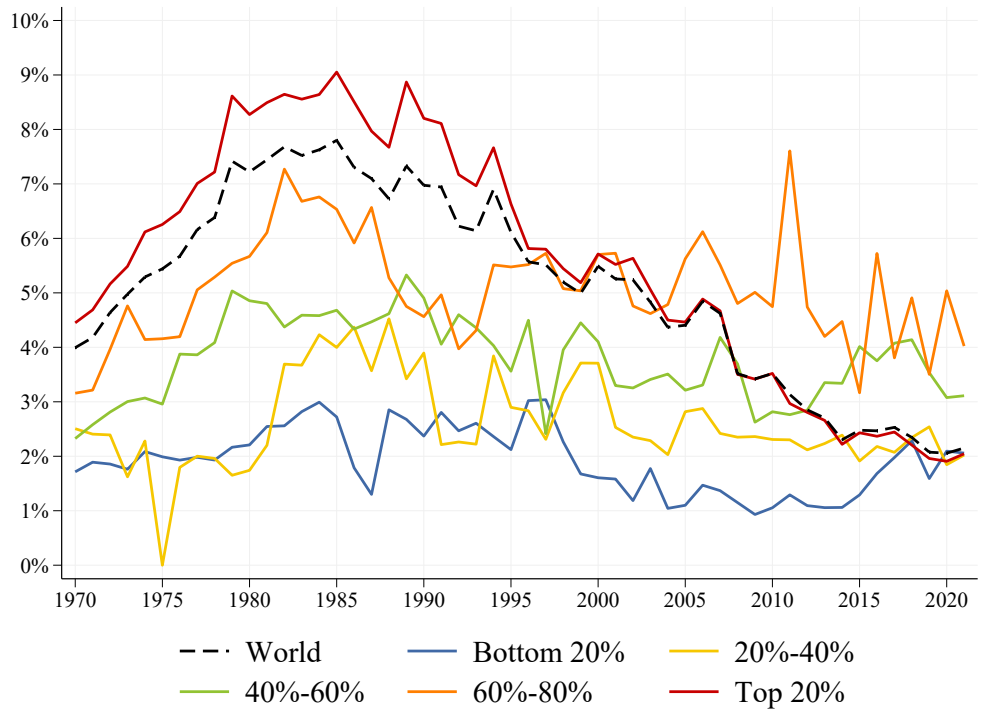
Countries grouped according to national income per capita quintiles, weighted by population. E.g. top 20% countries include exactly the top 20% of the world population (1,6 billion out of 8 billion in 2022) living in the countries with highest per capita income. In 2022: main top 20% countries include 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.

Data on the external public debt of developed countries is less comprehensive. We rely on secondary estimates, combining debt stocks from the BIS (Avdjiev et al., 2017) and the IMF (Arslanalp and Tsuda, 2012). We then assume that rich countries' interest rates on external public debt align with those on their overall public debt, drawing from IMF Public Finances in Modern History (Mauro et al., 2015). Public assets are a sum of reserves (excluding gold), bilateral official loans from IDS (typically rich countries lending to developing ones) and public external assets. This analysis potentially underestimates public assets by not fully accounting for bilateral loans aimed at wealthy nations. As demonstrated in Figure 18, the proportion of external public debt in total external liabilities has declined across all income groups, with a global average of 12%.

Figure 20 illustrates that excluding public sector involvement, net transfers from the lowest to the highest income quintiles have increased, challenging the notion that the privilege is solely a public sector phenomenon. Yet, the public sector's role, particularly the impact of low interest rates on external public debt and its influence on private liabilities rates through the *sovereign ceiling channel*, remains significant in our results. This concept suggests that the credit risk of a private entity cannot exceed that of its sovereign nation, affecting the interest rates accessible to private agents from different countries.

Figure 19

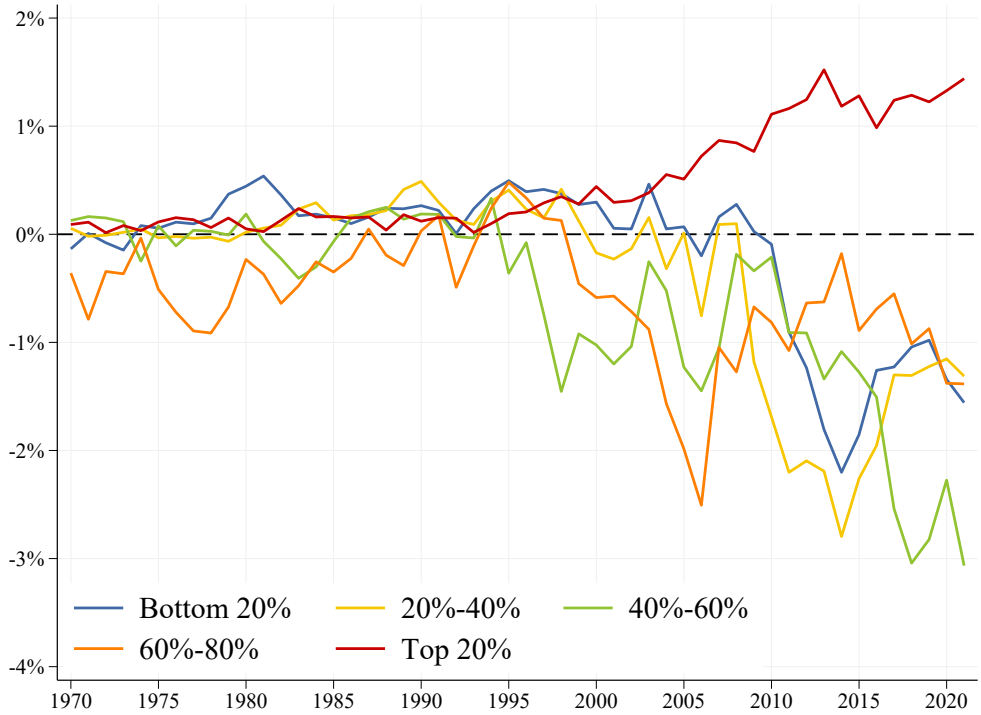
Returns paid on public external debt



Graph shows returns paid on public external debt. 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Figure 20

Private privilege as a share of GDP



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield on only private assets (liabilities), 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. E.g. top 20% countries include exactly the top 20% of the world population (1,6 billion out of 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

6 Mechanisms

Our results are rooted in the centrality of rich countries in the monetary and financial system.

A combination of factors results in a high demand for financial claims issued by rich countries, which decreases their cost of borrowing (i.e. decreases the interest they pay). We cannot specifically disentangle their contribution in our results but we will explain the potential channels. Specifically, these factors are i) the issuance of international reserve currencies, ii) the increase of reserves due to Basel 3 macroprudential rules, iii) increase of swap lines between rich countries, iv) tax motives and v) savings glut. Of course, we cannot neglect that all of this are accompanied by strong financial and monetary institutions, stable currencies and liquid markets.

First, most of these countries are the issuers of international reserve currencies (IC), which are then used in international transactions and as a reserve of value around the globe.

Table 12

Functions of International currencies

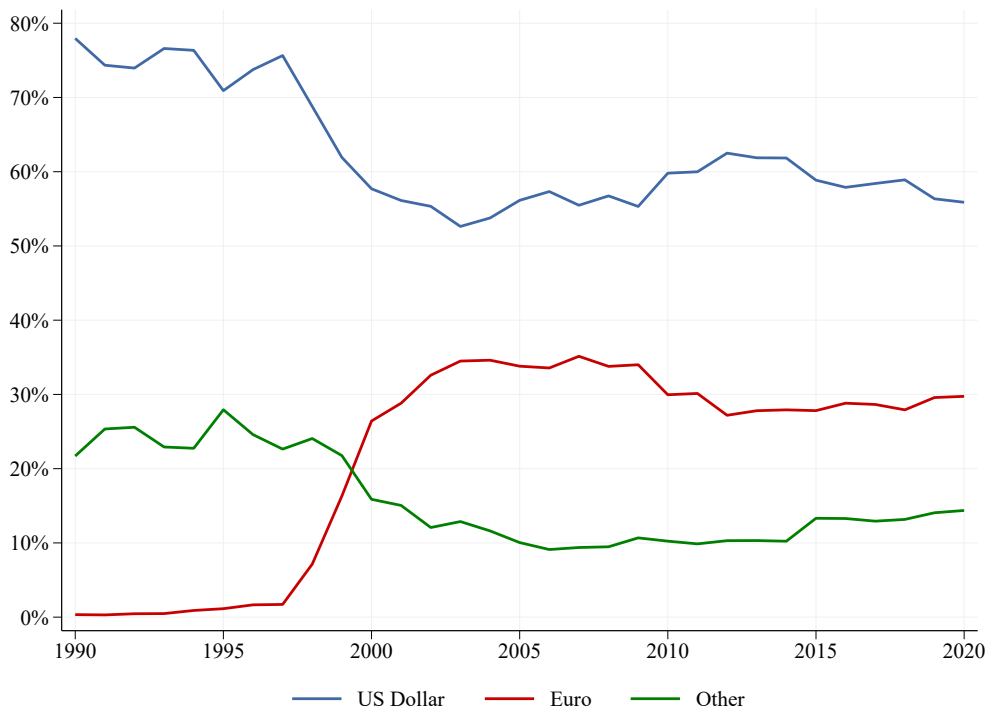
International currencies	*Store of value*	*Medium of exchange*	*Unit of account*
Governments	International reserve holdings	Foreign exchange intervention	Anchor for pegging LC
Private	Currency substitution	Invoicing trade and financial transactions	Denominating trade and financial

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

We mostly follow Gopinath and Stein (2021) in the understanding of how their role as IC issuers results in a privileged return differential and in so large income inflows. First, as imports -or more generally international transactions- are invoiced in those IC, households will demand deposits that are denominated in such currencies. This is because these deposits are safer with respect to two characteristics. First, they have a lower default risk, meaning that they ensure themselves of receiving the contracted amount at the end of the period. Second, they have a lower exchange rate risk, which means that if they have to import goods for a value of 1millon USdollars in the future and they acquire deposits for such a sum, doing so in USD ensures them to be able to cover their future imports. However, if they acquire deposits for an equivalent sum but in Chinese Renminbi -or any other currency-, then they will be exposed to the potential risk of the Chinese Renminbi depreciating against the USD and having to cover such a difference to import the 1millon USD goods, which implies a loss for them. We show in Figure 21 the strong dominance of the US dollar and the Euro in global trade, these two are the most important currencies in the group of rich countries receiving a privilege. Sadly, we have no data on the decomposition of "Other currencies", so we cannot contrast this with Pound sterling, Japanese yen or others.

Figure 21

Share of global trade by currency invoiced in

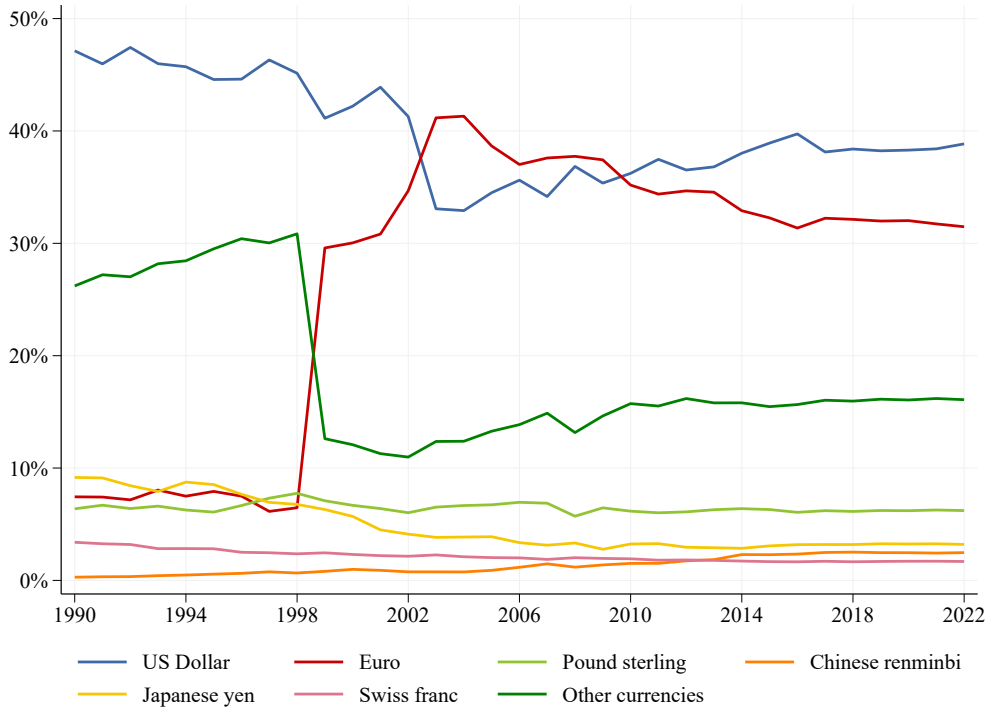


Author's calculations using Boz et al. (2020). EUR includes legacy currencies.

As more household stock on IC deposits the availability of these currencies increase, increasing trade invoiced in such currencies, constituting a feedback loop in between trade in IC and an increasing global demand for IC deposits and financial claims. These deposits and financial claims will be provided by governments (in the form of treasuries or bonds), privates and financial institutions. They will in turn be held by Central Banks (in the form of reserves), privates and financial institutions as well. Arguably, the public sector plays a significant role in providing the supply of such instruments and demanding them as international reserves. We show in Figure 22 how the US dollar and the Euro dominates the currency denomination of global foreign assets, supporting the claim that trade influences the denomination of deposits. We see a minor but still significant role of other currencies that are issued by privileged countries, such as the Pound sterling, the Japanese yen and the Swiss franc (decreasing over time). The Chinese renminbi shows a positive trend but this is not enough to entitle them with a positive return differential, as shown above. A similar pattern for foreign exchange reserves held by central banks is depicted in Figure 23, although with a less important role of the Euro.

Figure 22

Share of global assets by currency



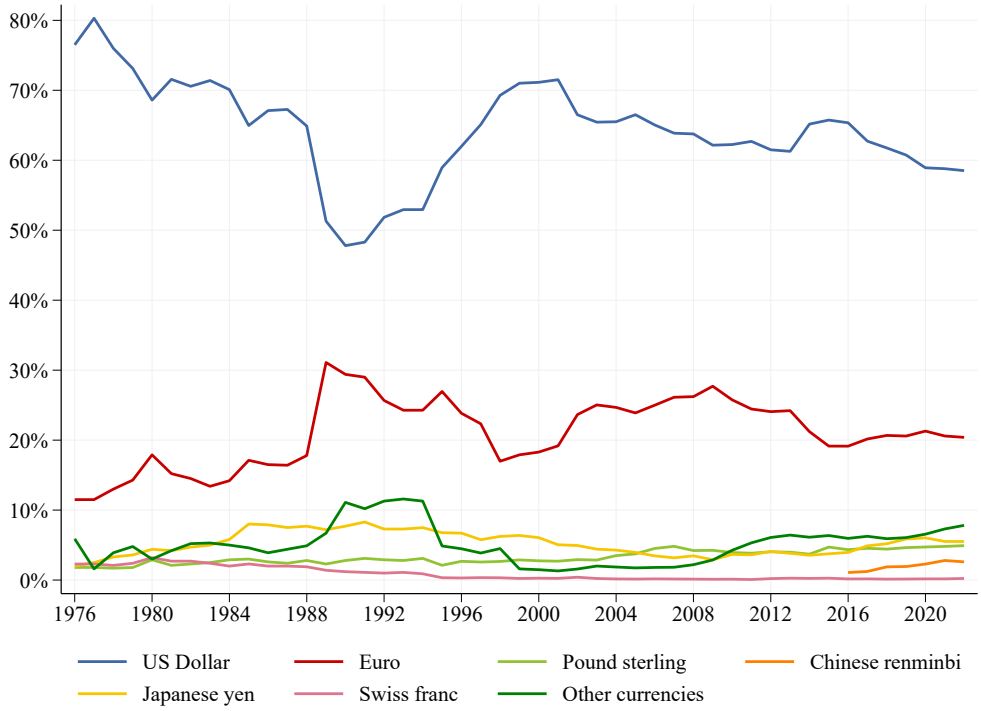
Source: Author's calculations based on A. Bénétrix, Gautam, Juvenal, and Schmitz (2019); A. S. Bénétrix, Lane, and Shambaugh (2015). Euro includes legacy currencies.

A higher global demand for IC saving instruments will increase the gains for governments providing them. In other words, it will lower the cost of borrowing for the governments of IC issuers countries, implying a lower interest rate in their sovereign bonds. This will lower the market interest rate paid by private agents that belong to IC issuer countries. The correlation in this last link is explained by the *sovereign ceiling channel*, which establishes that the higher credit rating a private agent can have cannot be higher than the rating of the government it belongs to. In other words, the interest rate a private agent can pay on its external debt cannot be lower than the interest rate its government pays on the market. This results, for instance, in Brazilian firms paying a higher interest rate than US firms, due to the fact that the Brazilian government has a lower credit

rating than the US government. In conclusion, the role of IC providers results in rich countries paying a lower return on their public liabilities and, thus, a lower return on their private liabilities, resulting in overall cheaper external liabilities for rich countries.

Figure 23

Share of global reserves by currency

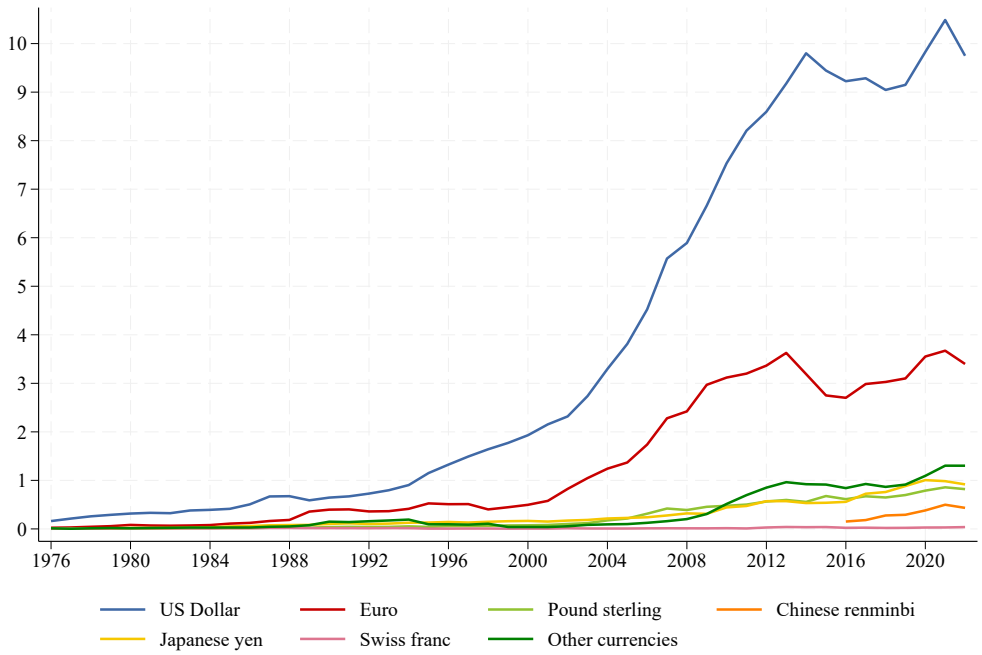


Source: IMF Annual Reports (1984, 1986-1988, 1990, 1999) and IMF Currency Composition of Official Foreign Exchange Reserves (COFER) (1995-2022). Deutsche marks, French francs, Dutch guilders and ECUs are included in the Euro before 1999.

Second, in response to the 2007-2008 financial crisis and with the goal of preventing similar crises in the future by making banks more resilient and less risky, the Basel Committee on Banking Supervision designed a set of macroprudential international banking regulations, the Basel III, that apply to both commercial and central banks. These reforms included: increasing the level of capital requirements to ensure that banks can absorb financial shocks. Introducing a non-risk-based leverage ratio, which requires banks to hold a certain percentage of their assets as equity, not just as a function of the perceived risk of those assets. Implementing liquidity requirements through the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). The LCR requires banks to hold enough high-quality liquid assets to cover their total net cash outflows over 30 days. The NSFR requires banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities. And establishing capital buffers as countercyclical measures. All of these combined have increased the reserves held by private and central banks, contributing to a higher demand of low-yield safe assets issued by the rich world and, thus, lowering their rate of return. Figure 24 shows the increase in central bank reserves held in US dollars and Euros since the GFC. Figure 25 shows how cross border commercial banks' assets have reached pre-crisis levels, with a clear dominance of USD and Euro denominated claims.

Figure 24

Central Bank Reserves in trillons of USD

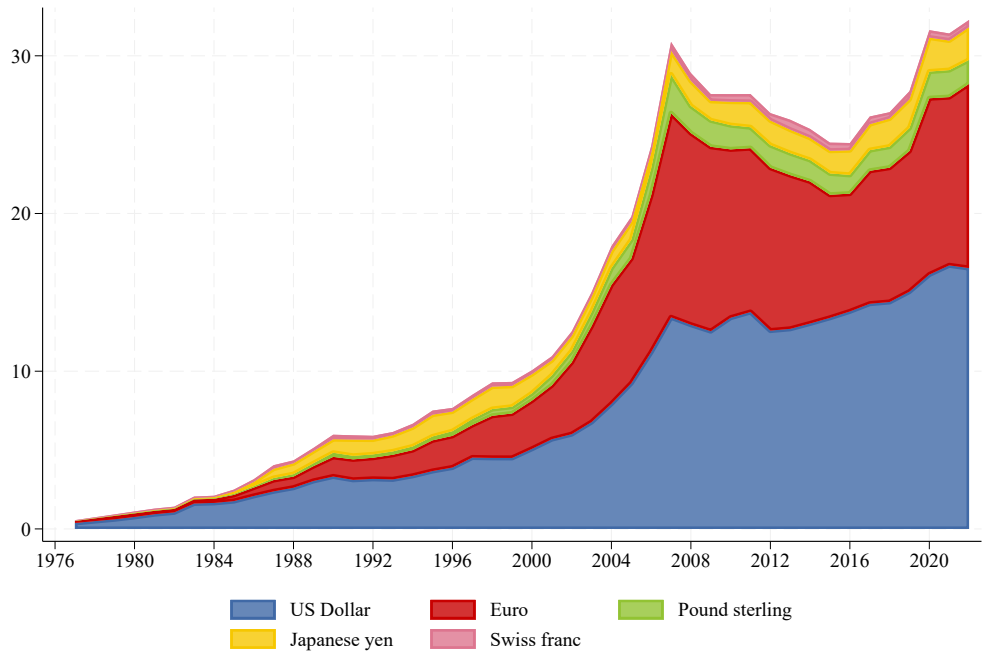


Source: IMF Annual Reports (1984, 1986-1988, 1990, 1999) and IMF Currency Composition of Official Foreign Exchange Reserves (COFER) (1995-2022). Deutsche marks, French francs, Dutch guilders and ECUs are included in the Euro before 1999.

Third, it is crucial to consider the motivations related to taxation, confidentiality, and broader political factors. Private investors from countries such as Brazil, China, Russia, India, and Saudi Arabia may prefer to hold low-yield assets in Europe and the United States. This preference can be attributed to their confidence in Western governments to maintain the anonymity, safety, and tax-exempt status of their investments. This phenomenon may illustrate the privileged position of the affluent world, which might have become the tax haven banker of the world. This dynamic, wherein global capitalists seek protection and confidentiality from affluent countries, emerges as a pivotal explanation for this trend.

Figure 25

Cross border assets of commercial banks in trillons of USD



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

Finally, the savings glut (Bernanke et al., 2005) may have played a role the results displayed. An excessive accumulation of savings in the economy not balanced by an equivalent level of investment generates an imbalance that can affect global economic conditions in several ways. One of the primary consequences of a savings glut is its downward pressure on global interest rates. When there is a surplus of savings looking for investment opportunities, the price of borrowing money (interest rates) tends to decrease. This has been evident in the low interest rate environments seen in many developed economies.

7 Discussion

This paper has examined the global implications of the unequal return rates across different income groups. The findings highlight that the exorbitant privilege, which was historically associated with the United States, has now become a rich world privilege, with heterogeneity among these selected countries. This privilege enjoyed by the richest countries stems from their ability to pay lower return in their liabilities, for each asset class, which derives from their central position in the international monetary and financial system. The exorbitant differential obtained by the US remains unmatched.

The findings reveal that while return rates on foreign assets have decreased globally, return rates on foreign liabilities have only decreased for the top 20% richest countries. This persistent decline has facilitated the emergence of the privilege enjoyed by the rich countries that resulted in net capital income transfers from the rest of the world, amounting to approximately 1% of the richest GDP. As a result, these countries are able to consistently record trade deficits equal to 1% of their GDP without adversely impacting their IIP. In contrast, the bottom 80% of countries are compelled to record trade surpluses or seek financing to cover the interest accrued from their foreign liabilities. Importantly, the magnitude is even bigger when looking at the top 10%

richest countries, which receive net capital income transfers of almost 2% of their combined GDP because of their excess yield.

Interestingly, the Eurozone has been successful in reversing a negative excess yield since its creation, indicating its irruption in the monetary system and its ability to supply the world with low-yield safe assets. When comparing the G8 and the BRICS, representing the most influential sets of countries in the developed and developing world respectively, divergent patterns emerge. The G8 has consolidated its privilege in the 21st century, while the BRICS have established a negative differential.

We have argued that the rich privilege comes from an institutional design, contrary to the belief of being a market outcome, and that it entails huge burdens for poor countries. The bottom 80% are forced to transfer around 2-3% of their GDP each year, amounts that could be spent in developmental policies at home. Efforts must be directed towards redesigning the current monetary and financial system to promote a more egalitarian regime. While the system has contributed to globalization, trade, financialization, and economic growth, it has failed to address complex challenges such as climate change, technological innovation, rising inequality, long-term demographic changes, and escalating geopolitical conflicts in a multiplex world. The initial promise made after World War II to establish a neutral international monetary and financial system remains unfulfilled.

We argue that the United States has not *earned* its privileged position of the US dollar, but this privilege was inherited from a time when it was imposed during the early years of the Bretton Woods system. Although it is true that dollar reserves have been accumulated voluntarily by the rest of the world, the initial role of the dollar as a stable global currency has allowed the US to become the currency hegemon and to capture an exorbitant privilege while tilting the international balance of power in its favor. So far, its hegemony has only been partially contested by other -rich- currency provider countries.

Meaningful structural reforms have yet to take place, even more after failed promises in the aftermath of the Great Recession, to avoid a situation where currency competition occurs among global powers -and only benefits them- as anticipated by some scholars. As it stands, the financial system primarily serves the interests of a few privileged countries, who extract benefits from their central role. In return, they are expected to provide global public goods, such as safety instruments where to allocate the excess savings of the poorer countries. However, as shown in the results of this study, the potential gains derived from the use of such public goods are outweighed by the enormous costs that bears on the poorest countries.

To correct for the net transfers from the poorest to the richest, we require proposals that meet the needs of the "rest of the world". While competing reserve or supranational currencies (e.g. SDRs) could provide safe and liquid assets, they alone are insufficient to achieve a more egalitarian global system. Moreover, they face the historical constraint of past bi-currency systems such as gold/silver in the 19th century or sterling/dollar after Bretton Woods have failed to prevail, ultimately converging towards a dominant currency.

We propose a set of policies that would overthrown such a privilege:

1. **Tax**: A clearing system where countries get taxed if their excess foreign capital income is above 0.05% of their GDP. Revenues would be use for a development fund focused on climate transition projects in developing countries. The mechanisms would work similarly to the International Clearing Union proposal of Keynes when the Bretton Woods institutions were created.

2. **Global reserve currency**: commonly used in international transaction. By changing the equilibrium of the monetary system, the *privilege* would disappear. There are some historic precedents such as Bancor (also proposed by Keynes in Bretton Woods) and Stiglitz's proposal in UN Report (2009).

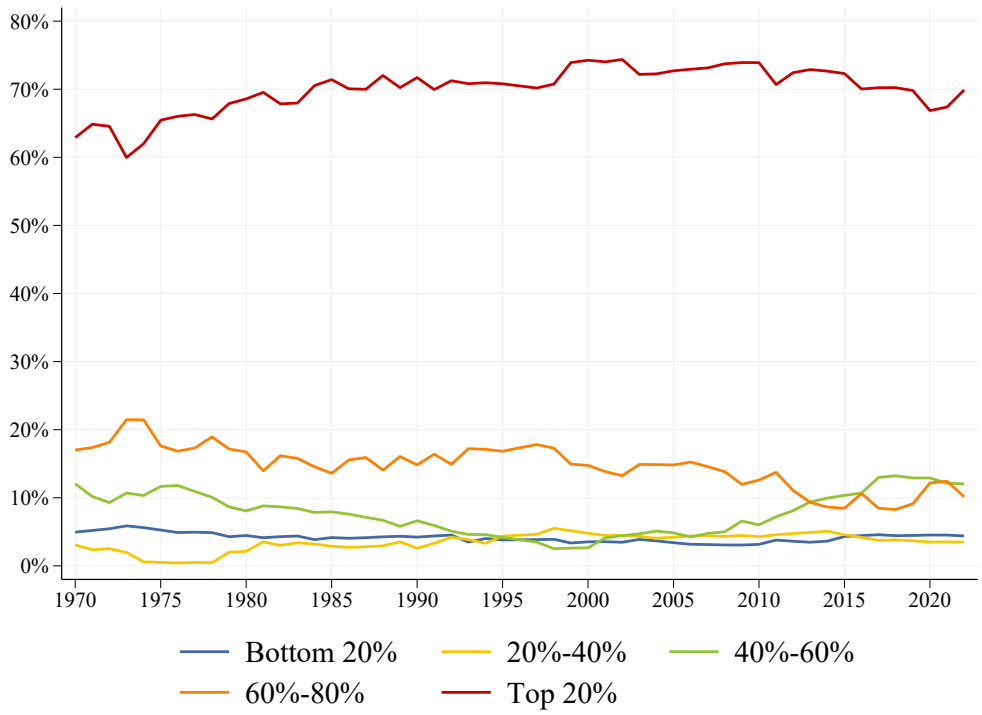
3. **Reforming IMF governance**: Giving a bigger vote to developing countries would allow to implement proposals 1 and 2.

Option number 1 is the most substantial in terms of global redistribution. Precise number for the threshold could be further refined but, in this scenario, in 2022 richest countries would contribute around 1.15% of their GDP to a development fund directed to climate or other developmental policies.

Any of these proposals would require a significant international cooperation to be achieved. Sadly, the current system is far from neutral and is ultimately unsustainable. Decision-making power remains concentrated among the wealthiest countries, as in existing institutional frameworks like the International Monetary Fund (IMF) (Figure 26).

Figure 26

Share of voting power in IMF by quintiles



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield on only private assets (liabilities), 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. E.g. top 20% countries include exactly the top 20% of the world population (1,6 billion out of 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

If we are aiming for a more egalitarian global system, we need to construct a more stable international monetary system based on true global governance, where developing countries have a voice and vote that extends beyond major powers.

Governance of major international financial institutions also requires redesign. The increasing divergence in development paths between rich economies, who are the dominant shareholders, and poorer economies, who are the primary clients, has widened significantly. Redefining the IMF quota formula, which determines SDRs and voting power, is a crucial step towards promoting a more equitable international monetary and financial system. Intended "to help assess members' relative position in the world economy", the Calculated Quota Shares IMF

formula is the modern and international version of a censitary regimes:

$$\text{CQS} = (0.50 \times GDP + 0.30 \times Opennes + 0.15 \times Variability + 0.05 \times Reserves)^K$$

where GDP is a blended GDP[13], $Openness$ is the sum of current payments and current receipts (goods, services, income and transfers), $Variability$ measures the volatility of current receipts (for example, earnings from the export of goods and services, as well as receipts on foreign investments) and net capital flows to an economy, $Reserves$ is the average stock of international reserves held by a country and K is a compression factor of 0.95. This formula allows richer and more financially integrated countries to have a higher saying in decisions, which will allow them to prevail in the international financial system.

A more democratic design is needed. Richer countries should indeed contribute more, as an absolute number and as a share of their GDP but the voting formula should be based on democratic variables besides monetary, to give voices to developing countries in decision making process. We could even consider moving from the previous formula completely and redesign a new one. For now, we propose the variables that should be included in the voting process: population, emissions gap (as a penalty) and the female labor income share. This will ensure that representation and voting power are not solely determined by economic size but also by the number of inhabitants, the efforts displayed towards mitigating climate change and the progress made in closing the gender gap within countries. It will also provide incentives to countries to allocate resources toward such causes.

$$\textbf{Proposal to include} : \theta \times \text{Population} + \zeta \times \text{Emissions gap} + \phi \times \text{Female Labor Income Share}$$

Although certainly not enough, giving voice and influence to a broader range of countries, especially those with significant populations but smaller economies, or those with high ecological and feminist values but small populations and economies, the decision-making processes within the IMF can become more reflective of the diverse needs and perspectives of the global community. To stop labeling countries as privileged, rich, developed, developing, poor and so on, the international monetary and financial system needs to be reformed, as it is currently unsustainable. We can reform it now or wait for another crisis to do so.

[13]For the purpose of the formula, a country's gross domestic product (GDP) is measured as a blend of GDP based on market exchange rates (weight of 60 percent) and on PPP exchange rates (40 percent)

References

Adler, G., & Garcia-Macia, D. (2018). *The stabilizing role of net foreign asset returns.* International Monetary Fund.

Alstadsæter, A., Johannesen, N., & Zucman, G. (2018). Who owns the wealth in tax havens? macro evidence and implications for global inequality. *Journal of Public Economics*, *162*, 89–100.

Arslanalp, M. S., & Tsuda, M. T. (2012). *Tracking global demand for advanced economy sovereign debt.* International Monetary Fund.

Atkeson, A., Heathcote, J., & Perri, F. (2022). *The end of privilege: A reexamination of the net foreign asset position of the united states* (Tech. Rep.). National Bureau of Economic Research.

Avdjiev, S., Hardy, B., Kalemli-Özcan, & Servén, L. (2017). *Gross capital flows by banks, corporates and sovereigns* (Tech. Rep.). National Bureau of Economic Research.

Bank for International Settlements. (2024). *Locational banking statistics.* Retrieved from https://data.bis.org/topics/LBS/data (BIS WS_LBS_D_PUB 1.0 (data set). Accessed on 15 April 2024)

Bénétrix, A., Gautam, D., Juvenal, L., & Schmitz, M. (2019). *Cross-border currency exposures.* International Monetary Fund.

Bénétrix, A. S., Lane, P. R., & Shambaugh, J. C. (2015). International currency exposures, valuation effects and the global financial crisis. *Journal of International Economics*, *96*, S98–S109.

Bernanke, B. S., et al. (2005). *The global saving glut and the us current account deficit* (Tech. Rep.).

Blanchet, T., Chancel, L., Flores, I., Morgan, M., Alvaredo, F., Atkinson, A. B., ... others (2021). Distributional national accounts guidelines. *Methods and Concepts Used in the World Inequality Database. World Inequality Lab.*

Boz, E., Casas, C., Georgiadis, G., Gopinath, G., Le Mezo, H., Mehl, A., & Nguyen, T. (2020). Patterns in invoicing currency in global trade.

Conte, M., Cotterlaz, P., Mayer, T., et al. (2022). *The cepii gravity database.* CEPII.

Curcuru, S. E., Dvorak, T., & Warnock, F. E. (2008). Cross-border returns differentials. *The Quarterly Journal of Economics*, *123*(4), 1495–1530.

Curcuru, S. E., Dvorak, T., & Warnock, F. E. (2010). Decomposing the us external returns differential. *Journal of international Economics*, *80*(1), 22–32.

Curcuru, S. E., Thomas, C. P., & Warnock, F. E. (2009). Current account sustainability and relative reliability. In *Nber international seminar on macroeconomics* (Vol. 5, pp. 67–109).

Curcuru, S. E., Thomas, C. P., & Warnock, F. E. (2013). On returns differentials. *Journal of International Money and Finance*, *36*, 1–25.

Darvas, Z. M., & Hüttl, P. (2017). *Returns on foreign assets and liabilities: exorbitant privileges and stabilising adjustments* (Tech. Rep.). Bruegel Working Paper.

Eichengreen, B. (2011). *Exorbitant privilege: The rise and fall of the dollar and the future of the international monetary system.* Oxford University Press.

Farhi, E., & Maggiori, M. (2018). A model of the international monetary system. *The Quarterly Journal of Economics*, *133*(1), 295–355.

Forbes, K. J. (2010). Why do foreigners invest in the united states? *Journal of International Economics*, *80*(1), 3–21.

Gohrband, C. A., & Howell, K. L. (2013). Us international financial flows and the us net investment position: new perspectives arising from new international standards. In *Measuring wealth and financial intermediation and their links to the real economy* (pp. 231–270). University of Chicago Press.

Gopinath, G., Boz, E., Casas, C., Díez, F. J., Gourinchas, P.-O., & Plagborg-Møller, M. (2020). Dominant currency paradigm. *American Economic Review*, *110*(3), 677–719.

Gopinath, G., & Stein, J. C. (2018). Trade invoicing, bank funding, and central bank reserve holdings. In *Aea papers and proceedings* (Vol. 108, pp. 542–546).

Gopinath, G., & Stein, J. C. (2021). Banking, trade, and the making of a dominant currency. *The Quarterly Journal of Economics*, *136*(2), 783–830.

Gourinchas, P.-O., & Rey, H. (2007a). From world banker to world venture capitalist: Us external adjustment and the exorbitant privilege. In *G7 current account imbalances: sustainability and adjustment* (pp. 11–66). University of Chicago Press.

Gourinchas, P.-O., & Rey, H. (2007b). International financial adjustment. *Journal of political economy*, *115*(4), 665–703.

Gourinchas, P.-O., & Rey, H. (2022). Exorbitant privilege and exorbitant duty.

Habib, M. M. (2010). Excess returns on net foreign assets: the exorbitant privilege from a global perspective.

Hausmann, R., & Sturzenegger, F. (2006). Global imbalances or bad accounting? the missing dark matter in the wealth of nations.

Hines Jr, J. R., & Rice, E. M. (1994). Fiscal paradise: Foreign tax havens and american business. *The Quarterly Journal of Economics*, *109*(1), 149–182.

Hünnekes, F., Schularick, M., & Trebesch, C. (2019). Exportweltmeister: The low returns on germany's capital exports.

Ito, H., & Chinn, M. (2013). The rise of the 'redback'and china's capital account liberalization: An empirical analysis on the determinants of invoicing currencies. In *Proceedings of adbi conference on currency internationalization: Lessons and prospects for the rmb* (Vol. 5).

Kenen, P. B. (1983). The role of the dollar as an international currency. *(No Title)*.

Lane, P. R., & Milesi-Ferretti, G. M. (2007). A global perspective on external positions. In *G7 current account imbalances: sustainability and adjustment* (pp. 67–102). University of Chicago Press.

Lane, P. R., & Milesi-Ferretti, G. M. (2009). Where did all the borrowing go? a forensic analysis of the us external position. *Journal of the Japanese and international Economies*, *23*(2), 177–199.

Lane, P. R., & Milesi-Ferretti, G. M. (2018). The external wealth of nations revisited: international financial integration in the aftermath of the global financial crisis. *IMF Economic Review*, *66*, 189–222.

Maggiori, M. (2017). Financial intermediation, international risk sharing, and reserve currencies. *American Economic Review*, *107*(10), 3038–3071.

Mauro, P., Romeu, R., Binder, A., & Zaman, A. (2015). A modern history of fiscal prudence and profligacy. *Journal of Monetary Economics*, *76*, 55–70.

Meissner, C. M., & Taylor, A. M. (2006). *Losing our marbles in the new century? the great rebalancing in historical perspective.* National Bureau of Economic Research Cambridge, Mass., USA.

Nardo, M., Ndacyayisenga, N., Pagano, A., Zeugner, S., et al. (2017). Finflows: database for bilateral financial investment stocks and flows. *European Commission JRC Technical Reports*, *451*.

Obstfeld, M., & Rogoff, K. S. (2005). Global current account imbalances and exchange rate adjustments. *Brookings papers on economic activity*, *2005*(1), 67–146.

Obstfeld, M., & Taylor, A. (2004). Sources of america's' exorbitant privilege. *University of California, in progress*.

Rogoff, K. S., & Tashiro, T. (2015). Japan's exorbitant privilege. *Journal of the Japanese and International Economies*, *35*, 43–61.

Tørsløv, T. R., Wier, L. S., & Zucman, G. (2018). *The missing profits of nations* (Tech. Rep.). National Bureau of Economic Research.

Wier, L. S., & Zucman, G. (2022). *Global profit shifting, 1975-2019* (Tech. Rep.). National Bureau of Economic Research.

Zucman, G. (2013). The missing wealth of nations: Are europe and the us net debtors or net creditors? *The Quarterly journal of economics*, *128*(3), 1321–1364.

Appendices

A Data

We put together a comprehensive dataset, encompassing 216 economies worldwide and spanning the period from 1970 to 2022 that ensures complete coverage of GDP, price indices, US dollar market value exchange rates, foreign wealth, and foreign capital income. Despite the availability of extensive information, integrating diverse data sources and ensuring comprehensive temporal coverage required making various assumptions and conducting meticulous work. While the specific estimated figures may not be flawless, conservative estimates were chosen in cases of uncertainty.

GDP, price index, and exchange rate data were obtained from Wid.world, and in instances where any of these variables were unavailable, such as for the Former Soviet countries prior to the dissolution of the USSR, it was assumed that the variables followed the trajectory of the parent economy; additionally, data for certain small territories considered as tax havens, like Bonaire, St Eustatius, and Saba, were sourced from regional statistics offices such as CBS Netherlands.

The primary source for data on foreign capital income is the IMF Balance of Payments (BOP), and in situations where IMF data is not accessible, alternative sources like the United Nations System of National Accounts (SNA) or OECD statistics are used; foreign capital income encompasses diverse components, including portfolio and other income received and paid, income received from tax havens, and reinvested earnings on portfolio investment. Foreign direct investment income comprises both officially recorded income and adjustments made for underreported FDI income due to profit shifting (Tørsløv et al., 2018).

If foreign capital income is not reported for a certain year but an aggregate is reported (e.g.: foreign income), then we use the foreign capital income-to-foreign income ratio of the closest year to fill in the missing value. If foreign capital income received or paid is available but the country does not report its decomposition (FDI or portfolio), then we assume each asset class capital income is proportional to the share of the asset class on aggregate wealth.

For missing values, predictions are made based on asset class stock, GDP in USD, exchange rates, and inflation rates. Return rates predictions are made separately for each asset class since FDI is assumed to be more profitable than portfolio. An Ordinary Least Squares (OLS) regression model is used, including country-specific fixed effects to account for time-invariant characteristics of each economy, as well as region-year fixed effects to capture unobserved shocks affecting the region uniformly. Specifically:

$$i^B_{\rho,ct} = \beta_0 + \beta_1 \frac{wealth^B_{\rho,ct}}{GDP_{ct}} + \beta_2 e_{ct} + \beta_3 \pi_{ct} + \alpha_c + \gamma_{rt} + \epsilon_{ct} \tag{A1}$$

Where i refers to the return rate, B to asset or liability, ρ to the asset class (FDI or portfolio), c to the country, t to the year, e to the nominal exchange rate with respect to US dollars, π to the inflation rate and α, γ and ϵ to the country fixed effects, region-year fixed effects and error term, respectively. Whenever data is still missing, we impute the value based on the regional average.

A.1 Data coverage

Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
AD	Andorra	2019-2021	.	2019-2021	.	1995-2022	1995-2022
AE	United Arab Emirates	.	.	.	.	1973-2022	1973-2022
AF	Afghanistan	1979-2020	.	1979-2020	.	2002-2022	2002-2022
AG	Antigua and Barbuda	1977-2022	.	1977-2022	.	1977-2022	1977-2022
AI	Anguilla	1990-2022	.	1990-2022	.	1990-2022	1990-2022
AL	Albania	1980-2022	.	1980-2022	.	1993-2022	1993-2022
AM	Armenia	1994-2022	1993	1993-2022	.	1996-2022	1996-2022
AO	Angola	1985-2022	.	1985-2022	.	1980-2022	1980-2022
AR	Argentina	1976-2022	.	1976-2022	.	1970-2022	1970-2022
AT	Austria	2005-2022	1970-2004	2005-2022	1970-2004	1970-2022	1970-2022
AU	Australia	1989-2022	1970-1988	1989-2022	1970-1988	1970-2022	1970-2022
AW	Aruba	1986-2022	.	1986-2022	.	1986-2022	1986-2022
AZ	Azerbaijan	1995-2022	1993-1994	1995-2022	1993-1994	1995-2022	1995-2022
BA	Bosnia and Herzegovina	1998-2022	.	1998-2022	.	1998-2022	1998-2022
BB	Barbados	1970-2017	.	1970-2017	.	1970-2022	1970-2022
BD	Bangladesh	1976-2022	.	1976-2022	.	1973-2022	1973-2022
BE	Belgium	2002-2022	1970-2001	2002-2022	1970-2001	1970-2022	1970-2022
BF	Burkina Faso	2005-2021	1970-2004	2005-2021	1970-2004	1974-2022	1974-2022
BG	Bulgaria	1980-2022	.	1980-2022	.	1991-2022	1991-2022
BH	Bahrain	1975-2022	.	1975-2022	.	1970-2022	1970-2022
BI	Burundi	1985-2018	1970-1984	1985-2018	1970-1984	1970-2022	1970-2022
BJ	Benin	1974-2021	.	1974-2021	.	1970-2022	1970-2022
BM	Bermuda	2006-2021	1996-2005	2006-2021	1997-2004	2001-2022	2001-2022
BN	Brunei	2001-2022	.	2001-2022	.	1985-2022	1985-2022
BO	Bolivia	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
BS	Bahamas	1976-2022	.	1976-2022	.	1970-2022	1970-2022
BT	Bhutan	2006-2022	1980-2000	2006-2022	1983-2000	1983-2022	1983-2022
BW	Botswana	1975-2022	1973-1974	1975-2022	1973-1974	1974-2022	1974-2022
BY	Belarus	1993-2022	1990-1992	1993-2022	1990-1992	1994-2022	1994-2022
BZ	Belize	1984-2022	1973-1976	1984-2022	1973-1976	1976-2022	1976-2022
CA	Canada	1970-2022	.	1970-2022	.	1970-2022	1970-2022
CD	Democratic Republic of Congo	2005-2021	.	2005-2021	.	1970-2022	1970-2022
CF	Central African Republic	1977-1994	2001-2007	1977-1994	2001-2007	1970-2022	1970-2022
CG	Congo	1978-2020	.	1978-2020	.	1970-2022	1970-2022

We first rely on IMF BOP data. If subcomponents (FDI/portfolio income) are missing but aggregates are reported (foreign capital income received or paid), we use shares asset class over total foreign wealth (asset or liability), interpolating if there are missing years in between the series. Then the same process is repeated for UN/OECD data. For missing values, predictions are made based on asset class stock, GDP in USD, exchange rates, and inflation rates. Missing values and zeros for capital income are treated as missreports (and thus estimated) unless foreign wealth in the EWN also reports zero values for such component.

Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
CH	Switzerland	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
CI	Cote d'Ivoire	2005-2022	1970-2000	2005-2022	1970-2000	1970-2022	1970-2022
CL	Chile	1975-2022	1970-1973	1975-2022	.	1970-2022	1970-2022
CM	Cameroon	1977-2022	1971-1976	1977-2022	1971-1976	1970-2022	1970-2022
CN	China	1982-2022	.	1982-2022	.	1981-2022	1981-2022
CO	Colombia	1970-2022	.	1970-2022	.	1970-2022	1970-2022
CR	Costa Rica	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
CU	Cuba	.	.	.	.	.	.
CV	Cape Verde	1977-2022	.	1977-2022	.	1981-2022	1981-2022
CW	Curaçao	2011-2022	1976-2010	2011-2022	1976-2010	1976-2022	1976-2022
CY	Cyprus	1976-2022	.	1976-2022	.	1973-2022	1973-2022
CZ	Czech Republic	1993-2022	1992	1993-2022	1992	1993-2022	1993-2022
DE	Germany	1971-2022	1970	1971-2022	1970	1970-2022	1970-2022
DJ	Djibouti	1991-2022	1976-1990	1991-2022	1990	1977-2022	1977-2022
DK	Denmark	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
DM	Dominica	1976-2022	.	1976-2022	.	1977-2022	1977-2022
DO	Dominican Republic	1970-2022	.	1970-2022	.	1970-2022	1970-2022
DZ	Algeria	1977-2022	1970-2004	1977-2022	1970-2004	1970-2022	1970-2022
EC	Ecuador	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
EE	Estonia	1992-2022	.	1992-2022	.	1992-2022	1992-2022
EG	Egypt	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
ER	Eritrea	1995-2000	.	1996-2000	.	1995-2022	1995-2022
ES	Spain	1975-2022	.	1975-2022	.	1970-2022	1970-2022
ET	Ethiopia	1977-2022	1972-1976	1977-2022	1972-1976	1970-2022	1970-2022
FI	Finland	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
FJ	Fiji	1979-2022	1977-1978	1979-2022	1977-1978	1977-2022	1970-2022
FM	Micronesia	2009-2014	.	2009-2014	.	1995-2022	1995-2022
FR	France	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
GA	Gabon	1978-2015	1972-1977	1978-2015	1972-1977	1970-2022	1970-2022
GB	United Kingdom	1970-2022	.	1970-2022	.	1970-2022	1970-2022
GD	Grenada	1977-2022	.	1977-2022	.	1971-2022	1971-2022
GE	Georgia	1997-2022	1996	1997-2022	1996	1995-2022	1995-2022
GG	Guernsey	.	.	.	.	2001-2022	2001-2022
GH	Ghana	1975-2022	.	1975-2022	.	1970-2022	1970-2022
GI	Gibraltar	.	.	.	.	1995-2022	1995-2022
GL	Greenland	.	.	.	.	.	.

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Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
GM	Gambia	1978-2022	.	1978-2022	.	1970-2022	1970-2022
GN	Guinea	1986-2022	.	1986-2022	.	1970-2022	1970-2022
GQ	Equatorial Guinea	1987-1996	.	1987-1996	.	1980-2022	1980-2022
GR	Greece	1976-2022	1970-1998	1976-2022	1970-1998	1970-2022	1970-2022
GT	Guatemala	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
GW	Guinea-Bissau	1982-2021	.	1982-2021	.	1980-2022	1980-2022
GY	Guyana	1977-2022	.	1977-2022	.	1970-2022	1970-2022
HK	Hong Kong	1998-2022	1993-1997	1998-2022	1993-1997	1979-2022	1979-2022
HN	Honduras	1974-2022	.	1974-2022	.	1970-2022	1970-2022
HR	Croatia	1993-2022	.	1993-2022	.	1996-2022	1996-2022
HT	Haiti	1971-2022	.	1971-2022	.	1970-2022	1970-2022
HU	Hungary	1982-2022	.	1982-2022	.	1982-2022	1982-2022
ID	Indonesia	1981-2022	.	1981-2022	.	1970-2022	1970-2022
IE	Ireland	2005-2022	1970-2004	2005-2022	1970-2004	1970-2022	1970-2022
IL	Israel	1970-2022	.	1970-2022	.	1970-2022	1970-2022
IM	Isle of Man	.	.	.	.	2001-2022	2001-2022
IN	India	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
IQ	Iraq	2005-2022	.	2005-2022	.	2005-2022	2005-2022
IR	Iran	1976-2000	1970-2018	1976-2000	1970-2018	1970-2022	1970-2022
IS	Iceland	1976-2022	.	1976-2022	.	1970-2022	1970-2022
IT	Italy	1970-2022	.	1970-2022	.	1970-2022	1970-2022
JE	Jersey	.	.	.	.	2001-2022	2001-2022
JM	Jamaica	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
JO	Jordan	1972-2022	.	1972-2022	.	1970-2022	1970-2022
JP	Japan	1996-2022	1970-1995	1996-2022	1970-1995	1970-2022	1970-2022
KE	Kenya	1975-2022	.	1975-2022	.	1970-2022	1970-2022
KG	Kyrgyz Republic	1995-2022	1991-1994	1993-2022	1991-1992	1993-2022	1993-2022
KH	Cambodia	1994-2022	.	1992-2022	.	1993-2022	1993-2022
KI	Kiribati	1979-2022	1972-1974	1979-2022	1972-1974	1988-2022	1988-2022
KM	Comoros	1980-2022	.	1980-2022	.	1979-2022	1979-2022
KN	Saint Kitts and Nevis	1980-2022	.	1980-2022	.	1981-2022	1980-2022
KP	North Korea	.	.	.	.	.	.
KR	South Korea	1976-2022	1970-1975	1976-2022	1970-1975	1971-2022	1971-2022
KS	Kosovo	2004-2022	.	2004-2022	.	2004-2022	2004-2022
KW	Kuwait	1975-2022	.	1975-2022	.	1974-2022	1974-2022
KY	Cayman Islands	2016-2021	1972-2015	2016-2021	1972-2015	1980-2022	1983-2022

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Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
KZ	Kazakhstan	1995-2022	1993-1994	1995-2022	1993-1994	1994-2022	1994-2022
LA	Laos	1984-2022	.	1984-2022	.	1977-2022	1977-2022
LB	Lebanon	2002-2022	1997-2001	2002-2022	1997-2001	1970-2022	1970-2022
LC	Saint Lucia	1976-2022	.	1976-2022	.	1976-2022	1976-2022
LI	Liechtenstein	.	.	.	.	1995-2022	1995-2022
LK	Sri Lanka	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
LR	Liberia	1979-2022	.	1979-2022	.	1970-2022	1970-2022
LS	Lesotho	1975-2022	1972-1974	1975-2022	.	1975-2022	1975-2022
LT	Lithuania	1993-2022	.	1993-2022	.	1992-2022	1992-2022
LU	Luxembourg	1999-2022	1970-1998	1999-2022	1970-1998	1990-2022	1990-2022
LV	Latvia	1992-2022	1990-1991	1992-2022	1990-1991	1992-2022	1992-2022
LY	Libya	1977-2021	1970-1976	1977-2021	1970-1976	1972-2022	1972-2022
MA	Morocco	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
MC	Monaco	.	.	.	.	.	.
MD	Moldova	1994-2022	1991-1993	1994-2022	1991-1993	1994-2022	1994-2022
ME	Montenegro	2007-2022	.	2007-2022	.	2006-2022	2006-2022
MG	Madagascar	1974-2022	1970-1973	1974-2022	1970-1973	1970-2022	1970-2022
MH	Marshall Islands	2005-2021	.	2005-2021	.	2005-2022	2001-2022
MK	Macedonia	1996-2022	.	1996-2022	.	1993-2022	1993-2022
ML	Mali	1975-2021	.	1975-2021	.	1970-2022	1970-2022
MM	Myanmar	1976-2019	.	1976-2019	.	1970-2022	1970-2022
MN	Mongolia	1981-2022	.	1981-2022	.	1992-2022	1992-2022
MO	Macao	2002-2022	.	2002-2022	.	1984-2022	1984-2022
MR	Mauritania	1975-2022	1973-1974	1975-2022	1973-1974	1970-2022	1970-2022
MS	Montserrat	1986-2022	.	1986-2022	.	1983-2022	1983-2022
MT	Malta	1971-2022	1970	1971-2022	1970	1970-2022	1970-2022
MU	Mauritius	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
MV	Maldives	1977-2022	.	1977-2022	.	1978-2022	1978-2022
MW	Malawi	1977-2021	1970-1972	1977-2021	1970-1972	1970-2022	1970-2022
MX	Mexico	1979-2022	1970-1978	1979-2022	1970-1978	1970-2022	1970-2022
MY	Malaysia	1974-2022	.	1974-2022	.	1970-2022	1970-2022
MZ	Mozambique	2005-2022	1996-2004	2005-2022	1996-2004	1980-2022	1980-2022
NA	Namibia	1990-2022	1989	1990-2022	1989	1989-2022	1989-2022
NC	New Caledonia	2002-2016	.	2002-2016	.	2002-2022	2002-2022
NE	Niger	1974-2022	.	1974-2022	.	1970-2022	1970-2022
NG	Nigeria	1977-2022	1973-1976	1977-2022	1973-1976	1970-2022	1970-2022

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Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
NI	Nicaragua	1977-2022	.	1977-2022	.	1970-2022	1970-2022
NL	Netherlands	1970-2022	.	1970-2022	.	1970-2022	1970-2022
NO	Norway	1975-2022	1970-1974	1975-2022	1970-1974	1970-2022	1970-2022
NP	Nepal	1976-2022	.	1976-2022	.	1970-2022	1970-2022
NR	Nauru	2008-2018	.	2008-2018	.	2008-2022	2008-2022
NZ	New Zealand	2000-2022	1971-1999	2000-2022	1971-1999	1970-2022	1970-2022
OM	Oman	1974-2022	.	1974-2022	.	1973-2022	1973-2022
PA	Panama	1977-2022	1970-1976	1977-2022	.	1970-2022	1970-2022
PE	Peru	1977-2022	.	1977-2022	.	1970-2022	1970-2022
PF	French Polynesia	2002-2016	.	2002-2016	.	2002-2022	2002-2022
PG	Papua New Guinea	1976-2021	1970-1975	1976-2021	1970-1975	1973-2022	1970-2022
PH	Philippines	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
PK	Pakistan	1976-2022	.	1976-2022	.	1970-2022	1970-2022
PL	Poland	1976-2022	.	1976-2022	.	1975-2022	1975-2022
PR	Puerto Rico	.	1970-2007	.	1970-2007	.	.
PS	Palestine	1995-2022	.	1995-2022	.	1998-2022	1998-2022
PT	Portugal	1975-2022	.	1975-2022	.	1972-2022	1972-2022
PW	Palau	2005-2022	.	2005-2022	.	2000-2022	2000-2022
PY	Paraguay	1975-2022	.	1975-2022	.	1970-2022	1970-2022
QA	Qatar	2011-2022	1996-2010	2011-2022	1996-2010	1970-2022	1970-2022
RO	Romania	1971-2022	.	1971-2022	.	1990-2022	1990-2022
RS	Serbia	2007-2022	2002-2006	2007-2022	2002-2006	1999-2022	1999-2022
RU	Russia	1994-2022	1992-1993	1994-2022	1992-1993	1993-2022	1993-2022
RW	Rwanda	2010-2022	1983-1989	2010-2022	1985-1989	1970-2022	1970-2022
SA	Saudi Arabia	1971-2022	1970	1971-2022	1970	1970-2022	1970-2022
SB	Solomon Islands	1975-2022	.	1975-2022	.	1977-2022	1977-2022
SC	Seychelles	1976-2022	.	1976-2022	.	1977-2022	1977-2022
SD	Sudan	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
SE	Sweden	1970-2022	.	1970-2022	.	1970-2022	1970-2022
SG	Singapore	1972-1994	.	1972-1994	.	1970-2022	1970-2022
SI	Slovenia	1992-2022	.	1992-2022	.	1992-2022	1992-2022
SK	Slovak Republic	1993-2022	.	1993-2022	.	1993-2022	1993-2022
SL	Sierra Leone	1977-2022	1970-1976	1977-2022	1970-1976	1970-2022	1970-2022
SM	San Marino	.	2012-2021	.	2012-2021	1993-2022	1993-2022
SN	Senegal	1974-2021	.	1974-2021	.	1970-2022	1970-2022
SO	Somalia	.	1972-1981	.	1972-1981	1970-2022	1970-2022

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Iso	Country	Capital income received		Capital income paid		Foreign wealth	
		IMF	UN/OECD	IMF	UN/OECD	Assets	Liabilities
SR	Suriname	2005-2022	1972-2004	2005-2022	1972-2004	1976-2022	1976-2022
SS	South Sudan	2014-2019	.	2014-2022	.	2011-2022	2011-2022
ST	Sao Tome and Principe	1974-2022	.	1974-2022	.	1987-2022	1987-2022
SV	El Salvador	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
SX	Sint Maarten (Dutch part)	2011-2022	1976-2009	2011-2022	1976-2009	1976-2022	1976-2022
SY	Syria	1977-2010	.	1977-2010	.	1970-2011	1970-2010
SZ	Swaziland	1974-2022	1970	1974-2022	1970	1970-2022	1970-2022
TC	Turks and Caicos Islands	2014-2018	.	2014-2018	.	1995-2022	1995-2022
TD	Chad	1977-1994	1970-2010	1977-1994	1970-2010	1970-2022	1970-2022
TG	Togo	1974-2020	1970-1973	1974-2020	1970-1973	1970-2022	1970-2022
TH	Thailand	1975-2022	1974	1975-2022	.	1970-2022	1970-2022
TJ	Tajikistan	2002-2022	.	2002-2022	2000-2001	1997-2022	1997-2022
TL	Timor	2006-2022	.	2006-2022	.	2005-2022	2005-2022
TM	Turkmenistan	.	.	.	.	1993-2022	1993-2022
TN	Tunisia	1976-2022	1970-1975	1976-2022	1970-1975	1970-2022	1970-2022
TO	Tonga	1971-2022	1970-2001	1971-2022	1970-2001	1980-2022	1980-2022
TR	Turkey	1974-2022	1970-1972	1974-2022	1970-1973	1970-2022	1970-2022
TT	Trinidad and Tobago	1975-2022	.	1975-2022	.	1970-2022	1970-2022
TV	Tuvalu	2001-2022	.	2001-2022	.	2001-2022	2001-2022
TW	Taiwan	.	.	.	.	1976-2022	1976-2022
TZ	Tanzania	1976-2022	.	1976-2022	.	1970-2022	1970-2022
UA	Ukraine	1996-2022	1989-1995	1996-2022	1989-1995	1994-2022	1994-2022
UG	Uganda	1980-2022	.	1980-2022	.	1970-2022	1970-2022
US	United States	1970-2022	.	1970-2022	.	1970-2022	1970-2022
UY	Uruguay	1978-2022	.	1978-2022	.	1970-2022	1970-2022
UZ	Uzbekistan	2005-2022	.	2005-2022	.	1993-2022	1993-2022
VC	Saint Vincent and the Grenadines	1978-2022	.	1978-2022	.	1976-2022	1976-2022
VE	Venezuela	1970-2016	2017-2019	1970-2016	2017-2019	1970-2022	1970-2022
VG	British Virgin Islands	.	1984-1999	.	1984-1999	1980-2022	1980-2022
VN	Vietnam	2012-2014	.	2012-2014	.	1995-2022	1989-2022
VU	Vanuatu	1982-2022	.	1982-2022	.	1973-2022	1973-2022
WS	Samoa	1977-2022	.	1977-2022	.	1970-2022	1970-2022
YE	Yemen	2005-2016	1990-2020	2005-2016	1990-2020	1990-2022	1990-2022
ZA	South Africa	1970-2022	.	1970-2022	.	1970-2022	1970-2022
ZM	Zambia	1978-2022	1970-1977	1978-2022	1970-1977	1970-2022	1970-2022
ZW	Zimbabwe	1977-2020	1975-1999	1977-2020	1975-1999	1976-2022	1970-2022

We first rely on IMF BOP data. If subcomponents (FDI/portfolio income) are missing but aggregates are reported (foreign capital income received or paid), we use shares asset class over total foreign wealth (asset or liability), interpolating if there are missing years in between the series. Then the same process is repeated for UN/OECD data. For missing values, predictions are made based on asset class stock, GDP in USD, exchange rates, and inflation rates. Missing values and zeros for capital income are treated as missreports (and thus estimated) unless foreign wealth in the EWN also reports zero values for such component.

A.2 Corrections

The adjustments made ensured that the net foreign capital income and net foreign wealth collectively sum up to zero globally, contingent upon the presence of all 216 economies, following the principles outlined in the hidden wealth literature pioneered by Zucman (2013). These corrections address the critique of *dark matter* presented by Hausmann and Sturzenegger (2006), who argue that the exorbitant privilege stems from the mismeasurement of U.S. foreign assets.

Net foreign capital income is composed by: Net foreign direct investment income (Net officially recorded + Shifted profits = 0 at the global level) and Net portfolio and other income (Net officially recorded + Received from tax havens = 0 at the global level + Net reinvested earnings on portfolio investment = 0 at the global level).

Hidden wealth: To correct the negative figures on aggregate wealth, the mismatch was addressed by assigning assets hidden in tax havens, along with their respective foreign income, to each individual country. This allocation methodology follows the approach outlined in Alstadsæter et al. (2018). The list of 41 tax havens is taken from Tørsløv et al. (2018), which builds upon (Hines Jr and Rice, 1994):

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.

For countries not included in Tørsløv et al. (2018), the value was completed using the regional average of the offshore wealth-to-GDP ratio. It is important to note that tax havens, with the exception of Belgium, Ireland, and the Netherlands, were not assigned any offshore wealth.

List of countries with imputed offshore wealth share: Belarus, Brunei, Costa Rica, Djibouti, Dominica, French Polynesia, Gambia, Greenland, Guyana, Kiribati, Kosovo, Liberia, Malaysia, Maldives, Montenegro, Montserrat, Myanmar, Nauru, New Caledonia, North Korea, Palau, Palestine, Papua New Guinea, Samoa, San Marino, Solomon Islands, Somalia, South Sudan, Timor, Tuvalu, Uruguay, Vanuatu.

Figure A1

Global foreign wealth as a share of global GDP

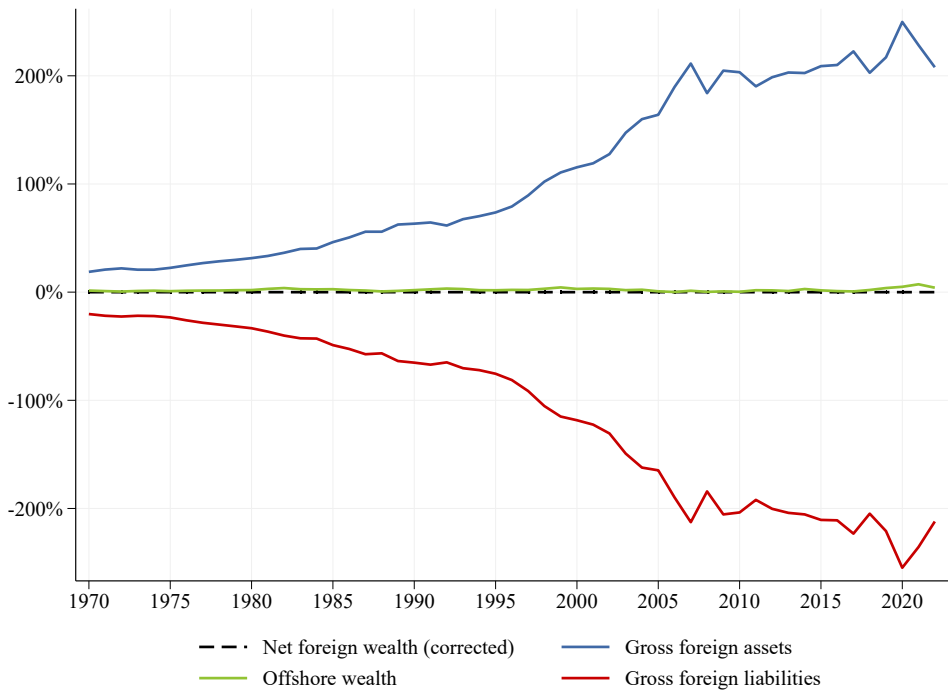
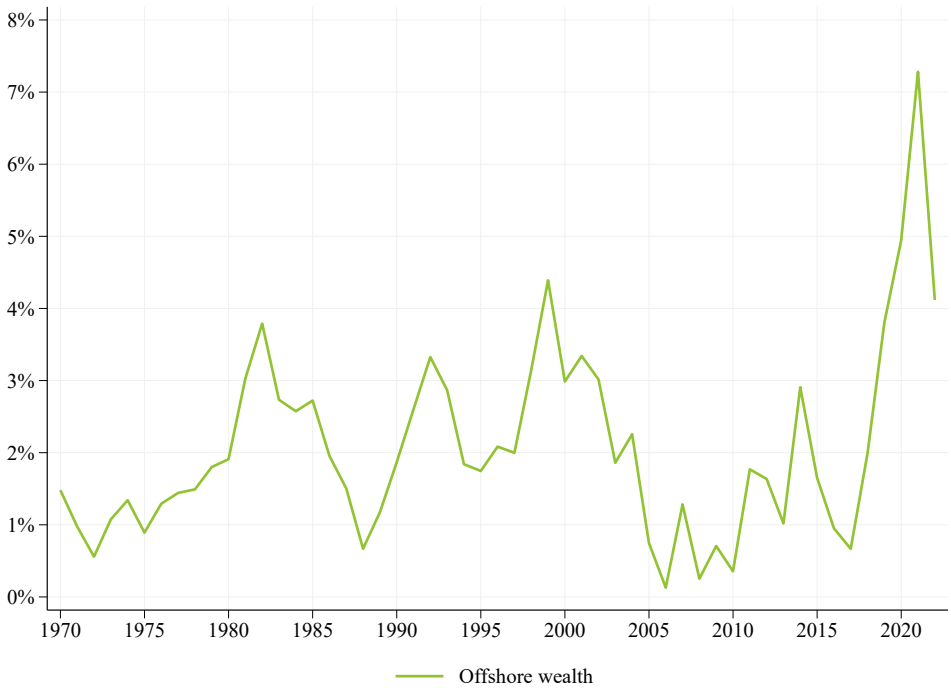


Figure A2

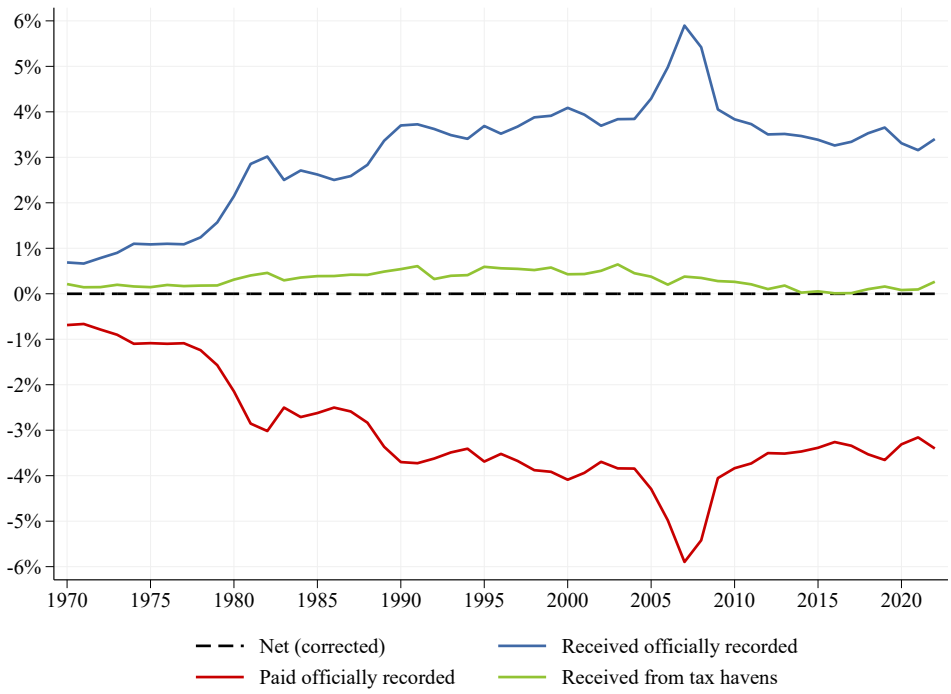
Global offshore wealth as a share of global GDP



Missing portfolio income: The same methodology as the one used for hidden wealth is applied. Importantly, global net wealth and global net portfolio income figures before correction are not proportional, meaning that rate of return on missing assets is not constant throughout the period.

Figure A3

Global portfolio income as a share of global GDP



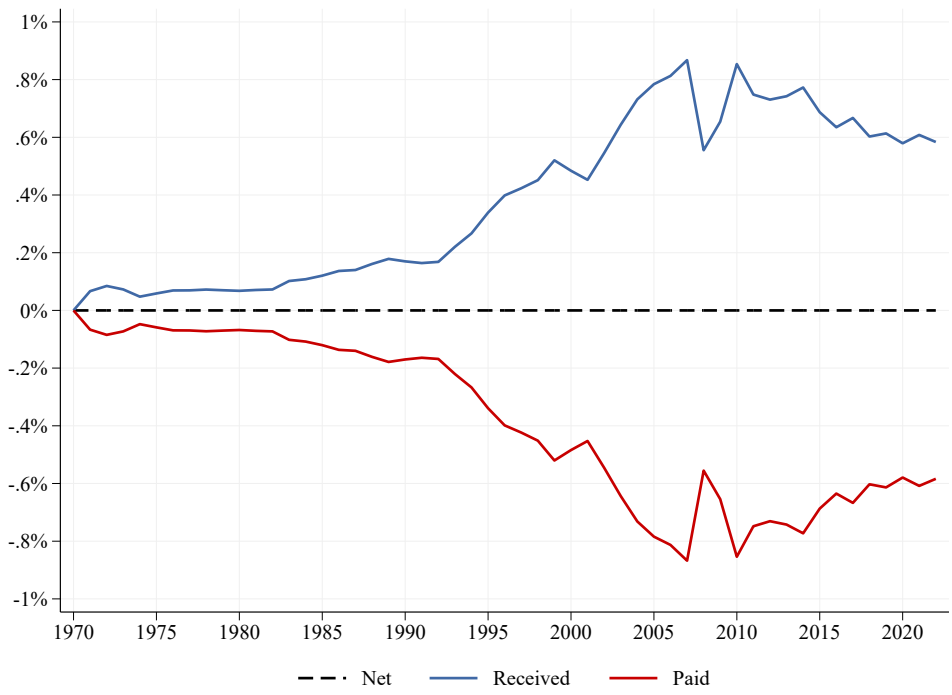
Retained earnings on portfolio investment: The income that a company retains after having paid its suppliers, its employees, its shareholders, and its corporate income tax bill is what we call "undistributed profits" or "retained earnings." This flow is part of national income.

However, imagine that a company in country A has some undistributed profits, but is actually owned by residents of country B. If the ownership takes the form of portfolio investment, meaning that the residents of country B do not have a direct control over the company's decisions, then the SNA currently considers that the entire flow of undistributed profits belongs to the national income of country A, not country B.

We correct SNA following Blanchet et al. (2021), by redistributing the corresponding share to country B. The correction estimates both the flow of foreign retained earnings that accrue to residents and the flow of domestic retained earnings that accrue to foreigners. The difference between these two items leads to our adjustment. We completed the procedure for all 216 countries and made sure that aggregates add up to 0. Tax Havens do not play a role here.

Figure A4

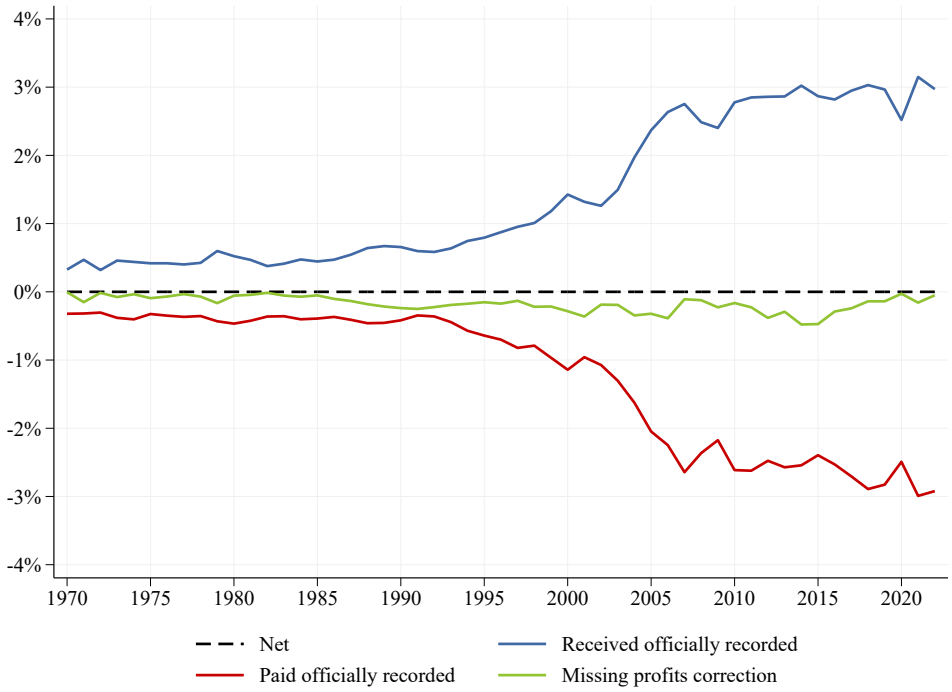
Global reinvested earnings on portfolio investment as a share of global GDP



Shifted profits: In contrast to the deficit observed in portfolio income, the world experiences a surplus in FDI income (Tørsløv et al., 2018), (Wier and Zucman, 2022). This surplus can be attributed to profit shifting practices, particularly in tax havens. In tax havens, foreign firms tend to exhibit significantly higher profits-to-wage ratios compared to local firms, indicating that parent companies from high-tax countries may be shifting profits to them to mitigate their corporate tax liabilities. It is estimated that approximately 40% of multinational profits are shifted through mechanisms such as royalty payments, management fees, and interest payments. Furthermore, profits generated in tax havens often go unrecorded or are under-counted, while tax havens report lower levels of FDI income than what their partner countries record as receiving. Hence, we correct for this discrepancy and we also correct the estimates for the economies that are under-reporting FDI income received following Tørsløv et al. (2018), for the first three years and for the last fifteen years of the period since it is when some of the years show negative aggregate values after imputations of missing countries.

Figure A5

Global foreign direct investment income as a share of global GDP



B Additional figures

B.1 Foreign Wealth

B.1.1 G8 vs BRICS

Table 1

Decomposition 1970-2000. Real USD

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP trillions 2000 USD		
Countries	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%

Table 2

Decomposition 2000-2022. Real USD

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP trillions 2022 USD		
Countries	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%
United Kingdom	-1%	4%	-1%	30%	-103%	-1%	-2%	-21%	-2%	105%	2	3	140%
United States	-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%

B.1.2 All countries

Table 3

Decomposition 1970-2022. Real USD. Europe

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Albania	-9%	-52%	-2%	-22%	-396%	34%	0%	226%	43%	67%	4	19	460%
Andorra	138%	350%	38%	315%	-2150%	-69%	0%	-42%	0%	2257%	1	3	363%
Austria	-6%	19%	-2%	8%	-115%	-2%	0%	-22%	-5%	157%	149	469	314%
Belgium	9%	67%	3%	39%	-114%	38%	-10%	-48%	-6%	165%	195	581	298%
Bosnia and Herzegovina	-2%	-24%	0%	-35%	-519%	141%	-2%	459%	42%	-110%	2	24	1461%
Bulgaria	-13%	-20%	-3%	-103%	-262%	25%	1%	65%	42%	215%	22	90	402%
Croatia	-3%	-23%	-1%	-70%	-406%	34%	-2%	118%	9%	295%	29	72	248%
Cyprus	20%	-102%	3%	-63%	-434%	3%	-3%	7%	0%	385%	4	29	745%
Czech Republic	2%	-19%	1%	-117%	-12%	2%	1%	1%	-20%	125%	116	287	247%
Denmark	-18%	62%	-7%	15%	4%	-7%	0%	-32%	-1%	88%	146	399	273%
Estonia	1%	-18%	0%	-83%	-196%	15%	4%	36%	20%	186%	12	38	316%
Finland	-30%	-1%	-9%	-30%	96%	2%	-1%	-23%	1%	-37%	81	281	346%
France	4%	-18%	1%	51%	-55%	14%	1%	-47%	0%	16%	966	2679	277%
Germany	8%	77%	3%	51%	150%	-1%	-3%	-50%	-9%	-65%	1402	3877	277%
Gibraltar	132%	1665%	17%	1896%	-5592%	-5%	7%	22%	6%	5314%	0	3	796%
Greece	5%	-110%	2%	-16%	-527%	-5%	12%	105%	27%	292%	97	217	224%
Guernsey	293%	3401%	67%	3400%	1%	-6%	9%	40%	8%	-117%	1	5	438%
Hungary	-16%	-52%	-6%	-138%	-12%	9%	5%	-21%	15%	97%	64	170	266%
Iceland	-13%	32%	-2%	-65%	-41%	7%	1%	-10%	7%	135%	5	29	583%
Ireland	-7%	-115%	0%	-377%	262%	-3%	2%	-7%	-31%	40%	38	531	1406%
Isle of Man	237%	-190%	34%	1108%	1%	-6%	11%	35%	9%	-1380%	1	6	694%
Italy	5%	8%	2%	-8%	-15%	6%	0%	-23%	-1%	46%	842	1955	232%
Jersey	228%	-158%	86%	1432%	0%	-5%	10%	62%	10%	-1753%	3	7	264%
Kosovo	10%	-15%	5%	3%	1813%	55%	1%	228%	19%	-2136%	5	9	205%
Latvia	4%	-26%	2%	-50%	-156%	41%	4%	74%	17%	42%	20	41	203%
Liechtenstein	91%	959%	15%	425%	-14%	-5%	8%	35%	7%	488%	1	8	629%
Lithuania	2%	-7%	1%	-58%	-254%	2%	5%	51%	10%	236%	28	71	257%
Luxembourg	25%	48%	4%	628%	-254%	-376%	-2%	-6%	-13%	65%	14	81	577%
Malta	90%	52%	5%	-283%	-150%	1%	-13%	22%	7%	462%	1	18	1698%
Moldova	-7%	-41%	-6%	-55%	-289%	247%	0%	328%	-1%	-267%	11	14	128%
Monaco	6%	312%	1%	-880%	-13%	-5%	7%	38%	7%	1156%	2	9	480%
Montenegro	0%	-119%	0%	-44%	-641%	106%	1%	121%	-1%	338%	2	6	260%
Netherlands	18%	77%	6%	130%	60%	-16%	-7%	-34%	-2%	-61%	329	1004	306%
North Macedonia	-4%	-62%	-2%	-60%	-407%	20%	1%	392%	0%	-7%	5	14	284%
Norway	-10%	208%	-2%	115%	168%	-15%	1%	-30%	-3%	-27%	109	566	517%
Poland	-23%	-35%	-5%	-95%	-92%	1%	2%	20%	-16%	150%	139	688	494%
Portugal	-16%	-79%	-5%	-43%	-310%	2%	6%	120%	24%	127%	84	254	304%
Romania	-3%	-42%	-1%	-66%	-135%	15%	2%	40%	12%	90%	58	301	522%
San Marino	24%	177%	7%	20%	-268%	52%	1%	225%	16%	124%	0	2	357%
Serbia	-9%	-85%	-4%	-72%	-315%	10%	1%	317%	-23%	1%	27	64	238%
Slovakia	0%	-60%	0%	-59%	-85%	29%	2%	-6%	10%	50%	32	115	363%
Slovenia	0%	0%	0%	-29%	-174%	10%	-5%	-3%	-17%	218%	16	60	374%
Spain	-7%	-54%	-2%	-39%	-165%	3%	3%	-11%	8%	149%	371	1397	377%
Sweden	-1%	36%	0%	31%	80%	3%	-1%	-35%	-4%	-37%	164	572	348%
Switzerland	72%	90%	28%	132%	125%	-77%	9%	-37%	-20%	-70%	322	818	254%
United Kingdom	8%	4%	3%	55%	-147%	-1%	-3%	-30%	-3%	129%	878	2668	304%

Decomposition 1970-2022. Real USD. China & East Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
China	2%	14%	0%	-13%	93%	1%	0%	4%	0%	-72%	639	18847	2949%
Hong Kong	25%	490%	2%	-125%	-2559%	-2%	9%	-22%	-2%	3188%	30	359	1180%
Japan	6%	77%	2%	71%	74%	0%	-1%	-9%	-4%	-56%	1206	3905	324%
Korea	-26%	46%	-1%	-18%	63%	0%	0%	-2%	0%	4%	61	1678	2735%
Macao	22%	439%	2%	-334%	-455%	-22%	28%	-147%	38%	1330%	3	24	933%
Mongolia	-12%	-240%	-2%	-125%	-81%	-1%	0%	59%	14%	-104%	3	17	533%
North Korea	-6%	28%	-3%	-114%	-291%	0%	0%	44%	8%	384%	9	15	171%
Taiwan	16%	233%	1%	56%	383%	0%	0%	18%	3%	-227%	34	765	2225%

Decomposition 1970-2022. Real USD. South & South-East Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Afghanistan	-37%	37%	-19%	2%	-650%	-11%	0%	369%	150%	198%	7	14	192%
Bangladesh	-9%	-17%	-1%	-14%	-45%	0%	0%	104%	4%	-63%	45	452	995%
Bhutan	19%	-130%	1%	-59%	-752%	-27%	0%	141%	66%	500%	0	3	2406%
Brunei Darussalam	129%	521%	38%	221%	1363%	-3%	3%	-82%	28%	-1046%	5	17	344%
Cambodia	-13%	-141%	0%	-66%	63%	-9%	2%	150%	17%	-297%	0	30	6127%
India	-14%	-29%	-1%	-26%	-54%	0%	0%	50%	0%	2%	198	3087	1563%
Indonesia	-26%	-19%	-1%	-63%	118%	-2%	2%	10%	-2%	-82%	35	1310	3704%
Lao PDR	-6%	-200%	0%	-58%	-232%	2%	2%	48%	0%	38%	1	15	1815%
Malaysia	-11%	4%	0%	-106%	445%	-6%	2%	-26%	0%	-304%	15	406	2682%
Maldives	-3%	-178%	0%	-141%	-589%	2%	0%	-96%	11%	636%	0	6	4621%
Myanmar	-6%	-58%	0%	-86%	-24%	11%	2%	45%	39%	-46%	3	64	1822%
Nepal	12%	-5%	1%	6%	-282%	12%	0%	355%	10%	-107%	5	42	826%
Pakistan	-27%	-34%	-2%	-36%	-113%	0%	0%	153%	2%	-38%	33	360	1092%
Papua New Guinea	-40%	-34%	-8%	-116%	313%	-13%	5%	72%	4%	-292%	6	31	494%
Philippines	-23%	-8%	-3%	-64%	39%	47%	2%	128%	0%	-157%	50	401	804%
Singapore	33%	177%	1%	360%	-594%	-4%	-2%	-25%	16%	424%	16	463	2819%
Sri Lanka	-13%	-74%	-1%	-42%	-151%	-1%	0%	156%	4%	-37%	7	67	921%
Thailand	-3%	-4%	0%	-129%	59%	8%	-1%	35%	-1%	26%	40	490	1240%
Timor-Leste	23%	504%	1%	358%	-278%	34%	360%	588%	40%	-600%	0	3	1606%
Viet Nam	-5%	-48%	0%	-67%	-26%	12%	2%	66%	9%	-42%	20	409	2054%

Decomposition 1970-2022. Real USD. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Armenia	-3%	-52%	-1%	-51%	-304%	105%	-1%	164%	9%	26%	6	21	348%
Azerbaijan	-1%	3%	0%	-84%	196%	-4%	-1%	50%	0%	-154%	16	79	503%
Belarus	-1%	-44%	0%	-61%	-335%	16%	0%	8%	9%	320%	17	57	339%
Georgia	-5%	-112%	-3%	-91%	-301%	122%	-1%	230%	3%	-71%	12	25	205%
Kazakhstan	-1%	-37%	0%	-155%	215%	-14%	1%	1%	0%	-85%	70	221	315%
Kyrgyzstan	-3%	-72%	-1%	-71%	-453%	123%	1%	419%	12%	-102%	5	12	234%
Russian Federation	-2%	28%	-1%	-50%	261%	-6%	0%	-7%	-7%	-162%	1178	2758	234%
Tajikistan	-13%	-37%	-5%	-31%	-261%	228%	1%	302%	28%	-300%	4	10	245%
Turkmenistan	6%	-11%	1%	-55%	99%	114%	1%	181%	10%	-362%	8	56	748%
Ukraine	-4%	0%	-5%	-131%	-1%	100%	2%	147%	3%	-115%	246	176	72%
Uzbekistan	1%	-4%	0%	-21%	-163%	66%	1%	81%	1%	31%	16	80	512%

Decomposition 1970-2022. Real USD. North America & Oceania

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Australia	-22%	-36%	-5%	-63%	-2%	-3%	0%	1%	-1%	37%	365	1614	442%
Bermuda	-104%	7810%	-47%	-7113%	-1619%	712%	16%	-35%	12%	15885%	3	8	220%
Canada	-36%	33%	-9%	-21%	19%	-3%	0%	-3%	-1%	52%	532	2096	394%
Fiji	-10%	-127%	-3%	-135%	-735%	37%	6%	141%	28%	535%	1	5	340%
French Polynesia	1%	-24%	0%	-1%	-1049%	400%	186%	427%	-1%	14%	3	6	199%
Greenland	-14%	-14%	-4%	-32%	-243%	-3%	0%	-10%	-1%	279%	1	3	381%
Kiribati	205%	457%	106%	555%	-472%	170%	354%	815%	-118%	-954%	0	0	194%
Marshall Islands	202%	-12217%	41%	-356%	-68185%	369%	147%	1212%	51%	54505%	0	0	490%
Micronesia	38%	118%	12%	-47%	-7144%	-26%	120%	1551%	-85%	5738%	0	0	315%
Nauru	36%	264%	62%	61%	3923%	16%	129%	1137%	-467%	-4598%	0	0	58%
New Caledonia	-7%	-212%	-2%	-33%	-284%	213%	6%	214%	-3%	-322%	3	10	344%
New Zealand	-50%	-45%	-13%	-95%	23%	1%	0%	6%	3%	31%	65	244	377%
Palau	29%	-157%	17%	-209%	-946%	-30%	11%	599%	40%	361%	0	0	175%
Samoa	26%	-31%	11%	-75%	-1130%	-4%	0%	828%	117%	222%	0	1	245%
Solomon Islands	-3%	-5%	-1%	-99%	260%	-6%	10%	283%	47%	-499%	0	2	458%
Tonga	-1%	-10%	0%	23%	-1279%	71%	1%	977%	132%	66%	0	0	358%
Tuvalu	88%	465%	27%	394%	-3105%	463%	425%	1086%	564%	611%	0	0	327%
USA	6%	-62%	1%	37%	-88%	-2%	0%	-14%	-1%	3%	6187	25440	411%
Vanuatu	-12%	-45%	-2%	-106%	-149%	-3%	2%	330%	95%	-211%	0	1	534%

Decomposition 1970-2022. Real USD. Latin America

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Anguilla	14%	-237%	1%	-33%	-948%	-9%	8%	11%	-53%	786%	0	0	994%
Antigua and Barbuda	-21%	-112%	-4%	-152%	-554%	-5%	9%	25%	-108%	675%	0	2	559%
Argentina	-15%	30%	-4%	-57%	86%	0%	0%	6%	1%	0%	194	658	340%
Aruba	-20%	-98%	-1%	11%	580%	-3%	0%	-54%	11%	-642%	0	4	1416%
Bahamas	-30%	-277%	-12%	-1377%	-1897%	34%	11%	15%	105%	2846%	5	13	247%
Barbados	-65%	112%	-39%	-1691%	-945%	42%	0%	25%	1%	2720%	3	6	165%
Belize	-3%	-119%	0%	-181%	-619%	-11%	9%	131%	7%	546%	0	3	1041%
Bolivia	-73%	-20%	-15%	-87%	-40%	2%	0%	94%	9%	18%	9	44	485%
Bonaire, Sint Eustatius and Saba	6%	312%	0%	-1130%	-378%	-4%	10%	57%	10%	1747%	0	1	1649%
Brazil	-25%	-39%	-4%	-89%	48%	0%	0%	6%	0%	-1%	335	1887	563%
Cayman Islands	-772%	-13657%	-44%	-25614%	-995%	-17%	8%	-203%	-1%	13208%	0	7	1738%
Chile	-55%	-17%	-8%	-95%	93%	-2%	0%	16%	-1%	-21%	41	286	694%
Colombia	-22%	-47%	-3%	-52%	10%	0%	0%	46%	8%	-56%	44	358	817%
Costa Rica	-27%	-55%	-3%	-94%	209%	-1%	0%	29%	1%	-195%	8	65	822%
Cuba	-3%	-37%	-3%	-214%	-694%	-15%	0%	1763%	323%	-1196%	770	633	82%
Curacao	-169%	-2086%	-15%	-4912%	-438%	-13%	-9%	201%	40%	3060%	0	3	1136%
Dominica	-15%	-55%	-4%	-104%	-984%	-16%	0%	246%	212%	595%	0	1	368%
Dominican Republic	-16%	-51%	-1%	-82%	-173%	5%	0%	137%	-2%	65%	9	115	1251%
Ecuador	-15%	-19%	-3%	-89%	105%	-4%	0%	86%	7%	-120%	20	115	574%
El Salvador	-10%	-45%	-4%	-104%	-363%	1%	0%	481%	8%	-64%	12	32	263%
Grenada	-33%	-146%	-6%	-160%	-941%	-56%	9%	159%	58%	790%	0	1	583%
Guatemala	-11%	-2%	-2%	-36%	-170%	2%	0%	221%	2%	-20%	16	95	613%
Guyana	-45%	-99%	-7%	-78%	-115%	-6%	0%	96%	44%	-33%	2	15	622%
Haiti	-9%	-6%	-4%	-8%	-406%	-3%	0%	532%	18%	-133%	10	20	200%
Honduras	-21%	-53%	-3%	-124%	17%	-6%	0%	347%	17%	-301%	5	32	655%
Jamaica	-110%	-129%	-63%	-211%	-783%	30%	0%	437%	-5%	468%	10	17	173%
Mexico	-15%	-39%	-3%	-95%	-4%	0%	0%	54%	-1%	10%	254	1467	578%
Montserrat	4%	119%	3%	-46%	-6251%	-47%	0%	1526%	282%	4652%	0	0	118%
Nicaragua	-25%	-105%	-10%	-139%	-341%	1%	0%	296%	107%	-19%	6	16	250%
Panama	-85%	-91%	-8%	-118%	30%	8%	7%	14%	-10%	-14%	7	77	1072%
Paraguay	-19%	-27%	-2%	-100%	-213%	35%	0%	35%	1%	217%	5	43	921%
Peru	-53%	-41%	-11%	-130%	19%	1%	0%	46%	-2%	37%	51	246	480%
Puerto Rico	6%	312%	2%	-1545%	-2041%	-6%	11%	73%	12%	3806%	39	120	305%
Saint Kitts and Nevis	15%	-81%	1%	-232%	-1118%	-1%	16%	121%	70%	1061%	0	1	1079%
Saint Lucia	-2%	-53%	0%	-171%	-648%	-1%	15%	64%	17%	671%	0	2	652%
Saint Vincent and the Grenadines	15%	-171%	3%	-106%	136%	5%	10%	176%	48%	-442%	0	1	453%
Sint Maarten (Dutch part)	-176%	-66%	-9%	117%	-529%	-44%	13%	147%	32%	208%	0	2	1884%
Suriname	-4%	-90%	-2%	-157%	360%	-12%	0%	70%	7%	-356%	2	4	204%
Trinidad and Tobago	-57%	11%	-14%	-151%	1027%	-10%	0%	1%	0%	-843%	7	30	412%
Turks and Caicos Islands	2%	429%	0%	37%	-849%	-5%	9%	-129%	5%	1361%	0	1	4084%
Uruguay	-17%	-17%	-5%	-101%	23%	0%	0%	8%	-1%	60%	24	74	315%
Venezuela	34%	275%	36%	-25%	1650%	-1%	0%	-26%	36%	-1394%	137	129	95%
Virgin Islands, British	27%	25773%	1%	-63527%	-5621%	-4%	10%	31%	8%	94874%	0	1	1822%

Decomposition 1970-2022. Real USD. MENA

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Algeria	-22%	19%	-4%	-92%	193%	1%	0%	40%	0%	-119%	36	189	524%
Bahrain	6%	37%	1%	-72%	-304%	-269%	8%	-154%	29%	799%	5	44	959%
Egypt	-12%	-51%	-1%	-17%	-115%	0%	0%	132%	15%	-64%	30	454	1497%
Iran	-4%	66%	-1%	0%	197%	-6%	0%	34%	36%	-194%	110	367	333%
Iraq	-62%	15%	-4%	-413%	365%	3%	0%	47%	16%	2%	17	263	1526%
Israel	-4%	43%	0%	-33%	-15%	-28%	-1%	107%	-1%	15%	51	504	986%
Jordan	82%	-61%	10%	74%	-750%	27%	-1%	501%	-1%	79%	6	49	856%
Kuwait	40%	585%	20%	579%	1025%	-2%	-1%	-324%	9%	-721%	89	175	196%
Lebanon	11%	-319%	5%	80%	-1684%	0%	12%	219%	33%	1017%	17	39	230%
Libya	-5%	407%	-3%	-1%	1599%	-2%	0%	-133%	14%	-1068%	25	46	180%
Morocco	-11%	-50%	-1%	-42%	-215%	1%	0%	173%	-3%	37%	15	131	872%
Oman	64%	-32%	5%	-107%	371%	-8%	-1%	-216%	2%	-79%	10	115	1188%
Palestine	24%	28%	13843%	4147%	-211208%	60869%	-1%	61464%	11453%	59461%	10894	19	0%
Qatar	73%	186%	2%	-52%	485%	32%	-1%	-133%	-1%	-146%	6	235	3628%
Saudi Arabia	73%	129%	12%	105%	642%	-3%	-1%	-173%	11%	-465%	181	1108	612%
Syrian Arab Republic	-4%	59%	-2%	-141%	-1869%	72%	-2%	280%	4%	1715%	6	19	293%
Tunisia	-54%	-151%	-7%	-100%	-242%	16%	0%	130%	5%	47%	6	47	786%
Turkey	-2%	-31%	0%	-13%	-109%	0%	-1%	19%	0%	71%	88	899	1026%
United Arab Emirates	189%	248%	13%	143%	204%	37%	-1%	95%	9%	-253%	36	507	1408%
Yemen	-32%	35%	-6%	-10%	-556%	33%	-1%	957%	24%	-405%	2	11	554%

Decomposition 1970-2022. Real USD. Sub-Saharan Africa

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Angola	-35%	-13%	-9%	-179%	703%	-17%	1%	15%	1%	-528%	33	125	379%
Benin	-3%	-43%	0%	-13%	-183%	-3%	-1%	71%	26%	61%	2	17	783%
Botswana	-32%	28%	-1%	-96%	-129%	0%	0%	140%	7%	107%	0	20	4310%
Burkina Faso	1%	-40%	0%	-31%	-181%	-2%	-2%	73%	31%	73%	2	19	1038%
Burundi	-2%	-77%	-1%	-15%	-342%	-3%	0%	384%	72%	-173%	1	4	274%
Cabo Verde	15%	-148%	1%	-51%	-631%	2%	0%	438%	15%	78%	0	2	1328%
Cameroon	-12%	-23%	-2%	-62%	66%	0%	-1%	19%	5%	-49%	6	43	682%
Central African Republic	-28%	-76%	-17%	-51%	24%	1%	1%	323%	123%	-481%	1	2	170%
Chad	-9%	-101%	-1%	-11%	138%	0%	1%	339%	0%	-567%	2	13	600%
Comoros	-6%	-4%	-1%	-5%	-330%	1%	0%	353%	40%	-60%	0	1	457%
Congo	-21%	-141%	-4%	-303%	1067%	-9%	-1%	11%	23%	-926%	3	16	555%
Cote d'Ivoire	-9%	-39%	-2%	-105%	153%	8%	0%	-30%	11%	-75%	12	70	564%
DR Congo	-1%	-45%	0%	-66%	-93%	-4%	1%	145%	-8%	-20%	31	65	209%
Djibouti	17%	-82%	3%	-29%	-729%	38%	0%	318%	10%	307%	1	4	636%
Equatorial Guinea	-19%	-129%	0%	-98%	1503%	-9%	1%	-19%	728%	-2234%	0	12	6893%
Eritrea	20%	-45%	12%	-1%	-532%	1%	0%	2392%	-6%	-1910%	1	2	167%
Ethiopia	-3%	-56%	0%	-5%	-147%	0%	0%	108%	-1%	-11%	16	142	904%
Gabon	-65%	-85%	-14%	-287%	1329%	-6%	1%	-60%	14%	-1063%	5	21	463%
Gambia	6%	-85%	1%	-25%	-491%	-10%	2%	276%	22%	140%	0	2	608%
Ghana	-9%	-36%	-1%	-50%	-119%	0%	0%	122%	8%	5%	11	74	659%
Guinea	-16%	40%	-2%	-29%	108%	-1%	-3%	34%	18%	-84%	3	21	728%
Guinea-Bissau	-46%	-33%	-13%	-22%	-347%	-34%	19%	236%	162%	-34%	0	2	363%
Kenya	0%	-50%	0%	18%	-204%	-1%	0%	130%	7%	0%	12	113	985%
Lesotho	2%	-30%	0%	-105%	-749%	1800%	11%	977%	132%	-2097%	0	2	640%
Liberia	-42%	-43%	-35%	-252%	-4183%	2%	2%	789%	284%	3350%	3	4	122%
Madagascar	-23%	-37%	-9%	-72%	-57%	-1%	0%	131%	29%	-57%	6	15	241%
Malawi	-22%	-63%	-4%	-82%	-233%	-1%	0%	146%	90%	22%	2	12	489%
Mali	-49%	-71%	-6%	-65%	-312%	1%	0%	174%	35%	103%	2	19	778%
Mauritania	-73%	-127%	-20%	-34%	123%	-75%	16%	160%	10%	-307%	3	10	366%
Mauritius	8%	234%	1%	717%	-338%	-2%	9%	2%	1%	-156%	1	13	1284%
Mozambique	-6%	-369%	-1%	-65%	-146%	6%	0%	101%	22%	-285%	2	18	957%
Namibia	-23%	0%	-5%	-29%	-202%	-5%	-1%	307%	16%	-80%	3	13	471%
Niger	-2%	-98%	0%	-22%	-148%	3%	-1%	76%	45%	-51%	4	15	420%
Nigeria	-18%	-14%	-3%	-71%	252%	0%	2%	82%	35%	-311%	92	488	530%
Rwanda	3%	-67%	0%	-23%	-158%	-6%	0%	136%	28%	-46%	1	13	1020%
Sao Tome and Principe	-39%	-116%	-9%	-13%	-126%	-3%	3%	154%	220%	-343%	0	1	451%
Senegal	-27%	-73%	-5%	-37%	-204%	10%	0%	150%	24%	-11%	5	28	552%
Seychelles	-4%	-37%	-1%	-222%	-1096%	-10%	-5%	63%	20%	1214%	0	2	694%
Sierra Leone	-3%	-78%	-1%	-66%	-300%	9%	0%	181%	52%	48%	1	4	317%
Somalia	-11%	-62%	-1%	-44%	-308%	2%	0%	198%	23%	69%	1	10	810%
South Africa	-41%	23%	-13%	-77%	100%	-13%	2%	-15%	-1%	40%	126	407	323%
South Sudan	3%	-59%	1%	-111%	107%	6%	0%	164%	31%	-258%	2	5	292%
Sudan	-103%	-232%	-20%	-102%	-99%	1%	0%	70%	-17%	-65%	15	76	518%
Swaziland	-18%	14%	-2%	-92%	117%	53%	-13%	241%	-1%	-290%	0	5	1204%
Tanzania	-23%	-54%	-3%	-23%	-154%	-1%	0%	53%	25%	49%	8	75	925%
Togo	-16%	0%	-3%	-25%	56%	16%	2%	170%	46%	-261%	2	8	495%
Uganda	-5%	-53%	0%	-26%	-118%	-9%	0%	104%	37%	-41%	5	48	1020%
Zambia	-124%	-91%	-26%	-129%	95%	-2%	0%	31%	29%	-89%	6	29	481%
Zimbabwe	-21%	-21%	-2%	-16%	-26%	-1%	0%	60%	13%	-47%	12	110	941%

Table 4

Decomposition 1970-2000. Real USD. Europe

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Albania	-9%	-13%	-5%	2%	-204%	15%	0%	179%	96%	-95%	4	8	192%
Andorra	138%	441%	53%	238%	-1682%	-43%	0%	-23%	0%	1898%	1	2	261%
Austria	-6%	-18%	-2%	-10%	-110%	2%	0%	-10%	-2%	115%	149	343	230%
Belgium	9%	65%	4%	22%	-60%	20%	-4%	-33%	-5%	121%	195	413	212%
Bosnia and Herzegovina	-2%	22%	0%	0%	-245%	146%	0%	375%	44%	-297%	2	13	805%
Bulgaria	-13%	-33%	-7%	-45%	-193%	1%	-1%	26%	71%	115%	22	44	196%
Croatia	-3%	-27%	-2%	-3%	-224%	3%	-2%	97%	0%	103%	29	44	154%
Cyprus	20%	-9%	5%	-105%	-392%	12%	-2%	34%	-2%	440%	4	16	418%
Czech Republic	2%	-7%	1%	-5%	-74%	3%	0%	10%	-39%	97%	116	167	144%
Denmark	-18%	-13%	-9%	-50%	-34%	3%	0%	-4%	0%	81%	146	285	195%
Estonia	1%	-48%	1%	-3%	-109%	1%	1%	61%	4%	-5%	12	18	154%
Finland	-30%	-143%	-12%	-54%	66%	2%	0%	-7%	0%	-138%	81	210	259%
France	4%	6%	2%	13%	-24%	0%	1%	-14%	-1%	28%	966	2139	221%
Germany	8%	5%	4%	14%	53%	0%	-1%	-29%	-2%	-33%	1402	3083	220%
Gibraltar	132%	886%	59%	428%	-2912%	-1%	2%	57%	6%	3248%	0	1	224%
Greece	5%	-22%	2%	17%	-224%	0%	2%	85%	13%	83%	97	226	233%
Guernsey	293%	2223%	126%	1185%	-2%	-1%	2%	54%	6%	853%	1	2	234%
Hungary	-16%	-69%	-11%	-79%	-19%	-11%	1%	-22%	0%	73%	64	95	149%
Iceland	-13%	-51%	-4%	-41%	-8%	2%	0%	-1%	1%	1%	5	16	318%
Ireland	-7%	-3%	-2%	-227%	87%	-4%	2%	5%	1%	136%	38	168	446%
Isle of Man	237%	2436%	59%	801%	2%	0%	2%	38%	5%	1528%	1	3	401%
Italy	5%	-4%	2%	-10%	-23%	3%	1%	-3%	0%	26%	842	1829	217%
Jersey	228%	1352%	99%	162%	-2%	-1%	2%	56%	6%	1030%	3	6	229%
Kosovo	10%	56%	11%	28%	2502%	88%	0%	356%	38%	-2968%	5	4	86%
Latvia	4%	-26%	4%	10%	18%	20%	-1%	61%	1%	-139%	20	21	105%
Liechtenstein	91%	793%	26%	176%	-13%	0%	2%	44%	5%	554%	1	4	357%
Lithuania	2%	-36%	2%	0%	-117%	-1%	2%	56%	-17%	40%	28	30	110%
Luxembourg	25%	216%	8%	533%	-241%	-163%	0%	-28%	-7%	115%	14	47	335%
Malta	90%	6%	14%	-149%	-455%	7%	-7%	57%	-3%	542%	1	7	665%
Moldova	-7%	-120%	-13%	-19%	31%	228%	0%	151%	4%	-501%	11	6	55%
Monaco	6%	532%	3%	-29%	-18%	-1%	2%	64%	7%	505%	2	4	221%
Montenegro	0%	-26%	0%	13%	-186%	69%	0%	71%	-2%	10%	2	3	141%
Netherlands	18%	-14%	8%	-4%	44%	-1%	-2%	-17%	-1%	-42%	329	714	217%
North Macedonia	-4%	-17%	-3%	2%	-199%	9%	0%	157%	-1%	18%	5	8	171%
Norway	-10%	29%	-4%	-29%	52%	-3%	0%	-15%	-3%	30%	109	307	280%
Poland	-23%	-32%	-10%	-50%	-85%	-2%	0%	31%	-56%	140%	139	308	221%
Portugal	-16%	-40%	-6%	-2%	-198%	1%	2%	113%	14%	36%	84	209	250%
Romania	-3%	-25%	-1%	-21%	-76%	1%	-1%	19%	1%	54%	58	133	231%
San Marino	24%	38%	8%	-4%	-87%	32%	0%	130%	14%	-54%	0	2	316%
Serbia	-9%	-70%	-8%	-16%	-209%	9%	0%	345%	-38%	-155%	27	31	115%
Slovakia	0%	-17%	0%	-2%	-86%	9%	1%	19%	6%	35%	32	54	170%
Slovenia	0%	-12%	0%	5%	-131%	6%	-4%	10%	0%	102%	16	36	227%
Spain	-7%	-29%	-2%	-16%	-100%	1%	2%	12%	4%	71%	371	1007	271%
Sweden	-1%	-31%	0%	-31%	65%	-1%	0%	-16%	-3%	-44%	164	332	202%
Switzerland	72%	103%	44%	89%	64%	-35%	3%	-21%	-2%	-38%	322	533	166%
United Kingdom	8%	-1%	4%	39%	-64%	-1%	-1%	-13%	0%	35%	878	1899	216%

Decomposition 2000-2022. Real USD. Europe

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Albania	-13%	-52%	-5%	-23%	-320%	28%	0%	158%	3%	107%	8	19	240%
Andorra	441%	350%	317%	154%	-990%	-40%	0%	-26%	0%	934%	2	3	139%
Austria	-18%	19%	-13%	14%	-39%	-3%	0%	-15%	-3%	79%	343	469	137%
Belgium	65%	67%	46%	26%	-76%	25%	-7%	-26%	-3%	81%	413	581	141%
Bosnia and Herzegovina	22%	-24%	12%	-36%	-404%	67%	-2%	268%	21%	49%	13	24	182%
Bulgaria	-33%	-20%	-16%	-82%	-172%	25%	1%	54%	7%	163%	44	90	205%
Croatia	-27%	-23%	-17%	-70%	-278%	32%	-1%	61%	9%	241%	44	72	161%
Cyprus	-9%	-102%	-5%	-11%	-225%	-3%	-2%	-11%	1%	154%	16	29	178%
Czech Republic	-7%	-19%	-4%	-115%	29%	0%	2%	-4%	2%	72%	167	287	172%
Denmark	-13%	62%	-9%	50%	29%	-9%	0%	-29%	-1%	32%	285	399	140%
Estonia	-48%	-18%	-23%	-84%	-141%	14%	3%	7%	18%	187%	18	38	205%
Finland	-143%	-1%	-107%	8%	53%	1%	-1%	-18%	1%	62%	210	281	134%
France	6%	-18%	4%	42%	-38%	15%	0%	-37%	0%	-5%	2139	2679	125%
Germany	5%	77%	4%	40%	110%	0%	-2%	-28%	-7%	-40%	3083	3877	126%
Gibraltar	886%	1665%	250%	1781%	-4861%	-5%	7%	7%	4%	4482%	1	3	355%
Greece	-22%	-110%	-22%	-33%	-312%	-5%	9%	19%	14%	219%	226	217	96%
Guernsey	2223%	3401%	1186%	2806%	4%	-5%	8%	12%	5%	-614%	2	5	188%
Hungary	-69%	-52%	-38%	-97%	-4%	15%	4%	-8%	14%	62%	95	170	179%
Iceland	-51%	32%	-28%	-43%	-38%	5%	1%	-10%	7%	137%	16	29	183%
Ireland	-3%	-115%	-1%	-314%	244%	-2%	2%	-8%	-32%	-4%	168	531	315%
Isle of Man	2436%	-190%	1408%	689%	2%	-6%	10%	14%	6%	-2312%	3	6	173%
Italy	-4%	8%	-4%	2%	6%	3%	0%	-20%	-1%	22%	1829	1955	107%
Jersey	1352%	-158%	1175%	1263%	5%	-4%	8%	16%	5%	-2625%	6	7	115%
Kosovo	56%	-15%	23%	-8%	789%	18%	1%	82%	3%	-923%	4	9	240%
Latvia	-26%	-26%	-13%	-55%	-166%	31%	4%	44%	17%	114%	21	41	194%
Liechtenstein	793%	959%	449%	335%	-8%	-4%	7%	11%	4%	165%	4	8	177%
Lithuania	-36%	-7%	-15%	-58%	-209%	2%	5%	28%	17%	224%	30	71	233%
Luxembourg	216%	48%	125%	301%	-121%	-286%	-2%	11%	-9%	29%	47	81	172%
Malta	6%	52%	2%	-235%	19%	-2%	-11%	0%	9%	270%	7	18	255%
Moldova	-120%	-41%	-51%	-48%	-298%	153%	0%	270%	-2%	-65%	6	14	234%
Monaco	532%	312%	245%	-880%	-6%	-4%	6%	9%	4%	937%	4	9	217%
Montenegro	-26%	-119%	-14%	-51%	-548%	71%	1%	85%	0%	338%	3	6	185%
Netherlands	-14%	77%	-10%	130%	29%	-15%	-5%	-23%	-1%	-29%	714	1004	141%
North Macedonia	-17%	-62%	-10%	-62%	-302%	15%	1%	308%	1%	-12%	8	14	167%
Norway	29%	208%	16%	131%	148%	-14%	1%	-23%	-1%	-51%	307	566	184%
Poland	-32%	-35%	-15%	-73%	-59%	2%	2%	6%	9%	92%	308	688	223%
Portugal	-40%	-79%	-33%	-42%	-158%	1%	5%	29%	13%	106%	209	254	122%
Romania	-25%	-42%	-11%	-57%	-103%	14%	2%	33%	12%	68%	133	301	226%
San Marino	38%	177%	34%	23%	-196%	26%	1%	117%	4%	167%	2	2	113%
Serbia	-70%	-85%	-34%	-66%	-221%	6%	1%	155%	-5%	81%	31	64	207%
Slovakia	-17%	-60%	-8%	-59%	-47%	25%	1%	-15%	7%	36%	54	115	213%
Slovenia	-12%	0%	-7%	-32%	-99%	7%	-3%	-9%	-17%	160%	36	60	165%
Spain	-29%	-54%	-21%	-28%	-98%	2%	1%	-20%	5%	105%	1007	1397	139%
Sweden	-31%	36%	-18%	49%	47%	3%	-1%	-27%	-2%	-15%	332	572	172%
Switzerland	103%	90%	67%	78%	87%	-55%	8%	-24%	-19%	-51%	533	818	153%
United Kingdom	-1%	4%	-1%	30%	-103%	-1%	-2%	-21%	-2%	105%	1899	2668	140%

Decomposition 1970-2000. Real USD. China & East Asia

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
China	2%	5%	0%	-3%	111%	0%	0%	3%	1%	-108%	639	3661	573%
Hong Kong	25%	132%	4%	-90%	-843%	0%	2%	-11%	0%	1070%	30	203	669%
Japan	6%	24%	2%	11%	49%	0%	0%	-4%	-3%	-32%	1206	3345	277%
Korea	-26%	-7%	-2%	-11%	-15%	2%	0%	6%	0%	14%	61	763	1244%
Macao	22%	149%	4%	-105%	157%	8%	5%	-24%	11%	92%	3	15	571%
Mongolia	-12%	-200%	-7%	-41%	-38%	-3%	0%	48%	16%	-174%	3	5	161%
North Korea	-6%	-23%	-3%	-11%	-69%	0%	0%	18%	4%	38%	9	16	184%
Taiwan	16%	61%	2%	36%	146%	0%	0%	11%	2%	-135%	34	349	1015%

Decomposition 2000-2022. Real USD. China & East Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
China	5%	14%	1%	-12%	75%	1%	0%	3%	0%	-54%	3661	18847	515%
Hong Kong	132%	490%	75%	-79%	-2134%	-2%	8%	-16%	-2%	2639%	203	359	177%
Japan	24%	77%	20%	62%	34%	0%	0%	-6%	-2%	-31%	3345	3905	117%
Korea	-7%	46%	-3%	-13%	71%	-1%	0%	-5%	0%	-3%	763	1678	220%
Macao	149%	439%	91%	-273%	-547%	-27%	25%	-133%	31%	1273%	15	24	163%
Mongolia	-200%	-240%	-60%	-113%	-74%	0%	0%	47%	9%	-50%	5	17	332%
North Korea	-23%	28%	-25%	-104%	-223%	-1%	0%	27%	4%	349%	16	15	93%
Taiwan	61%	233%	28%	41%	320%	0%	0%	14%	2%	-172%	349	765	219%

Decomposition 1970-2000. Real USD. South & South-East Asia

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Afghanistan	-37%	-406%	-61%	-17%	-306%	-34%	0%	322%	187%	-497%	7	4	60%
Bangladesh	-9%	-23%	-3%	-5%	-68%	0%	0%	84%	9%	-39%	45	122	268%
Bhutan	19%	53%	3%	10%	-277%	-25%	0%	178%	28%	136%	0	1	595%
Brunei Darussalam	129%	449%	52%	273%	1069%	-2%	1%	-38%	21%	-927%	5	12	250%
Cambodia	-13%	-26%	-1%	-6%	-229%	-15%	1%	119%	29%	77%	0	7	1441%
India	-14%	-15%	-3%	-9%	-4%	0%	0%	29%	0%	-27%	198	813	412%
Indonesia	-26%	-67%	-2%	-46%	172%	0%	1%	4%	-1%	-194%	35	371	1050%
Lao PDR	-6%	-130%	-1%	-12%	-149%	1%	1%	80%	1%	-51%	1	4	469%
Malaysia	-11%	-29%	-1%	-97%	267%	-2%	1%	-7%	-1%	-189%	15	130	859%
Maldives	-3%	-24%	0%	-49%	-456%	2%	0%	13%	14%	453%	0	2	1583%
Myanmar	-6%	-131%	-2%	-17%	-105%	7%	1%	48%	28%	-92%	3	13	382%
Nepal	12%	-21%	4%	10%	-152%	5%	0%	74%	12%	26%	5	16	327%
Pakistan	-27%	-24%	-5%	-17%	-75%	0%	0%	89%	1%	-16%	33	175	529%
Papua New Guinea	-40%	-61%	-19%	-91%	179%	-7%	2%	100%	6%	-231%	6	14	217%
Philippines	-23%	-43%	-8%	-57%	-44%	46%	1%	36%	0%	-17%	50	140	281%
Singapore	33%	151%	3%	63%	-678%	1%	-1%	-10%	7%	765%	16	164	997%
Sri Lanka	-13%	-43%	-3%	-18%	-118%	0%	0%	98%	5%	-6%	7	28	386%
Thailand	-3%	-44%	0%	-51%	-37%	12%	0%	7%	0%	26%	40	242	613%
Timor-Leste	23%	69%	4%	78%	265%	13%	307%	866%	71%	-1535%	0	1	594%
Viet Nam	-5%	-43%	-1%	-16%	-127%	7%	1%	61%	12%	20%	20	107	535%

Decomposition 2000-2022. Real USD. South & South-East Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Afghanistan	-406%	37%	-127%	7%	-559%	-1%	0%	273%	93%	353%	4	14	319%
Bangladesh	-23%	-17%	-6%	-13%	-28%	0%	0%	82%	2%	-53%	122	452	372%
Bhutan	53%	-130%	13%	-60%	-708%	-21%	0%	100%	60%	486%	1	3	404%
Brunei Darussalam	449%	521%	327%	28%	615%	-1%	2%	-55%	13%	-409%	12	17	137%
Cambodia	-26%	-141%	-6%	-65%	117%	-5%	1%	125%	11%	-318%	7	30	425%
India	-15%	-29%	-4%	-24%	-52%	0%	0%	43%	0%	8%	813	3087	380%
Indonesia	-67%	-19%	-19%	-51%	76%	-2%	1%	10%	-2%	-32%	371	1310	353%
Lao PDR	-130%	-200%	-34%	-55%	-198%	1%	1%	28%	0%	56%	4	15	387%
Malaysia	-29%	4%	-9%	-78%	373%	-6%	1%	-24%	0%	-253%	130	406	312%
Maldives	-24%	-178%	-8%	-125%	-440%	2%	0%	-102%	6%	490%	2	6	292%
Myanmar	-131%	-58%	-27%	-82%	-5%	10%	2%	36%	34%	-24%	13	64	477%
Nepal	-21%	-5%	-8%	2%	-227%	10%	0%	328%	5%	-115%	16	42	253%
Pakistan	-24%	-34%	-12%	-29%	-78%	0%	0%	112%	2%	-30%	175	360	206%
Papua New Guinea	-61%	-34%	-27%	-78%	245%	-10%	4%	29%	2%	-199%	14	31	228%
Philippines	-43%	-8%	-15%	-45%	60%	32%	1%	118%	0%	-159%	140	401	286%
Singapore	151%	177%	53%	343%	-369%	-4%	-2%	-21%	14%	163%	164	463	283%
Sri Lanka	-43%	-74%	-18%	-35%	-104%	-1%	0%	117%	2%	-35%	28	67	239%
Thailand	-44%	-4%	-22%	-106%	82%	2%	-1%	32%	-1%	9%	242	490	202%
Timor-Leste	69%	504%	26%	331%	-367%	29%	257%	283%	15%	-70%	1	3	271%
Viet Nam	-43%	-48%	-11%	-63%	6%	10%	1%	51%	6%	-48%	107	409	384%

Decomposition 1970-2000. Real USD. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Armenia	-3%	-75%	-3%	1%	-225%	86%	0%	222%	6%	-162%	6	6	97%
Azerbaijan	-1%	-84%	-1%	16%	-16%	-12%	-1%	165%	-2%	-232%	16	15	94%
Belarus	-1%	-20%	-1%	1%	-79%	6%	0%	11%	13%	29%	17	26	157%
Georgia	-5%	-71%	-8%	-10%	-92%	247%	0%	354%	-1%	-560%	12	8	65%
Kazakhstan	-1%	-71%	-1%	-6%	148%	-2%	2%	15%	-8%	-219%	70	66	94%
Kyrgyzstan	-3%	-144%	-4%	-19%	-85%	40%	2%	130%	2%	-209%	5	5	95%
Russian Federation	-2%	38%	-1%	1%	112%	-1%	0%	-1%	4%	-74%	1178	1362	116%
Tajikistan	-13%	-112%	-28%	-30%	-149%	-2%	3%	936%	79%	-922%	4	2	48%
Turkmenistan	6%	-13%	3%	2%	57%	32%	2%	129%	8%	-245%	8	14	186%
Ukraine	-4%	-41%	-6%	-8%	-17%	1%	0%	60%	2%	-73%	246	164	67%
Uzbekistan	1%	-17%	1%	0%	-59%	106%	2%	21%	0%	-88%	16	21	131%

Decomposition 2000-2022. Real USD. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Armenia	-75%	-52%	-21%	-51%	-251%	83%	0%	104%	7%	77%	6	21	359%
Azerbaijan	-84%	3%	-16%	-88%	201%	-2%	-1%	20%	0%	-111%	15	79	536%
Belarus	-20%	-44%	-9%	-61%	-309%	13%	0%	3%	4%	314%	26	57	216%
Georgia	-71%	-112%	-22%	-88%	-273%	46%	0%	121%	3%	103%	8	25	318%
Kazakhstan	-71%	-37%	-21%	-155%	198%	-13%	1%	-3%	2%	-45%	66	221	334%
Kyrgyzstan	-144%	-72%	-58%	-65%	-423%	107%	1%	369%	12%	-13%	5	12	245%
Russian Federation	38%	28%	19%	-51%	225%	-6%	0%	-6%	-9%	-144%	1362	2758	203%
Tajikistan	-112%	-37%	-22%	-25%	-238%	228%	0%	121%	13%	-115%	2	10	510%
Turkmenistan	-13%	-11%	-3%	-55%	86%	106%	0%	150%	8%	-303%	14	56	401%
Ukraine	-41%	0%	-38%	-126%	21%	100%	2%	93%	1%	-54%	164	176	107%
Uzbekistan	-17%	-4%	-4%	-21%	-155%	40%	0%	76%	1%	59%	21	80	392%

Decomposition 1970-2000. Real USD. North America & Oceania

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Australia	-22%	-47%	-9%	-43%	-4%	0%	0%	4%	-1%	6%	365	941	257%
Bermuda	-104%	-2247%	-49%	-4144%	-1340%	312%	2%	0%	7%	2965%	3	7	214%
Canada	-36%	-4%	-14%	-50%	29%	-1%	0%	-1%	-1%	34%	532	1406	264%
Fiji	-10%	-7%	-4%	-54%	-404%	21%	2%	35%	44%	354%	1	3	234%
French Polynesia	1%	-6%	0%	8%	-613%	184%	62%	213%	-1%	140%	3	6	210%
Greenland	-14%	-8%	-6%	-26%	-358%	-1%	0%	-5%	0%	388%	1	2	249%
Kiribati	205%	616%	160%	447%	-371%	110%	65%	642%	-228%	-209%	0	0	128%
Marshall Islands	202%	1177%	60%	-124%	-3200%	282%	46%	913%	17%	3184%	0	0	335%
Micronesia	38%	80%	12%	10%	-119%	-13%	27%	802%	-127%	-512%	0	0	309%
Nauru	36%	67%	162%	123%	12055%	-75%	48%	2318%	-1219%	-13344%	0	0	22%
New Caledonia	-7%	-35%	-3%	-27%	-119%	149%	2%	171%	-3%	-206%	3	6	220%
New Zealand	-50%	-70%	-26%	-85%	47%	0%	0%	10%	0%	-16%	65	125	194%
Palau	29%	53%	16%	-106%	165%	-16%	0%	261%	-58%	-208%	0	0	184%
Samoa	26%	-43%	16%	-2%	-767%	6%	0%	593%	71%	40%	0	1	166%
Solomon Islands	-3%	-60%	-1%	-57%	121%	-13%	2%	261%	-2%	-372%	0	1	265%
Tonga	-1%	-41%	0%	48%	-684%	5%	0%	512%	38%	41%	0	0	271%
Tuvalu	88%	256%	42%	288%	-180%	453%	170%	611%	460%	-1587%	0	0	212%
USA	6%	-14%	2%	18%	-33%	-1%	0%	-7%	0%	8%	6187	16478	266%
Vanuatu	-12%	11%	-4%	-88%	-722%	-156%	1%	274%	78%	627%	0	1	308%

Decomposition 2000-2022. Real USD. North America & Oceania

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Australia	-47%	-36%	-27%	-39%	0%	-3%	0%	-1%	-1%	35%	941	1614	172%
Bermuda	-2247%	7810%	-2185%	-3378%	-356%	426%	14%	-35%	6%	13318%	7	8	103%
Canada	-4%	33%	-3%	11%	3%	-3%	0%	-2%	0%	27%	1406	2096	149%
Fiji	-7%	-127%	-5%	-98%	-461%	23%	5%	121%	-3%	290%	3	5	145%
French Polynesia	-6%	-24%	-7%	-9%	-422%	215%	128%	212%	-1%	-140%	6	6	95%
Greenland	-8%	-14%	-6%	-15%	-6%	-2%	0%	-6%	0%	22%	2	3	153%
Kiribati	616%	457%	407%	273%	-243%	102%	316%	403%	26%	-827%	0	0	151%
Marshall Islands	1177%	-12217%	805%	-280%	-66437%	186%	119%	616%	41%	52734%	0	0	146%
Micronesia	80%	118%	78%	-57%	-7028%	-13%	96%	802%	35%	6205%	0	0	102%
Nauru	67%	264%	26%	15%	-732%	44%	111%	259%	-4%	545%	0	0	261%
New Caledonia	-35%	-212%	-22%	-18%	-214%	124%	5%	110%	-1%	-194%	6	10	156%
New Zealand	-70%	-45%	-36%	-54%	0%	1%	0%	1%	3%	40%	125	244	195%
Palau	53%	-157%	56%	-106%	-1158%	-13%	12%	338%	102%	613%	0	0	95%
Samoa	-43%	-31%	-29%	-73%	-643%	-8%	0%	438%	72%	213%	1	1	148%
Solomon Islands	-60%	-5%	-35%	-67%	189%	1%	9%	134%	49%	-284%	1	2	173%
Tonga	-41%	-10%	-31%	-13%	-783%	67%	1%	611%	106%	32%	0	0	132%
Tuvalu	256%	465%	166%	219%	-3003%	188%	328%	712%	286%	1569%	0	0	154%
USA	-14%	-62%	-9%	27%	-69%	-1%	0%	-10%	-1%	0%	16478	25440	154%
Vanuatu	11%	-45%	6%	-58%	274%	87%	1%	174%	51%	-581%	1	1	174%

Decomposition 1970-2000. Real USD. Latin America

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Anguilla	14%	15%	3%	-47%	-1500%	-14%	2%	23%	-36%	1584%	0	0	548%
Antigua and Barbuda	-21%	-42%	-6%	-73%	-297%	-8%	2%	56%	6%	278%	0	1	369%
Argentina	-15%	-13%	-8%	-38%	39%	0%	0%	3%	0%	-10%	194	362	187%
Aruba	-20%	-45%	-2%	-14%	-23%	-1%	0%	2%	6%	-12%	0	3	1058%
Bahamas	-30%	118%	-13%	-644%	-1813%	12%	2%	8%	50%	2516%	5	12	220%
Barbados	-65%	35%	-41%	-1017%	-622%	26%	0%	30%	4%	1655%	3	5	157%
Belize	-3%	-60%	0%	-52%	-316%	-15%	2%	101%	1%	219%	0	2	591%
Bolivia	-73%	-94%	-34%	-84%	-64%	0%	0%	52%	1%	36%	9	20	215%
Bonaire, Sint Eustatius and Saba	6%	532%	0%	-112%	-2%	1%	3%	58%	7%	576%	0	1	1271%
Brazil	-25%	-36%	-7%	-58%	18%	0%	0%	4%	0%	7%	335	1160	346%
Cayman Islands	-772%	1389%	-68%	-15810%	-386%	-8%	2%	-93%	0%	17752%	0	4	1132%
Chile	-55%	-40%	-17%	-54%	44%	-1%	0%	9%	0%	-20%	41	133	323%
Colombia	-22%	-16%	-6%	-22%	-2%	-1%	0%	24%	14%	-23%	44	153	349%
Costa Rica	-27%	-16%	-8%	-62%	74%	1%	0%	30%	1%	-52%	8	28	355%
Cuba	-3%	-45%	-1%	-19%	-85%	1%	0%	235%	24%	-200%	770	1522	198%
Curacao	-169%	354%	-14%	-1437%	-1010%	-21%	-3%	161%	23%	2654%	0	3	1207%
Dominica	-15%	-37%	-5%	-59%	-297%	2%	0%	164%	48%	111%	0	1	305%
Dominican Republic	-16%	-22%	-4%	-47%	-74%	3%	0%	85%	-2%	17%	9	41	449%
Ecuador	-15%	-83%	-5%	-88%	139%	-7%	0%	30%	10%	-162%	20	62	308%
El Salvador	-10%	-37%	-6%	-58%	-107%	4%	0%	205%	0%	-75%	12	21	168%
Grenada	-33%	-30%	-8%	-56%	-658%	-19%	2%	143%	24%	543%	0	1	384%
Guatemala	-11%	-17%	-4%	-17%	-61%	2%	0%	48%	3%	11%	16	44	283%
Guyana	-45%	-102%	-35%	-104%	103%	-15%	0%	88%	169%	-309%	2	3	131%
Haiti	-9%	-19%	-6%	-16%	-295%	0%	0%	226%	13%	58%	10	15	151%
Honduras	-21%	-64%	-7%	-69%	94%	1%	0%	72%	9%	-163%	5	14	297%
Jamaica	-110%	-55%	-76%	-135%	-367%	23%	0%	149%	-7%	360%	10	14	144%
Mexico	-15%	-26%	-3%	-52%	10%	1%	0%	13%	0%	6%	254	1071	422%
Montserrat	4%	89%	5%	-85%	-5148%	-57%	0%	1208%	152%	4014%	0	0	79%
Nicaragua	-25%	-163%	-20%	-140%	-398%	1%	0%	160%	99%	135%	6	8	126%
Panama	-85%	-73%	-27%	-37%	116%	23%	2%	26%	1%	-177%	7	23	319%
Paraguay	-19%	-157%	-4%	-39%	-151%	17%	0%	18%	1%	1%	5	21	445%
Peru	-53%	-50%	-28%	-89%	30%	-1%	0%	23%	1%	14%	51	97	190%
Puerto Rico	6%	532%	2%	-637%	-1318%	-1%	2%	52%	6%	2425%	39	126	319%
Saint Kitts and Nevis	15%	-99%	2%	-72%	-1044%	-11%	4%	125%	8%	890%	0	1	707%
Saint Lucia	-2%	-57%	0%	-70%	-266%	0%	5%	73%	11%	190%	0	2	440%
Saint Vincent and the Grenadines	15%	-38%	5%	-57%	184%	1%	2%	135%	20%	-327%	0	1	310%
Sint Maarten (Dutch part)	-176%	355%	-15%	9%	-1010%	-21%	7%	162%	23%	1200%	0	1	1207%
Suriname	-4%	7%	-3%	-68%	-171%	-4%	0%	35%	4%	213%	2	2	133%
Trinidad and Tobago	-57%	-92%	-25%	-113%	326%	-2%	0%	-5%	0%	-273%	7	17	229%
Turks and Caicos Islands	2%	176%	0%	9%	-422%	1%	2%	-54%	4%	635%	0	1	1856%
Uruguay	-17%	-5%	-9%	-29%	34%	0%	0%	5%	0%	-5%	24	44	188%
Venezuela	34%	15%	15%	25%	441%	0%	0%	-8%	18%	-475%	137	314	230%
Virgin Islands, British	27%	10320%	2%	-8013%	-1611%	1%	2%	20%	3%	19916%	0	1	1545%

Decomposition 2000-2022. Real USD. Latin America

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Anguilla	15%	-237%	8%	-10%	-165%	-2%	7%	-1%	-34%	-40%	0	0	181%
Antigua and Barbuda	-42%	-112%	-28%	-108%	-390%	0%	8%	-11%	-112%	529%	1	2	151%
Argentina	-13%	30%	-7%	-37%	64%	0%	0%	5%	0%	5%	362	658	182%
Aruba	-45%	-98%	-34%	22%	647%	-2%	0%	-58%	7%	-680%	3	4	134%
Bahamas	118%	-277%	105%	-836%	-292%	25%	9%	8%	63%	641%	12	13	112%
Barbados	35%	112%	34%	-795%	-374%	17%	0%	-2%	-2%	1235%	5	6	105%
Belize	-60%	-119%	-34%	-155%	-449%	-3%	8%	76%	6%	432%	2	3	176%
Bolivia	-94%	-20%	-42%	-50%	-17%	2%	0%	73%	9%	6%	20	44	226%
Bonaire, Sint Eustatius and Saba	532%	312%	410%	-1058%	-377%	-4%	8%	14%	5%	1315%	1	1	130%
Brazil	-36%	-39%	-22%	-55%	37%	0%	0%	4%	0%	-4%	1160	1887	163%
Cayman Islands	1389%	-13657%	904%	-16312%	-764%	-12%	7%	-147%	0%	2667%	4	7	154%
Chile	-40%	-17%	-18%	-71%	75%	-2%	0%	12%	-1%	-12%	133	286	215%
Colombia	-16%	-47%	-7%	-43%	12%	0%	0%	37%	3%	-48%	153	358	234%
Costa Rica	-16%	-55%	-7%	-69%	188%	-2%	0%	16%	0%	-182%	28	65	232%
Cuba	-45%	-37%	-108%	-174%	-516%	-16%	0%	1234%	269%	-727%	1522	633	42%
Curacao	354%	-2086%	376%	-3520%	615%	8%	-6%	32%	16%	393%	3	3	94%
Dominica	-37%	-55%	-31%	-64%	-743%	-18%	0%	115%	172%	512%	1	1	120%
Dominican Republic	-22%	-51%	-8%	-66%	-154%	4%	0%	110%	-1%	65%	41	115	279%
Ecuador	-83%	-19%	-44%	-45%	39%	0%	0%	73%	4%	-45%	62	115	187%
El Salvador	-37%	-45%	-24%	-68%	-308%	-1%	0%	359%	8%	-12%	21	32	157%
Grenada	-30%	-146%	-20%	-127%	-531%	-43%	8%	68%	43%	456%	1	1	152%
Guatemala	-17%	-2%	-8%	-28%	-143%	2%	0%	201%	1%	-26%	44	95	216%
Guyana	-102%	-99%	-21%	-56%	-133%	-3%	0%	79%	9%	27%	3	15	476%
Haiti	-19%	-6%	-14%	4%	-192%	-3%	0%	369%	8%	-178%	15	20	132%
Honduras	-64%	-53%	-29%	-94%	-20%	-6%	0%	318%	14%	-236%	14	32	221%
Jamaica	-55%	-129%	-45%	-103%	-495%	12%	0%	321%	1%	181%	14	17	121%
Mexico	-26%	-39%	-19%	-60%	-14%	-1%	0%	45%	0%	10%	1071	1467	137%
Montserrat	89%	119%	59%	6%	-2899%	-9%	0%	754%	187%	2021%	0	0	149%
Nicaragua	-163%	-105%	-82%	-71%	-147%	0%	0%	220%	59%	-83%	8	16	198%
Panama	-73%	-91%	-22%	-109%	-6%	1%	6%	7%	-11%	42%	23	77	336%
Paraguay	-157%	-27%	-76%	-86%	-155%	27%	0%	27%	1%	234%	21	43	207%
Peru	-50%	-41%	-20%	-96%	6%	1%	0%	37%	-2%	32%	97	246	253%
Puerto Rico	532%	312%	556%	-927%	-720%	-5%	9%	21%	6%	1372%	126	120	96%
Saint Kitts and Nevis	-99%	-81%	-65%	-191%	-425%	6%	13%	49%	65%	465%	1	1	153%
Saint Lucia	-57%	-53%	-38%	-130%	-488%	-1%	12%	16%	10%	566%	2	2	148%
Saint Vincent and the Grenadines	-38%	-171%	-26%	-70%	20%	4%	8%	87%	34%	-229%	1	1	146%
Sint Maarten (Dutch part)	355%	-66%	228%	112%	106%	-31%	9%	44%	17%	-551%	1	2	156%
Suriname	7%	-90%	5%	-116%	467%	-9%	0%	48%	5%	-488%	2	4	154%
Trinidad and Tobago	-92%	11%	-51%	-92%	874%	-9%	0%	4%	0%	-714%	17	30	180%
Turks and Caicos Islands	176%	429%	80%	32%	-675%	-5%	8%	-107%	3%	1093%	1	1	220%
Uruguay	-5%	-17%	-3%	-84%	1%	0%	0%	5%	-1%	65%	44	74	168%
Venezuela	15%	275%	35%	-82%	625%	0%	0%	-6%	-5%	-293%	314	129	41%
Virgin Islands, British	10320%	25773%	8753%	-57211%	-4725%	-5%	9%	16%	5%	78931%	1	1	118%

Decomposition 1970-2000. Real USD. MENA

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Algeria	-22%	-24%	-8%	-87%	121%	0%	0%	20%	0%	-71%	36	102	282%
Bahrain	6%	69%	2%	-16%	-441%	-198%	2%	-76%	41%	755%	5	19	414%
Egypt	-12%	-14%	-2%	6%	-100%	-1%	0%	123%	42%	-82%	30	164	540%
Iran	-4%	0%	-2%	-1%	189%	-7%	0%	50%	26%	-254%	110	194	176%
Iraq	-62%	-122%	-8%	-741%	329%	3%	0%	76%	4%	215%	17	139	806%
Israel	-4%	-28%	-1%	-25%	-80%	-18%	0%	134%	-2%	-37%	51	227	445%
Jordan	82%	-1%	22%	128%	-663%	26%	0%	533%	-3%	-45%	6	21	364%
Kuwait	40%	307%	36%	487%	689%	-2%	0%	-219%	-12%	-672%	89	99	110%
Lebanon	11%	-13%	6%	143%	-1087%	-1%	2%	27%	1%	897%	17	28	164%
Libya	-5%	61%	-3%	-34%	690%	0%	0%	-70%	11%	-533%	25	52	206%
Morocco	-11%	-33%	-3%	-34%	-87%	0%	0%	107%	-1%	-15%	15	58	388%
Oman	64%	-1%	10%	-24%	381%	-2%	0%	-113%	-1%	-252%	10	62	644%
Palestine	24%	22%	29859%	8907%	-454673%	130940%	0%	132006%	24615%	128368%	10894	9	0%
Qatar	73%	542%	11%	64%	731%	33%	0%	-106%	-2%	-188%	6	44	682%
Saudi Arabia	73%	112%	25%	127%	721%	-4%	0%	-192%	9%	-574%	181	532	294%
Syrian Arab Republic	-4%	-47%	-1%	-40%	-159%	37%	0%	117%	2%	-2%	6	32	504%
Tunisia	-54%	-85%	-12%	-51%	-155%	6%	0%	78%	1%	48%	6	27	459%
Turkey	-2%	-23%	-1%	7%	-109%	1%	0%	47%	0%	32%	88	311	356%
United Arab Emirates	189%	293%	30%	194%	284%	31%	0%	88%	5%	-338%	36	229	637%
Yemen	-32%	23%	-5%	36%	-352%	21%	0%	256%	13%	53%	2	13	668%

Decomposition 2000-2022. Real USD. MENA

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Algeria	-24%	19%	-13%	-47%	141%	1%	0%	30%	0%	-93%	102	189	186%
Bahrain	69%	37%	30%	-66%	-111%	-188%	7%	-126%	12%	479%	19	44	232%
Egypt	-14%	-51%	-5%	-19%	-82%	0%	0%	90%	0%	-35%	164	454	277%
Iran	0%	66%	0%	0%	103%	-2%	0%	8%	23%	-66%	194	367	189%
Iraq	-122%	15%	-64%	-24%	222%	1%	0%	11%	14%	-145%	139	263	189%
Israel	-28%	43%	-12%	-24%	21%	-21%	-1%	48%	-1%	33%	227	504	222%
Jordan	-1%	-61%	0%	23%	-483%	17%	-1%	285%	0%	97%	21	49	235%
Kuwait	307%	585%	173%	316%	657%	-1%	-1%	-203%	18%	-375%	99	175	178%
Lebanon	-13%	-319%	-9%	-21%	-936%	1%	10%	201%	33%	401%	28	39	140%
Libya	61%	407%	70%	37%	844%	-2%	0%	-54%	1%	-489%	52	46	87%
Morocco	-33%	-50%	-15%	-27%	-180%	1%	0%	129%	-3%	46%	58	131	225%
Oman	-1%	-32%	0%	-96%	179%	-7%	-1%	-158%	3%	48%	62	115	184%
Palestine	22%	28%	10%	19%	-443%	170%	-1%	273%	43%	-44%	9	19	216%
Qatar	542%	186%	102%	-64%	356%	27%	0%	-115%	-1%	-119%	44	235	532%
Saudi Arabia	112%	129%	54%	46%	310%	-2%	-1%	-84%	7%	-201%	532	1108	208%
Syrian Arab Republic	-47%	59%	-81%	-79%	-1688%	10%	-1%	83%	2%	1813%	32	19	58%
Tunisia	-85%	-151%	-50%	-73%	-158%	13%	0%	86%	4%	25%	27	47	171%
Turkey	-23%	-31%	-8%	-15%	-74%	0%	0%	4%	0%	63%	311	899	289%
United Arab Emirates	293%	248%	133%	59%	80%	24%	-1%	57%	7%	-112%	229	507	221%
Yemen	23%	35%	27%	-56%	-104%	9%	-1%	669%	9%	-519%	13	11	83%

Decomposition 1970-2000. Real USD. Sub-Saharan Africa

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio								Real GDP billions 2000 USD		
Countries	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)
Angola	-35%	-114%	-25%	-96%	619%	-22%	0%	66%	1%	-658%	33	47	142%
Benin	-3%	-26%	-1%	-9%	-339%	-10%	-1%	125%	34%	174%	2	6	282%
Botswana	-32%	77%	-2%	-62%	12%	10%	0%	50%	5%	63%	0	9	1831%
Burkina Faso	1%	-43%	0%	-2%	-208%	-2%	0%	66%	24%	79%	2	6	328%
Burundi	-2%	-112%	-1%	-7%	-163%	-9%	0%	292%	22%	-245%	1	2	159%
Cabo Verde	15%	-51%	3%	-1%	-525%	1%	0%	371%	10%	91%	0	1	529%
Cameroon	-12%	-80%	-4%	-78%	154%	-2%	0%	5%	1%	-156%	6	19	290%
Central African Republic	-28%	-82%	-20%	-32%	125%	1%	0%	197%	40%	-392%	1	2	141%
Chad	-9%	-94%	-5%	-7%	-84%	0%	0%	275%	-2%	-270%	2	4	167%
Comoros	-6%	-46%	-2%	-1%	-356%	-1%	0%	197%	11%	107%	0	1	258%
Congo	-21%	-118%	-6%	-247%	790%	-8%	0%	24%	19%	-691%	3	10	343%
Cote d'Ivoire	-9%	-70%	-4%	-144%	258%	11%	0%	-39%	7%	-159%	12	30	240%
DR Congo	-1%	-23%	-1%	-66%	313%	-10%	0%	298%	-53%	-505%	31	20	64%
Djibouti	17%	20%	11%	40%	-1386%	48%	0%	853%	-3%	458%	1	1	164%
Equatorial Guinea	-19%	-106%	-1%	-31%	161%	0%	0%	36%	74%	-345%	0	5	2615%
Eritrea	20%	-43%	15%	24%	-254%	-5%	0%	1940%	-5%	-1758%	1	2	132%
Ethiopia	-3%	-67%	-2%	-7%	-85%	2%	0%	87%	-4%	-56%	16	22	139%
Gabon	-65%	-75%	-22%	-188%	1238%	-5%	0%	-49%	20%	-1069%	5	13	294%
Gambia	6%	-44%	2%	0%	-495%	-9%	1%	175%	7%	276%	0	1	318%
Ghana	-9%	-68%	-5%	-16%	-125%	-3%	0%	111%	13%	-43%	11	22	195%
Guinea	-16%	-70%	-6%	-29%	114%	0%	-2%	50%	21%	-217%	3	8	267%
Guinea-Bissau	-46%	-103%	-24%	-9%	-645%	-77%	11%	230%	185%	227%	0	1	190%
Kenya	0%	24%	0%	44%	-149%	-1%	0%	128%	9%	-8%	12	45	387%
Lesotho	2%	-50%	0%	-32%	-45%	1748%	4%	459%	127%	-2311%	0	2	458%
Liberia	-42%	-470%	-54%	-66%	-2425%	12%	1%	233%	85%	1744%	3	3	78%
Madagascar	-23%	-69%	-17%	-59%	12%	-1%	0%	74%	9%	-88%	6	9	138%
Malawi	-22%	-78%	-8%	-52%	-85%	0%	0%	78%	28%	-39%	2	7	288%
Mali	-49%	-76%	-17%	-26%	-272%	1%	0%	153%	32%	54%	2	7	283%
Mauritania	-73%	-157%	-43%	-61%	138%	-86%	8%	187%	3%	-302%	3	5	169%
Mauritius	8%	-10%	1%	6%	-160%	-2%	2%	40%	-1%	102%	1	7	677%
Mozambique	-6%	-165%	-2%	-62%	-150%	6%	0%	79%	15%	-51%	2	5	267%
Namibia	-23%	-15%	-10%	-1%	71%	-7%	0%	244%	11%	-322%	3	6	229%
Niger	-2%	-64%	-1%	-16%	-98%	3%	0%	94%	52%	-97%	4	5	132%
Nigeria	-18%	-51%	-10%	-48%	311%	-1%	1%	8%	-3%	-309%	92	164	178%
Rwanda	3%	-42%	2%	-13%	-174%	-9%	0%	225%	36%	-109%	1	3	208%
Sao Tome and Principe	-39%	-350%	-22%	-31%	-423%	-4%	1%	153%	175%	-200%	0	0	181%
Senegal	-27%	-50%	-12%	-28%	-99%	8%	0%	59%	15%	7%	5	11	225%
Seychelles	-4%	8%	-1%	-109%	-560%	0%	-2%	87%	0%	593%	0	1	449%
Sierra Leone	-3%	-128%	-3%	-46%	0%	26%	0%	119%	49%	-273%	1	1	106%
Somalia	-11%	-106%	-6%	-106%	-353%	0%	0%	299%	19%	40%	1	3	195%
South Africa	-41%	-4%	-22%	-53%	30%	-19%	1%	-5%	-2%	66%	126	240	190%
South Sudan	3%	5%	1%	-15%	-74%	0%	0%	43%	6%	44%	2	5	333%
Sudan	-103%	-212%	-31%	-17%	-118%	0%	0%	34%	-10%	-70%	15	49	333%
Swaziland	-18%	9%	-3%	-27%	367%	73%	-2%	158%	0%	-555%	0	2	593%
Tanzania	-23%	-51%	-9%	-15%	-201%	0%	0%	117%	42%	15%	8	20	251%
Togo	-16%	-54%	-8%	-41%	-238%	18%	1%	158%	5%	51%	2	4	209%
Uganda	-5%	-39%	-2%	-8%	-24%	-12%	0%	97%	21%	-110%	5	13	268%
Zambia	-124%	-238%	-83%	-201%	244%	-15%	0%	26%	47%	-257%	6	9	150%
Zimbabwe	-21%	-38%	-9%	-30%	3%	-4%	0%	33%	24%	-57%	12	29	249%

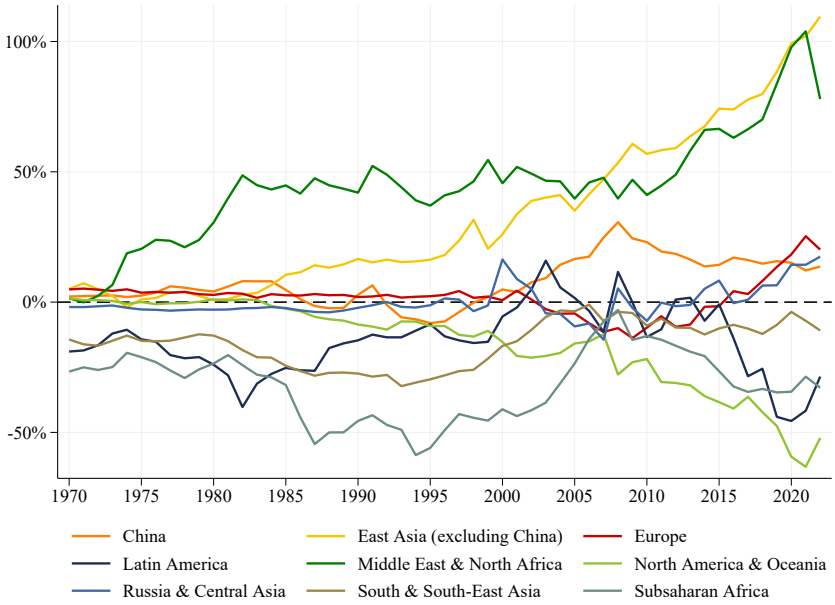
Decomposition 2000-2022. Real USD. Sub-Saharan Africa

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio								Real GDP billions 2022 USD		
Countries	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)
Angola	-114%	-13%	-43%	-146%	498%	-10%	1%	-10%	1%	-304%	47	125	267%
Benin	-26%	-43%	-10%	-10%	-64%	0%	-1%	27%	14%	0%	6	17	278%
Botswana	77%	28%	33%	-72%	-144%	-4%	0%	121%	5%	91%	9	20	235%
Burkina Faso	-43%	-40%	-14%	-31%	-118%	-1%	-2%	54%	23%	49%	6	19	316%
Burundi	-112%	-77%	-66%	-11%	-253%	3%	0%	218%	60%	-29%	2	4	172%
Cabo Verde	-51%	-148%	-20%	-51%	-438%	2%	0%	301%	11%	48%	1	2	251%
Cameroon	-80%	-23%	-34%	-31%	5%	1%	0%	17%	5%	15%	19	43	235%
Central African Republic	-82%	-76%	-68%	-27%	-63%	0%	1%	166%	97%	-183%	2	2	121%
Chad	-94%	-101%	-26%	-9%	161%	0%	1%	267%	1%	-496%	4	13	359%
Comoros	-46%	-4%	-26%	-5%	-133%	1%	0%	245%	34%	-121%	1	1	177%
Congo	-118%	-141%	-73%	-163%	634%	-5%	-1%	-4%	12%	-541%	10	16	162%
Cote d'Ivoire	-70%	-39%	-30%	-47%	49%	4%	0%	-14%	8%	-10%	30	70	235%
DR Congo	-23%	-45%	-7%	-46%	-189%	-1%	1%	56%	8%	134%	20	65	326%
Djibouti	20%	-82%	5%	-39%	-383%	26%	0%	103%	11%	195%	1	4	388%
Equatorial Guinea	-106%	-129%	-40%	-88%	1474%	-9%	1%	-33%	707%	-2141%	5	12	264%
Eritrea	-43%	-45%	-34%	-20%	-364%	5%	0%	885%	-3%	-514%	2	2	126%
Ethiopia	-67%	-56%	-10%	-4%	-136%	0%	0%	96%	0%	-1%	22	142	649%
Gabon	-75%	-85%	-48%	-175%	581%	-3%	1%	-29%	2%	-414%	13	21	157%
Gambia	-44%	-85%	-23%	-25%	-241%	-6%	2%	188%	19%	1%	1	2	191%
Ghana	-68%	-36%	-20%	-46%	-88%	1%	0%	93%	5%	20%	22	74	338%
Guinea	-70%	40%	-26%	-19%	72%	-1%	-2%	17%	10%	-11%	8	21	273%
Guinea-Bissau	-103%	-33%	-54%	-18%	2%	6%	14%	120%	67%	-171%	1	2	191%
Kenya	24%	-50%	10%	3%	-149%	-1%	0%	82%	3%	3%	45	113	254%
Lesotho	-50%	-30%	-36%	-86%	-745%	588%	9%	669%	43%	-472%	2	2	140%
Liberia	-470%	-43%	-301%	-219%	-2944%	-6%	2%	676%	244%	2505%	3	4	156%
Madagascar	-69%	-37%	-40%	-39%	-61%	0%	0%	91%	24%	-12%	9	15	175%
Malawi	-78%	-63%	-46%	-52%	-184%	-1%	0%	103%	75%	41%	7	12	170%
Mali	-76%	-71%	-28%	-56%	-219%	1%	0%	120%	24%	88%	7	19	275%
Mauritania	-157%	-127%	-72%	-6%	67%	-37%	13%	78%	8%	-178%	5	10	217%
Mauritius	-10%	234%	-5%	715%	-259%	-1%	8%	-18%	2%	-207%	7	13	190%
Mozambique	-165%	-369%	-46%	-49%	-107%	4%	0%	80%	18%	-269%	5	18	359%
Namibia	-15%	0%	-7%	-30%	-246%	-2%	-1%	193%	12%	82%	6	13	206%
Niger	-64%	-98%	-20%	-18%	-123%	3%	-1%	47%	29%	-16%	5	15	318%
Nigeria	-51%	-14%	-17%	-56%	156%	1%	2%	80%	36%	-215%	164	488	298%
Rwanda	-42%	-67%	-9%	-21%	-125%	-4%	0%	92%	22%	-22%	3	13	489%
Sao Tome and Principe	-350%	-116%	-141%	-2%	38%	-1%	3%	95%	169%	-277%	0	1	249%
Senegal	-50%	-73%	-20%	-26%	-168%	7%	0%	127%	18%	-11%	11	28	245%
Seychelles	8%	-37%	5%	-158%	-744%	-11%	-4%	8%	20%	847%	1	2	154%
Sierra Leone	-128%	-78%	-43%	-51%	-309%	1%	0%	146%	36%	142%	1	4	300%
Somalia	-106%	-62%	-26%	-19%	-224%	2%	0%	128%	19%	58%	3	10	417%
South Africa	-4%	23%	-2%	-47%	86%	-2%	2%	-12%	0%	-1%	240	407	170%
South Sudan	5%	-59%	6%	-95%	200%	6%	0%	118%	25%	-319%	5	5	88%
Sudan	-212%	-232%	-136%	-94%	-19%	1%	0%	50%	-11%	-22%	49	76	156%
Swaziland	9%	14%	4%	-79%	-84%	19%	-12%	167%	-1%	0%	2	5	203%
Tanzania	-51%	-54%	-14%	-19%	-101%	-1%	0%	22%	14%	46%	20	75	368%
Togo	-54%	0%	-23%	-8%	157%	9%	1%	105%	44%	-284%	4	8	237%
Uganda	-39%	-53%	-10%	-24%	-113%	-6%	0%	81%	31%	-12%	13	48	381%
Zambia	-238%	-91%	-74%	-68%	16%	3%	0%	23%	15%	-6%	9	29	321%
Zimbabwe	-38%	-21%	-10%	-9%	-26%	0%	0%	52%	7%	-34%	29	110	377%

B.1.3 World regions

Figure A6

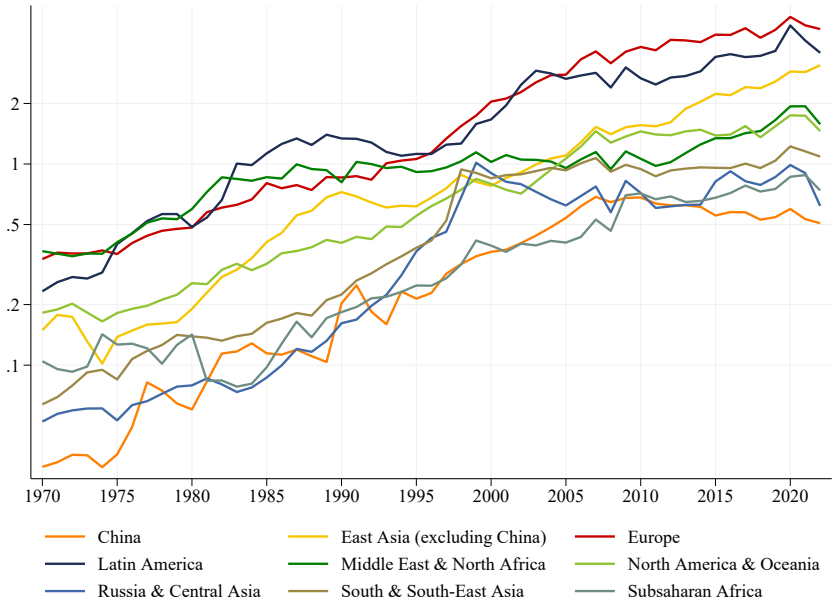
Net foreign assets as a share of regional GDP



Graph shows net foreign assets corrected by offshore wealth as a share of each region's GDP.

Figure A7

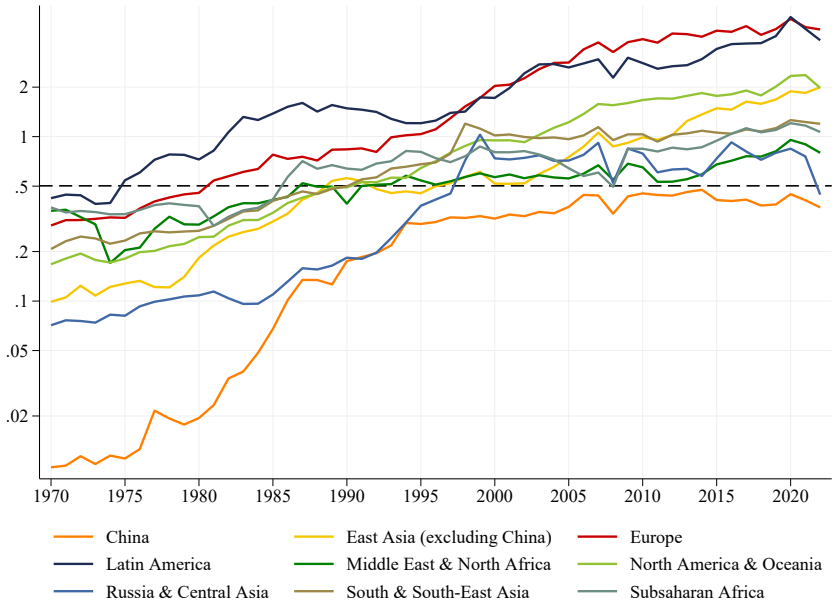
Gross foreign assets as a share of regional GDP (log scale)



Graph shows gross foreign assets corrected by offshore wealth as a share of each region's GDP.

Figure A8

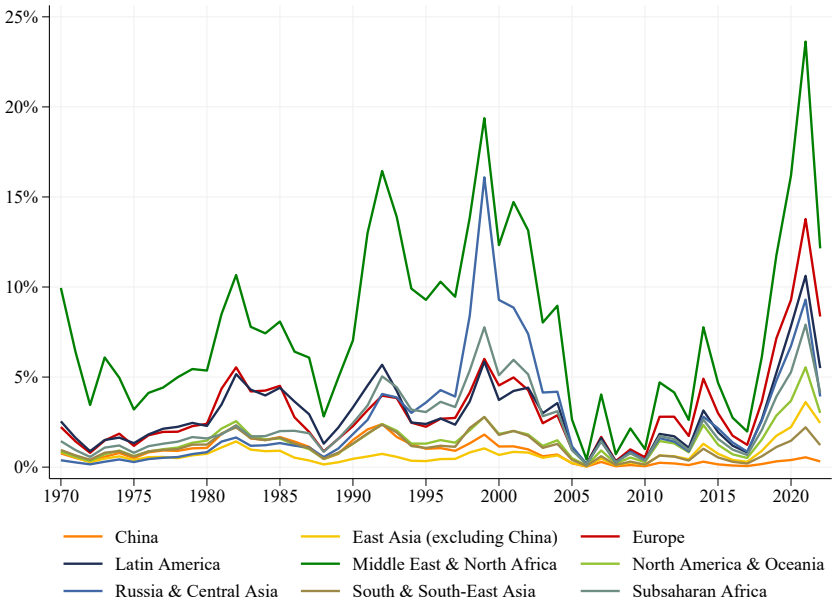
Gross foreign liabilities as a share of regional GDP (log scale)



Graph shows gross foreign liabilities corrected by offshore wealth as a share of each region's GDP.

Figure A9

Offshore wealth as a share of regional GDP



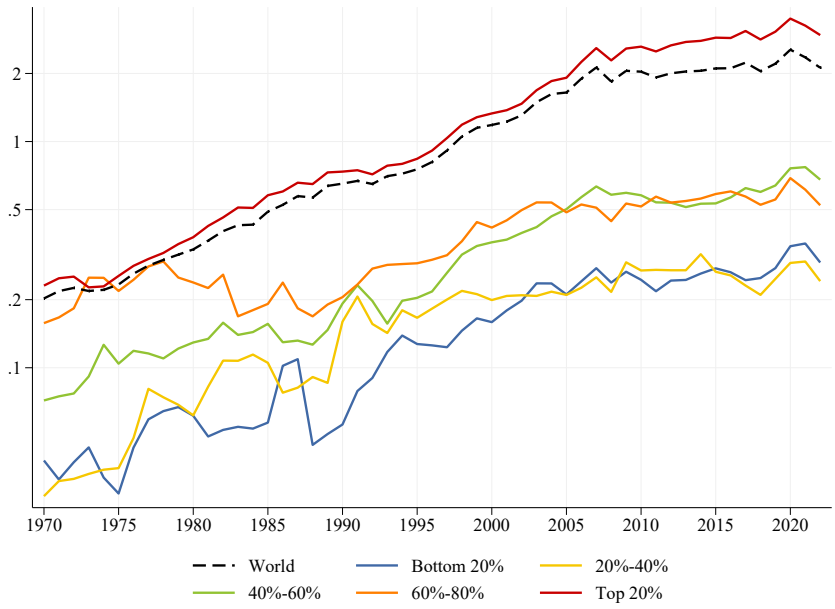
Graph shows offshore wealth as a share of each region's GDP.

B.1.4 Quintiles

Countries are 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Figure A10

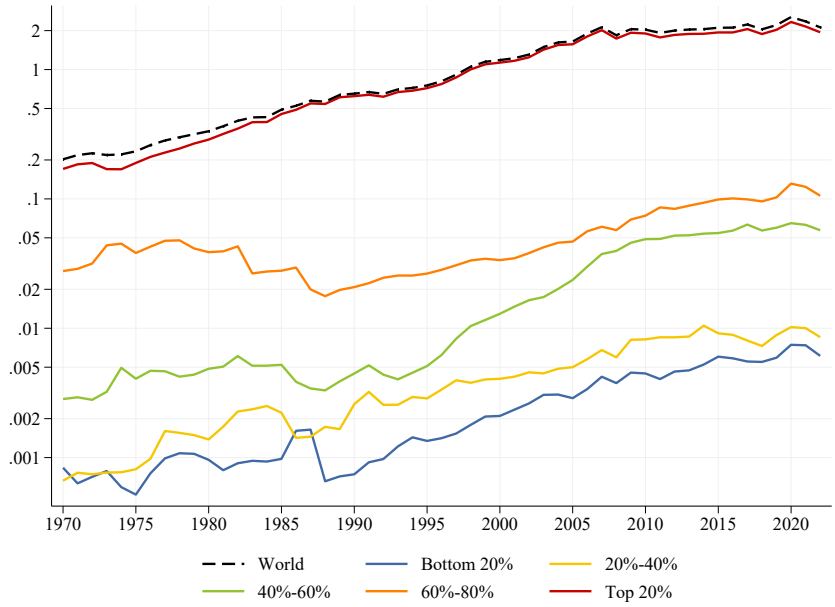
Gross foreign assets, as a share of group GDP (log scale)



Graph shows average gross foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A11

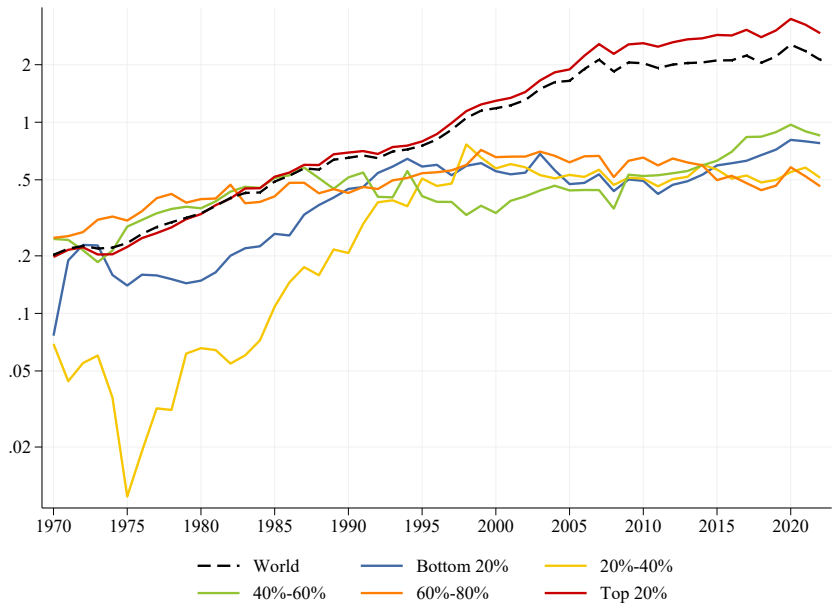
Gross foreign assets, as a share of global GDP (log scale)



Graph shows average gross foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A12

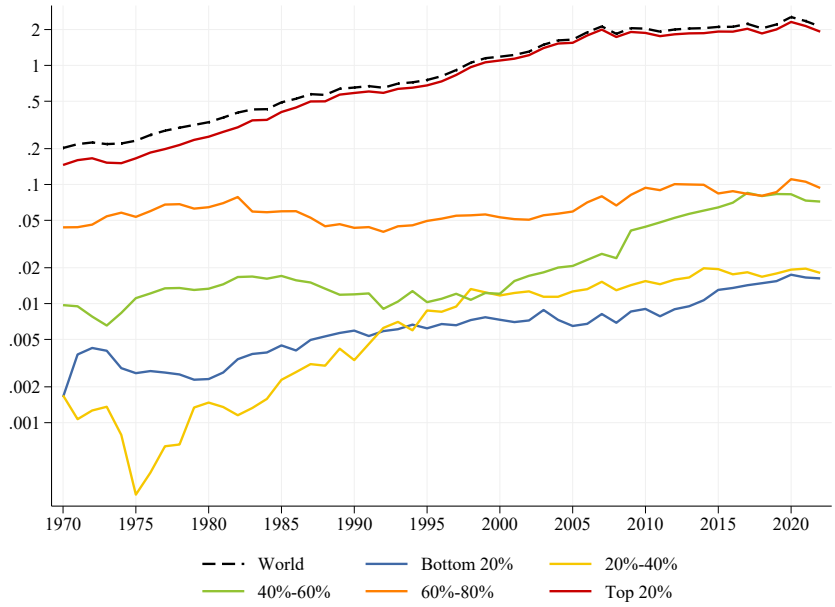
Gross foreign liabilities, as a share of group GDP (log scale)



Graph shows average gross foreign liabilites. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A13

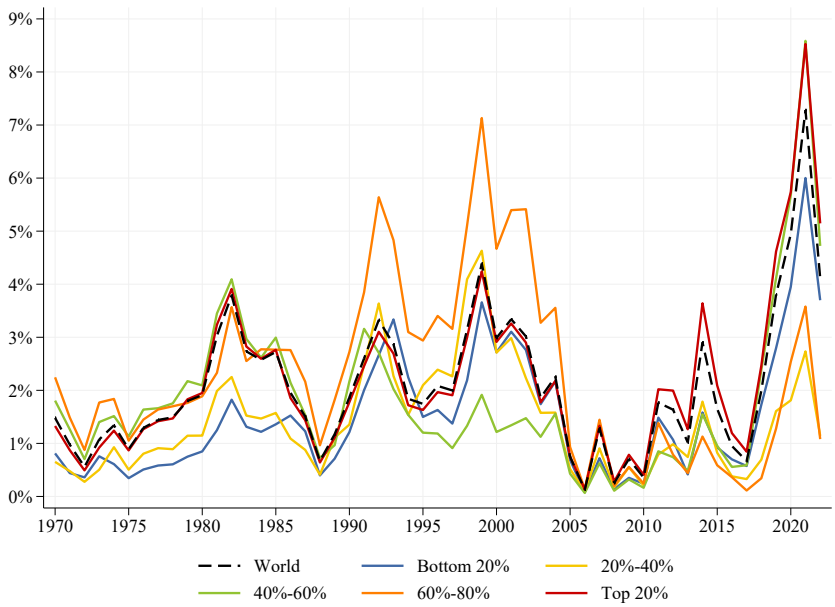
Gross foreign liabilities, as a share of global GDP (log scale)



Graph shows average gross foreign liabilites. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A14

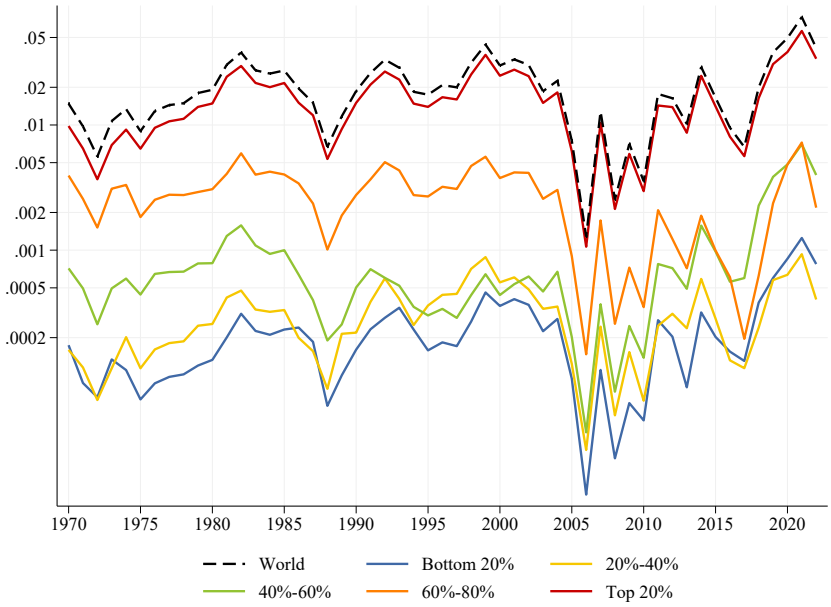
Offshore wealth, as a share of group GDP



Graph shows average offshore wealth. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A15

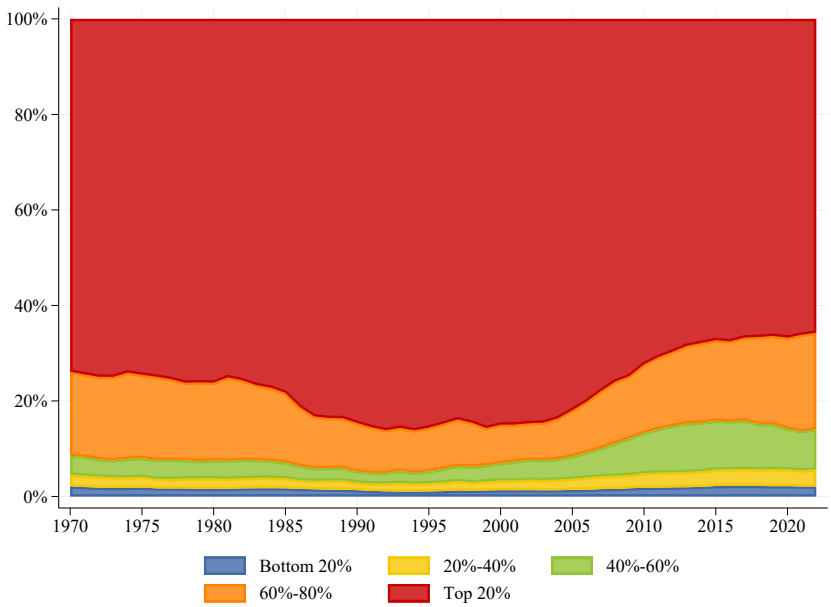
Offshore wealth, as a share of global GDP



Graph shows average offshore wealth. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A16

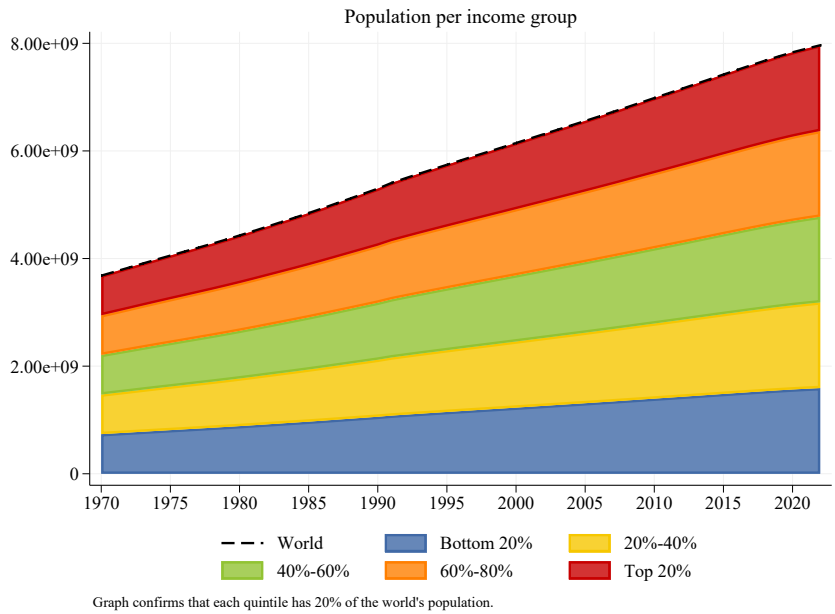
Share of global GDP per income group



Graph shows aggregate GDP per group. National income does not include FDI income paid correction due to shifted profits.

Figure A17

Share of global population per income group



Graph shows aggregate population per group. National income does not include FDI income paid correction due to shifted profits.

Table 5

Transition matrix

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

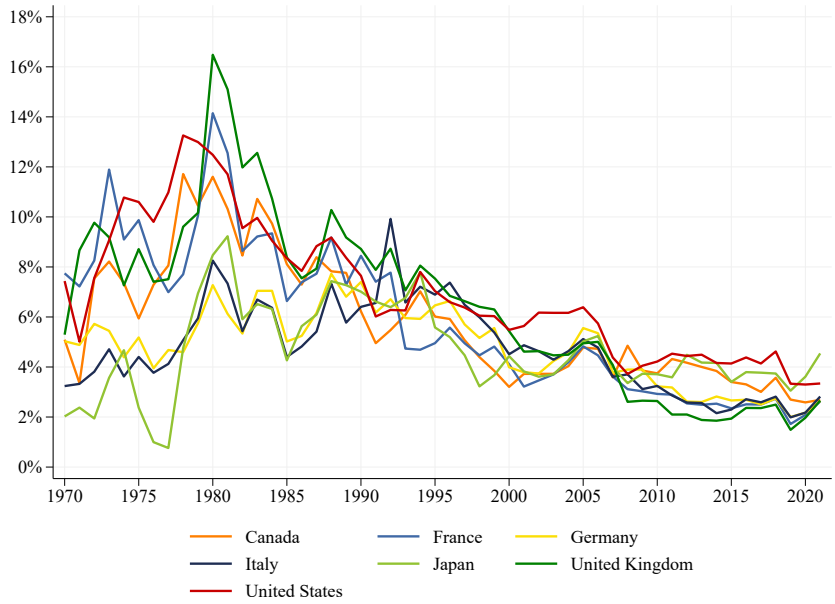
The table shows a transition matrix by quintiles of per capita national income.

B.2 Unequal rates of return

B.2.1 G8 vs BRICS

Figure A18

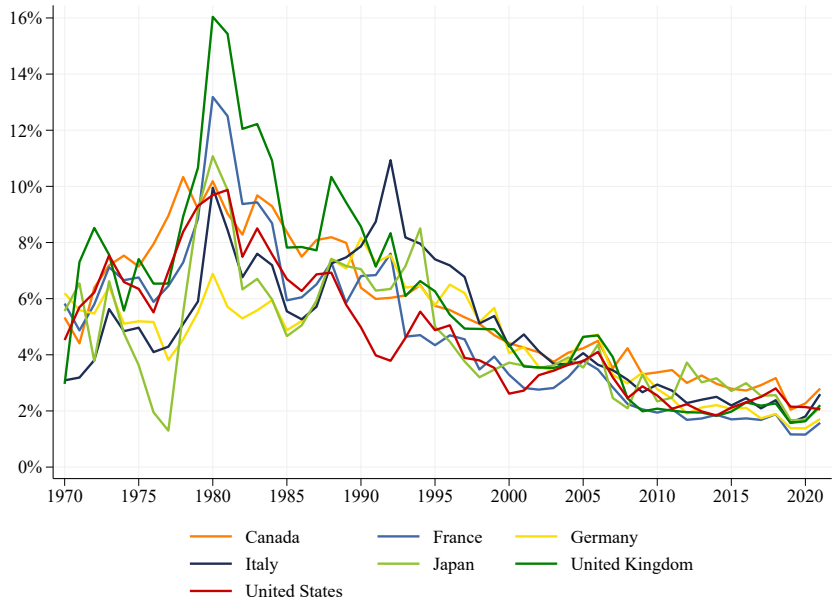
Returns on foreign assets, G7 countries



Graph shows average rate of returns on foreign assets.

Figure A19

Returns on foreign liabilities, G7 countries



Graph shows average rate of returns on foreign liabilities.

Figure A20

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

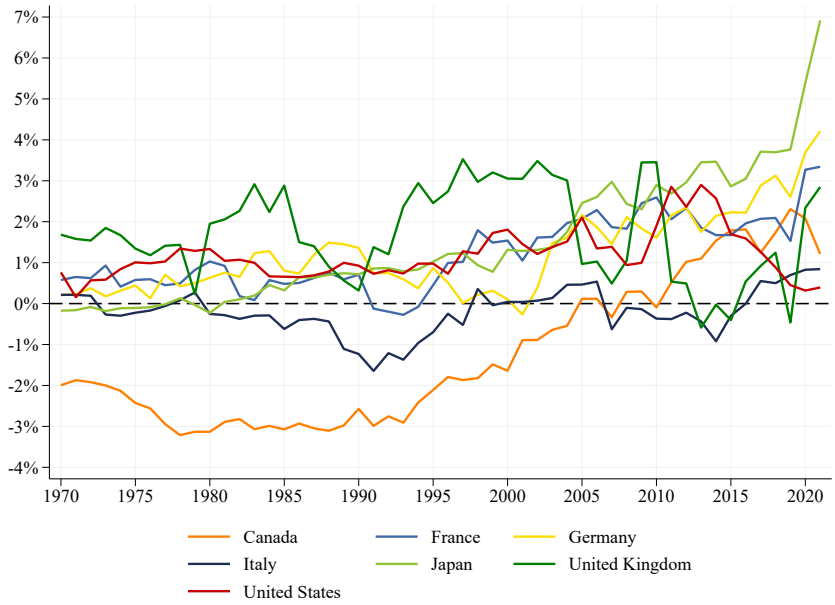
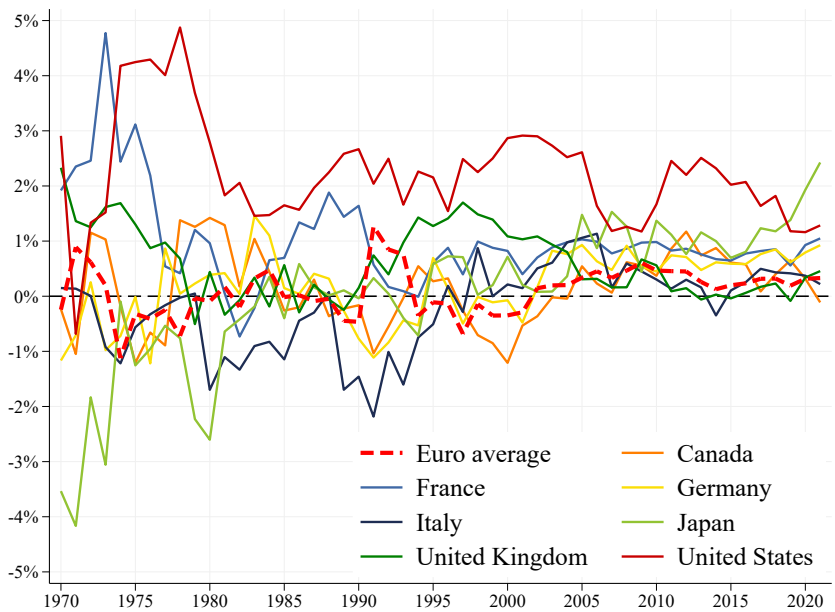


Figure A21

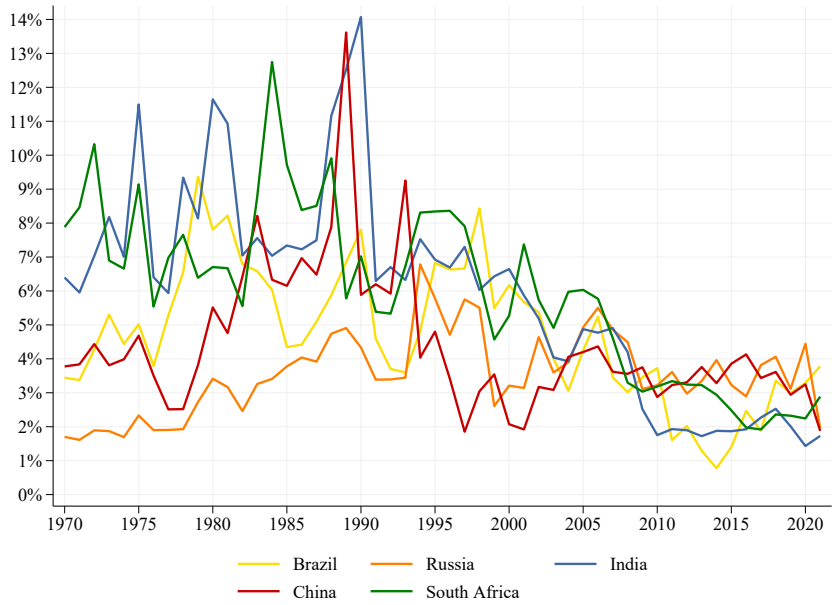
Excess yields, G8 economies



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities. For returns on assets or liabilities refer to Appendix.

Figure A22

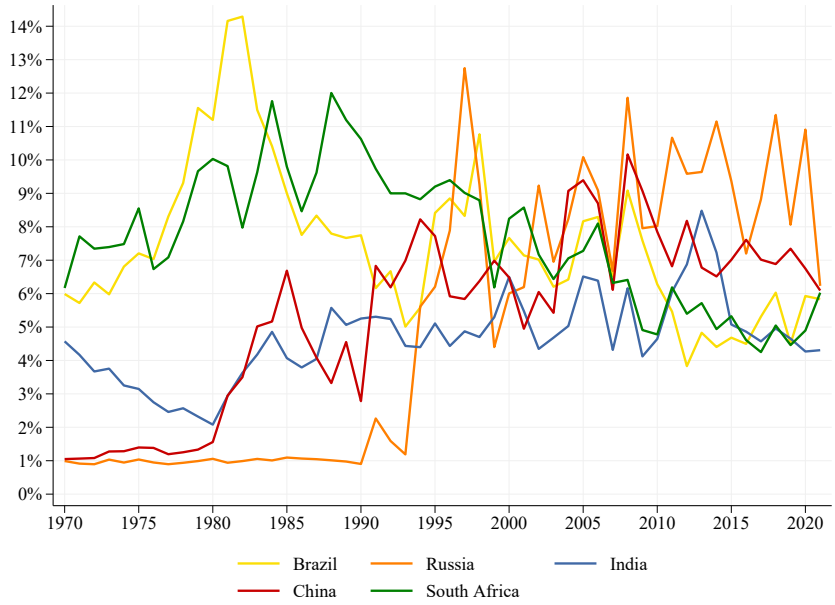
Returns on foreign assets, BRICS



Graph shows average rate of returns on foreign assets.

Figure A23

Returns on foreign liabilities, BRICS



Graph shows average rate of returns on foreign liabilities.

Figure A24

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

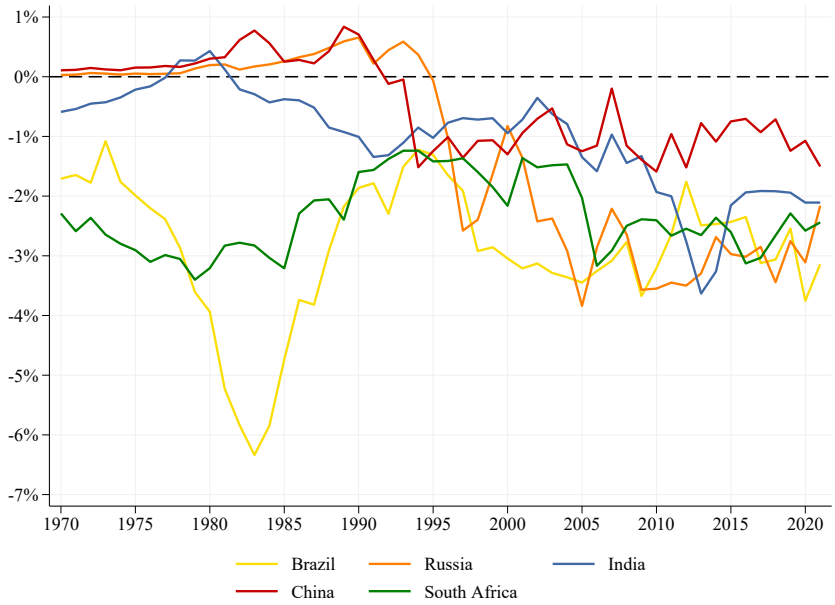
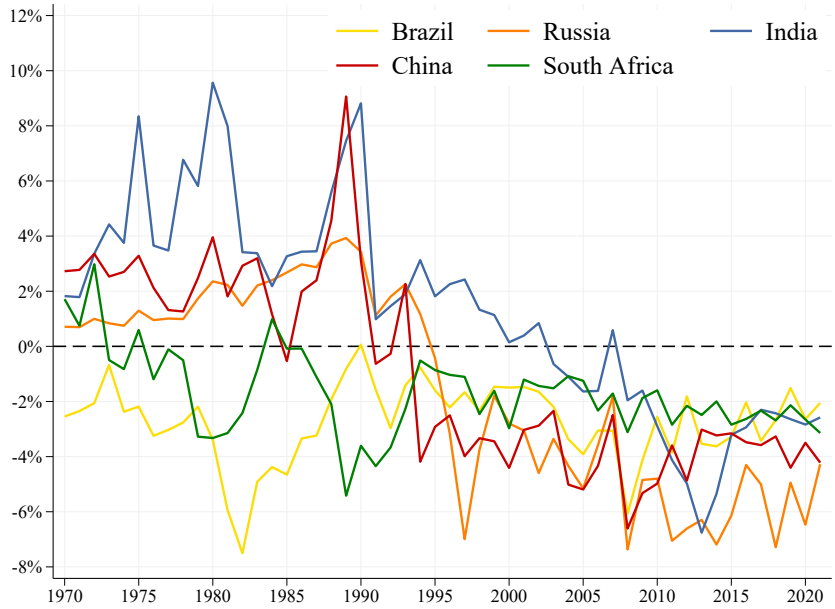


Figure A25

Excess yields, BRICS

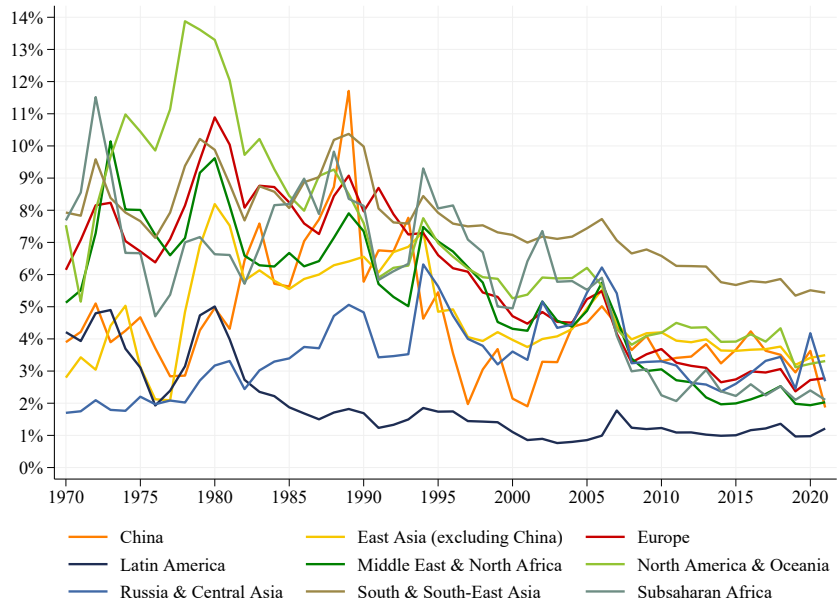


Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.

B.2.2 World Regions

Figure A26

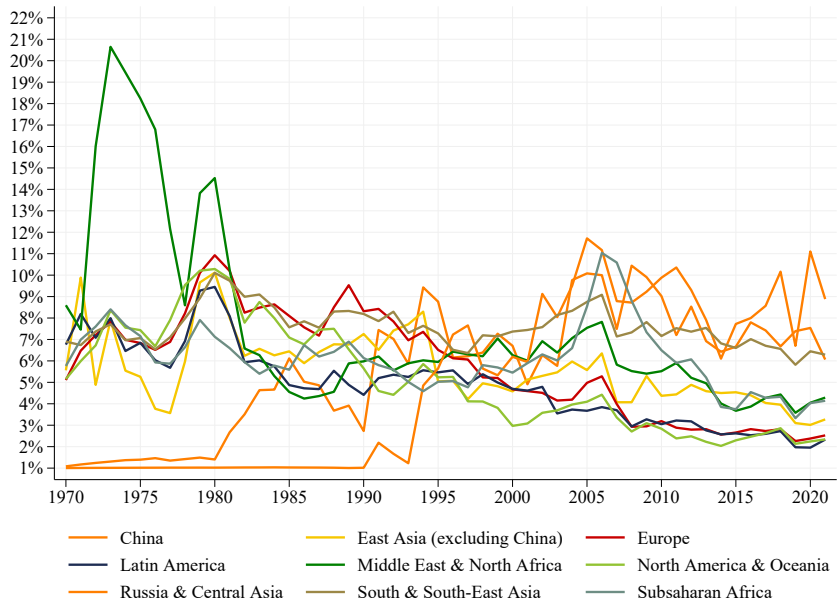
Returns on foreign assets per region



Graph shows average rate of returns on foreign assets for different regions in the world.

Figure A27

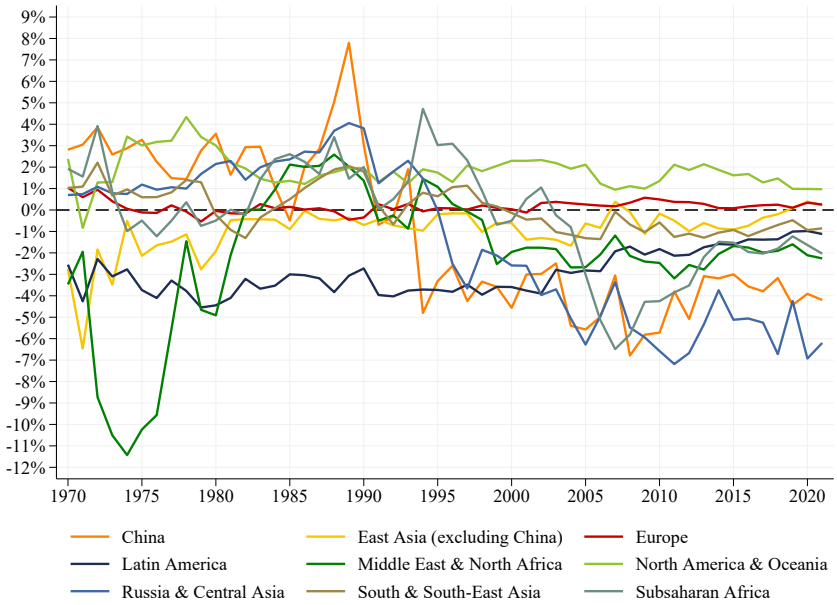
Returns on foreign liabilities per region



Graph shows average rate of returns on foreign liabilities for different regions in the world.

Figure A28

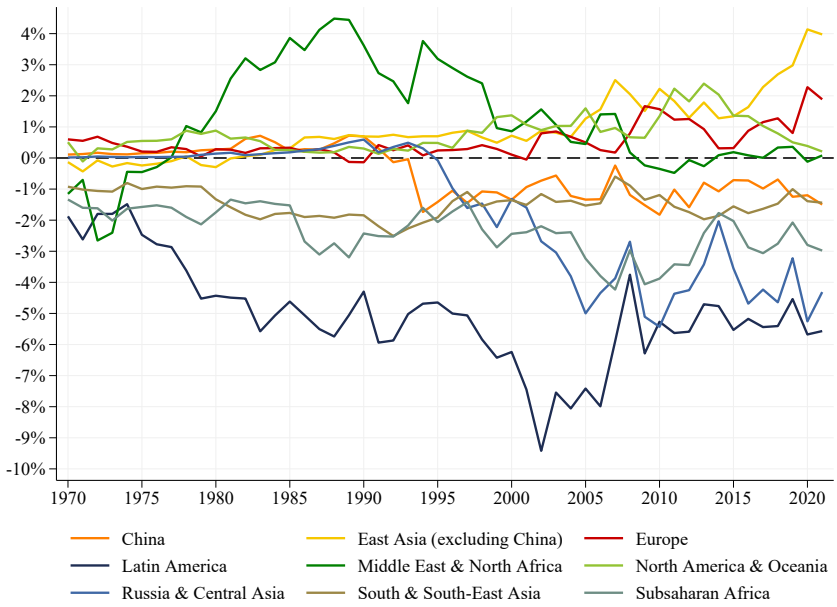
Excess yields per region



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

Figure A29

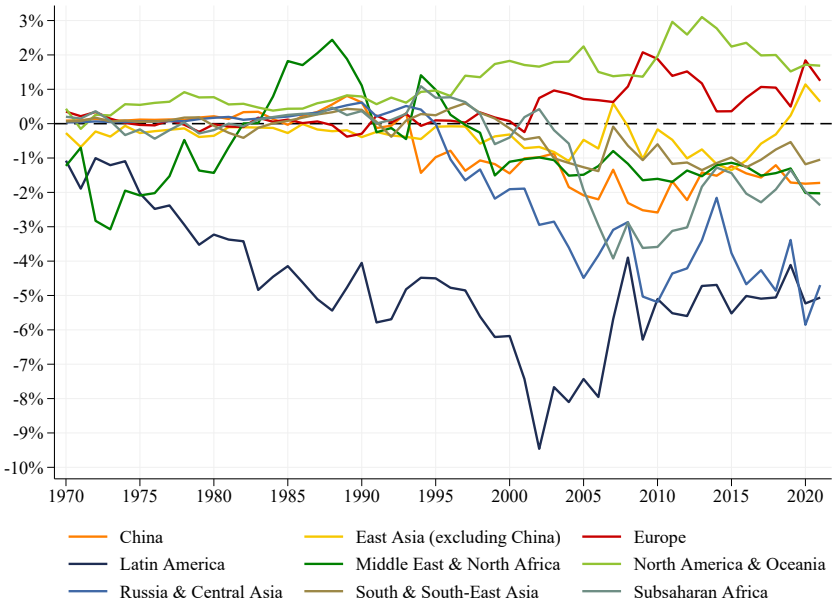
Net foreign capital income as a share of GDP



Graph shows aggregate net foreign capital income, as a share of regional GDP.

Figure A30

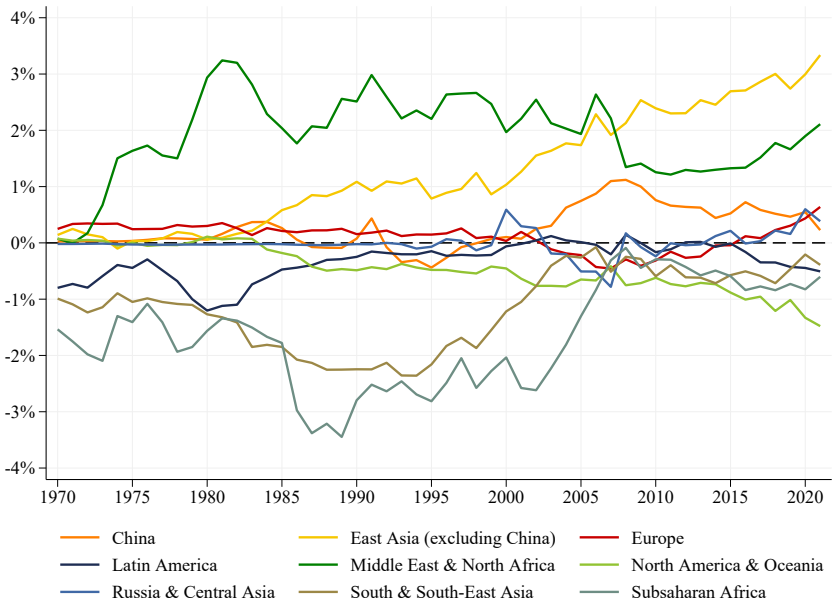
Excess yield as a share of GDP



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).

Figure A31

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



Graph shows net foreign capital income if regions would not have a different average return rate on their assets with respect to their liabilities, as a share of group GDP.

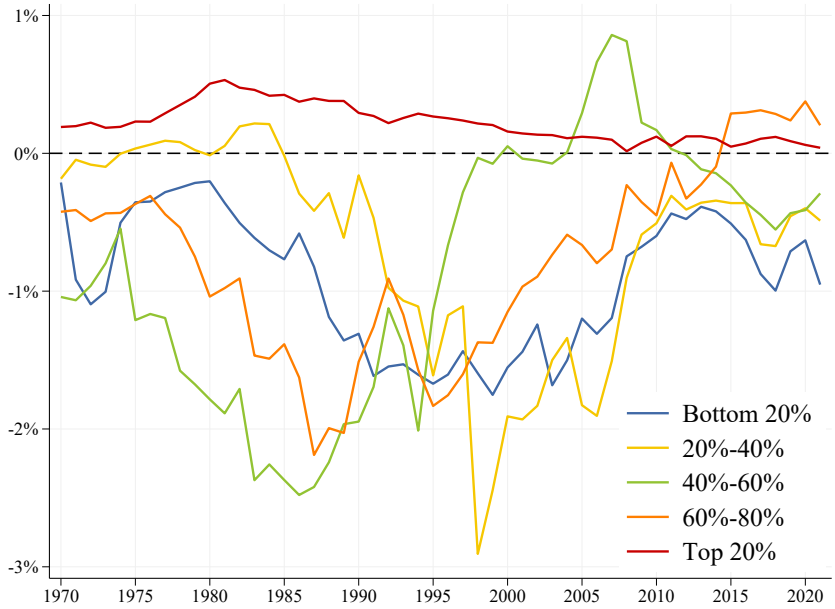
B.2.3 Quintiles

Countries are 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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

We can see from A32 that subtracting the excess yield from the net foreign capital income changes the net balance significantly. The richest countries net foreign capital income would be very close to zero, while the bottom 80% would experience significant increases and the 4th quintile would even record a net positive balance.

Figure A32

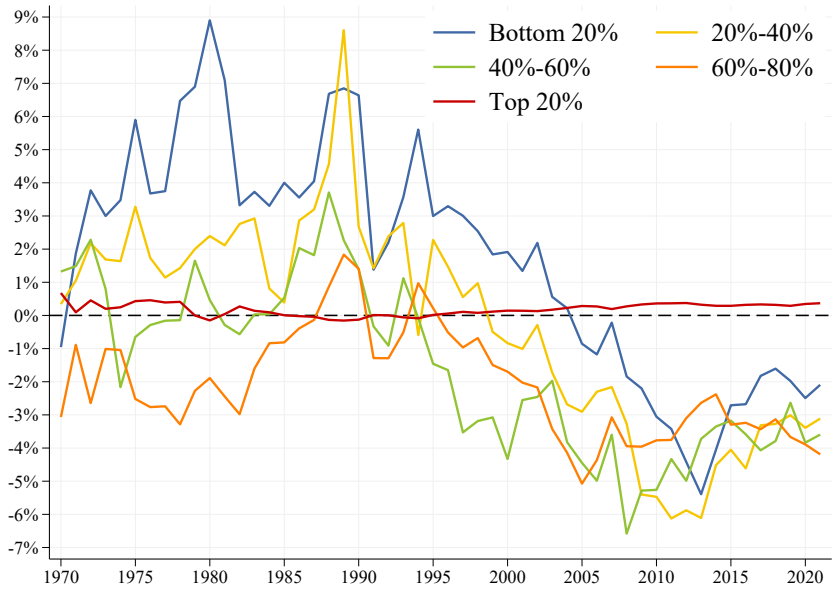
Net foreign capital income minus excess yield income as a share of GDP



Graph shows net foreign capital income if country groups would not have a different average return rate on their assets with respect to their liabilities, as a share of group GDP. National income does not include FDI income paid correction due to shifted profits.

Figure A33

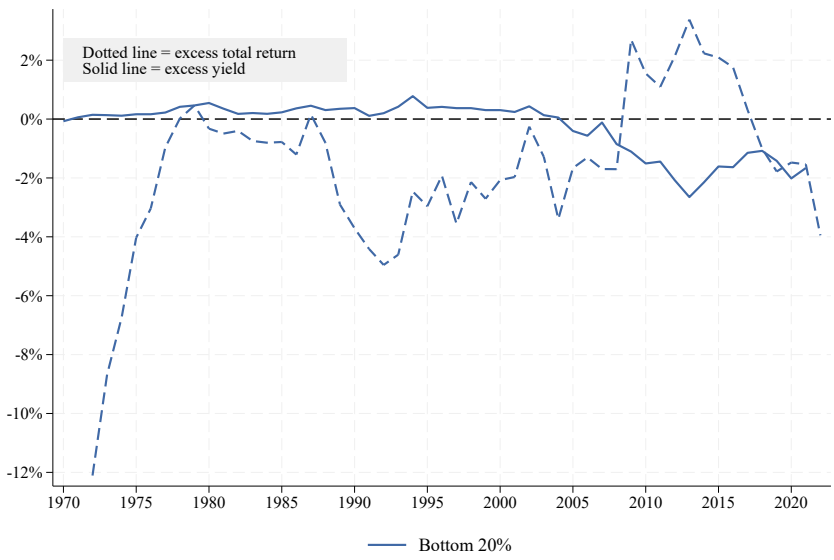
Excess yields per income group



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities. National income does not include FDI income paid correction due to shifted profits.

Figure A34

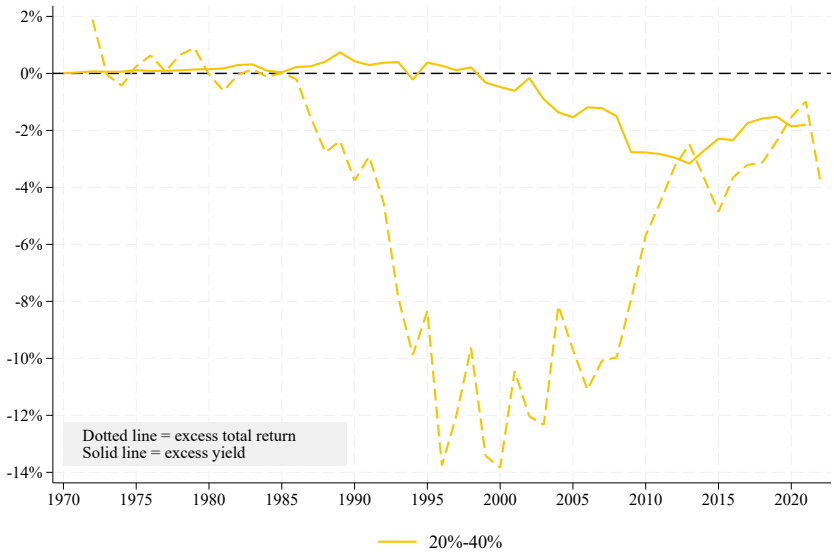
Total Excess returns as a share of group GDP - Bottom 20%



Graph shows total excess returns (5-years moving average) and excess yield for the bottom 20%, as a share of group GDP.

Figure A35

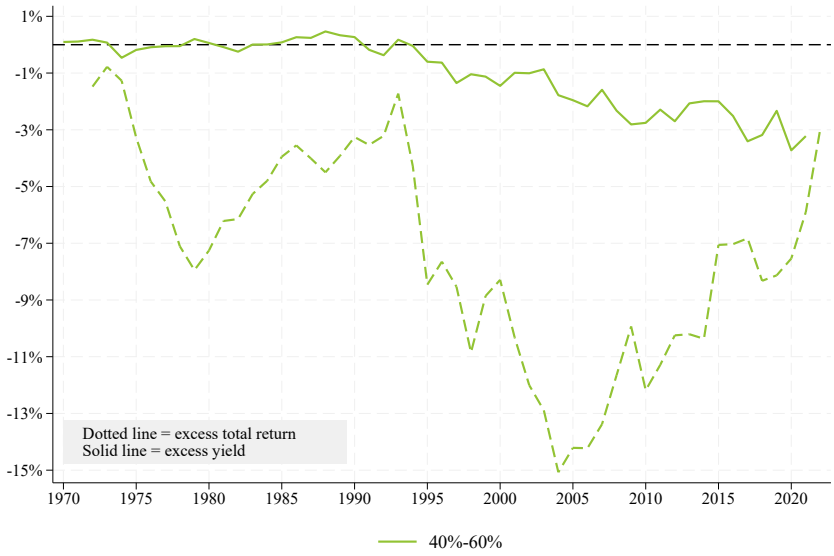
Total Excess returns as a share of group GDP - 20%-40%



Graph shows total excess returns (5-years moving average) and excess yield for the 20%-40% group, as a share of group GDP.

Figure A36

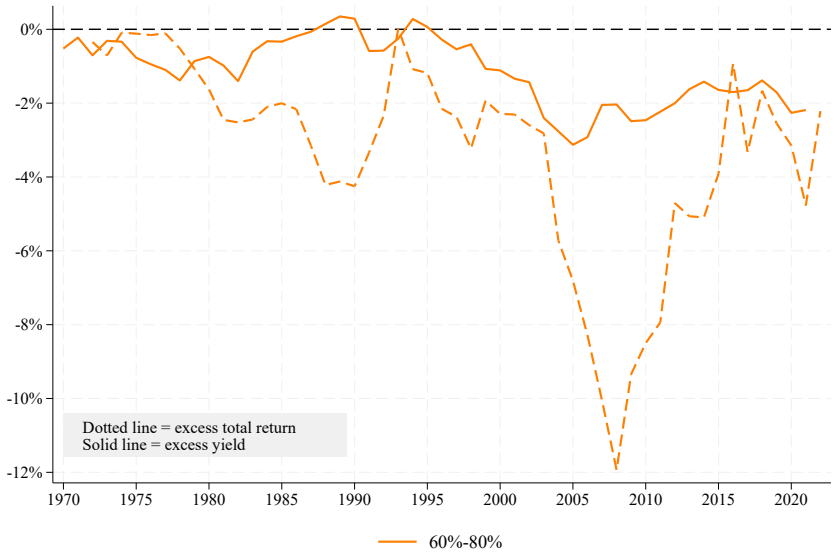
Total Excess returns as a share of group GDP - 40%-60%



Graph shows total excess returns (5-years moving average) and excess yield for the 40%-60% group, as a share of group GDP.

Figure A37

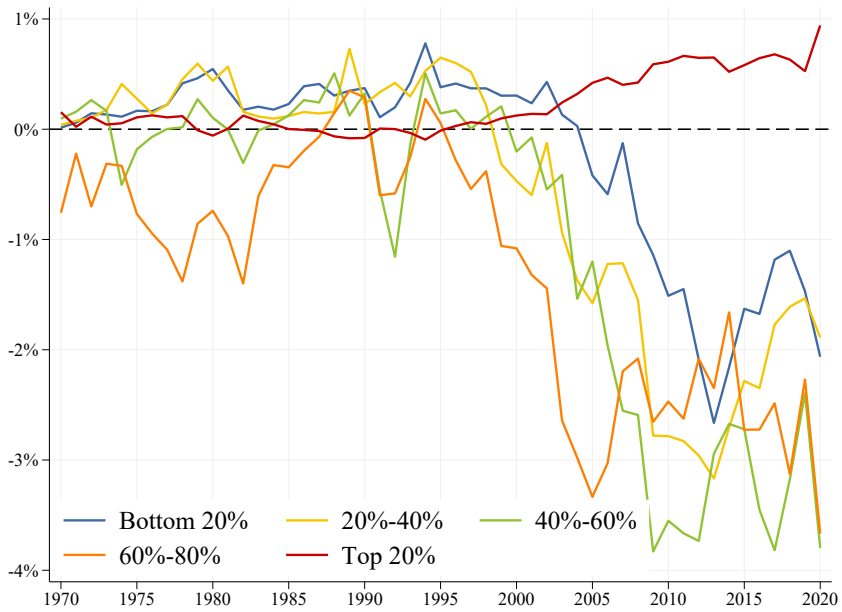
Total Excess returns as a share of group GDP - 60%-80%



Graph shows total excess returns (5-years moving average) and excess yield for the 60%-80% group, as a share of group GDP.

Figure A38

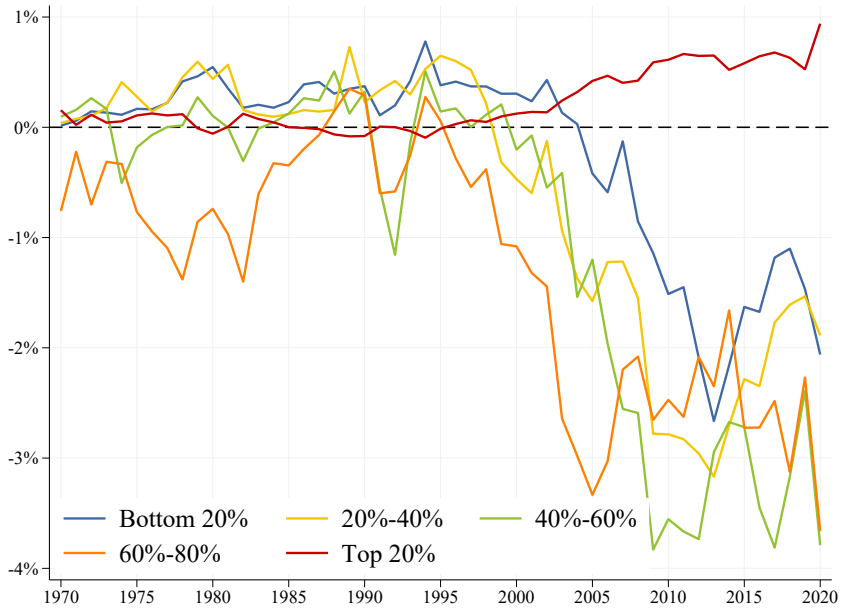
Scenario A: Chinese reserves only in USD



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).

Figure A39

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).

Figure A40

Liabilities decomposition - bottom 20%, 1970-2022

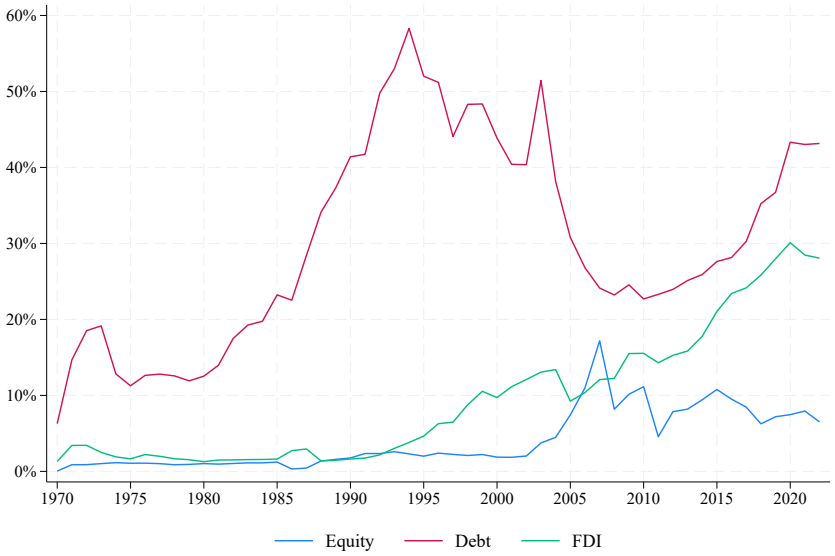


Figure A41

Assets decomposition - bottom 20%, 1970-2022

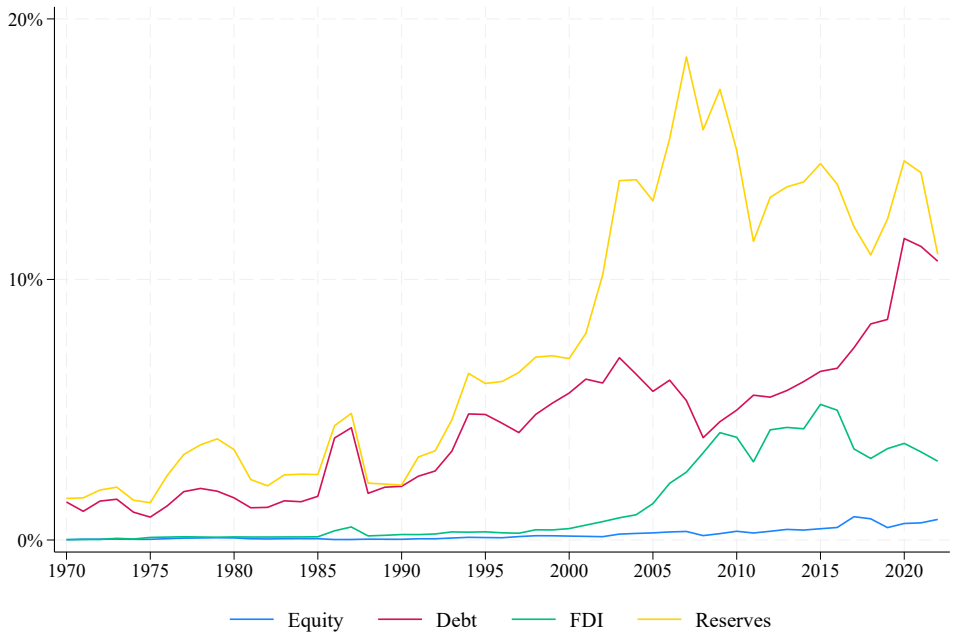


Figure A42

Liabilities decomposition - 20-40%, 1970-2022

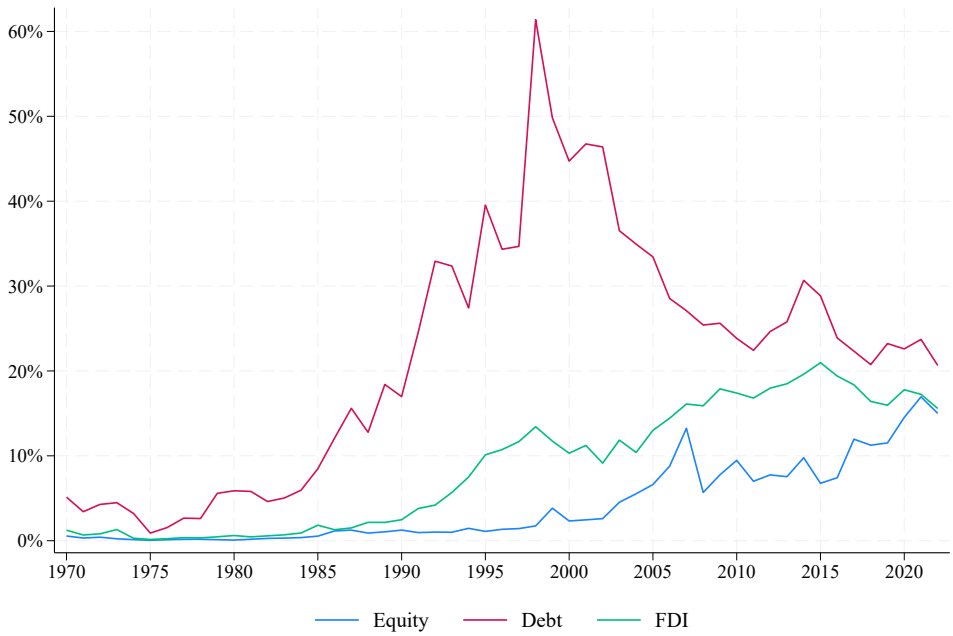


Figure A43

Assets decomposition - 20-40%, 1970-2022

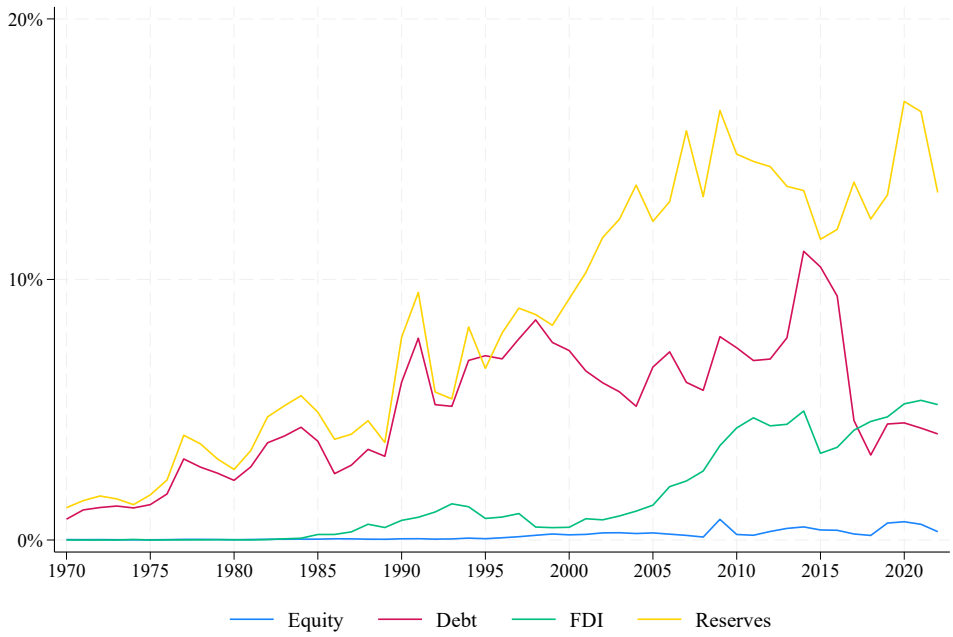


Figure A44

Liabilities decomposition - 40-60%, 1970-2022

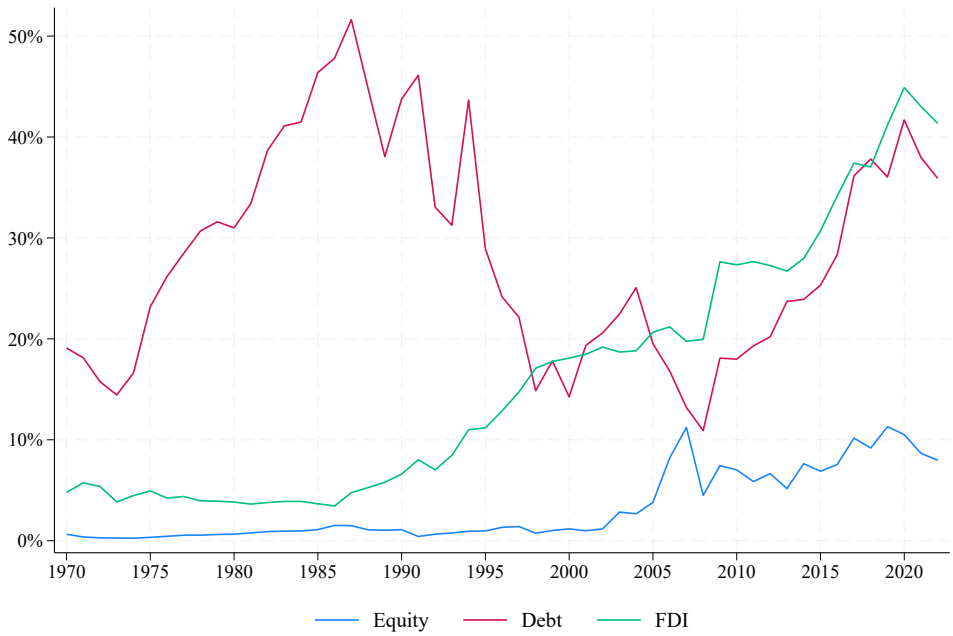


Figure A45

Assets decomposition - 40-60%, 1970-2022

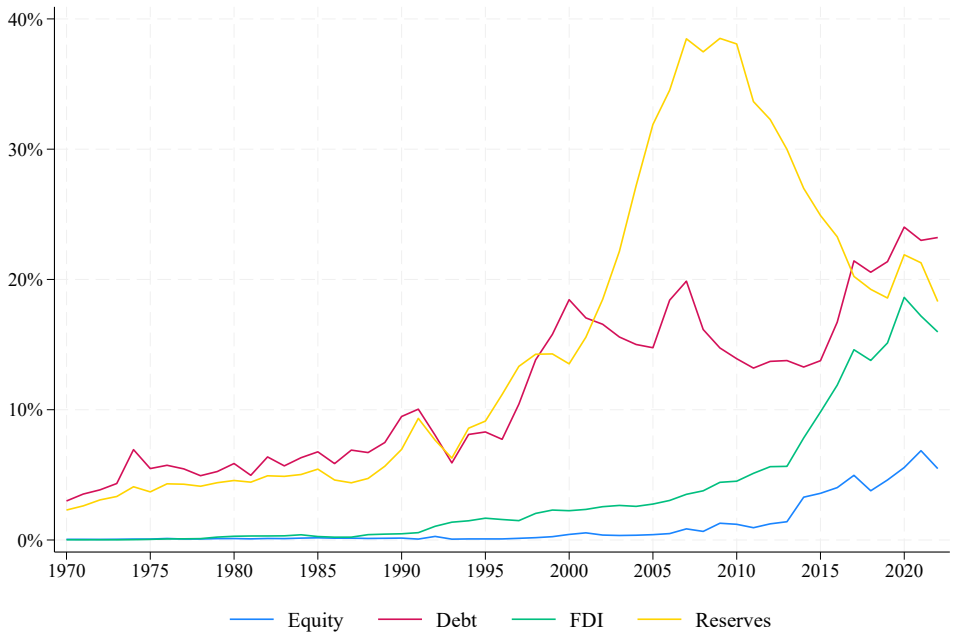


Figure A46

Liabilities decomposition - 60-80%, 1970-2022

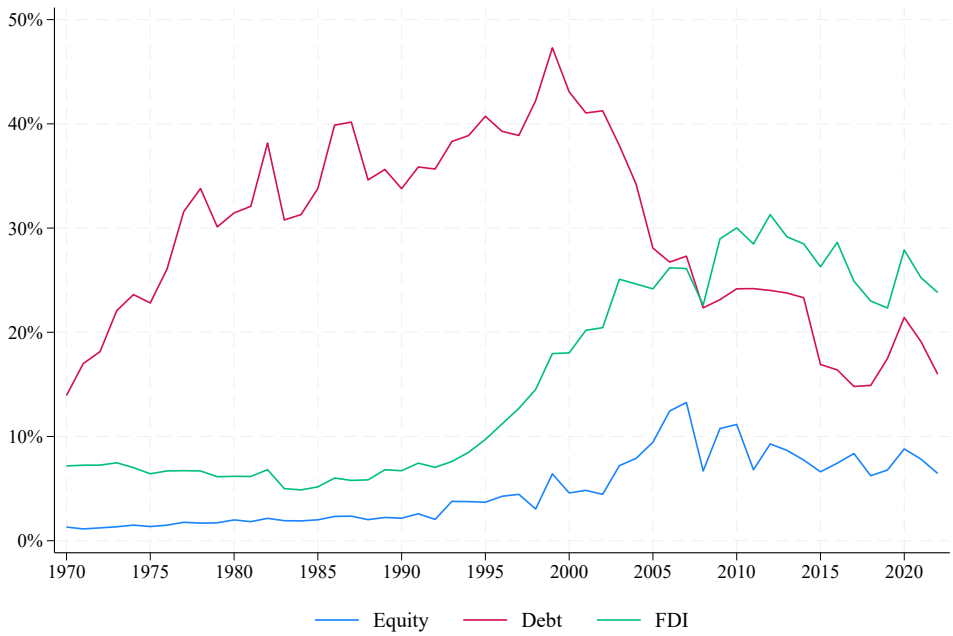


Figure A47

Assets decomposition - 60-80%, 1970-2022

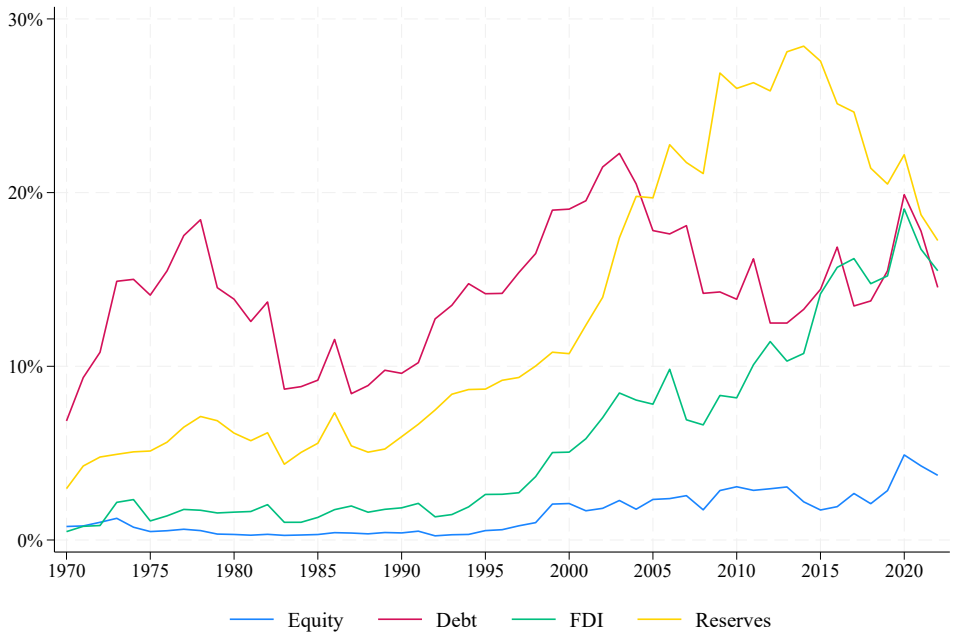


Figure A48

Liabilities decomposition - top 20%, 1970-2022

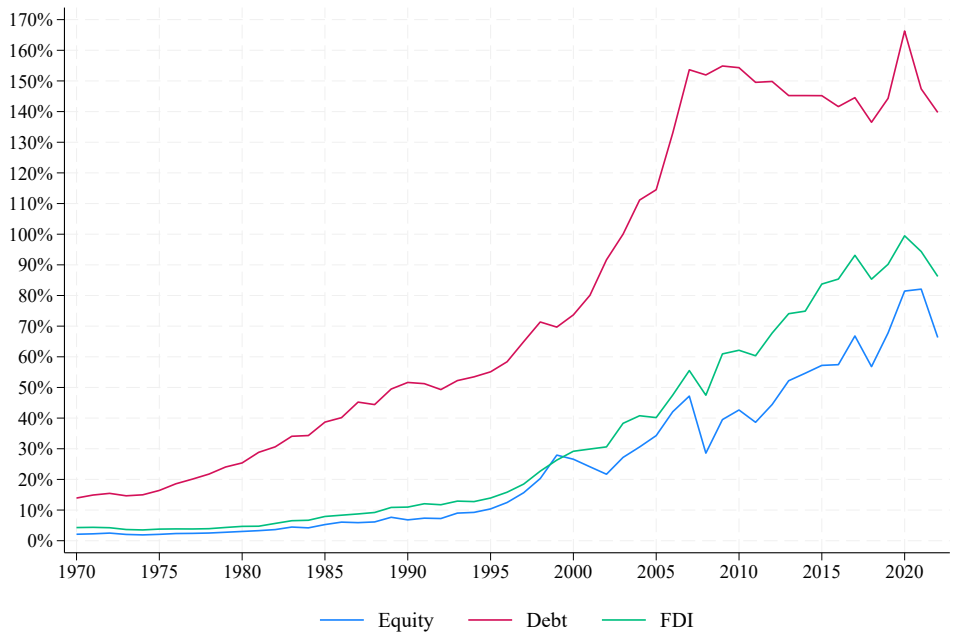
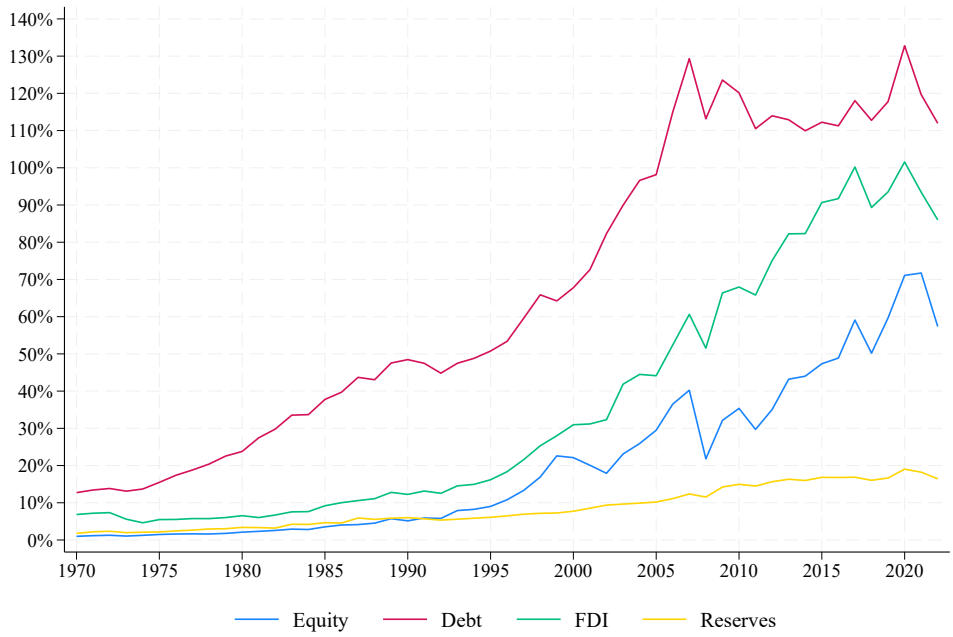


Figure A49

Assets decomposition - top 20%, 1970-2022



C Comparison

Table 6

Excess real yields on net foreign assets. 1981-2007 (percentage)

Country	Excess yield (corrected)	Excess yield (raw data)	Excess yield (Habib et al., 2010)
Argentina	-2.9	-5.2	-4.3
Austria	0.2	0.2	-0.4
Australia	0.4	-1.5	-1.3
Bulgaria	-1.4	-2.8	-2.3
Brazil	-2.7	-4.8	-3.1
Canada	-0.1	-1.5	-1.5
Switzerland	0.2	1.1	1.2
Chile	-1.8	-5.0	-4.7
China	-0.7	-1.6	-0.7
Colombia	-1.6	-5.6	-5.5
Czech Republic	-1.6	-3.2	-3.1
Germany	0.1	-0.3	-0.3
Denmark	0.1	0.0	0.0
Spain	-0.4	-0.7	-1.1
Finland	-1.2	-1.1	-1.3
France	0.7	0.2	0.0
United Kingdom	0.6	-0.1	0.0
Greece	2.7	-2.3	-2.2
Hong Kong	-2.4	-1.2	-0.5
Croatia	0.2	-2.0	-2.9
Hungary	-2.3	-2.6	-1.1
Indonesia	-2.3	-2.6	-3.1
Ireland	-6.8	-1.2	-4.0
Israel	0.3	-0.6	-0.3
India	2.3	0.9	0.9
Italy	-0.4	-1.2	-2.2
Japan	0.2	1.6	0.8
Korea	0.4	-0.6	2.6
Mexico	-2.8	-2.4	-2.1
Malaysia	-6.2	-3.3	-3.5
Netherlands	-1.2	-0.2	-0.5
Norway	-1.0	-1.2	-1.4
New Zealand	0.8	-1.7	-2.9
Peru	-2.5	-4.2	-3.4
Philippines	0.0	-1.1	-1.0
Poland	-1.8	-2.6	-2.0
Portugal	1.5	-0.7	-1.0
Romania	-4.3	-3.5	-2.9
Russia	-0.4	-3.7	-3.3
Sweden	0.2	0.1	-0.1
Singapore	0.3	0.1	-1.2
Slovenia	0.3	-1.4	-1.3
Slovak Republic	-1.3	-3.1	-2.7
Thailand	-2.4	-1.7	-1.6
Turkey	4.6	-1.8	-1.2
United States	2.2	1.3	1.3
Uruguay	-1.2	-2.1	-1.4
Venezuela	0.9	-2.8	-2.5
South Africa	-1.8	-3.0	-3.4

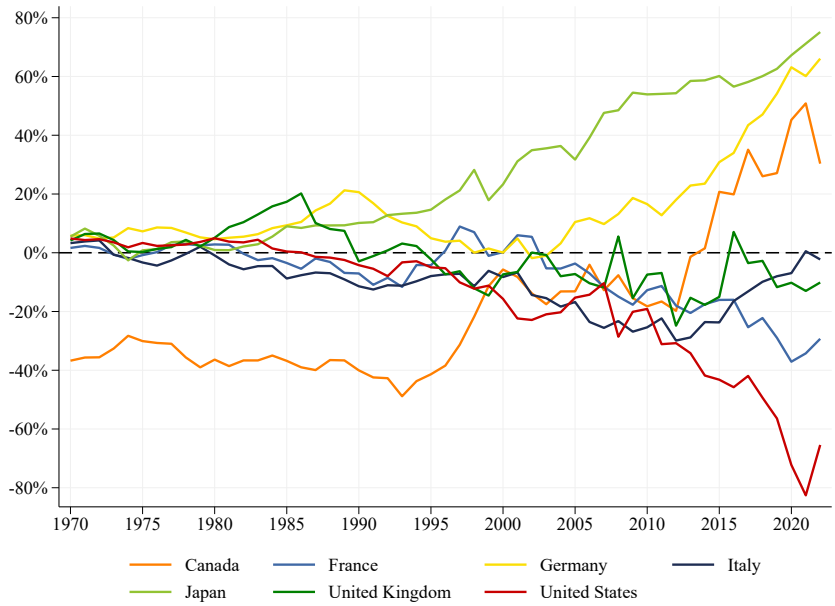
The table presents a comparison between our results and those from (Habib, 2010). Excess real yields are calculated as $i^A - i^L$. The yields in the raw data column are estimated using foreign wealth series from (Lane and Milesi-Ferretti, 2018) and foreign capital income series from the IMF BOP, without relying on any of the corrections and the imputations discussed above.

D Robustness

D.1 G8 vs BRICS

Figure A50

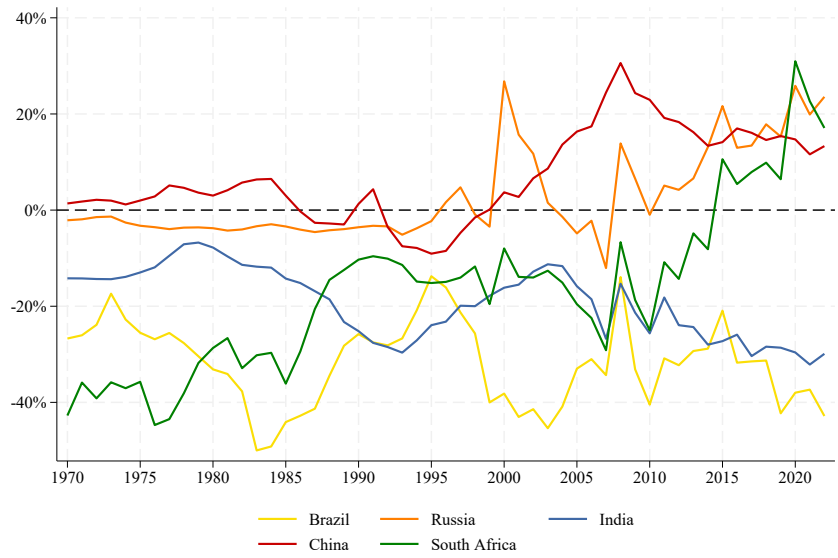
Net foreign assets as a share of country GDP (G7 countries), without tax havens correction



Graph shows net foreign assets as a share of each country's GDP.

Figure A51

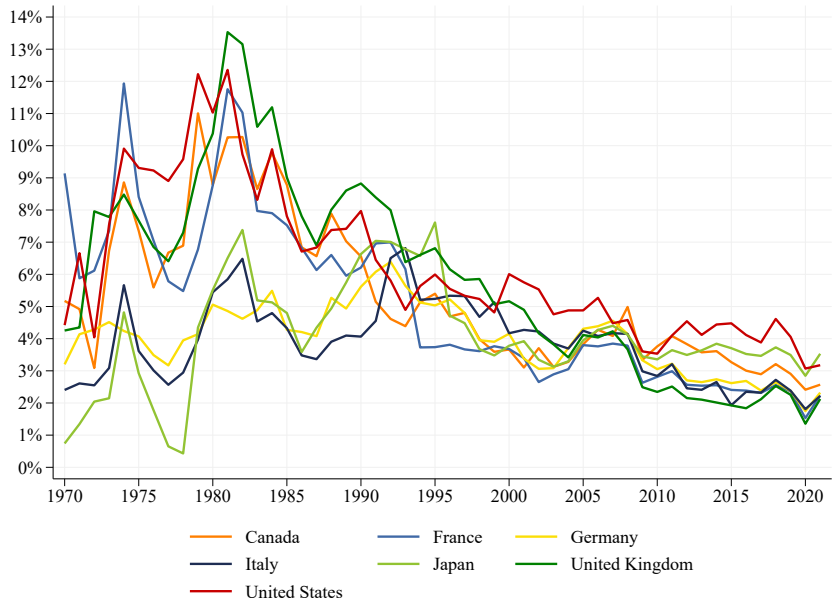
Net foreign assets as a share of country GDP (BRICS), without tax havens correction



Graph shows net foreign assets as a share of each country's GDP.

Figure A52

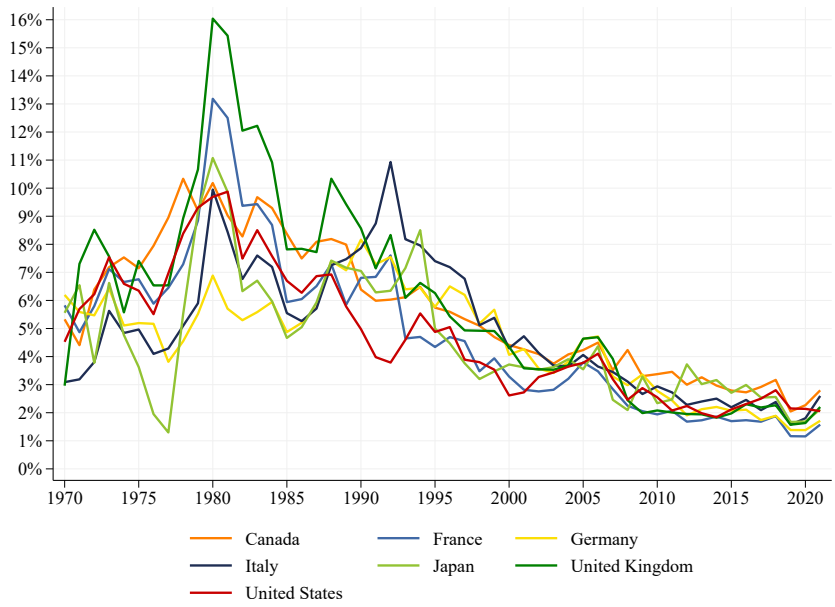
Returns on foreign assets without tax havens correction, G7 countries



Graph shows average rate of returns on foreign assets.

Figure A53

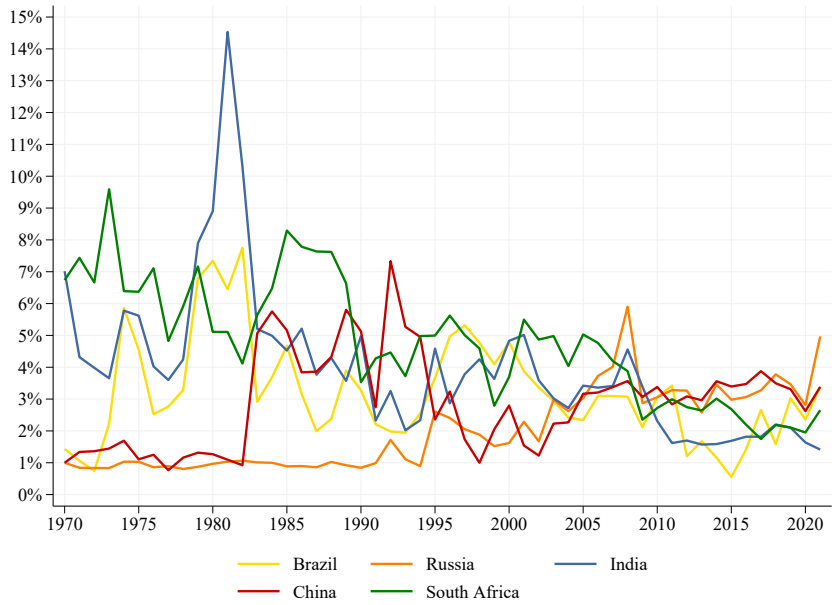
Returns on foreign liabilities without tax havens correction, G7 countries



Graph shows average rate of returns on foreign liabilities.

Figure A54

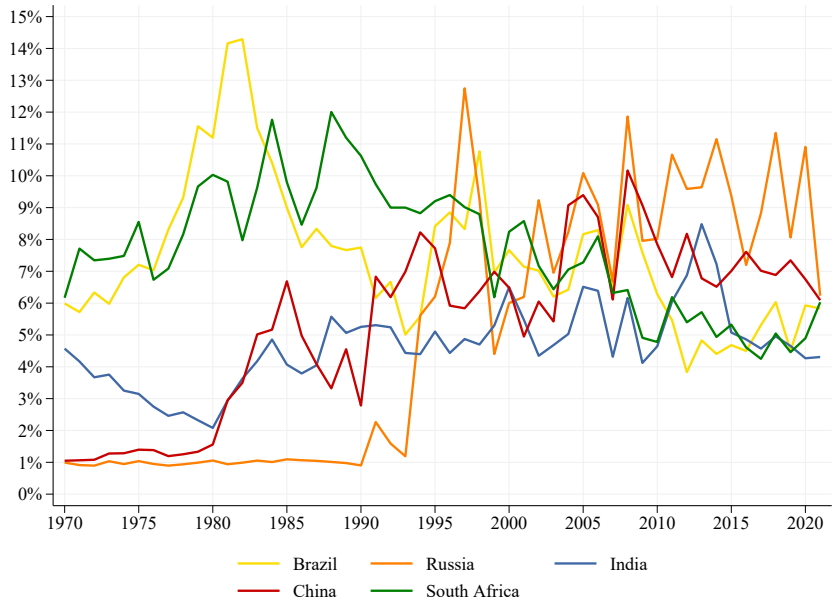
Returns on foreign assets without tax havens correction, BRICS



Graph shows average rate of returns on foreign assets.

Figure A55

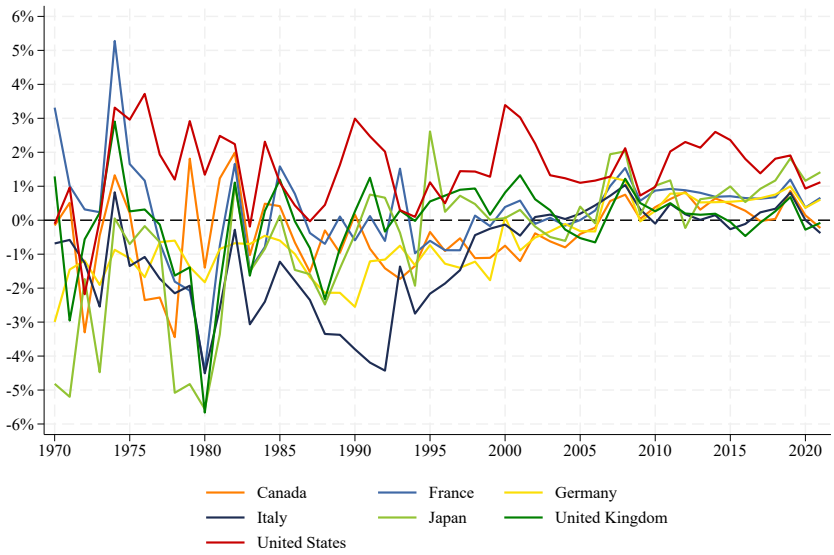
Returns on foreign liabilities without tax havens correction, BRICS



Graph shows average rate of returns on foreign liabilities.

Figure A56

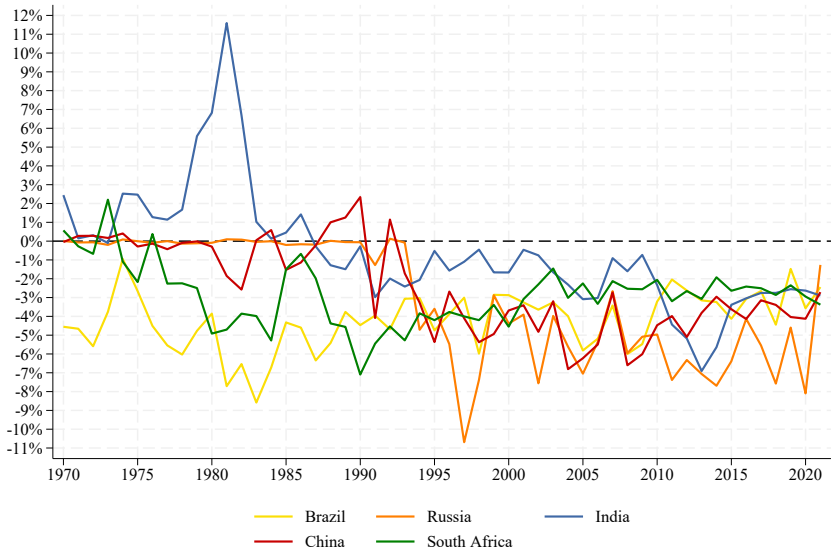
Excess yields without tax havens correction, G7 countries



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

Figure A57

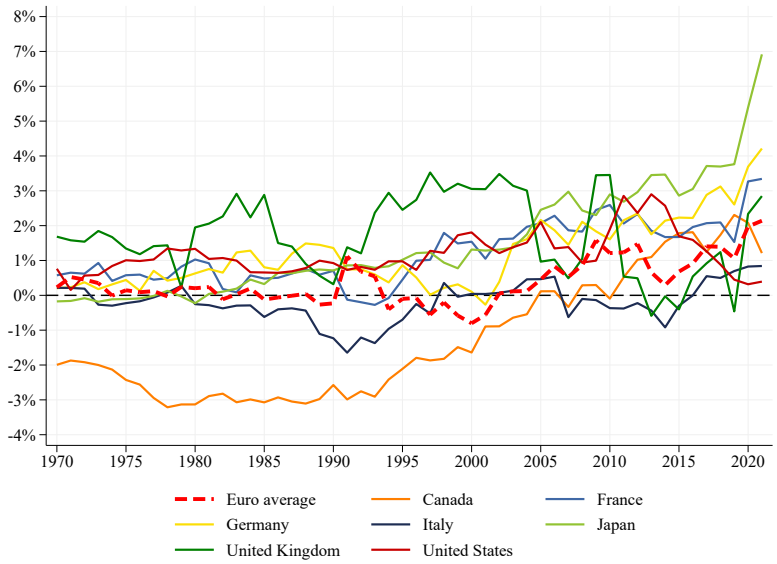
Excess yields without tax havens correction, BRICS



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

Figure A58

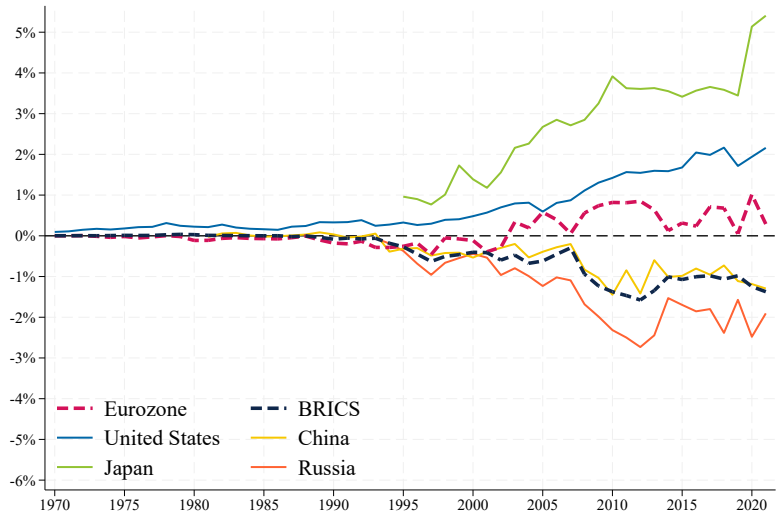
Net foreign capital income as a share of country (Eurozone) GDP



Graph shows net foreign capital income, as a share of country (Eurozone) GDP. Before Eurozone was created only founders are included: 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).

Figure A59

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



Graph shows excess yields income using foreign wealth and foreign capital income raw data series. Before Eurozone was created only founders are included: 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)

D.2 All countries

The set of tables below reports reports excess real yields for all the countries in our sample, grouped by world regions. Excess real yields are calculated as $i^A - i^L$. The yields in the raw data column are estimated using foreign wealth series from (Lane and Milesi-Ferretti, 2018) and foreign capital income series from the IMF BOP, without relying on any of the corrections and the imputations discussed above.

Excess real yields on net foreign assets. Northern America & Oceania (percentage)

Country	**Excess yield (corrected)**			**Excess yield (raw data)**		
	1970-1999	**2000-2009**	**2010-2022**	**1970-1999**	**2000-2009**	**2010-2022**
Australia	0,0	0,0	0,0	-1,7	-1,3	-0,9
Bermuda	-6,5	-2,4	-0,7		0,1	0,0
Canada	0,1	0,0	0,5	-1,4	-1,3	-0,5
Fiji	-0,7	-6,0	-4,0	-1,5	-6,5	-2,8
French Polynesia	3,5	0,8	0,2			-0,5
Greenland	-0,4	-0,7	0,0			
Kiribati	-180,8	-15,0	-5,6	-59,0	-11,2	-7,1
Marshall Islands	-17,0	-3,8	0,0			0,2
Micronesia	-2,8	-3,3	-8,4			-9,4
Nauru	-1,1	-0,7	-1,7			0,2
New Caledonia	5,3	9,4	3,7			4,8
New Zealand	1,9	-0,1	-0,1	-0,2	-1,8	-1,3
Palau	-5,4	-2,3	-2,5			-2,4
Samoa	2,1	-3,4	-2,7	2,1	-5,8	-2,9
Solomon Islands	-8,1	-3,6	-4,9	-5,9	-3,9	-7,6
Tonga	11,1	4,9	-0,7	13,6	5,0	1,6
Tuvalu	-51,8	-27,0	0,9		-50,1	-5,8
USA	2,4	2,2	1,9	2,4	1,2	1,4
Vanuatu	-20,1	-2,6	-1,2	-20,2	-3,1	-5,3

Table 7

Excess real yields on net foreign assets. Europe (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Albania	2.5	2.1	-1.4	3.3	2.2	-1.0
Andorra	0.4	0.8	0.6			
Austria	0.1	0.3	0.5		0.1	0.1
Belgium	0.1	0.1	-0.1		-0.3	-0.3
Bosnia and Herzegovina	1.2	-0.5	-2.5	-1.4	-0.9	-1.6
Bulgaria	-0.4	-3.0	-3.1	-1.4	-3.7	-1.7
Croatia	1.0	-1.8	-3.0	-1.5	-2.4	-2.6
Cyprus	-8.4	-4.2	0.4	0.0	-1.7	0.4
Czech Republic	0.0	-4.7	-4.7	-1.9	-4.4	-4.4
Denmark	-0.1	0.7	0.9	-0.2	0.2	0.9
Estonia	3.5	-1.9	-1.7	-1.1	-2.4	-3.0
Finland	-2.1	0.5	0.4	-2.3	0.5	-0.2
France	1.2	0.8	0.8	0.4	0.4	0.6
Germany	-0.1	0.5	0.7	-0.7	0.2	0.9
Greece	3.2	0.7	0.6	-2.6	-1.0	-0.4
Guernsey	0.8	0.1	1.1			
Hungary	-2.0	-1.2	-1.1	-3.0	-1.5	-1.1
Iceland	1.7	1.4	1.1	-3.8	-0.2	0.4
Ireland	-6.2	-2.3	-1.4		-1.1	-1.0
Isle of Man	0.8	0.0	0.2			
Italy	-0.6	0.6	0.2	-1.6	0.1	0.0
Jersey	-0.5	-1.0	0.4			
Kosovo	2.1	-3.2	-1.7		-5.3	-2.8
Latvia	2.1	-0.5	-1.4	-0.4	-1.3	-1.5
Liechtenstein	-0.3	-1.5	0.9			
Lithuania	2.2	-1.4	-3.1	-0.9	-2.6	-3.2
Luxembourg	1.2	0.1	0.1	0.2	-0.1	-0.1
Malta	-20.0	-4.1	-0.9	0.2	-0.5	-0.2
Moldova	0.3	-1.3	-3.1	-1.5	-1.9	-3.0
Monaco	0.3	-1.7	-1.0			
Montenegro	4.9	-0.3	-0.9		-1.9	-1.1
Netherlands	-1.6	0.3	0.9	-0.3	0.2	0.3
North Macedonia	3.9	-1.1	-3.0	-1.7	-2.2	-2.9
Norway	-0.9	0.0	1.3	-1.2	-0.8	-0.5
Poland	-1.1	-2.7	-4.0	-2.7	-2.7	-3.5
Portugal	1.8	0.3	0.1	-1.3	-0.3	-0.3
Romania	-5.3	-3.2	-3.8	-2.6	-4.0	-1.4
San Marino	-0.8	-1.0	-2.9			
Serbia	1.1	-0.4	-2.3		-1.4	-1.7
Slovakia	0.2	-3.9	-0.8	-1.6	-3.9	-2.6
Slovenia	1.0	-0.8	-1.3	-0.9	-1.8	-1.3
Spain	-0.7	0.2	0.7	-1.1	-0.1	0.5
Sweden	-0.4	1.2	1.2	-0.7	0.9	0.7
Switzerland	-0.6	0.2	0.1	1.3	0.5	0.3
United Kingdom	0.8	0.7	0.2	0.2	0.1	0.0

Excess real yields on net foreign assets. China & East Asia (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
China	1,3	-4,2	-3,8	-1,1	-3,0	-3,6
Hong Kong	-5,4	-2,8	-1,8	-0,9	-1,3	-1,1
Japan	-0,7	0,7	1,3	1,3	1,9	1,9
Korea	4,0	-2,5	-1,1	-1,1	-0,2	1,6
Macao	-13,2	-26,3	-7,1		-15,8	-13,1
Mongolia	-0,2	1,0	-3,3	1,3	-0,5	-6,6
North Korea	-0,8	-3,8	-4,1			
Taiwan	1,8	-1,9	-1,3			

Excess real yields on net foreign assets. South & South-East Asia (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Afghanistan	13,0	2,9	0,9		1,1	0,5
Bangladesh	6,1	0,4	-4,5	4,4	-1,1	-4,1
Bhutan	0,0	-1,0	-3,9		-1,2	-5,2
Brunei Darussalam	-3,1	-3,8	-4,3		-3,8	
Cambodia	0,4	-3,4	-3,7	-0,4	-3,7	-5,2
India	3,9	-0,7	-3,6	2,6	-0,1	-1,7
Indonesia	-1,5	-3,9	-5,0	-2,5	-3,7	-4,5
Lao PDR	4,1	-0,2	-2,5	2,0	-0,1	0,2
Malaysia	-5,8	-7,1	-3,9	-3,7	-3,7	-2,6
Maldives	-1,6	-10,7	-8,0	-10,5	-12,2	-12,2
Myanmar	3,2	-6,6	-11,2	0,4	-10,1	-12,6
Nepal	5,2	1,7	-0,1	3,6	0,8	-0,2
Pakistan	6,5	0,1	-1,2	-0,3	-3,0	-1,6
Papua New Guinea	-0,6	-6,3	-3,8	-0,4	-7,5	-2,2
Philippines	-1,3	-1,8	-5,1	-1,3	-1,1	-3,6
Singapore	-0,8	0,6	1,0	-1,6		
Sri Lanka	1,6	1,2	-2,4	1,0	0,6	-0,4
Thailand	-1,1	-6,0	-6,2	-0,9	-4,2	-4,3
Timor-Leste	6,2	8,2	-6,9		72,9	36,2
Viet Nam	3,1	-3,0	-6,7			-4,4

Excess real yields on net foreign assets. Russia & Central Asia (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Armenia	1,4	-1,4	-2,6	0,5	-3,0	-3,6
Azerbaijan	7,4	-4,3	-3,3	2,7	-6,9	-6,8
Belarus	2,5	-0,3	-4,3	-2,7	-2,2	-3,6
Georgia	1,1	-0,9	-1,4	-1,8	-1,8	0,3
Kazakhstan	1,7	-6,2	-9,0	-2,7	-8,5	-15,4
Kyrgyzstan	0,5	-1,0	-3,4	-1,6	-1,5	-6,0
Russian Federation	1,0	-4,1	-5,9	-3,7	-3,8	-5,0
Tajikistan	3,7	2,6	1,3		0,0	2,6
Turkmenistan	-0,1	-11,2	-6,2			
Ukraine	1,5	-2,4	-4,5	-3,4	-3,0	-4,7
Uzbekistan	0,4	-1,9	-5,4		-4,3	-3,8

Excess real yields on net foreign assets. Latin America (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Anguilla	-5,8	-1,5	0,9	-13,9	-1,4	-0,2
Antigua and Barbuda	-0,5	-5,2	-2,3	-0,4	-4,8	-3,1
Argentina	-4,0	-2,5	-5,0	-5,8	-4,6	-7,2
Aruba	2,6	1,1	9,5	-0,1	-3,1	-2,0
Bahamas	-1,0	-1,1	-1,2	-0,1	0,0	0,0
Barbados	-42,9	-22,0	0,4	-1,6	-2,0	-0,1
Belize	-8,8	-7,7	-3,7	-2,2	-5,5	-3,1
Bolivia	-1,3	-0,6	-6,2	-3,9	-2,8	-11,3
Bonaire, Sint Eustatius and Saba	-0,4	-1,6	-1,0			
Brazil	-2,6	-3,0	-2,7	-5,5	-3,6	-3,0
Cayman Islands	-7,7	-3,4	-0,5			
Chile	-1,1	-3,4	-2,9	-3,7	-7,1	-6,7
Colombia	-0,1	-3,5	-2,0	-4,9	-5,7	-7,1
Costa Rica	-2,3	-3,5	-4,5	-5,0	-4,5	-4,5
Cuba	-3,5	-1,7	-1,4			
Curacao	-2,8	-3,8	-1,8			
Dominica	0,4	-3,6	-0,4	-1,7	-3,9	-0,9
Dominican Republic	-1,7	-7,4	-3,8	-6,4	-9,9	-2,7
Ecuador	-2,5	-2,2	-3,2	-6,0	-4,9	-4,0
El Salvador	-3,1	-0,5	-3,8	-3,4	-1,5	-3,5
Grenada	-3,8	-5,2	-2,1	-3,9	-4,9	-2,6
Guatemala	-1,6	-1,3	-3,7	-3,2	-3,3	-5,9
Guyana	3,6	2,2	-1,9	-2,1	-0,6	2,3
Haiti	-0,1	2,4	1,8	-1,4	0,2	1,6
Honduras	-0,9	-3,4	-6,5	-2,7	-4,4	-8,5
Jamaica	-0,1	-2,1	-0,4	-3,0	-2,8	0,6
Mexico	-2,6	-3,8	-2,7	-3,0	-1,5	-1,8
Montserrat	-11,5	-4,4	-0,1	-26,5	-4,5	-3,4
Nicaragua	4,3	1,3	-2,4	-1,0	-1,2	-2,3
Panama	8,3	-2,5	-2,9	0,0	-1,8	-2,6
Paraguay	-1,3	-6,1	-6,3	-3,2	-7,6	-10,8
Peru	-1,3	-6,1	-6,3	-3,2	-7,6	-10,8
Puerto Rico	-3,0	-1,3	-0,5			
Saint Kitts and Nevis	-3,8	-5,3	-2,7	-0,7	-4,2	-1,5
Saint Lucia	-0,9	-4,8	-3,4	-0,6	-3,9	-2,0
Saint Vincent and the Grenadines	-9,4	-4,0	0,1	-11,1	-3,1	-0,5
Sint Maarten (Dutch part)	1,5	0,1	12,1			
Suriname	-12,4	-8,9	-6,6		-3,0	-11,9
Trinidad and Tobago	-5,1	-3,3	-3,6	-4,8	-3,7	-8,4
Turks and Caicos Islands	-2,8	-1,9	0,2			
Uruguay	-0,6	-1,8	-4,5	-2,0	-2,5	-5,4
Venezuela	-2,1	-1,3	-6,4	-5,1	-4,5	-9,0
Virgin Islands, British	-164,4	-6,3	-5,8			

Excess real yields on net foreign assets. MENA (percentage)

Country	**Excess yield (corrected)**			**Excess yield (raw data)**		
	1970-1999	**2000-2009**	**2010-2022**	**1970-1999**	**2000-2009**	**2010-2022**
Algeria	-3,9	-17,3	-16,7	-6,0	-24,3	-20,0
Bahrain	-2,2	-0,8	-1,9	-0,9	-0,8	-2,1
Egypt	2,6	3,3	-2,9	1,2	0,7	-5,4
Iran	1,4	-1,1	-4,2	1,0		
Iraq	-0,1	1,3	-1,4		3,1	0,4
Israel	0,8	-1,2	-3,2	-0,8	-0,4	-1,2
Jordan	5,4	5,6	0,4	0,2	1,7	-0,7
Kuwait	-2,2	-1,0	-1,3	-3,1	-0,8	0,3
Lebanon	1,7	-0,5	0,5		-1,3	0,0
Libya	-19,3	-21,0	-7,1	-15,8	-21,1	-10,9
Morocco	2,6	1,2	-1,0	-3,0	-0,3	-1,4
Oman	-17,9	-9,4	-8,8	-24,7	-9,5	-11,2
Palestine	0,3	2,5	-1,1	1,0	2,0	0,1
Qatar	-4,3	-11,7	-5,3			-7,9
Saudi Arabia	-12,0	-4,9	-2,6	-16,8	-6,3	-1,8
Syrian Arab Republic	2,2	-7,3	-2,2	-1,2	-7,5	
Tunisia	3,6	-0,5	-0,9	1,2	-2,7	-3,2
Turkey	4,7	1,4	-0,4	-3,0	-0,4	0,1
United Arab Emirates	-12,8	-4,1	-0,6			
Yemen	6,2	-8,7	-3,2		-16,0	-14,5

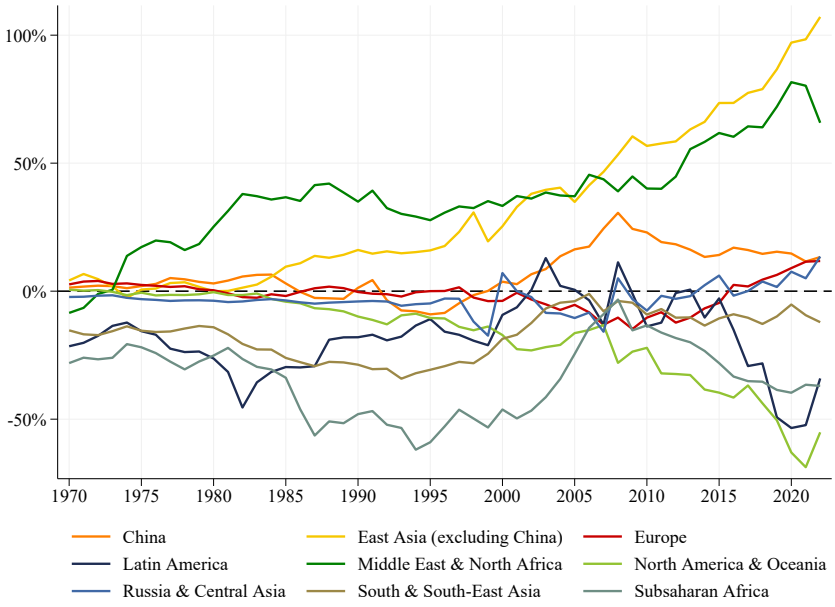
Excess real yields on net foreign assets. Sub-Saharan Africa (percentage)

Country	Excess yield (corrected)			Excess yield (raw data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Angola	10,9	-15,3	-9,1	-4,1	-20,9	-14,8
Benin	9,6	-0,6	-0,2	5,8	-0,8	-0,5
Botswana	-5,5	-27,0	-9,7	-9,4	-28,8	-5,7
Burkina Faso	2,7	1,9	-2,4		2,8	0,3
Burundi	2,0	2,3	-0,4	0,8	0,1	-1,5
Cabo Verde	0,8	0,3	-1,0	-2,2	0,1	-1,5
Cameroon	-3,9	-2,5	-4,4	-5,0	-3,7	-5,7
Central African Republic	0,1	-1,2	-1,0	0,9		
Chad	3,1	35,8	-1,7	2,0		
Comoros	2,8	0,4	-0,7	4,2	0,7	0,3
Congo	3,3	-7,8	-1,3	-4,6	-12,9	-9,7
Cote d'Ivoire	0,0	-2,7	-6,4		-4,6	-5,0
DR Congo	3,7	2,4	-4,3		-1,1	-6,3
Djibouti	-0,2	-0,2	-3,3	-0,6	-0,6	-0,7
Equatorial Guinea	4,9	-5,4	-1,7	-4,2		
Eritrea	-1,8	1,0	-0,9	-9,6		
Ethiopia	1,8	1,9	-0,4	1,6	1,2	-0,6
Gabon	-3,5	-11,0	-8,7	-6,7	-14,1	-14,3
Gambia	3,5	-0,2	-1,0	-0,8	-3,7	-1,7
Ghana	-0,8	0,3	-5,3	-2,6	-0,8	-6,0
Guinea	4,8	3,8	-3,9	-1,5	0,1	-1,7
Guinea-Bissau	9,9	6,5	-1,5	-1,6	0,3	-4,1
Kenya	5,5	6,4	-1,1	-3,6	-1,1	-0,1
Lesotho	28,1	-2,8	-3,8	-2,6	-3,1	-7,5
Liberia	5,8	0,0	-32,0	0,0		
Madagascar	0,7	0,1	-2,9	-2,1	-2,4	-2,0
Malawi	-1,6	-3,1	-6,4	-3,5	-3,2	-4,4
Mali	3,4	-5,3	-4,8	-0,5	-6,1	-8,5
Mauritania	0,9	13,1	2,5	-1,6		7,2
Mauritius	7,1	1,6	1,2	-1,3	-3,0	0,0
Mozambique	0,3	-1,7	-0,1		-2,0	0,0
Namibia	3,2	-1,8	-3,7	2,7	-1,6	-7,5
Niger	5,8	0,5	-0,6	2,6	-0,2	-0,7
Nigeria	-0,7	-9,6	-10,8	-4,4	-11,4	-22,2
Rwanda	0,0	-0,1	-3,8		-1,2	-2,7
Sao Tome and Principe	17,0	3,4	1,0	1,3	2,7	0,8
Senegal	4,7	2,6	-1,5	-0,9	-0,9	-1,8
Seychelles	-6,1	-5,0	-2,4	-3,5	-2,7	-0,9
Sierra Leone	-0,8	0,4	-6,1	-1,3	-0,7	-10,7
Somalia	4,8	21,3	3,3			
South Africa	-1,3	-1,8	-2,5	-2,1	-2,5	-2,4
South Sudan	-7,6	-16,2	-12,1			
Sudan	2,2	-2,4	-1,7	0,5	-4,8	-4,7
Swaziland	-3,1	-9,2	-19,7	-3,8	-10,0	-20,2
Tanzania	5,6	1,1	-1,4	0,8	-0,5	-1,5
Togo	3,4	2,0	0,7	2,1	-0,1	5,2
Uganda	2,7	-0,7	-2,9	-0,7	-1,4	-1,9
Zambia	1,5	-2,7	-3,1	-1,5	-5,1	-4,8
Zimbabwe	1,9	3,7	-2,5	0,9	-1,7	-3,2

D.3 World regions

Figure A60

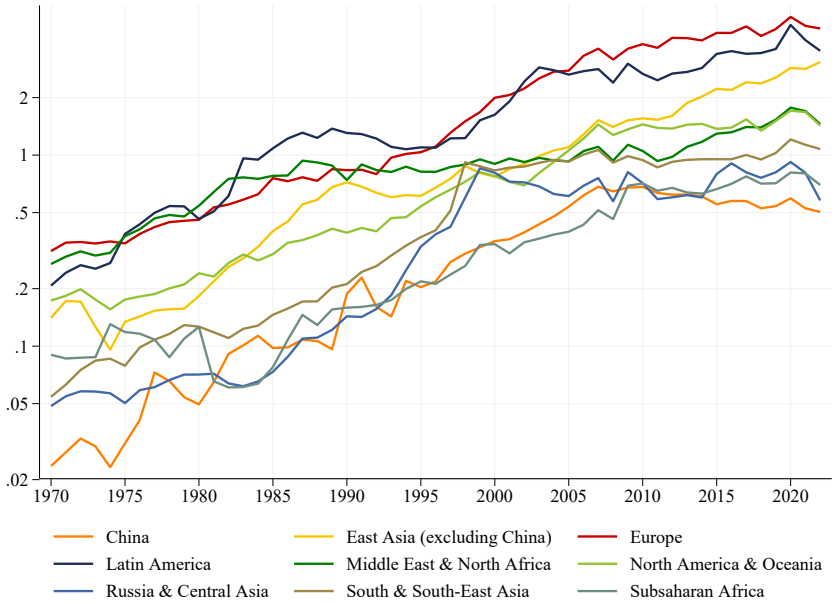
Net foreign assets as a share of regional GDP, without tax havens correction



Graph shows net foreign assets without offshore wealth correction as a share of each region's GDP.

Figure A61

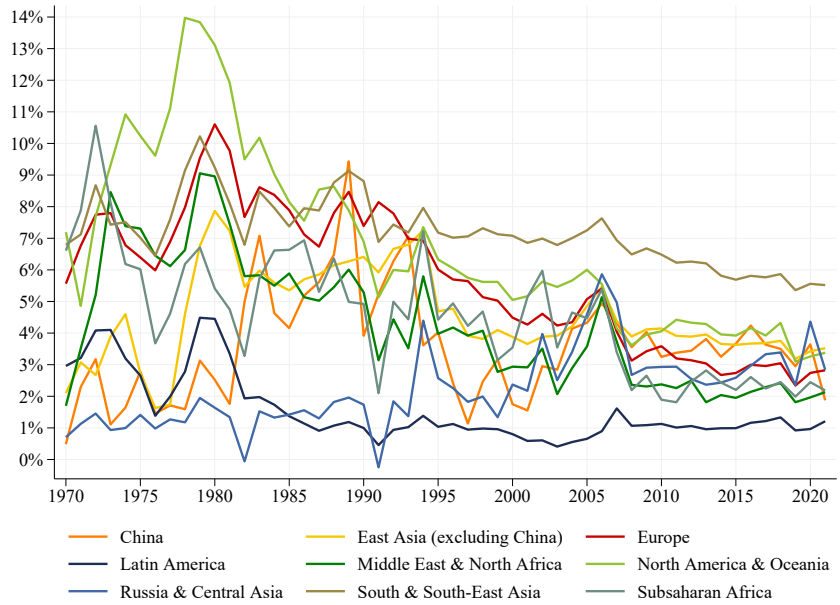
Gross foreign assets as a share of regional GDP, without tax havens correction (log scale)



Graph shows gross foreign assets without offshore wealth correction as a share of each region's GDP.

Figure A62

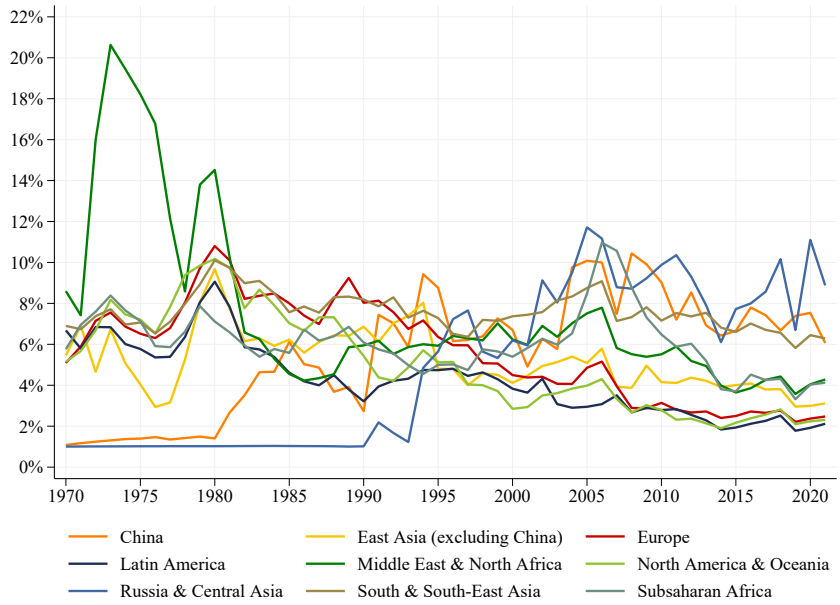
Returns on foreign assets per region, without tax havens correction



Graph shows average rate of returns on foreign assets for different regions in the world, without offshore wealth correction.

Figure A63

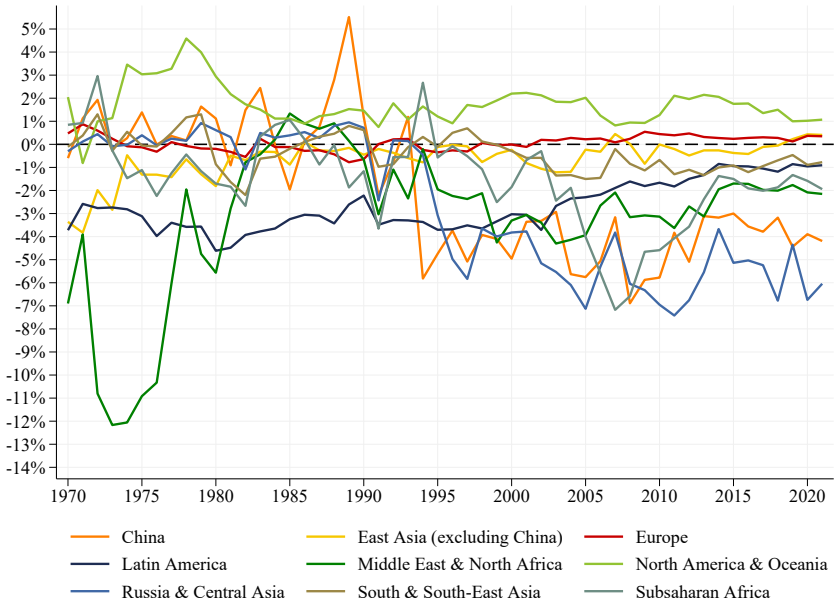
Returns on foreign liabilities per region, without tax havens correction



Graph shows average rate of returns on foreign liabilities for different regions in the world, without offshore wealth correction.

Figure A64

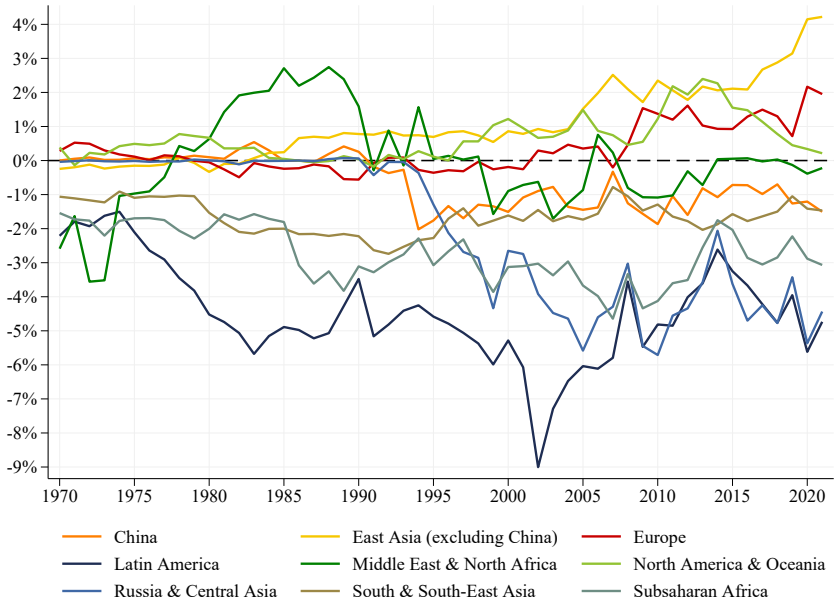
Excess yields per region, without tax havens correction



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities, without offshore wealth correction.

Figure A65

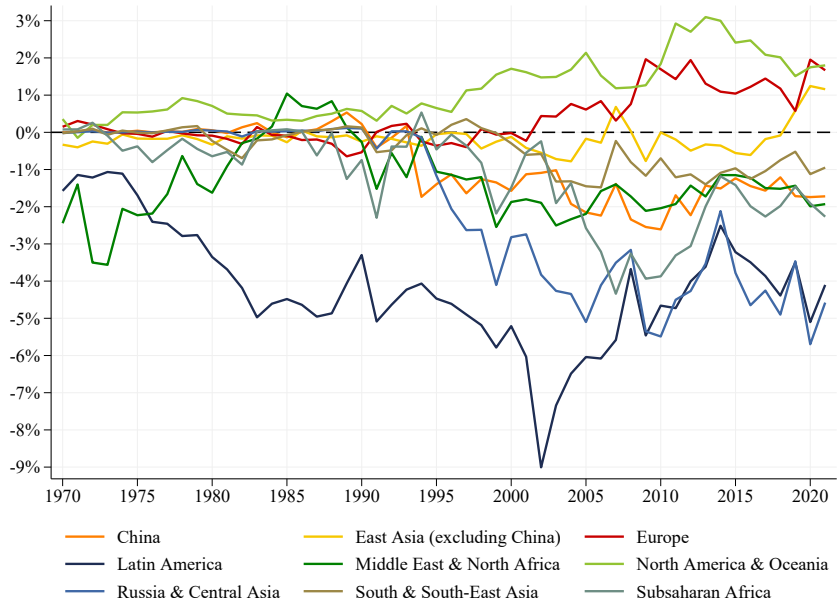
Net foreign capital income as a share of GDP, without tax havens correction



Graph shows aggregate net foreign capital income, without offshore wealth correction, as a share of regional GDP.

Figure A66

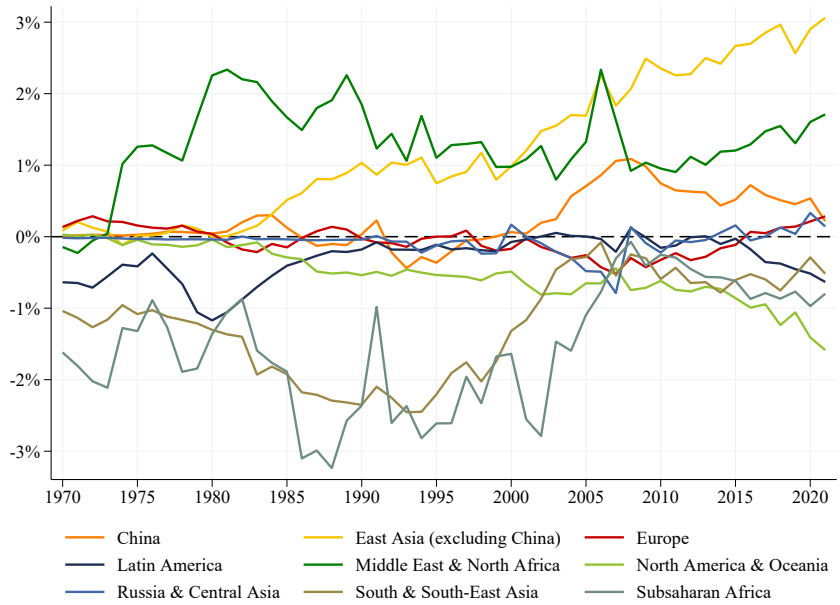
Excess yield as a share of GDP, without tax havens correction



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).

Figure A67

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



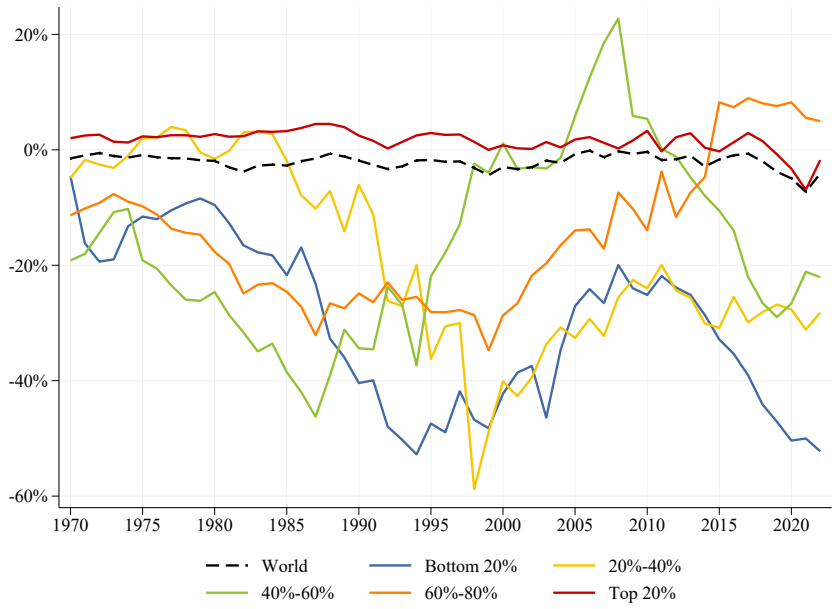
Graph shows net foreign capital income if regions would not have a different average return rate on their assets with respect to their liabilities, as a share of group GDP.

D.4 Quintiles

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 8 billion in 2022) living in the countries with highest per capita income. In 2022: 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.

Figure A68

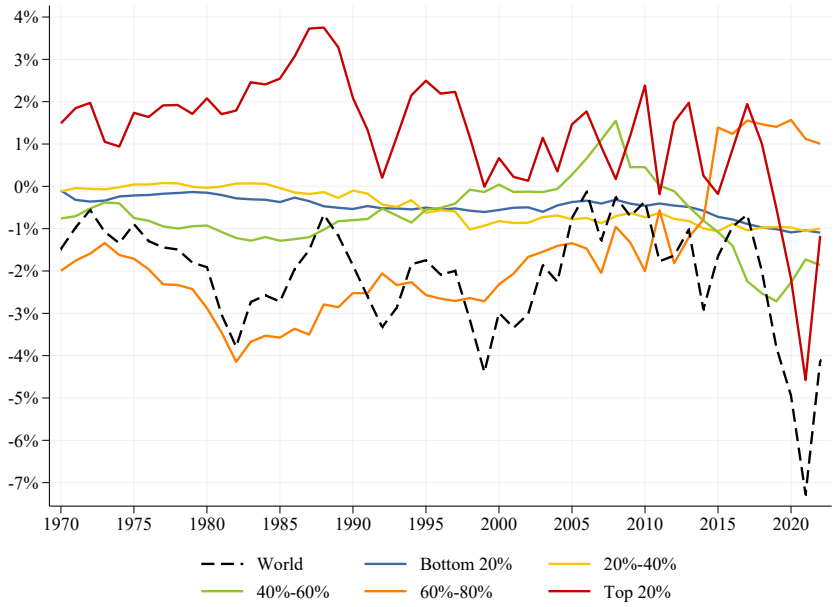
Net foreign assets before offshore as a share of group GDP, without tax havens correction



Graph shows average net foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A69

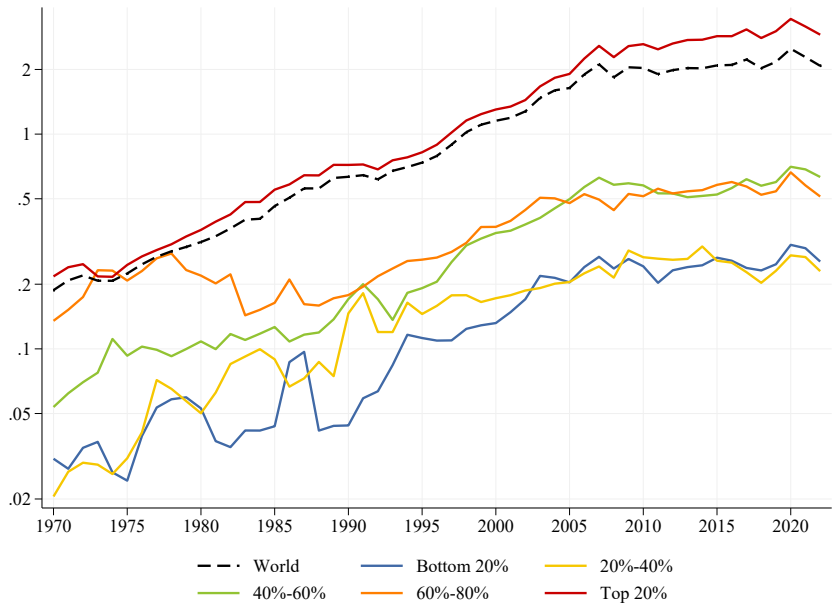
Net foreign assets as a share of world GDP, without tax havens correction



Graph shows average net foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A70

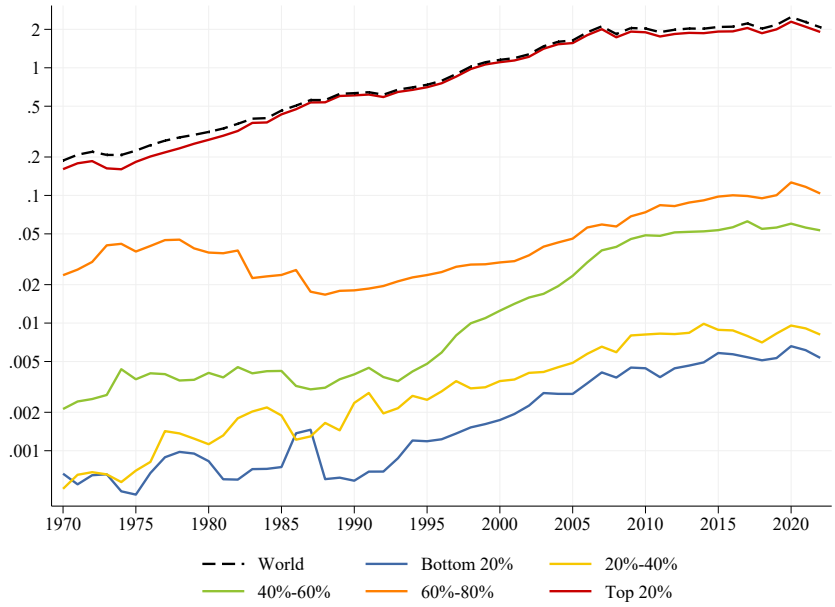
Gross foreign assets as a share of group GDP, without tax havens correction (log scale)



Graph shows average gross foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A71

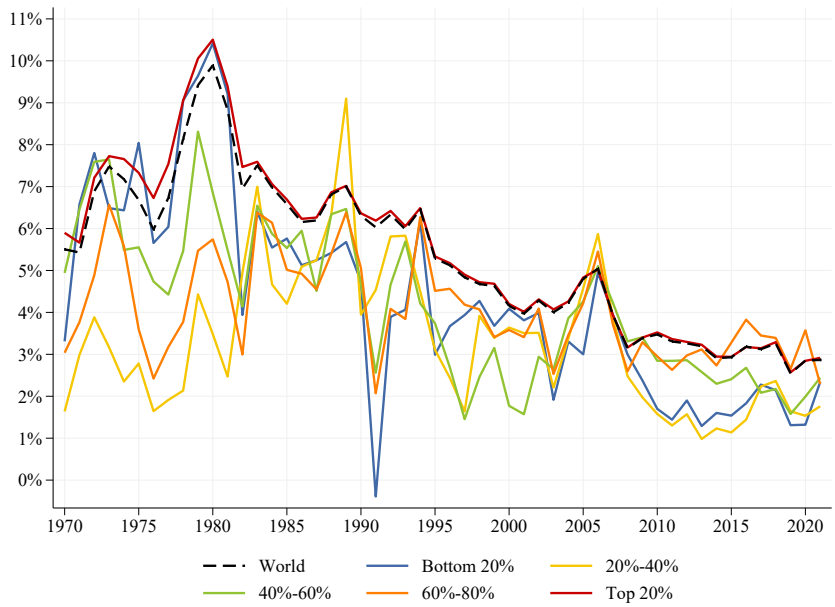
Gross foreign assets as a share of global GDP, without tax havens correction (log scale)



Graph shows average gross foreign assets. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A72

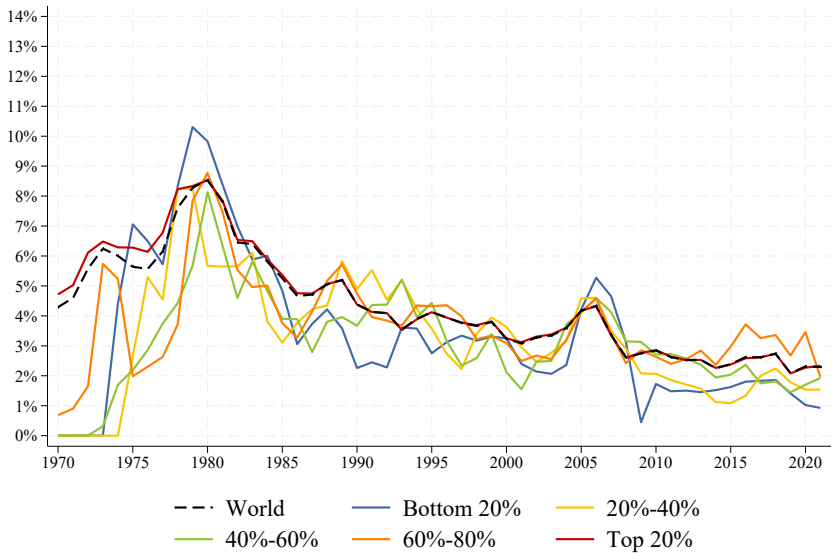
Returns on foreign assets per income group, without tax havens correction



Graph shows average rate of returns on foreign assets before correcting for offshore wealth. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A73

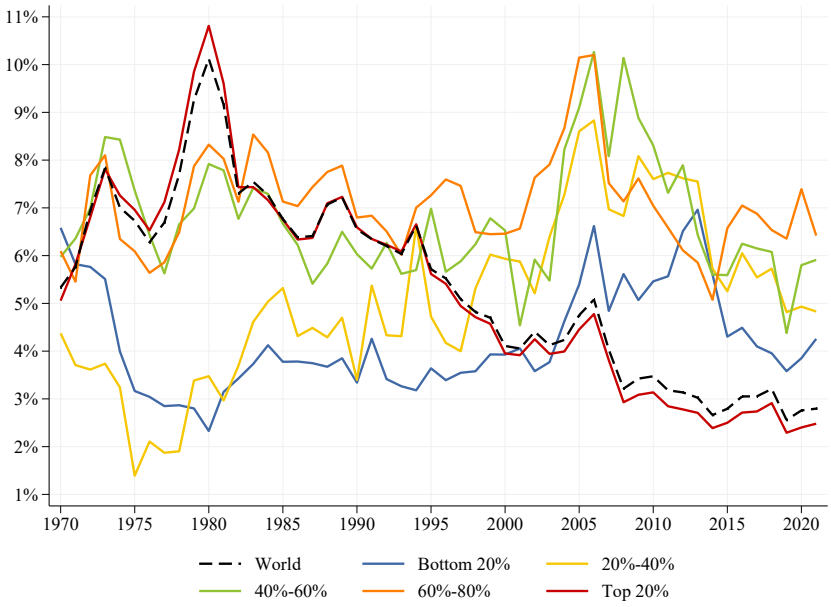
Returns on foreign assets per income group (raw data)



Graph shows average rate of returns on foreign assets using raw foreign wealth and foreign capital income series, before offshore wealth corrections and imputations. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A74

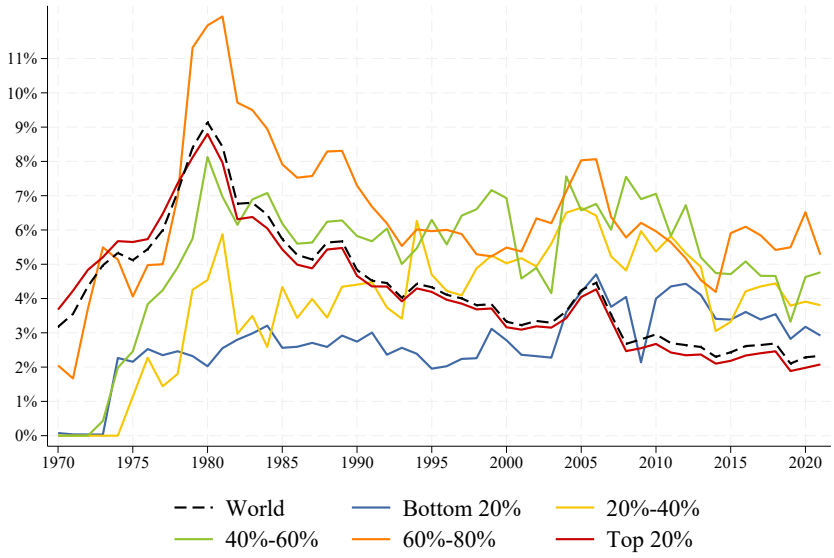
Returns on foreign liabilities per income group, without tax havens correction



Graph shows average rate of returns on foreign liabilities before correcting for offshore wealth. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A75

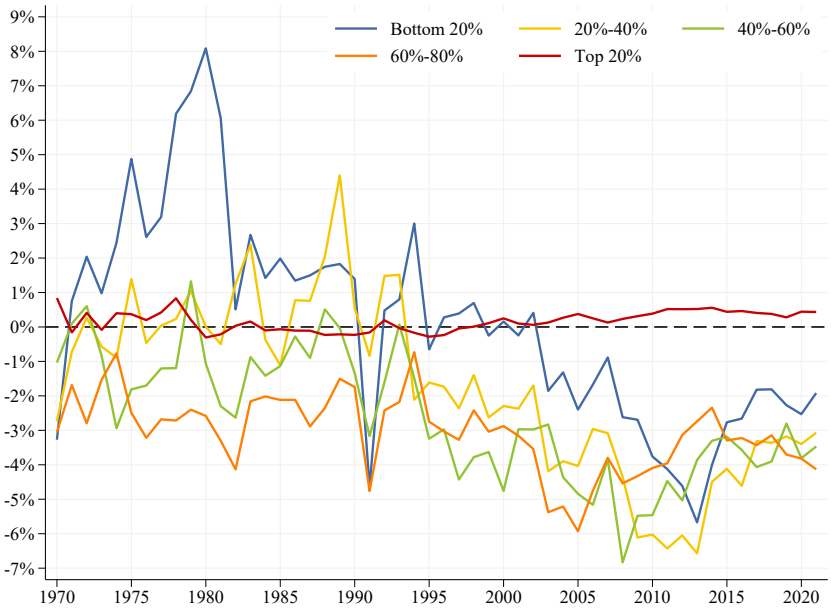
Returns on foreign liabilities per income group (raw data)



Graph shows average rate of returns on foreign liabilities using raw foreign wealth and foreign capital income series, before offshore wealth corrections and imputations. Simple averages by group. National income does not include FDI income paid correction due to shifted profits.

Figure A76

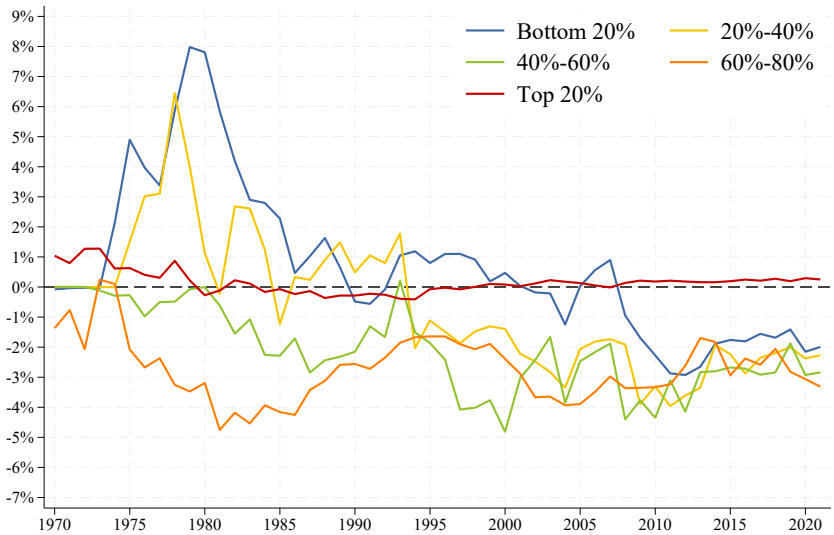
Excess yields per income group, without tax havens correction



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities. National income does not include FDI income paid correction due to shifted profits.

Figure A77

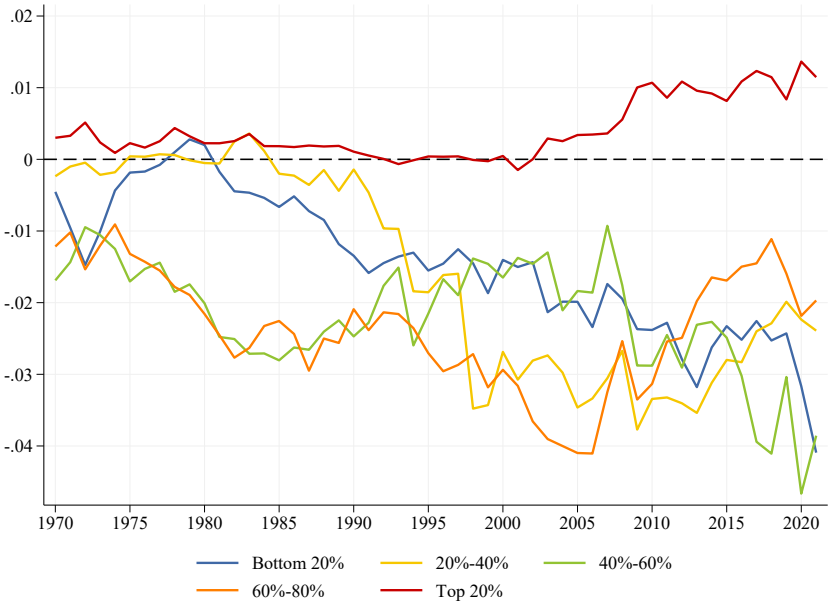
Excess yields per income group (raw data)



Excess yield calculated as rate of return on foreign assets (raw data series)- rate of return on foreign liabilities (raw data series). National income does not include FDI income paid correction due to shifted profits.

Figure A78

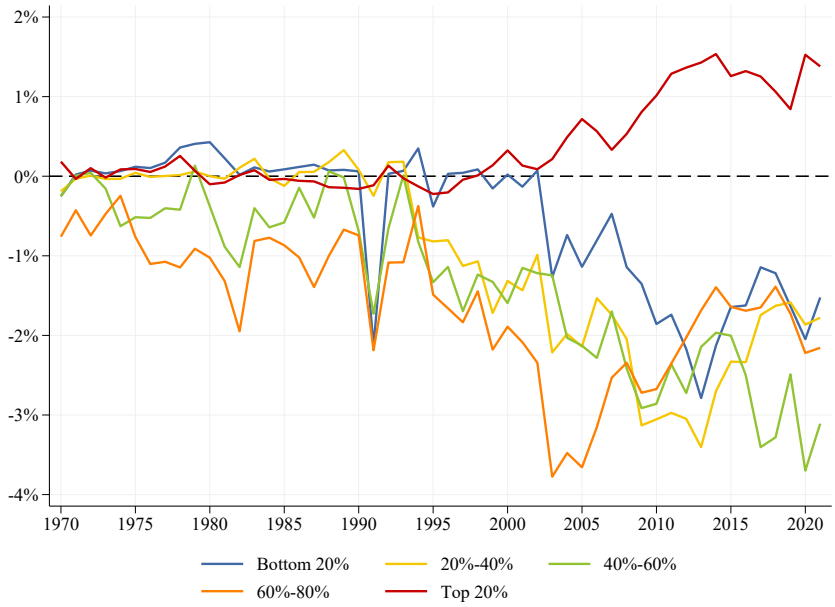
Net foreign capital income as a share of GDP, without tax havens correction



Graph shows aggregate net foreign capital income without offshore wealth correction, as a share of income group GDP. National income does not include FDI income paid correction due to shifted profits.

Figure A79

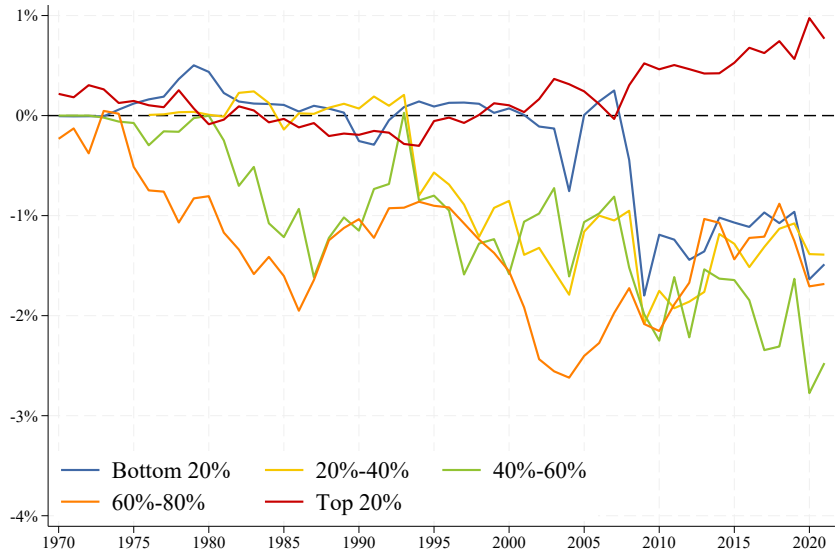
Excess yield as a share of GDP, without tax havens correction



Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield without offshore wealth correction, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative). National income does not include FDI income paid correction due to shifted profits.

Figure A80

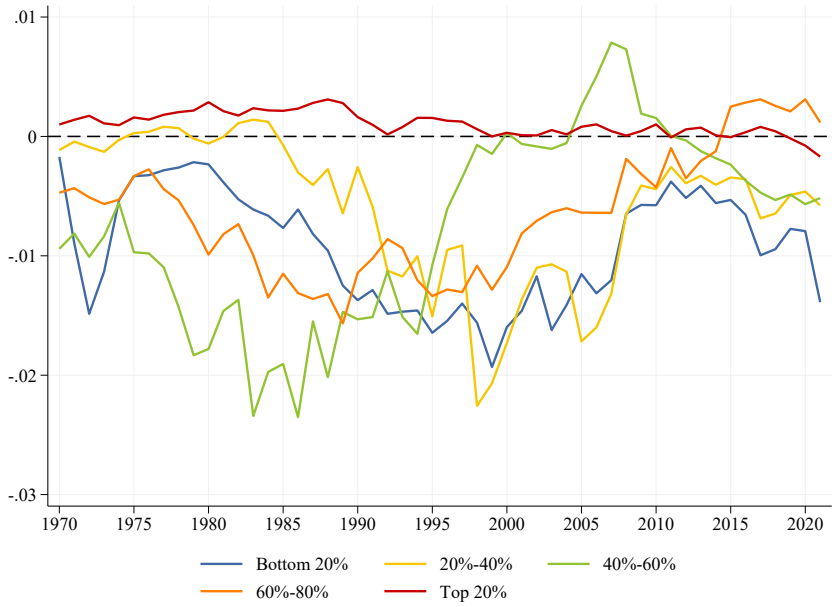
Excess yield as a share of GDP, without tax havens correction



Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative), using raw foreign wealth and foreign capital income series, before tax havens corrections and imputations. National income does not include FDI income paid correction due to shifted profits.

Figure A81

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



Graph shows net foreign capital income if country groups would not have a different average return rate on their assets with respect to their liabilities, without offshore wealth correction, as a share of group GDP. National income does not include FDI income paid correction due to shifted profits.