

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

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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†

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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 almost 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 losses 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

*Paris School of Economics, Paris, France. Contact: gaston.nievas@psemail.eu

†Paris School of Economics, Paris, France Contact: alice.sodano@psemail.eu

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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 initial levels of foreign wealth are positively correlated with its future evolution, 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.

In this paper, we study what the distribution of NFA and the return differential implies from a global perspective. Our contribution 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, as well as all of the elements of the current account, with a particular emphasis in foreign capital income. Achieving a global dataset requires the use of some assumptions to overcome many inconsistencies, the resulting data might be subject to imperfections. Noteworthy, we do not possess extremely detail level data as some studies focusing on the U.S. do ([Bertaut, Curcuro, Faia, and Gourinchas, 2024](#)). However, we argue that the magnitude of the transfers are such that an urgent topic like this cannot wait to be addressed until better data is available. Additionally, we encourage statistical offices and central banks to increase their efforts to collect and release to the public security level data.

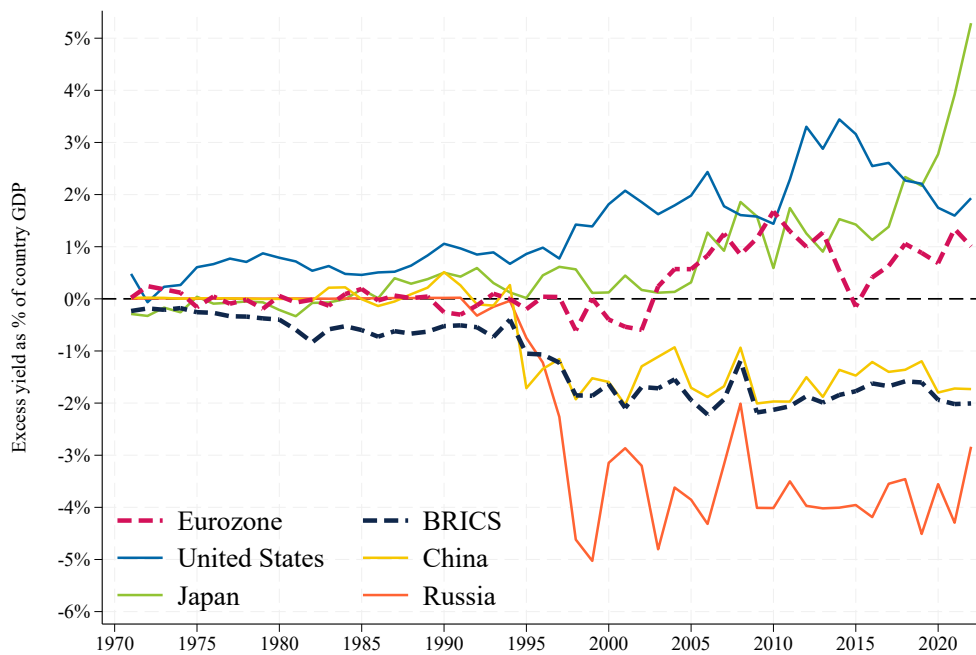
Another point to make about the data is that, to the best of our knowledge, there is no global data on foreign capital income at the bilateral level. Additionally, data on capital flows at the directional level is also limited. Thus, we cannot calculate direct transfers from country A to country B, but we can calculate net transfers by netting out the global aggregates, which allows to identify the winners and losers. For that, we ensure that 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. To do so, we apply two different methodologies: i) we simply correct proportionally, ii) we follow the corrections of the hidden wealth literature started by [Zucman \(2013\)](#). In practice, our net-zero correction has a relatively small impact on our findings, as can be seen by the fact that the results are robust to using raw -uncorrected- data. All of the data details are described in detail in the Appendix.

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. Throughout the whole paper, our object of study is 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*. We chose to focus primarily on yields since they constitute a more stable transfer between countries, and allow for long-term interpretations. We also study total returns (i.e. including valuation changes). We find that other rich countries, typically 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. The Euro has been a particular success story in terms of

return differentials, recording income flows associated to their excess yield of around 1% 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). Moreover, we also study the drivers of these differential returns and we link our results to the role that reserve currencies have in the International Monetary System (Gopinath and Stein, 2018).

Figure 1

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

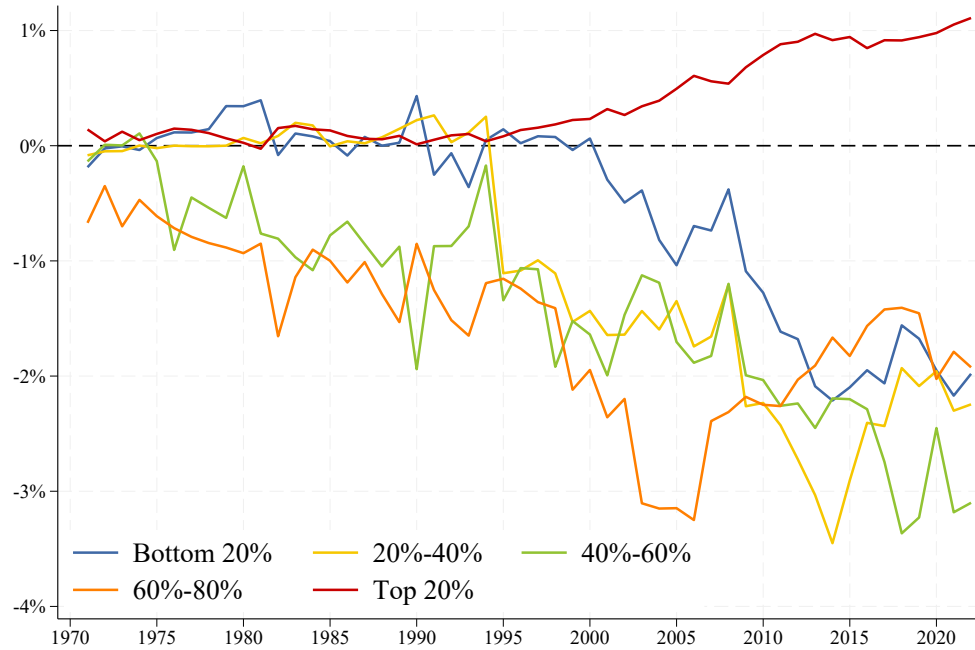


Graph shows excess yields income, which is defined as the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of country GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative). Before Eurozone was created only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

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 seen simply as the equilibrium. We expose four main lines of conventional thought that would explain a positive return differential for rich countries. Namely,

Hypothesis that would explain 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 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.
- H3. 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.
- 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 their centrality in the monetary and financial system. Issuing reserve currencies allow them to benefit from lower rates of return on their liabilities (public and private).

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 and the excess total return (including the excess capital gains) are also positive (which disproves H1). The excess yield comes entirely from lower rates of return on rich countries liabilities (which disproves H2). The yields of rich countries' foreign assets are less volatile (less risky) than the yields of the rest of the world (which disproves H3). The excess yield remains highly significant after we exclude public debt from the analysis (which disproves H4). We also provide evidence that the “exorbitant duty” of the U.S. (and rich countries) -the idea that they provide insurance to the rest of the world during financial crises, thus absorbing their losses ([Gourinchas and Rey, 2022](#))- is not so “exorbitant” and is more than offset by their “exorbitant privilege”.

Noteworthy, to disprove H3, we analyze a measure of return-to-risk volatility defined as the average total return over its standard deviation. This measure may actually understate the risk of investments in emerging markets since it will not effectively capture extreme losses or defaults, which are rare but with strong consequences. Since crises are not frequent, average volatility of returns may seem low. In contrast, advanced economies' debt rarely default but it can still experience price volatility. Emerging market debt often exhibits a favorable realized Sharpe ratio but comes with greater tail risk. Investors demand higher yields as compensation for these potential extreme events. When a crisis occurs, the mean-to-standard deviation ratio deteriorates significantly for the issuer. However, during extended periods without crises, the developing country benefits from a seemingly attractive ratio, characterized by high returns and controlled volatility. In contrast, advanced economies rarely face catastrophic default events that could elevate their average returns, resulting in a consistently lower risk-reward profile despite minimal tail risk. With the data we have we cannot test for this channel. In the case this was a plausible explanation, an open question for future research is if this return differential is the correct way to compensate investors in rich countries for the tail-risk or if the amount of return that is being asked from developing countries is imposing further constraints to their balance of payments and increasing the probability of a future default?

We turn to H5 as the favoured interpretation: wealth holders from rich countries are able to access cheap credit because rich countries are issuers of international reserve currencies ([Gopinath and Stein, 2021](#)), which gives rise to various regulatory, political and financial advantages. Contrary to economic beliefs, the privilege is not the result of compensating rich countries for undertaking bigger risks or potential losses, 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 also an institutional outcome.

An example of this are prudential rules, which 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 been reinforced following the post-2008 strengthening 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. Of course, these factors are underpinned by strong financial and monetary institutions, stable currencies, and liquid markets, which enhance the ability of rich countries to attract capital and issue safe assets. This, in turn, reinforces their role in global imbalances (Caballero, Farhi, and Gourinchas; Mendoza, Quadrini, and Rios-Rull, 2008; 2009).

The negative impact of the international monetary and financial system over struggling countries has become a recent complain of the Global South¹, 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 was one of the reasons that 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 the unequal rates of return, decomposing the excess yield and computing the total excess return. Section 5 highlights 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

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

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

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).

Curcuro, 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, Curcuro 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 calculation⁴. One potential takeaway from the first wave of papers is that the U.S. net debt position, while negative, was less detrimental than previously 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), Curcuro, Dvorak, and Warnock (2008), Curcuro, 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 (the latest study being Bertaut et al. (2024)), 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

³Curcuro, 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).

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, the point to similarities between UK historical financial hegemony (1870-1913) and US' current position. 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; Ilzetzi, Reinhart, and Rogoff; Maggiori, 2011; 2018; 2020; 2018; 2021; 2020; 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. 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 A provides a detailed description of the data coverage and the assumptions made to ensure a complete and consistent dataset. Even though figures that rely on assumptions are not perfect, we completely discard them being the drivers of our results. 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 taken 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 of net foreign assets accumulation. 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

⁵Bonaire, Cuba, Kosovo, Monaco, North Korea, Puerto Rico. Cuba and North Korea are assumed to be an average of the foreign assets to GDP ratio of Former Soviet countries.

employed as shown in Equation A1, 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. The predicted values obtained are net of these fixed effects, which we add back to ensure our imputed returns capture these country and region-year specific characteristics.

We classify foreign wealth and foreign capital income as follows:

$$\begin{aligned}\text{Total } A/L &= \text{Portfolio } A/L + \text{FDI } A/L, \\ \text{Portfolio } A/L &= \text{Portfolio Equity } A/L + \text{Portfolio Debt } A/L, \\ \text{Portfolio Debt } A/L &= \text{Portfolio Debt } A/L + \text{Financial Derivatives } A/L + \text{Other Investment } A/L + \\ &\quad \text{FX Reserves (excl. Gold) } A.\end{aligned}$$

The rest of the current account and the capital account is completed mainly from the IMF Balance of Payments statistics. We extend trade in goods figures relying on the CEPII database (Conte, Cotterlaz, Mayer, et al., 2022), which are sourced mainly from IMF and Comtrade. 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

A well-documented anomaly in balance of payments statistics is that when aggregating net foreign assets globally, the total tends to be persistently negative rather than zero. This suggests that the world as a whole is a net debtor, which is theoretically impossible. The prevailing explanation in the literature attributes these negative imbalances to assets concealed in offshore tax havens, which are recorded as liabilities but not as corresponding assets. Similar discrepancies repeat in all of the elements of the BoP, although the sign might differ. To address this issue, adjustments were implemented to ensure that global net foreign capital income and net foreign wealth and all of the other elements sum precisely to zero, as they naturally should—conditional on the inclusion of all 216 economies.

As noted in the introduction, ensuring that global aggregates net out is crucial, as it provides the only means to identify the winners and losers in global transactions, given the absence of bilateral directional wealth or capital income data. This correction does not drive our main results, as they remain robust when relying solely on raw data.

We present results based on two correction approaches: (i) a proportional adjustment that scales corrections according to each country’s share of global assets/liabilities (or income received/paid), and (ii) an approach following the principles established in the hidden wealth literature, pioneered by Zucman (2013). As shown in the Appendix, both methods yield nearly identical results. This is largely due to findings in the hidden wealth literature, which indicate that wealthier countries tend to hold more offshore assets, while the proportional method assigns offshore wealth in proportion to total wealth—leading to a similar allocation favoring richer countries.

We adopt the results from the first method (proportional correction) as our primary specification for three key reasons: (1) other components of the current and capital accounts exhibit global discrepancies for which no established correction methodology exists, (2) over a time span exceeding 50 years, the discrepancy between global credits and debits fluctuates significantly and can even reverse in sign, and (3) this approach enables

corrections at the subcomponent level of global aggregates. A detailed discussion of the advantages and limitations of each method is provided in a separate technical note (Nievas and Piketty, 2024). The method is straightforward: whenever the global net balance deviates from zero, we proportionally adjust credits and debits. The key insight is that the proportional correction offers a consistent adjustment across all Balance of Payments components, for which the sources of discrepancies remain only partially understood. Developing a specific correction methodology for each element would be the subject of a separate paper.

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.

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:

$$CA_t + KA_t + FA_t = 0 \quad (1)$$

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:

$$CA_t = TB_t + NY_t + NCT_t \quad (2)$$

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:

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

Where EO_t is commonly referred as the errors and omission term -and we will assume 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:

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

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

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

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

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

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.

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

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 differential⁶.

As shown in the Appendix Figure A10, global external assets have risen 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 A15) or almost 2% of global GDP (Figure 3)⁷.

⁶Capital 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:

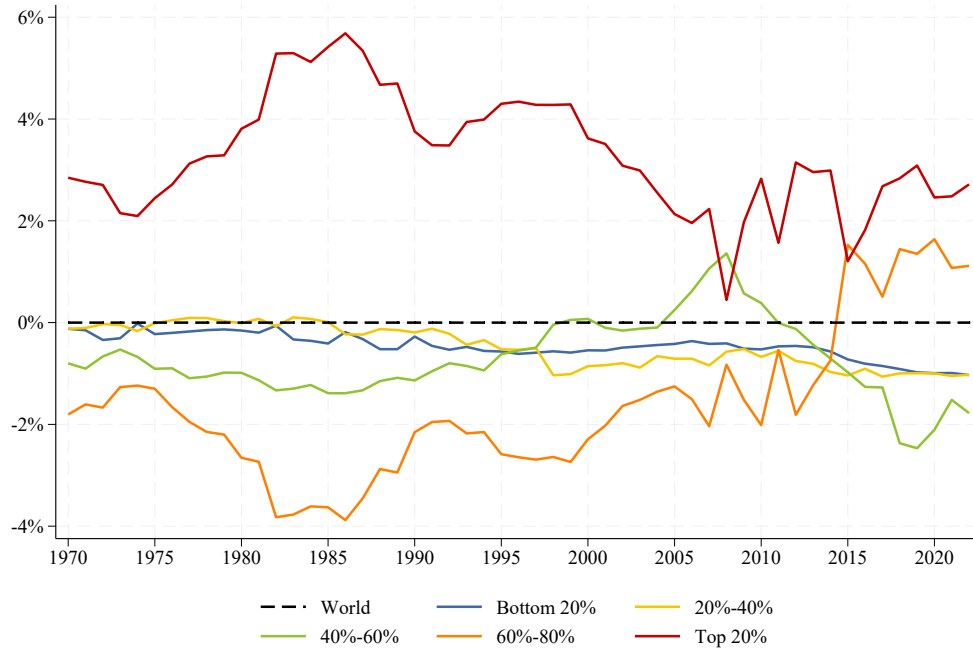
$$KG_t = NFA_t - \left(NFA_{t_0} + \sum_{s=1}^t (CA_s + KA_s) \right)$$

⁷If 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 A76 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 around 8% 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 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 correcting the global estimates (Figure 3) and including hidden wealth in tax havens (Figure A74 in the Appendix). 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.

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

Fact: Rich countries experience capital gains.

Contrary to expected, we find that Hypothesis 1 does not hold, rich countries actually enjoy capital gains, as depicted in Table 1, which provides evidence that they are on average not losing their investments. This is true for almost the entire period except for the last decade (Table 2) which is consistent with Atkeson et al. (2022) findings for the US, where they document that the decline on US NFA after the Great Recession is the result of a rise in the value of corporate equity that foreigners own. This process has been heterogenous among the rich countries, the reversal in capital gains for the US has been accompanied by a reversal from capital losses to gains of countries such as Canada, Germany, Italy, the UK and Japan (Table 3). Further, the positive NFA position of the richest Top 20% is entirely explained by their financial privilege, capital gains, large positive net investment income (privilege and other net foreign capital income) and surplus in trade services, despite recording trade deficits in goods. On the contrary, the NFA positions of the poorest groups of countries are deteriorated by negative cumulated net investment income. Importantly, capital losses of the Bottom 40% poorest countries

have reversed in 2000, recording sustained gains.

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. Real values USD of 2023.

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

The table reports the decomposition of 2022 NFA-GDP ratio by quintiles, over the period 1970-2022. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

Table 2

Decomposition by subperiods. Real values USD of 2023.

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

The table reports the decomposition of NFA-GDP ratios by quintiles, over the subperiod 1970-2000, 2000-2012, 2012-2022. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

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 4) nor in the BRICS countries (Figure 5), there is an outstanding fact: the financial privilege of rich countries are paid by trade surpluses in goods and financial losses of the BRICS (Table 3).

Except for the United States and France, the remaining six economies of G8 have experienced improvements in their financial accounts over time (Figure 4). A notable case is Canada, which has successfully reversed its net negative NFA position since 2012, thanks to net foreign capital income surpluses of 13% of their 2022 GDP and capital gains of 61% of its GDP (Appendix Table 3).

In contrast, Japan and Germany consistently exhibit higher NFA-to-GDP ratios, and these ratios have steadily increased over time. These two economies have built up significant external assets relative to their GDP, thanks to 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

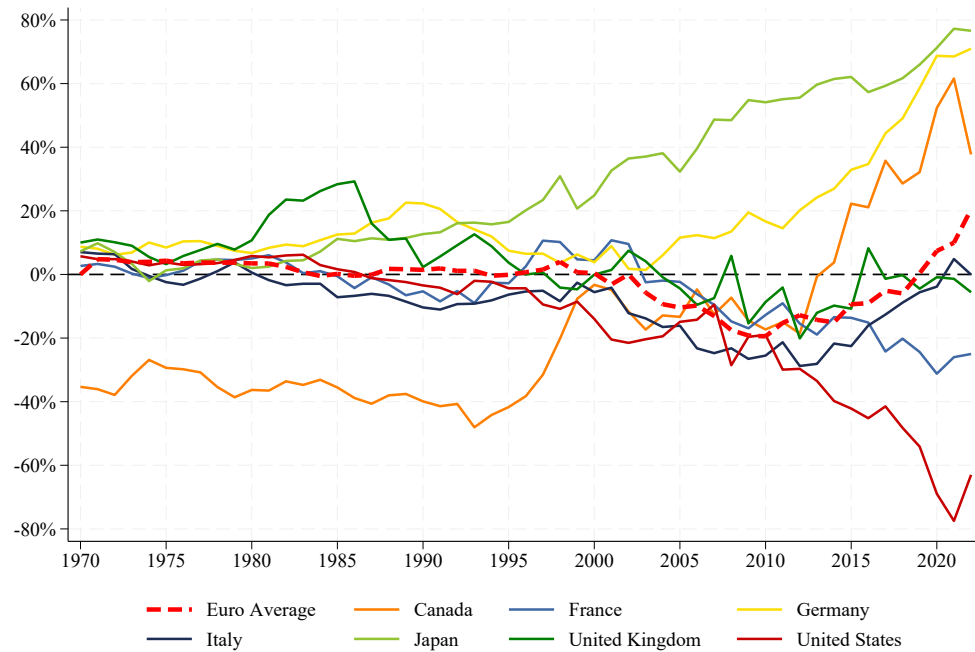
Conversely, the U.S. stands out as the most indebted among the G8 economies, primarily due to its persistent trade deficits. Although these trade deficits have been apacigated by moderate capital gains and important positive net investment income, they have led to an increased reliance on foreign financing 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 5, 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 45% 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 (16% of GDP) and negative net investment income (14%).

⁸Appendix Tables 1, 2, 3 provide the NFA-to-GDP ratios decomposition for the G7 vs BRICS countries over the subperiods: 1970-2000, 2000-2012, 2012-2022.

Figure 4

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).

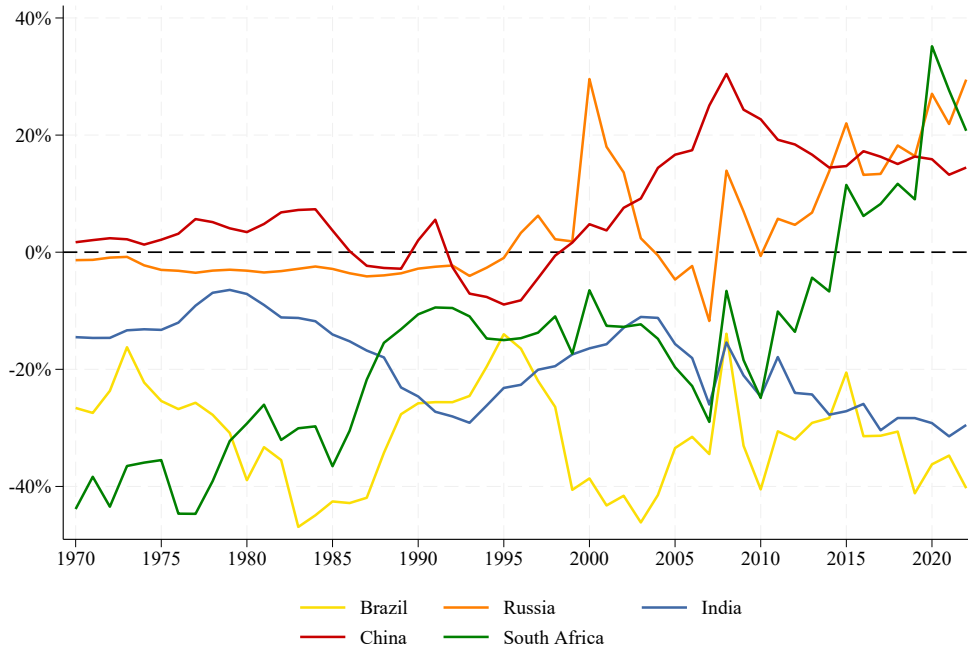
In contrast, Russia has maintained a creditor position since the dissolution of the USSR -with the exception of the 2005-2007 period-, primarily due to its abundant energy exports. Russia's vast reserves of natural resources, particularly oil and gas, have contributed to a consistent inflow of foreign 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 capital losses⁹ (Table 3). 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 119% 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 (34% and 102% of their 2022 GDP respectively) which could not be offset by their capital gains. This was aggravated by its accumulated trade deficit.

The divergent net external positions of the G7 and the BRICS¹⁰ 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.

⁹For a better understanding of Russia's NFA, CA surpluses and offshore wealth see [Novokmet, Piketty, and Zucman \(2018\)](#)

¹⁰For figures including the tax havens correction refer to the Appendix [A49](#) and [A52](#).

Figure 5*Net foreign assets as a share of country GDP, BRICS***Table 3***Decomposition 1970-2022. Real values USD of 2023.*

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

The table reports the decomposition of 2022 NFA-GDP ratio for G7 and BRICS countries. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

Exorbitant duty ?

Gourinchas and Rey (2022) argue that while the U.S. benefits from an “exorbitant privilege”—earning higher returns on its external assets compared to its liabilities—it also bears an “exorbitant duty” by absorbing losses during global financial crises, effectively providing insurance to the rest of the world. In their framework, the U.S. has the responsibility of providing insurance to the global economy during times of financial stress, as the

issuer of the world’s primary reserve currency. They back this argument by the fact that the U.S. experienced capital losses of 13% of their GDP between the 4th quarter of 2007 and the 1st quarter of 2009. We briefly shed light on this issue in Table 4.

While it is true that the U.S. lost a significant amount of their GDP in valuation changes in 2008 (14%), we quickly see a recuperation of 13% of their GDP in their next period, all measured in real USD of 2023. The resulting net capital losses of 2008-2009 were of around 2% of their 2009 GDP. We thus find that the “*exorbitant*” *duty* is not as exorbitant as the privilege: i) capital losses quickly rebounded after the Great Recession, and ii) even if the subsequent capital gains didn’t fully compensate the losses, the U.S. has cumulated excess yields amounting to 50% of its GDP and capital gains of 4% for the 1970-2022 period (Table 3), greatly exceeding the 2008 losses. For quintiles of national income per capita refer to Appendix Table 37.

Table 4

Country	Capital Gains/Losses % GDP		Net Capital Gains as % of 2009 GDP	GDP 2008 / GDP 2009
	2008	2009		
Canada	4%	-5%	-1%	103%
France	-3%	1%	-2%	103%
Germany	-3%	2%	-1%	106%
Italy	5%	1%	6%	106%
Japan	-3%	1%	-2%	106%
United Kingdom	17%	-18%	0%	105%
United States	-14%	13%	-2%	103%
Eurozone	3%	0%	3%	104%
Total G8	-8%	3%	-5%	104%
Brazil	22%	-16%	6%	100%
China	-2%	-9%	-10%	93%
India	13%	-3%	10%	94%
Russia	20%	-7%	15%	108%
South Africa	27%	-8%	20%	102%
Total BRICS	12%	-7%	5%	96%

Note: values measured in real USD of 2023. Net capital gains is computed as the sum of capital gains/losses of 2008 and 2009 divided by 2009 GDP.

4 Unequal rates of return

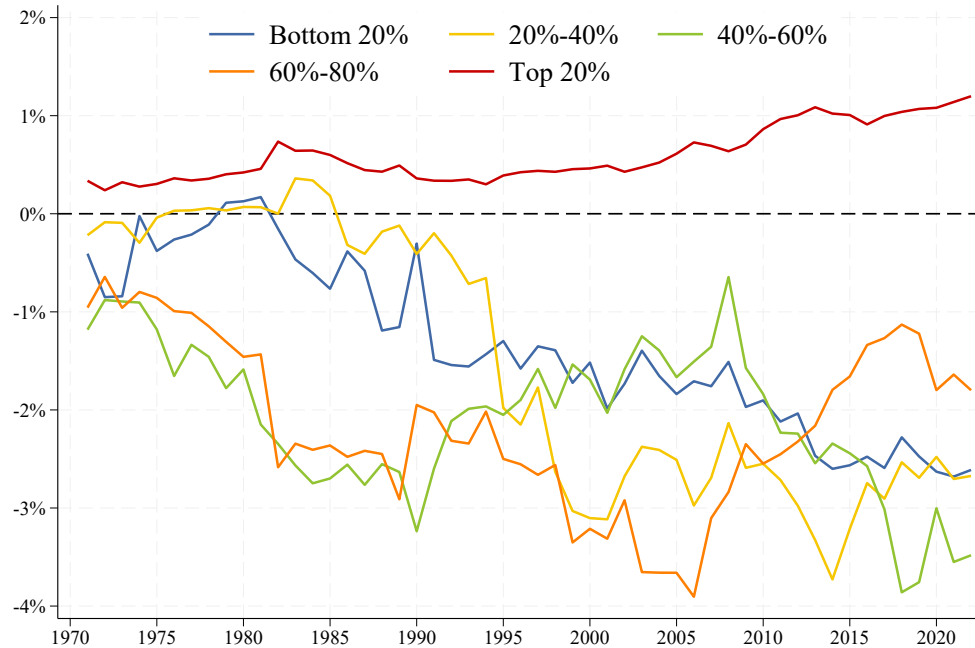
As emphasized before, net capital income plays a crucial role in determining the CA balance and, consequently, the change in NFA. It is possible for a country to experience an improvement or deterioration in its CA balance based on the net capital income it receives or pays (see France above).

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 6 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 6

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.

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 3).

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.

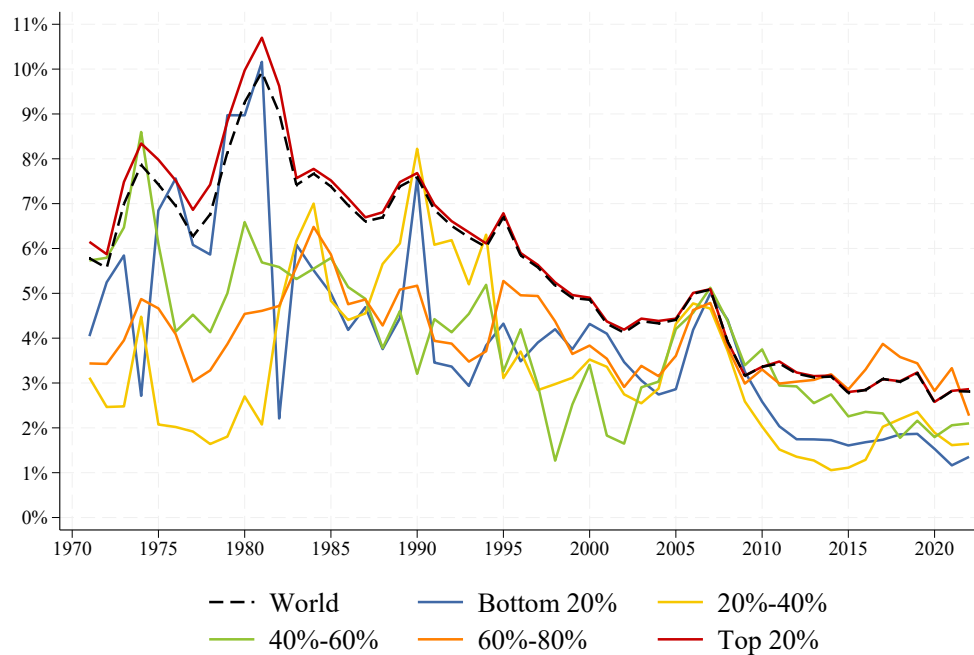
To gain insights into the impact of return rates on the net external positions of different country groups, we

calculate the implied yields as the income received (paid) over assets (liabilities). Equation 5 demonstrates this calculation, and Figure 7 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 8. 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 7

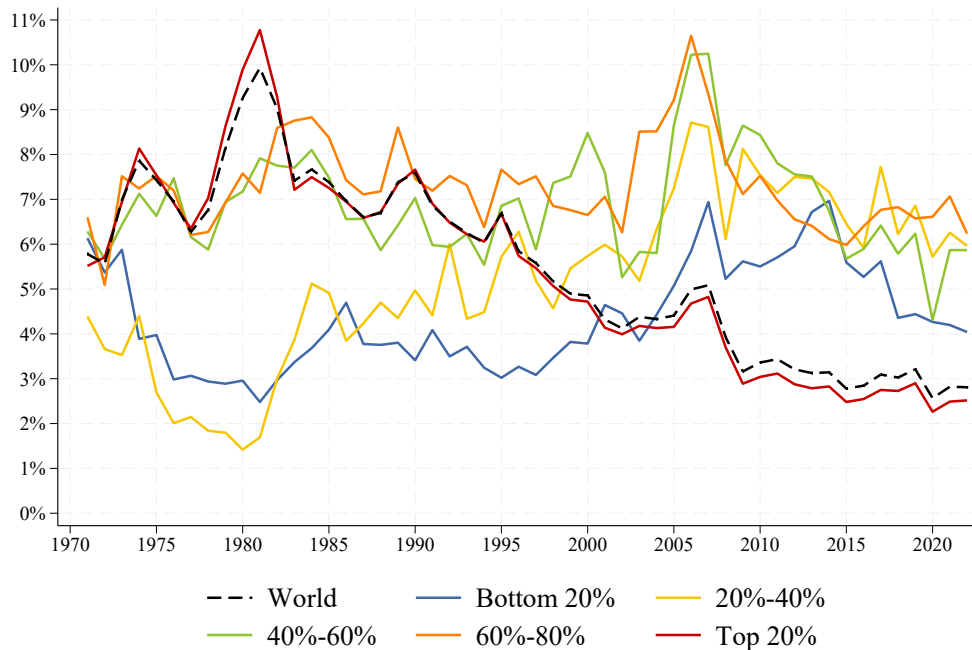
Returns on foreign assets per income group



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.

Figure 8

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.

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.

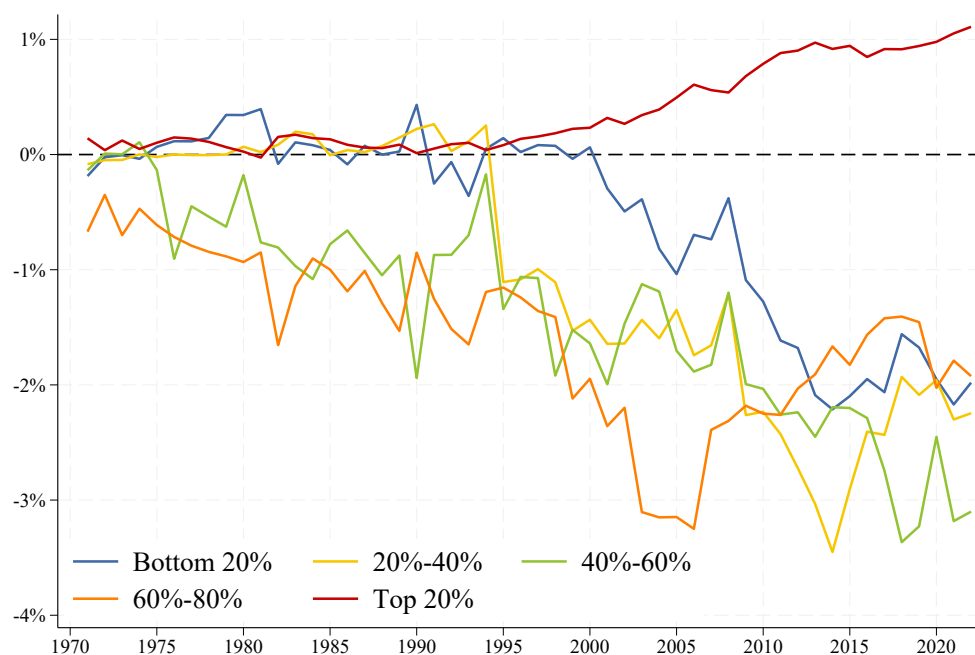
In effect, the central position of rich countries in the international monetary and financial system allows them to function as intermediaries, akin to bankers of the world. This role further reinforces their privilege, as they leverage their advantageous position to attract excess savings (Bernanke 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.¹¹

¹¹For figures excluding the tax havens correction refer to Appendix A81, A83 and A85; for regional figures A24, A25, A26.

Figure 9 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. The amount can be compared to the set target on official development assistance to poor countries that the rich countries set each year. Even though these targets are hardly met, they aim for 1% of their GDP. Instead, they are receiving the same amount of transfer thanks to a preferential access to global capital markets. This implies that 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 9

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.

Table 5

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

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 5 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% 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 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.*

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).

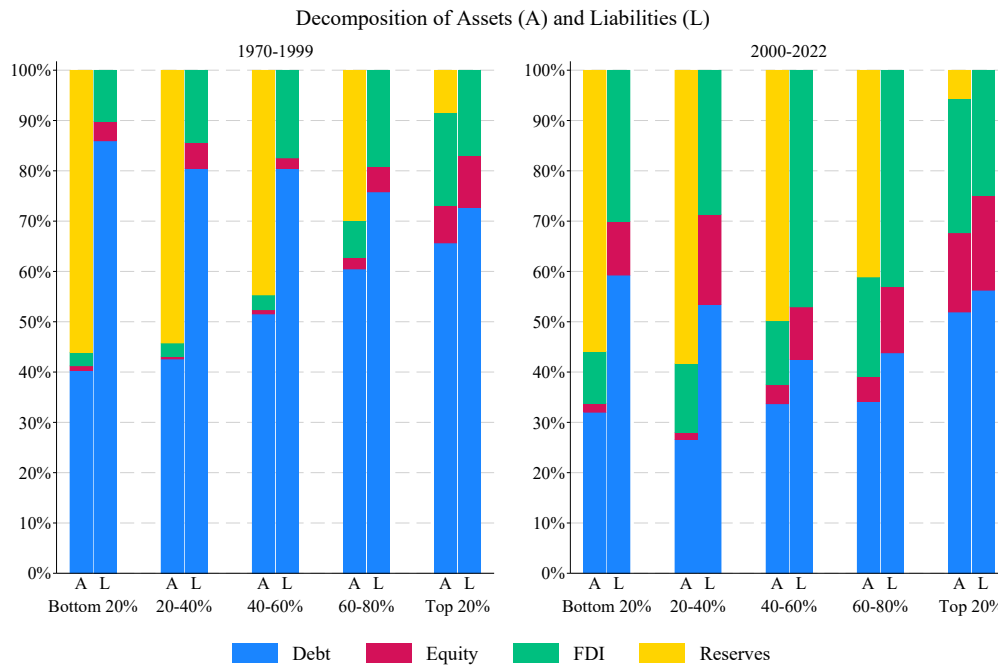
$$i_c^B - i_{world}^B = \sum_{\rho} \left(\underbrace{\alpha_{\rho,c} \times (i_{\rho,c}^B - i_{\rho,world}^B)}_{\text{Return effect}} + \underbrace{(\alpha_{\rho,c} - \alpha_{\rho,world}) \times i_{\rho,c}^B}_{\text{Composition effect}} \right) \quad (8)$$

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 10

Rich countries hold less central bank reserves and less FDI liabilities



Financial derivatives, and Other investment 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.

Figure 10 shows the average decomposition of assets and liabilities for each income group for two periods.¹² 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 6. Notably, such a positive composition effect is not so substantial, amounting to 0.07% of their GDP.

¹²Appendix Figures A38 to A47 show the evolution of the decomposition of assets and liabilities over time.

Table 6*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	-0.06%	0.06%	-0.11%	0.00%	0.01%	-0.04%	-0.13%	0.10%	0.00%	0.01%
	2000-2022	0.01%	0.06%	-0.05%	0.00%	0.05%	-0.03%	-0.04%	0.13%	-0.03%	-0.06%
20%-40%	1970-1999	0.01%	0.06%	-0.05%	0.00%	0.00%	-0.04%	-0.06%	0.11%	0.00%	0.01%
	2000-2022	0.09%	0.10%	-0.01%	0.00%	0.01%	-0.03%	0.03%	0.15%	-0.02%	-0.04%
40%-60%	1970-1999	-0.04%	0.07%	-0.11%	0.00%	0.01%	-0.04%	-0.12%	0.12%	-0.01%	0.00%
	2000-2022	-0.03%	0.13%	-0.15%	-0.06%	0.12%	-0.07%	0.20%	0.29%	-0.03%	-0.47%
60%-80%	1970-1999	-0.02%	0.02%	-0.05%	0.00%	0.01%	-0.02%	-0.05%	0.06%	-0.01%	-0.01%
	2000-2022	0.02%	0.12%	-0.10%	-0.02%	0.06%	-0.08%	0.17%	0.25%	-0.03%	-0.33%
Top 20%	1970-1999	0.04%	0.03%	0.02%	0.00%	-0.01%	0.02%	0.02%	-0.01%	0.01%	0.00%
	2000-2022	0.07%	0.07%	0.00%	0.02%	-0.01%	0.04%	-0.03%	-0.01%	0.02%	0.04%

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.

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 7*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	1.02%	-0.13%	1.15%	0.01%	0.01%	-0.05%	1.03%	0.00%	-0.01%	0.07%
	2000-2022	-1.05%	-0.22%	-0.83%	0.00%	-0.39%	-0.03%	-0.20%	-0.05%	0.02%	-0.70%
20%-40%	1970-1999	0.49%	-0.32%	0.80%	0.04%	-0.01%	-0.14%	0.61%	-0.07%	-0.01%	0.21%
	2000-2022	-1.81%	-0.27%	-1.54%	0.00%	-0.79%	-0.04%	-0.62%	-0.07%	-0.03%	-0.99%
40%-60%	1970-1999	-0.23%	-0.31%	0.08%	0.02%	-0.05%	-0.16%	0.41%	-0.02%	-0.01%	-0.44%
	2000-2022	-2.50%	-0.38%	-2.12%	0.36%	-1.18%	-0.07%	-0.73%	0.04%	-0.22%	-0.77%
60%-80%	1970-1999	-0.66%	-0.51%	-0.15%	0.00%	-0.12%	-0.31%	0.07%	-0.05%	-0.07%	-0.13%
	2000-2022	-2.05%	-0.12%	-1.93%	0.04%	-0.81%	0.03%	-0.80%	0.16%	-0.17%	-0.71%
Top 20%	1970-1999	0.16%	0.20%	-0.04%	0.01%	0.02%	0.11%	-0.08%	0.02%	0.02%	0.02%
	2000-2022	0.73%	0.06%	0.67%	-0.01%	0.29%	0.00%	0.26%	-0.03%	0.04%	0.26%

Excess return is defined as the difference with the world's average return rate within asset class times assets (liabilities), expressed as a fraction of the group's GDP. Columns (3)-(5) represent the sum of columns (6)-(12). Countries grouped according to national income per capita quintiles, weighted by population. For example, the 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.

Turning into the return effect in Table 7, we find this is where most of the privilege of the richest countries come from. 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 provided by multilateral institutions-. 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 quintile (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.

4.2 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 of

$$KG_t^B = B_t - B_{t-1} - FLOW_t^B \quad (9)$$

with B referring to the asset (liabilities) classes. These capital gains are then rescaled to match the net valuation changes that emerge from the cumulation of the current account, as described in Section 3. Intuitively, KG_t^B captures all variations in the stock of assets (liabilities) (B_t) that cannot be explained by prior holdings (B_{t-1}) or capital flows ($FLOW_t^B$). This residual typically arises from asset price fluctuations or exchange rate movements.

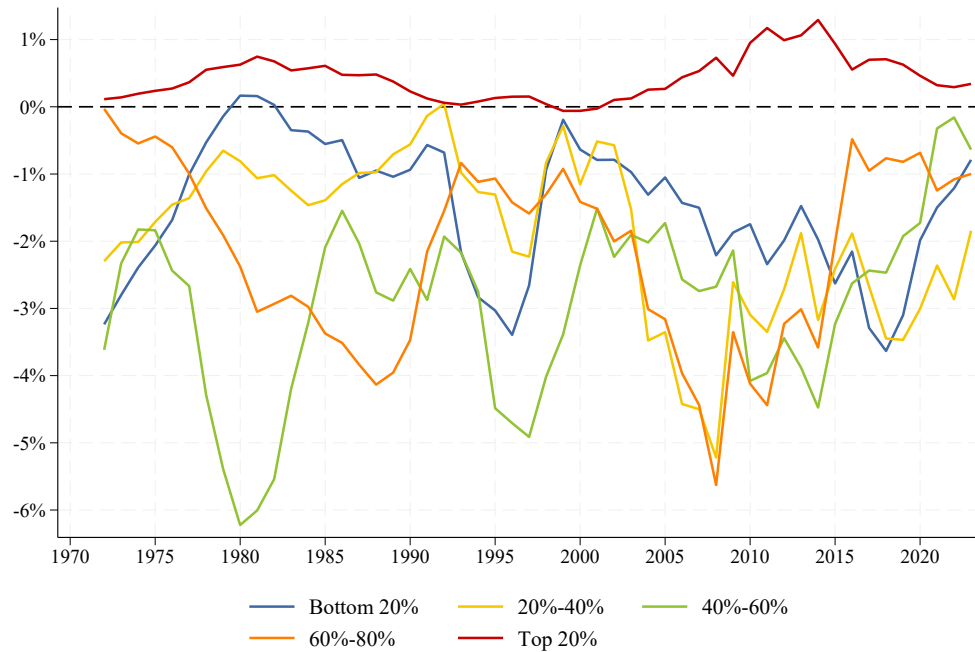
Figure 11 monetizes the total excess returns, offering insights not only into the impact of yield differentials but also into the contribution of exchange rates and asset price movements in determining the external positions of the different groups of countries. The top 20% record positive total excess returns over the entire period of interest, corroborating the finding of a rich-world exorbitant privilege, with gains of around .5% of their GDP in 2022. Figure 12 compares the total excess returns to the excess yields analysed above, illustrating that accounting for valuation changes decreases the advantage of the richest countries post2015. On the contrary, the bottom 80% shows persistent negative total returns. ¹³

Further, Table 8 shows that the Top 20% maintains their exorbitant privilege (i.e. their higher return on assets than return on liabilities) even when including valuation changes, for each asset class in the 2000-2022 period. The rest of the world records a negative return differential in each asset class, except for the 40%-60% and the 60%-80% groups in FDI.

¹³Appendix Figures from A32 to A35 show the comparison between total excess returns and excess yields for each group of countries.

Figure 11

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.

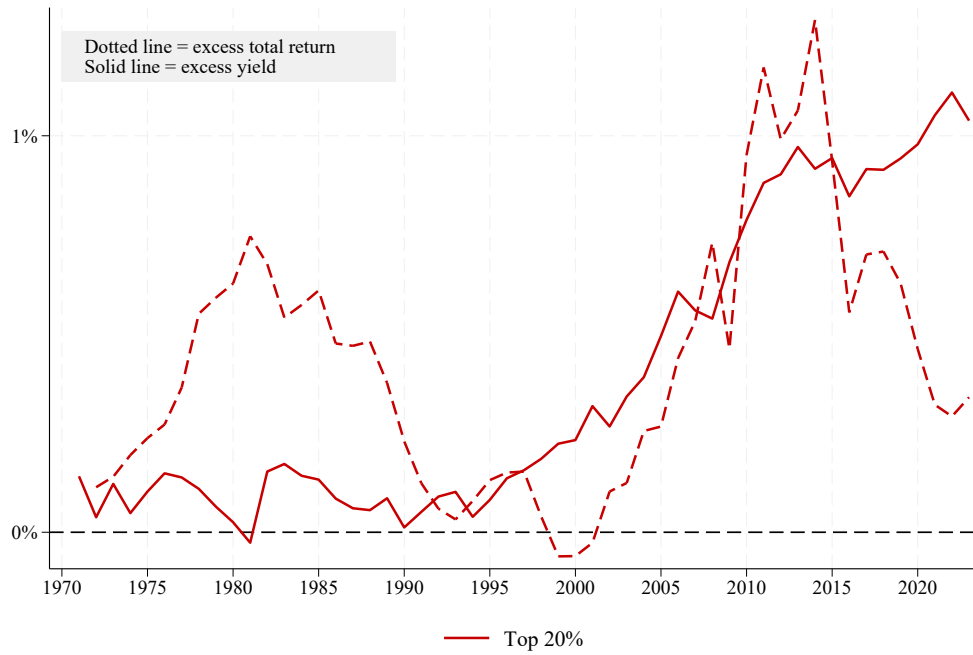
Table 8*Total Returns by Quintile*

Quintile	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Bottom 20%	1970-1999	Avg rate	2.09%	8.35%	2.51%	17.27%	11.24%	7.45%	-3.51%	-15.09%	14.54%
		SD	(0.11)	(0.06)	(0.32)	(0.28)	(0.18)	(0.06)	(0.14)	(0.28)	(0.11)
	2000-2022	Avg rate	2.06%	6.13%	4.45%	18.31%	1.70%	3.05%	1.51%	8.83%	10.15%
		SD	(0.04)	(0.06)	(0.18)	(0.29)	(0.04)	(0.03)	(0.05)	(0.09)	(0.08)
20%-40%	1970-1999	Avg rate	-1.69%	13.76%	18.21%	25.04%	9.61%	15.22%	-9.80%	1.12%	0.81%
		SD	(0.14)	(0.08)	(0.17)	(0.24)	(0.17)	(0.09)	(0.19)	(0.17)	(0.10)
	2000-2022	Avg rate	0.04%	6.18%	1.91%	15.86%	-3.62%	1.67%	1.02%	1.73%	10.64%
		SD	(0.04)	(0.09)	(0.27)	(0.31)	(0.07)	(0.05)	(0.05)	(0.11)	(0.11)
40%-60%	1970-1999	Avg rate	3.05%	13.78%	27.77%	19.13%	6.68%	14.49%	-1.23%	4.82%	12.90%
		SD	(0.05)	(0.07)	(0.27)	(0.18)	(0.07)	(0.08)	(0.07)	(0.13)	(0.08)
	2000-2022	Avg rate	2.89%	8.43%	13.54%	21.13%	1.52%	8.06%	2.01%	7.34%	6.31%
		SD	(0.03)	(0.08)	(0.27)	(0.43)	(0.05)	(0.05)	(0.04)	(0.09)	(0.07)
60%-80%	1970-1999	Avg rate	5.03%	10.88%	20.24%	15.55%	5.31%	11.07%	0.94%	13.79%	10.18%
		SD	(0.03)	(0.04)	(0.14)	(0.19)	(0.05)	(0.04)	(0.07)	(0.09)	(0.08)
	2000-2022	Avg rate	3.53%	7.87%	7.78%	15.95%	0.29%	7.01%	2.94%	10.89%	7.29%
		SD	(0.04)	(0.08)	(0.20)	(0.29)	(0.04)	(0.04)	(0.04)	(0.08)	(0.10)
Top 20%	1970-1999	Avg rate	11.88%	10.97%	19.76%	17.18%	11.91%	9.79%	6.32%	11.62%	12.01%
		SD	(0.04)	(0.03)	(0.08)	(0.09)	(0.04)	(0.04)	(0.06)	(0.08)	(0.08)
	2000-2022	Avg rate	6.28%	6.00%	8.78%	8.49%	5.67%	5.16%	1.87%	7.54%	6.55%
		SD	(0.07)	(0.07)	(0.19)	(0.16)	(0.07)	(0.06)	(0.03)	(0.10)	(0.10)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of total returns by quintile over the periods 1970–1999 and 2000–2022.

Figure 12

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. Total excess returns are the sum of excess yield income and excess capital gains income. Excess yield income is calculated as GFA (GFL) multiplied by excess yield when positive (negative). Similarly, excess capital gains income is computed as GFA (GFL) multiplied by excess capital gains when positive (negative).

4.2.1 Risk adjusted returns

In the previous subsection we showed that the privilege comes from rich countries accessing to cheaper liabilities, rather than they investing in more profitable assets. However, there is also a line of thought that argues that the positive return differential is the result of a compensation for their investment in riskier assets. We also showed 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 these investments are in terms of the total return they provide.

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

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

We define our risk measure as the Return-to-Volatility (RV) ratio, which is simply the ratio of the average total return (yields + valuation changes) to the standard deviation of total returns. This ratio quantifies how much return is earned per unit of volatility. It is conceptually similar to the Sharpe ratio but does not require the definition of a risk-free asset, making it easier to compute.

A higher RV on the asset side of the International Investment Position indicates better risk-adjusted returns. This benefits a country because it implies that its international investments generate higher returns relative to

the risk to which they are exposed. Conversely, a higher RV on the liability side suggests that a country is accessing more expensive debt relative to its risk, which is detrimental to its balance of payments.

Focusing on the period post-2000, Table 9 shows that the richest top 20% of countries have the highest RV for Total Assets, meaning that their risk per unit of return (the inverse of RV) is lower than for the rest of the world. This contradicts the claim that these countries invest in riskier assets and need to be compensated accordingly. Instead, the data suggests that they receive more than adequate compensation for any volatility in their foreign investments, whereas poorer countries do not enjoy a similar benefit. When breaking this down by asset class, we find that most of this positive outcome comes from the high RV of their debt assets, which constitute more than 50% of their portfolio (Figure 10).

Table 9

Return-to-Volatility Ratio

Quintile	Period	Avg rate/sd	Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Bottom 20%	1970-1999	Avg rate/sd	20%	131%	8%	62%	62%	120%	-26%	-54%	136%
	2000-2022	Avg rate/sd	46%	108%	25%	64%	38%	89%	28%	94%	131%
20%-40%	1970-1999	Avg rate/sd	-12%	169%	104%	102%	55%	162%	-51%	6%	8%
	2000-2022	Avg rate/sd	1%	72%	7%	51%	-54%	31%	21%	15%	94%
40%-60%	1970-1999	Avg rate/sd	66%	187%	103%	108%	93%	180%	-17%	36%	163%
	2000-2022	Avg rate/sd	86%	110%	49%	50%	30%	152%	56%	80%	86%
60%-80%	1970-1999	Avg rate/sd	181%	291%	141%	82%	112%	271%	13%	161%	131%
	2000-2022	Avg rate/sd	92%	100%	40%	56%	8%	181%	82%	136%	75%
Top 20%	1970-1999	Avg rate/sd	321%	323%	251%	192%	294%	268%	105%	151%	147%
	2000-2022	Avg rate/sd	88%	85%	47%	54%	83%	82%	55%	74%	63%

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

We also find that the RV for Total Liabilities among the top 20% of countries is the second lowest, only higher than that of the 20%-40% poorest countries. This implies that the liabilities of advanced economies yield lower average returns relative to their volatility, whereas emerging market debt typically offers higher returns to compensate for risk. However, this also suggests that the rest of the world is being over-penalized on its liabilities, as investors demand a higher return per unit of risk. Unexpectedly, this result holds for the debt liabilities of the top 20% countries, implying that foreign investors in rich-country debt receive relatively low compensation for the variability they bear.

Several factors can explain this result. First, while low yields indicate safety and quality, they also mean the average total return is small. Even modest price fluctuations can then result in a low mean/SD ratio. This aligns with recent financial reports showing that the Sharpe ratio (risk-adjusted return) has been significantly higher for emerging market investment-grade sovereign debt than for U.S. Treasuries and other advanced sovereign bonds (Group; UBS, 2020; 2023). These findings support the idea that emerging market debt provides higher returns per unit of volatility—i.e., a lower mean/SD ratio on the liability side—than the safe assets of rich countries.

Second, richer countries tend to have more developed and integrated financial markets. Paradoxically, the depth and liquidity of advanced financial markets can lead to higher measured volatility (Dabla-Norris and Srivisal, 2013). Advanced economy debts (such as G7 government bonds) are widely traded in global markets by diverse investors. This means their prices respond continuously to news, global risk sentiment, and interest rate expectations. Emerging market debt, while not immune to global factors, has in some cases exhibited less day-to-day volatility relative to its yield. Before major financial integration, some developing countries' bonds

were held to maturity by local banks or official lenders, muting price fluctuations. Even today, during periods of global stress, there is often a *flight to quality* into advanced economy bonds, causing yield swings in those markets, whereas some emerging market bonds (especially if already high-yield) may experience proportionally smaller moves until extreme events occur. Additionally, rich countries with complex derivatives and leverage built on their bond markets may experience amplified responses to shocks compared to less financially developed markets. Historically, emerging markets experienced more boom-bust cycles, but many have implemented stronger policy frameworks (e.g., inflation targeting, FX reserves buffers) that have stabilized financial cycles to some extent.

Third, the structure of external public debt differs between rich and poor countries. Advanced economies' public portfolio debt liabilities are largely marketable securities (bonds) held by public and private investors globally. These securities are marked-to-market and tend to have longer maturities, making their prices more sensitive to interest rate fluctuations (duration risk). Developing countries, on the other hand, historically relied more on bank loans and official loans (from multilateral institutions or foreign governments) rather than purely market-issued bonds. Such official or bilateral debt is often on fixed terms and not actively traded, leading to more stable nominal returns. Even within portfolio debt, emerging sovereigns often issue shorter-duration bonds (as investors are unwilling to lend long-term), which limits price volatility. Rich-country debt is almost entirely financed by private investors in the market, whereas a developing country may have a significant portion of debt held by official sources (IMF, World Bank, etc.) with predictable servicing costs. This difference in debt composition means that total debt return volatility can be lower for countries with a larger official debt share, enhancing stability relative to the higher average interest they pay.

Finally, historical volatility (standard deviation) may actually understate the risk of emerging market debt in the presence of infrequent crises or defaults. Emerging markets tend to experience occasional crises leading to extreme losses or defaults (e.g., Argentina 2001). Because these crises are infrequent, the average volatility of returns may appear moderate relative to consistently high yields. Advanced country debt rarely defaults and is seen as a safe haven, but it can still experience price volatility due to interest rate changes. Day-to-day or quarter-to-quarter volatility for advanced economy debt can sometimes be as high as, or even higher than, that of emerging market bonds, which often provide stable coupon payments—until a rare default event occurs. In other words, while emerging market debt often has a favorable realized Sharpe ratio, it also comes with higher tail risk. Investors demand higher yields precisely to compensate for these potential tail events. When such an event occurs, the mean/SD ratio deteriorates significantly for the emerging issuer. However, over long periods without crisis, the developing country enjoys a favorable-looking ratio (high mean, contained volatility). Rich countries, on the other hand, rarely experience catastrophic default events that could raise their average returns, leading to a persistently lower risk-reward profile despite minimal tail risk.

4.3 G8 vs BRICS

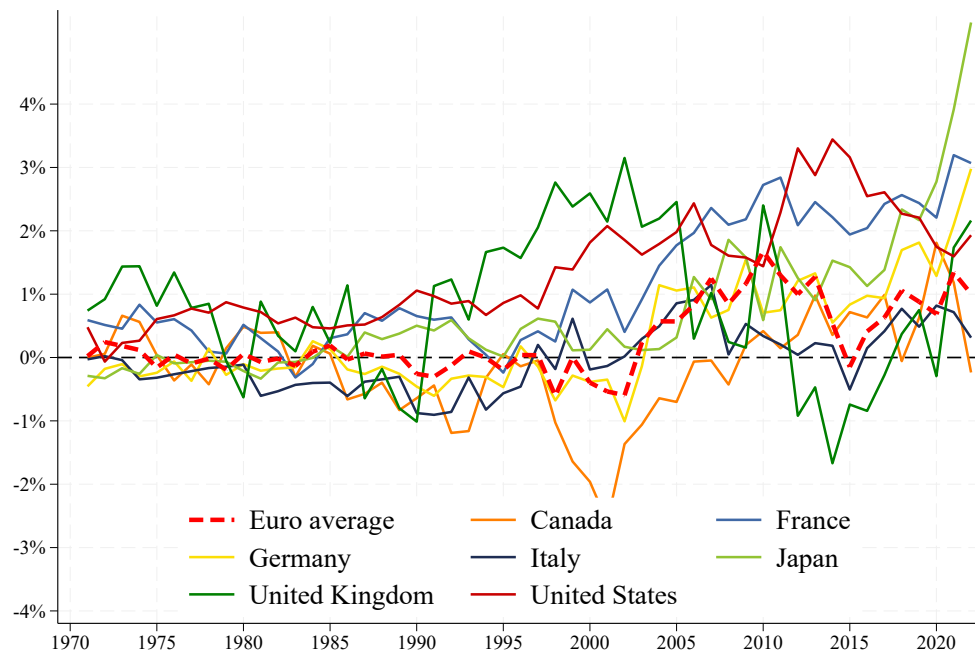
While the G8 economies displayed considerable heterogeneity in the evolution of their NFA, they do share a common privilege in the 21st century. The United States, in particular, has enjoyed this privilege consistently throughout the entire period under examination. France and the United Kingdom have also experienced this privilege for the majority of the period, with only a temporary decline observed in the 1980s and another one post Great Recession. 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 4, 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 13).

Figure 13

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).

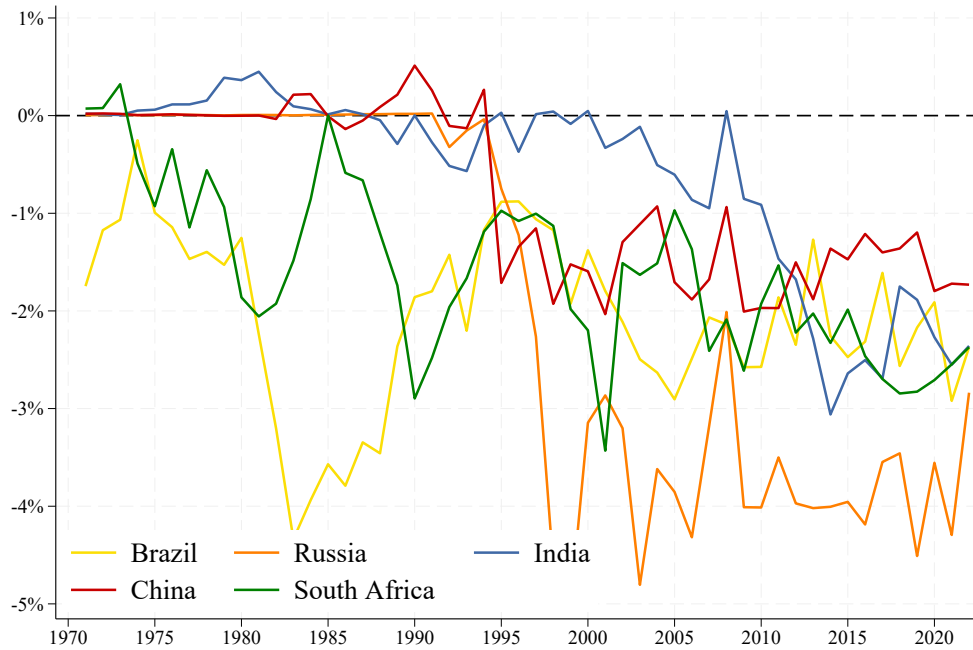
In contrast to the G8 economies, the main developing economies experienced a different narrative in terms of their excess returns. While some of them recorded positive net income in the beginning of the period, these situations gradually decreased over time, eventually reversing in the 2000s. South Africa 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 it's the explanation of the net negative income reported. From Figure 14 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 A22).

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 14

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 $\text{Tipping point} = \frac{L}{A} > \frac{i^A}{i^L} = \frac{3.68\%}{2.29\%} = 160\%$. This means that the U.S. can afford to have liabilities for 160% 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 151%, it becomes apparent that the U.S. economy has the capacity to accumulate more debt equivalent to 9% 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 10 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 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 10

Tipping point at the end of the period (2022)

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

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 11 and Table 12 that, again, 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 Canada 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 Canada this comes from profitable debt and equity assets.

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 outweigh the enormous losses due to FDI liabilities. India's case is comparable to Russia.

Table 11

Return effect as a share of GDP

	Period	Total assets			Equity		Debt		Reserves	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
G7											
Canada	1970-1999	-0.07%	0.69%	-0.76%	0.42%	0.27%	0.72%	-1.03%	0.09%	-0.54%	0.01%
Canada	2000-2022	0.56%	0.54%	0.03%	1.18%	0.19%	1.02%	-0.84%	0.08%	-1.73%	0.67%
Germany	1970-1999	-0.33%	-0.45%	0.13%	0.11%	-0.09%	-0.30%	0.48%	0.00%	-0.26%	-0.26%
Germany	2000-2022	0.11%	-0.17%	0.28%	-0.40%	-0.47%	0.27%	0.25%	0.00%	-0.03%	0.49%
France	1970-1999	0.85%	0.69%	0.16%	0.06%	0.00%	1.49%	-0.83%	0.13%	-0.98%	0.99%
France	2000-2022	2.60%	-0.40%	3.01%	0.09%	0.85%	-0.23%	1.52%	0.00%	-0.26%	0.63%
United Kingdom	1970-1999	1.14%	4.08%	-2.94%	-0.07%	-0.04%	2.98%	-1.90%	0.11%	1.06%	-1.01%
United Kingdom	2000-2022	2.18%	-0.19%	2.37%	0.50%	0.65%	-1.76%	1.84%	-0.01%	1.08%	-0.13%
Italy	1970-1999	-0.19%	-0.38%	0.19%	0.13%	0.10%	-0.15%	-0.14%	0.03%	-0.39%	0.24%
Italy	2000-2022	-0.36%	-0.69%	0.33%	-0.76%	-0.12%	0.19%	0.32%	-0.01%	-0.12%	0.13%
Japan	1970-1999	0.20%	0.31%	-0.10%	0.80%	-0.31%	-0.39%	0.19%	0.01%	-0.11%	0.01%
Japan	2000-2022	0.62%	1.10%	-0.48%	0.50%	-0.64%	-0.06%	0.38%	0.13%	0.53%	-0.22%
United States	1970-1999	0.91%	0.75%	0.16%	0.06%	0.06%	0.44%	-0.24%	0.02%	0.23%	0.35%
United States	2000-2022	2.16%	0.88%	1.28%	-0.45%	0.59%	0.36%	-0.05%	-0.01%	0.97%	0.74%
Total G7	1970-1999	0.45%	0.63%	-0.18%	0.06%	0.00%	0.48%	-0.28%	0.03%	0.05%	0.10%
Total G7	2000-2022	1.49%	0.47%	1.02%	-0.15%	0.25%	0.06%	0.29%	0.02%	0.55%	0.48%
BRICS											
Brazil	1970-1999	-1.03%	-0.31%	-0.72%	0.00%	-0.01%	-0.09%	-0.58%	-0.01%	-0.20%	-0.13%
Brazil	2000-2022	-2.31%	-0.25%	-2.06%	-0.01%	-0.47%	0.02%	-1.02%	0.08%	-0.34%	-0.57%
China	1970-1999	0.29%	-0.24%	0.53%	0.08%	-0.05%	-0.19%	0.27%	-0.13%	0.00%	0.31%
China	2000-2022	-1.85%	0.43%	-2.28%	0.32%	-1.21%	0.09%	-0.76%	0.25%	-0.23%	-0.31%
India	1970-1999	0.63%	0.00%	0.63%	-0.01%	0.08%	-0.01%	0.50%	0.02%	0.00%	0.05%
India	2000-2022	-2.04%	0.07%	-2.11%	0.00%	-0.87%	0.03%	-0.71%	-0.02%	0.06%	-0.54%
Russia	1970-1999	-0.01%	-0.87%	0.86%	0.00%	0.02%	-0.79%	0.77%	-0.03%	-0.04%	0.07%
Russia	2000-2022	-4.01%	0.15%	-4.17%	0.06%	-1.03%	-0.05%	-0.96%	-0.08%	0.22%	-2.18%
South Africa	1970-1999	-1.71%	0.02%	-1.73%	0.02%	-0.98%	0.10%	-0.66%	0.02%	-0.12%	-0.09%
South Africa	2000-2022	-2.88%	0.13%	-3.00%	0.49%	-0.84%	0.34%	-1.73%	0.20%	-0.90%	-0.43%
Total BRICS	1970-1999	-0.23%	-0.40%	0.18%	0.01%	-0.06%	-0.32%	0.23%	-0.03%	-0.07%	0.01%
Total BRICS	2000-2022	-2.18%	0.15%	-2.33%	0.07%	-0.90%	0.06%	-0.84%	0.17%	-0.15%	-0.59%

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

Table 12*Composition effect as a share of GDP*

	Period	Total Assets			Equity		Debt		Reserves	FDI	
		Privilege	Asset	Liab.	Asset	Liab.	Asset	Liab.	Asset	Asset	Liab.
G7											
Canada	1970-1999	0.22%	-0.07%	0.29%	0.06%	0.01%	-0.32%	0.65%	-0.01%	0.19%	-0.36%
Canada	2000-2022	0.41%	0.37%	0.05%	0.60%	0.03%	-0.61%	0.25%	-0.01%	0.39%	-0.24%
Germany	1970-1999	0.01%	0.12%	-0.11%	-0.02%	0.01%	0.15%	-0.15%	0.01%	-0.02%	0.03%
Germany	2000-2022	0.19%	0.48%	-0.29%	-0.03%	0.10%	0.63%	-0.50%	0.00%	-0.12%	0.11%
France	1970-1999	-0.24%	-0.11%	-0.13%	0.00%	0.02%	-0.13%	-0.15%	-0.01%	0.03%	0.00%
France	2000-2022	0.12%	0.64%	-0.52%	-0.09%	0.03%	0.87%	-0.72%	0.00%	-0.13%	0.16%
United Kingdom	1970-1999	0.08%	0.83%	-0.75%	0.06%	0.06%	0.86%	-0.94%	-0.02%	-0.07%	0.13%
United Kingdom	2000-2022	0.19%	1.08%	-0.89%	-0.12%	0.07%	1.69%	-1.42%	-0.01%	-0.48%	0.46%
Italy	1970-1999	-0.12%	0.11%	-0.23%	-0.01%	0.01%	0.12%	-0.25%	0.00%	-0.01%	0.01%
Italy	2000-2022	-0.30%	0.10%	-0.40%	0.13%	0.07%	0.05%	-0.58%	0.00%	-0.07%	0.11%
Japan	1970-1999	-0.09%	0.12%	-0.21%	-0.05%	-0.02%	0.19%	-0.20%	0.00%	-0.02%	0.00%
Japan	2000-2022	-0.28%	-0.02%	-0.26%	-0.05%	-0.23%	0.17%	-0.12%	0.05%	-0.20%	0.09%
United States	1970-1999	0.21%	0.07%	0.13%	0.01%	-0.02%	-0.25%	0.19%	-0.01%	0.32%	-0.03%
United States	2000-2022	0.13%	0.16%	-0.03%	0.19%	-0.02%	-0.15%	-0.05%	0.00%	0.13%	0.03%
Total G7	1970-1999	0.02%	0.03%	-0.01%	0.00%	0.00%	-0.02%	-0.01%	-0.01%	0.06%	0.00%
Total G7	2000-2022	-0.04%	0.13%	-0.18%	0.06%	0.01%	0.16%	-0.28%	-0.01%	-0.07%	0.10%
BRICS											
Brazil	1970-1999	0.17%	0.06%	0.11%	0.00%	0.00%	-0.06%	0.18%	0.12%	0.00%	-0.06%
Brazil	2000-2022	0.09%	0.15%	-0.07%	-0.01%	-0.03%	-0.05%	0.31%	0.15%	0.06%	-0.35%
China	1970-1999	0.06%	0.06%	-0.01%	-0.01%	0.01%	-0.06%	0.00%	0.14%	-0.01%	-0.01%
China	2000-2022	0.21%	0.26%	-0.05%	-0.06%	0.08%	-0.10%	0.26%	0.46%	-0.04%	-0.39%
India	1970-1999	0.03%	0.09%	-0.06%	0.00%	0.00%	-0.03%	-0.06%	0.12%	0.00%	0.01%
India	2000-2022	0.13%	0.18%	-0.05%	0.00%	-0.20%	-0.03%	0.11%	0.24%	-0.03%	0.04%
Russia	1970-1999	-0.02%	0.05%	-0.06%	0.00%	0.00%	0.05%	-0.07%	0.00%	0.00%	0.01%
Russia	2000-2022	-0.14%	0.07%	-0.20%	-0.01%	0.03%	-0.06%	0.16%	0.11%	0.03%	-0.40%
South Africa	1970-1999	0.38%	0.18%	0.20%	0.02%	-0.05%	-0.14%	0.46%	0.00%	0.29%	-0.21%
South Africa	2000-2022	0.45%	0.41%	0.05%	0.59%	-0.35%	-0.25%	0.69%	0.01%	0.06%	-0.29%
Total BRICS	1970-1999	0.01%	0.02%	-0.01%	0.00%	0.01%	-0.01%	0.00%	0.03%	0.00%	-0.01%
Total BRICS	2000-2022	0.10%	0.17%	-0.07%	-0.02%	-0.01%	-0.09%	0.24%	0.31%	-0.03%	-0.30%

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).

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.

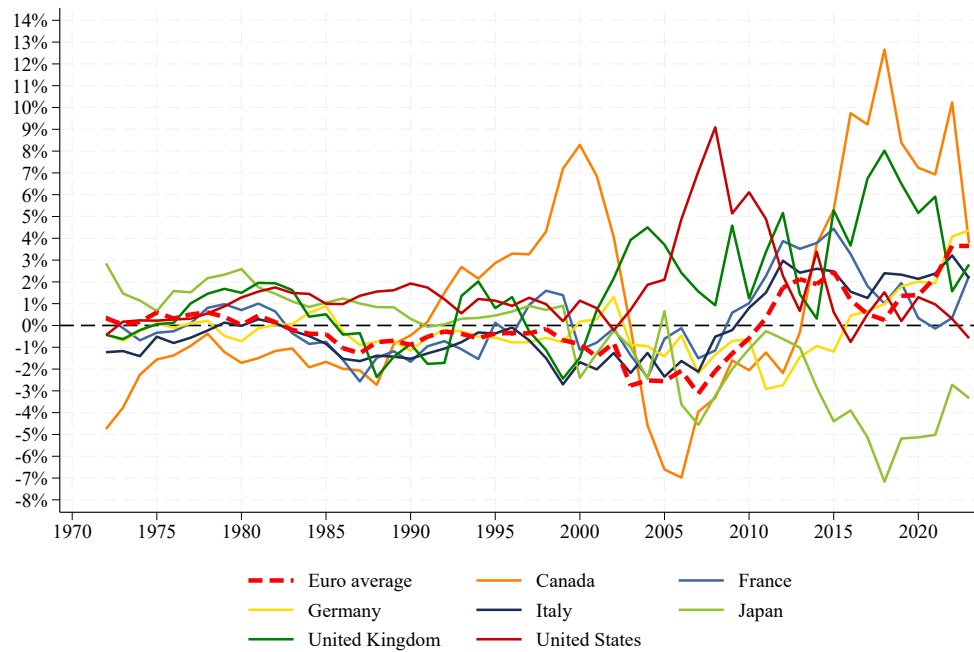
Total returns

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 is the only one that is mostly negative. Post-2015, 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 15.

In the BRICS grouping, the scenario varies markedly. After the fall of the Soviet Union, Russia constantly incurs significant losses. Throughout the period analyzed, China and India consistently underperform, failing to achieve positive returns. Conversely, Brazil and South Africa demonstrate relative resilience the latest years.

Figure 15

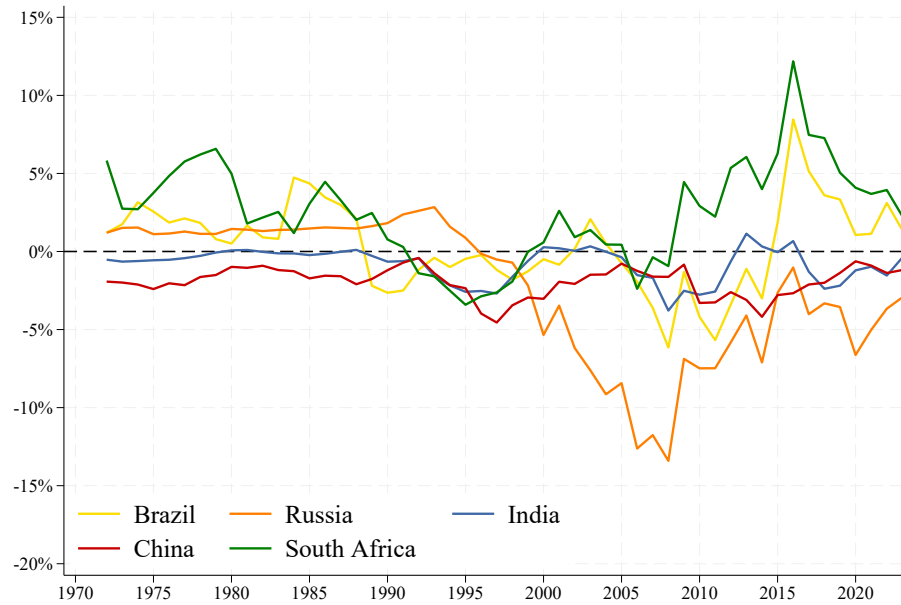
Total Excess returns as a share GDP, G8



Total excess returns are the sum of excess yield income and excess capital gains income. Excess yield income is calculated as GFA (GFL) multiplied by excess yield when positive (negative). Similarly, excess capital gains income is computed as GFA (GFL) multiplied by excess capital gains when positive (negative). Lines smoothed using a 5-year moving average.

Figure 16

Total Excess returns as a share GDP, BRICS



Total excess returns are the sum of excess yield income and excess capital gains income. Excess yield income is calculated as GFA (GFL) multiplied by excess yield when positive (negative). Similarly, excess capital gains income is computed as GFA (GFL) multiplied by excess capital gains when positive (negative). Lines smoothed using a 5-year moving average.

When analyzing the return differential including valuation changes, we see that the positive results for the latest period 2000-2022 hold for G7 countries, with the exception of Germany and Japan. Germany total return on liabilities is slightly higher than the total return on assets, consistent with the findings of [Hünnekes et al. \(2019\)](#). This is particularly stark for equities, while they have a positive return differential in FDI. Oppositely, Japan has a positive differential in equities but a negative one in debt and FDI. France, the UK and the US have a positive differential in every asset class.

Conversely, all of the BRICS countries present a negative total return differential in total assets in the period 2000-2022, except for South Africa. For Brazil and China, only the total return differential in FDI is positive. For India, the debt and FDI differential are positives but they do not compensate the big losses in equities. South Africa presents a positive return differential in every asset class.

Table 13*Total returns - G8*

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Canada	1970-1999	Avg rate	10.58%	10.59%	16.24%	12.28%	10.80%	10.23%	8.67%	9.37%	11.67%
		SD	(0.06)	(0.05)	(0.17)	(0.19)	(0.05)	(0.04)	(0.04)	(0.09)	(0.10)
	2000-2022	Avg rate	6.72%	6.42%	10.06%	9.80%	7.37%	5.28%	4.16%	5.13%	7.58%
		SD	(0.14)	(0.14)	(0.20)	(0.27)	(0.06)	(0.06)	(0.05)	(0.16)	(0.21)
Germany	1970-1999	Avg rate	10.13%	10.84%	19.89%	19.05%	11.05%	8.92%	5.51%	5.73%	21.68%
		SD	(0.10)	(0.13)	(0.14)	(0.28)	(0.13)	(0.13)	(0.13)	(0.12)	(0.27)
	2000-2022	Avg rate	4.81%	4.91%	4.79%	11.18%	4.52%	4.58%	2.59%	6.98%	3.74%
		SD	(0.09)	(0.11)	(0.17)	(0.30)	(0.10)	(0.10)	(0.04)	(0.08)	(0.13)
France	1970-1999	Avg rate	11.86%	12.38%	23.00%	36.60%	11.98%	11.04%	12.48%	6.79%	18.89%
		SD	(0.07)	(0.09)	(0.12)	(0.26)	(0.11)	(0.07)	(0.16)	(0.16)	(0.35)
	2000-2022	Avg rate	4.40%	3.95%	5.67%	4.91%	4.24%	4.18%	4.10%	4.90%	4.82%
		SD	(0.09)	(0.10)	(0.20)	(0.18)	(0.10)	(0.11)	(0.05)	(0.08)	(0.11)
United Kingdom	1970-1999	Avg rate	14.22%	13.98%	19.55%	20.44%	14.69%	13.09%	9.29%	10.73%	14.91%
		SD	(0.07)	(0.07)	(0.15)	(0.17)	(0.08)	(0.08)	(0.45)	(0.11)	(0.21)
	2000-2022	Avg rate	5.90%	5.03%	9.35%	7.69%	5.74%	4.67%	3.07%	6.21%	5.78%
		SD	(0.10)	(0.10)	(0.18)	(0.19)	(0.13)	(0.12)	(0.10)	(0.09)	(0.12)
Italy	1970-1999	Avg rate	5.87%	8.43%	21.34%	41.37%	4.54%	7.06%	8.53%	6.73%	10.04%
		SD	0.10	0.12	0.26	0.64	0.12	0.11	0.17	0.13	0.20
	2000-2022	Avg rate	4.37%	3.83%	5.03%	5.30%	4.03%	3.52%	2.28%	5.04%	5.49%
		SD	0.10	0.11	0.15	0.22	0.10	0.11	0.04	0.09	0.12
Japan	1970-1999	Avg rate	7.51%	-0.38%	13.32%	-4.05%	6.97%	0.20%	9.62%	6.57%	-7.21%
		SD	0.07	0.12	0.09	0.29	0.08	0.10	0.07	0.08	0.12
	2000-2022	Avg rate	8.63%	10.34%	11.96%	5.83%	10.44%	13.72%	4.13%	5.79%	10.60%
		SD	0.06	0.09	0.26	0.22	0.09	0.10	0.04	0.05	0.14
United States	1970-1999	Avg rate	14.14%	10.04%	24.59%	17.98%	11.04%	7.61%	10.08%	16.81%	14.07%
		SD	0.08	0.06	0.19	0.15	0.05	0.03	0.09	0.15	0.20
	2000-2022	Avg rate	7.64%	5.14%	10.19%	9.64%	7.38%	4.37%	1.32%	8.82%	4.66%
		SD	0.10	0.07	0.22	0.16	0.14	0.08	0.07	0.17	0.15
Eurozone	1970-1999	Avg rate	13.25%	13.57%	21.02%	22.36%	14.15%	11.94%	8.49%	8.92%	14.65%
		SD	0.06	0.07	0.08	0.08	0.07	0.07	0.09	0.09	0.14
	2000-2022	Avg rate	6.19%	6.28%	6.93%	6.77%	4.82%	4.99%	1.86%	9.10%	9.29%
		SD	0.10	0.10	0.17	0.15	0.09	0.10	0.04	0.15	0.16
Total G8	1970-1999	Avg rate	12.67%	11.33%	20.69%	17.13%	12.27%	9.97%	8.97%	12.65%	13.01%
		SD	(0.04)	(0.04)	(0.10)	(0.10)	(0.04)	(0.04)	(0.08)	(0.08)	(0.09)
	2000-2022	Avg rate	6.51%	5.78%	8.73%	7.63%	5.78%	5.10%	3.42%	7.58%	6.62%
		SD	(0.08)	(0.08)	(0.19)	(0.16)	(0.08)	(0.07)	(0.04)	(0.11)	(0.12)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of the total returns for the G8 countries over the periods 1970-1999 and 2000-2022.

Table 14*Total Returns - BRICS*

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Brazil	1970-1999	Avg rate	10.46%	9.25%	11.43%	13.92%	6.08%	9.98%	10.68%	23.29%	5.54%
		SD	(0.08)	(0.07)	(0.25)	(0.22)	(0.20)	(0.09)	(0.13)	(0.17)	(0.18)
	2000-2022	Avg rate	5.06%	7.24%	2.41%	14.84%	1.96%	7.03%	4.89%	8.42%	5.53%
		SD	(0.04)	(0.18)	(0.49)	(0.47)	(0.16)	(0.06)	(0.06)	(0.07)	(0.22)
China	1970-1999	Avg rate	-2.87%	26.96%	30.14%	42.73%	11.32%	32.63%	-13.41%	-5.79%	-1.38%
		SD	(0.15)	(0.19)	(0.33)	(0.28)	(0.21)	(0.20)	(0.19)	(0.21)	(0.15)
	2000-2022	Avg rate	3.86%	9.45%	18.41%	26.23%	1.97%	12.51%	3.12%	8.96%	4.90%
		SD	(0.04)	(0.10)	(0.31)	(0.46)	(0.07)	(0.10)	(0.04)	(0.10)	(0.09)
India	1970-1999	Avg rate	-0.13%	6.39%	15.39%	8.93%	2.32%	6.03%	-1.60%	14.76%	7.61%
		SD	(0.15)	(0.06)	(0.25)	(0.16)	(0.32)	(0.06)	(0.22)	(0.28)	(0.06)
	2000-2022	Avg rate	2.10%	5.08%	6.79%	18.52%	-0.17%	-3.29%	1.49%	9.42%	7.19%
		SD	(0.05)	(0.13)	(0.21)	(0.31)	(0.08)	(0.05)	(0.06)	(0.12)	(0.10)
Russia	1970-1999	Avg rate	5.90%	-4.85%	30.20%	-4.47%	3.19%	-9.68%	29.48%	36.09%	73.36%
		SD	(0.05)	(0.08)	(0.07)	(0.85)	(0.05)	(0.12)	(0.14)	(0.13)	(0.33)
	2000-2022	Avg rate	2.46%	12.43%	19.71%	26.05%	-2.17%	5.71%	4.11%	14.23%	21.58%
		SD	(0.09)	(0.20)	(0.31)	(0.48)	(0.08)	(0.07)	(0.07)	(0.32)	(0.32)
South Africa	1970-1999	Avg rate	17.51%	13.71%	25.30%	23.65%	10.83%	15.78%	1.00%	19.68%	16.81%
		SD	(0.15)	(0.15)	(0.25)	(0.53)	(0.18)	(0.11)	(1.46)	(0.20)	(0.43)
	2000-2022	Avg rate	12.91%	10.31%	11.39%	9.01%	25.43%	15.54%	5.93%	13.39%	8.14%
		SD	(0.15)	(0.19)	(0.23)	(0.26)	(0.22)	(0.11)	(0.07)	(0.20)	(0.26)
Total BRICS	1970-1999	Avg rate	6.38%	5.67%	22.21%	13.07%	4.78%	3.53%	3.66%	21.12%	12.73%
		SD	(0.05)	(0.04)	(0.19)	(0.19)	(0.06)	(0.06)	(0.08)	(0.15)	(0.11)
	2000-2022	Avg rate	4.03%	8.82%	11.47%	18.21%	1.00%	7.64%	3.28%	10.44%	6.86%
		SD	(0.05)	(0.12)	(0.21)	(0.32)	(0.04)	(0.04)	(0.04)	(0.12)	(0.12)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of the total returns for the BRICS countries over the periods 1970-1999 and 2000-2022.

Risk adjusted returns

As above, we analyze risk-adjusted returns using the Return-to-Volatility (RV) ratio, which measures how much return is earned per unit of volatility. A higher RV on the asset side of the International Investment Position indicates stronger risk-adjusted returns, meaning a country's foreign investments generate higher returns relative to their associated risk. Conversely, a higher RV on the liability side suggests that the country is incurring more expensive debt relative to its risk level, negatively affecting its balance of payments.

We find mixed evidence in the G7 vs. BRICS comparison for the post-2000 period. On the asset side, Canada, Germany, France, the UK, Italy, India, and Russia exhibit a low RV, implying lower returns per unit of risk. For Canada, this holds across all asset classes except debt. For Germany and India, the only exception is FDI. In France, the UK, and Italy, the low RV is consistent across all asset classes, although for FDI is not so low.

In contrast, Japan, the US, Brazil, China, and South Africa display a high RV on their total assets. For Japan and South Africa, the only exception is equities. Brazil's and China's results are primarily driven by FDI and FX Reserves.

The pattern is similar for total liabilities. For the latest period, countries such as Canada, Germany, France, the UK, Italy, and India borrow at lower costs relative to the volatility of their liabilities. For Canada, this pattern holds across all asset classes except debt, while for Germany, France, the UK and Italy, it is consistent across their entire portfolios. Brazil and South Africa also exhibit relatively low RVs on total liabilities, with particularly low values in equity and FDI but higher values for debt. Meanwhile, Russia's RV on liabilities is

higher than on its total assets.

On the other hand, Japan, the US, and China pay higher returns on their liabilities relative to their volatility compared to other countries. In Japan, this is mainly driven by debt and, to a lesser extent, FDI. Whereas in China, the elevated RV for debt is entirely responsible for the observed effect.

Overall, the G7 and BRICS countries show distinct patterns in risk-adjusted returns. The US and Japan consistently exhibit high RVs across both assets and liabilities, suggesting they earn higher returns but also pay relatively more for their debt. In contrast, Canada, Germany, France, the UK, and Italy tend to have lower RVs, indicating lower returns per unit of risk on assets but also cheaper borrowing costs. Among the BRICS, Brazil and South Africa generally face lower RVs on liabilities, suggesting more favorable borrowing conditions, while China's elevated liability RV highlights a relatively high cost of debt. Russia stands out with a low RV on its assets and a higher one on liabilities, creating an imbalance.

Table 15

Return-to-Volatility Ratio

Countries	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
G8											
Canada	1970-1999	Avg rate/SD	182%	204%	94%	66%	197%	250%	239%	102%	119%
	2000-2022	Avg rate/SD	50%	46%	50%	36%	124%	92%	77%	33%	37%
Germany	1970-1999	Avg rate/SD	97%	86%	138%	69%	85%	70%	43%	47%	82%
	2000-2022	Avg rate/SD	52%	46%	29%	37%	45%	47%	59%	84%	29%
France	1970-1999	Avg rate/SD	159%	139%	195%	140%	114%	149%	80%	42%	54%
	2000-2022	Avg rate/SD	49%	39%	29%	27%	41%	39%	80%	64%	44%
United Kingdom	1970-1999	Avg rate/SD	207%	191%	131%	119%	175%	158%	21%	97%	72%
	2000-2022	Avg rate/SD	58%	49%	52%	40%	44%	40%	32%	69%	47%
Italy	1970-1999	Avg rate/SD	57%	71%	81%	65%	39%	63%	49%	50%	50%
	2000-2022	Avg rate/SD	43%	34%	34%	24%	39%	33%	64%	54%	45%
Japan	1970-1999	Avg rate/SD	102%	-3%	153%	-14%	92%	2%	133%	83%	-59%
	2000-2022	Avg rate/SD	145%	112%	45%	26%	122%	134%	100%	121%	76%
United States	1970-1999	Avg rate/SD	184%	160%	129%	116%	224%	254%	117%	113%	72%
	2000-2022	Avg rate/SD	74%	72%	46%	59%	53%	56%	19%	52%	32%
Eurozone	1970-1999	Avg rate/SD	217%	203%	267%	279%	209%	167%	90%	97%	104%
	2000-2022	Avg rate/SD	64%	60%	41%	44%	54%	52%	44%	60%	59%
Total G8	1970-1999	Avg rate/SD	317%	308%	209%	170%	318%	268%	111%	150%	141%
	2000-2022	Avg rate/SD	80%	75%	46%	48%	70%	70%	84%	66%	55%
BRICS											
Brazil	1970-1999	Avg rate/SD	129%	139%	46%	64%	30%	107%	85%	134%	31%
	2000-2022	Avg rate/SD	114%	40%	5%	32%	12%	113%	75%	124%	26%
China	1970-1999	Avg rate/SD	-19%	144%	90%	154%	55%	165%	-69%	-27%	-9%
	2000-2022	Avg rate/SD	101%	98%	59%	57%	28%	130%	84%	87%	56%
India	1970-1999	Avg rate/SD	-1%	104%	61%	56%	7%	103%	-7%	53%	119%
	2000-2022	Avg rate/SD	44%	40%	33%	61%	-2%	-70%	23%	81%	69%
Russia	1970-1999	Avg rate/SD	120%	-60%	459%	-5%	69%	-84%	211%	277%	226%
	2000-2022	Avg rate/SD	28%	63%	64%	55%	-28%	82%	63%	44%	68%
South Africa	1970-1999	Avg rate/SD	115%	91%	101%	45%	62%	142%	1%	100%	39%
	2000-2022	Avg rate/SD	83%	54%	51%	34%	115%	136%	83%	66%	31%
Total BRICS	1970-1999	Avg rate/SD	124%	137%	116%	68%	85%	59%	48%	140%	113%
	2000-2022	Avg rate/SD	85%	72%	54%	56%	24%	175%	83%	90%	55%

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

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 18 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.

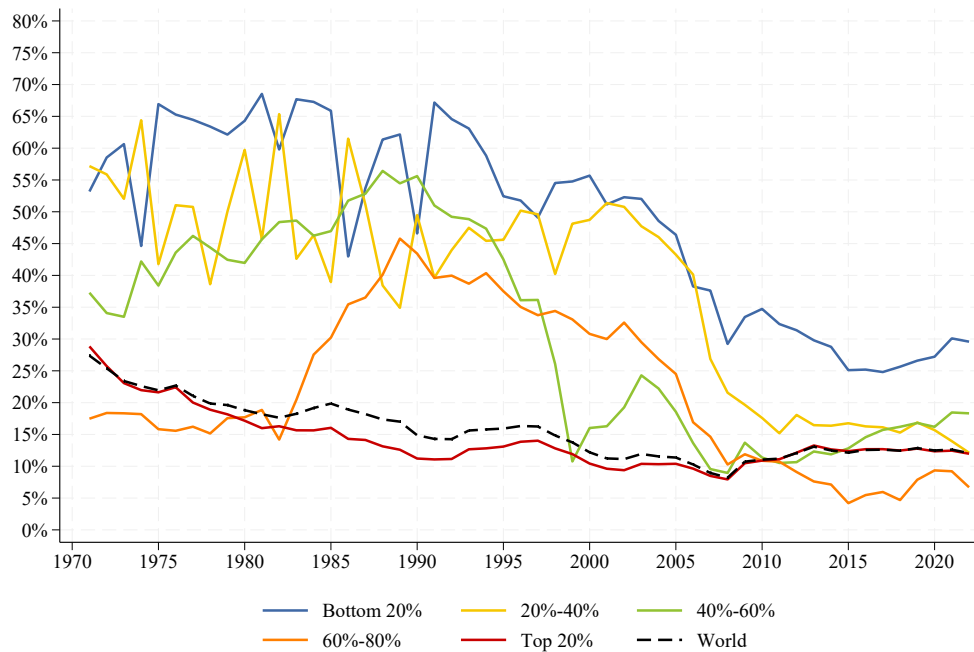
Hypothesis 4: *The privilege of rich countries is driven by low interest rates in their public debt.*

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 in a straightforward manner.

Figure 17

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.

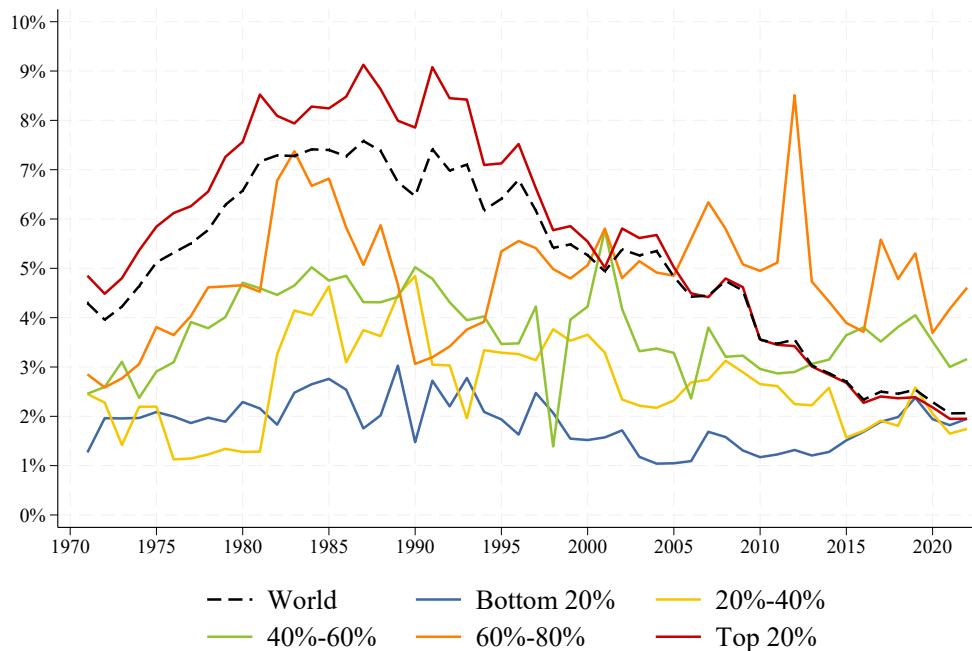
Data on the external public debt of developed countries is less comprehensive. We rely on secondary estimates, combining debt stocks from the BIS (Avdjiev et al., 2017) and the IMF (Arslanalp and Tsuda, 2012). We

then assume that rich countries' interest rates on external public debt align with those on their overall public debt, relying from IMF Public Finances in Modern History (Mauro et al., 2015). Public assets are a sum of FX 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. Appendix A.6 provides a more detailed explanation on how these figures are constructed. As demonstrated in Figure 17, the proportion of external public debt in total external liabilities has declined across all income groups, with a global average of 12%.

Figure 19 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 18

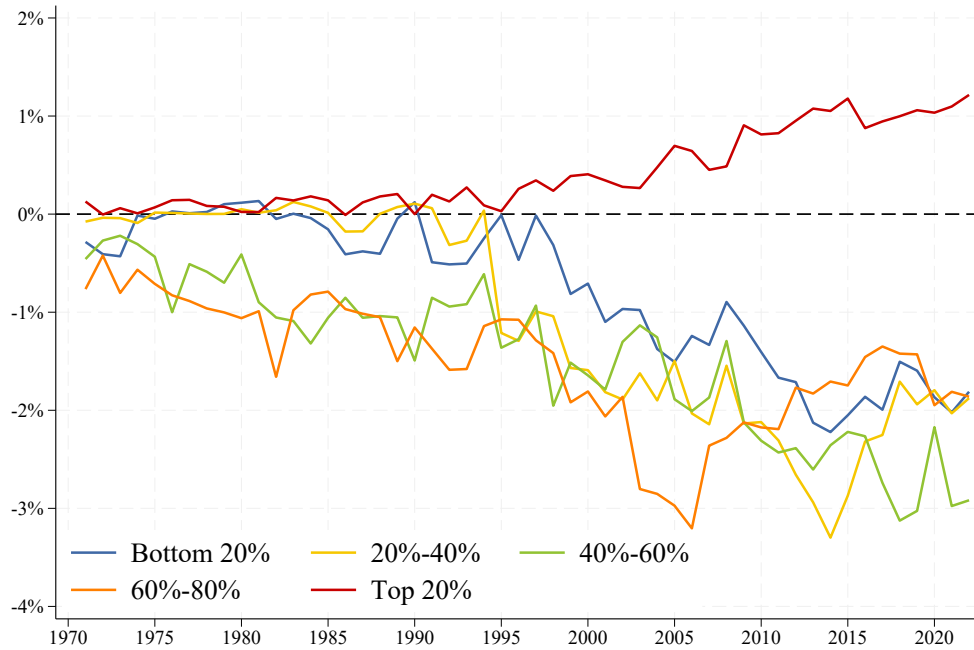
Returns paid on public external debt



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.

Figure 19

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.

6 Mechanisms

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

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) tax motives and iv) savings glut. Of course, all of these factors are accompanied by strong financial and monetary institutions, stable currencies and liquid markets, facilitating the ability of rich countries to attract capital and issue safe assets, reinforcing their role in global imbalances (Caballero et al.; Mendoza et al., 2008; 2009).

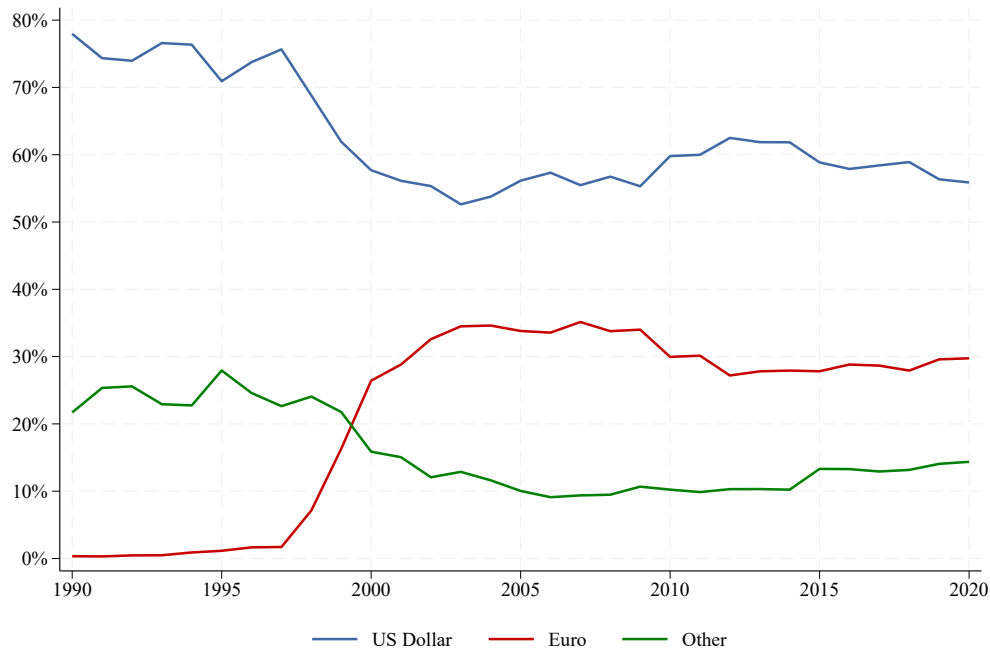
First, most of these countries are the issuers of international reserve currencies (IC), which are then used in international transactions and as a reserve of value around the globe.

Table 16*Functions of International currencies*

International currencies	Store of value	Medium of exchange	Unit of account
<i>Governments</i>	International reserve holdings	Foreign exchange intervention	Anchor for pegging LC
<i>Private</i>	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 1million 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 1million USD goods, which implies a loss for them. We show in Figure 20 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.

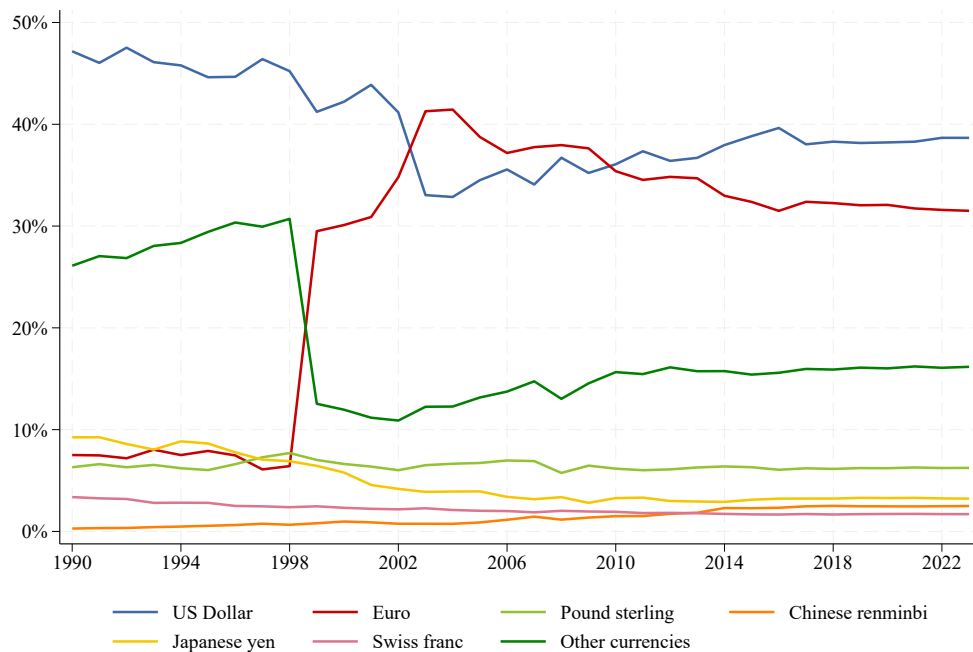
Figure 20*Share of global trade by currency invoiced in*

Author's calculations relying [Boz et al. \(2020\)](#). EUR includes legacy currencies. We impute regional averages for countries with missing data.

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 21 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 22, although with a less important role of the Euro.

Figure 21

Share of global assets by currency



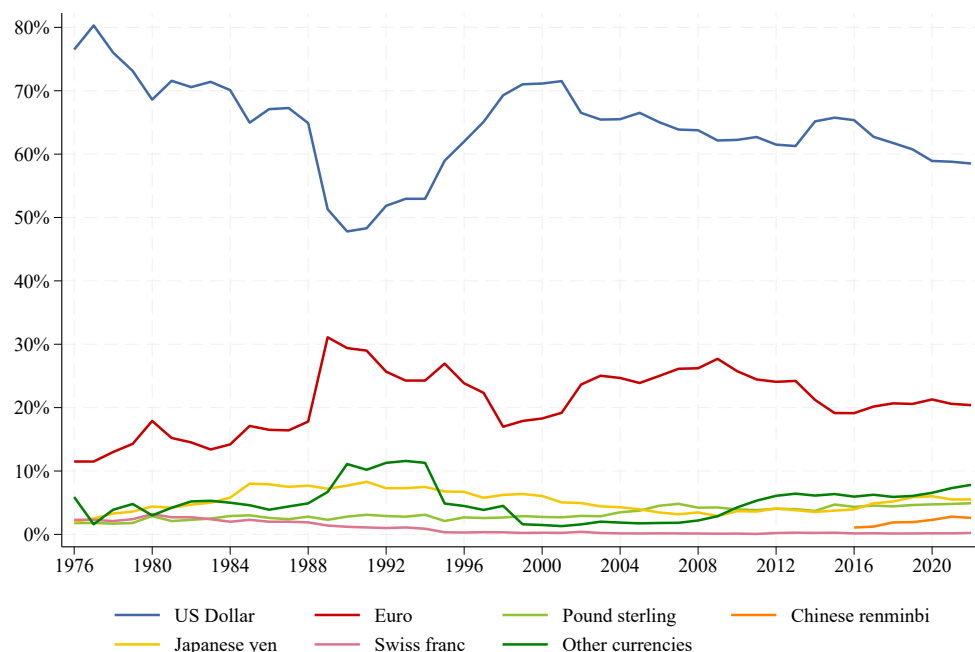
Source: Author's calculations based on [A. Bénétrix, Gautam, Juvenal, and Schmitz \(2019\)](#); [A. S. Bénétrix, Lane, and Shambaugh \(2015\)](#). Euro includes legacy currencies. We impute regional averages for countries with missing data.

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 22

Share of global reserves by currency

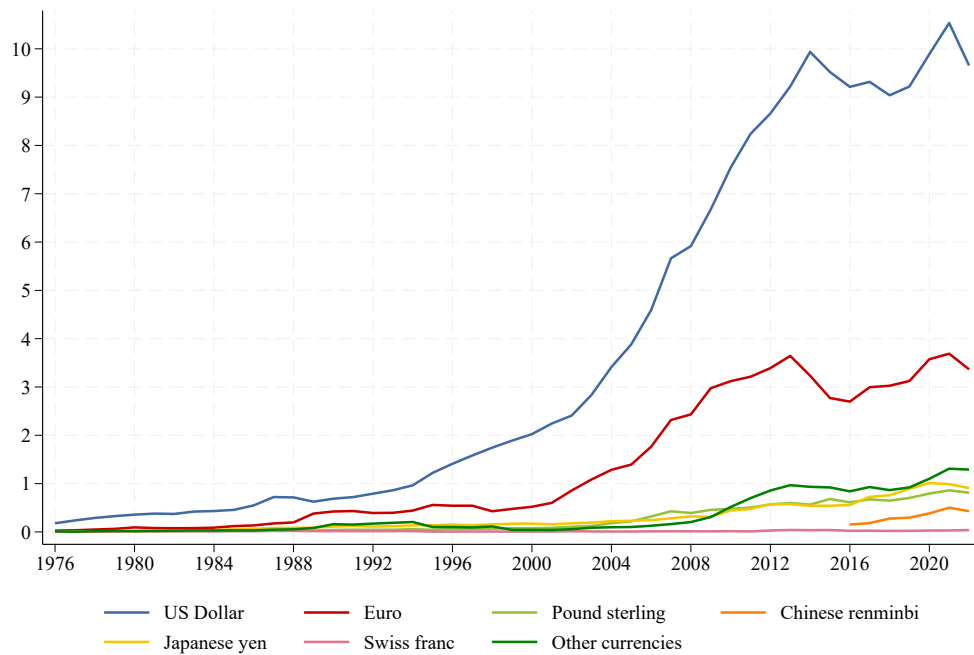


Source: IMF Annual Reports (1984, 1986-1988, 1990, 1999) and IMF Currency Composition of Official Foreign Exchange Reserves (COFER) (1995-2022). Deutsche marks, French francs, Dutch guilders and ECUs are included in the Euro before 1999.

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 23 shows the increase in central bank reserves held in US dollars and Euros since the GFC. Figure 24 shows how cross border commercial banks' assets have reached pre-crisis levels, with a clear dominance of USD and Euro denominated claims.

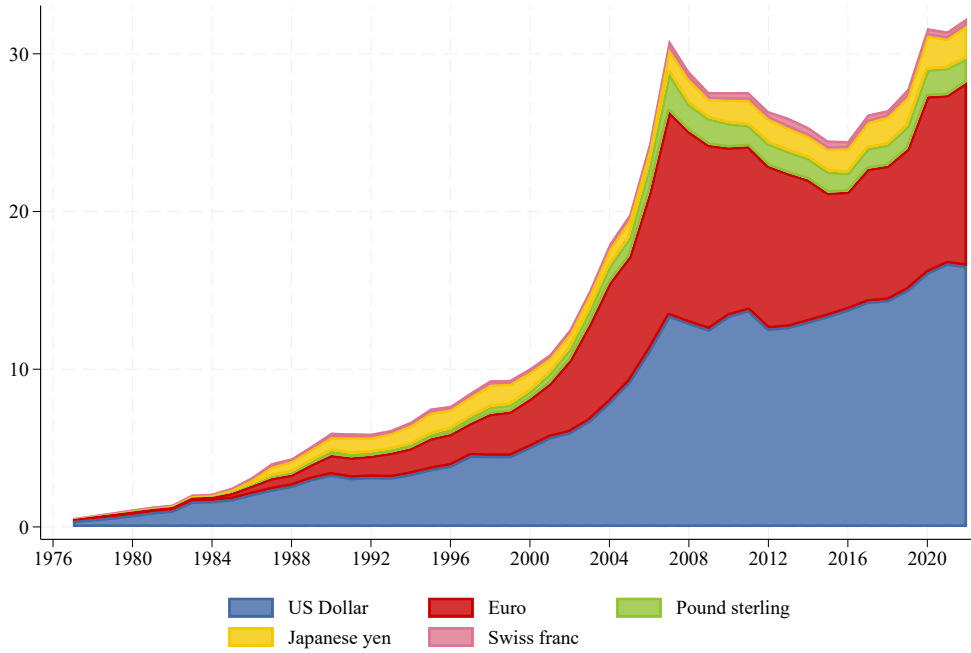
Figure 23

Central Bank Reserves in trillions 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 potential explanation for this trend.

Figure 24*Cross border assets of commercial banks in trillions 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 in 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. To the best of our capabilities, we tried to clean our results from the China effect in a counterfactual exercise in Appendix B. In this exercise, we assume a world where China does not hold any claim on any other country and does not owe anything to any other country, and results hold. However, even if we can compute the results excluding all of the Chinese assets/liabilities and their respective income, we cannot purge the global interest rate decline from the effect that the rise of Chinese demand had on it.

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 purely 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 ¹⁴. 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 current 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 that have failed to prevail, such as gold/silver in the 19th century or sterling/dollar after Bretton Woods, ultimately converging towards a dominant currency.

We mainly propose a redesign of the international financial system to allow for policies that would overthrow such a privilege:

1. **Rewriting the article of agreements of the International Monetary Fund:** to grant the institution taxation powers and the power to issue a global currency

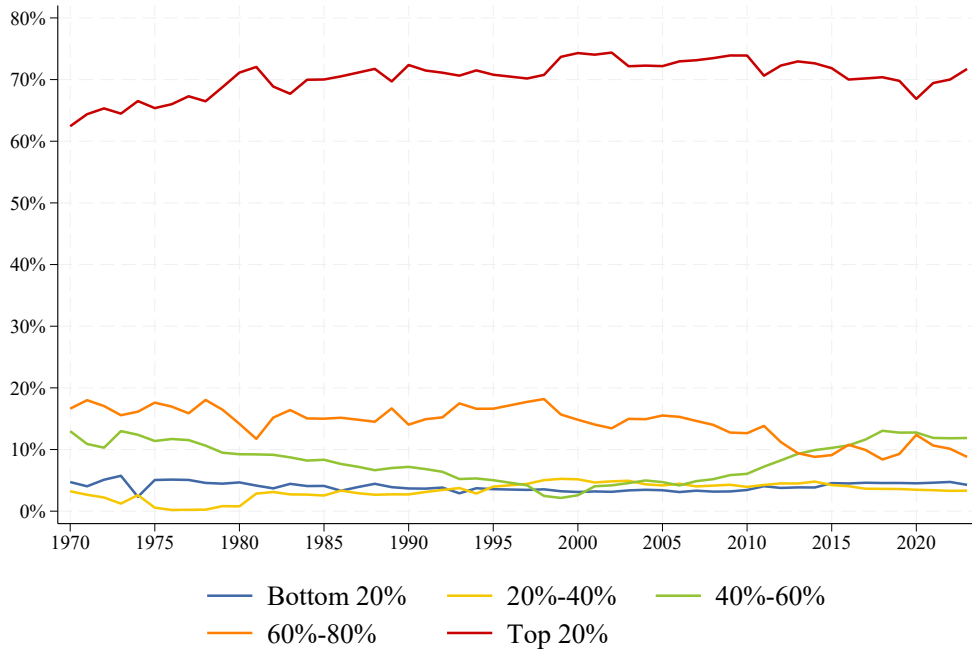
¹⁴Figure A48 compares how much the bottom 80% spend on the privilege with the public investments on human capital. The bottom 40% spend more on the privilege to what their governments invest on health.

2. **Reforming IMF governance:** by giving a bigger vote to developing countries, ensuring that any of the solutions reached are democratic in the global sense.

The present system is far from neutral and is ultimately unsustainable. Decision-making power remains concentrated among the wealthiest countries, which are the ones benefitted by the privilege (Figure 25).

Figure 25

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.

If we are aiming for a democratic 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. 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:

$$CQS = (0.50 \times GDP + 0.30 \times Openness + 0.15 \times Variability + 0.05 \times Reserves)^K$$

where GDP is a blended GDP ¹⁵, $Openness$ 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

¹⁵For 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)

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. Of course, the final variables and their respective weights are the subject of discussion and should be decided in a democratic framework, in the following formula we simply portray what could be relevant to add.

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

Finally, with a more democratic institution in place and with full power to enforce real changes in the international financial system, we propose:

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 used 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).

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. However, option number 2 would allow for another equilibrium and no winners and losers in the long-run.

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.

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ONLINE APPENDIX FOR:

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

Gaston Nievas

Alice Sodano

April 1, 2025

This appendix contains the following sections:

1. Section [A](#) details the various data sources, corrections, and assumptions underlying the analysis.
2. Section [B](#) presents additional figures on foreign wealth and unequal rates of return across countries, world regions, and income quintiles.
3. Section [C](#) compares our yield estimates with those of [Habib \(2010\)](#).
4. Section [D](#) reports robustness checks using raw data and tax-haven corrected series.

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.

In all imputations procedures, tax havens are considered as a different region on their own¹⁶. This is because the amount of foreign wealth with respect to GDP that these small states hold is absurd and would disrupt any estimates from countries that have not put in place similar taxation regimes.

¹⁶**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.

All of the data used in this paper is already available through the latest update in Wid.world. In addition, all of STATA .dofiles with the steps to construct this data from the raw sources are reported in the [WID World GitHub](#).

A.1 National accounts

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.

A.2 Foreign wealth

The data on foreign wealth is taken 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 of gross foreign assets and liabilities accumulation. Only six countries have been completely imputed using a regional average.¹⁷

For former communists countries, we perform the same procedure as for any other country. An alternative would be to assume that such countries do not hold any foreign wealth, but we believe that would be unrealistic given that there is enough evidence of them engaging in foreign trade and other international transactions, which must have affected their Balance of Payments in one way or another ([Central Intelligence Agency; Conte et al., 1980; 2022](#)). Importantly, excluding them from the analysis in the periods they were under a communist regime would not affect the results. Cuba and North Korea foreign wealth figures are constructed as an average of the gross foreign assets/liabilities to GDP ratio for the soviet countries.

After imputing gross foreign assets/liabilities following the regional trends, we allocate the aggregates into the corresponding sub-components whenever disaggregated data is not available. We first allocate them based on the share of sub-component to gross foreign asset/liability of the closest year for which data is available. If there is no observation for a country, we take the average regional share.

We classify foreign wealth and foreign capital income as follows:

¹⁷Bonaire, Cuba, Kosovo, Monaco, North Korea, Puerto Rico.

$$\begin{aligned}
\text{Total } A/L &= \text{Portfolio } A/L + \text{FDI } A/L, \\
\text{Portfolio } A/L &= \text{Portfolio Equity } A/L + \text{Portfolio Debt } A/L, \\
\text{Portfolio Debt } A/L &= \text{Portfolio Debt } A/L + \text{Financial Derivatives } A/L + \text{Other Investment } A/L + \\
&\quad \text{FX Reserves (excl. Gold) } A.
\end{aligned}$$

A.3 Foreign capital income

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.

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 current USD, exchange rates, and inflation rates. Return rates predictions are made separately for each asset class since they yield different returns. 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. The predicted values obtained are net of these fixed effects, which we add back to ensure our imputed returns capture these country and region-year specific characteristics. Specifically:

$$i_{\rho,ct}^B = \beta_0 + \beta_1 \frac{wealth_{\rho,ct}^B}{GDP_{ct}} + \beta_2 e_{ct} + \beta_3 \pi_{ct} + \alpha_c + \gamma_{rt} + \epsilon_{ct} \quad (A1)$$

Where i refers to the return rate, B to asset or liability, ρ to the asset class (FDI, portfolio debt, portfolio equity or FX reserves), 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. So the final imputed yield equals to $i_{\rho,ct}^B + \alpha_c + \gamma_{rt}$. Whenever data is still missing, we impute the value based on the regional average. Since rates of return can be very volatile, we apply different levels of winsorization (at the regional level) to the yields that will be used in the regressions to predict missing values, as follows: i) for FDI we cut in the 5th and 80th percentile ii) for equities we cut in the 5th and 80th percentile, iii) for debt we cut in the 20th and 80th percentile, iv) for reserves we cut in the 20th and 80th percentile.

For former/current communist countries (China pre-1981, Cuba, Former Soviet Union, Former Yugoslavia and North Korea) assets and liabilities are assumed to earn/pay 1% yield. This implies that their privilege is 0.

In general, if we find a 0 value in the raw data for foreign wealth but a non-missing non-zero value in the raw data on foreign capital income then we assume the 0 value is a missing value and impute accordingly. The same procedure is done otherwise. We try our best to get plausible country level

estimates that are consistent with aggregate trends, although we acknowledge they are not perfect. As repeated several times, the whole imputation procedure does not affect our main results, which are robust to using only the raw data sources. This is the case because imputations are based on regional averages/trends, so they do not bias our results.

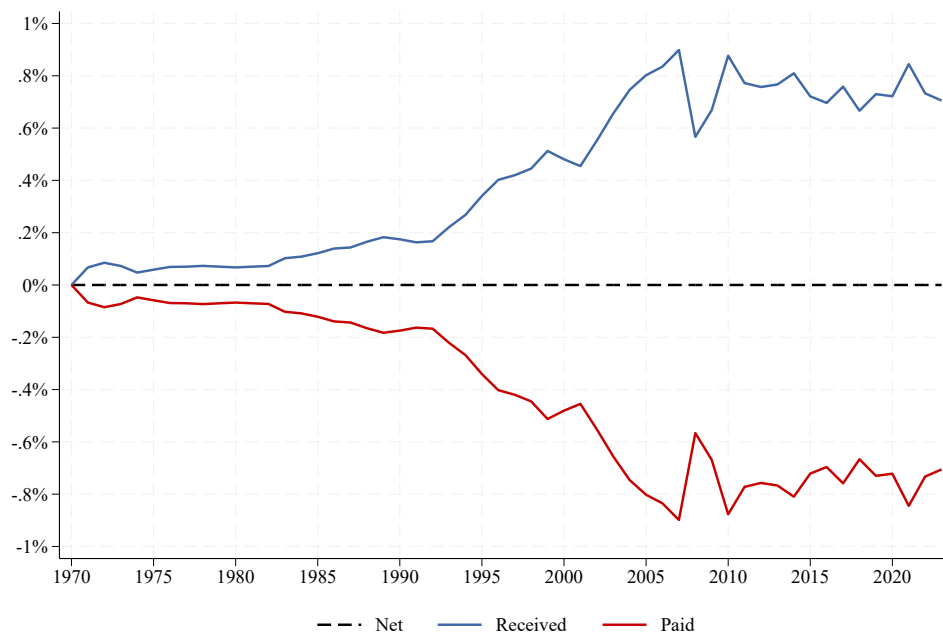
Retained earnings on portfolio investment: The income that a company retains after having paid its suppliers, its employees, its shareholders, and its corporate income tax bill is what we call “undistributed profits” or “retained earnings.” This flow is part of national income.

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 A1

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



A.4 Valuation changes

Valuation changes capture fluctuations in the value of financial assets and liabilities due to price and exchange rate movements. There are two ways to compute them:

- a financial account-based approach, which derives valuation changes as the difference between stock changes and recorded financial flows:

$$KG_t^B = B_t - B_{t-1} - FLOW_t^B$$

with B referring to the asset (liabilities) classes.

- a current account-based approach, which estimates valuation changes as a residual from the cumulation of the current account:

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

where CA_t and KA_t are respectively the Current Account and the Capital Account.

Our preferred approach is the current account-based approach, as current account data are generally more reliable due to the better coverage and recording of trade and income flows. However, since this approach provides valuation changes only for net wealth (as shown in Section 3), we use the financial account-based approach to decompose valuation changes into asset and liability components.

To ensure consistency between the two estimates, we apply a rescaling procedure. Before doing so, we exclude Russia in 1994 as an implausibly large equity position in that year would otherwise distort the results for the full 1970–1999 period. We then compute the discrepancy between the valuation changes obtained from the stock-flow method and those derived as a residual from the current account approach. This discrepancy is then proportionally distributed across asset and liability categories based on their relative shares in total external wealth. Specifically, we calculate the ratio between the two estimates and use it to scale the valuation changes derived from stock-flow differences so that their aggregate sum matches the current account-based estimate.

A.5 Rest of current account and capital account

The rest of the current account and the capital account is completed mainly from the IMF Balance of Payments statistics. We extend trade in goods figures relying on the CEPII database (Conte et al., 2022), which are sourced mainly from IMF and Comtrade.

Steps to square current account:

1. Everything is done at the subcomponent level and expressed as a % GDP.
2. 0 values (although rare) are considered as missing values.

3. For missing observations in years in between the first year of data reported and the last one: the % GDP gets linearly interpolated.
4. For missing observations in years priors to the first year or after the last one: the % GDP stays constant.
5. 3 + 4 above means that countries that reported data at any point in time are already fully covered.
6. For countries with no coverage whatsoever: we allocate the regional mean of the % GDP.

A.6 External public debt and assets

Data for developing countries is accessible and reliable from 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. 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](#)). For the BIS [Avdjiev et al. \(2017\)](#) data, we only keep observations for which their aggregate figures cover at least 80% of the figures reported in [Lane and Milesi-Ferretti \(2018\)](#). 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. For countries that are not in the IDS as debtors, we allocate their external public debt held by privates to corresponding counterparts (as external public assets held by privates) proportionally in the countries that hold their portfolio liabilities, relying on FINFLOWS and keeping shares constant for previous years. This analysis potentially underestimates public assets by not fully accounting for bilateral loans aimed at wealthy nations.

As with foreign wealth, if needed, we extend the coverage of the series relying on the regional trends, or we impute the regional average as a share of GDP. If we have data on Central Bank foreign debt stocks but not on their interest paid, we assume the interest rate is the same as the central governments'. If the figures of external public debt are higher than the figures of external liabilities from [Lane and Milesi-Ferretti \(2018\)](#), then we treat those external public debt as missing.

A.7 Other sources

For the counterfactual results without China in Appendix B, we use bilateral data from FINFLOWS (hosted by the European Commission, combining IMF/OECD data) ([Nardo et al., 2017](#)).

We use the bilateral data to subtract any Chinese asset (liability) from its debtor (creditor) counterpart. For missing countries, we impute the share of Chinese assets/liabilities in total assets/liabilities relying on the regional average. For years with no coverage, we assume such shares to remain constant. Since there is no reliable data on the composition of Chinese FX reserves, we perform two exercises: Scenario A assumes that 100% of their FX reserves are denominated in USD, Scenario B assumes that 70% are denominated in USD, 20% in Euros and 10% in Japanese Yen.

To subtract the income accrued/paid by China, we assume countries pay/receive their average rate of return in their Chinese debt/investments. Since the sum of this exercise is not exactly the same as the figures we have for Chinese foreign capital income received/paid, we then use the estimated figures to calculate the share of each country in China's total capital income paid/receive. With these shares, we distribute the aggregate figures proportionally, ensuring that all of Chinese payments/receipts are worn out.

A.8 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	.	.	.	.	.	.

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 misreports (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
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

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 misreports (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
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

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
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

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
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 misreports (and thus estimated) unless foreign wealth in the EWN also reports zero values for such component.

A.9 Corrections

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

This kind of discrepancy repeats in every item of the Balance of Payments, although for most of them there is no clear consensus on the causes and how to correct it. Adjustments were made to ensure that net foreign capital income, net foreign wealth and rest of items sum up to precisely zero at the global level -as it should naturally be-, which is conditional on the presence of all 216 economies. As mentioned in the introduction, it's important that global aggregates net out because it is the only way to underpin the winners and losers of the global transactions, given that we do not count with directional data. Again, we discard this correction driving our main results since they hold when relying entirely on raw data.

We present results following two correction approaches: i) one simply correcting proportionally based on the amount of global assets/liabilities (or income) that a country holds (or receives/pays) and ii) a second one following the principles outlined in the hidden wealth literature, started by [Zucman \(2013\)](#). As reported in the Appendix, both correction methods hold almost identical results. This is explained by the fact that the hidden wealth literature finds that richer countries are the ones with more offshore wealth and, the proportional method, assigns more offshore wealth to countries that have more wealth in general, which are the rich countries.

A.9.1 Proportional method

We chose as our main results the ones relying on the first method (proportional correction) for three main reasons: 1) the other elements of the current account and capital account present global discrepancies for which there is no research on how to correct them, 2) in a series of more than 50 years, the gap between global credits and global debits varies significantly and can even change sign and 3) we can correct global aggregates at the subcomponent level. We discuss in detail the pros and cons of choosing one method over the other in a separate technical note ([Nievas and Piketty, 2024](#)). The method is straightforward: we opt for increasing credit (debit) proportionally whenever the net global is different than zero. The main takeaway is that the proportional correction allows for a consistent correction of every single element of the Balance of Payments, for which the causes of discrepancy are not completely understood and a methodology to correct them would be the subject of a separate paper.

For instance, for a given country when we correct portfolio assets, we distribute (Global PTF assets - Global PTF liabilities) :

$$\text{PTF Assets} = \text{PTF Assets} - \frac{\text{PTF Assets}}{\text{Global PTF Assets}} \times (\text{Global PTF Assets} - \text{Global PTF Liabilities})$$

if Global PTF Assets < Global PTF Liabilities.

Note that the allocated difference is subtracted because the Global Net is negative. The same process repeats for the other elements. The global zero net of FDI and portfolio ensures an aggregate zero net of foreign capital income and foreign wealth.

A.9.2 Tax haven method

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 partially 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, Johannesen, and Zucman \(2018\)](#). The list of 41 tax havens is taken from [Tørsløv, Wier, and Zucman \(2018\)](#), 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 A2

Global foreign wealth as a share of global GDP

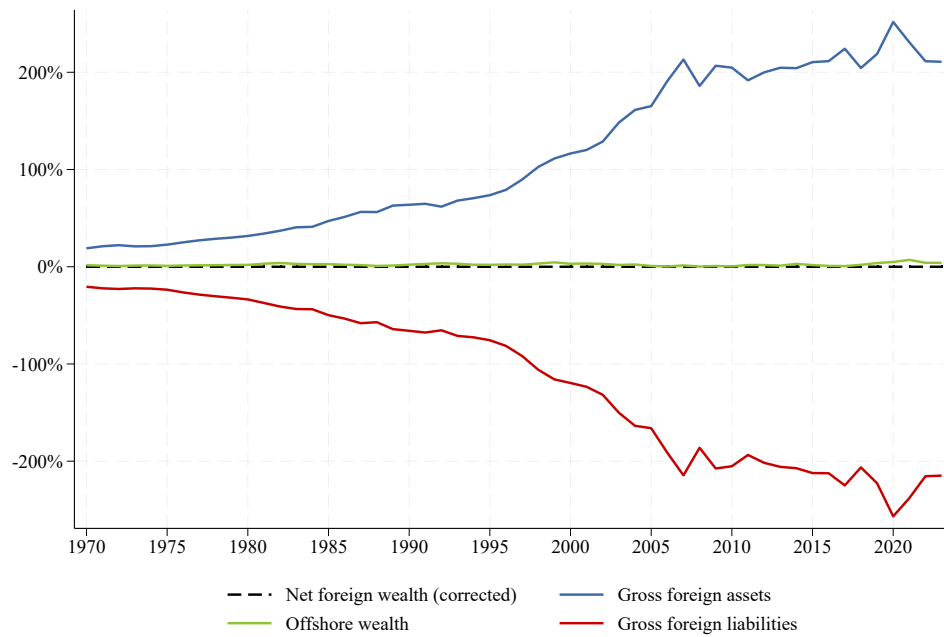
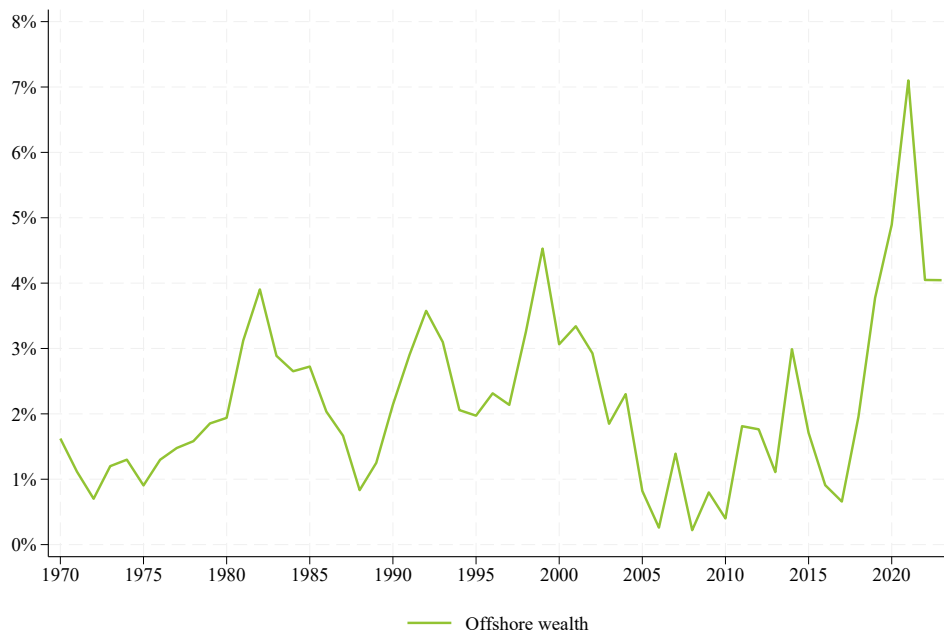


Figure A3

Global offshore wealth as a share of global GDP

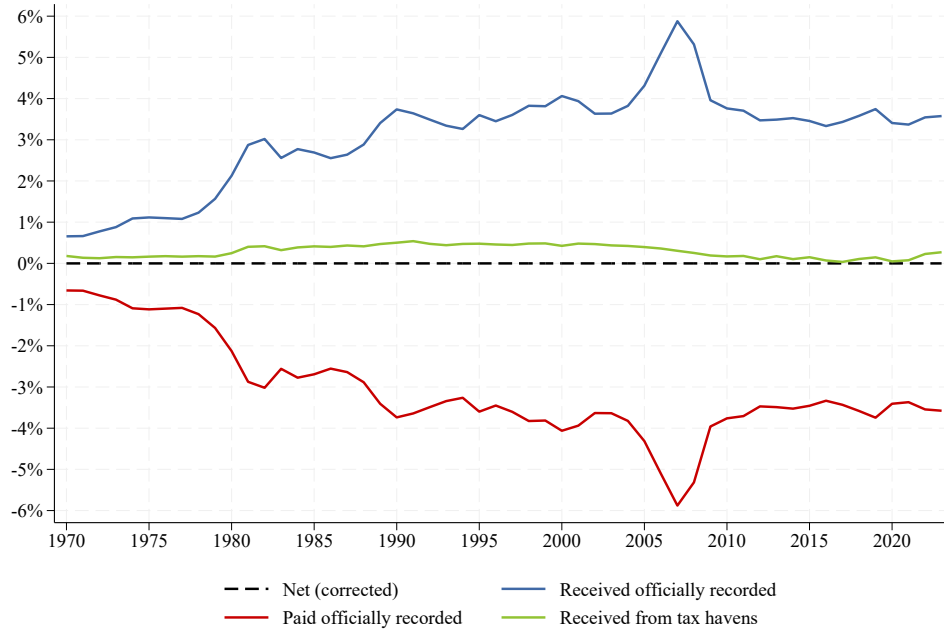


Missing portfolio income: The same methodology as the one used for hidden wealth is applied. Importantly, global net wealth and global net portfolio income figures before correction are not pro-

portional, meaning that rate of return on missing assets is not constant throughout the period.

Figure A4

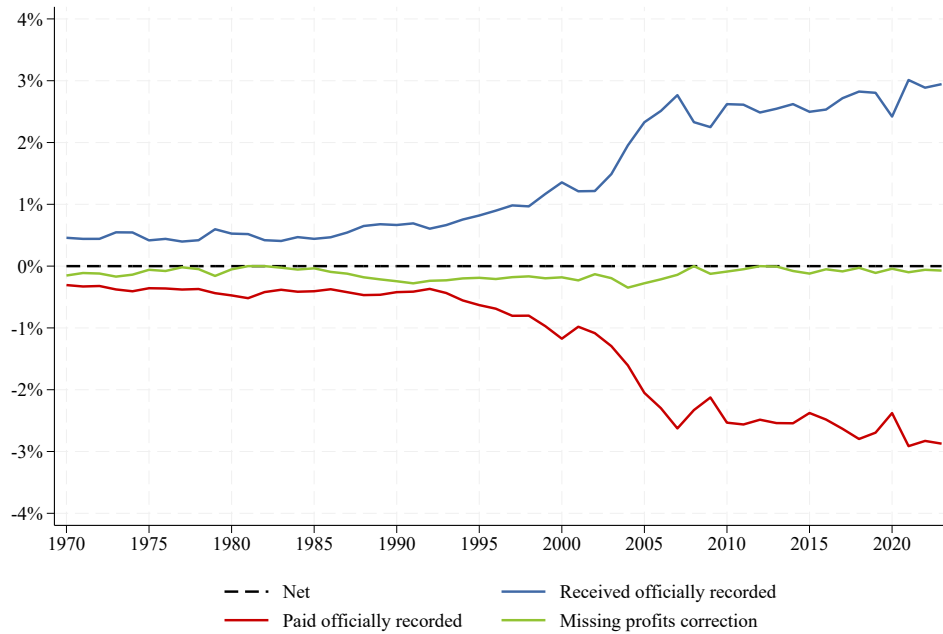
Global portfolio income as a share of global GDP



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 values USD of 2023.

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

The table reports the decomposition of 2000 NFA-GDP ratio for G7 vs BRICS, over the period 1970-2000. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

Table 2

Decomposition 2000-2012. Real values USD of 2023.

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

The table reports the decomposition of 2012 NFA-GDP ratio for G7 vs BRICS, over the period 2000-2012. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

Table 3

Decomposition 2012-2022. Real values USD of 2023.

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

The table reports the decomposition of 2022 NFA-GDP ratio for G7 vs BRICS, over the period 2012-2022. *Privilege* is the excess yield income. *Other NFKI* is net foreign capital income excluding privilege. *Trade goods* and *services* sum to the trade balance. *Rent, taxes, and subsidies* are subsidies minus taxes on production and imports. *Transfers and remittances* correspond to secondary income.

B.1.2 All countries

Table 4

Decomposition 1970-2022. Europe (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Albania	-9%	-51%	-2%	-12%	-11%	-494%	60%	37%	0%	400%	114%	-143%	0	0	443%
Andorra	150%	341%	42%	130%	204%	-1905%	1829%	-71%	12%	41%	0%	57%	0	0	354%
Austria	-5%	19%	-2%	15%	-12%	-96%	94%	6%	2%	-23%	-14%	48%	0	1	312%
Belgium	11%	69%	4%	-5%	42%	-55%	12%	43%	-6%	-48%	-18%	101%	0	1	299%
Bosnia and Herzegovina	-2%	-26%	0%	-31%	-7%	-701%	131%	159%	-1%	518%	91%	-187%	0	0	1146%
Bulgaria	-12%	-21%	-3%	-81%	-28%	-201%	129%	27%	2%	136%	97%	-99%	0	0	399%
Croatia	-3%	-26%	-1%	-65%	-14%	-477%	432%	38%	5%	123%	12%	-78%	0	0	248%
Cyprus	25%	3%	3%	-2%	-62%	-568%	408%	5%	-2%	-3%	-2%	225%	0	0	747%
Czech Republic	2%	-19%	1%	-109%	-18%	-51%	115%	12%	2%	21%	-68%	77%	0	0	247%
Denmark	-17%	66%	-6%	49%	-23%	68%	43%	-7%	2%	-34%	-5%	-20%	0	0	268%
Estonia	-1%	-16%	0%	-58%	-30%	-210%	158%	43%	6%	58%	36%	-10%	0	0	316%
Finland	-28%	1%	-8%	11%	-36%	118%	-63%	4%	3%	-21%	1%	-7%	0	0	330%
France	3%	-25%	1%	49%	-3%	-45%	35%	21%	2%	-61%	-2%	-23%	1	3	290%
Germany	9%	71%	3%	16%	23%	173%	-57%	0%	-3%	-48%	-22%	-14%	2	5	260%
Gibraltar	150%	1761%	18%	-106%	511%	-6608%	192%	4%	9%	56%	9%	7767%	0	0	822%
Greece	-1%	-149%	0%	-18%	-51%	-532%	256%	-2%	28%	119%	52%	-1%	0	0	224%
Guernsey	390%	3466%	93%	-464%	2456%	13%	23%	7%	11%	-14%	1%	1339%	0	0	421%
Hungary	-15%	-35%	-5%	-86%	-77%	-67%	67%	15%	8%	-20%	22%	107%	0	0	314%
Iceland	-17%	25%	-3%	4%	-86%	-79%	64%	8%	-3%	-14%	6%	128%	0	0	579%
Ireland	-7%	-98%	0%	-275%	-29%	373%	-163%	0%	6%	-10%	-50%	50%	0	1	1394%
Isle of Man	280%	-156%	42%	59%	1091%	20%	28%	7%	15%	-18%	1%	-1400%	0	0	671%
Italy	7%	0%	3%	1%	-16%	28%	-2%	6%	0%	-26%	-6%	11%	1	2	232%
Jersey	309%	151%	115%	-412%	1896%	9%	27%	10%	12%	-15%	1%	-1493%	0	0	269%
Kosovo	8%	-18%	4%	-17%	11%	-1078%	329%	144%	-1%	100%	8%	483%	0	0	210%
Latvia	4%	-27%	2%	-37%	-20%	-296%	176%	67%	12%	82%	28%	-41%	0	0	211%
Liechtenstein	102%	1016%	24%	-72%	393%	21%	147%	-110%	-143%	-30%	-13%	799%	0	0	421%
Lithuania	2%	-6%	1%	-41%	-16%	-170%	73%	4%	11%	53%	8%	72%	0	0	257%
Luxembourg	117%	483%	20%	1372%	68%	-111%	776%	-385%	-5%	79%	-42%	-1289%	0	0	595%
Macedonia	-5%	-66%	-2%	-44%	-20%	-494%	49%	23%	-10%	398%	-1%	36%	0	0	316%
Malta	107%	82%	7%	-119%	61%	-338%	333%	3%	-11%	15%	10%	121%	0	0	1517%
Moldova	-6%	-41%	-5%	-48%	-13%	-616%	-38%	222%	-4%	383%	-10%	87%	0	0	124%
Monaco	36%	438%	8%	-812%	266%	15%	115%	6%	10%	-24%	-10%	865%	0	0	475%
Montenegro	-7%	-123%	-3%	-38%	-24%	-781%	562%	119%	1%	122%	-5%	-76%	0	0	255%
Netherlands	22%	117%	7%	5%	46%	188%	-11%	-21%	-6%	-24%	-13%	-55%	0	1	326%
Norway	-8%	206%	-2%	44%	74%	259%	-14%	-19%	3%	-40%	-9%	-89%	0	0	419%
Poland	-23%	-35%	-5%	-60%	-35%	-70%	42%	4%	4%	26%	-64%	122%	0	1	495%
Portugal	-19%	-92%	-6%	0%	-63%	-342%	116%	7%	11%	152%	49%	-17%	0	0	346%
Romania	-2%	-42%	0%	-55%	-12%	-162%	41%	19%	4%	50%	17%	56%	0	0	528%
San Marino	36%	167%	12%	-104%	130%	-346%	388%	-543%	1%	124%	12%	491%	0	0	288%
Serbia	-9%	-86%	-4%	-43%	-35%	-357%	-1%	10%	-1%	333%	-67%	79%	0	0	235%
Slovak Republic	2%	-61%	0%	-42%	-23%	-84%	45%	36%	2%	-2%	16%	-10%	0	0	364%
Slovenia	0%	0%	0%	-19%	-9%	-75%	108%	9%	3%	6%	-42%	20%	0	0	377%
Spain	-9%	-58%	-3%	2%	-53%	-152%	120%	3%	4%	1%	23%	-3%	0	2	342%
Sweden	0%	40%	0%	52%	-22%	123%	-27%	1%	-2%	-36%	-12%	-38%	0	1	299%
Switzerland	86%	108%	37%	8%	141%	98%	49%	-79%	3%	-34%	-10%	-105%	0	1	237%
United Kingdom	10%	-6%	3%	29%	12%	-155%	104%	-2%	-3%	-29%	-7%	42%	1	3	294%

Table 5

Decomposition 1970-2022. China & East Asia(exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
China	2%	14%	0%	-21%	7%	45%	-11%	-1%	0%	5%	7%	-16%	1	16	2834%
Hong Kong	34%	533%	3%	-257%	329%	-237%	-44%	-2%	10%	-13%	14%	729%	0	0	1186%
Japan	7%	77%	2%	36%	43%	50%	-41%	1%	0%	-11%	-10%	8%	1	4	309%
Macao	29%	440%	3%	-354%	227%	-705%	2761%	-22%	22%	-185%	70%	-1377%	0	0	943%
Mongolia	-12%	-243%	-1%	-99%	-25%	-201%	-151%	0%	0%	64%	23%	149%	0	0	1100%
North Korea	-6%	25%	-3%	-101%	3%	-275%	398%	-1%	0%	-9%	32%	-19%	0	0	197%
South Korea	-27%	48%	-1%	-16%	-2%	63%	-20%	0%	0%	-9%	0%	32%	0	2	2731%
Taiwan	3%	229%	0%	-22%	72%	470%	166%	0%	0%	-10%	11%	-456%	0	1	2350%

Table 6

Decomposition 1970-2022. South & South-East Asia (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Afghanistan	-34%	37%	-21%	19%	-16%	-807%	-14%	3%	0%	631%	358%	-116%	0	0	161%
Bangladesh	-10%	-17%	-1%	-9%	-5%	-77%	-22%	0%	0%	97%	8%	-8%	0	0	1191%
Bhutan	22%	-129%	1%	-48%	-11%	-461%	-60%	-61%	0%	229%	116%	167%	0	0	2531%
Brunei	137%	502%	52%	-75%	335%	1553%	-358%	-4%	35%	-75%	6%	-966%	0	0	261%
Cambodia	-4%	-143%	-1%	-69%	-9%	-339%	73%	-9%	9%	187%	37%	-24%	0	0	661%
India	-15%	-30%	-1%	-24%	-10%	-94%	31%	0%	0%	47%	-1%	21%	0	3	1452%
Indonesia	-28%	-19%	-2%	-41%	-24%	89%	-53%	-1%	-12%	7%	-1%	18%	0	1	1708%
Laos	-6%	-199%	0%	-38%	-13%	-120%	-1%	1%	4%	69%	3%	-105%	0	0	1965%
Malaysia	-11%	5%	0%	-120%	-14%	242%	-57%	-7%	13%	-29%	-2%	-20%	0	0	2262%
Maldives	-7%	-174%	0%	-137%	-16%	-678%	665%	2%	0%	-136%	22%	104%	0	0	2978%
Myanmar	-6%	-60%	0%	-65%	-9%	-14%	21%	12%	-6%	47%	71%	-115%	0	0	1880%
Nepal	13%	-6%	1%	4%	-1%	-426%	18%	13%	0%	364%	18%	2%	0	0	930%
Pakistan	-29%	-39%	-2%	-16%	-25%	-126%	-30%	0%	0%	145%	3%	12%	0	0	1196%
Papua New Guinea	-41%	-30%	-9%	-87%	-39%	380%	-234%	-14%	2%	76%	7%	-111%	0	0	449%
Philippines	-24%	-10%	-3%	-48%	-23%	-197%	41%	47%	12%	132%	1%	28%	0	0	804%
Singapore	43%	200%	2%	69%	261%	395%	-12%	-25%	-14%	11%	-2%	-486%	0	0	2616%
Sri Lanka	-13%	-74%	-1%	-18%	-26%	-191%	-1%	-1%	0%	126%	7%	34%	0	0	934%
Thailand	-4%	-5%	0%	-89%	-27%	79%	-23%	12%	-18%	27%	-1%	35%	0	0	1297%
Timor	20%	513%	2%	159%	194%	-110%	-1072%	6%	227%	956%	86%	65%	0	0	1180%
Vietnam	-5%	-47%	0%	-65%	-7%	-7%	-79%	3%	7%	32%	1%	68%	0	0	2576%

Table 7

Decomposition 1970-2022. Russia & Central Asia (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Armenia	-3%	-56%	-1%	-39%	-17%	-273%	-41%	108%	0%	186%	15%	6%	0	0	354%
Azerbaijan	-2%	3%	0%	-89%	-21%	369%	-164%	-1%	-1%	47%	-2%	-135%	0	0	453%
Belarus	-1%	-38%	0%	-54%	-14%	-153%	85%	15%	4%	24%	16%	40%	0	0	344%
Georgia	-5%	-111%	-2%	-38%	-60%	-364%	61%	56%	0%	211%	14%	12%	0	0	205%
Kazakhstan	-1%	-37%	0%	-145%	-17%	199%	-81%	-12%	-1%	1%	-2%	22%	0	0	328%
Kyrgyz Republic	-3%	-78%	-1%	-75%	-12%	-502%	-91%	13%	-4%	470%	17%	107%	0	0	224%
Russia	-1%	29%	0%	-81%	6%	225%	-66%	-7%	0%	-13%	-19%	-16%	1	2	295%
Tajikistan	-13%	-39%	-6%	-16%	-17%	-395%	-80%	268%	-1%	380%	73%	-244%	0	0	228%
Turkmenistan	6%	-10%	1%	-60%	0%	163%	-83%	144%	-3%	162%	13%	-347%	0	0	555%
Ukraine	-4%	-3%	-5%	-134%	-10%	-270%	192%	122%	-3%	258%	7%	-158%	0	0	69%
Uzbekistan	1%	-5%	0%	-21%	0%	-86%	-70%	65%	-1%	74%	1%	34%	0	0	557%

Table 8

Decomposition 1970-2022. North America & Oceania (errate23)

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
Countries	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Australia	-24%	-36%	-5%	-8%	-59%	8%	-22%	-3%	0%	11%	-3%	46%	0	2	471%
Bermuda	-71%	8575%	-32%	2031%	-78%	-1291%	452%	1107%	21%	-61%	1%	6425%	0	0	224%
Canada	-35%	38%	-9%	-3%	-31%	46%	-37%	10%	0%	0%	2%	60%	1	2	382%
Fiji	-9%	-127%	-2%	-102%	-49%	-638%	354%	35%	4%	187%	69%	14%	0	0	364%
French Polynesia	1%	-24%	0%	7%	-11%	-881%	289%	317%	174%	565%	-2%	-481%	0	0	405%
Greenland	-15%	-13%	-4%	-24%	-24%	-93%	114%	-155%	0%	-8%	1%	181%	0	0	373%
Kiribati	189%	445%	147%	-78%	733%	-1316%	-874%	182%	862%	1361%	-455%	-117%	0	0	129%
Marshall Islands	208%	-12452%	41%	-26%	-39%	-3614%	-923%	457%	355%	1801%	78%	-10582%	0	0	504%
Micronesia	43%	108%	14%	-76%	27%	-1809%	-796%	-18%	193%	2180%	47%	346%	0	0	303%
Nauru	37%	286%	58%	60%	62%	4124%	-421%	30%	223%	1117%	-689%	-4278%	0	0	64%
New Caledonia	-7%	-212%	-2%	21%	-58%	-327%	-163%	221%	5%	353%	-8%	-254%	0	0	361%
New Zealand	-53%	-51%	-14%	-18%	-98%	6%	27%	0%	0%	9%	-3%	40%	0	0	386%
Palau	34%	-161%	21%	-325%	15%	-1251%	1105%	-21%	23%	938%	325%	-990%	0	0	161%
Samoa	31%	-32%	13%	-43%	-37%	-1357%	301%	-4%	0%	1119%	257%	-281%	0	0	241%
Solomon Islands	-4%	-5%	-1%	-64%	-23%	-101%	-270%	-5%	17%	245%	73%	123%	0	0	767%
Tonga	2%	-10%	1%	47%	-17%	-1281%	-113%	92%	-7%	1034%	206%	28%	0	0	323%
Tuvalu	99%	467%	24%	60%	293%	-1109%	-1778%	500%	835%	1662%	1017%	-1037%	0	0	409%
United States	6%	-63%	1%	50%	-15%	-110%	22%	-1%	0%	-14%	0%	4%	7	27	410%
Vanuatu	-10%	-49%	-1%	-166%	32%	-732%	407%	22%	0%	331%	198%	-139%	0	0	718%

Table 9

Decomposition 1970-2022. Latin America (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Anguilla	18%	-234%	2%	-37%	-18%	-1309%	656%	-38%	8%	-89%	-189%	779%	0	0	832%
Antigua and Barbuda	-20%	-113%	-4%	-149%	-33%	-1204%	1030%	-12%	7%	-59%	-181%	492%	0	0	549%
Argentina	-17%	19%	-7%	-86%	-6%	83%	-33%	0%	0%	8%	1%	59%	0	1	263%
Aruba	-18%	-96%	-1%	23%	-86%	-751%	838%	-3%	14%	-94%	25%	-60%	0	0	1278%
Bahamas	71%	-231%	26%	-157%	6%	-702%	556%	5%	-1%	24%	224%	-213%	0	0	271%
Barbados	-66%	257%	-37%	90%	-29%	-1016%	857%	45%	0%	18%	3%	328%	0	0	177%
Belize	-2%	-119%	0%	-128%	-38%	-415%	237%	-7%	-6%	120%	10%	109%	0	0	968%
Bolivia	-77%	-26%	-16%	-82%	-27%	41%	-84%	2%	0%	111%	23%	7%	0	0	477%
Bonaire, Saint-Eustache et Saba	36%	438%	2%	-1197%	419%	-327%	702%	13%	13%	28%	35%	751%	0	0	1735%
Brazil	-27%	-40%	-5%	-69%	-33%	51%	-52%	0%	0%	6%	0%	61%	0	2	548%
British Virgin Islands	63%	33072%	3%	-2427%	5040%	-4994%	482%	-995%	-128%	3%	25%	36064%	0	0	2065%
Cayman Islands	-175%	-13927%	-11%	284%	-134%	-824%	1100%	-23%	10%	-326%	-2%	-14002%	0	0	1567%
Chile	-57%	-15%	-9%	-87%	-21%	80%	-51%	-1%	0%	61%	3%	11%	0	0	668%
Colombia	-24%	-50%	-3%	-38%	-28%	-18%	-35%	3%	0%	49%	1%	19%	0	0	701%
Costa Rica	-30%	-55%	-4%	-88%	-23%	-177%	142%	-1%	0%	29%	2%	65%	0	0	808%
Cuba	-2%	-35%	-1%	-42%	-10%	-149%	715%	-4%	0%	18%	36%	-599%	0	0	361%
Curaçao	-157%	-2042%	-12%	-497%	327%	-1964%	736%	261%	65%	-87%	60%	-931%	0	0	1296%
Dominica	-16%	-59%	-4%	-96%	-29%	-1031%	309%	-33%	0%	249%	386%	190%	0	0	383%
Dominican Republic	-19%	-55%	-2%	-75%	-24%	-264%	140%	5%	0%	132%	-1%	33%	0	0	1284%
Ecuador	-17%	-24%	-3%	-88%	-19%	40%	-57%	-4%	0%	86%	12%	8%	0	0	580%
El Salvador	-10%	-48%	-4%	-78%	-38%	-533%	27%	4%	0%	498%	11%	64%	0	0	293%
Grenada	-28%	-151%	-4%	-138%	-42%	-1016%	550%	-66%	8%	154%	127%	278%	0	0	638%
Guatemala	-13%	-7%	-2%	-41%	-11%	-246%	-16%	3%	0%	242%	5%	60%	0	0	598%
Guyana	-46%	-91%	-4%	-57%	-18%	5%	-122%	-3%	0%	65%	53%	-10%	0	0	1114%
Haiti	-9%	-7%	-3%	1%	-6%	-428%	-95%	-1%	0%	525%	40%	-40%	0	0	349%
Honduras	-22%	-55%	-3%	-99%	-37%	-435%	61%	-5%	0%	379%	39%	46%	0	0	655%
Jamaica	-119%	-137%	-77%	-134%	-127%	-740%	187%	35%	0%	458%	-23%	285%	0	0	154%
Mexico	-16%	-41%	-4%	-70%	-41%	-26%	-14%	4%	0%	57%	13%	40%	0	2	441%
Montserrat	6%	115%	5%	-114%	41%	-2623%	-2%	-41%	8%	2067%	540%	233%	0	0	125%
Nicaragua	-27%	-108%	-11%	-79%	-76%	-425%	-8%	0%	0%	389%	203%	-101%	0	0	256%
Panama	-82%	-92%	-7%	-13%	-52%	-217%	195%	-19%	8%	8%	6%	-3%	0	0	1186%
Paraguay	-26%	-36%	-3%	-90%	-29%	72%	-20%	8%	0%	31%	5%	-10%	0	0	879%
Peru	-53%	-43%	-11%	-108%	-31%	51%	-44%	1%	0%	49%	1%	48%	0	0	486%
Puerto Rico	36%	438%	12%	-1372%	113%	-1426%	897%	56%	14%	31%	46%	2067%	0	0	291%
Saint Kitts and Nevis	18%	-80%	3%	-159%	-45%	-969%	594%	12%	14%	44%	107%	318%	0	0	705%
Saint Lucia	-1%	-52%	0%	-145%	-61%	-892%	628%	-1%	-1%	68%	40%	311%	0	0	538%
Saint Vincent and the Grenadines	17%	-170%	4%	-96%	-24%	-856%	301%	-20%	6%	222%	85%	210%	0	0	467%
Sint Maarten (Dutch part)	-163%	-65%	-9%	351%	284%	-1584%	2242%	-91%	-58%	-149%	52%	-1103%	0	0	1768%
Suriname	-4%	-90%	-2%	-170%	-2%	231%	-306%	-14%	0%	55%	10%	108%	0	0	248%
Trinidad and Tobago	-60%	9%	-19%	-167%	-37%	517%	-86%	-11%	0%	-19%	0%	-168%	0	0	315%
Turks and Caicos Islands	5%	430%	0%	-30%	36%	-1017%	1944%	5%	9%	-235%	36%	-319%	0	0	3528%
Uruguay	-17%	-19%	-5%	-91%	-17%	15%	29%	0%	0%	12%	-1%	39%	0	0	360%
Venezuela	29%	168%	35%	-336%	9%	1038%	-436%	-2%	0%	-31%	-56%	-51%	0	0	83%

Table 10

Decomposition 1970-2022. MENA (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Algeria	-23%	17%	-4%	-108%	2%	182%	-108%	11%	0%	42%	0%	0%	0	0	515%
Bahrain	10%	39%	1%	-57%	76%	156%	121%	-118%	22%	-110%	67%	-120%	0	0	761%
Egypt	-15%	-57%	-1%	-21%	-14%	-176%	35%	5%	0%	139%	40%	-65%	0	0	1662%
Iran	-4%	60%	-1%	-13%	6%	170%	-57%	-3%	0%	143%	27%	-211%	0	0	363%
Iraq	-25%	14%	-3%	-6%	-41%	463%	-210%	6%	0%	81%	43%	-318%	0	0	732%
Israel	-11%	31%	-1%	-52%	-7%	-111%	59%	-28%	0%	136%	1%	36%	0	0	968%
Jordan	39%	-117%	5%	-30%	-44%	-703%	41%	23%	0%	563%	1%	27%	0	0	849%
Kuwait	30%	570%	15%	27%	513%	1040%	-324%	-2%	-1%	-372%	2%	-328%	0	0	205%
Lebanon	20%	-341%	14%	40%	10%	-1696%	283%	4%	8%	-42%	40%	998%	0	0	145%
Libya	-3%	428%	-2%	-191%	180%	1158%	-407%	-30%	2%	-173%	6%	-115%	0	0	149%
Morocco	-15%	-61%	-2%	-32%	-22%	-304%	106%	1%	0%	168%	-1%	25%	0	0	863%
Oman	30%	-39%	1%	-79%	-5%	518%	-189%	-53%	0%	-326%	2%	91%	0	0	2103%
Palestine	16%	18%	1%	0%	16%	-991%	-117%	263%	0%	482%	110%	253%	0	0	1535%
Qatar	66%	185%	4%	-129%	43%	607%	-148%	18%	-1%	-193%	-23%	7%	0	0	1896%
Saudi Arabia	49%	115%	8%	-30%	100%	639%	-322%	-12%	0%	-140%	1%	-130%	0	1	614%
Syria	-11%	4%	-3%	-164%	-24%	-362%	104%	72%	-1%	413%	7%	-38%	0	0	379%
Tunisia	-58%	-160%	-7%	-59%	-54%	-328%	143%	15%	0%	120%	8%	2%	0	0	882%
Turkey	-8%	-40%	-1%	-13%	-18%	-112%	61%	4%	0%	-31%	0%	70%	0	1	1027%
United Arab Emirates	50%	223%	3%	5%	106%	137%	-36%	-73%	-1%	34%	3%	46%	0	0	1477%
Yemen	-25%	-31%	-6%	-241%	-38%	-579%	-275%	-3%	-1%	701%	31%	380%	0	0	451%

Table 11

Decomposition 1970-2022. Sub-Saharan Africa (exrate23)

Countries	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(1970)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2022)	GDP(2022)/GDP(1970)
Angola	-37%	-20%	-9%	-192%	-30%	650%	-398%	-11%	1%	9%	2%	-42%	0	0	409%
Benin	-4%	-44%	0%	0%	-13%	-100%	-45%	1%	-1%	63%	47%	5%	0	0	1268%
Botswana	-35%	27%	-1%	-173%	44%	79%	-61%	2%	0%	278%	15%	-155%	0	0	4059%
Burkina Faso	1%	-40%	0%	-27%	-6%	-82%	-107%	0%	-2%	93%	61%	31%	0	0	1141%
Burundi	-2%	-84%	-1%	-9%	-15%	-338%	-206%	-15%	0%	459%	130%	-88%	0	0	338%
Cameroon	-15%	-26%	-2%	-57%	-12%	23%	-67%	-2%	-1%	23%	11%	56%	0	0	674%
Cape Verde	17%	-146%	2%	-29%	-28%	-774%	165%	3%	0%	537%	28%	-48%	0	0	834%
Central African Republic	-30%	-76%	-21%	-34%	-21%	-109%	-362%	15%	0%	473%	31%	-49%	0	0	142%
Chad	-8%	-99%	-1%	-2%	-10%	120%	-226%	-1%	2%	447%	5%	-433%	0	0	747%
Comoros	-4%	-4%	-1%	-3%	-8%	-318%	-107%	-3%	7%	341%	66%	21%	0	0	467%
Congo	-25%	-149%	-5%	-310%	-78%	937%	-749%	-9%	-1%	8%	57%	-1%	0	0	480%
Cote d'Ivoire	-10%	-45%	-1%	-68%	-30%	192%	-125%	7%	0%	-39%	26%	-7%	0	0	750%
Democratic Republic of Congo	-1%	-47%	0%	-65%	-15%	101%	-195%	-16%	1%	202%	-33%	-27%	0	0	202%
Djibouti	19%	-78%	3%	-41%	6%	-492%	252%	8%	17%	357%	5%	-193%	0	0	646%
Equatorial Guinea	-20%	-124%	-1%	-70%	-16%	1148%	-831%	-4%	2%	-20%	652%	-985%	0	0	3542%
Eritrea	22%	-50%	8%	-12%	2%	-670%	79%	1%	20%	1546%	2%	-1027%	0	0	256%
Ethiopia	-3%	-54%	0%	-3%	-4%	-167%	-22%	0%	1%	151%	2%	-12%	0	0	981%
Gabon	-73%	-93%	-16%	-250%	-71%	924%	-414%	-15%	6%	-76%	36%	-216%	0	0	459%
Gambia	6%	-83%	1%	-25%	-9%	-302%	47%	-7%	1%	271%	37%	-96%	0	0	518%
Ghana	-9%	-33%	-1%	-36%	-18%	-57%	-68%	1%	0%	87%	13%	46%	0	0	682%
Guinea	-15%	35%	-2%	-19%	-17%	89%	-123%	-1%	-3%	36%	32%	44%	0	0	724%
Guinea-Bissau	-30%	-41%	-8%	-21%	-32%	-129%	-150%	12%	12%	180%	226%	-132%	0	0	363%
Kenya	-9%	-61%	-1%	-32%	-7%	-247%	50%	-1%	2%	119%	10%	45%	0	0	826%
Lesotho	3%	-31%	0%	-76%	-35%	-1830%	-856%	1836%	22%	1243%	233%	-570%	0	0	682%
Liberia	-43%	-47%	-22%	-72%	-90%	-377%	-588%	-28%	-8%	1434%	652%	-949%	0	0	191%
Madagascar	-23%	-44%	-9%	-70%	-23%	-168%	-86%	-2%	7%	151%	79%	78%	0	0	243%
Malawi	-22%	-63%	-2%	-51%	-9%	-207%	-67%	1%	4%	126%	142%	0%	0	0	1014%
Mali	-49%	-72%	-6%	-50%	-24%	-74%	-211%	2%	0%	215%	77%	-3%	0	0	860%
Mauritania	-79%	-118%	-18%	-11%	-27%	-19%	-206%	-6%	20%	180%	22%	-51%	0	0	431%
Mauritius	12%	415%	1%	695%	236%	-356%	97%	-2%	10%	-116%	1%	-152%	0	0	1047%
Mozambique	-5%	-371%	0%	-36%	-42%	-247%	-211%	6%	9%	150%	51%	-51%	0	0	994%
Namibia	-24%	-2%	-5%	19%	2%	-250%	-65%	-6%	-2%	498%	31%	-223%	0	0	457%
Niger	-1%	-96%	0%	-2%	-21%	-120%	-132%	5%	-2%	86%	76%	16%	0	0	398%
Nigeria	-22%	-17%	-4%	-70%	-8%	120%	-89%	0%	2%	92%	63%	-124%	0	0	617%
Rwanda	4%	-69%	0%	-25%	-4%	-194%	-34%	-8%	3%	191%	59%	-58%	0	0	1219%
Sao Tome and Principe	-40%	-126%	-9%	17%	-28%	-604%	-104%	-1%	-3%	231%	470%	-94%	0	0	450%
Senegal	-30%	-84%	-6%	-26%	-33%	-231%	-49%	11%	0%	152%	49%	48%	0	0	525%
Seychelles	-2%	-31%	0%	-92%	0%	-752%	535%	-6%	-4%	27%	55%	206%	0	0	1025%
Sierra Leone	-2%	-90%	-1%	-76%	-11%	-276%	-157%	0%	0%	285%	126%	20%	0	0	266%
Somalia	-12%	-70%	-1%	-23%	-29%	-456%	6%	3%	14%	112%	32%	272%	0	0	864%
South Africa	-44%	21%	-13%	-59%	-26%	66%	-22%	-16%	0%	-26%	-4%	119%	0	0	342%
South Sudan	0%	-59%	0%	-95%	-5%	35%	-302%	5%	1%	1225%	50%	-972%	0	0	1176%
Sudan	-99%	-344%	-10%	-71%	-15%	-150%	-57%	2%	0%	106%	-44%	-105%	0	0	1026%
Swaziland	-20%	9%	-2%	-130%	14%	-29%	-168%	70%	-9%	430%	-4%	-162%	0	0	1065%
Tanzania	-23%	-55%	-2%	-19%	-13%	-138%	14%	-1%	4%	66%	51%	-17%	0	0	1064%
Togo	-17%	-2%	-3%	-3%	-29%	-199%	-42%	12%	2%	147%	74%	40%	0	0	518%
Uganda	-4%	-53%	0%	-25%	-6%	-111%	-53%	-9%	4%	127%	75%	-55%	0	0	976%
Zambia	-144%	-94%	-30%	-110%	-37%	147%	-101%	-4%	4%	50%	73%	-86%	0	0	478%
Zimbabwe	-22%	-66%	-5%	-46%	-11%	-60%	-125%	-2%	5%	258%	59%	-139%	0	0	442%

Table 12

Decomposition 1970-2000. Real values USD of 2023. Europe

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/GDP(1970)
Albania	-9%	-12%	-5%	6%	-4%	-222%	-26%	13%	0%	581%	277%	-633%	0	0	187%
Andorra	150%	512%	60%	107%	159%	-1400%	1146%	-50%	3%	10%	0%	475%	0	0	250%
Austria	-5%	-17%	-2%	2%	-10%	-107%	75%	8%	1%	-15%	-7%	38%	0	0	230%
Belgium	11%	68%	5%	11%	19%	-61%	28%	20%	-2%	-42%	-14%	103%	0	0	212%
Bosnia and Herzegovina	-2%	22%	0%	-1%	-2%	-338%	52%	178%	0%	473%	115%	-456%	0	0	604%
Bulgaria	-12%	-33%	-6%	-21%	-27%	-61%	99%	1%	0%	113%	181%	-313%	0	0	196%
Croatia	-3%	-27%	-2%	-5%	-5%	-214%	295%	3%	0%	95%	0%	-194%	0	0	154%
Cyprus	25%	-7%	6%	4%	-22%	-364%	284%	11%	-2%	41%	-6%	40%	0	0	416%
Czech Republic	2%	-7%	2%	-10%	1%	-106%	145%	12%	0%	30%	-122%	42%	0	0	144%
Denmark	-17%	-10%	-9%	8%	-49%	6%	40%	1%	2%	-7%	0%	-2%	0	0	198%
Estonia	-1%	-50%	-1%	-10%	-7%	-116%	90%	49%	1%	78%	12%	-148%	0	0	154%
Finland	-28%	-141%	-11%	-19%	-35%	67%	-15%	2%	1%	-8%	-1%	-122%	0	0	249%
France	3%	4%	1%	9%	1%	-6%	32%	5%	1%	-18%	-2%	-19%	1	2	225%
Germany	9%	4%	4%	-5%	15%	71%	-34%	-1%	-1%	-35%	-6%	-4%	2	4	203%
Gibraltar	150%	939%	67%	-78%	431%	-2889%	170%	9%	3%	57%	-1%	3171%	0	0	224%
Greece	-1%	-36%	0%	-10%	-9%	-224%	94%	1%	5%	89%	32%	-14%	0	0	213%
Guernsey	390%	2450%	180%	235%	1115%	-7%	10%	9%	3%	-3%	-1%	908%	0	0	217%
Hungary	-15%	-70%	-8%	-38%	-41%	-52%	41%	-11%	1%	-34%	0%	73%	0	0	182%
Iceland	-17%	-56%	-5%	-17%	-42%	-22%	17%	2%	-1%	-1%	1%	11%	0	0	318%
Ireland	-7%	12%	-2%	-129%	-18%	86%	-103%	4%	9%	-3%	1%	166%	0	0	446%
Isle of Man	280%	2568%	69%	91%	743%	-2%	7%	7%	2%	-2%	0%	1653%	0	0	409%
Italy	7%	-6%	3%	-8%	-6%	8%	13%	3%	0%	-4%	-1%	-15%	1	2	218%
Jersey	309%	1534%	137%	-64%	694%	-7%	10%	9%	3%	-3%	-1%	755%	0	0	226%
Kosovo	8%	53%	10%	2%	12%	-981%	432%	205%	0%	138%	-3%	237%	0	0	86%
Latvia	4%	-27%	3%	0%	0%	-101%	127%	59%	2%	70%	2%	-190%	0	0	105%
Liechtenstein	102%	848%	32%	-22%	213%	-23%	86%	-25%	-18%	-15%	-5%	626%	0	0	315%
Lithuania	2%	-36%	2%	-1%	-5%	-87%	-1%	-2%	2%	64%	-53%	45%	0	0	110%
Luxembourg	117%	410%	35%	977%	-87%	-120%	452%	-182%	-5%	-28%	-21%	-611%	0	0	335%
Macedonia	-5%	-21%	-3%	-2%	-7%	-176%	-5%	9%	-4%	109%	-4%	62%	0	0	185%
Malta	107%	15%	17%	-12%	65%	-319%	179%	10%	-4%	59%	-11%	31%	0	0	630%
Moldova	-6%	-117%	-11%	-9%	-14%	-147%	-139%	139%	-5%	235%	-2%	-164%	0	0	55%
Monaco	36%	593%	16%	-269%	164%	-32%	113%	10%	3%	-20%	-7%	616%	0	0	225%
Montenegro	-7%	-32%	-5%	-1%	-7%	-170%	515%	72%	0%	61%	-7%	-491%	0	0	141%
Netherlands	22%	-9%	9%	-10%	32%	67%	4%	-3%	-1%	-16%	-4%	-86%	0	1	235%
Norway	-8%	31%	-3%	-15%	-17%	56%	22%	-6%	1%	-20%	-10%	22%	0	0	294%
Poland	-23%	-32%	-10%	-17%	-32%	-55%	17%	-2%	0%	35%	-174%	206%	0	0	221%
Portugal	-19%	-44%	-7%	-5%	-14%	-188%	27%	5%	2%	118%	34%	-16%	0	0	291%
Romania	-2%	-26%	-1%	-21%	-1%	-27%	-3%	1%	0%	20%	2%	6%	0	0	233%
San Marino	36%	48%	11%	-33%	31%	-78%	143%	-236%	0%	49%	0%	161%	0	0	316%
Serbia	-9%	-72%	-8%	-2%	-17%	-203%	-15%	7%	0%	356%	-113%	-78%	0	0	113%
Slovak Republic	2%	-17%	1%	-5%	0%	-79%	64%	23%	0%	15%	13%	-49%	0	0	170%
Slovenia	0%	-12%	0%	2%	0%	-94%	87%	4%	0%	10%	0%	-19%	0	0	227%
Spain	-9%	-31%	-4%	-15%	-12%	-88%	65%	0%	2%	12%	8%	1%	0	1	251%
Sweden	0%	-29%	0%	-7%	-29%	78%	-25%	-1%	-1%	-20%	-6%	-19%	0	0	186%
Switzerland	86%	116%	54%	6%	105%	-36%	78%	-30%	2%	-27%	-3%	-34%	0	1	159%
United Kingdom	10%	0%	5%	20%	19%	-42%	34%	-2%	-2%	-12%	-1%	-19%	1	2	210%

Table 13

Decomposition 2000-2012. Real values USD of 2023. Europe

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/ GDP(2000)
Albania	-12%	-43%	-7%	4%	-8%	-383%	-2%	24%	0%	451%	153%	-275%	0	0	179%
Andorra	512%	123%	412%	132%	186%	-1731%	1571%	-65%	6%	30%	0%	-417%	0	0	124%
Austria	-17%	-4%	-14%	9%	-15%	-103%	92%	11%	2%	-20%	-11%	44%	0	0	121%
Belgium	68%	44%	56%	3%	34%	-55%	28%	34%	-4%	-44%	-20%	13%	0	1	121%
Bosnia and Herzegovina	22%	-60%	15%	-8%	-6%	-659%	96%	180%	0%	541%	109%	-329%	0	0	142%
Bulgaria	-33%	-83%	-21%	-51%	-28%	-192%	97%	25%	-1%	121%	114%	-147%	0	0	161%
Croatia	-27%	-94%	-22%	-38%	-19%	-403%	379%	16%	0%	122%	0%	-130%	0	0	126%
Cyprus	-7%	-128%	-5%	13%	-37%	-528%	380%	7%	-2%	29%	-4%	19%	0	0	135%
Czech Republic	-7%	-46%	-5%	-63%	-14%	-93%	127%	8%	1%	26%	-86%	51%	0	0	139%
Denmark	-10%	38%	-9%	30%	-46%	43%	45%	-3%	2%	-27%	-4%	7%	0	0	110%
Estonia	-50%	-52%	-33%	-47%	-41%	-212%	153%	44%	3%	69%	27%	-16%	0	0	155%
Finland	-141%	14%	-117%	-6%	-41%	129%	-48%	4%	2%	-13%	0%	105%	0	0	120%
France	4%	-15%	4%	29%	0%	-22%	34%	12%	2%	-47%	-3%	-24%	2	3	116%
Germany	4%	20%	3%	2%	17%	131%	-52%	-1%	-2%	-42%	-13%	-25%	4	4	114%
Gibraltar	939%	-52%	442%	-134%	186%	-5946%	155%	6%	4%	53%	3%	5178%	0	0	212%
Greece	-36%	-122%	-36%	-25%	-36%	-432%	187%	1%	17%	120%	46%	35%	0	0	99%
Guernsey	2450%	4099%	1477%	-207%	1758%	-2%	15%	8%	5%	-7%	0%	1053%	0	0	166%
Hungary	-70%	-91%	-56%	-62%	-87%	-67%	51%	-4%	5%	-23%	7%	146%	0	0	124%
Iceland	-56%	-431%	-42%	-17%	-108%	-61%	15%	6%	-3%	-4%	4%	-222%	0	0	133%
Ireland	12%	-137%	9%	-278%	-24%	309%	-180%	1%	12%	-5%	-5%	224%	0	0	134%
Isle of Man	2568%	711%	1385%	7%	892%	0%	12%	6%	4%	-7%	0%	-1588%	0	0	186%
Italy	-6%	-29%	-6%	-3%	-13%	7%	5%	4%	1%	-17%	-4%	-3%	2	2	101%
Jersey	1534%	2049%	1638%	-633%	1787%	-7%	22%	13%	7%	-10%	0%	-768%	0	0	94%
Kosovo	53%	3%	33%	-9%	16%	-1129%	355%	174%	0%	117%	2%	444%	0	0	161%
Latvia	-27%	-70%	-17%	-16%	-17%	-260%	146%	61%	5%	84%	17%	-73%	0	0	159%
Liechtenstein	848%	590%	754%	-56%	354%	-9%	134%	-103%	-122%	-23%	-12%	-327%	0	0	112%
Lithuania	-36%	-57%	-21%	-20%	-17%	-162%	33%	6%	6%	56%	-11%	73%	0	0	169%
Luxembourg	410%	200%	299%	1270%	-2%	-161%	676%	-309%	-4%	42%	-40%	-1572%	0	0	137%
Macedonia	-21%	-60%	-15%	-18%	-14%	-378%	23%	19%	-7%	272%	-3%	60%	0	0	137%
Malta	15%	45%	11%	-59%	69%	-410%	251%	9%	-10%	76%	3%	106%	0	0	133%
Moldova	-117%	-30%	-67%	-28%	-14%	-431%	-79%	194%	-4%	335%	-5%	70%	0	0	174%
Monaco	593%	1130%	461%	-744%	311%	-14%	141%	11%	6%	-25%	-12%	995%	0	0	129%
Montenegro	-32%	-173%	-23%	-21%	-17%	-530%	527%	94%	1%	84%	-6%	-281%	0	0	139%
Netherlands	-9%	37%	-8%	11%	26%	143%	-10%	-11%	-4%	-25%	-24%	-60%	1	1	115%
Norway	31%	99%	25%	-6%	18%	205%	8%	-12%	2%	-29%	-10%	-102%	0	0	121%
Poland	-32%	-68%	-21%	-39%	-34%	-77%	19%	8%	2%	32%	-104%	146%	0	1	155%
Portugal	-44%	-130%	-44%	-2%	-47%	-321%	67%	6%	8%	151%	49%	3%	0	0	101%
Romania	-26%	-71%	-16%	-36%	-9%	-131%	14%	6%	0%	56%	1%	44%	0	0	161%
San Marino	48%	230%	54%	-86%	102%	-243%	287%	-443%	1%	100%	5%	454%	0	0	90%
Serbia	-72%	-90%	-45%	-14%	-27%	-322%	-19%	8%	-1%	325%	-85%	89%	0	0	160%
Slovak Republic	-17%	-68%	-10%	-42%	-13%	-85%	54%	37%	1%	9%	14%	-35%	0	0	170%
Slovenia	-12%	-44%	-9%	-6%	-6%	-111%	94%	4%	1%	15%	-24%	-2%	0	0	128%
Spain	-31%	-93%	-27%	-11%	-40%	-148%	95%	1%	3%	5%	17%	12%	1	1	119%
Sweden	-29%	-16%	-23%	23%	-29%	121%	-25%	0%	-2%	-29%	-12%	-41%	0	0	128%
Switzerland	116%	106%	93%	12%	134%	13%	82%	-52%	2%	-30%	-8%	-139%	1	1	124%
United Kingdom	0%	-20%	0%	32%	15%	-102%	67%	-2%	-2%	-21%	-4%	-4%	2	3	119%

Table 14

Decomposition 2012-2022. Real values USD of 2023. Europe

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/ GDP(2012)
Albania	-43%	-51%	-33%	-16%	-6%	-223%	64%	19%	0%	66%	-2%	79%	0	0	132%
Andorra	123%	341%	108%	16%	44%	-418%	496%	-15%	7%	16%	0%	87%	0	0	114%
Austria	-4%	19%	-4%	7%	2%	-7%	15%	-3%	1%	-7%	-5%	20%	0	1	112%
Belgium	44%	69%	38%	-8%	14%	-11%	-12%	16%	-3%	-11%	-1%	47%	1	1	116%
Bosnia and Herzegovina	-60%	-26%	-45%	-26%	-3%	-230%	63%	27%	-1%	124%	10%	54%	0	0	133%
Bulgaria	-83%	-21%	-66%	-42%	-7%	-57%	56%	8%	2%	47%	8%	30%	0	0	126%
Croatia	-94%	-26%	-73%	-39%	1%	-175%	146%	28%	5%	30%	11%	40%	0	0	128%
Cyprus	-128%	3%	-96%	-12%	-38%	-186%	134%	-1%	0%	-27%	2%	227%	0	0	133%
Czech Republic	-46%	-19%	-38%	-63%	-8%	25%	13%	5%	2%	0%	2%	43%	0	0	124%
Denmark	38%	66%	31%	27%	14%	36%	7%	-5%	0%	-14%	-2%	-29%	0	0	124%
Estonia	-52%	-16%	-39%	-27%	-9%	-57%	48%	11%	4%	7%	18%	27%	0	0	133%
Finland	14%	1%	13%	17%	1%	2%	-22%	1%	1%	-10%	1%	-2%	0	0	110%
France	-15%	-25%	-14%	25%	-3%	-27%	5%	11%	0%	-21%	1%	-2%	3	3	111%
Germany	20%	71%	18%	15%	8%	63%	-13%	0%	-1%	-12%	-12%	4%	4	5	113%
Gibraltar	-52%	1761%	-30%	-22%	370%	-3840%	108%	0%	7%	27%	7%	5134%	0	0	173%
Greece	-122%	-149%	-115%	6%	-18%	-134%	86%	-3%	13%	5%	9%	2%	0	0	106%
Guernsey	4099%	3466%	3504%	-331%	1051%	16%	12%	0%	8%	-8%	1%	-786%	0	0	117%
Hungary	-91%	-35%	-65%	-44%	-16%	-18%	32%	19%	5%	-3%	18%	36%	0	0	138%
Iceland	-431%	25%	-316%	17%	-14%	-34%	55%	5%	-1%	-12%	3%	321%	0	0	137%
Ireland	-137%	-98%	-59%	-163%	-20%	249%	-89%	0%	1%	-8%	-49%	40%	0	1	234%
Isle of Man	711%	-156%	804%	48%	93%	21%	16%	-1%	10%	-11%	1%	-1137%	0	0	88%
Italy	-29%	0%	-27%	3%	-4%	22%	-7%	3%	0%	-10%	-2%	23%	2	2	106%
Jersey	2049%	151%	1612%	87%	538%	15%	11%	0%	7%	-8%	1%	-2112%	0	0	127%
Kosovo	3%	-18%	2%	-12%	0%	-393%	102%	33%	0%	25%	7%	218%	0	0	152%
Latvia	-70%	-27%	-55%	-27%	-8%	-102%	67%	21%	8%	18%	17%	34%	0	0	127%
Liechtenstein	590%	1016%	497%	-27%	100%	30%	38%	-23%	-56%	-11%	-4%	473%	0	0	119%
Lithuania	-57%	-6%	-41%	-30%	-5%	-57%	52%	0%	7%	13%	18%	36%	0	0	139%
Luxembourg	200%	483%	155%	427%	75%	14%	276%	-160%	-2%	50%	-13%	-339%	0	0	129%
Macedonia	-60%	-66%	-48%	-32%	-9%	-215%	33%	9%	-4%	198%	1%	2%	0	0	125%
Malta	45%	82%	25%	-96%	24%	-120%	201%	-2%	-6%	-24%	9%	71%	0	0	181%
Moldova	-30%	-41%	-23%	-28%	-2%	-316%	23%	83%	-1%	143%	-7%	87%	0	0	131%
Monaco	1130%	438%	689%	-394%	85%	25%	31%	0%	6%	-9%	-3%	8%	0	0	164%
Montenegro	-173%	-123%	-133%	-23%	-13%	-410%	172%	51%	1%	64%	0%	168%	0	0	131%
Netherlands	37%	117%	31%	-3%	26%	77%	-3%	-12%	-3%	-4%	3%	5%	1	1	121%
Norway	99%	206%	84%	50%	62%	96%	-23%	-10%	1%	-16%	-1%	-39%	0	0	118%
Poland	-68%	-35%	-47%	-35%	-12%	-19%	29%	-1%	3%	4%	9%	33%	1	1	144%
Portugal	-130%	-92%	-111%	2%	-25%	-73%	63%	2%	5%	25%	9%	12%	0	0	117%
Romania	-71%	-42%	-51%	-31%	-6%	-74%	32%	14%	4%	11%	17%	40%	0	0	141%
San Marino	230%	167%	227%	-27%	30%	-121%	115%	-120%	1%	29%	8%	27%	0	0	102%
Serbia	-90%	-86%	-69%	-34%	-16%	-121%	13%	4%	-1%	88%	-1%	51%	0	0	129%
Slovak Republic	-68%	-61%	-55%	-11%	-14%	-15%	2%	8%	1%	-10%	7%	26%	0	0	125%
Slovenia	-44%	0%	-34%	-16%	-4%	10%	37%	6%	2%	-5%	-25%	29%	0	0	129%
Spain	-93%	-58%	-81%	12%	-20%	-26%	41%	2%	1%	-4%	9%	8%	1	2	115%
Sweden	-16%	40%	-12%	36%	1%	29%	-7%	2%	-1%	-14%	-3%	9%	0	1	126%
Switzerland	106%	108%	88%	-2%	34%	93%	-18%	-38%	1%	-10%	-4%	-35%	1	1	121%
United Kingdom	-20%	-6%	-17%	0%	-1%	-75%	51%	0%	-2%	-12%	-4%	53%	3	3	118%

Table 15

Decomposition 1970-2000. Real values USD of 2023. China & East Asia

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
China	2%	5%	0%	-8%	0%	4%	13%	0%	0%	4%	10%	-19%	1	3	554%
Hong Kong	34%	148%	5%	-67%	82%	-363%	-146%	0%	3%	2%	11%	621%	0	0	669%
Japan	7%	25%	3%	4%	13%	45%	-26%	0%	0%	-5%	-6%	-1%	1	4	273%
Macao	29%	156%	5%	14%	39%	140%	888%	17%	8%	-35%	25%	-946%	0	0	571%
Mongolia	-12%	-200%	-4%	-12%	-15%	-732%	-58%	-3%	0%	63%	29%	533%	0	0	294%
North Korea	-6%	-24%	-3%	-13%	-1%	-71%	221%	0%	0%	7%	22%	-185%	0	0	184%
South Korea	-27%	-6%	-2%	0%	-11%	-2%	9%	2%	0%	5%	1%	-8%	0	1	1253%
Taiwan	3%	59%	0%	1%	26%	146%	81%	0%	0%	3%	9%	-207%	0	0	1067%

Table 16

Decomposition 2000-2012. Real values USD of 2023. China & East Asia

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/GDP(2000)
China	5%	18%	2%	-16%	5%	33%	4%	-1%	0%	8%	9%	-26%	3	9	281%
Hong Kong	148%	293%	93%	-151%	182%	-166%	-116%	-1%	4%	-5%	13%	440%	0	0	159%
Japan	25%	56%	23%	14%	28%	59%	-35%	1%	0%	-7%	-9%	-16%	4	4	107%
Macao	156%	148%	40%	-84%	46%	-100%	648%	3%	4%	-34%	20%	-395%	0	0	387%
Mongolia	-200%	-182%	-81%	-27%	-15%	-373%	-63%	-6%	0%	72%	23%	286%	0	0	247%
North Korea	-24%	10%	-20%	-48%	1%	-192%	286%	-1%	0%	0%	27%	-42%	0	0	115%
South Korea	-6%	-7%	-4%	-10%	-11%	25%	-8%	1%	0%	-4%	0%	2%	1	1	168%
Taiwan	59%	166%	37%	-13%	48%	281%	133%	-1%	0%	-4%	12%	-327%	0	1	160%

Table 17

Decomposition 2012-2022. Real values USD of 2023. China & East Asia

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
China	18%	14%	10%	-13%	4%	29%	-14%	-1%	0%	1%	2%	-3%	9	16	182%
Hong Kong	293%	533%	262%	-136%	180%	-98%	65%	-1%	6%	-9%	3%	260%	0	0	112%
Japan	56%	77%	53%	24%	18%	-7%	-8%	0%	0%	-4%	-2%	3%	4	4	105%
Macao	148%	440%	348%	-202%	129%	-521%	1424%	-30%	14%	-115%	32%	-640%	0	0	43%
Mongolia	-182%	-243%	-120%	-86%	-17%	28%	-118%	2%	0%	17%	8%	43%	0	0	152%
North Korea	10%	25%	11%	-53%	3%	-76%	102%	0%	0%	-10%	3%	46%	0	0	93%
South Korea	-7%	48%	-6%	-8%	6%	46%	-15%	0%	0%	-7%	0%	32%	1	2	130%
Taiwan	166%	229%	120%	-14%	40%	282%	78%	0%	0%	-8%	2%	-271%	1	1	138%

Table 18

Decomposition 1970-2000. Real values USD of 2023. South & South-East Asia

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/GDP(1970)
Afghanistan	-34%	-383%	-64%	31%	-44%	-407%	-35%	1%	0%	364%	549%	-779%	0	0	53%
Bangladesh	-10%	-25%	-4%	4%	-10%	-89%	-21%	0%	0%	95%	25%	-26%	0	0	265%
Bhutan	22%	54%	3%	6%	10%	-263%	-19%	-155%	0%	210%	60%	203%	0	0	663%
Brunei	137%	466%	60%	-9%	294%	921%	-229%	-2%	26%	-20%	5%	-580%	0	0	228%
Cambodia	-4%	-23%	-2%	-5%	-5%	-133%	-6%	-16%	4%	133%	65%	-58%	0	0	158%
India	-15%	-16%	-4%	-1%	-11%	-25%	-7%	-1%	0%	30%	0%	3%	0	1	395%
Indonesia	-28%	-71%	-5%	-19%	-39%	113%	-68%	0%	-9%	1%	-1%	-45%	0	0	601%
Laos	-6%	-131%	-1%	1%	-14%	-250%	-22%	1%	1%	154%	4%	-4%	0	0	469%
Malaysia	-11%	-29%	-1%	-90%	-36%	143%	-59%	-3%	5%	-30%	-2%	43%	0	0	869%
Maldives	-7%	-21%	-1%	-55%	-14%	-290%	301%	1%	0%	19%	30%	-12%	0	0	1024%
Myanmar	-6%	-130%	-2%	-12%	-13%	-125%	24%	3%	0%	57%	61%	-124%	0	0	332%
Nepal	13%	-22%	4%	8%	-3%	-203%	71%	2%	0%	94%	28%	-23%	0	0	328%
Pakistan	-29%	-36%	-7%	-12%	-23%	-79%	-18%	0%	0%	90%	2%	9%	0	0	429%
Papua New Guinea	-41%	-57%	-20%	-36%	-62%	120%	-126%	-11%	1%	62%	9%	6%	0	0	204%
Philippines	-24%	-46%	-9%	-23%	-43%	-120%	30%	45%	9%	36%	0%	30%	0	0	281%
Singapore	43%	174%	4%	-3%	69%	-25%	125%	-10%	-1%	-11%	0%	26%	0	0	968%
Sri Lanka	-13%	-43%	-3%	2%	-23%	-92%	-35%	0%	0%	73%	10%	26%	0	0	385%
Thailand	-4%	-46%	-1%	-7%	-38%	-14%	-8%	17%	-6%	2%	0%	10%	0	0	638%
Timor	20%	70%	4%	39%	37%	232%	-982%	2%	192%	1147%	165%	-767%	0	0	454%
Vietnam	-5%	-45%	-1%	-5%	-17%	-101%	-70%	5%	14%	17%	3%	112%	0	0	519%

Table 19

Decomposition 2000-2012. Real values USD of 2023. South & South-East Asia

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/GDP(2000)
Afghanistan	-383%	20%	-119%	12%	-16%	-408%	22%	0%	0%	349%	259%	-79%	0	0	323%
Bangladesh	-25%	-12%	-11%	-3%	-9%	-81%	-23%	0%	0%	110%	15%	-10%	0	0	224%
Bhutan	54%	-24%	21%	-11%	5%	-449%	-39%	-74%	0%	227%	74%	221%	0	0	257%
Brunei	466%	325%	389%	-37%	271%	1262%	-264%	-4%	23%	-45%	6%	-1277%	0	0	120%
Cambodia	-23%	-26%	-9%	-36%	-3%	-213%	58%	-15%	4%	158%	47%	-17%	0	0	246%
India	-16%	-24%	-8%	-7%	-10%	-69%	11%	-1%	0%	44%	-1%	17%	1	2	212%
Indonesia	-71%	-39%	-38%	-30%	-30%	115%	-64%	0%	-12%	7%	-1%	14%	0	1	187%
Laos	-131%	-100%	-56%	-8%	-14%	-167%	23%	1%	1%	96%	5%	18%	0	0	235%
Malaysia	-29%	-1%	-17%	-124%	-23%	254%	-49%	-4%	9%	-44%	-2%	-2%	0	0	174%
Maldives	-21%	-71%	-12%	-112%	-13%	-562%	560%	2%	0%	-37%	34%	67%	0	0	173%
Myanmar	-130%	5%	-36%	-39%	-9%	26%	-2%	5%	-13%	29%	87%	-44%	0	0	358%
Nepal	-22%	2%	-12%	6%	-4%	-278%	36%	8%	0%	234%	23%	-11%	0	0	181%
Pakistan	-36%	-27%	-20%	-16%	-26%	-94%	-29%	0%	0%	124%	3%	31%	0	0	176%
Papua New Guinea	-57%	-72%	-37%	-71%	-49%	244%	-222%	-17%	1%	85%	9%	-16%	0	0	152%
Philippines	-46%	-19%	-26%	-37%	-34%	-153%	32%	48%	8%	107%	1%	36%	0	0	178%
Singapore	174%	206%	89%	44%	172%	224%	14%	-30%	-13%	-1%	-1%	-292%	0	0	195%
Sri Lanka	-43%	-51%	-21%	-1%	-21%	-110%	-31%	0%	0%	82%	8%	44%	0	0	202%
Thailand	-46%	-22%	-27%	-46%	-30%	44%	-33%	14%	-13%	17%	-1%	51%	0	0	169%
Timor	70%	1103%	41%	212%	118%	-113%	-1252%	9%	190%	1468%	129%	300%	0	0	173%
Vietnam	-45%	-49%	-16%	-28%	-11%	-72%	-95%	3%	8%	18%	2%	142%	0	0	275%

Table 20

Decomposition 2012-2022. Real values USD of 2023. South & South-East Asia

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
Afghanistan	20%	37%	22%	6%	2%	-413%	-37%	3%	0%	282%	94%	79%	0	0	93%
Bangladesh	-12%	-17%	-6%	-8%	-1%	-39%	-12%	0%	0%	47%	1%	1%	0	0	201%
Bhutan	-24%	-129%	-16%	-44%	-15%	-175%	-38%	-13%	0%	91%	70%	11%	0	0	149%
Brunei	325%	502%	340%	-41%	54%	280%	-91%	-1%	10%	-31%	0%	-17%	0	0	96%
Cambodia	-26%	-143%	-15%	-51%	-7%	-229%	45%	0%	7%	102%	11%	-6%	0	0	170%
India	-24%	-30%	-14%	-20%	-4%	-61%	27%	1%	0%	24%	0%	19%	2	3	173%
Indonesia	-39%	-19%	-26%	-23%	-5%	14%	-11%	-1%	-5%	3%	-1%	35%	1	1	152%
Laos	-100%	-199%	-56%	-35%	-6%	-31%	-14%	1%	4%	17%	1%	-79%	0	0	178%
Malaysia	-1%	5%	-1%	-42%	1%	79%	-26%	-5%	8%	0%	0%	-8%	0	0	149%
Maldives	-71%	-174%	-43%	-76%	-9%	-371%	364%	1%	0%	-120%	2%	78%	0	0	168%
Myanmar	5%	-60%	3%	-43%	-3%	-30%	22%	9%	2%	30%	22%	-70%	0	0	158%
Nepal	2%	-6%	1%	0%	1%	-264%	-5%	8%	0%	231%	4%	17%	0	0	157%
Pakistan	-27%	-39%	-17%	-6%	-9%	-71%	-12%	0%	0%	71%	1%	4%	0	0	159%
Papua New Guinea	-72%	-30%	-50%	-41%	-5%	216%	-92%	-4%	2%	19%	0%	-75%	0	0	144%
Philippines	-19%	-10%	-12%	-28%	-1%	-106%	22%	19%	7%	71%	0%	19%	0	0	161%
Singapore	206%	200%	149%	40%	146%	250%	-25%	-3%	-5%	13%	-1%	-364%	0	0	138%
Sri Lanka	-51%	-74%	-43%	-19%	-9%	-112%	26%	-1%	0%	64%	0%	20%	0	0	120%
Thailand	-22%	-5%	-18%	-56%	-2%	41%	3%	1%	-8%	15%	0%	19%	0	0	120%
Timor	1103%	513%	735%	42%	123%	-73%	-294%	1%	106%	26%	0%	-154%	0	0	150%
Vietnam	-49%	-47%	-27%	-52%	-2%	35%	-31%	1%	3%	23%	0%	3%	0	0	180%

Table 21

Decomposition 1970-2000. Real values USD of 2023. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
Countries	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/GDP(1970)
Armenia	-3%	-76%	-3%	1%	-7%	-177%	-88%	72%	0%	306%	15%	-195%	0	0	97%
Azerbaijan	-2%	-92%	-2%	-2%	-6%	-84%	-208%	1%	-1%	175%	-8%	42%	0	0	94%
Belarus	-1%	-22%	-1%	-3%	-1%	-55%	24%	2%	0%	13%	25%	-26%	0	0	157%
Georgia	-5%	-75%	-8%	-6%	-10%	-121%	-61%	19%	0%	230%	21%	-140%	0	0	65%
Kazakhstan	-1%	-73%	-1%	-8%	-7%	-11%	-51%	-2%	4%	9%	-23%	17%	0	0	94%
Kyrgyz Republic	-3%	-144%	-3%	-15%	-11%	-67%	-113%	22%	0%	260%	3%	-221%	0	0	95%
Russia	-1%	30%	-1%	-16%	0%	51%	-45%	-1%	0%	-3%	7%	38%	1	1	164%
Tajikistan	-13%	-114%	-28%	-8%	-28%	-127%	-164%	-1%	4%	1194%	235%	-1193%	0	0	48%
Turkmenistan	6%	-12%	3%	-3%	3%	65%	-77%	27%	1%	105%	2%	-138%	0	0	186%
Ukraine	-4%	-43%	-6%	-7%	-5%	-68%	147%	1%	0%	155%	7%	-266%	0	0	67%
Uzbekistan	1%	-17%	1%	-2%	0%	-44%	-119%	91%	1%	6%	0%	49%	0	0	131%

Table 22

Decomposition 2000-2012. Real values USD of 2023. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/GDP(2000)
Armenia	-76%	-78%	-31%	-23%	-12%	-245%	-66%	101%	0%	202%	16%	-20%	0	0	245%
Azerbaijan	-92%	-41%	-22%	-64%	-13%	226%	-114%	-1%	-1%	52%	-2%	-103%	0	0	411%
Belarus	-22%	-49%	-10%	-13%	-5%	-104%	38%	6%	1%	8%	16%	14%	0	0	219%
Georgia	-75%	-99%	-36%	-18%	-29%	-259%	-8%	40%	0%	193%	18%	-1%	0	0	210%
Kazakhstan	-73%	-19%	-29%	-83%	-15%	149%	-80%	-8%	0%	-1%	-4%	52%	0	0	253%
Kyrgyz Republic	-144%	-59%	-91%	-47%	-14%	-276%	-99%	15%	-2%	395%	4%	56%	0	0	158%
Russia	30%	5%	17%	-45%	1%	140%	-46%	-5%	0%	-5%	-14%	-38%	1	2	174%
Tajikistan	-114%	-60%	-48%	-7%	-21%	-395%	-103%	176%	1%	624%	113%	-400%	0	0	239%
Turkmenistan	-12%	10%	-5%	-22%	2%	76%	-60%	66%	-1%	93%	6%	-146%	0	0	268%
Ukraine	-43%	-30%	-27%	-35%	-6%	-108%	125%	20%	-1%	134%	4%	-135%	0	0	155%
Uzbekistan	-17%	16%	-7%	-7%	0%	-26%	-77%	61%	0%	25%	0%	48%	0	0	241%

Table 23

Decomposition 2012-2022. Real values USD of 2023. Russia & Central Asia

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
Armenia	-78%	-56%	-52%	-27%	-9%	-122%	2%	46%	0%	54%	5%	47%	0	0	149%
Azerbaijan	-41%	3%	-35%	-38%	-11%	203%	-71%	0%	-1%	1%	0%	-45%	0	0	117%
Belarus	-49%	-38%	-49%	-44%	-10%	-49%	50%	10%	3%	13%	0%	39%	0	0	100%
Georgia	-99%	-111%	-66%	-26%	-45%	-209%	70%	31%	0%	89%	2%	43%	0	0	150%
Kazakhstan	-19%	-37%	-14%	-94%	-6%	105%	-26%	-7%	-2%	2%	1%	5%	0	0	138%
Kyrgyz Republic	-59%	-78%	-40%	-45%	-2%	-344%	-28%	3%	-2%	224%	15%	142%	0	0	148%
Russia	5%	29%	5%	-41%	6%	98%	-24%	-3%	0%	-8%	-6%	3%	2	2	103%
Tajikistan	-60%	-39%	-30%	-13%	-7%	-220%	-29%	193%	-1%	71%	16%	-19%	0	0	198%
Turkmenistan	10%	-10%	9%	-43%	-1%	97%	-33%	94%	-2%	86%	9%	-225%	0	0	111%
Ukraine	-30%	-3%	-45%	-87%	-1%	-128%	10%	97%	-2%	58%	1%	95%	0	0	67%
Uzbekistan	16%	-5%	9%	-18%	0%	-74%	-28%	32%	-1%	63%	1%	10%	0	0	177%

Table 24

Decomposition 1970-2000. Real values USD of 2023. North America & Oceania

	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
Countries	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
Australia	-24%	-48%	-9%	-11%	-43%	3%	-16%	0%	0%	10%	-3%	22%	0	1	258%
Bermuda	-71%	-2280%	-37%	912%	-164%	-999%	341%	667%	0%	-11%	0%	-2989%	0	0	193%
Canada	-35%	-3%	-14%	-8%	-49%	54%	-23%	6%	0%	-2%	1%	33%	1	1	254%
Fiji	-9%	-7%	-4%	-27%	-40%	-294%	209%	19%	1%	78%	113%	-62%	0	0	246%
French Polynesia	1%	-6%	0%	9%	-3%	-409%	133%	155%	81%	209%	-1%	-181%	0	0	348%
Greenland	-15%	-9%	-6%	-9%	-24%	-182%	110%	-182%	0%	-2%	0%	285%	0	0	249%
Kiribati	189%	606%	200%	-57%	484%	-499%	-461%	7%	106%	892%	-575%	510%	0	0	95%
Marshall Islands	208%	1220%	58%	11%	49%	-2964%	-614%	294%	88%	1076%	25%	3196%	0	0	358%
Micronesia	43%	82%	14%	-3%	8%	-120%	-412%	-12%	46%	952%	-56%	-335%	0	0	303%
Nauru	37%	71%	167%	200%	109%	13892%	-907%	-93%	73%	2194%	-1959%	-13604%	0	0	22%
New Caledonia	-7%	-36%	-3%	4%	-33%	-115%	-33%	150%	1%	209%	-8%	-209%	0	0	228%
New Zealand	-53%	-75%	-26%	-16%	-90%	43%	40%	-1%	0%	11%	-4%	-34%	0	0	204%
Palau	34%	57%	18%	-194%	10%	155%	521%	-18%	0%	299%	120%	-856%	0	0	184%
Samoa	31%	-43%	19%	16%	-16%	-891%	76%	7%	0%	931%	196%	-380%	0	0	166%
Solomon Islands	-4%	-59%	-1%	-24%	-27%	-2%	-252%	-17%	1%	243%	-7%	27%	0	0	393%
Tonga	2%	-43%	1%	51%	-3%	-532%	-4%	8%	2%	473%	48%	-86%	0	0	279%
Tuvalu	99%	279%	40%	-153%	289%	-536%	-1020%	429%	209%	721%	991%	-689%	0	0	243%
United States	6%	-14%	2%	16%	0%	-38%	10%	-1%	0%	-6%	0%	2%	7	17	265%

Table 25

Decomposition 2000-2012. Real values USD of 2023. North America & Oceania

	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/ GDP(2000)
Australia	-48%	-54%	-33%	-12%	-56%	-9%	-16%	-1%	0%	11%	-3%	67%	1	1	144%
Bermuda	-2280%	-373%	-1937%	1415%	-91%	-1122%	401%	869%	6%	-24%	1%	110%	0	0	118%
Canada	-3%	-19%	-3%	-11%	-44%	67%	-30%	8%	0%	0%	1%	-7%	1	2	126%
Fiji	-7%	-70%	-6%	-61%	-43%	-501%	306%	37%	2%	127%	89%	-20%	0	0	122%
French Polynesia	-6%	-23%	-6%	8%	-8%	-718%	215%	262%	106%	447%	-2%	-327%	0	0	102%
Greenland	-9%	-24%	-6%	-21%	-23%	-179%	113%	-157%	0%	-4%	1%	254%	0	0	133%
Kiribati	606%	406%	555%	-79%	687%	-991%	-698%	123%	292%	1240%	-729%	8%	0	0	109%
Marshall Islands	1220%	-16092%	1084%	21%	9%	-4350%	-902%	449%	192%	1792%	78%	-14465%	0	0	113%
Micronesia	82%	69%	80%	-15%	18%	-910%	-640%	-19%	88%	1687%	0%	-221%	0	0	102%
Nauru	71%	106%	52%	160%	102%	9341%	-747%	-65%	103%	1873%	-1504%	-9210%	0	0	137%
New Caledonia	-36%	-125%	-24%	10%	-41%	-215%	-93%	164%	2%	281%	-6%	-203%	0	0	152%
New Zealand	-75%	-69%	-54%	-22%	-107%	24%	41%	0%	0%	14%	-3%	39%	0	0	138%
Palau	57%	33%	54%	-239%	13%	-480%	776%	-17%	-1%	593%	184%	-850%	0	0	104%
Samoa	-43%	-60%	-32%	-15%	-32%	-1072%	198%	-7%	0%	973%	211%	-284%	0	0	134%
Solomon Islands	-59%	-21%	-34%	-48%	-25%	-80%	-215%	-8%	4%	268%	28%	90%	0	0	172%
Tonga	-43%	-31%	-41%	60%	-13%	-947%	-62%	27%	-1%	791%	142%	14%	0	0	106%
Tuvalu	279%	311%	249%	-145%	404%	-998%	-1779%	646%	361%	1547%	1228%	-1201%	0	0	112%
United States	-14%	-30%	-11%	35%	-6%	-87%	15%	-1%	0%	-11%	0%	37%	17	21	124%
Vanuatu	15%	-59%	10%	-177%	50%	-540%	434%	-98%	0%	231%	168%	-137%	0	0	142%

Table 26

Decomposition 2012-2022. Real values USD of 2023. North America & Oceania

	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
Quintile	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
Australia	-54%	-36%	-43%	2%	-17%	15%	-10%	-2%	0%	2%	-1%	18%	1	2	127%
Bermuda	-373%	8575%	-380%	642%	15%	-163%	51%	242%	17%	-41%	1%	8192%	0	0	98%
Canada	-19%	38%	-16%	7%	6%	-12%	-13%	3%	0%	0%	1%	61%	2	2	119%
Fiji	-70%	-127%	-58%	-55%	-15%	-243%	116%	6%	3%	88%	-4%	36%	0	0	122%
French Polynesia	-23%	-24%	-20%	-1%	-4%	-275%	107%	94%	83%	190%	-1%	-198%	0	0	114%
Greenland	-24%	-13%	-21%	-6%	-4%	61%	15%	-17%	0%	-5%	1%	-36%	0	0	112%
Kiribati	406%	445%	326%	-16%	195%	-561%	-337%	91%	648%	405%	132%	-439%	0	0	125%
Marshall Islands	-16092%	-12452%	-12865%	-58%	-51%	-145%	-227%	102%	210%	411%	16%	154%	0	0	125%
Micronesia	69%	108%	71%	-64%	10%	-914%	-160%	0%	111%	516%	63%	476%	0	0	98%
Nauru	106%	286%	50%	-16%	15%	-278%	-74%	64%	177%	231%	20%	97%	0	0	212%
New Caledonia	-125%	-212%	-121%	12%	-22%	-137%	-83%	69%	3%	91%	-2%	-22%	0	0	104%
New Zealand	-69%	-51%	-50%	-2%	-23%	-12%	-2%	0%	0%	-1%	-1%	40%	0	0	137%
Palau	33%	-161%	39%	-46%	0%	-750%	220%	-1%	23%	261%	114%	-22%	0	0	84%
Samoa	-60%	-32%	-56%	-30%	-9%	-400%	130%	3%	0%	241%	64%	25%	0	0	108%
Solomon Islands	-21%	-5%	-18%	-26%	-1%	-26%	-88%	2%	14%	17%	56%	65%	0	0	114%
Tonga	-31%	-10%	-28%	-8%	-6%	-450%	-61%	70%	-6%	339%	87%	53%	0	0	109%
Tuvalu	311%	467%	208%	151%	27%	-446%	-636%	75%	607%	701%	207%	-427%	0	0	150%
United States	-30%	-63%	-24%	24%	-10%	-44%	11%	0%	0%	-5%	0%	-14%	21	27	125%
Vanuatu	-59%	-49%	-51%	-21%	-12%	-292%	52%	108%	0%	137%	56%	-26%	0	0	117%

Table 27

Decomposition 1970-2000. Real values USD of 2023. Latin America

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/GDP(1970)
Anguilla	18%	19%	3%	-71%	14%	-436%	455%	-20%	3%	-4%	-100%	176%	0	0	548%
Antigua and Barbuda	-20%	-42%	-6%	-67%	-25%	-812%	713%	-10%	1%	70%	22%	71%	0	0	360%
Argentina	-17%	-18%	-10%	-49%	-8%	29%	-17%	0%	0%	2%	0%	35%	0	1	174%
Aruba	-18%	-45%	-2%	8%	-18%	-252%	212%	-1%	4%	-14%	12%	4%	0	0	1082%
Bahamas	71%	249%	31%	-61%	4%	-355%	399%	5%	0%	6%	125%	95%	0	0	229%
Barbados	-66%	44%	-39%	-33%	-18%	-580%	522%	28%	0%	23%	10%	132%	0	0	168%
Belize	-2%	-61%	0%	-34%	-19%	-209%	72%	-7%	-3%	96%	1%	41%	0	0	525%
Bolivia	-77%	-100%	-36%	-69%	-35%	-17%	-61%	0%	0%	64%	2%	50%	0	0	216%
Bonaire, Saint-Eustache et Saba	36%	593%	2%	-318%	185%	-1%	412%	12%	4%	51%	21%	225%	0	0	1453%
Brazil	-27%	-39%	-8%	-42%	-26%	26%	-24%	0%	0%	4%	0%	32%	0	1	342%
British Virgin Islands	63%	10698%	4%	-126%	373%	-1609%	174%	-119%	-12%	24%	10%	11979%	0	0	1545%
Cayman Islands	-175%	2382%	-15%	-21%	6%	-368%	531%	-14%	1%	-155%	-1%	2420%	0	0	1132%
Chile	-57%	-41%	-18%	-36%	-29%	22%	-20%	-1%	0%	14%	1%	25%	0	0	319%
Colombia	-24%	-21%	-8%	-19%	-19%	8%	-14%	1%	0%	22%	1%	5%	0	0	311%
Costa Rica	-30%	-19%	-8%	-56%	-23%	-78%	36%	0%	0%	36%	3%	71%	0	0	355%
Cuba	-2%	-44%	-1%	-16%	-2%	-53%	619%	5%	0%	63%	32%	-690%	0	0	198%
Curaçao	-157%	449%	-11%	-532%	299%	-651%	336%	228%	56%	-44%	33%	735%	0	0	1380%
Dominica	-16%	-37%	-5%	-54%	-23%	-445%	142%	-1%	0%	172%	133%	44%	0	0	305%
Dominican Republic	-19%	-27%	-4%	-48%	-22%	-180%	109%	3%	0%	70%	-3%	50%	0	0	455%
Ecuador	-17%	-90%	-6%	-84%	-24%	64%	-39%	-7%	0%	31%	20%	-45%	0	0	308%
El Salvador	-10%	-40%	-5%	-40%	-26%	-175%	-23%	7%	0%	213%	-4%	13%	0	0	191%
Grenada	-28%	-26%	-7%	-54%	-10%	-594%	250%	-20%	2%	196%	71%	139%	0	0	431%
Guatemala	-13%	-24%	-5%	-28%	-7%	-92%	-19%	2%	0%	61%	8%	57%	0	0	283%
Guyana	-46%	-112%	-34%	-62%	-79%	-7%	-142%	-7%	0%	43%	309%	-133%	0	0	136%
Haiti	-9%	-22%	-3%	-10%	-6%	-116%	-39%	1%	0%	159%	17%	-25%	0	0	258%
Honduras	-22%	-61%	-7%	-28%	-52%	-104%	5%	1%	0%	100%	24%	0%	0	0	297%
Jamaica	-119%	-58%	-87%	-87%	-73%	-242%	107%	24%	0%	142%	-21%	179%	0	0	136%
Mexico	-16%	-28%	-5%	-31%	-36%	-8%	10%	3%	0%	14%	7%	17%	0	1	324%
Montserrat	6%	91%	8%	-149%	33%	-2973%	494%	-56%	6%	1280%	361%	1087%	0	0	79%
Nicaragua	-27%	-194%	-21%	-49%	-113%	-223%	-48%	0%	0%	122%	188%	-51%	0	0	127%
Panama	-82%	-68%	-23%	169%	-70%	-136%	132%	-52%	3%	23%	20%	-133%	0	0	355%
Paraguay	-26%	-171%	-7%	-33%	-32%	28%	-30%	13%	0%	17%	3%	-130%	0	0	367%
Peru	-53%	-52%	-28%	-50%	-49%	4%	-28%	0%	0%	27%	4%	68%	0	0	190%
Puerto Rico	36%	593%	11%	-542%	9%	-491%	393%	29%	3%	44%	21%	1117%	0	0	324%
Saint Kitts and Nevis	18%	-94%	4%	-35%	-22%	-575%	162%	-12%	4%	107%	23%	252%	0	0	479%
Saint Lucia	-1%	-56%	0%	-48%	-33%	-446%	278%	-1%	-2%	97%	27%	73%	0	0	407%
Saint Vincent and the Grenadines	17%	-36%	6%	-58%	-1%	-383%	153%	-20%	2%	179%	46%	39%	0	0	304%
Sint Maarten (Dutch part)	-163%	449%	-12%	188%	280%	-651%	1402%	-13%	-38%	-125%	31%	-614%	0	0	1380%
Suriname	-4%	4%	-3%	-98%	10%	-11%	-175%	-6%	0%	18%	6%	263%	0	0	155%
Trinidad and Tobago	-60%	-93%	-30%	-106%	-43%	114%	-23%	-2%	0%	-21%	0%	18%	0	0	202%
Turks and Caicos Islands	5%	184%	0%	-13%	19%	-395%	839%	7%	2%	-69%	14%	-221%	0	0	1856%
Uruguay	-17%	-7%	-9%	-22%	-17%	-13%	19%	0%	0%	11%	1%	23%	0	0	192%
Venezuela	29%	-6%	15%	-46%	-8%	212%	-97%	-1%	0%	-10%	-1%	-70%	0	0	196%

Table 28

Decomposition 2000-2012. Real values USD of 2023. Latin America

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/GDP(2000)
Anguilla	19%	82%	14%	-76%	22%	-898%	513%	-35%	4%	-72%	-178%	787%	0	0	137%
Antigua and Barbuda	-42%	-76%	-35%	-130%	-28%	-1123%	945%	-12%	3%	-5%	-95%	403%	0	0	122%
Argentina	-18%	10%	-12%	-65%	-8%	73%	-20%	0%	0%	5%	1%	36%	1	1	147%
Aruba	-45%	-102%	-46%	-12%	-66%	-551%	621%	-2%	10%	-73%	29%	-12%	0	0	97%
Bahamas	249%	351%	224%	-101%	5%	-540%	477%	4%	-1%	22%	187%	74%	0	0	111%
Barbados	44%	-939%	42%	-87%	-15%	-812%	705%	38%	0%	28%	5%	-843%	0	0	106%
Belize	-61%	-149%	-42%	-112%	-33%	-299%	150%	-7%	-5%	117%	8%	75%	0	0	144%
Bolivia	-100%	10%	-62%	-72%	-36%	30%	-57%	2%	0%	114%	31%	61%	0	0	161%
Bonaire, Saint-Eustache et Saba	593%	1130%	623%	-94%	-27%	-867%	939%	16%	7%	47%	36%	276%	0	0	95%
Brazil	-39%	-32%	-25%	-50%	-28%	39%	-31%	0%	0%	5%	0%	59%	1	2	152%
British Virgin Islands	10698%	59930%	10149%	-989%	3615%	-5369%	394%	-1279%	-171%	16%	23%	53541%	0	0	105%
Cayman Islands	2382%	-5344%	2138%	-94%	-27%	-867%	939%	-21%	4%	-275%	-2%	-7138%	0	0	111%
Chile	-41%	-12%	-24%	-68%	-22%	78%	-27%	-1%	0%	41%	3%	8%	0	0	167%
Colombia	-21%	-27%	-13%	-38%	-20%	11%	-25%	2%	0%	37%	1%	17%	0	0	165%
Costa Rica	-19%	-31%	-11%	-62%	-23%	-150%	95%	0%	0%	30%	3%	87%	0	0	169%
Cuba	-44%	-51%	-25%	-24%	-5%	-99%	539%	-1%	0%	29%	29%	-495%	0	0	176%
Curaçao	449%	-1284%	404%	-525%	277%	-1299%	477%	205%	55%	-49%	50%	-879%	0	0	111%
Dominica	-37%	-48%	-30%	-89%	-25%	-678%	248%	-25%	0%	201%	170%	180%	0	0	125%
Dominican Republic	-27%	-59%	-16%	-72%	-24%	-279%	163%	7%	0%	112%	-3%	53%	0	0	171%
Ecuador	-90%	-12%	-53%	-75%	-20%	40%	-47%	-4%	0%	68%	15%	64%	0	0	171%
El Salvador	-40%	-65%	-32%	-49%	-35%	-394%	-1%	5%	0%	380%	7%	53%	0	0	125%
Grenada	-26%	-131%	-22%	-115%	-24%	-894%	373%	-45%	4%	200%	105%	286%	0	0	119%
Guatemala	-24%	-16%	-16%	-36%	-9%	-208%	-15%	3%	0%	165%	7%	94%	0	0	149%
Guyana	-112%	-37%	-49%	-34%	-41%	-105%	-97%	-3%	0%	89%	176%	27%	0	0	232%
Haiti	-22%	8%	-17%	-4%	-6%	-246%	-76%	0%	0%	366%	38%	-45%	0	0	129%
Honduras	-61%	-48%	-37%	-59%	-42%	-327%	62%	2%	0%	247%	50%	59%	0	0	162%
Jamaica	-58%	-125%	-54%	-120%	-105%	-531%	146%	30%	0%	303%	-31%	237%	0	0	107%
Mexico	-28%	-41%	-23%	-49%	-38%	-18%	-2%	3%	0%	34%	12%	40%	1	2	121%
Montserrat	91%	127%	79%	-165%	43%	-3116%	174%	-55%	7%	2065%	585%	510%	0	0	115%
Nicaragua	-194%	-94%	-129%	-53%	-89%	-372%	-34%	0%	0%	279%	254%	50%	0	0	151%
Panama	-68%	-61%	-31%	48%	-54%	-172%	149%	-29%	4%	22%	10%	-9%	0	0	220%
Paraguay	-171%	-41%	-97%	-77%	-37%	80%	-25%	9%	0%	26%	2%	78%	0	0	176%
Peru	-52%	-25%	-27%	-79%	-34%	42%	-31%	1%	0%	32%	2%	70%	0	0	194%
Puerto Rico	593%	1130%	608%	-984%	51%	-1027%	647%	43%	7%	38%	36%	1712%	0	0	98%
Saint Kitts and Nevis	-94%	-128%	-73%	-120%	-41%	-778%	388%	3%	8%	73%	47%	365%	0	0	128%
Saint Lucia	-56%	-84%	-44%	-94%	-50%	-669%	400%	-1%	-2%	71%	33%	273%	0	0	126%
Saint Vincent and the Grenadines	-36%	-127%	-28%	-98%	-16%	-668%	254%	-22%	4%	192%	78%	176%	0	0	128%
Sint Maarten (Dutch part)	449%	-104%	373%	250%	314%	-1089%	1888%	-70%	-74%	-174%	42%	-1564%	0	0	120%
Suriname	4%	-4%	2%	-86%	5%	86%	-147%	-4%	0%	28%	7%	105%	0	0	182%
Trinidad and Tobago	-93%	1%	-51%	-114%	-32%	282%	-5%	-3%	0%	-16%	0%	-60%	0	0	182%
Turks and Caicos Islands	184%	7%	110%	-22%	31%	-687%	1318%	7%	5%	-126%	23%	-652%	0	0	168%
Uruguay	-7%	-32%	-5%	-43%	-14%	-25%	32%	0%	0%	13%	1%	9%	0	0	151%
Venezuela	-6%	45%	-4%	-58%	-1%	263%	-101%	-1%	0%	-9%	-3%	-42%	0	0	150%

Table 29

Decomposition 2012-2022. Real values USD of 2023. Latin America

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
Anguilla	82%	-234%	74%	30%	-38%	-544%	214%	-9%	5%	-30%	-35%	98%	0	0	111%
Antigua and Barbuda	-76%	-113%	-61%	-51%	-10%	-332%	300%	-3%	4%	-60%	-126%	226%	0	0	125%
Argentina	10%	19%	9%	-26%	2%	14%	-14%	0%	0%	3%	0%	31%	1	1	103%
Aruba	-102%	-96%	-83%	35%	-36%	-321%	356%	-2%	6%	-38%	1%	-15%	0	0	122%
Bahamas	351%	-231%	330%	-65%	1%	-215%	117%	1%	0%	5%	55%	-459%	0	0	106%
Barbados	-939%	257%	-941%	175%	-20%	-222%	165%	9%	0%	-11%	-3%	1104%	0	0	100%
Belize	-149%	-119%	-117%	-46%	-14%	-191%	129%	-1%	-3%	32%	4%	88%	0	0	128%
Bolivia	10%	-26%	7%	-34%	0%	27%	-45%	0%	0%	32%	1%	-13%	0	0	137%
Bonaire, Saint-Eustache et Saba	1130%	438%	901%	-487%	99%	-325%	186%	0%	7%	-10%	7%	60%	0	0	125%
Brazil	-32%	-40%	-30%	-23%	-8%	15%	-24%	0%	0%	1%	0%	28%	2	2	105%
British Virgin Islands	59930%	33072%	47263%	-1707%	2377%	-907%	188%	-51%	-7%	-10%	7%	-14080%	0	0	127%
Cayman Islands	-5344%	-13927%	-4301%	375%	-121%	-146%	375%	-6%	7%	-114%	0%	-9995%	0	0	124%
Chile	-12%	-15%	-9%	-37%	-3%	18%	-31%	-1%	0%	30%	0%	19%	0	0	125%
Colombia	-27%	-50%	-20%	-13%	-14%	-25%	-18%	1%	0%	23%	0%	15%	0	0	137%
Costa Rica	-31%	-55%	-23%	-44%	-6%	-75%	77%	-1%	0%	7%	0%	10%	0	0	135%
Cuba	-51%	-35%	-49%	-20%	-5%	-60%	217%	-3%	0%	-11%	8%	-112%	0	0	104%
Curaçao	-1284%	-2042%	-1519%	134%	0%	-485%	194%	20%	-1%	-34%	3%	-353%	0	0	85%
Dominica	-48%	-59%	-48%	-8%	-5%	-386%	73%	-10%	0%	53%	220%	53%	0	0	100%
Dominican Republic	-59%	-55%	-36%	-32%	-11%	-104%	44%	1%	0%	68%	1%	14%	0	0	165%
Ecuador	-12%	-24%	-11%	-21%	-1%	4%	-16%	0%	0%	27%	-2%	-5%	0	0	111%
El Salvador	-65%	-48%	-53%	-42%	-9%	-233%	30%	-1%	0%	205%	6%	49%	0	0	123%
Grenada	-131%	-151%	-105%	-50%	-25%	-326%	272%	-33%	5%	-7%	45%	74%	0	0	125%
Guatemala	-16%	-7%	-11%	-17%	-4%	-109%	-5%	2%	0%	133%	0%	6%	0	0	142%
Guyana	-37%	-91%	-11%	-47%	-6%	31%	-97%	-2%	0%	42%	3%	-4%	0	0	354%
Haiti	8%	-7%	8%	5%	0%	-208%	-27%	-1%	0%	195%	4%	16%	0	0	104%
Honduras	-48%	-55%	-35%	-61%	-6%	-212%	18%	-6%	0%	212%	3%	34%	0	0	136%
Jamaica	-125%	-137%	-118%	-19%	-31%	-263%	51%	6%	0%	184%	6%	48%	0	0	106%
Mexico	-41%	-41%	-37%	-28%	-7%	-11%	-13%	1%	0%	28%	2%	24%	2	2	112%
Montserrat	127%	115%	93%	4%	10%	-386%	-138%	-2%	4%	619%	136%	-226%	0	0	137%
Nicaragua	-94%	-108%	-71%	-42%	-9%	-163%	18%	0%	0%	194%	14%	-49%	0	0	133%
Panama	-61%	-92%	-40%	-48%	-17%	-116%	105%	1%	5%	-6%	0%	24%	0	0	152%
Paraguay	-41%	-36%	-30%	-37%	-2%	14%	-2%	1%	0%	13%	3%	4%	0	0	136%
Peru	-25%	-43%	-19%	-53%	-6%	21%	-21%	1%	0%	27%	0%	8%	0	0	132%
Puerto Rico	1130%	438%	1230%	-335%	65%	-347%	217%	10%	8%	-11%	8%	-406%	0	0	92%
Saint Kitts and Nevis	-128%	-80%	-111%	-59%	-11%	-318%	281%	10%	8%	-18%	76%	62%	0	0	115%
Saint Lucia	-84%	-52%	-80%	-58%	-15%	-280%	267%	0%	1%	-1%	10%	104%	0	0	104%
Saint Vincent and the Grenadines	-127%	-170%	-106%	-17%	-13%	-330%	96%	-3%	3%	65%	23%	111%	0	0	120%
Sint Maarten (Dutch part)	-104%	-65%	-98%	124%	-12%	-620%	538%	-27%	13%	8%	13%	-4%	0	0	107%
Suriname	-4%	-90%	-5%	-77%	-8%	149%	-150%	-10%	0%	25%	2%	-16%	0	0	88%
Trinidad and Tobago	1%	9%	1%	-44%	0%	219%	-87%	-8%	0%	-1%	0%	-71%	0	0	86%
Turks and Caicos Islands	7%	430%	6%	-12%	9%	-439%	843%	-1%	5%	-131%	17%	133%	0	0	113%
Uruguay	-32%	-19%	-25%	-63%	-6%	35%	5%	0%	0%	2%	-1%	35%	0	0	124%
Venezuela	45%	168%	160%	-144%	12%	137%	-96%	0%	0%	-3%	-50%	151%	0	0	28%

Table 30

Decomposition 1970-2000. Real values USD of 2023. MENA

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/GDP(1970)
Algeria	-23%	-26%	-8%	-68%	-29%	124%	-68%	17%	0%	19%	0%	-12%	0	0	277%
Bahrain	10%	108%	3%	-14%	89%	72%	27%	-147%	9%	-45%	117%	-1%	0	0	328%
Egypt	-15%	-22%	-2%	2%	-17%	-146%	42%	5%	0%	116%	112%	-133%	0	0	610%
Iran	-4%	-3%	-2%	-6%	2%	180%	-79%	-3%	0%	133%	39%	-266%	0	0	180%
Iraq	-25%	-180%	-7%	-1%	-54%	452%	-201%	5%	0%	123%	13%	-511%	0	0	357%
Israel	-11%	-37%	-2%	-22%	-31%	-140%	12%	-18%	0%	164%	2%	0%	0	0	438%
Jordan	39%	-72%	11%	-51%	-20%	-549%	10%	12%	0%	556%	-1%	-40%	0	0	362%
Kuwait	30%	293%	27%	70%	427%	716%	-217%	-2%	0%	-211%	-45%	-473%	0	0	109%
Lebanon	20%	-9%	17%	40%	59%	-1005%	172%	0%	1%	-89%	2%	794%	0	0	120%
Libya	-3%	62%	-2%	-75%	41%	376%	-132%	-24%	0%	-85%	1%	-37%	0	0	177%
Morocco	-15%	-42%	-5%	-40%	-22%	-139%	19%	1%	0%	124%	-2%	23%	0	0	308%
Oman	30%	-10%	3%	-30%	-3%	290%	-96%	-27%	0%	-134%	-2%	-21%	0	0	1106%
Palestine	16%	14%	2%	0%	19%	-818%	-46%	175%	0%	203%	77%	401%	0	0	700%
Qatar	66%	547%	17%	-30%	44%	552%	-88%	24%	0%	-113%	-23%	163%	0	0	382%
Saudi Arabia	49%	94%	17%	-8%	104%	558%	-349%	-21%	0%	-138%	2%	-71%	0	1	294%
Syria	-11%	-57%	-2%	-50%	-21%	-80%	-3%	48%	0%	226%	4%	-178%	0	0	501%
Tunisia	-58%	-92%	-13%	-30%	-44%	-174%	101%	4%	0%	75%	1%	-12%	0	0	456%
Turkey	-8%	-34%	-2%	-15%	-11%	-71%	41%	11%	0%	14%	0%	0%	0	0	356%
United Arab Emirates	50%	271%	8%	20%	105%	216%	-37%	-134%	0%	52%	2%	39%	0	0	662%
Yemen	-25%	-11%	-3%	-28%	-23%	-209%	-63%	6%	0%	98%	13%	199%	0	0	752%

Table 31

Decomposition 2000-2012. Real values USD of 2023. MENA

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/GDP(2000)
Algeria	-26%	77%	-16%	-93%	-5%	257%	-82%	12%	0%	32%	0%	-27%	0	0	155%
Bahrain	108%	68%	61%	-43%	69%	153%	82%	-112%	12%	-66%	69%	-156%	0	0	178%
Egypt	-22%	-25%	-13%	-4%	-13%	-169%	57%	4%	0%	125%	67%	-78%	0	0	167%
Iran	-3%	18%	-2%	-8%	3%	178%	-57%	-5%	0%	125%	30%	-245%	0	0	168%
Iraq	-180%	13%	-115%	2%	-53%	434%	-195%	8%	0%	107%	56%	-231%	0	0	157%
Israel	-37%	22%	-25%	-43%	-23%	-120%	24%	-27%	0%	171%	2%	63%	0	0	148%
Jordan	-72%	-85%	-37%	-29%	-31%	-564%	13%	20%	0%	508%	1%	33%	0	0	193%
Kuwait	293%	329%	160%	33%	335%	760%	-177%	-2%	0%	-187%	-7%	-587%	0	0	183%
Lebanon	-9%	-64%	-5%	22%	25%	-858%	175%	3%	2%	-49%	6%	614%	0	0	180%
Libya	62%	219%	43%	-92%	71%	589%	-151%	-17%	0%	-84%	3%	-143%	0	0	146%
Morocco	-42%	-52%	-22%	-30%	-20%	-228%	79%	1%	0%	141%	-1%	28%	0	0	195%
Oman	-10%	0%	-6%	-52%	-1%	433%	-130%	-36%	0%	-188%	0%	-20%	0	0	155%
Palestine	14%	6%	8%	4%	14%	-810%	-76%	147%	0%	425%	100%	194%	0	0	181%
Qatar	547%	115%	136%	-77%	22%	392%	-66%	13%	0%	-91%	-20%	-195%	0	0	401%
Saudi Arabia	94%	115%	58%	-18%	93%	641%	-315%	-14%	0%	-118%	3%	-215%	1	1	163%
Syria	-57%	3%	-46%	-89%	-15%	-100%	27%	42%	0%	231%	4%	-52%	0	0	125%
Tunisia	-92%	-102%	-58%	-53%	-44%	-204%	110%	9%	0%	92%	4%	42%	0	0	158%
Turkey	-34%	-50%	-20%	-17%	-16%	-101%	49%	7%	0%	-13%	0%	62%	0	1	173%
United Arab Emirates	271%	127%	165%	5%	101%	222%	-35%	-90%	-1%	46%	3%	-289%	0	0	164%
Yemen	-11%	-1%	-8%	-99%	-17%	-156%	-101%	-1%	0%	180%	16%	186%	0	0	129%

Table 32

Decomposition 2012-2022. Real values USD of 2023. MENA

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/GDP(2012)
Algeria	77%	17%	65%	-33%	7%	-26%	-42%	1%	0%	17%	0%	28%	0	0	120%
Bahrain	68%	39%	52%	-25%	25%	47%	62%	-34%	14%	-62%	14%	-54%	0	0	130%
Egypt	-25%	-57%	-15%	-20%	-6%	-78%	2%	2%	0%	66%	-1%	-7%	0	0	163%
Iran	18%	60%	15%	-6%	4%	26%	-10%	0%	0%	42%	2%	-14%	0	0	120%
Iraq	13%	14%	10%	-7%	-1%	146%	-65%	0%	0%	-3%	0%	-66%	0	0	131%
Israel	22%	31%	15%	-26%	9%	-34%	45%	-11%	0%	23%	-1%	12%	0	0	149%
Jordan	-85%	-117%	-70%	-9%	-20%	-267%	34%	8%	0%	158%	-1%	49%	0	0	122%
Kuwait	329%	570%	321%	-7%	194%	352%	-158%	0%	0%	-201%	11%	59%	0	0	103%
Lebanon	-64%	-341%	-97%	9%	-29%	-464%	31%	-1%	6%	31%	29%	144%	0	0	67%
Libya	219%	428%	379%	-38%	60%	202%	-160%	0%	1%	-32%	2%	13%	0	0	58%
Morocco	-52%	-61%	-36%	-13%	-9%	-161%	56%	0%	0%	75%	0%	26%	0	0	144%
Oman	0%	-39%	0%	-41%	-4%	189%	-89%	-26%	0%	-183%	2%	113%	0	0	123%
Palestine	6%	18%	5%	-4%	5%	-351%	-56%	146%	0%	147%	32%	94%	0	0	121%
Qatar	115%	185%	93%	-74%	26%	333%	-102%	8%	0%	-127%	-11%	38%	0	0	124%
Saudi Arabia	115%	115%	90%	-17%	30%	165%	-83%	-1%	0%	-50%	-2%	-17%	1	1	128%
Syria	3%	4%	4%	-21%	0%	-229%	69%	3%	0%	35%	1%	142%	0	0	61%
Tunisia	-102%	-160%	-84%	-19%	-19%	-173%	55%	9%	0%	49%	5%	16%	0	0	122%
Turkey	-50%	-40%	-30%	-3%	-9%	-56%	34%	0%	0%	-25%	0%	51%	1	1	167%
United Arab Emirates	127%	223%	94%	2%	33%	-22%	-10%	-7%	-1%	0%	0%	135%	0	0	136%
Yemen	-1%	-31%	-2%	-38%	-1%	-269%	-64%	-2%	0%	362%	-3%	-14%	0	0	47%

Table 33

Decomposition 1970-2000. Real values USD of 2023. Sub-Saharan Africa

Countries	NFA-GDP ratios		Decomposition of 2000 NFA-GDP ratio										Real GDP trillions 2000 USD		
	b(1970)	b(2000)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (1970)	GDP (2000)	GDP(2000)/ GDP(1970)
Angola	-37%	-114%	-25%	-89%	-73%	339%	-269%	-14%	0%	60%	3%	-47%	0	0	151%
Benin	-4%	-29%	-1%	5%	-14%	-107%	-34%	-1%	-1%	89%	57%	-22%	0	0	470%
Botswana	-35%	78%	-2%	-117%	40%	148%	-74%	12%	0%	74%	13%	-16%	0	0	2012%
Burkina Faso	1%	-46%	0%	1%	-5%	-186%	-83%	1%	-1%	74%	58%	94%	0	0	352%
Burundi	-2%	-134%	-1%	4%	-21%	-127%	-195%	-35%	0%	334%	71%	-164%	0	0	166%
Cameroon	-15%	-84%	-5%	-68%	-15%	76%	-73%	-6%	0%	2%	2%	4%	0	0	287%
Cape Verde	17%	-53%	5%	-4%	-1%	-533%	33%	2%	0%	501%	22%	-77%	0	0	346%
Central African Republic	-30%	-80%	-22%	-16%	-16%	10%	-171%	2%	0%	191%	10%	-69%	0	0	139%
Chad	-8%	-93%	-5%	6%	-16%	-97%	-220%	0%	1%	334%	6%	-101%	0	0	158%
Comoros	-4%	-44%	-2%	8%	-8%	-152%	-119%	-4%	2%	150%	25%	57%	0	0	250%
Congo	-25%	-125%	-7%	-182%	-93%	462%	-472%	-8%	0%	17%	40%	119%	0	0	352%
Cote d'Ivoire	-10%	-89%	-4%	-82%	-81%	286%	-172%	8%	0%	-56%	24%	-14%	0	0	238%
Democratic Republic of Congo	-1%	-84%	-1%	-54%	-31%	293%	-330%	-60%	-1%	334%	-160%	-64%	0	0	64%
Djibouti	19%	18%	13%	-10%	41%	-1116%	380%	-19%	19%	974%	-16%	-248%	0	0	152%
Equatorial Guinea	-20%	-98%	-2%	-28%	-19%	107%	-199%	0%	0%	53%	97%	-108%	0	0	1151%
Eritrea	22%	-46%	12%	-1%	17%	-601%	4%	-6%	5%	723%	4%	-201%	0	0	185%
Ethiopia	-3%	-69%	-2%	1%	-10%	-97%	-12%	1%	1%	103%	6%	-60%	0	0	162%
Gabon	-73%	-77%	-25%	-143%	-84%	656%	-332%	-20%	2%	-60%	52%	-122%	0	0	289%
Gambia	6%	-43%	2%	-5%	-5%	-90%	9%	-2%	1%	169%	9%	-131%	0	0	263%
Ghana	-9%	-63%	-4%	-14%	-5%	-32%	-40%	-2%	0%	58%	18%	-42%	0	0	202%
Guinea	-15%	-68%	-6%	-7%	-32%	43%	-72%	0%	-2%	42%	43%	-78%	0	0	274%
Guinea-Bissau	-30%	-182%	-17%	-8%	-48%	-154%	-66%	6%	1%	114%	186%	-196%	0	0	176%
Kenya	-9%	-6%	-3%	-33%	-12%	-210%	54%	-2%	3%	103%	16%	79%	0	0	304%
Lesotho	3%	-48%	1%	-25%	-27%	-1701%	-763%	2146%	14%	524%	271%	-489%	0	0	411%
Liberia	-43%	-444%	-55%	5%	-67%	270%	-293%	-2%	-4%	723%	235%	-1257%	0	0	78%
Madagascar	-23%	-73%	-16%	-41%	-30%	-58%	-93%	-2%	2%	80%	41%	45%	0	0	140%
Malawi	-22%	-62%	-8%	-42%	-24%	-18%	-124%	7%	1%	87%	106%	-47%	0	0	291%
Mali	-49%	-81%	-15%	-4%	-30%	-97%	-193%	2%	0%	167%	77%	12%	0	0	318%
Mauritania	-79%	-169%	-43%	-30%	-35%	31%	-151%	1%	4%	159%	14%	-119%	0	0	185%
Mauritius	12%	-9%	2%	63%	-10%	-89%	38%	-2%	1%	-28%	-2%	18%	0	0	522%
Mozambique	-5%	-165%	-2%	-19%	-52%	-149%	-59%	12%	7%	95%	37%	-36%	0	0	266%
Namibia	-24%	-15%	-10%	42%	-30%	2%	-126%	-10%	0%	301%	28%	-210%	0	0	229%
Niger	-1%	-66%	-1%	7%	-25%	-49%	-131%	3%	-1%	89%	111%	-69%	0	0	126%
Nigeria	-22%	-52%	-10%	-45%	-15%	106%	-47%	-2%	1%	20%	0%	-59%	0	0	207%
Rwanda	4%	-43%	1%	-8%	-7%	-144%	-46%	-12%	2%	224%	92%	-145%	0	0	258%
Sao Tome and Principe	-40%	-356%	-22%	13%	-34%	-198%	-159%	-2%	-18%	230%	440%	-606%	0	0	181%
Senegal	-30%	-63%	-14%	-16%	-38%	-106%	-19%	9%	0%	62%	33%	25%	0	0	217%
Seychelles	-2%	9%	0%	-60%	2%	-524%	443%	4%	-2%	53%	9%	85%	0	0	467%
Sierra Leone	-2%	-121%	-3%	-106%	-7%	-142%	-119%	-3%	0%	237%	203%	-182%	0	0	72%
Somalia	-12%	-111%	-6%	-47%	-83%	-355%	5%	4%	9%	120%	47%	196%	0	0	197%
South Africa	-44%	-6%	-21%	-27%	-35%	84%	-15%	-23%	1%	-12%	-5%	44%	0	0	210%
South Sudan	0%	-7%	0%	-47%	-2%	-89%	-29%	0%	0%	626%	18%	-486%	0	0	570%
Sudan	-99%	-188%	-17%	-8%	-8%	-71%	-20%	0%	0%	35%	-29%	-70%	0	0	570%
Swaziland	-20%	8%	-3%	-34%	-9%	-68%	-121%	88%	-1%	191%	0%	-33%	0	0	575%
Tanzania	-23%	-64%	-9%	-7%	-20%	-137%	-34%	0%	2%	101%	83%	-43%	0	0	273%
Togo	-17%	-69%	-10%	1%	-65%	-114%	-120%	6%	1%	171%	10%	51%	0	0	162%
Uganda	-4%	-41%	-2%	-3%	-9%	-39%	-73%	-8%	2%	144%	61%	-115%	0	0	244%
Zambia	-144%	-245%	-98%	-134%	-92%	203%	-192%	-13%	6%	46%	124%	-95%	0	0	147%
Zimbabwe	-22%	-50%	-10%	-37%	-22%	27%	-73%	-3%	3%	112%	55%	-102%	0	0	212%

Table 34

Decomposition 2000-2012. Real values USD of 2023. Sub-Saharan Africa

Quintile	NFA-GDP ratios		Decomposition of 2012 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2000)	b(2012)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2000)	GDP (2012)	GDP(2012)/ GDP(2000)
Angola	-114%	-13%	-44%	-130%	-29%	445%	-282%	-6%	0%	21%	2%	10%	0	0	261%
Benin	-29%	-10%	-18%	0%	-12%	-122%	-41%	0%	-1%	86%	63%	36%	0	0	158%
Botswana	78%	43%	56%	-187%	57%	130%	-52%	4%	0%	222%	13%	-199%	0	0	140%
Burkina Faso	-46%	-3%	-23%	0%	-4%	-143%	-90%	0%	-1%	98%	68%	92%	0	0	202%
Burundi	-134%	-27%	-89%	-3%	-20%	-241%	-210%	-24%	0%	483%	136%	-58%	0	0	150%
Cameroon	-84%	-13%	-53%	-58%	-14%	53%	-72%	-4%	-1%	16%	12%	107%	0	0	160%
Cape Verde	-53%	-136%	-28%	-13%	-21%	-627%	87%	1%	0%	492%	27%	-53%	0	0	191%
Central African Republic	-80%	-35%	-62%	-25%	-14%	19%	-222%	8%	0%	295%	22%	-55%	0	0	129%
Chad	-93%	-81%	-25%	20%	-11%	87%	-146%	-4%	1%	293%	3%	-298%	0	0	371%
Comoros	-44%	-7%	-35%	4%	-11%	-246%	-118%	-4%	3%	261%	59%	79%	0	0	126%
Congo	-125%	-39%	-80%	-257%	-65%	650%	-511%	-8%	-1%	14%	48%	170%	0	0	156%
Cote d'Ivoire	-89%	4%	-64%	-96%	-61%	350%	-198%	13%	0%	-59%	53%	69%	0	0	138%
Democratic Republic of Congo	-84%	-56%	-46%	-69%	-24%	156%	-251%	-26%	1%	280%	-62%	-14%	0	0	181%
Djibouti	18%	-8%	8%	-12%	19%	-723%	285%	1%	20%	507%	-10%	-104%	0	0	237%
Equatorial Guinea	-98%	-37%	-21%	-38%	-7%	485%	-310%	-1%	1%	0%	236%	-382%	0	0	471%
Eritrea	-46%	-55%	-36%	-3%	5%	-806%	44%	-2%	12%	1136%	2%	-407%	0	0	125%
Ethiopia	-69%	-30%	-24%	0%	-5%	-156%	-17%	0%	1%	163%	2%	5%	0	0	285%
Gabon	-77%	-30%	-61%	-213%	-77%	891%	-375%	-17%	4%	-78%	45%	-149%	0	0	126%
Gambia	-43%	-46%	-31%	-21%	-10%	-164%	37%	-5%	1%	189%	21%	-63%	0	0	138%
Ghana	-63%	-34%	-29%	-17%	-7%	-86%	-37%	0%	0%	88%	16%	37%	0	0	217%
Guinea	-68%	-20%	-46%	-8%	-30%	22%	-108%	-1%	-3%	39%	35%	80%	0	0	150%
Guinea-Bissau	-182%	-35%	-134%	-19%	-43%	-164%	-114%	4%	3%	211%	302%	-81%	0	0	136%
Kenya	-6%	-15%	-4%	-24%	-8%	-231%	59%	-2%	2%	114%	13%	66%	0	0	175%
Lesotho	-48%	7%	-29%	-51%	-25%	-1446%	-672%	1615%	23%	833%	199%	-439%	0	0	167%
Liberia	-444%	2%	-235%	-54%	-116%	-144%	-655%	-25%	-12%	1467%	751%	-976%	0	0	189%
Madagascar	-73%	-56%	-54%	-50%	-28%	-154%	-99%	-1%	5%	116%	84%	126%	0	0	135%
Malawi	-62%	-27%	-33%	-42%	-15%	-120%	-90%	2%	2%	135%	150%	-15%	0	0	185%
Mali	-81%	-30%	-45%	-40%	-24%	-75%	-169%	2%	0%	152%	99%	70%	0	0	180%
Mauritania	-169%	-90%	-107%	-13%	-27%	71%	-206%	1%	19%	207%	14%	-51%	0	0	158%
Mauritius	-9%	362%	-6%	172%	254%	-202%	80%	-2%	2%	-48%	-1%	113%	0	0	160%
Mozambique	-165%	-117%	-65%	-34%	-40%	-139%	-90%	7%	7%	122%	53%	63%	0	0	252%
Namibia	-15%	47%	-9%	20%	-9%	-88%	-69%	-6%	-1%	366%	24%	-181%	0	0	173%
Niger	-66%	-40%	-37%	2%	-20%	-86%	-133%	6%	-2%	94%	74%	62%	0	0	180%
Nigeria	-52%	-6%	-22%	-57%	-7%	136%	-62%	-1%	1%	56%	29%	-78%	0	0	236%
Rwanda	-43%	-14%	-17%	-9%	-4%	-149%	-39%	-9%	3%	221%	68%	-80%	0	0	258%
Sao Tome and Principe	-356%	-166%	-199%	17%	-32%	-466%	-146%	-4%	-11%	195%	561%	-82%	0	0	179%
Senegal	-63%	-43%	-43%	-20%	-36%	-207%	-22%	12%	0%	130%	60%	83%	0	0	147%
Seychelles	9%	42%	7%	-91%	1%	-700%	477%	-2%	-4%	64%	54%	236%	0	0	137%
Sierra Leone	-121%	-50%	-42%	-57%	-12%	-201%	-81%	0%	0%	175%	130%	39%	0	0	287%
Somalia	-111%	-116%	-49%	-26%	-49%	-293%	5%	3%	12%	129%	44%	108%	0	0	224%
South Africa	-6%	-14%	-4%	-38%	-31%	61%	-17%	-17%	3%	-18%	-3%	51%	0	0	149%
South Sudan	-7%	7%	-6%	-85%	-1%	-187%	-63%	0%	1%	1423%	38%	-1112%	0	0	118%
Sudan	-188%	-95%	-131%	-52%	-18%	-49%	-67%	0%	0%	74%	-39%	186%	0	0	144%
Swaziland	8%	29%	5%	-70%	8%	-68%	-154%	79%	-3%	289%	-4%	-53%	0	0	153%
Tanzania	-64%	-45%	-30%	-12%	-16%	-149%	-10%	-1%	3%	94%	81%	-6%	0	0	214%
Togo	-69%	22%	-35%	-1%	-46%	-153%	-82%	11%	2%	148%	62%	116%	0	0	197%
Uganda	-41%	-29%	-16%	-11%	-8%	-80%	-49%	-8%	3%	138%	114%	-112%	0	0	255%
Zambia	-245%	4%	-105%	-101%	-49%	122%	-100%	-5%	4%	51%	98%	90%	0	0	233%
Zimbabwe	-50%	-37%	-27%	-31%	-12%	2%	-94%	-2%	3%	167%	53%	-96%	0	0	181%

Table 35

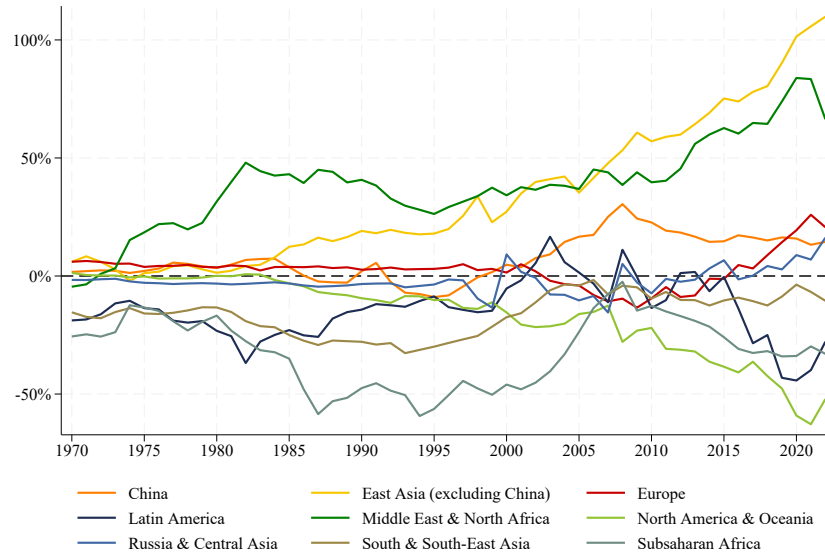
Decomposition 2012-2022. Real values USD of 2023. Sub-Saharan Africa

Quintile	NFA-GDP ratios		Decomposition of 2022 NFA-GDP ratio										Real GDP trillions 2023 USD		
	b(2012)	b(2022)	Initial wealth	Privilege	Other NFKI	Trade goods	Trade services	Compens. employees	Rent, taxes, subsidies	Transfers, remittances	Capital account	Capital gain/loss	GDP (2012)	GDP (2022)	GDP(2022)/ GDP(2012)
Angola	-13%	-20%	-12%	-75%	-3%	258%	-145%	-5%	1%	-13%	0%	-26%	0	0	104%
Benin	-10%	-44%	-6%	-1%	-6%	-31%	-23%	0%	0%	14%	11%	-3%	0	0	171%
Botswana	43%	27%	30%	-46%	5%	-22%	-27%	-1%	0%	141%	6%	-59%	0	0	145%
Burkina Faso	-3%	-40%	-2%	-27%	-4%	8%	-55%	0%	-1%	35%	19%	-13%	0	0	160%
Burundi	-27%	-84%	-20%	-7%	-1%	-179%	-55%	3%	0%	125%	34%	16%	0	0	135%
Cameroon	-13%	-26%	-9%	-19%	-2%	-14%	-20%	2%	0%	13%	3%	20%	0	0	147%
Cape Verde	-136%	-146%	-108%	-21%	-13%	-305%	105%	3%	0%	160%	7%	28%	0	0	126%
Central African Republic	-35%	-76%	-44%	-4%	-3%	-135%	-94%	6%	0%	121%	4%	73%	0	0	80%
Chad	-81%	-99%	-64%	-19%	-2%	64%	-121%	2%	1%	240%	3%	-203%	0	0	128%
Comoros	-7%	-4%	-5%	-6%	0%	-166%	-30%	0%	5%	184%	29%	-15%	0	0	148%
Congo	-39%	-149%	-44%	-24%	-3%	233%	-184%	0%	0%	-8%	3%	-123%	0	0	88%
Cote d'Ivoire	4%	-45%	2%	-27%	-3%	42%	-41%	2%	0%	-15%	14%	-19%	0	0	227%
Democratic Republic of Congo	-56%	-47%	-32%	-28%	-1%	11%	-56%	-1%	1%	48%	3%	8%	0	0	175%
Djibouti	-8%	-78%	-5%	-34%	-5%	-104%	99%	7%	6%	78%	11%	-132%	0	0	179%
Equatorial Guinea	-37%	-124%	-57%	-16%	-6%	495%	-403%	-2%	2%	-23%	328%	-441%	0	0	65%
Eritrea	-55%	-50%	-49%	-10%	-4%	57%	44%	3%	10%	573%	0%	-674%	0	0	111%
Ethiopia	-30%	-54%	-14%	-3%	-1%	-101%	-15%	0%	0%	81%	1%	-1%	0	0	212%
Gabon	-30%	-93%	-24%	-88%	-11%	244%	-126%	-2%	3%	-17%	0%	-72%	0	0	126%
Gambia	-46%	-83%	-32%	-11%	-2%	-197%	24%	-5%	1%	141%	25%	-26%	0	0	143%
Ghana	-34%	-33%	-22%	-28%	-14%	-7%	-46%	1%	0%	34%	3%	46%	0	0	156%
Guinea	-20%	35%	-11%	-15%	-1%	74%	-68%	0%	-1%	15%	13%	29%	0	0	177%
Guinea-Bissau	-35%	-41%	-23%	-10%	-4%	-25%	-79%	9%	11%	46%	29%	5%	0	0	152%
Kenya	-15%	-61%	-10%	-17%	-2%	-109%	15%	-1%	1%	49%	2%	9%	0	0	155%
Lesotho	7%	-31%	7%	-30%	-9%	-426%	-196%	229%	0%	462%	40%	-107%	0	0	99%
Liberia	2%	-47%	2%	-52%	0%	-315%	-99%	-14%	-1%	345%	77%	10%	0	0	130%
Madagascar	-56%	-44%	-43%	-34%	-2%	-57%	-10%	-1%	4%	66%	14%	20%	0	0	129%
Malawi	-27%	-63%	-14%	-29%	-1%	-152%	-20%	-1%	3%	60%	66%	26%	0	0	189%
Mali	-30%	-72%	-20%	-26%	-8%	-23%	-103%	1%	0%	118%	12%	-24%	0	0	150%
Mauritania	-90%	-118%	-61%	-2%	-9%	-73%	-76%	-9%	7%	46%	12%	48%	0	0	148%
Mauritius	362%	415%	289%	593%	35%	-212%	39%	0%	8%	-81%	2%	-259%	0	0	125%
Mozambique	-117%	-371%	-79%	-13%	-15%	-170%	-166%	1%	4%	74%	17%	-25%	0	0	148%
Namibia	47%	-2%	41%	-2%	11%	-190%	-5%	-1%	-1%	202%	12%	-68%	0	0	115%
Niger	-40%	-96%	-23%	-4%	-11%	-74%	-61%	2%	-1%	35%	36%	5%	0	0	175%
Nigeria	-6%	-17%	-5%	-29%	-2%	19%	-44%	0%	1%	52%	44%	-53%	0	0	126%
Rwanda	-14%	-69%	-8%	-21%	-1%	-122%	-13%	-3%	2%	78%	23%	-3%	0	0	184%
Sao Tome and Principe	-166%	-126%	-119%	5%	-5%	-299%	-2%	1%	5%	97%	77%	116%	0	0	139%
Senegal	-43%	-84%	-26%	-15%	-12%	-116%	-36%	5%	0%	79%	13%	22%	0	0	165%
Seychelles	42%	-31%	26%	-35%	0%	-342%	251%	-5%	-2%	-10%	25%	61%	0	0	160%
Sierra Leone	-50%	-90%	-39%	-36%	-2%	-138%	-101%	0%	0%	155%	26%	45%	0	0	128%
Somalia	-116%	-70%	-59%	-10%	-5%	-327%	4%	2%	9%	51%	10%	256%	0	0	196%
South Africa	-14%	21%	-12%	-26%	2%	8%	-7%	0%	-2%	-10%	-1%	70%	0	0	110%
South Sudan	7%	-59%	4%	-48%	-4%	138%	-267%	5%	0%	443%	29%	-358%	0	0	175%
Sudan	-95%	-344%	-76%	-32%	-1%	-117%	-6%	1%	0%	49%	-14%	-149%	0	0	125%
Swaziland	29%	9%	24%	-78%	8%	24%	-43%	5%	-7%	215%	-1%	-136%	0	0	121%
Tanzania	-45%	-55%	-25%	-13%	-4%	-62%	20%	0%	2%	16%	7%	4%	0	0	182%
Togo	22%	-2%	14%	-5%	0%	-112%	9%	5%	1%	58%	39%	-12%	0	0	162%
Uganda	-29%	-53%	-18%	-18%	-2%	-65%	-22%	-5%	2%	43%	2%	31%	0	0	157%
Zambia	4%	-94%	3%	-39%	-2%	64%	-31%	0%	1%	16%	3%	-110%	0	0	140%
Zimbabwe	-37%	-66%	-32%	-21%	0%	-76%	-51%	0%	3%	127%	16%	-31%	0	0	115%

B.1.3 World regions

Figure A6

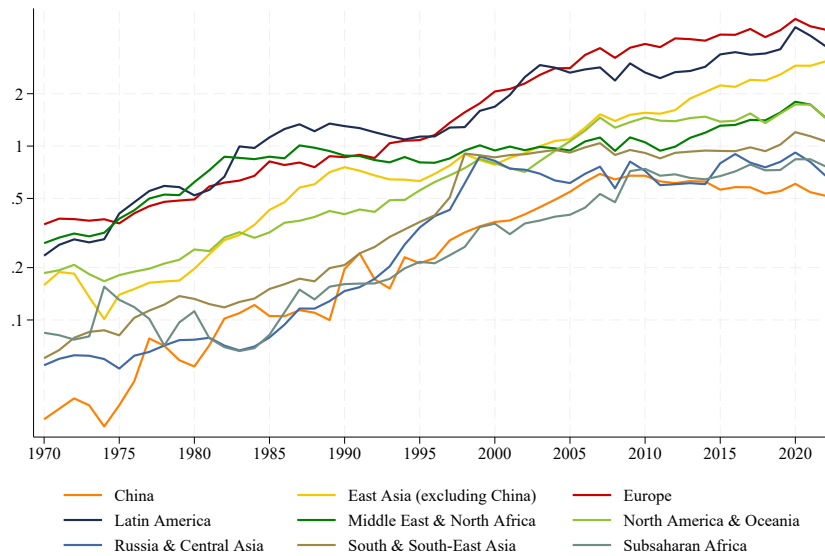
Net foreign assets as a share of regional GDP



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

Figure A7

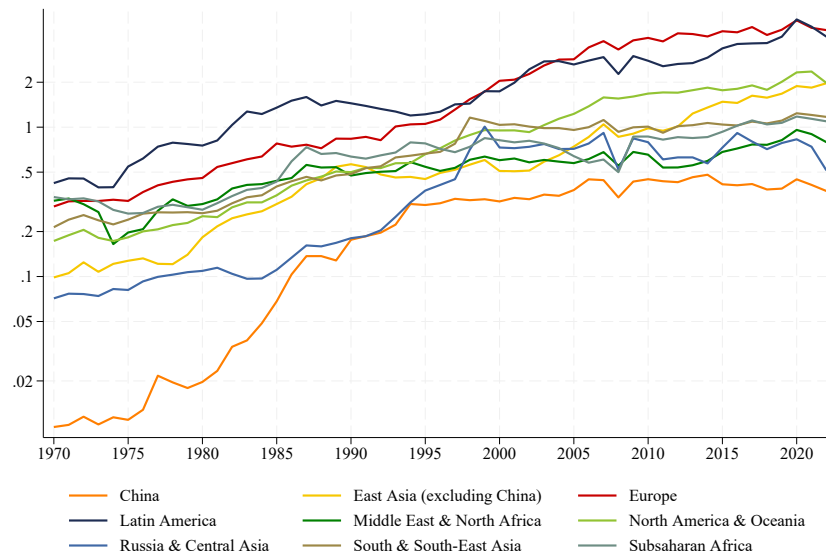
Gross foreign assets as a share of regional GDP (log scale)



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)



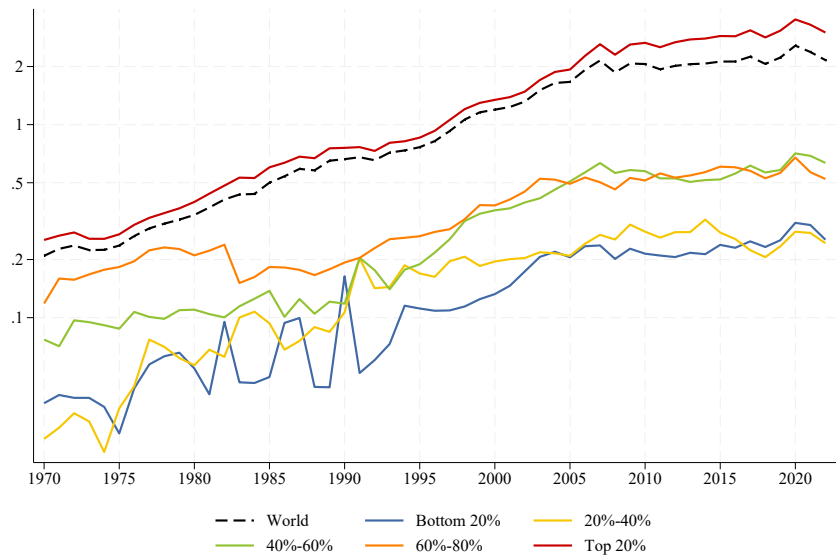
Graph shows gross foreign liabilities corrected by offshore wealth as a share of each region's GDP.

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 A9

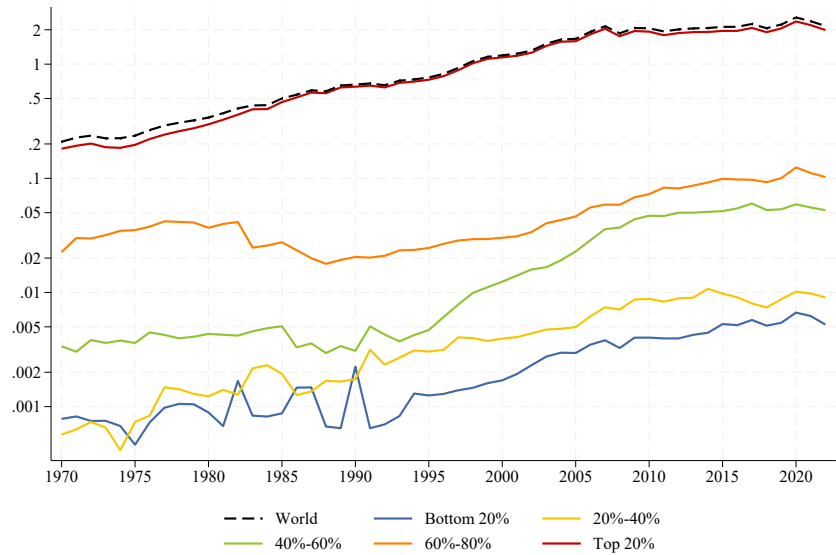
Gross foreign assets, as a share of group GDP (log scale)



Graph shows average gross foreign assets. Simple averages by group.

Figure A10

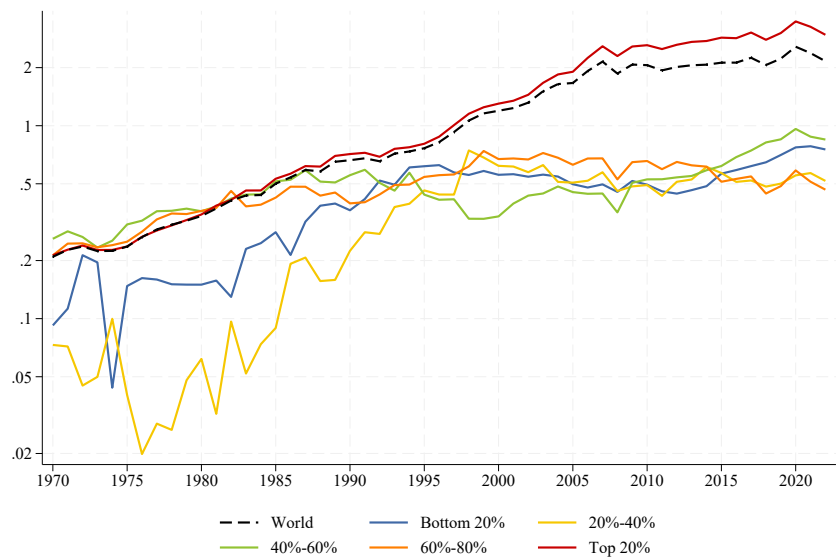
Gross foreign assets, as a share of global GDP (log scale)



Graph shows average gross foreign assets. Simple averages by group.

Figure A11

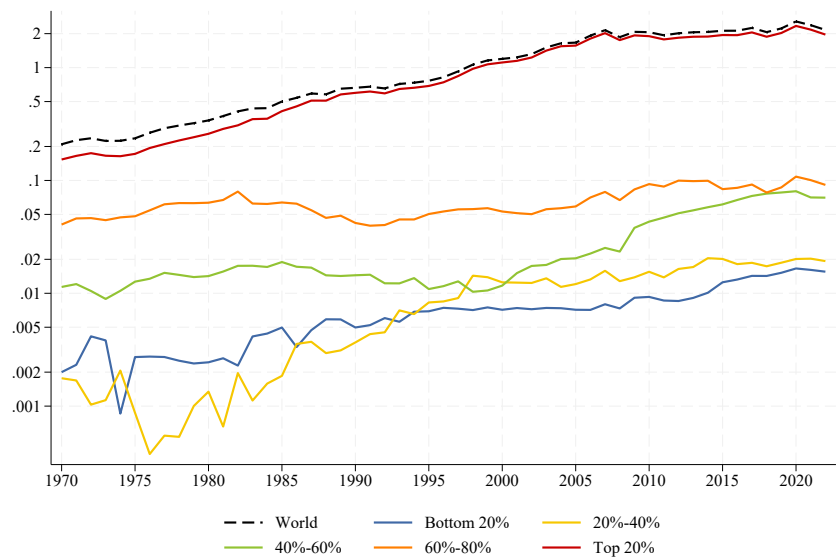
Gross foreign liabilities, as a share of group GDP (log scale)



Graph shows average gross foreign liabilities. Simple averages by group.

Figure A12

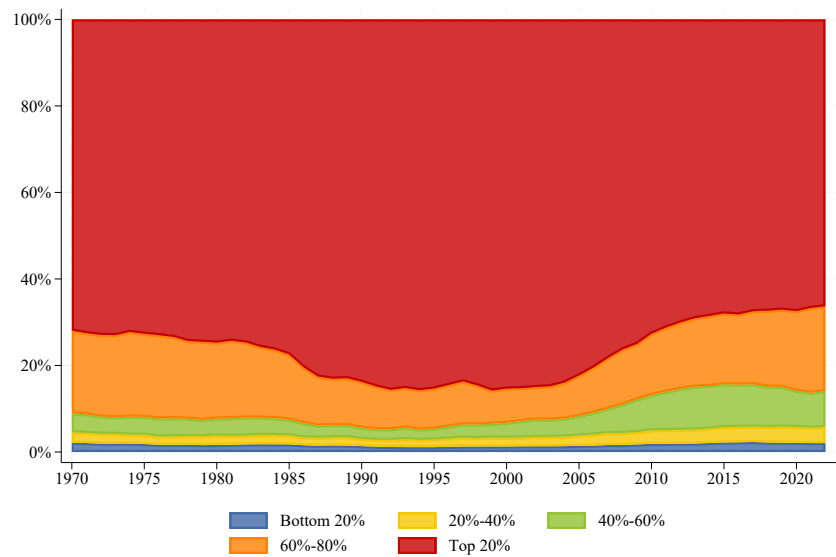
Gross foreign liabilities, as a share of global GDP (log scale)



Graph shows average gross foreign liabilities. Simple averages by group.

Figure A13

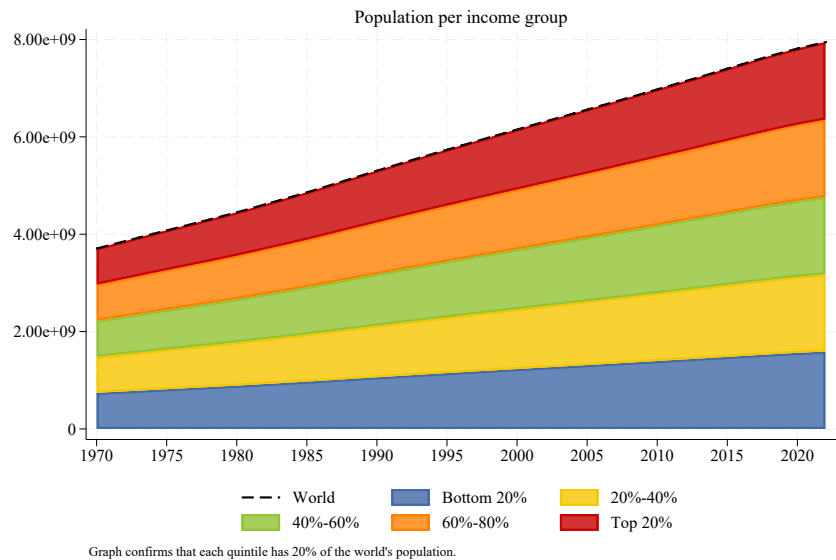
Share of global GDP per income group



Graph shows aggregate GDP per group.

Figure A14

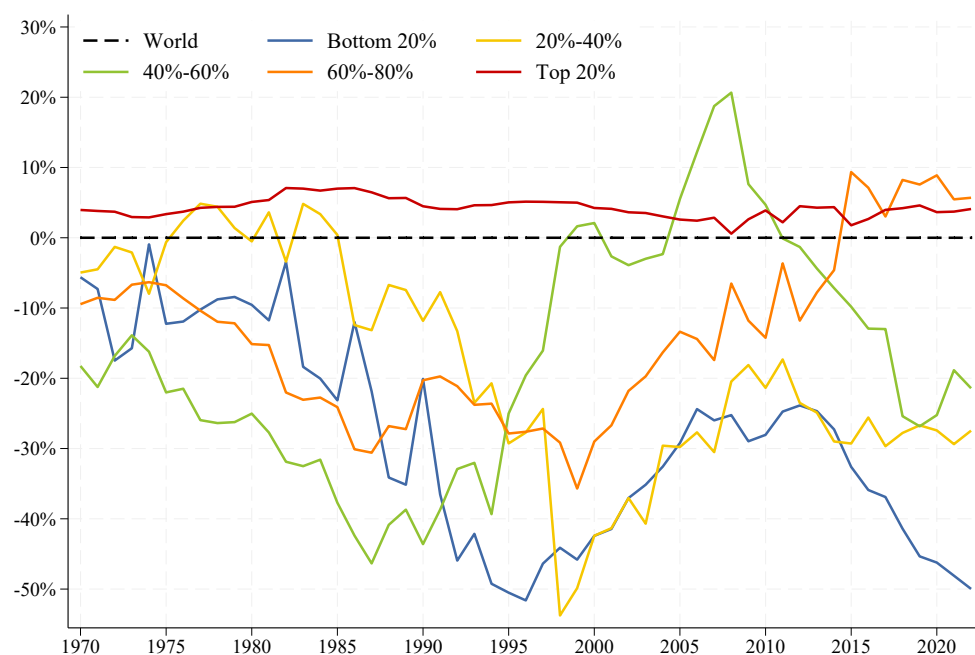
Share of global population per income group



Graph shows aggregate population per group.

Figure A15

Net foreign assets as a share of group GDP



Graph shows average net 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.

Table 36

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

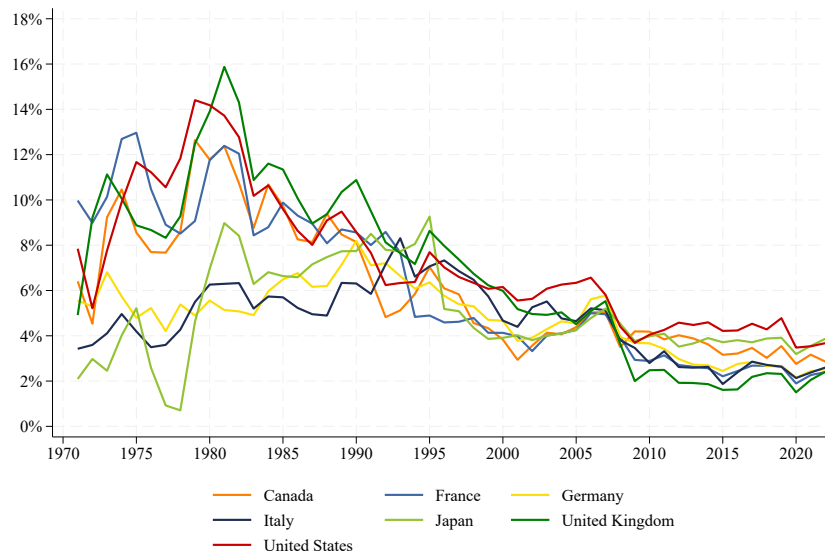
The table shows a transition matrix by quintiles of per capita national income.

B.2 Unequal rates of return

B.2.1 G8 vs BRICS

Figure A16

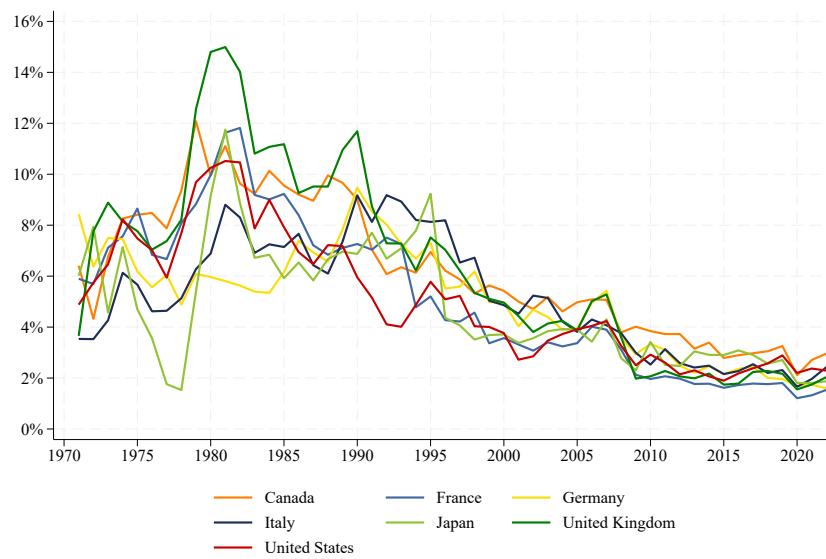
Returns on foreign assets, G7 countries



Graph shows average rate of returns on foreign assets.

Figure A17

Returns on foreign liabilities, G7 countries



Graph shows average rate of returns on foreign liabilities.

Figure A18

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

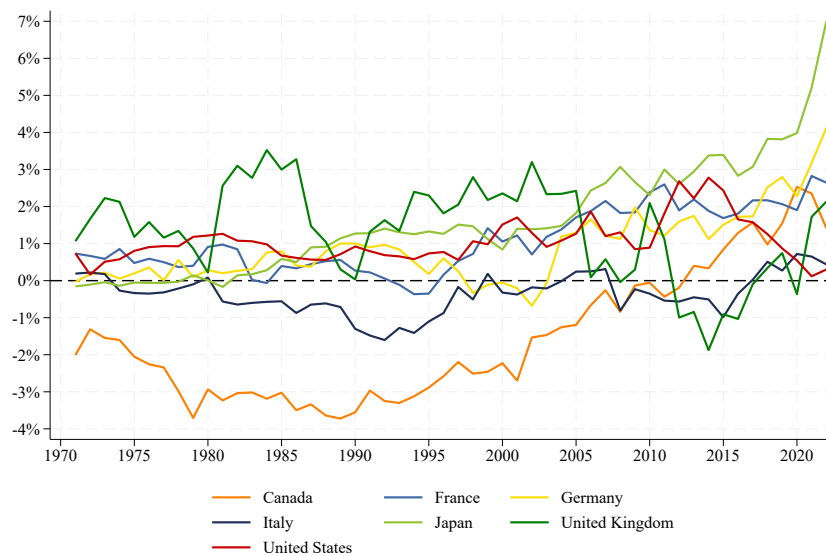
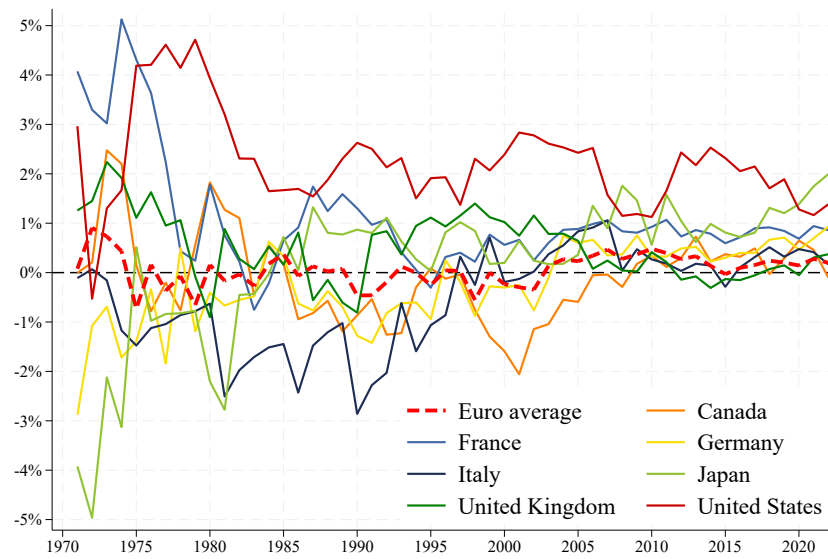


Figure A19

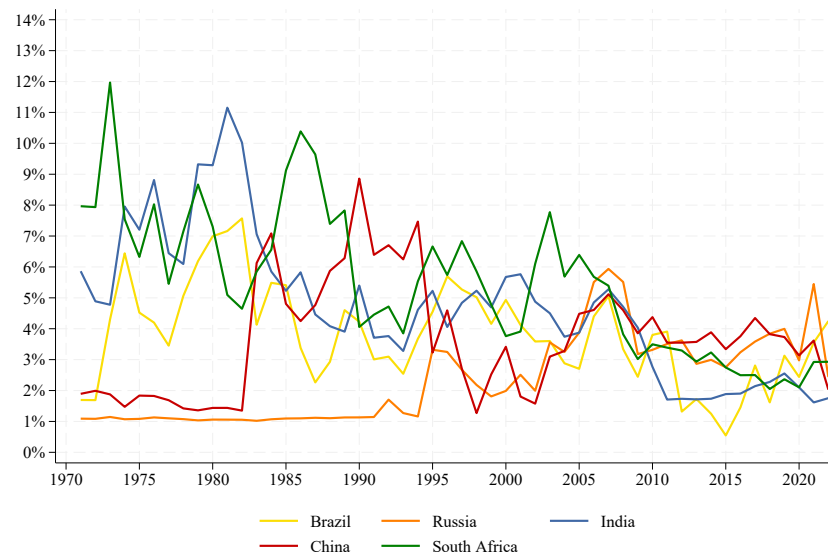
Excess yields, G8 economies



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 A20

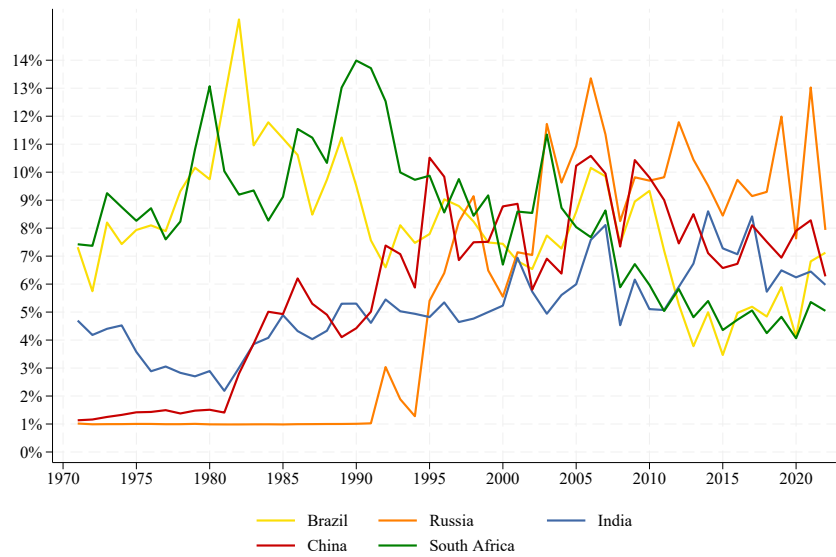
Returns on foreign assets, BRICS



Graph shows average rate of returns on foreign assets.

Figure A21

Returns on foreign liabilities, BRICS



Graph shows average rate of returns on foreign liabilities.

Figure A22

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

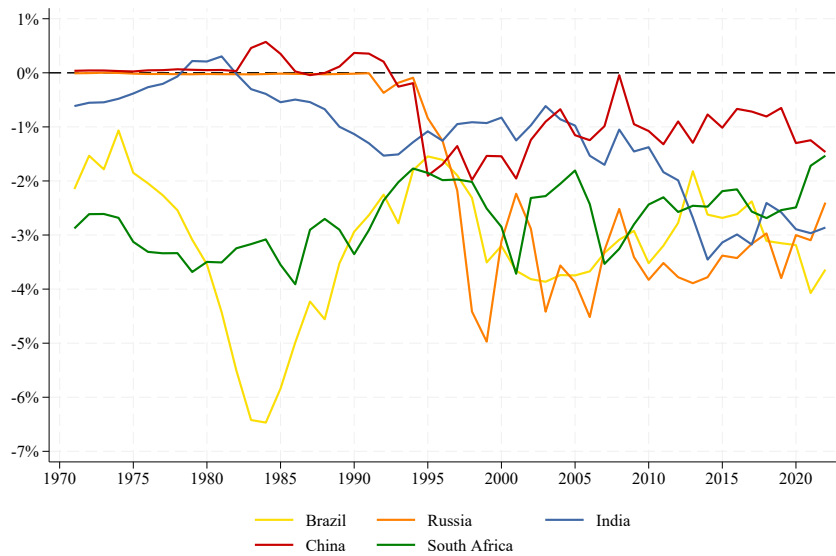
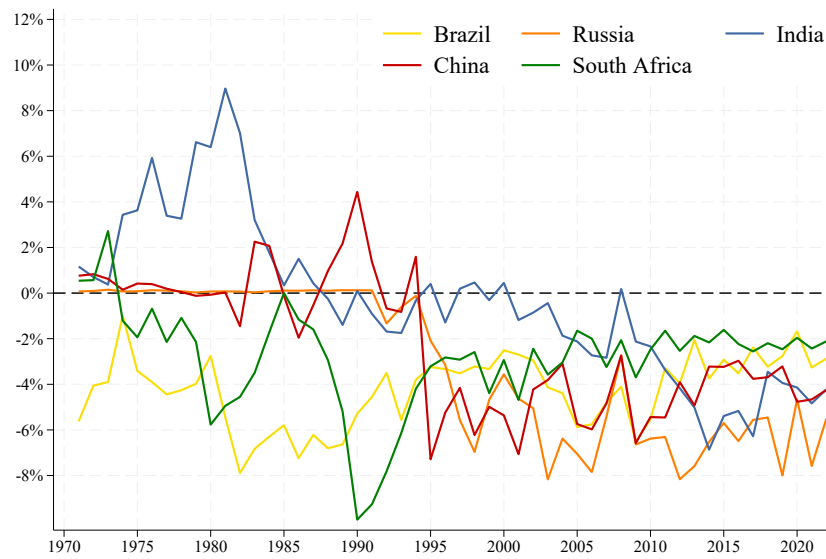


Figure A23

Excess yields, BRICS

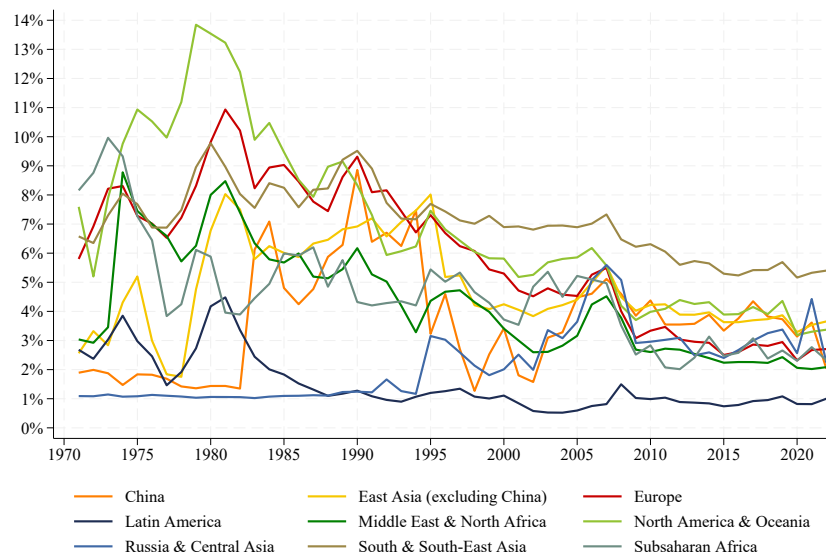


Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities.

B.2.2 World Regions

Figure A24

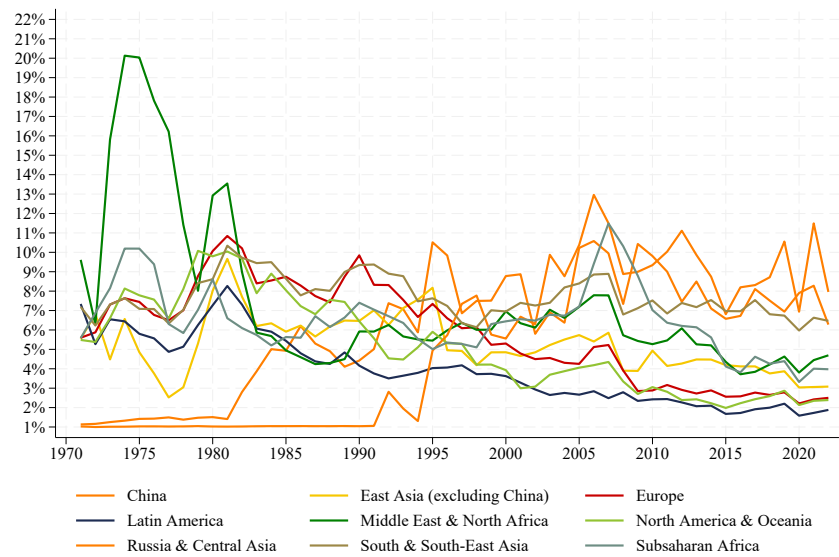
Returns on foreign assets per region



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

Figure A25

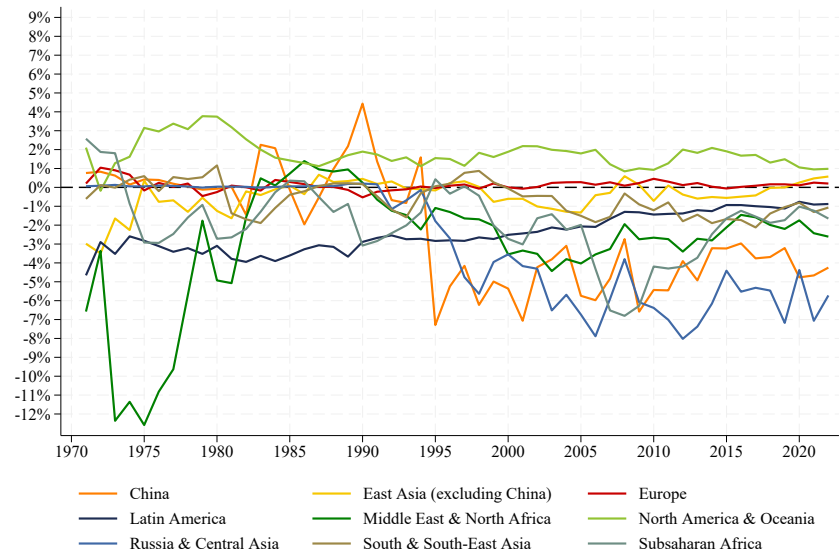
Returns on foreign liabilities per region



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

Figure A26

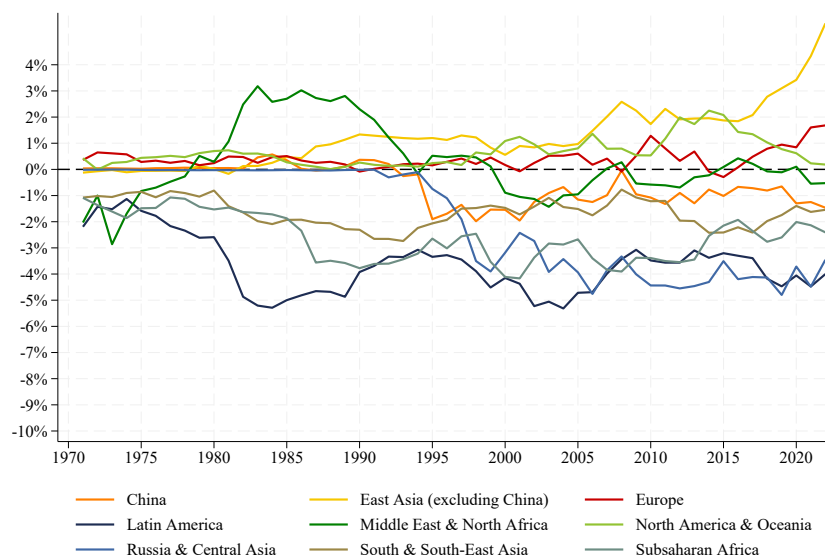
Excess yields per region



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

Figure A27

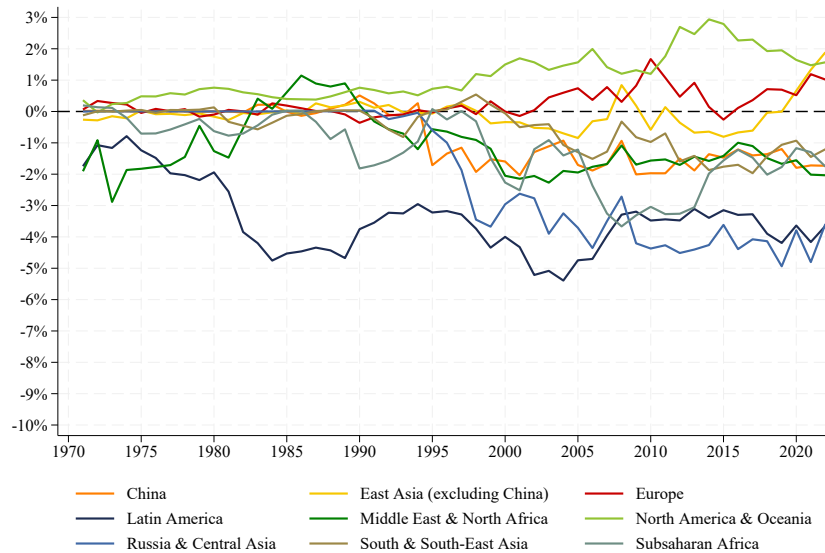
Net foreign capital income as a share of GDP



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

Figure A28

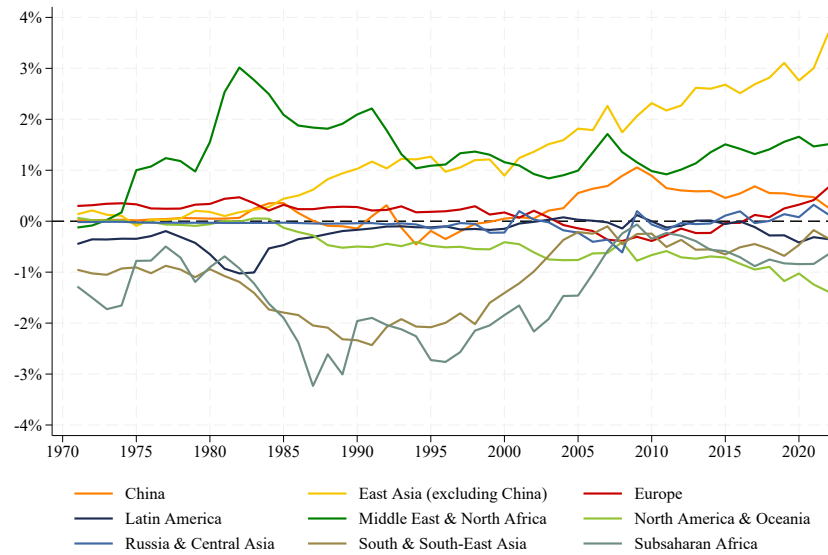
Excess yield as a share of GDP



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 A29

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.

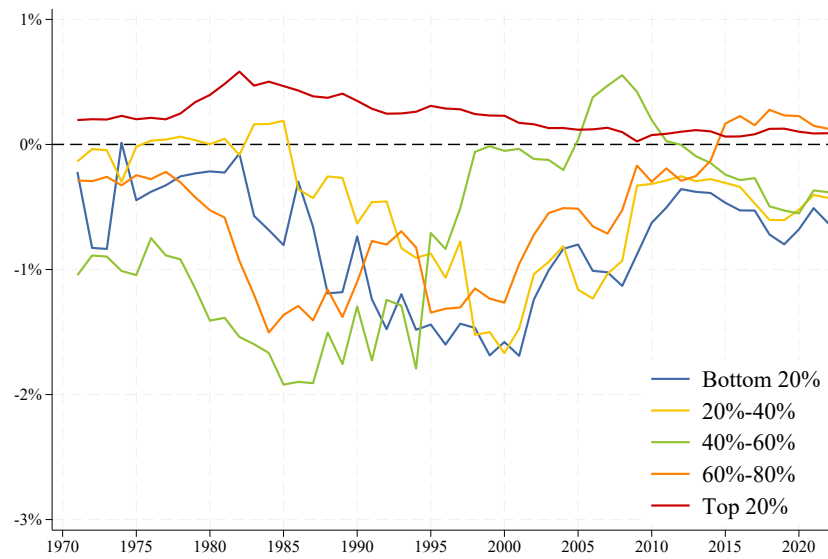
B.2.3 Quintiles

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 [A30](#) 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 A30

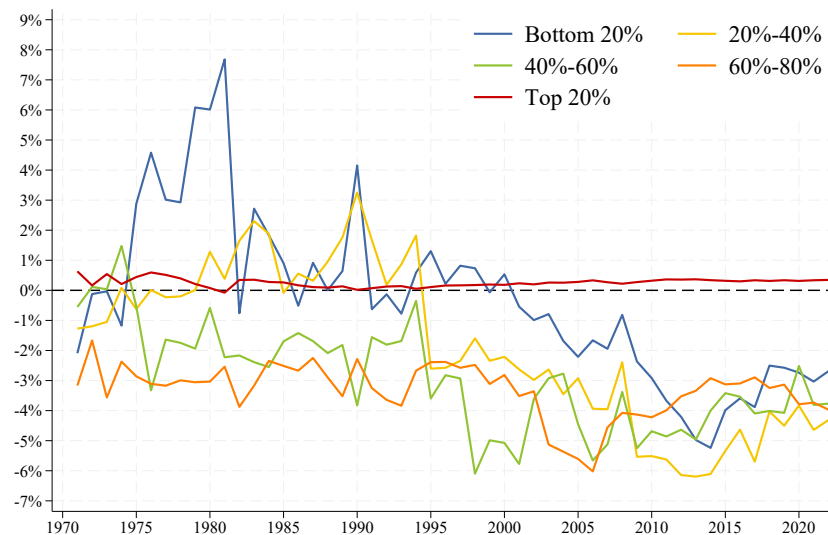
Net foreign capital income minus excess yield income as a share of GDP



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.

Figure A31

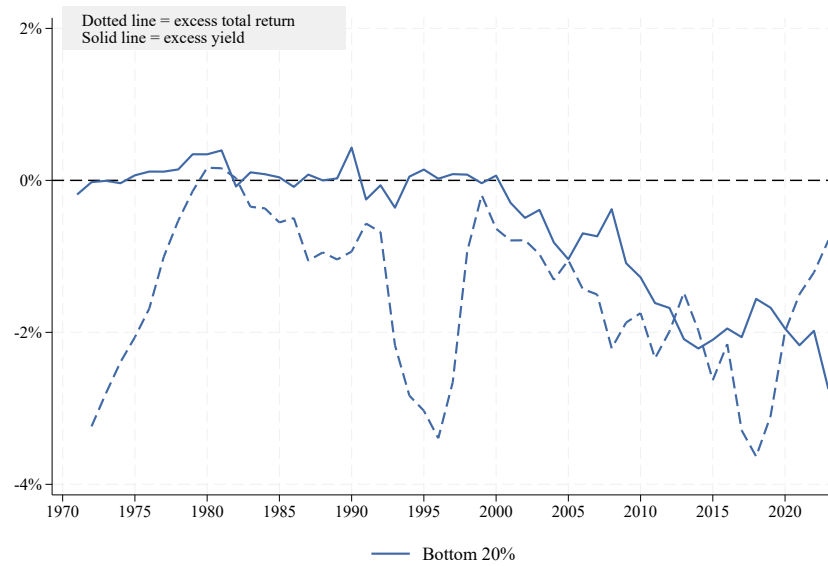
Excess yields per income group



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

Figure A32

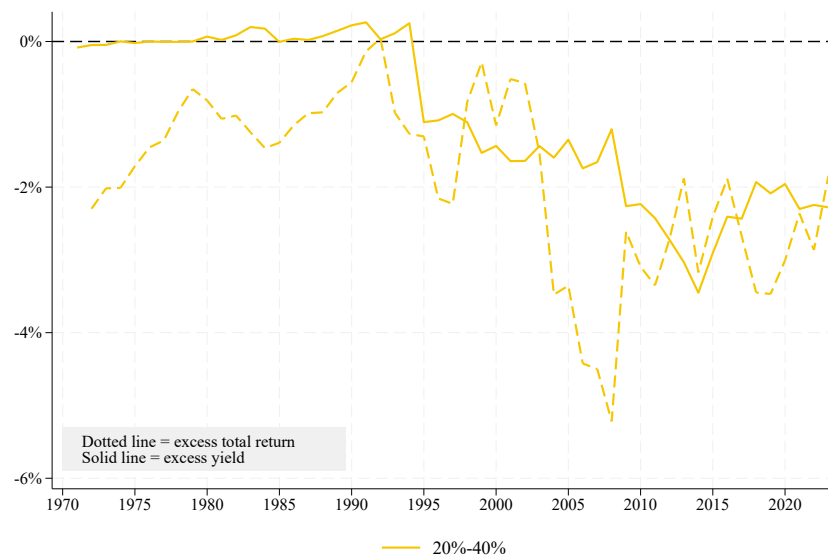
Total Excess returns as a share of group GDP - Bottom 20%



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

Figure A33

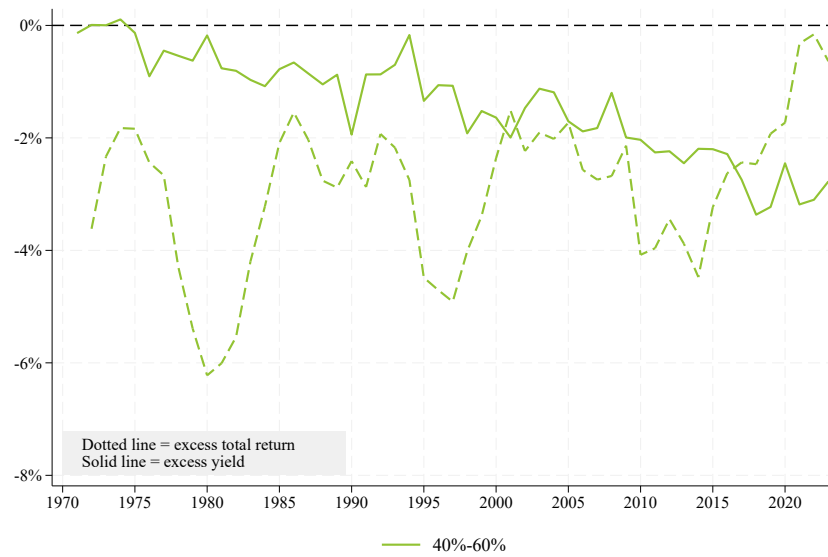
Total Excess returns as a share of group GDP - 20%-40%



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

Figure A34

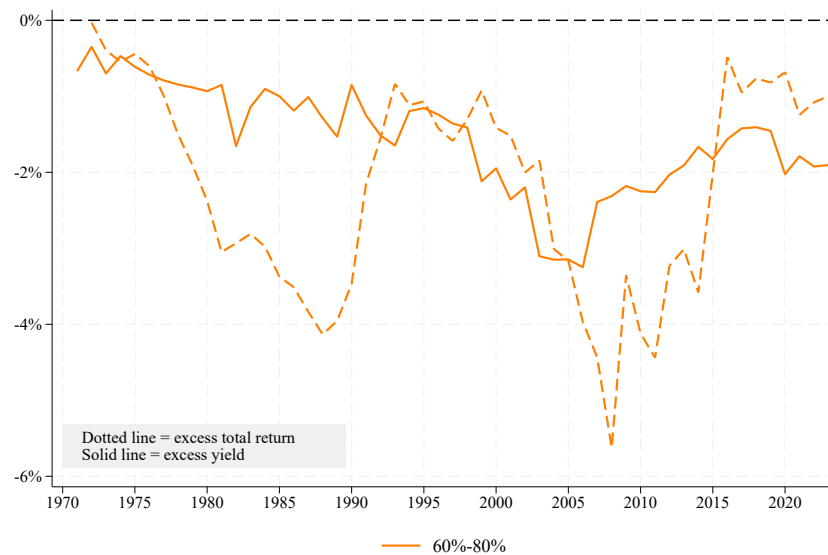
Total Excess returns as a share of group GDP - 40%-60%



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

Figure A35

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

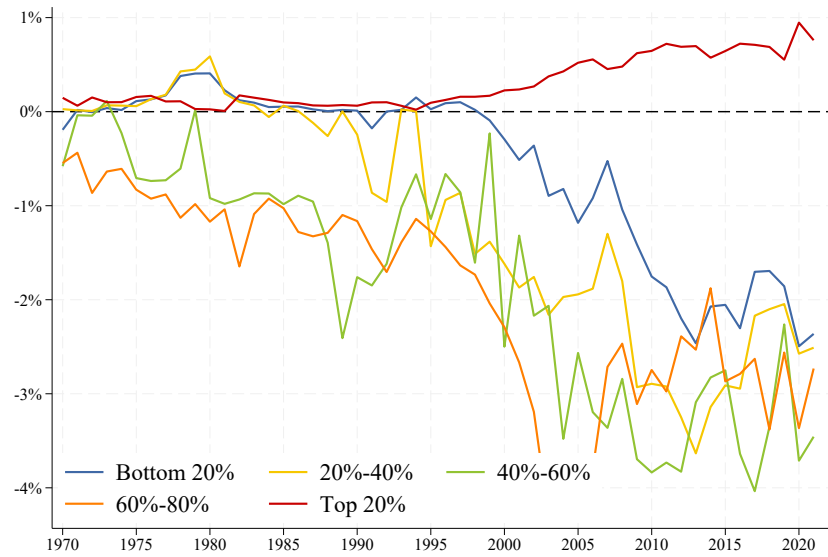


Graph shows total excess returns (5-years moving average) and excess yield for the 60%-80% group, as a share of group GDP.

Figure A36

Counterfactual exercise: a world without China.

Scenario A: Chinese reserves are entirely denominated in USD

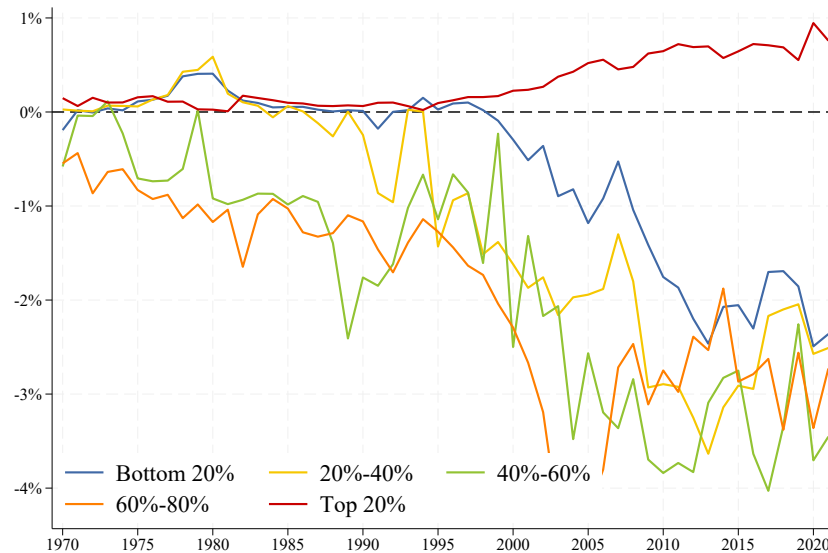


Graph shows the foreign capital income received (paid) related to the positive (negative) excess yield, as a share of group GDP. Excess yield income calculated as GFA (GFL) multiplied by excess yield if positive (negative).

Figure A37

Counterfactual exercise: a world without China.

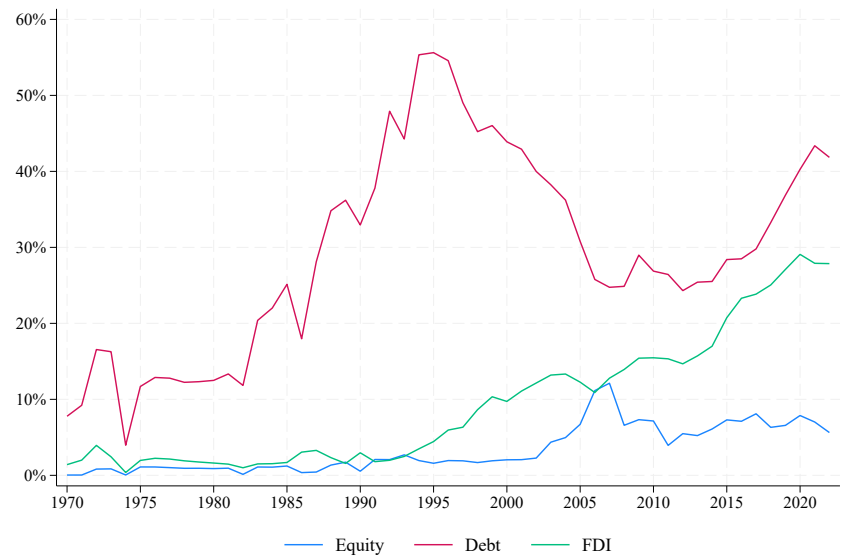
Scenario B: Chinese reserves in USD (70%), EUR (20%), JPY (10%)



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 A38

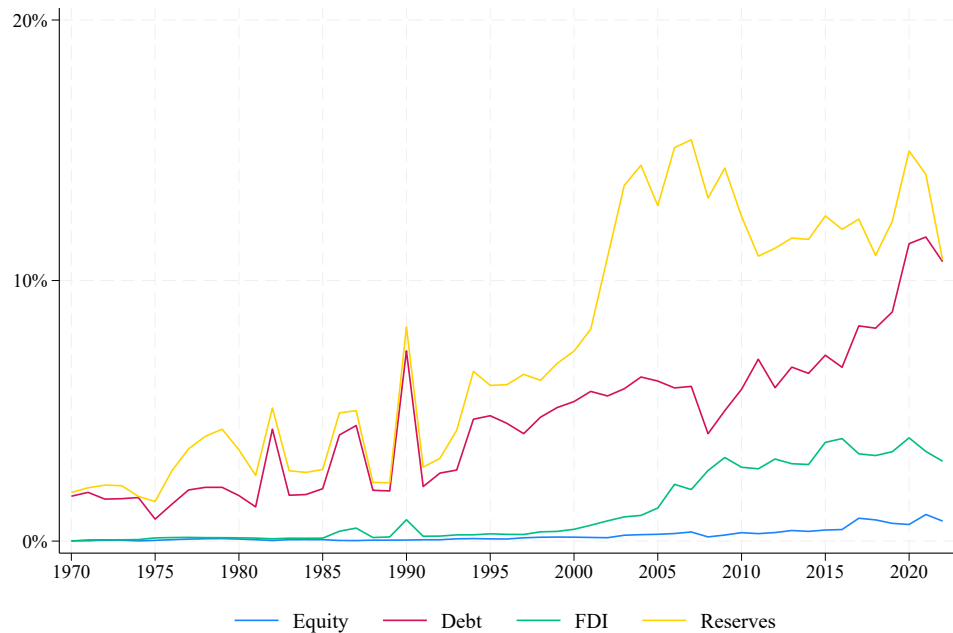
Liabilities decomposition - bottom 20%, 1970-2022



The graph shows the evolution of the liability sub-components as a percentage of GDP for the top 20%.

Figure A39

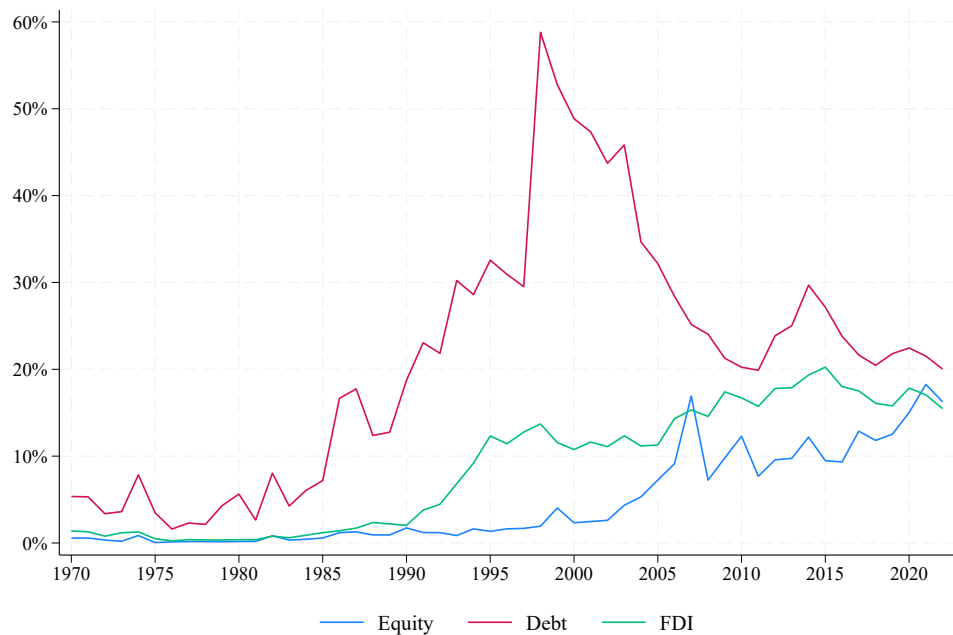
Assets decomposition - bottom 20%, 1970-2022



The graph shows the evolution of the asset sub-components as a percentage of GDP for the top 20%.

Figure A40

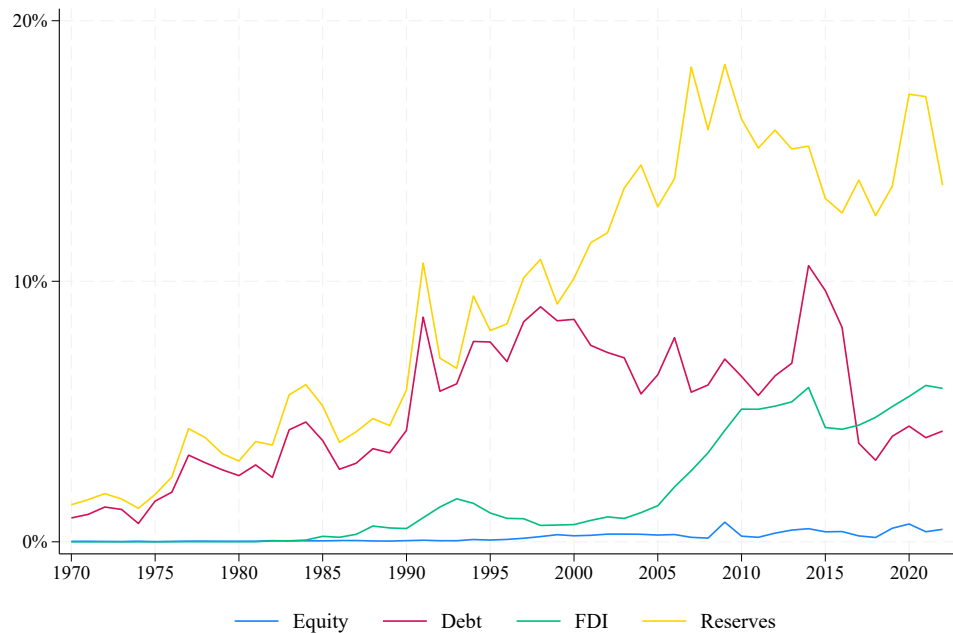
Liabilities decomposition - 20-40%, 1970-2022



The graph shows the evolution of the liability sub-components as a percentage of GDP for the 20-40%.

Figure A41

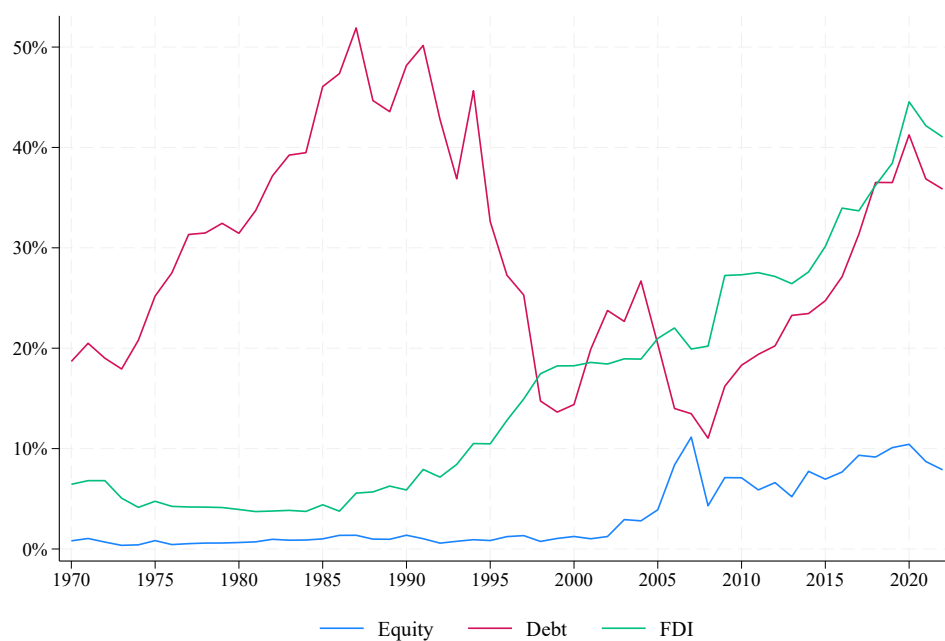
Assets decomposition - 20-40%, 1970-2022



The graph shows the evolution of the asset sub-components as a percentage of GDP for the 20-40%.

Figure A42

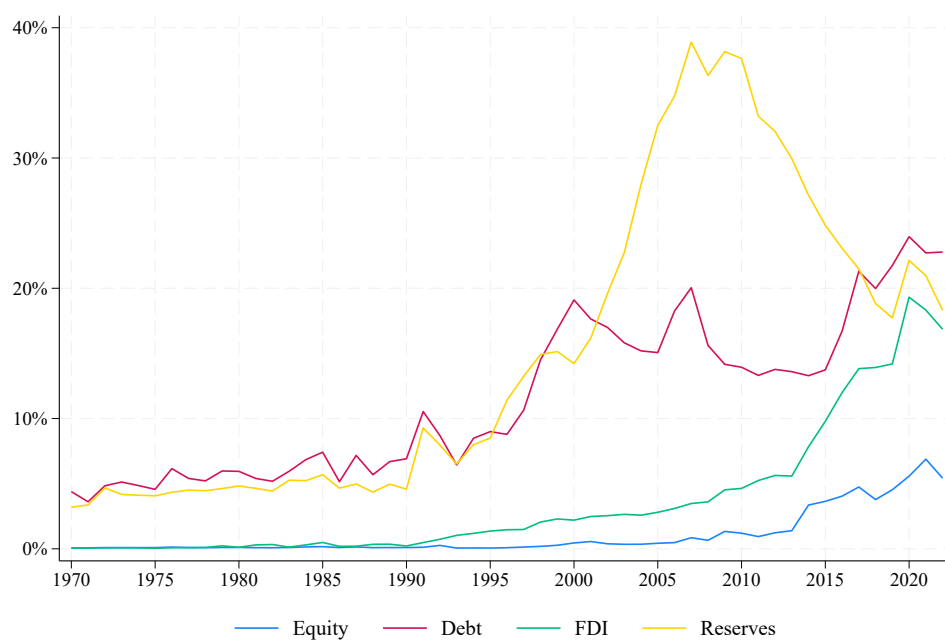
Liabilities decomposition - 40-60%, 1970-2022



The graph shows the evolution of the liability sub-components as a percentage of GDP for the 40-60%.

Figure A43

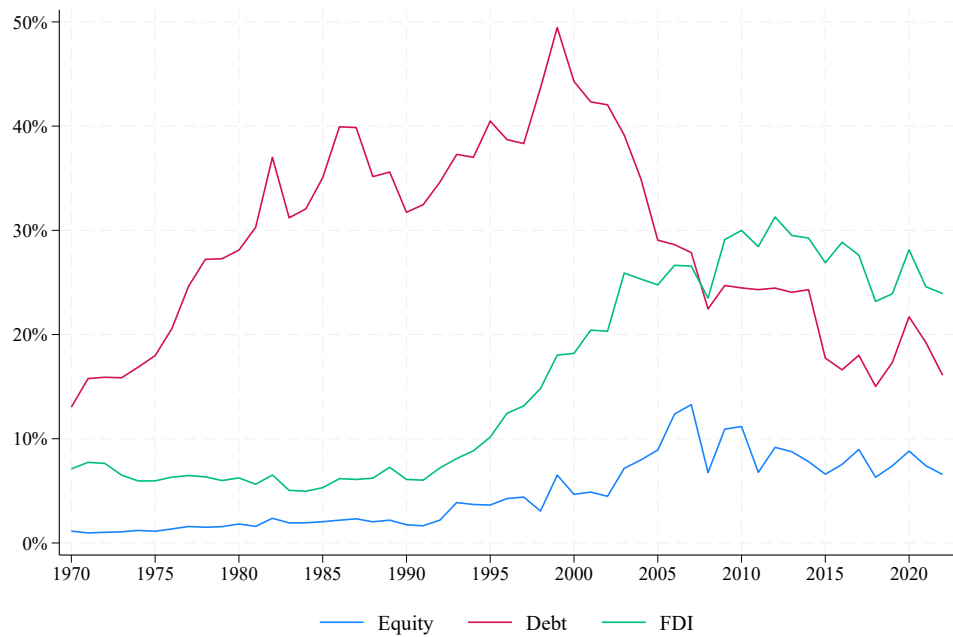
Assets decomposition - 40-60%, 1970-2022



The graph shows the evolution of the asset sub-components as a percentage of GDP for the 40-60%.

Figure A44

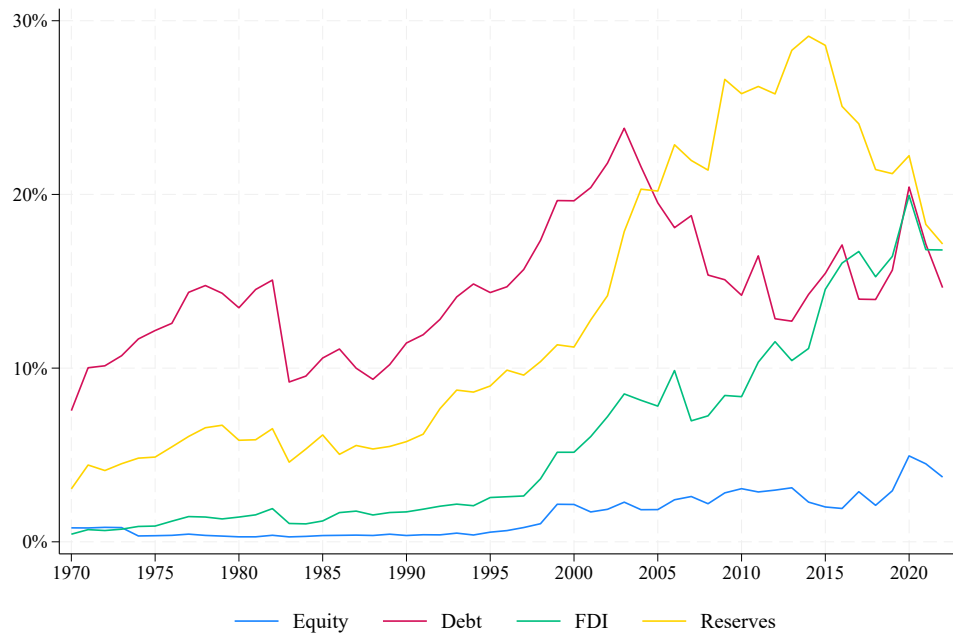
Liabilities decomposition - 60-80%, 1970-2022



The graph shows the evolution of the liability sub-components as a percentage of GDP for the 60-80%.

Figure A45

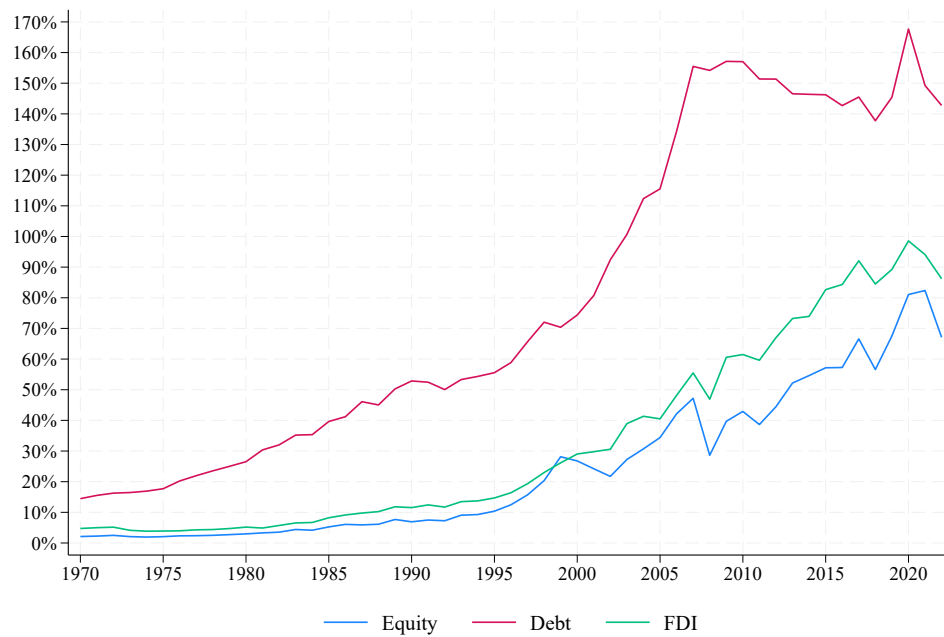
Assets decomposition - 60-80%, 1970-2022



The graph shows the evolution of the asset sub-components as a percentage of GDP for the 60-80%.

Figure A46

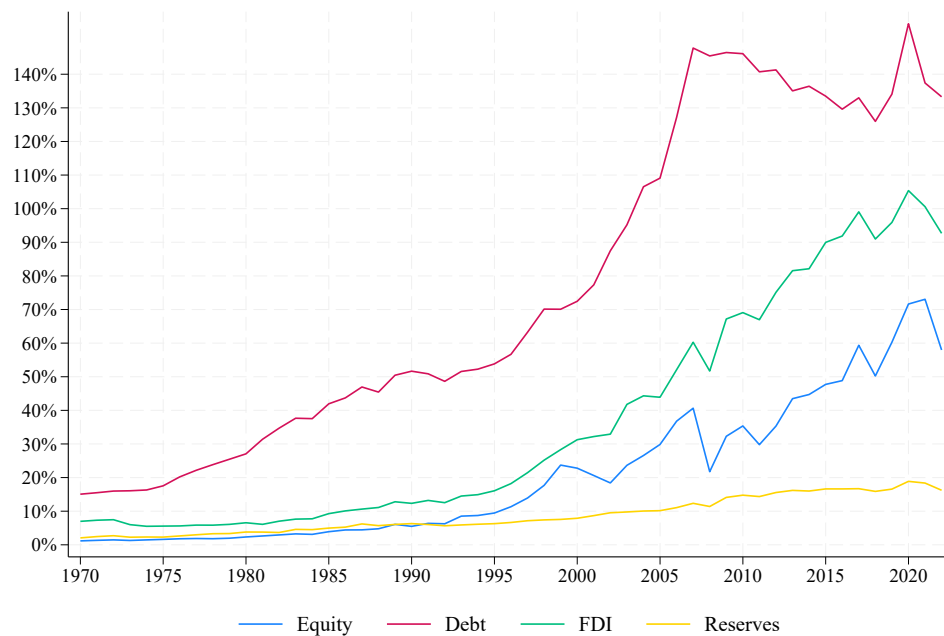
Liabilities decomposition - top 20%, 1970-2022



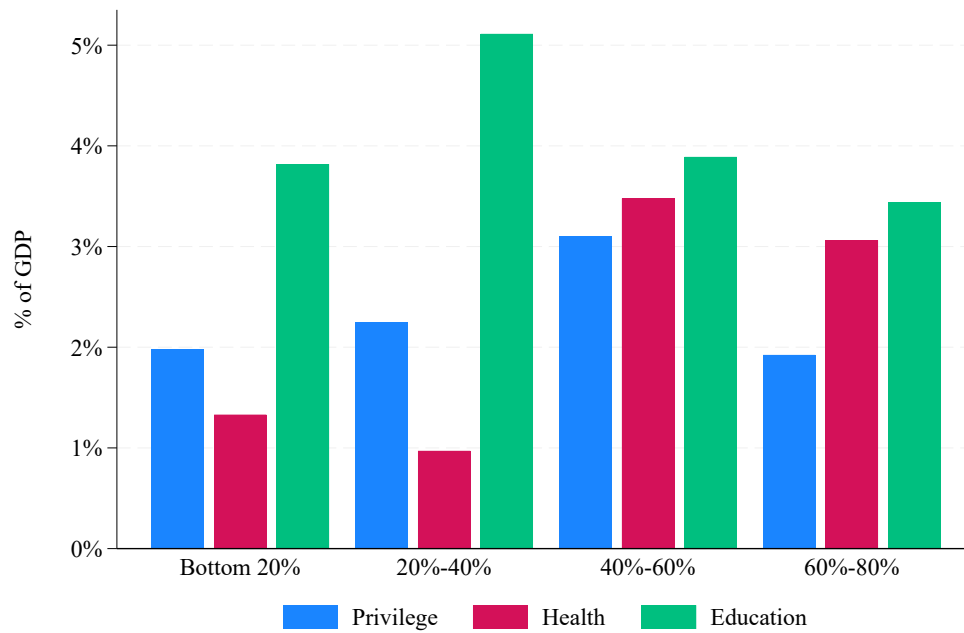
The graph shows the evolution of the liability sub-components as a percentage of GDP for the top 20%.

Figure A47

Assets decomposition - top 20%, 1970-2022



The graph shows the evolution of the asset sub-components as a percentage of GDP for the top 20%.

Figure A48*Investment in Human Capital vs the cost of the privilege - 2022*

Public investment in Health and Education come from Wid.world.

Table 37*Exorbitant duty? Quintiles of national income per capita.*

Quintile	Capital Gains/Losses % GDP		Net Capital Gains as % of 2009 GDP	GDP 2008 / GDP 2009
	2008	2009		
Bottom 20%	2%	-4%	-2%	95%
20%-40%	14%	5%	19%	109%
40%-60%	-4%	-15%	-18%	91%
60%-80%	7%	-5%	3%	102%
Top 20%	-3%	3%	-1%	103%

Note: values measured in real USD of 2023. Net capital gains is computed as the sum of capital gains/losses of 2008 and 2009 divided by 2009 GDP.

C Comparison

Table 38

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	-6,0	-5,0	-4,3
Australia	-0,4	-1,5	-1,3
Austria	0,4	0,0	-0,4
Brazil	-4,9	-4,6	-3,1
Bulgaria	-2,0	-2,0	-2,3
Canada	-0,5	-1,5	-1,5
Chile	-2,8	-4,4	-4,7
China	-2,2	-1,2	-0,7
Colombia	-4,1	-4,9	-5,5
Croatia	-1,2	-1,4	-2,9
Czech Republic	-2,5	-2,5	-3,1
Denmark	0,6	-0,2	0,0
Finland	-1,3	-1,2	-1,3
France	0,6	0,2	0,0
Germany	-0,3	-0,3	-0,3
Greece	-1,2	-2,1	-2,2
Hong Kong	-1,3	-1,1	-0,5
Hungary	-3,0	-2,7	-1,1
India	0,2	1,2	0,9
Indonesia	-4,0	-2,3	-3,1
Ireland	-4,4	-1,1	-4,0
Israel	-2,2	-0,5	-0,3
Italy	-0,8	-1,1	-2,2
Japan	0,4	1,5	0,8
Korea	0,9	-0,8	2,6
Malaysia	-8,6	-2,9	-3,5
Mexico	-4,2	-2,5	-2,1
Netherlands	-0,5	-0,2	-0,5
New Zealand	-0,5	-1,6	-2,9
Norway	-1,1	-1,3	-1,4
Peru	-4,6	-3,6	-3,4
Philippines	-1,7	-1,1	-1,0
Poland	-2,1	-2,6	-2,0
Portugal	-0,2	-0,8	-1,0
Romania	-6,1	-2,3	-2,9
Russia	-2,6	-3,2	-3,3
Singapore	-0,4	-0,3	-1,2
Slovak Republic	-2,0	-2,3	-2,7
Slovenia	0,0	-1,1	-1,3
South Africa	-3,8	-3,0	-3,4
Spain	-1,7	-0,7	-1,1
Sweden	0,1	-0,2	-0,1
Switzerland	0,4	1,1	1,2
Thailand	-2,1	-1,6	-1,6
Turkey	-2,9	-1,9	-1,2
United Kingdom	0,5	0,0	0,0
United States	2,2	1,3	1,3
Uruguay	-1,9	-1,8	-1,4
Venezuela	-2,9	-2,5	-2,5

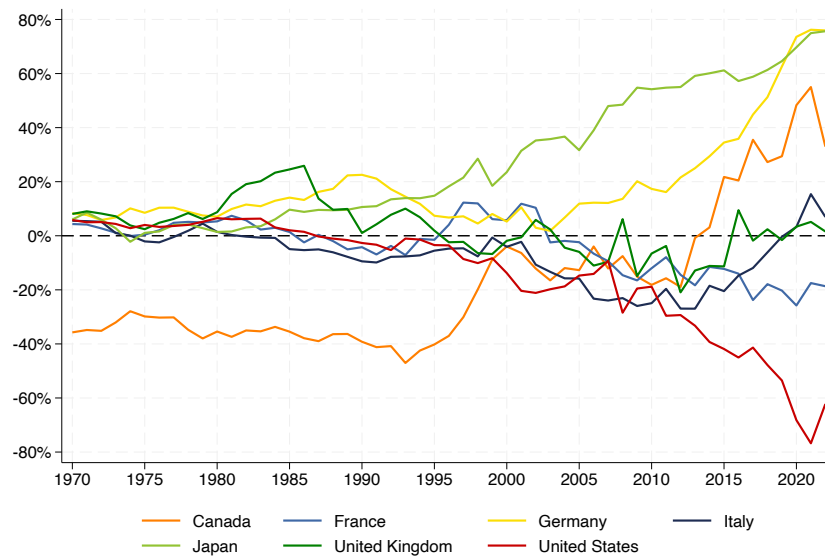
The table presents a comparison between our results and those from (Habib, 2010). Excess real yields are calculated as $i^A - i^L$. The yields in the raw data column are estimated using foreign wealth series from (Lane and Milesi-Ferretti, 2018) and foreign capital income series from the IMF BOP, without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

D Robustness

D.1 G8 vs BRICS

Figure A49

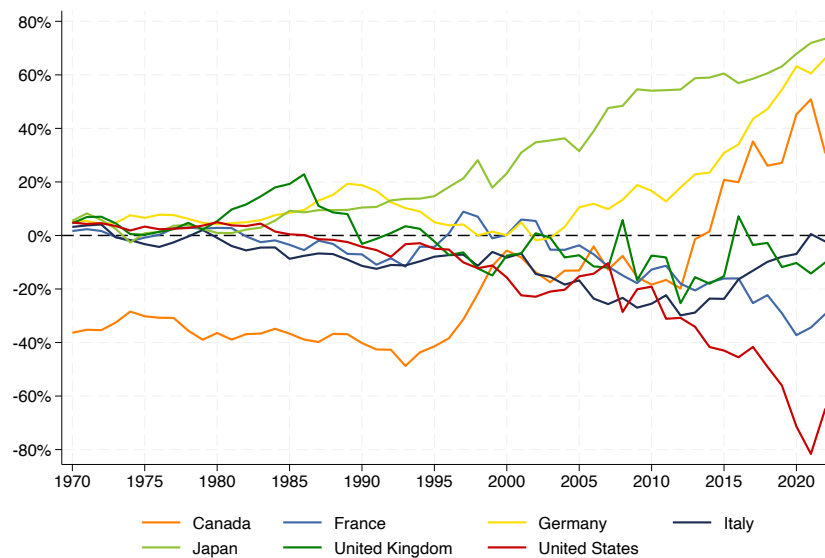
Net foreign assets as a share of country GDP (G7 countries), with tax havens correction



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

Figure A50

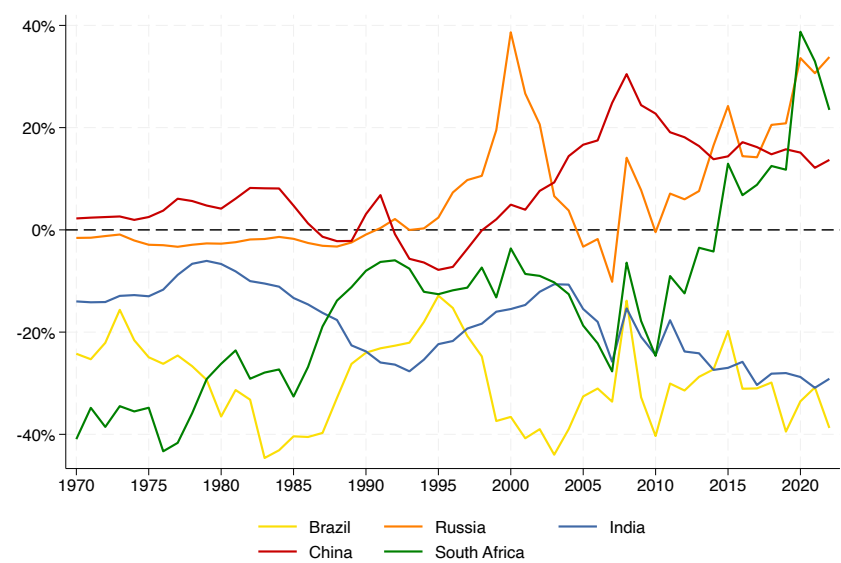
Net foreign assets as a share of country GDP (G7 countries), raw data



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

Figure A51

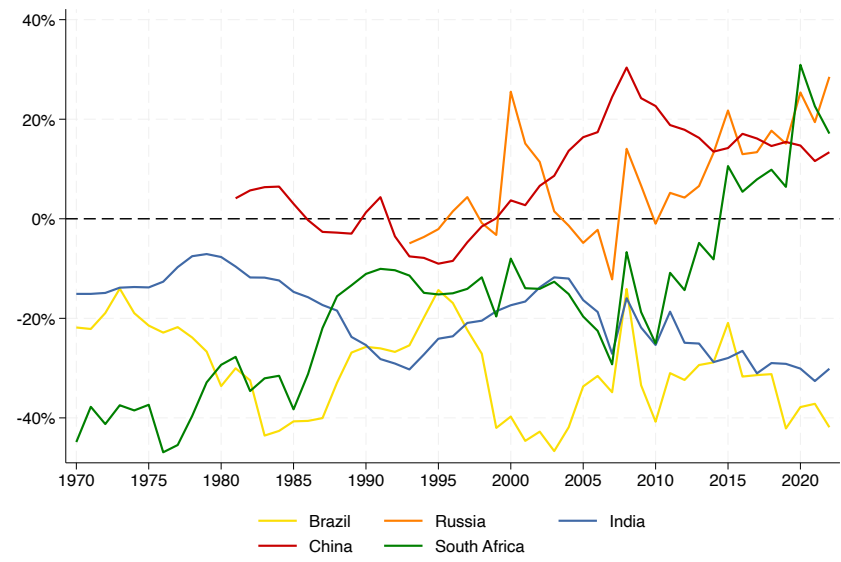
Net foreign assets as a share of country GDP (BRICS), with tax havens correction



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

Figure A52

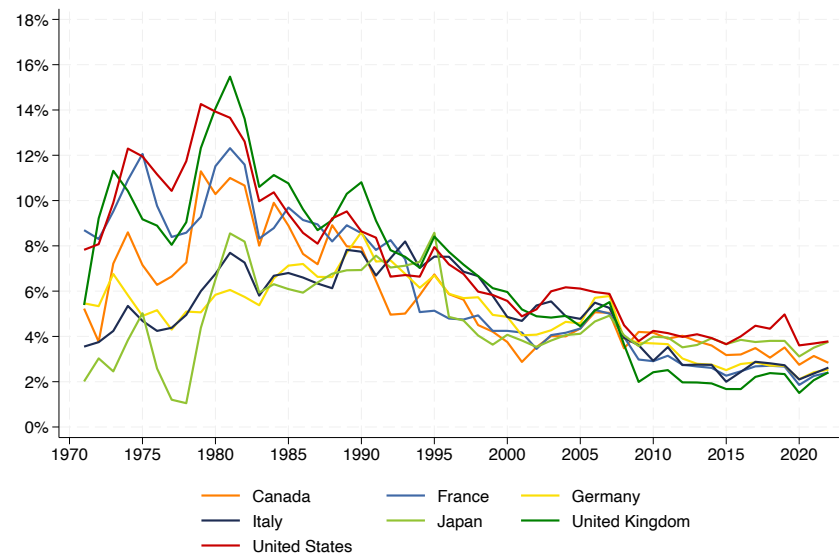
Net foreign assets as a share of country GDP (BRICS), raw data



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

Figure A53

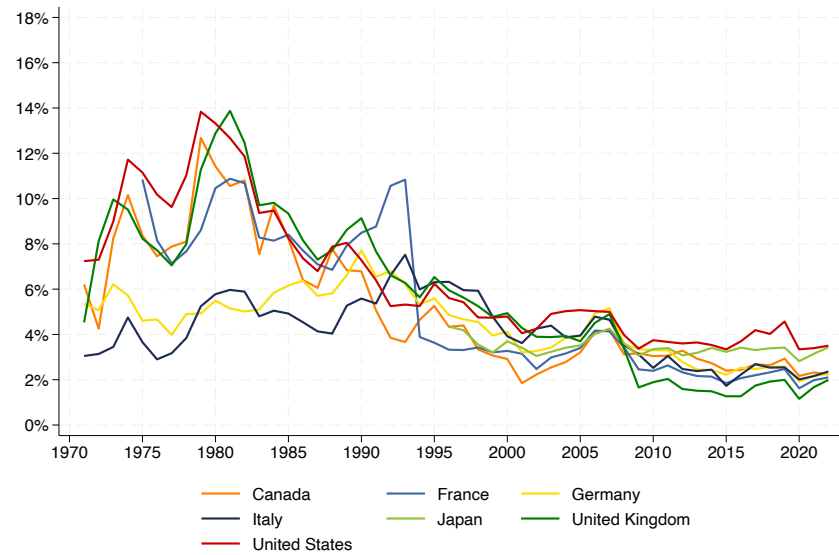
Returns on foreign assets with tax havens correction, G7 countries



Graph shows average rate of returns on foreign assets.

Figure A54

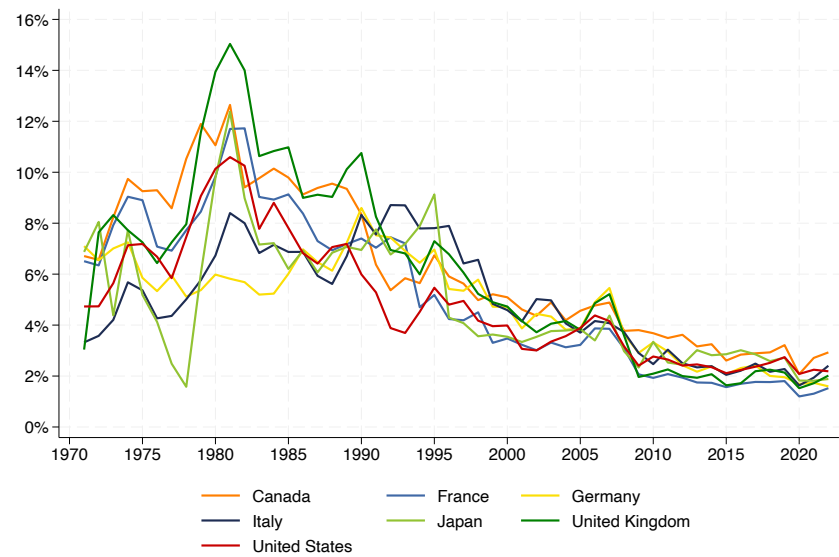
Returns on foreign assets, G7 countries, raw data



Graph shows average rate of returns on foreign assets.

Figure A55

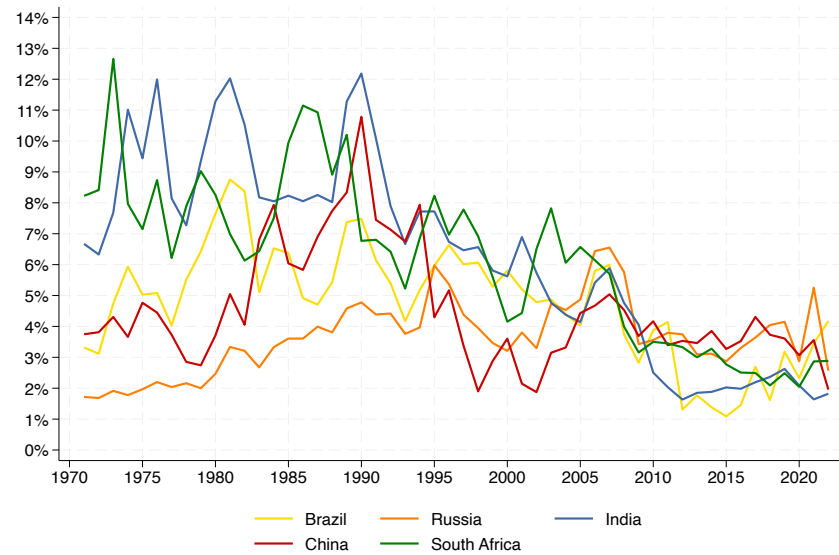
Returns on foreign liabilities with tax havens correction, G7 countries



Graph shows average rate of returns on foreign liabilities.

Figure A56

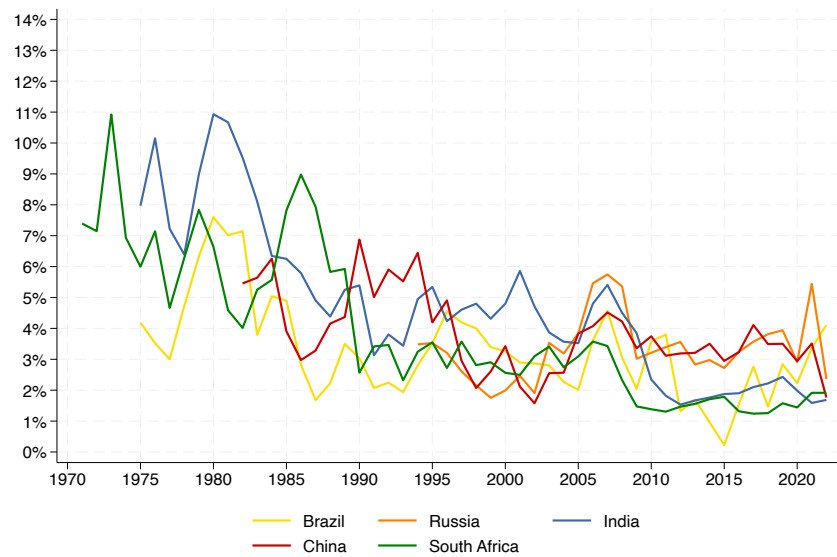
Returns on foreign assets with tax havens correction, BRICS



Graph shows average rate of returns on foreign assets.

Figure A57

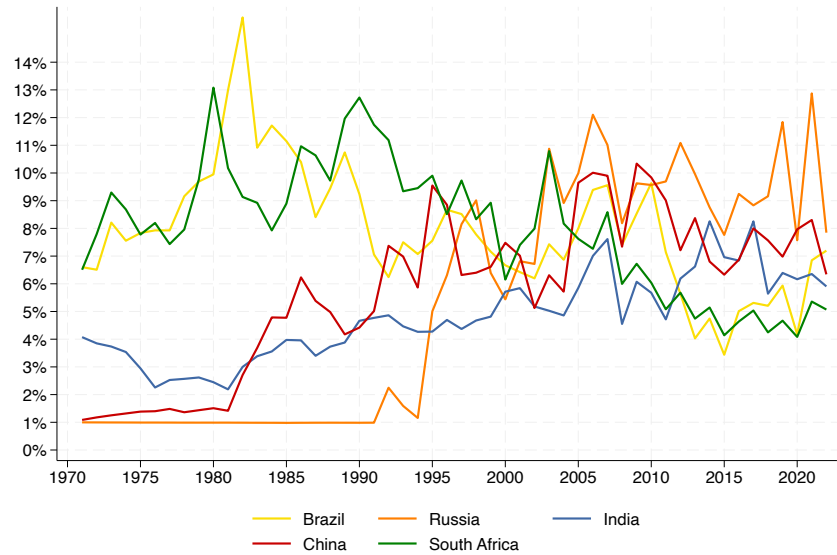
Returns on foreign assets, BRICS, raw data



Graph shows average rate of returns on foreign assets.

Figure A58

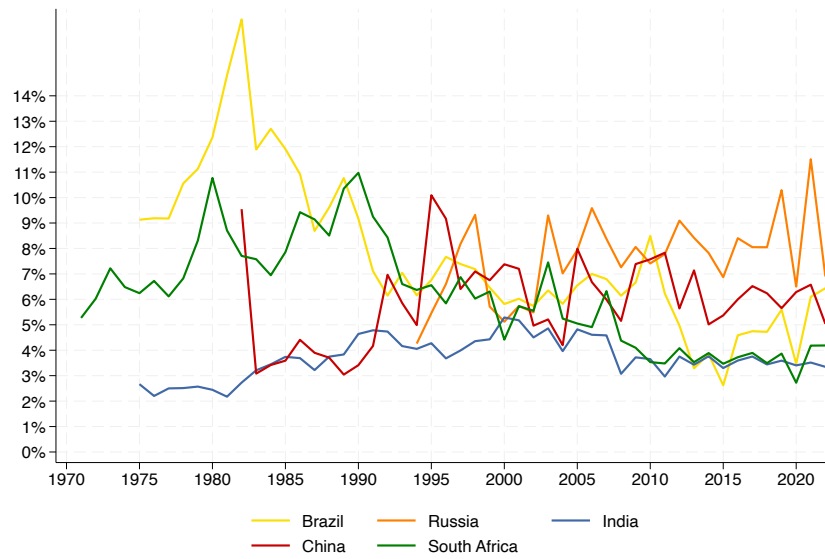
Returns on foreign liabilities with tax havens correction, BRICS



Graph shows average rate of returns on foreign liabilities.

Figure A59

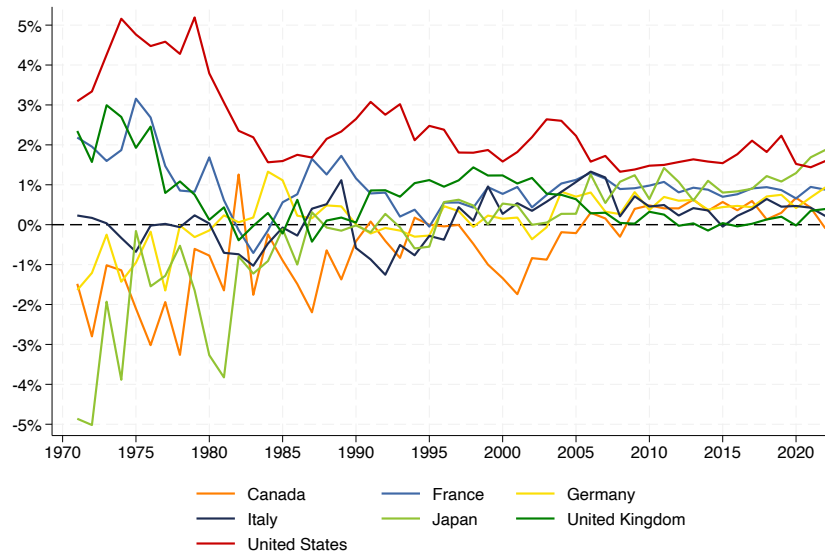
Returns on foreign liabilities, BRICS, raw data



Graph shows average rate of returns on foreign liabilities.

Figure A60

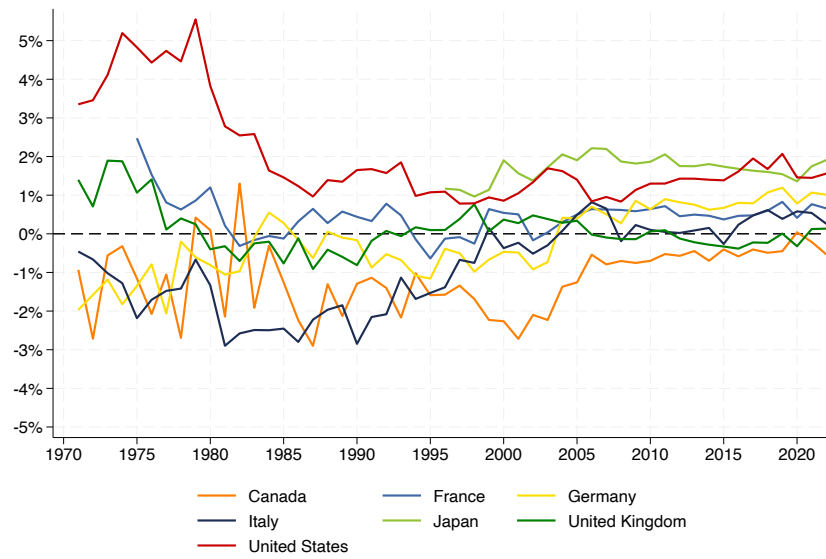
Excess yields with tax havens correction, G7 countries



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

Figure A61

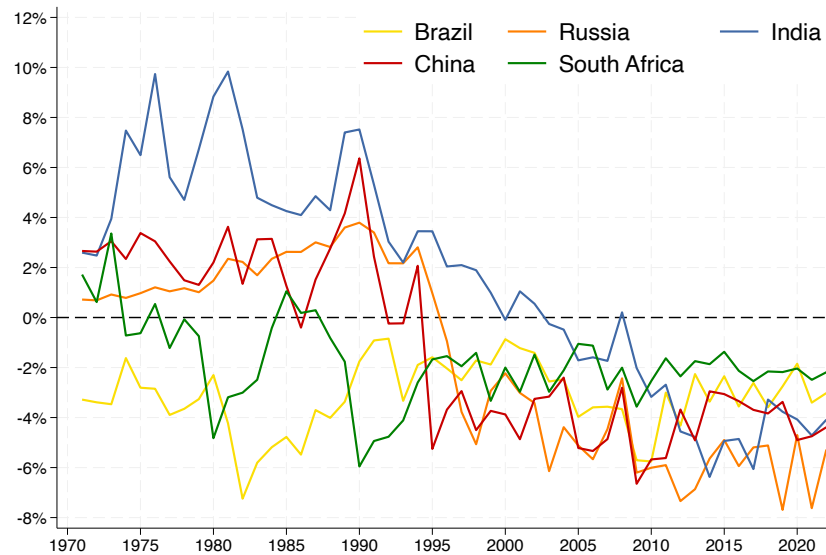
Excess yields, G7 countries, raw data



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

Figure A62

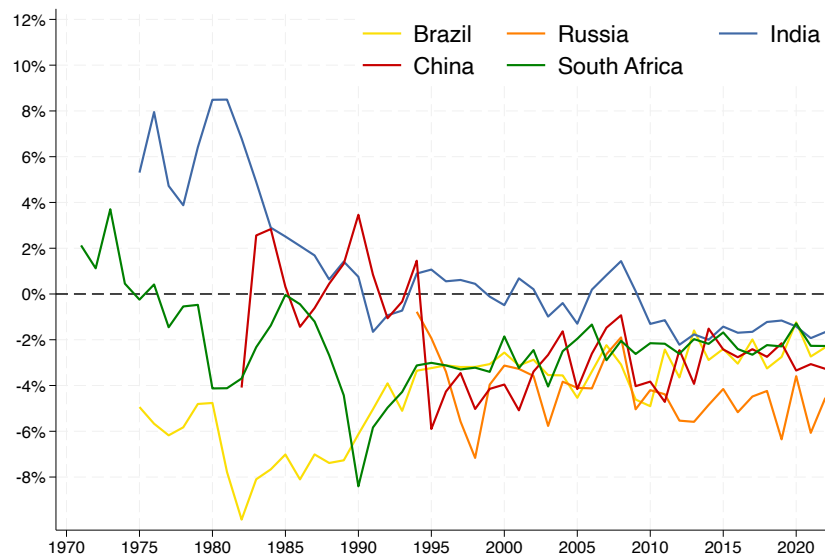
Excess yields with tax havens correction, BRICS



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

Figure A63

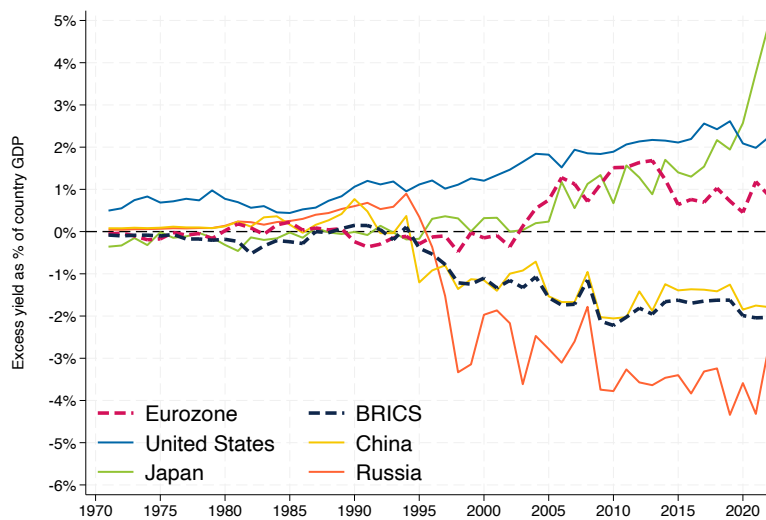
Excess yields, BRICS, raw data



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

Figure A64

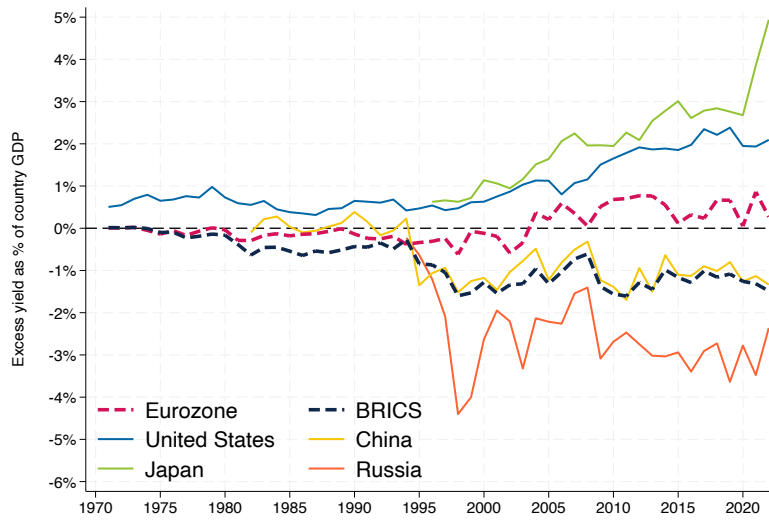
Excess yield income as share of GDP, G8 vs BRICS, with tax havens correction



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)

Figure A65

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)

Table 39*Total returns - G8 (raw data)*

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Canada	1970-1999	Avg rate	8.77%	9.03%	15.68%	11.67%	9.79%	9.77%	0.00%	10.88%	11.21%
		SD	(0.04)	(0.04)	(0.17)	(0.19)	(0.05)	(0.04)	(0.00)	(0.08)	(0.10)
	2000-2023	Avg rate	4.09%	3.75%	8.50%	9.08%	5.57%	4.42%	0.00%	6.01%	7.36%
		SD	(0.14)	(0.14)	(0.19)	(0.27)	(0.05)	(0.06)	(0.00)	(0.16)	(0.20)
Germany	1970-1999	Avg rate	6.83%	7.70%	15.39%	18.92%	10.81%	8.38%	0.00%	4.82%	19.79%
		SD	(0.08)	(0.10)	(0.14)	(0.27)	(0.12)	(0.13)	(0.00)	(0.11)	(0.26)
	2000-2023	Avg rate	3.10%	3.57%	4.66%	11.12%	3.83%	4.67%	-0.66%	6.30%	3.74%
		SD	(0.08)	(0.09)	(0.17)	(0.32)	(0.10)	(0.10)	(0.00)	(0.09)	(0.13)
France	1970-1999	Avg rate	9.66%	9.11%	13.78%	21.43%	14.79%	11.45%	-3.36%	6.98%	12.59%
		SD	(0.06)	(0.07)	(0.12)	(0.20)	(0.09)	(0.08)	(0.00)	(0.18)	(0.34)
	2000-2023	Avg rate	2.76%	2.71%	4.85%	5.20%	3.46%	3.99%	3.40%	4.40%	4.40%
		SD	(0.08)	(0.09)	(0.19)	(0.19)	(0.10)	(0.11)	(0.05)	(0.08)	(0.11)
United Kingdom	1970-1999	Avg rate	11.52%	10.94%	16.35%	25.27%	8.77%	7.93%	33.76%	11.97%	11.54%
		SD	(0.06)	(0.06)	(0.16)	(0.19)	(0.05)	(0.06)	(0.00)	(0.10)	(0.19)
	2000-2023	Avg rate	4.08%	3.38%	8.38%	7.00%	5.14%	4.68%	2.40%	5.88%	6.00%
		SD	(0.08)	(0.08)	(0.17)	(0.22)	(0.13)	(0.12)	(0.09)	(0.10)	(0.11)
Italy	1970-1999	Avg rate	3.76%	6.12%	42.26%	-12.52%	-20.29%	-15.10%	4.03%	5.82%	7.35%
		SD	(0.09)	(0.10)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.13)	(0.19)
	2000-2023	Avg rate	2.55%	2.66%	4.22%	5.24%	3.22%	3.68%	1.63%	4.38%	5.24%
		SD	(0.09)	(0.10)	(0.15)	(0.23)	(0.10)	(0.11)	(0.03)	(0.10)	(0.12)
Japan	1970-1999	Avg rate	5.63%	9.43%	13.22%	27.31%	7.21%	7.94%	0.00%	-3.27%	2.79%
		SD	(0.06)	(0.15)	(0.15)	(0.75)	(0.08)	(0.07)	(0.00)	(0.08)	(0.21)
	2000-2023	Avg rate	7.06%	8.11%	10.51%	4.13%	10.40%	12.87%	0.00%	4.78%	9.35%
		SD	(0.05)	(0.09)	(0.26)	(0.22)	(0.08)	(0.10)	(0.00)	(0.04)	(0.14)
United States	1970-1999	Avg rate	11.34%	7.29%	27.57%	19.01%	8.15%	5.98%	-0.01%	17.43%	11.95%
		SD	(0.07)	(0.05)	(0.19)	(0.12)	(0.03)	(0.03)	(0.00)	(0.15)	(0.18)
	2000-2023	Avg rate	5.67%	3.92%	9.67%	9.15%	6.84%	4.18%	1.24%	7.98%	4.55%
		SD	(0.09)	(0.07)	(0.22)	(0.19)	(0.14)	(0.09)	(0.07)	(0.17)	(0.15)
Eurozone	1970-1999	Avg rate	7.24%	7.96%	12.23%	19.19%	7.99%	7.13%	1.01%	6.50%	10.57%
		SD	(0.05)	(0.05)	(0.10)	(0.20)	(0.07)	(0.07)	(0.07)	(0.09)	(0.14)
	2000-2023	Avg rate	4.21%	4.49%	5.97%	6.01%	3.87%	4.70%	0.48%	8.59%	8.44%
		SD	(0.08)	(0.08)	(0.16)	(0.16)	(0.09)	(0.09)	(0.04)	(0.16)	(0.15)
Total G8	1970-1999	Avg rate	12.67%	11.33%	20.69%	17.13%	12.27%	9.97%	8.97%	12.65%	13.01%
		SD	(0.04)	(0.04)	(0.10)	(0.10)	(0.04)	(0.04)	(0.08)	(0.08)	(0.09)
	2000-2022	Avg rate	6.51%	5.78%	8.73%	7.63%	5.78%	5.10%	3.42%	7.58%	6.62%
		SD	(0.08)	(0.08)	(0.19)	(0.16)	(0.08)	(0.07)	(0.04)	(0.11)	(0.12)
Total G8	1970-1999	Avg rate	8.57%	7.47%	13.94%	11.23%	6.62%	5.38%	1.42%	12.33%	10.49%
		SD	(0.03)	(0.03)	(0.14)	(0.14)	(0.04)	(0.04)	(0.06)	(0.09)	(0.07)
	2000-2023	Avg rate	4.81%	4.39%	7.89%	6.88%	5.06%	4.84%	0.54%	7.05%	6.06%
		SD	(0.07)	(0.06)	(0.19)	(0.17)	(0.08)	(0.07)	(0.03)	(0.12)	(0.11)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of the total returns for the G8 countries over the periods 1970-1999 and 2000-2022, using raw data series.

Table 40*Total Returns - BRICS*

Country	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Brazil	1970-1999	Avg rate	9.22%	9.78%	0.27%	34.11%	-7.95%	11.42%	6.15%	19.48%	3.98%
		SD	(0.09)	(0.05)	(0.22)	(0.51)	(0.15)	(0.09)	(0.01)	(0.15)	(0.18)
	2000-2023	Avg rate	2.98%	3.89%	0.80%	14.75%	0.47%	5.81%	3.36%	6.90%	6.01%
		SD	(0.03)	(0.16)	(0.48)	(0.47)	(0.17)	(0.06)	(0.06)	(0.07)	(0.22)
China	1970-1999	Avg rate	2.48%	10.48%	98.57%	-7.41%	1.49%	10.20%	0.00%	-5.41%	-11.18%
		SD	(0.09)	(0.09)	(0.03)	(0.46)	(0.01)	(0.02)	(0.00)	(0.20)	(0.13)
	2000-2023	Avg rate	2.27%	6.46%	30.41%	19.94%	5.12%	8.06%	0.00%	-2.08%	0.06%
		SD	(0.03)	(0.07)	(0.51)	(0.66)	(0.02)	(0.15)	(0.00)	(0.08)	(0.03)
India	1970-1999	Avg rate	9.24%	4.92%	18.92%	-8.79%	-14.98%	-3.08%	0.00%	12.24%	2.84%
		SD	(0.12)	(0.04)	(0.01)	(0.06)	(0.14)	(0.01)	(0.00)	(0.32)	(0.06)
	2000-2023	Avg rate	-0.65%	3.41%	2.71%	12.69%	9.47%	-3.92%	-3.32%	6.62%	9.45%
		SD	(0.04)	(0.11)	(0.24)	(0.20)	(0.22)	(0.06)	(0.04)	(0.13)	(0.10)
Russia	1970-1999	Avg rate	0.83%	6.75%	132.67%	96.47%	0.46%	7.25%	0.67%	11.52%	18.07%
		SD	(0.01)	(0.08)	(2.73)	(1.49)	(0.02)	(0.18)	(0.07)	(0.12)	(0.41)
	2000-2023	Avg rate	-0.06%	7.88%	19.11%	29.22%	-3.78%	6.27%	1.88%	12.30%	22.44%
		SD	(0.08)	(0.21)	(0.29)	(0.48)	(0.08)	(0.07)	(0.05)	(0.32)	(0.32)
South Africa	1970-1999	Avg rate	11.93%	11.04%	21.09%	21.59%	5.12%	15.08%	0.00%	17.35%	16.81%
		SD	(0.12)	(0.12)	(0.25)	(0.51)	(0.20)	(0.12)	(0.00)	(0.18)	(0.44)
	2000-2023	Avg rate	7.54%	5.57%	8.39%	8.41%	23.01%	12.51%	0.00%	12.35%	7.75%
		SD	(0.15)	(0.17)	(0.22)	(0.27)	(0.22)	(0.11)	(0.00)	(0.21)	(0.26)
Total BRICS	1970-1999	Avg rate	6.27%	9.18%	20.97%	25.45%	7.74%	6.95%	-4.72%	17.63%	4.45%
		SD	(0.07)	(0.04)	(0.22)	(0.46)	(0.11)	(0.05)	(0.12)	(0.16)	(0.11)
	2000-2023	Avg rate	2.04%	6.14%	7.98%	15.24%	-1.50%	3.69%	-0.57%	7.61%	4.61%
		SD	(0.04)	(0.11)	(0.21)	(0.32)	(0.04)	(0.04)	(0.03)	(0.12)	(0.12)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of the total returns for the BRICS countries over the periods 1970-1999 and 2000-2022, using raw data series.

D.2 All countries

The set of tables below 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 Total Returns: Europe

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Albania	-223,3%	13,9%	9,0%	17,0%	8,9%	3,8%
Andorra	27,7%	-20,7%	3,1%			
Austria	3,3%	-0,3%	1,0%		-1,2%	0,2%
Belgium	3,6%	-2,2%	0,8%		-1,3%	0,0%
Bosnia and Herzegovina	-659,6%	19,4%	3,2%	4,7%	18,2%	2,6%
Bulgaria	-41,2%	-4,9%	-1,4%	1,4%	-3,7%	-1,9%
Croatia	-40,3%	-8,1%	0,0%	7,0%	-6,1%	-1,0%
Cyprus	1,4%	4,3%	0,9%	7,4%	1,2%	0,2%
Czech Republic	11,9%	-6,0%	-1,2%	1,1%	-4,8%	-3,4%
Denmark	-1,8%	-0,6%	0,4%	-1,9%	-0,9%	-0,2%
Estonia	-114,8%	-2,1%	0,0%	-3,1%	-1,8%	-2,0%
Finland	-7,4%	4,8%	0,5%	-7,3%	4,7%	0,3%
France	-0,5%	0,0%	0,8%	-0,1%	-0,3%	0,3%
Germany	-0,7%	-0,8%	0,4%	-0,9%	-0,6%	-0,4%
Gibraltar	41,5%	10,6%	14,9%			
Greece	-3,1%	-4,5%	0,0%	1,2%	-1,7%	-0,5%
Guernsey	3,6%	2,1%	-0,8%			
Hungary	0,3%	7,5%	0,5%	-5,5%	-0,8%	-0,8%
Iceland	-5,6%	-5,0%	8,4%	-10,0%	-20,1%	16,5%
Ireland	6,0%	-3,6%	-0,9%		-2,4%	-1,4%
Isle of Man	10,3%	-1,3%	-5,7%			
Italy	-2,6%	-1,0%	1,7%	-2,4%	-1,1%	0,7%
Jersey	2,9%	0,5%	-1,4%			
Kosovo	69,1%	64,2%	41,6%		-9,8%	-3,2%
Latvia	-78,7%	-3,2%	0,5%	-9,8%	-2,1%	-0,6%
Liechtenstein	11,3%	-1,5%	8,6%			
Lithuania	24,3%	0,7%	-0,1%	3,3%	-0,4%	-3,8%
Luxembourg	-0,3%	-0,7%	0,1%	1,3%	-0,1%	-0,1%
Malta	0,6%	-0,2%	-0,1%	2,3%	0,8%	-0,4%
Moldova	-19,1%	6,8%	7,8%	0,3%	7,3%	5,6%
Monaco	0,5%	0,6%	-0,2%			
Montenegro	-154,3%	-3,0%	5,8%		-7,7%	4,0%
Netherlands	-3,7%	0,1%	0,2%	-2,6%	-0,7%	-0,3%
North Macedonia	38,4%	-4,2%	-6,6%	6,4%	0,4%	-6,5%
Norway	1,0%	-5,6%	1,3%	-4,1%	-4,6%	1,3%
Poland	45,7%	-4,7%	-1,3%	1,5%	-4,1%	-3,5%
Portugal	-1,1%	-2,0%	-0,4%	2,1%	-1,1%	-0,8%
Romania	-7,8%	-3,7%	0,4%	3,4%	-2,5%	-1,4%
San Marino	7,1%	7,6%	-2,4%			
Serbia	57,9%	42,7%	-0,4%		19,1%	-1,7%
Slovakia	-14,1%	-5,5%	0,2%	-0,6%	-4,2%	-3,4%
Slovenia	5,1%	-0,2%	0,9%	-5,0%	-1,9%	-2,3%
Spain	1,4%	-4,4%	0,9%	-0,6%	-2,6%	0,9%
Sweden	-0,9%	-0,3%	0,8%	-1,5%	-0,9%	0,3%
Switzerland	-1,6%	-1,7%	-1,1%	1,5%	-1,1%	-1,4%
United Kingdom	0,2%	0,9%	0,8%	0,6%	0,8%	0,6%

Excess Total Returns: China & East Asia

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
China	-30%	-7%	-5%	-8%	-4%	-5%
Hong Kong	20%	-1%	0%	2%	1%	0%
Japan	8%	0%	-3%	4%	1%	-3%
Korea	-2%	-2%	2%	-9%	-2%	0%
Macao	-63%	-22%	-14%		-10%	-11%
Mongolia	4%	5%	-13%	-10%	-3%	-12%
North Korea	-40%	14%	-3%			
Taiwan	-55%	-21%	-14%			

Excess Total Returns: South & South-East Asia

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Afghanistan	-8,6%	19,6%	8,4%		49,4%	30,6%
Bangladesh	-24,5%	-27,9%	-7,8%	-10,4%	-21,3%	-9,4%
Bhutan	57,6%	49,3%	-5,7%		-3,1%	-0,9%
Brunei Darussalam	-63,8%	-19,9%	-9,6%		-16,9%	-8,4%
Cambodia	2,7%	-4,4%	-8,4%	18,8%	0,1%	-6,6%
India	-6,5%	-4,4%	-1,9%	-0,5%	-3,5%	-4,5%
Indonesia	-14,1%	-7,9%	1,1%	-9,7%	-8,8%	-2,6%
Lao PDR	415,6%	3,5%	-13,5%	45,3%	-1,5%	-13,4%
Malaysia	-5,9%	-14,0%	-7,0%	-6,2%	-13,8%	-6,1%
Maldives	-38,2%	-6,8%	-0,4%	8,2%	-1,4%	-9,1%
Myanmar	-10,4%	-13,1%	-35,3%	6,5%	7,5%	-19,3%
Nepal	-24,3%	-2,0%	3,5%	11,6%	3,7%	1,6%
Pakistan	2,2%	-5,0%	0,5%	0,4%	-2,5%	-2,6%
Papua New Guinea	-3,1%	-12,8%	-29,1%	-5,5%	-14,6%	-25,6%
Philippines	3,2%	-2,7%	-3,6%	0,3%	-1,9%	-4,3%
Singapore	6,5%	-2,6%	-3,5%	3,8%		
Sri Lanka	0,3%	5,3%	-0,8%	0,3%	0,9%	-5,4%
Thailand	7,6%	1,7%	-5,9%	0,0%	-0,9%	-8,0%
Timor-Leste	-122,0%	-10,7%	-5,6%		39,2%	-10,7%
Viet Nam	133,6%	18,4%	-1,3%			-18,7%

Excess Total Returns: Russia & Central Asia

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Armenia	-49,7%	-1,9%	-0,1%	9,7%	-2,9%	-2,0%
Azerbaijan	-8,2%	-59,4%	-22,5%	-0,7%	-48,4%	-22,4%
Belarus	-27,3%	-1,0%	-0,3%	-2,6%	2,4%	-1,0%
Georgia	-32,1%	-0,8%	-1,1%	-3,9%	0,7%	-2,0%
Kazakhstan	47,0%	-11,4%	-10,9%	-24,5%	-12,2%	-11,4%
Kyrgyzstan	-61,7%	2,5%	7,9%	-7,0%	1,2%	0,9%
Russian Federation	10,7%	-14,6%	-6,4%	-5,9%	-10,1%	-6,3%
Tajikistan	-147,3%	-5,6%	-2,8%		0,9%	-11,2%
Turkmenistan	-25,0%	-80,1%	-41,4%			
Ukraine	-75,8%	-11,8%	-0,5%	-4,6%	-10,9%	-1,1%
Uzbekistan	26,7%	32,9%	-5,7%		6,0%	-7,1%

Excess Total Returns: Northern America & Oceania

Country	Excess Yield (Corrected)			Excess Yield (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Australia	-6,1%	1,7%	2,8%	-10,0%	1,2%	
Bermuda	0,8%	2,6%	2,6%			
Canada	0,0%	-3,7%	3,4%	-0,3%	-2,9%	
Fiji	-12,4%	-8,4%	-3,2%	-1,4%	-10,1%	
French Polynesia	-13,9%	-63,9%	-50,9%		4,1%	
Greenland	54,4%	-0,7%	-0,4%			
Kiribati	-239,8%	-11,2%	-11,4%	-72,7%	-38,9%	
Marshall Islands	-21,1%	-39,3%	11,8%			
Micronesia	0,9%	22,7%	7,6%		-27,8%	
Nauru	-181,5%	74,6%	-3,4%		-14,2%	
New Caledonia	-207,1%	-60,4%	-29,3%		-3,2%	
New Zealand	3,1%	3,0%	5,0%		2,8%	
Palau	-47,0%	-4,2%	-2,9%		4,6%	
Samoa	-54,6%	-22,3%	-0,9%	-5,3%	-7,6%	
Solomon Islands	5,9%	20,4%	3,3%	-7,6%	20,4%	
Tonga	-2,5%	-23,0%	2,7%	22,8%	1,7%	
Tuvalu	-278,8%	-48,3%	1,5%		5,2%	
USA	4,1%	5,0%	0,6%	4,0%	3,8%	
Vanuatu	-63,1%	-5,8%	-6,4%	0,5%	-2,5%	

Excess Total Returns: Latin America

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Anguilla	-14,9%	37,3%	2,7%	10,7%	25,0%	3,2%
Antigua and Barbuda	10,6%	14,5%	15,0%	10,9%	2,7%	-1,3%
Argentina	7,5%	-1,6%	0,2%	3,1%	0,0%	-0,2%
Aruba	-1,7%	-10,1%	4,0%	8,4%	-11,9%	-0,4%
Bahamas	-0,4%	-1,3%	-1,7%	0,3%	-0,3%	-1,6%
Barbados	4,5%	-12,5%	3,8%	5,5%	-0,8%	2,2%
Belize	26,5%	-8,4%	1,5%	-12,7%	-10,4%	-2,3%
Bolivia	0,0%	-5,0%	-10,3%	-1,9%	-2,2%	-11,4%
Bonaire, Sint Eustatius and Saba	-1,8%	0,0%	-0,1%			
Brazil	1,2%	-6,5%	1,1%	-3,6%	-4,1%	1,5%
Cayman Islands	-1,7%	-1,2%	-0,5%			
Chile	7,6%	-6,1%	-3,0%	8,0%	-5,2%	-1,5%
Colombia	-2,8%	-5,7%	0,2%	-2,8%	-4,9%	-0,8%
Costa Rica	6,8%	0,0%	-2,3%	-0,4%	-1,8%	-4,0%
Cuba	-321,8%	-22,5%	-17,6%			
Curacao	1,9%	2,7%	-7,7%			-5,7%
Dominica	-15,5%	8,6%	2,7%	11,0%	2,7%	-0,7%
Dominican Republic	8,0%	-10,9%	-5,4%	1,5%	-13,8%	-7,2%
Ecuador	-5,7%	-3,3%	-4,3%	-6,8%	-4,8%	-6,1%
El Salvador	-4,0%	-0,7%	0,4%	-5,6%	-1,5%	-2,0%
Grenada	0,2%	13,6%	-0,8%	8,2%	8,7%	-3,4%
Guatemala	6,2%	16,8%	-4,3%	4,9%	14,1%	-5,2%
Guyana	-14,8%	9,6%	-0,2%	-2,4%	6,6%	-1,3%
Haiti	-3,3%	-10,7%	-2,9%	1,9%	4,8%	3,0%
Honduras	-9,6%	-0,5%	-5,5%	-1,1%	-0,1%	-6,5%
Jamaica	3,6%	-7,7%	2,4%	-1,5%	-12,3%	-0,1%
Mexico	-8,7%	2,7%	-1,0%	-9,5%	2,1%	-1,9%
Montserrat	322,0%	-30,5%	-20,5%	5,9%	10,0%	-3,2%
Nicaragua	0,5%	-6,2%	-12,2%	-33,6%	16,5%	2,6%
Panama	7,6%	-0,6%	-1,8%	-0,4%	-0,7%	-2,7%
Paraguay	-10,4%	3,2%	-6,1%	3,7%	-0,5%	-8,0%
Peru	6,3%	-4,5%	-5,7%	4,4%	-5,2%	-6,2%
Puerto Rico	1,4%	2,5%	-0,1%			
Saint Kitts and Nevis	80,6%	0,4%	0,7%	7,2%	-1,1%	-0,3%
Saint Lucia	-2,0%	22,8%	3,8%	8,9%	14,4%	0,5%
Saint Vincent and the Grenadines	-19,9%	3,8%	6,8%	2,4%	1,9%	4,4%
Sint Maarten (Dutch part)	-4,9%	1,4%	7,1%			1,3%
Suriname	21,5%	-7,7%	-13,0%		-10,1%	-14,9%
Trinidad and Tobago	-6,0%	-14,2%	-10,4%	-8,8%	-15,9%	-12,2%
Turks and Caicos Islands	-71,2%	-19,4%	-1,2%			
Uruguay	1,1%	0,1%	-4,7%	0,3%	-0,2%	-3,6%
Venezuela	-11,4%	-4,6%	-3,2%	-8,6%	-5,8%	-6,5%
Virgin Islands, British	23,2%	17,2%	1,2%			

Excess Total Returns: MENA

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Algeria	-5,1%	-18,6%	-15,3%	-14,6%	-12,7%	-14,9%
Bahrain	10,9%	-2,0%	-1,8%	-2,4%	-1,4%	-1,9%
Egypt	-32,3%	-1,7%	-12,3%	4,2%	-1,0%	-13,3%
Iran	-91,0%	-46,9%	23,2%	0,7%	13,6%	
Iraq	-103,2%	-23,8%	-13,5%		2,1%	-16,1%
Israel	-1,5%	0,2%	-0,5%	0,6%	2,9%	-0,5%
Jordan	-4,9%	-5,2%	0,3%	-1,6%	-1,2%	0,4%
Kuwait	-44,9%	-4,8%	4,6%	-11,7%	-2,0%	4,8%
Lebanon	21,9%	11,6%	2,9%		3,1%	1,0%
Libya	-12,2%	-13,9%	-12,0%	-11,0%	-10,2%	-10,5%
Morocco	-5,0%	-1,2%	4,5%		-4,1%	2,5%
Oman	-53,8%	-20,2%	5,2%	-27,6%	-24,6%	-9,1%
Palestine	68,8%	-3,6%	17,1%	-2,1%	16,2%	24,3%
Qatar	-2,0%	-27,4%	-4,3%			-5,1%
Saudi Arabia	-23,4%	-26,4%	-7,0%	-16,7%	-17,5%	-5,4%
Syrian Arab Republic	-50,7%	-0,2%	8,6%	-7,7%	9,0%	-5,9%
Tunisia	-17,2%	-12,8%	-1,7%	-14,4%	-12,4%	-3,9%
Turkey	2,2%	5,6%	9,9%	-0,1%	1,2%	3,0%
United Arab Emirates	-26,8%	-9,6%	5,0%			
Yemen	35,3%	-10,2%	-13,5%		-7,3%	-6,4%

Excess Total Returns: Sub-Saharan Africa

Country	Excess Total Returns (Corrected)			Excess Total Returns (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Angola	-5,2%	-30,7%	-15,1%	6,5%	-25,7%	-17,4%
Benin	-18,6%	11,5%	3,5%	2,0%	10,3%	-1,5%
Botswana	-3,7%	-41,7%	-19,5%	-3,0%	-24,6%	-10,4%
Burkina Faso	57,2%	-0,1%	-1,7%		-3,0%	-4,3%
Burundi	-8,3%	-14,0%	2,1%	-4,3%	1,4%	1,2%
Cabo Verde	-20,2%	-3,5%	-3,3%	-2,0%	3,1%	-3,2%
Cameroon	4,0%	11,4%	-5,3%	-7,6%	13,3%	-7,3%
Central African Republic	-0,2%	-26,9%	0,1%	-1,1%		
Chad	9,3%	-35,6%	-6,2%	-5,1%		
Comoros	43,8%	3,3%	-9,6%	-2,7%	7,2%	3,5%
Congo	-1,5%	7,0%	-106,3%	-6,0%	0,2%	-45,2%
Cote d'Ivoire	-36,0%	-15,7%	-11,0%		-8,0%	-14,0%
Djibouti	-31,1%	-5,7%	-18,1%	-4,5%	-4,4%	-20,5%
DR Congo	13,8%	12,8%	-0,4%		15,6%	-2,3%
Equatorial Guinea	-0,5%	-1587,4%	-1095,6%	-36,5%		
Eritrea	-123,8%	-33,0%	-86,9%	-0,3%	1,4%	
Ethiopia	2,0%	23,6%	15,9%	2,4%	22,7%	23,6%
Gabon	-48,9%	-67,3%	-63,8%	-43,1%	-57,1%	-63,8%
Gambia	-29,7%	-2,1%	-4,2%	-0,6%	2,1%	2,7%
Ghana	-15,0%	0,7%	10,0%	-2,4%	5,4%	5,0%
Guinea	-30,4%	23,1%	19,8%	-61,2%	16,2%	15,3%
Guinea-Bissau	-9,8%	-33,6%	-10,5%	-20,3%	-24,2%	-5,4%
Kenya	3,3%	-0,9%	1,9%	4,5%	1,9%	0,4%
Lesotho	-227,8%	-48,3%	-18,0%	127,2%	-18,4%	5,7%
Liberia	-46,5%	-5,6%	-26,0%	-5,8%		-34,7%
Madagascar	12,6%	3,8%	-2,8%	42,8%	15,5%	-4,5%
Malawi	-1,1%	-31,7%	-7,3%	6,7%	-11,3%	4,3%
Mali	-2,4%	-4,2%	-15,4%	-9,7%	-5,7%	-11,9%
Mauritania	8,2%	6,6%	11,9%	25,6%		12,5%
Mauritius	30,8%	-44,5%	-0,4%	5,8%	12,8%	-1,0%
Mozambique	-32,8%	-11,2%	-0,9%		-8,6%	0,8%
Namibia	-23,3%	-12,0%	-9,4%	-5,0%	1,5%	-1,0%
Niger	-9,8%	12,3%	0,1%	15,8%	12,9%	2,2%
Nigeria	-5,3%	-47,9%	-38,8%	-14,9%	-39,5%	-20,4%
Rwanda	-81,2%	-17,9%	-14,5%			-4,6%
Sao Tome and Principe	-44,8%	7,4%	3,1%	-30,8%	6,0%	4,6%
Senegal	-0,4%	6,3%	1,1%	-1,5%	4,5%	-2,8%
Seychelles	-1,7%	2,7%	2,9%	6,0%	3,3%	1,4%
Sierra Leone	-14,7%	10,3%	14,3%	-6,1%	13,1%	19,6%
Somalia	11,4%	-8,4%	46,3%			
South Africa	3,8%	1,0%	3,8%	0,9%	0,8%	2,9%
South Sudan	-402,2%	-450,5%	-205,7%			
Sudan	1,0%	2,4%	-10,3%	-9,9%	-3,6%	-9,9%
Swaziland	-14,9%	-5,0%	-45,6%	-9,8%	-1,0%	-30,0%
Tanzania	-7,0%	-13,6%	-3,4%	3,7%	-7,2%	0,0%
Togo	-4,6%	8,3%	4,4%	-4,3%	6,1%	3,2%
Uganda	-108,0%	-48,9%	-0,5%	3,6%	-2,0%	0,2%
Zambia	-2,2%	-5,9%	-27,2%	-6,2%	0,4%	-35,6%
Zimbabwe	6,5%	-46,2%	-13,3%	3,2%	-8,6%	-8,4%

Excess Yields: Europe

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Albania	2,2%	3,3%	-1,5%	1,7%	2,6%	-1,4%
Andorra	1,2%	1,3%	0,6%			0,8%
Austria	-0,2%	0,2%	0,3%		0,0%	0,1%
Belgium	0,3%	-0,2%	-0,2%		-0,2%	-0,3%
Bosnia and Herzegovina	0,0%	-0,9%	-2,5%	-1,2%	-0,7%	-2,5%
Bulgaria	-0,8%	-4,0%	-3,1%	-1,2%	-2,8%	-3,1%
Croatia	-0,4%	-2,6%	-3,1%	-0,9%	-1,8%	-3,0%
Cyprus	-0,3%	-1,5%	0,0%	0,2%	-1,9%	0,1%
Czech Republic	-0,5%	-6,0%	-4,9%	-1,5%	-3,2%	-4,1%
Denmark	0,8%	0,5%	1,0%	-0,3%	0,0%	0,7%
Estonia	-0,8%	-3,2%	-1,8%	-0,5%	-1,9%	-2,1%
Finland	-2,1%	0,7%	0,5%	-2,2%	0,3%	0,1%
France	1,4%	0,8%	0,8%	0,3%	0,4%	0,6%
Germany	-0,7%	0,2%	0,5%	-0,6%	0,0%	0,8%
Gibraltar	-1,1%	-1,5%	-0,4%			
Greece	-0,9%	-0,8%	0,3%	-2,4%	-0,7%	0,1%
Guernsey	0,8%	-0,5%	-0,5%			
Hungary	-2,3%	-2,5%	-1,4%	-3,1%	-1,7%	-1,3%
Iceland	-2,0%	0,9%	1,0%	-3,5%	-0,4%	0,4%
Ireland	-1,4%	-2,3%	-1,1%		-1,0%	-1,0%
Isle of Man	1,0%	-0,6%	0,2%			
Italy	-1,1%	0,4%	0,2%	-1,4%	0,1%	0,2%
Jersey	0,3%	-0,8%	0,1%			
Kosovo	0,3%	-4,2%	-2,0%		-3,5%	-2,3%
Latvia	-0,1%	-1,2%	-1,5%	0,5%	-0,8%	-1,7%
Liechtenstein	-0,8%	-1,8%	-1,1%			
Lithuania	0,4%	-1,8%	-2,7%	-0,3%	-1,9%	-3,1%
Luxembourg	2,1%	0,4%	0,4%	0,1%	-0,1%	-0,1%
Malta	-0,3%	-1,2%	-0,5%	0,5%	-0,4%	-0,5%
Moldova	-0,1%	-2,0%	-3,2%	-0,6%	-1,7%	-2,8%
Monaco	-0,4%	-1,8%	-0,7%			
Montenegro	-0,1%	-1,9%	-1,2%		-0,5%	-1,2%
Netherlands	-0,7%	0,2%	0,1%	-0,2%	0,1%	-0,1%
North Macedonia	-0,2%	-1,9%	-2,8%	-1,9%	-1,9%	-3,0%
Norway	-1,0%	-0,5%	1,3%	-1,3%	-0,8%	-0,4%
Poland	-1,4%	-2,6%	-3,8%	-2,9%	-1,8%	-3,2%
Portugal	-0,5%	0,1%	0,2%	-1,1%	-0,3%	-0,2%
Romania	-6,2%	-4,2%	-3,5%	-1,8%	-2,8%	-3,3%
San Marino	-1,1%	-0,9%	-2,9%			
Serbia	0,0%	-1,1%	-2,4%		-1,1%	-2,1%
Slovakia	-0,3%	-4,9%	-0,9%	-1,3%	-3,0%	-2,0%
Slovenia	0,5%	-0,8%	-1,0%	-0,7%	-1,3%	-1,7%
Spain	-2,6%	0,0%	0,7%	-1,0%	0,0%	0,7%
Sweden	-0,9%	1,0%	1,2%	-0,7%	0,8%	0,7%
Switzerland	-0,6%	0,1%	0,0%	1,2%	0,5%	0,0%
United Kingdom	0,7%	0,6%	0,0%	0,2%	0,1%	-0,1%

Excess Yields: China & East Asia

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
China	-0,5%	-4,9%	-4,1%	-0,5%	-2,6%	-2,7%
Hong Kong	-0,9%	-1,9%	-1,2%	-0,8%	-1,1%	-0,9%
Japan	-0,4%	0,7%	1,1%	1,1%	1,7%	1,7%
Korea	5,0%	-2,9%	-1,2%	-1,1%	-0,4%	0,4%
Macao	0,5%	-15,6%	-7,0%		-11,5%	-5,7%
Mongolia	-1,6%	1,9%	-3,8%	0,6%	0,5%	-3,5%
North Korea	-1,2%	-3,8%	-3,9%			
Taiwan	-0,9%	-2,4%	-1,3%			

Excess Yields: South & South-East Asia

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Afghanistan	14,3%	3,4%	0,8%		1,1%	0,8%
Bangladesh	5,6%	-0,9%	-5,2%	4,3%	-0,7%	-3,6%
Bhutan	0,6%	-0,1%	-4,2%		-0,6%	-3,4%
Brunei Darussalam	-2,3%	-4,8%	-5,4%		-3,6%	-4,8%
Cambodia	-0,1%	-4,7%	-4,6%	0,0%	-3,1%	-2,9%
India	1,8%	-1,4%	-4,6%	2,5%	-0,1%	-1,4%
Indonesia	-3,1%	-3,5%	-4,4%	-2,0%	-3,1%	-3,8%
Lao PDR	3,2%	-0,8%	-2,2%	1,8%	-0,1%	-1,4%
Malaysia	-7,7%	-9,6%	-4,4%	-3,0%	-4,0%	-2,0%
Maldives	-7,0%	-12,2%	-9,4%	-9,0%	-9,1%	-7,7%
Myanmar	-1,0%	-5,1%	-12,1%	0,9%	-8,7%	-12,3%
Nepal	3,5%	1,3%	-0,1%	3,3%	1,0%	0,0%
Pakistan	0,8%	-3,6%	-1,8%	-0,2%	-2,9%	-2,2%
Papua New Guinea	-1,4%	-9,1%	-4,0%	0,0%	-6,3%	-3,2%
Philippines	-3,3%	-2,7%	-5,5%	-1,3%	-1,0%	-2,3%
Singapore	-1,7%	0,4%	0,5%	-1,2%		
Sri Lanka	0,8%	0,4%	-2,2%	0,9%	0,6%	-1,7%
Thailand	-0,8%	-4,8%	-5,8%	-0,5%	-3,5%	-4,0%
Timor-Leste	5,2%	5,7%	-7,0%		41,5%	1,1%
Viet Nam	0,7%	-4,6%	-7,7%			-4,4%

Excess Yields: Russia & Central Asia

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Armenia	0,1%	-2,0%	-2,9%	0,2%	-1,8%	-2,6%
Azerbaijan	0,6%	-7,3%	-4,0%	2,8%	-5,4%	-3,5%
Belarus	-1,0%	-2,0%	-4,7%	-2,3%	-1,4%	-4,3%
Georgia	-0,2%	-2,4%	-1,6%	-1,3%	-1,8%	-1,2%
Kazakhstan	-0,4%	-7,7%	-9,7%	-0,9%	-6,4%	-9,0%
Kyrgyzstan	-0,6%	-2,0%	-4,4%	-0,8%	-1,0%	-3,3%
Russian Federation	-0,8%	-5,7%	-6,5%	-3,5%	-3,4%	-5,1%
Tajikistan	-0,3%	0,3%	1,7%		-0,8%	1,8%
Turkmenistan	-0,3%	-11,5%	-7,3%			
Ukraine	-0,1%	-3,0%	-4,9%	-2,9%	-2,6%	-4,7%
Uzbekistan	-0,4%	-2,7%	-4,8%		-4,2%	-3,9%

Excess Yields: Northern America & Oceania

Country	Excess Yield (Corrected)			Excess Yield (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Australia	-1,0%	-0,4%	0,1%	-1,8%	-1,1%	-0,8%
Bermuda	2,3%	0,6%	0,3%		0,1%	0,0%
Canada	-0,1%	-0,7%	0,3%	-1,3%	-1,4%	-0,5%
Fiji	-1,6%	-7,8%	-4,4%	-1,7%	-4,7%	-3,6%
French Polynesia	3,1%	1,7%	-0,2%		1,8%	0,5%
Greenland	-0,8%	-1,1%	-0,5%			
Kiribati	-286,0%	-20,2%	-7,2%	-41,9%	-11,9%	-4,3%
Marshall Islands	-0,1%	-0,4%	0,0%		0,2%	0,0%
Micronesia	-0,9%	-1,5%	-8,0%		-5,4%	-7,0%
Nauru	2,3%	1,3%	-3,1%		-1,1%	-1,5%
New Caledonia	5,1%	10,5%	3,9%		8,4%	3,4%
New Zealand	0,4%	-0,9%	0,0%		-1,7%	-1,0%
Palau	-8,3%	-4,3%	-1,7%		-0,4%	-2,0%
Samoa	2,0%	-4,2%	-3,0%	1,8%	-5,3%	-2,5%
Solomon Islands	-7,6%	-3,0%	-4,7%	-5,5%	-2,6%	-5,0%
Tonga	11,2%	5,7%	-0,3%	12,8%	4,5%	-0,5%
Tuvalu	-259,8%	-63,8%	1,6%		-43,8%	0,5%
USA	2,4%	2,2%	1,8%	2,3%	1,1%	1,5%
Vanuatu	-23,2%	-3,3%	-1,9%	-16,2%	-2,8%	-2,1%

Excess Yields: Latin America

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Anguilla	-7,0%	-3,1%	0,7%	-13,5%	-1,9%	0,9%
Antigua and Barbuda	-1,3%	-7,0%	-2,9%	0,3%	-4,8%	-1,9%
Argentina	-7,0%	-3,8%	-5,7%	-5,3%	-4,1%	-5,8%
Aruba	2,6%	-1,0%	3,4%	-0,1%	-2,5%	-1,3%
Bahamas	-0,1%	-0,1%	-0,2%	-0,1%	0,0%	-0,1%
Barbados	-0,7%	-2,1%	0,6%	-1,5%	-1,8%	-0,2%
Belize	-10,3%	-7,8%	-3,5%	-2,0%	-4,7%	-2,7%
Bolivia	-4,1%	-2,1%	-7,3%	-3,7%	-2,4%	-6,1%
Bonaire, Sint Eustatius and Saba	-0,6%	-1,7%	-0,7%			
Brazil	-4,7%	-4,4%	-3,2%	-5,0%	-3,2%	-2,5%
Cayman Islands	0,0%	0,0%	0,0%			0,0%
Chile	-2,1%	-4,2%	-3,4%	-3,6%	-6,0%	-3,3%
Colombia	-2,5%	-4,6%	-2,7%	-4,6%	-4,7%	-2,8%
Costa Rica	-4,4%	-6,1%	-4,9%	-4,6%	-4,2%	-4,2%
Cuba	-3,7%	-1,8%	-1,6%			
Curacao	-1,4%	-0,2%	0,2%			0,0%
Dominica	-0,8%	-6,6%	-0,6%	-0,6%	-4,8%	-0,4%
Dominican Republic	-8,2%	-12,8%	-4,4%	-5,8%	-9,1%	-3,8%
Ecuador	-5,9%	-5,0%	-3,7%	-5,5%	-4,7%	-3,3%
El Salvador	-4,4%	-1,2%	-4,1%	-3,2%	-1,2%	-3,8%
Grenada	-3,8%	-7,6%	-2,7%	-3,1%	-4,7%	-2,0%
Guatemala	-4,7%	-3,2%	-4,4%	-3,0%	-2,7%	-3,9%
Guyana	-1,5%	-1,6%	-2,5%	-1,9%	-1,0%	-1,6%
Haiti	-2,9%	1,5%	2,3%	-1,2%	-0,2%	1,3%
Honduras	-2,9%	-4,2%	-7,1%	-2,4%	-3,6%	-6,1%
Jamaica	-0,9%	-3,5%	-0,8%	-3,0%	-2,6%	-0,3%
Mexico	-4,6%	-5,0%	-2,8%	-2,9%	-1,6%	-2,0%
Montserrat	-13,2%	-7,8%	-0,9%	-22,6%	-5,2%	-0,3%
Nicaragua	0,5%	-1,1%	-2,9%	-1,2%	-1,3%	-2,6%
Panama	10,9%	-0,9%	-2,8%	0,1%	-1,3%	-2,2%
Paraguay	-2,8%	-4,4%	-6,3%	-2,1%	-4,4%	-5,5%
Peru	-3,4%	-7,2%	-7,2%	-3,3%	-5,9%	-5,9%
Puerto Rico	-2,7%	-1,4%	-0,4%			
Saint Kitts and Nevis	-0,2%	-5,7%	-2,2%	0,1%	-4,0%	-1,7%
Saint Lucia	-0,2%	-6,4%	-3,7%	-0,2%	-3,9%	-2,9%
Saint Vincent and the Grenadines	-9,3%	-5,2%	-1,1%	-9,3%	-2,9%	-0,1%
Sint Maarten (Dutch part)	2,1%	0,1%	13,8%			0,4%
Suriname	-17,6%	-12,2%	-6,8%		-1,7%	-5,2%
Trinidad and Tobago	-7,9%	-4,0%	-4,1%	-4,4%	-3,6%	-3,7%
Turks and Caicos Islands	-0,6%	-1,8%	-0,5%			-1,0%
Uruguay	-1,9%	-2,3%	-5,0%	-2,0%	-1,7%	-4,1%
Venezuela	-6,4%	-4,7%	-7,4%	-4,7%	-4,2%	-6,6%
Virgin Islands, British	-0,1%	-0,4%	-0,2%			

Excess Yields: MENA

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Algeria	-6,5%	-20,5%	-17,5%	-5,2%	-27,8%	-15,6%
Bahrain	-2,1%	-0,3%	-1,0%	-0,4%	-0,7%	-2,5%
Egypt	-0,8%	1,2%	-4,4%	1,0%	1,5%	-3,8%
Iran	-0,3%	-4,7%	-4,3%	1,5%	-0,4%	
Iraq	-0,1%	1,2%	-1,0%		0,5%	-0,9%
Israel	-1,3%	-3,4%	-3,6%	-0,5%	-0,8%	-0,7%
Jordan	-1,9%	0,8%	-0,6%	0,2%	1,7%	0,4%
Kuwait	-1,2%	-0,9%	-2,1%	-3,3%	-0,2%	-0,4%
Lebanon	-0,5%	-0,5%	0,3%		-1,1%	0,1%
Libya	-19,9%	-23,8%	-7,1%	-14,4%	-19,3%	-5,6%
Morocco	-3,5%	-1,5%	-1,6%	-2,7%	-0,5%	-0,7%
Oman	-22,3%	-8,6%	-5,9%	-16,2%	-8,0%	-6,1%
Palestine	-1,7%	1,2%	-1,2%	0,9%	2,1%	0,0%
Qatar	-5,5%	-14,1%	-6,6%			-4,7%
Saudi Arabia	-15,3%	-7,0%	-3,5%	-15,4%	-5,7%	-1,1%
Syrian Arab Republic	-2,2%	-9,1%	-4,1%	-1,0%	-7,0%	-10,9%
Tunisia	-1,9%	-3,0%	-1,7%	1,6%	-2,3%	-1,5%
Turkey	-4,0%	-1,2%	-0,8%	-2,8%	-0,4%	0,0%
United Arab Emirates	-14,4%	-5,9%	0,1%			
Yemen	-2,0%	-18,6%	-7,9%		-15,1%	-10,1%

Excess Yields: Sub-Saharan Africa

Country	Excess Yields (Corrected)			Excess Yields (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Angola	1,3%	-22,2%	-10,3%	-4,1%	-17,6%	-9,6%
Benin	10,1%	-0,7%	-0,3%	5,3%	-0,7%	-0,1%
Botswana	-2,2%	-34,6%	-10,5%	-8,9%	-27,6%	-9,8%
Burkina Faso	2,7%	0,8%	-2,2%		2,5%	-1,5%
Burundi	0,8%	0,0%	-1,0%	0,8%	0,0%	-0,6%
Cabo Verde	0,3%	-0,2%	-1,3%	-1,5%	0,1%	-0,9%
Cameroon	-6,2%	-4,1%	-4,9%	-4,8%	-4,1%	-4,0%
Central African Republic	0,3%	-1,7%	-0,7%	0,9%		
Chad	1,9%	35,7%	3,2%	1,8%		
Comoros	3,1%	0,0%	-2,2%	3,8%	0,6%	0,6%
Congo	-1,7%	-15,7%	-2,4%	-3,6%	-12,5%	-3,4%
Cote d'Ivoire	-5,7%	-4,6%	-7,5%		-4,5%	-4,7%
Djibouti	-1,2%	-1,7%	-3,5%	-0,3%	-0,4%	-1,9%
DR Congo	-1,5%	-5,9%	-5,3%		-0,4%	-4,8%
Equatorial Guinea	3,9%	-8,0%	-1,6%	-3,5%		
Eritrea	-2,2%	0,1%	-1,0%	-3,4%	2,3%	
Ethiopia	1,0%	1,1%	-0,8%	1,8%	1,3%	-0,4%
Gabon	-7,3%	-14,6%	-10,8%	-6,5%	-12,8%	-9,2%
Gambia	0,8%	-2,5%	-1,2%	-0,5%	-4,2%	-1,3%
Ghana	-4,0%	-1,2%	-5,4%	-2,4%	-0,6%	-4,6%
Guinea	1,3%	0,9%	-4,2%	-1,6%	0,1%	-4,0%
Guinea-Bissau	1,8%	-0,3%	-1,7%	-1,6%	-0,2%	-1,4%
Kenya	-4,9%	-1,9%	-3,0%	-3,2%	-1,1%	-1,3%
Lesotho	-20,6%	-4,1%	-3,6%	-1,9%	-3,2%	-3,6%
Liberia	3,0%	5,8%	-22,0%	0,1%		-42,6%
Madagascar	-2,7%	-3,3%	-4,0%	-2,1%	-2,1%	-3,1%
Malawi	-5,5%	-3,8%	-8,4%	-3,6%	-1,7%	-4,7%
Mali	1,2%	-6,4%	-5,6%	-0,5%	-5,3%	-4,8%
Mauritania	0,0%	4,5%	1,4%	-0,9%		1,5%
Mauritius	17,3%	10,5%	1,5%	-0,3%	-2,1%	0,2%
Mozambique	-0,3%	-2,8%	-0,5%		-2,3%	-0,2%
Namibia	6,0%	2,1%	-1,4%	3,3%	-2,2%	-3,6%
Niger	5,0%	0,0%	-0,7%	3,2%	0,0%	-0,4%
Nigeria	-3,0%	-11,1%	-12,1%	-3,2%	-9,0%	-9,6%
Rwanda	-0,9%	-1,4%	-4,5%			-2,8%
Sao Tome and Principe	21,1%	2,6%	1,0%	0,3%	2,0%	1,0%
Senegal	-0,5%	-1,4%	-1,9%	-0,8%	-1,0%	-1,6%
Seychelles	-3,6%	-3,1%	-1,1%	-3,2%	-2,7%	-0,9%
Sierra Leone	-3,6%	-0,8%	-6,4%	-1,1%	-0,7%	-5,1%
Somalia	0,1%	-0,1%	-1,1%			
South Africa	-3,1%	-2,9%	-2,2%	-2,2%	-2,3%	-2,2%
South Sudan	-19,0%	-26,8%	-8,9%			19,6%
Sudan	0,0%	-4,1%	-2,3%	0,6%	-4,0%	-2,5%
Swaziland	-4,5%	-8,5%	-20,4%	-3,5%	-7,0%	-18,5%
Tanzania	1,3%	-1,2%	-2,7%	0,8%	-0,3%	-1,4%
Togo	1,7%	-0,7%	0,6%	2,0%	-0,2%	0,2%
Uganda	-0,5%	-2,6%	-3,7%	-0,8%	-1,2%	-2,1%
Zambia	-1,6%	-5,9%	-4,4%	-1,4%	-4,3%	-3,4%
Zimbabwe	-2,4%	-2,1%	-3,7%	1,9%	-1,7%	-2,5%

Excess Capital Gains: Europe

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Albania	-225,5%	10,6%	10,5%	15,3%	6,3%	5,1%
Andorra	26,5%	-22,0%	2,6%			
Austria	3,4%	-0,6%	0,7%	-3,0%	-1,3%	0,1%
Belgium	3,3%	-2,1%	1,0%	0,5%	-1,1%	0,3%
Bosnia and Herzegovina	-659,5%	20,3%	5,7%	5,9%	18,8%	5,1%
Bulgaria	-40,4%	-0,9%	1,7%	2,6%	-0,9%	1,2%
Croatia	-39,9%	-5,4%	3,1%	7,9%	-4,3%	2,0%
Cyprus	1,7%	5,8%	0,9%	7,2%	3,1%	0,1%
Czech Republic	12,4%	0,0%	3,7%	2,6%	-1,6%	0,7%
Denmark	-2,6%	-1,1%	-0,5%	-1,6%	-0,9%	-0,9%
Estonia	-114,0%	1,1%	1,8%	-2,6%	0,1%	0,1%
Finland	-5,3%	4,1%	0,0%	-5,1%	4,4%	0,2%
France	-1,9%	-0,8%	0,0%	-0,4%	-0,7%	-0,2%
Germany	0,0%	-1,0%	-0,1%	-0,3%	-0,6%	-1,2%
Gibraltar	42,5%	12,1%	15,2%			
Greece	-2,2%	-3,8%	-0,3%	3,6%	-1,0%	-0,6%
Guernsey	2,7%	2,6%	-0,3%			
Hungary	2,6%	10,0%	1,9%	-2,4%	1,0%	0,5%
Iceland	-3,6%	-6,0%	7,5%	-6,5%	-19,7%	16,1%
Ireland	7,4%	-1,3%	0,3%	-4,8%	-1,5%	-0,4%
Isle of Man	9,2%	-0,7%	-5,9%			
Italy	-1,4%	-1,4%	1,5%	-0,9%	-1,2%	0,5%
Jersey	2,6%	1,3%	-1,4%			
Kosovo	68,8%	68,4%	43,6%		-6,3%	-1,0%
Latvia	-78,6%	-1,9%	2,0%	-10,3%	-1,3%	1,1%
Liechtenstein	12,0%	0,3%	9,7%			
Lithuania	23,9%	2,5%	2,6%	3,6%	1,5%	-0,7%
Luxembourg	-2,4%	-1,1%	-0,2%	1,2%	-0,1%	0,0%
Malta	0,9%	1,1%	0,4%	1,7%	1,2%	0,1%
Moldova	-18,9%	8,8%	11,0%	0,9%	9,1%	8,4%
Monaco	0,9%	2,4%	0,5%			
Montenegro	-154,2%	-1,1%	7,0%		-7,2%	5,2%
Netherlands	-3,0%	-0,1%	0,1%	-2,4%	-0,9%	-0,3%
North Macedonia	38,6%	-2,4%	-3,9%	8,3%	2,3%	-3,5%
Norway	1,9%	-5,0%	0,0%	-2,8%	-3,8%	1,7%
Poland	47,1%	-2,1%	2,5%	4,4%	-2,3%	-0,3%
Portugal	-0,6%	-2,1%	-0,6%	3,2%	-0,8%	-0,7%
Romania	-1,5%	0,5%	3,9%	5,2%	0,3%	1,9%
San Marino	8,2%	8,6%	0,5%			-5,4%
Serbia	57,9%	43,8%	2,0%		20,2%	0,3%
Slovakia	-13,8%	-0,6%	1,1%	0,7%	-1,3%	-1,4%
Slovenia	4,6%	0,6%	2,0%	-4,2%	-0,6%	-0,6%
Spain	4,1%	-4,4%	0,2%	0,4%	-2,5%	0,2%
Sweden	0,0%	-1,3%	-0,4%	-0,8%	-1,7%	-0,3%
Switzerland	-0,9%	-1,8%	-1,2%	0,2%	-1,6%	-1,5%
United Kingdom	-0,4%	0,4%	0,8%	0,4%	0,7%	0,7%

Excess Capital Gains: China & East Asia

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
China	-29,3%	-1,9%	-0,5%	-7,5%	-1,0%	-2,0%
Hong Kong	20,4%	0,6%	1,4%	2,9%	2,1%	0,8%
Japan	8,3%	-0,9%	-4,0%	2,9%	-0,6%	-4,3%
Korea	-7,1%	1,1%	2,9%	-8,1%	-1,8%	-0,2%
Macao	-63,2%	-6,4%	-6,8%	9,1%	1,7%	-5,2%
Mongolia	5,2%	3,4%	-8,9%	-10,2%	-3,3%	-8,1%
North Korea	-38,8%	17,9%	0,9%			
Taiwan	-54,4%	-19,0%	-13,0%	16,1%	10,6%	6,9%

Excess Capital Gains: South & South-East Asia

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Afghanistan	-22,9%	16,2%	7,5%		48,3%	29,8%
Bangladesh	-30,1%	-27,0%	-2,6%	-14,7%	-20,6%	-5,8%
Bhutan	57,0%	49,4%	-1,5%	6,6%	-2,5%	2,5%
Brunei Darussalam	-61,5%	-15,1%	-4,2%	-3,5%	-13,3%	-3,6%
Cambodia	2,8%	0,4%	-3,8%	18,8%	3,2%	-3,8%
India	-8,3%	-3,1%	2,7%	-3,0%	-3,3%	-3,1%
Indonesia	-11,1%	-4,4%	5,5%	-7,7%	-5,8%	1,2%
Lao PDR	412,4%	4,3%	-11,2%	43,5%	-1,4%	-12,0%
Malaysia	1,8%	-4,4%	-2,5%	-3,2%	-9,9%	-4,1%
Maldives	-31,3%	5,5%	9,0%	17,2%	7,7%	-1,4%
Myanmar	-9,4%	-8,0%	-23,1%	5,6%	16,2%	-7,0%
Nepal	-27,8%	-3,4%	3,6%	8,4%	2,6%	1,6%
Pakistan	1,4%	-1,4%	2,4%	0,6%	0,4%	-0,5%
Papua New Guinea	-1,7%	-3,7%	-25,1%	-5,5%	-8,3%	-22,4%
Philippines	6,5%	0,0%	1,9%	1,6%	-0,9%	-2,0%
Singapore	8,2%	-3,0%	-4,1%	5,0%	-0,9%	-2,3%
Sri Lanka	-0,5%	4,9%	1,5%	-0,7%	0,3%	-3,7%
Thailand	8,5%	6,5%	-0,1%	0,5%	2,6%	-4,0%
Timor-Leste	-127,2%	-16,4%	1,4%		-2,2%	-11,8%
Viet Nam	132,9%	23,0%	6,4%	-10,9%	-2,1%	-14,2%

Excess Capital Gains: Russia & Central Asia

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Armenia	-49,9%	0,2%	2,7%	9,5%	-1,0%	0,6%
Azerbaijan	-8,8%	-52,1%	-18,5%	-3,5%	-43,0%	-19,0%
Belarus	-26,3%	1,1%	4,4%	-0,2%	3,7%	3,3%
Georgia	-31,9%	1,7%	0,6%	-2,6%	2,5%	-0,9%
Kazakhstan	47,4%	-3,7%	-1,2%	-23,6%	-5,8%	-2,4%
Kyrgyzstan	-61,1%	4,5%	12,2%	-6,2%	2,3%	4,1%
Russian Federation	11,5%	-8,8%	0,0%	-2,4%	-6,7%	-1,2%
Tajikistan	-147,0%	-5,9%	-4,5%	-6,0%	1,6%	-13,0%
Turkmenistan	-24,7%	-68,6%	-34,1%	-29,6%	20,6%	-4,3%
Ukraine	-75,6%	-8,8%	4,4%	-1,8%	-8,3%	3,6%
Uzbekistan	27,2%	35,6%	-0,9%	-17,5%	10,2%	-3,1%

Excess Capital Gains: Northern America & Oceania

Country	Excess Yield (Corrected)			Excess Yield (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Australia	-5,1%	2,2%	2,7%	-8,2%	2,3%	2,6%
Bermuda	-1,5%	2,1%	2,3%			2,0%
Canada	0,0%	-3,0%	3,1%	1,1%	-1,5%	3,3%
Fiji	-10,8%	-0,6%	1,2%	0,3%	-5,5%	-0,9%
French Polynesia	-17,0%	-65,6%	-50,7%		2,4%	-7,1%
Greenland	55,2%	0,4%	0,1%			
Kiribati	46,2%	8,9%	-4,2%	-30,8%	-27,0%	-8,1%
Marshall Islands	-21,0%	-38,8%	11,8%			-0,3%
Micronesia	1,8%	24,3%	15,5%	4,3%	-22,4%	8,3%
Nauru	-183,7%	73,3%	-0,3%		-13,2%	9,1%
New Caledonia	-212,1%	-70,9%	-33,2%		-11,6%	-29,0%
New Zealand	2,7%	3,9%	5,0%	9,4%	4,5%	4,2%
Palau	-38,8%	0,1%	-1,2%		5,0%	7,5%
Samoa	-56,6%	-18,1%	2,1%	-7,1%	-2,3%	-2,2%
Solomon Islands	13,5%	23,4%	7,9%	-2,1%	23,0%	8,1%
Tonga	-13,6%	-28,6%	3,0%	9,9%	-2,7%	5,9%
Tuvalu	-19,1%	15,5%	-0,1%		49,0%	58,1%
USA	1,7%	2,8%	-1,2%	1,7%	2,7%	-1,3%
Vanuatu	-39,9%	-2,5%	-4,5%	16,7%	0,3%	-3,0%

Excess Capital Gains: Latin America

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Anguilla	-7,8%	40,3%	2,0%	24,2%	26,9%	2,3%
Antigua and Barbuda	12,0%	21,5%	18,0%	10,6%	7,5%	0,6%
Argentina	14,5%	2,2%	6,0%	8,4%	4,1%	5,6%
Aruba	-4,3%	-9,1%	0,6%	8,5%	-9,4%	0,9%
Bahamas	-0,3%	-1,2%	-1,5%	0,3%	-0,2%	-1,4%
Barbados	5,2%	-10,4%	3,2%	7,0%	1,0%	2,4%
Belize	36,8%	-0,7%	5,0%	-10,6%	-5,8%	0,4%
Bolivia	4,1%	-2,9%	-3,0%	1,9%	0,2%	-5,3%
Bonaire, Sint Eustatius and Saba	-1,3%	1,7%	0,6%			
Brazil	5,9%	-2,1%	4,3%	1,4%	-0,8%	4,0%
Cayman Islands	-1,7%	-1,2%	-0,6%			
Chile	9,7%	-1,9%	0,5%	11,6%	0,9%	1,8%
Colombia	-0,3%	-1,1%	2,9%	1,9%	-0,2%	1,9%
Costa Rica	11,2%	6,1%	2,6%	4,2%	2,4%	0,2%
Cuba	-318,1%	-20,7%	-16,0%			
Curacao	3,3%	2,9%	-7,9%			-5,7%
Dominica	-14,7%	15,2%	3,3%	11,6%	7,5%	-0,2%
Dominican Republic	16,2%	1,8%	-0,9%	7,3%	-4,7%	-3,4%
Ecuador	0,2%	1,7%	-0,6%	-1,3%	-0,1%	-2,8%
El Salvador	0,4%	0,5%	4,5%	-2,4%	-0,3%	1,8%
Grenada	4,0%	21,2%	1,9%	11,3%	13,4%	-1,4%
Guatemala	10,9%	19,9%	0,1%	7,8%	16,8%	-1,2%
Guyana	-13,4%	11,2%	2,3%	-0,5%	7,6%	0,2%
Haiti	-0,4%	-12,2%	-5,2%	3,1%	5,0%	1,8%
Honduras	-6,7%	3,8%	1,6%	1,4%	3,6%	-0,3%
Jamaica	4,5%	-4,2%	3,2%	1,5%	-9,7%	0,1%
Mexico	-4,1%	7,7%	1,8%	-6,6%	3,7%	0,1%
Montserrat	335,2%	-22,7%	-19,7%	28,5%	15,2%	-2,9%
Nicaragua	0,0%	-5,1%	-9,3%	-32,4%	17,8%	5,2%
Panama	-3,4%	0,3%	1,0%	-0,6%	0,6%	-0,5%
Paraguay	-7,6%	7,7%	0,2%	5,8%	3,9%	-2,5%
Peru	9,6%	2,7%	1,5%	7,6%	0,6%	-0,3%
Puerto Rico	4,1%	3,9%	0,3%			
Saint Kitts and Nevis	80,8%	6,1%	2,9%	7,1%	2,9%	1,4%
Saint Lucia	-1,8%	29,3%	7,5%	9,1%	18,3%	3,4%
Saint Vincent and the Grenadines	-10,5%	9,0%	7,9%	11,7%	4,8%	4,5%
Sint Maarten (Dutch part)	-7,0%	1,3%	-6,6%			0,9%
Suriname	39,0%	4,5%	-6,2%	5,6%	-8,5%	-9,7%
Trinidad and Tobago	1,9%	-10,1%	-6,3%	-4,5%	-12,3%	-8,5%
Turks and Caicos Islands	-70,7%	-17,6%	-0,7%			
Uruguay	2,9%	2,4%	0,4%	2,3%	1,5%	0,5%
Venezuela	-5,0%	0,0%	4,2%	-3,9%	-1,6%	0,2%
Virgin Islands, British	23,3%	17,7%	1,4%			

Excess Capital Gains: MENA

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Algeria	1,5%	1,9%	2,2%	-9,4%	15,1%	0,7%
Bahrain	13,0%	-1,7%	-0,8%	-2,0%	-0,6%	0,6%
Egypt	-31,5%	-3,0%	-7,9%	3,2%	-2,5%	-9,6%
Iran	-90,7%	-42,2%	27,5%	-0,7%	14,0%	50,2%
Iraq	-103,1%	-25,0%	-12,5%		1,6%	-15,2%
Israel	-0,3%	3,6%	3,1%	1,1%	3,6%	0,2%
Jordan	-3,1%	-6,0%	0,9%	-1,9%	-2,9%	0,0%
Kuwait	-43,8%	-3,9%	6,7%	-8,3%	-1,8%	5,2%
Lebanon	22,4%	12,1%	2,6%	1,2%	4,2%	0,9%
Libya	7,6%	10,0%	-4,9%	3,5%	9,1%	-4,9%
Morocco	-1,5%	0,3%	6,1%		-3,6%	3,3%
Oman	-31,5%	-11,6%	11,1%	-11,4%	-16,5%	-3,0%
Palestine	70,4%	-4,8%	18,3%	-2,9%	14,0%	24,3%
Qatar	3,5%	-13,2%	2,4%	16,5%	-6,0%	-0,4%
Saudi Arabia	-8,2%	-19,3%	-3,5%	-1,3%	-11,9%	-4,3%
Syrian Arab Republic	-48,4%	8,9%	12,6%	-6,7%	16,0%	5,0%
Tunisia	-15,3%	-9,8%	0,0%	-15,9%	-10,0%	-2,4%
Turkey	6,2%	6,8%	10,7%	2,7%	1,6%	3,0%
United Arab Emirates	-12,4%	-3,8%	5,0%	18,1%	3,6%	6,9%
Yemen	37,3%	8,4%	-5,6%	16,4%	7,8%	3,7%

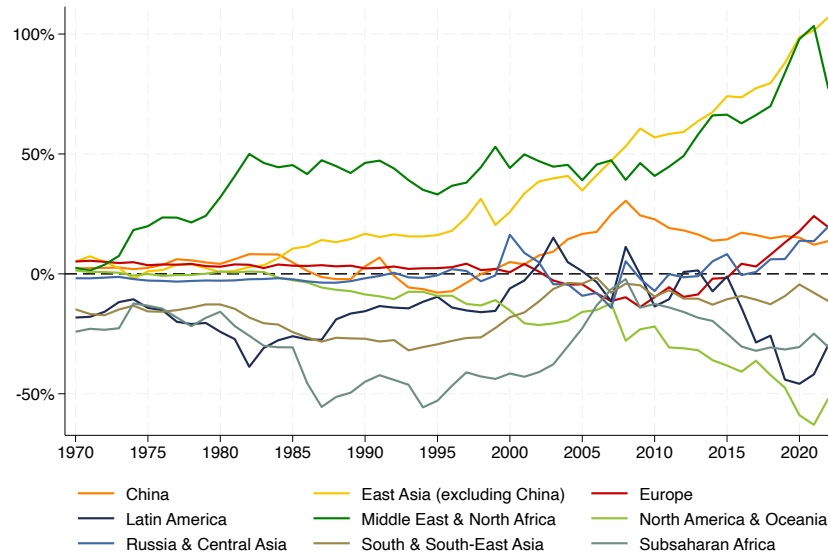
Excess Capital Gains: Sub-Saharan Africa

Country	Excess Capital Gains (Corrected)			Excess Capital Gains (Raw Data)		
	1970-1999	2000-2009	2010-2022	1970-1999	2000-2009	2010-2022
Angola	-6,5%	-8,5%	-4,9%	10,7%	-8,1%	-7,8%
Burkina Faso	54,5%	-0,9%	0,5%	-22,1%	-5,4%	-2,8%
Burundi	-9,1%	-14,0%	3,1%	-5,0%	1,4%	1,8%
Benin	-28,7%	12,2%	3,8%	-3,3%	10,9%	-1,3%
Botswana	-1,6%	-7,1%	-9,1%	6,0%	3,0%	-0,6%
DR Congo	15,3%	18,7%	4,8%	-4,6%	16,0%	2,5%
Central African Republic	-0,4%	-25,2%	0,8%	-1,9%	2,9%	-1,9%
Congo	0,2%	22,7%	-103,9%	-2,4%	12,7%	-41,8%
Cote d'Ivoire	-30,3%	-11,1%	-3,5%	-35,7%	-3,5%	-9,3%
Cameroon	10,2%	15,6%	-0,5%	-2,9%	17,4%	-3,3%
Cabo Verde	-20,5%	-3,3%	-2,0%	-0,5%	3,0%	-2,3%
Djibouti	-29,9%	-4,0%	-14,6%	-4,2%	-4,0%	-18,6%
Eritrea	-121,6%	-33,1%	-85,9%	3,1%	-0,8%	10,4%
Ethiopia	1,0%	22,5%	16,8%	0,6%	21,4%	24,0%
Gabon	-41,6%	-52,7%	-53,0%	-36,6%	-44,4%	-54,6%
Ghana	-11,0%	1,9%	15,4%	0,0%	6,0%	9,6%
Gambia	-30,6%	0,4%	-3,0%	-0,1%	6,3%	3,9%
Guinea	-31,7%	22,2%	24,0%	-59,6%	16,0%	19,3%
Equatorial Guinea	-4,4%	-1579,5%	-1094,0%	-33,1%	-950,1%	-2273,5%
Guinea-Bissau	-11,6%	-33,3%	-8,8%	-18,7%	-24,0%	-4,1%
Kenya	8,3%	1,0%	4,9%	7,8%	3,0%	1,7%
Comoros	40,8%	3,3%	-7,4%	-6,5%	6,6%	2,9%
Liberia	-49,5%	-11,4%	-4,0%	-5,9%	21,5%	7,9%
Lesotho	-207,2%	-44,2%	-14,4%	129,1%	-15,3%	9,3%
Madagascar	15,3%	7,1%	1,2%	44,9%	17,6%	-1,4%
Mali	-3,6%	2,2%	-9,7%	-9,2%	-0,4%	-7,1%
Mauritania	8,2%	2,1%	10,4%	26,5%	31,0%	11,0%
Mauritius	13,5%	-54,9%	-1,9%	6,2%	15,0%	-1,2%
Malawi	4,3%	-27,9%	1,1%	10,3%	-9,6%	9,0%
Mozambique	-32,5%	-8,4%	-0,3%	-39,3%	-6,3%	1,0%
Namibia	-29,3%	-14,1%	-8,0%	-8,3%	3,8%	2,6%
Niger	-14,8%	12,3%	0,9%	12,6%	12,9%	2,6%
Nigeria	-2,4%	-36,8%	-26,7%	-11,7%	-30,5%	-10,8%
Rwanda	-80,3%	-16,6%	-10,0%	-8,9%	21,5%	-1,8%
Seychelles	1,9%	5,8%	4,0%	9,2%	6,0%	2,3%
Sudan	1,1%	6,5%	-8,0%	-10,5%	0,4%	-7,4%
Sierra Leone	-11,0%	11,1%	20,7%	-5,0%	13,8%	24,8%
Senegal	0,1%	7,7%	3,0%	-0,8%	5,5%	-1,2%
Somalia	11,3%	-8,3%	47,4%	-10,0%	-6,0%	-10,2%
South Sudan	-383,1%	-423,7%	-196,8%			
Sao Tome and Principe	-65,9%	4,9%	2,1%	-31,1%	4,0%	3,6%
Swaziland	-10,3%	3,4%	-25,2%	-6,3%	6,0%	-11,6%
Chad	7,4%	-71,3%	-9,4%	-6,8%	-18,8%	19,9%
Togo	-6,3%	9,0%	3,8%	-6,3%	6,2%	2,9%
Tanzania	-8,3%	-12,4%	-0,8%	2,9%	-6,8%	1,4%
Uganda	-107,5%	-46,3%	3,2%	4,4%	-0,9%	2,3%
South Africa	6,9%	4,0%	6,0%	3,1%	3,1%	5,1%
Zambia	-0,6%	-0,1%	-22,8%	-4,8%	4,7%	-32,1%
Zimbabwe	8,9%	-44,1%	-9,6%	1,3%	-6,9%	-5,9%

D.3 World regions

Figure A66

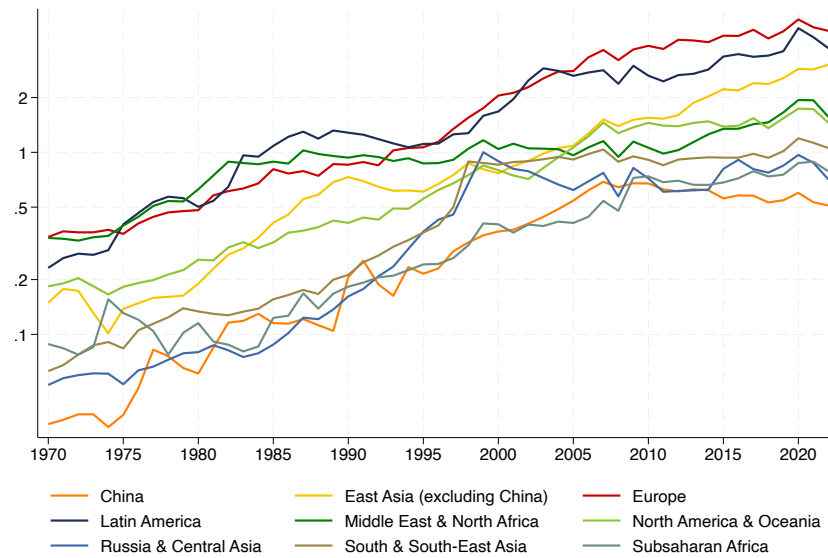
Net foreign assets as a share of regional GDP, with tax havens correction



Graph shows net foreign assets with tax havens correction as a share of each region's GDP.

Figure A67

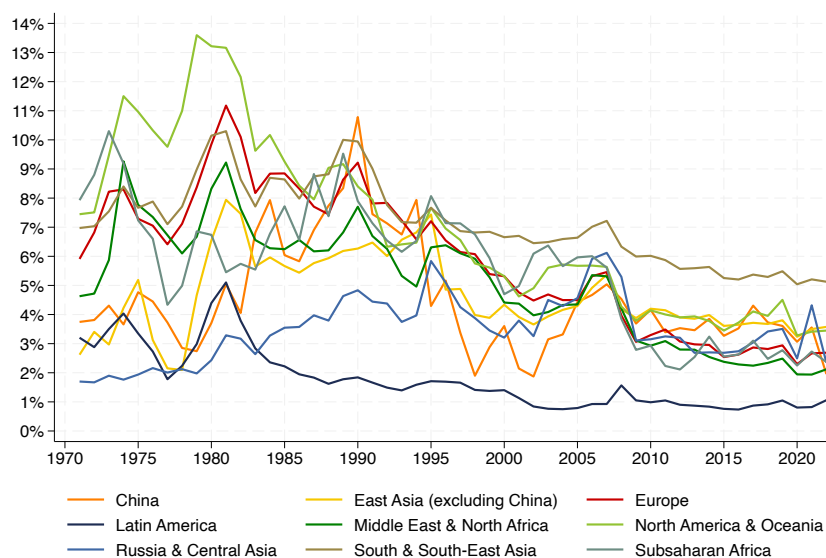
Gross foreign assets as a share of regional GDP, with tax havens correction (log scale)



Graph shows gross foreign assets with tax havens correction as a share of each region's GDP.

Figure A68

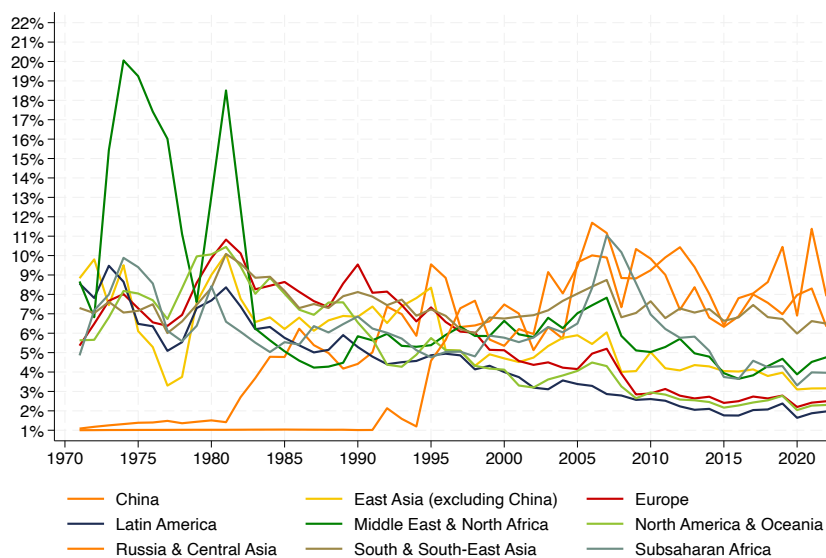
Returns on foreign assets per region, with tax havens correction



Graph shows average rate of returns on foreign assets for different regions in the world, with tax havens correction.

Figure A69

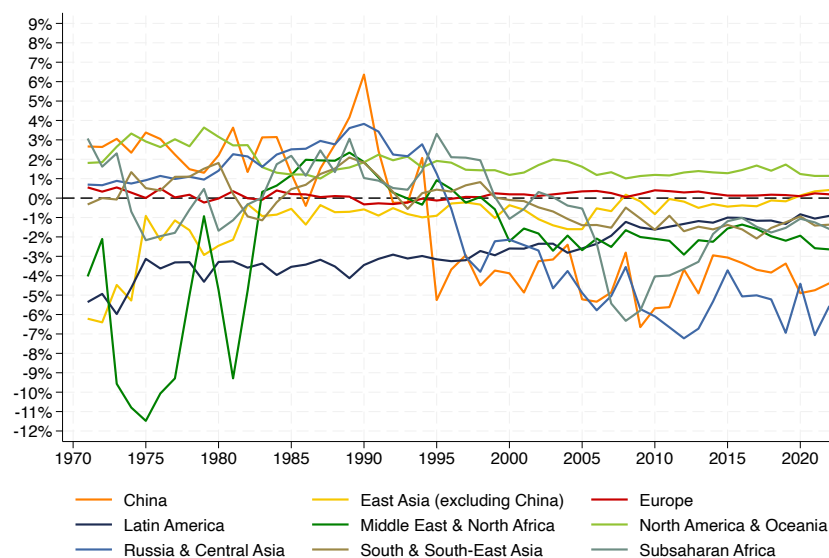
Returns on foreign liabilities per region, with tax havens correction



Graph shows average rate of returns on foreign liabilities for different regions in the world, with tax havens correction.

Figure A70

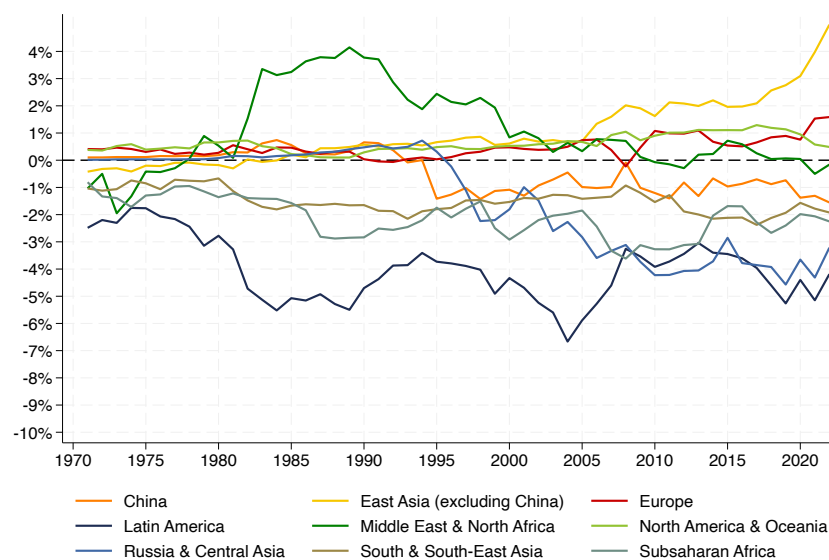
Excess yields per region, with tax havens correction



Excess yield calculated as rate of return on foreign assets - rate of return on foreign liabilities, with tax havens correction

Figure A71

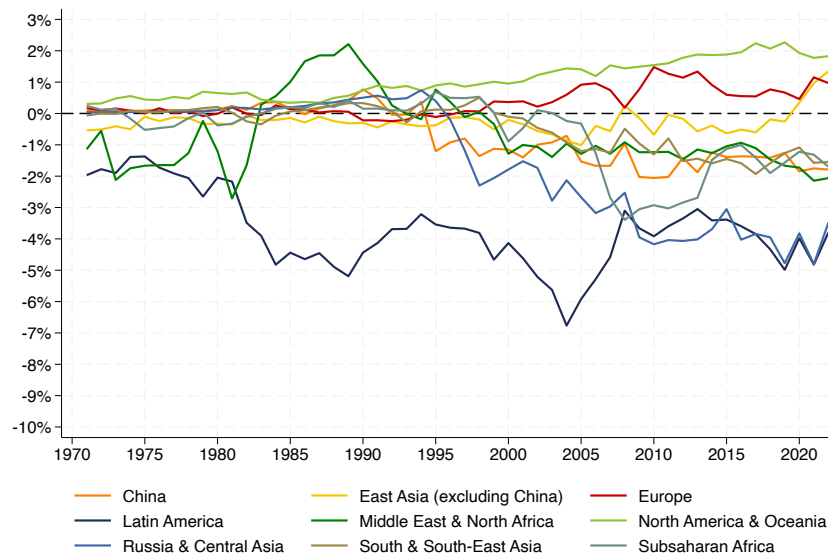
Net foreign capital income as a share of GDP, with tax havens correction



Graph shows aggregate net foreign capital income, with tax havens correction, as a share of regional GDP.

Figure A72

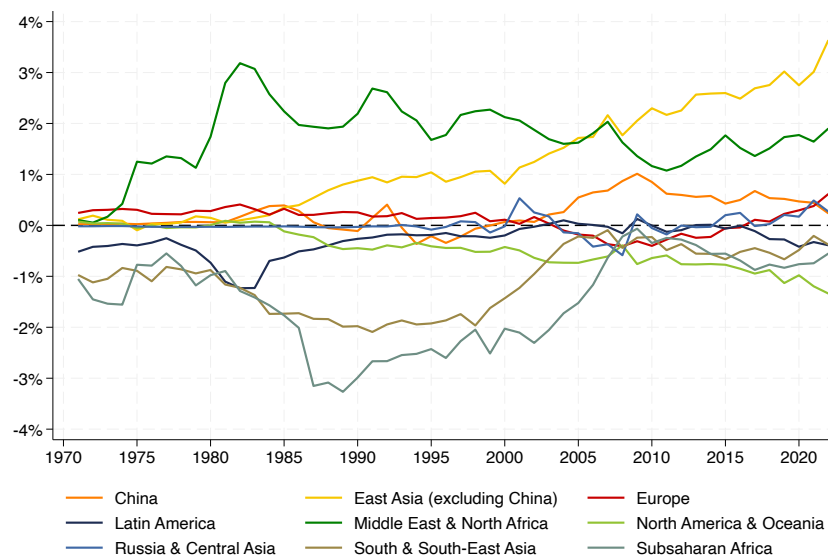
Excess yield as a share of GDP, with tax havens correction



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 A73

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



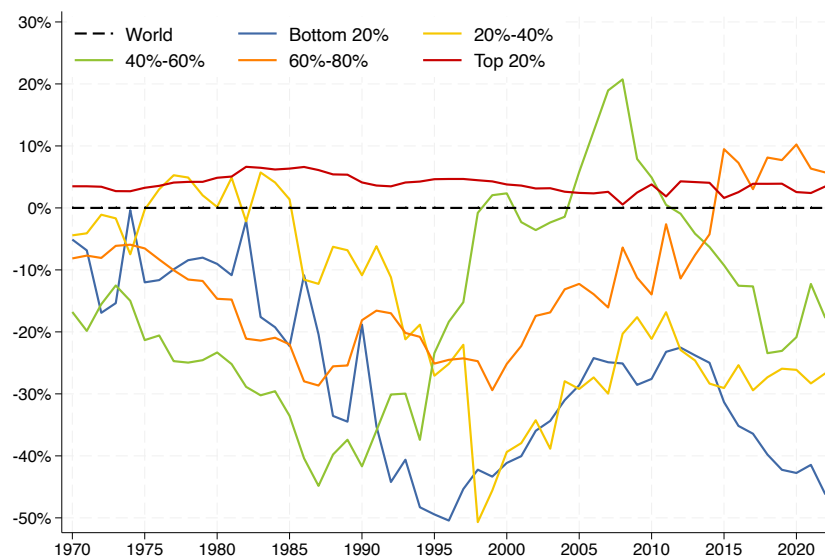
Graph shows net foreign capital income if regions would not have a different average return rate on their assets with respect to their liabilities, as a share of group GDP.

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 A74

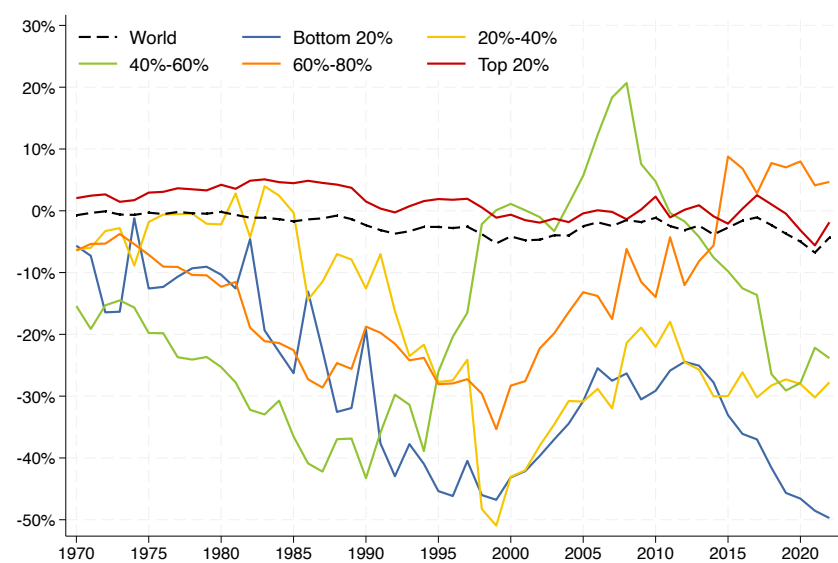
Net foreign assets as a share of group GDP, with tax havens correction



Graph shows average net foreign assets. Simple averages by group.

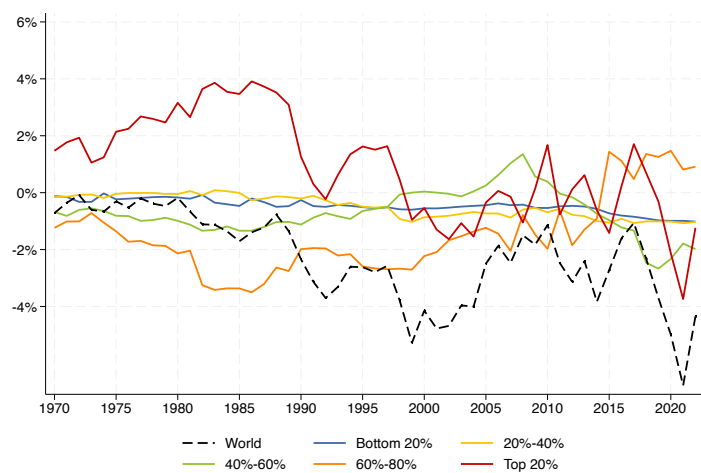
Figure A75

Net foreign assets as a share of group GDP, raw data



Graph shows average net foreign assets. Simple averages by group.

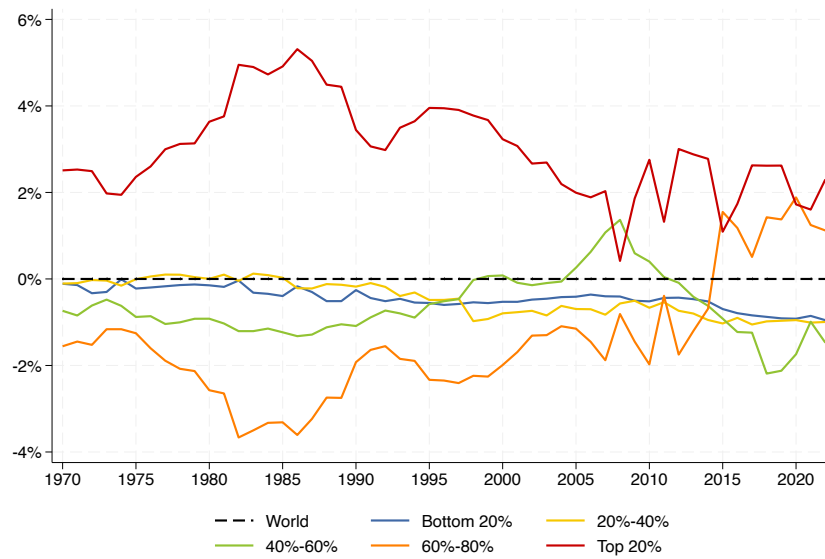
Net foreign assets as a share of world GDP (raw data)



Graph shows average net foreign assets. Simple averages by group.

Figure A76

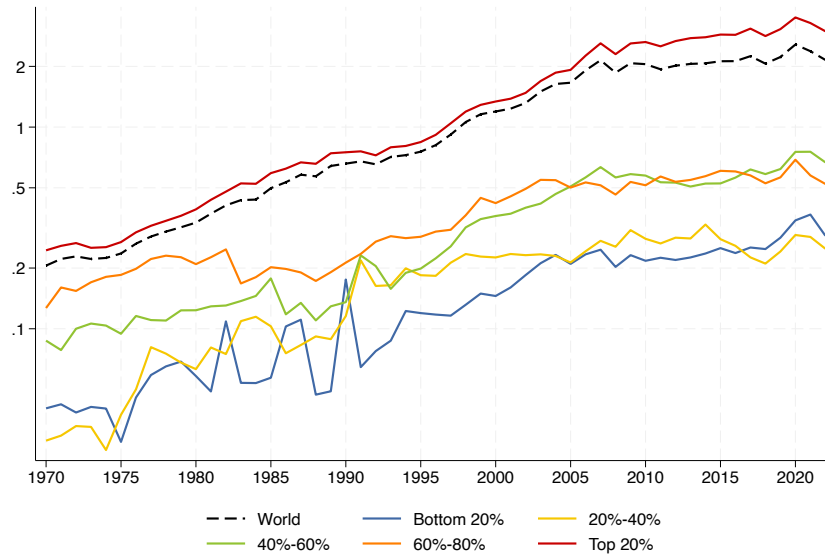
Net foreign assets as a share of world GDP, with tax havens correction



Graph shows average net foreign assets. Simple averages by group.

Figure A77

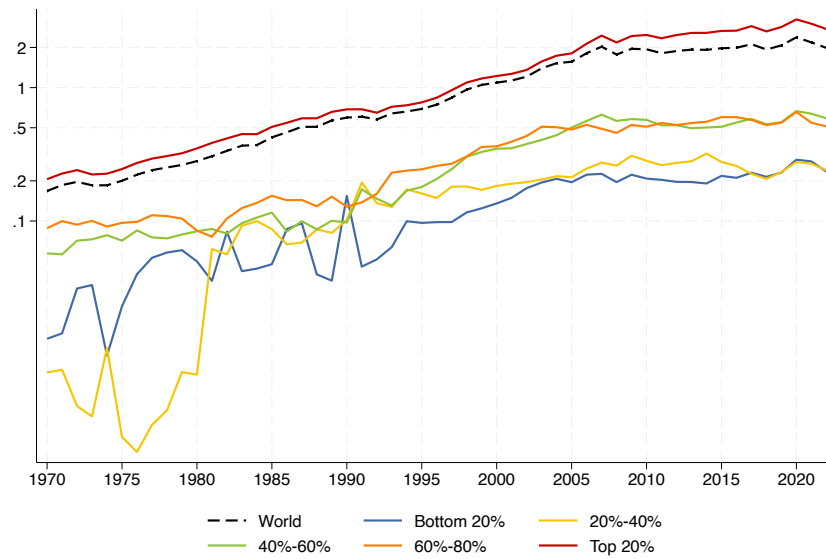
Gross foreign assets as a share of group GDP, with tax havens correction (log scale)



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

Figure A78

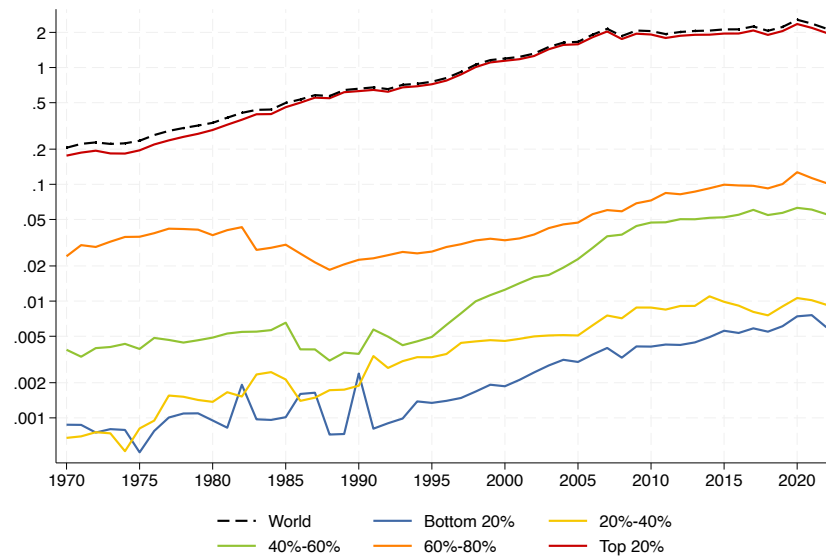
Gross foreign assets as a share of group GDP, raw data (log scale)



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

Figure A79

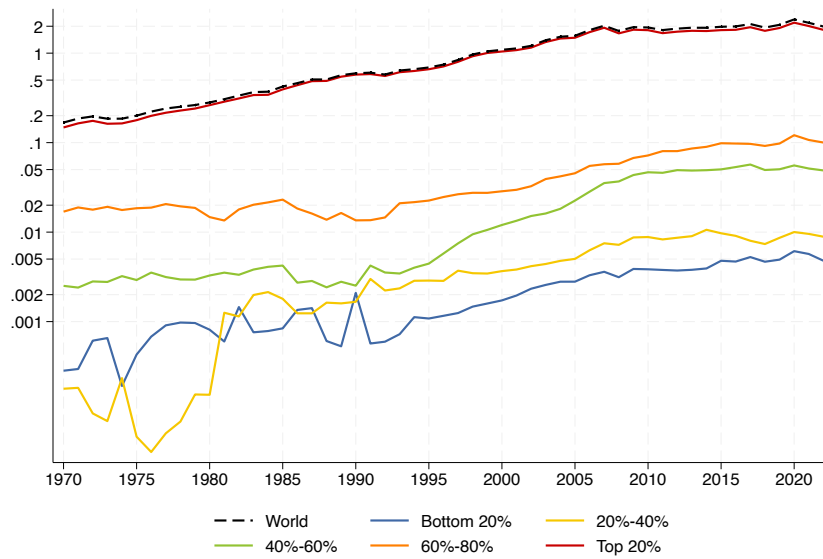
Gross foreign assets as a share of global GDP, with tax havens correction (log scale)



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

Figure A80

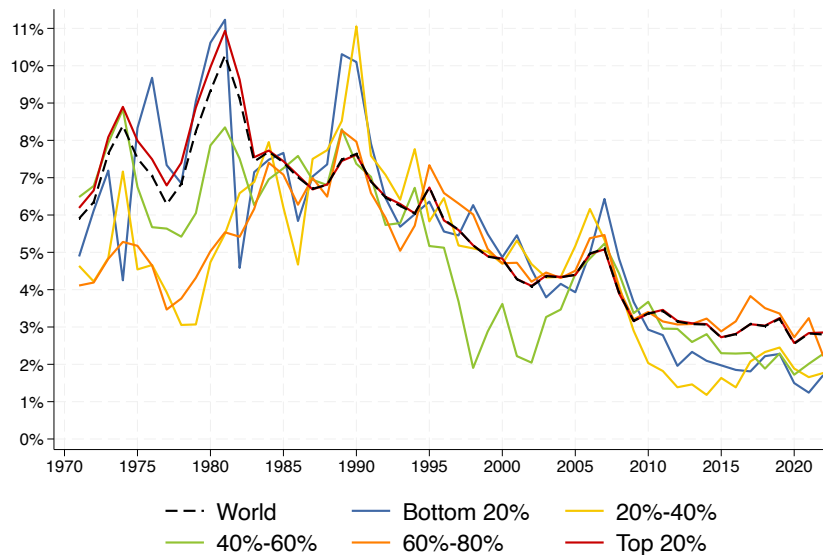
Gross foreign assets as a share of global GDP, raw data (log scale)



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

Figure A81

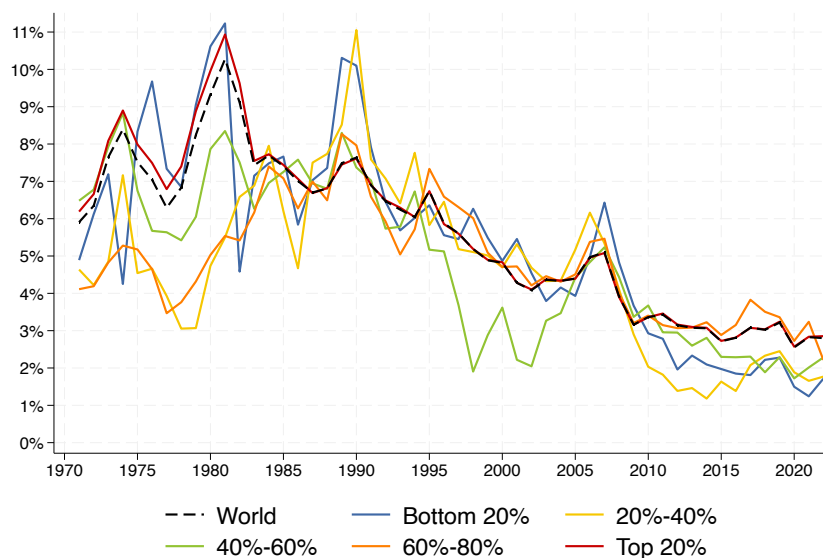
Returns on foreign assets per income group, with tax havens correction



Graph shows average rate of returns on foreign assets after correcting for offshore wealth. Simple averages by group.

Figure A82

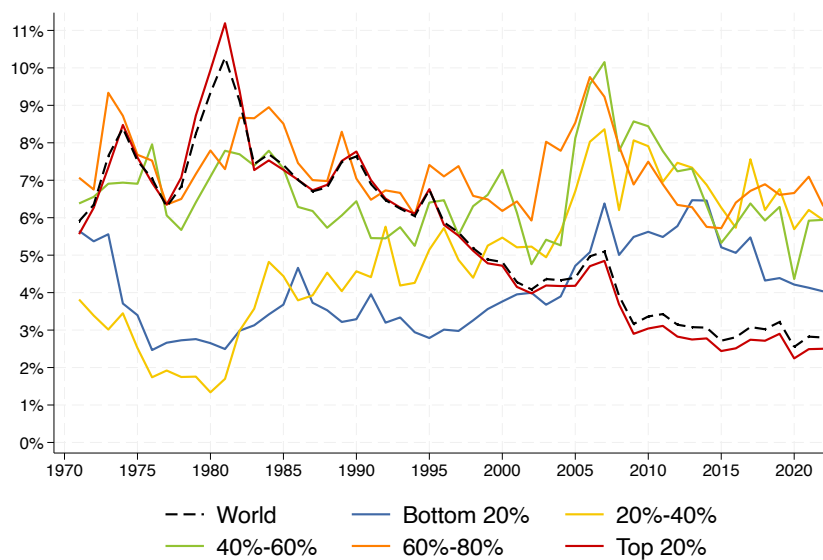
Returns on foreign assets per income group, raw data



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 A83

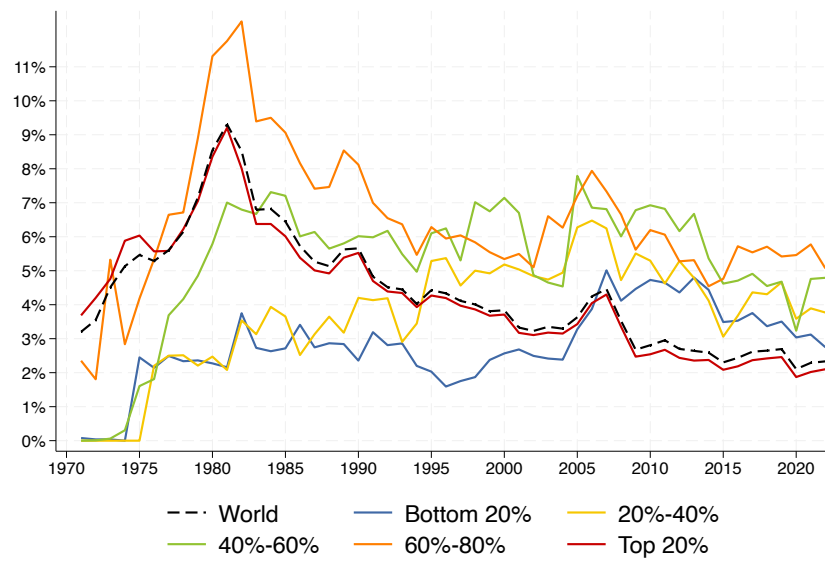
Returns on foreign liabilities per income group, with tax havens correction



Graph shows average rate of returns on foreign liabilities after correcting for offshore wealth. Simple averages by group.

Figure A84

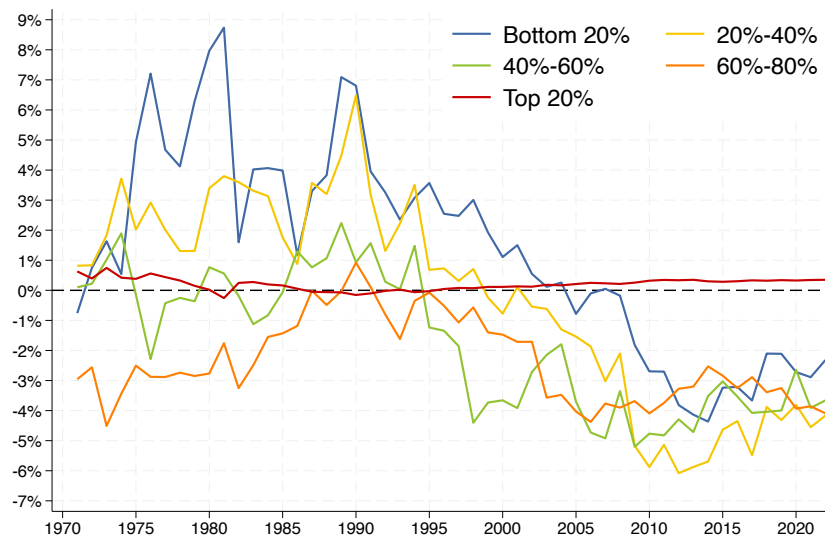
Returns on foreign liabilities per income group, raw data



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.

Figure A85

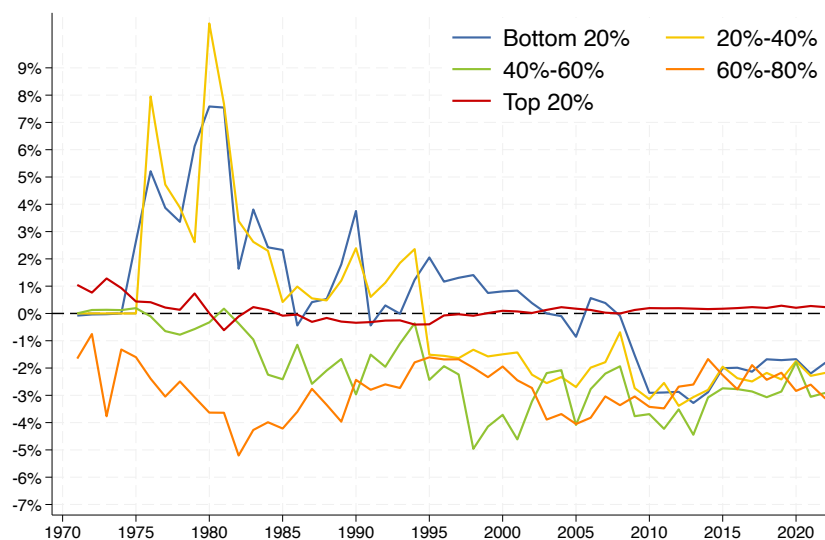
Excess yields per income group, with tax havens correction



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

Figure A86

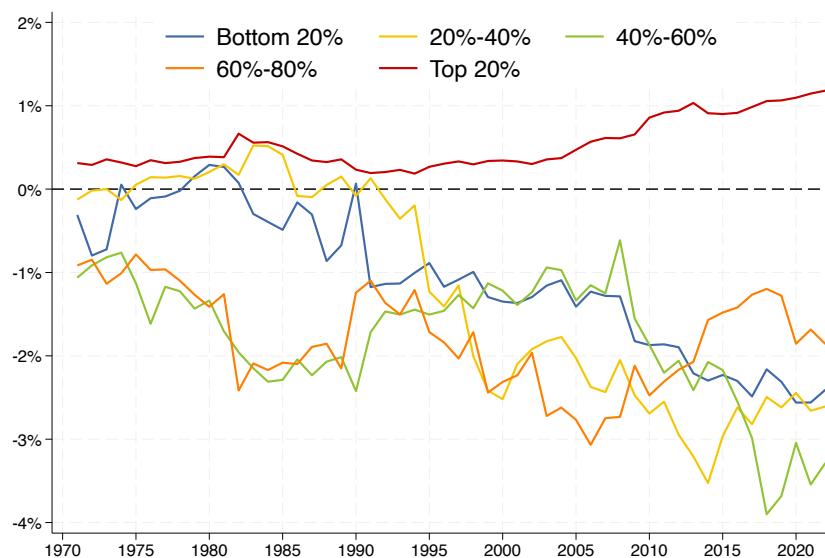
Excess yields per income group, raw data



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 A87

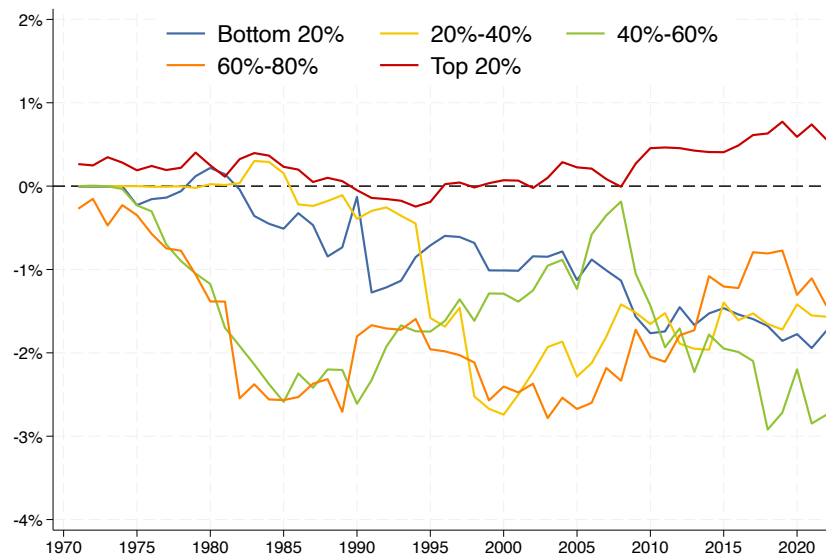
Net foreign capital income as a share of GDP, with tax havens correction



Graph shows aggregate net foreign capital income with offshore wealth correction, as a share of income group GDP.

Figure A88

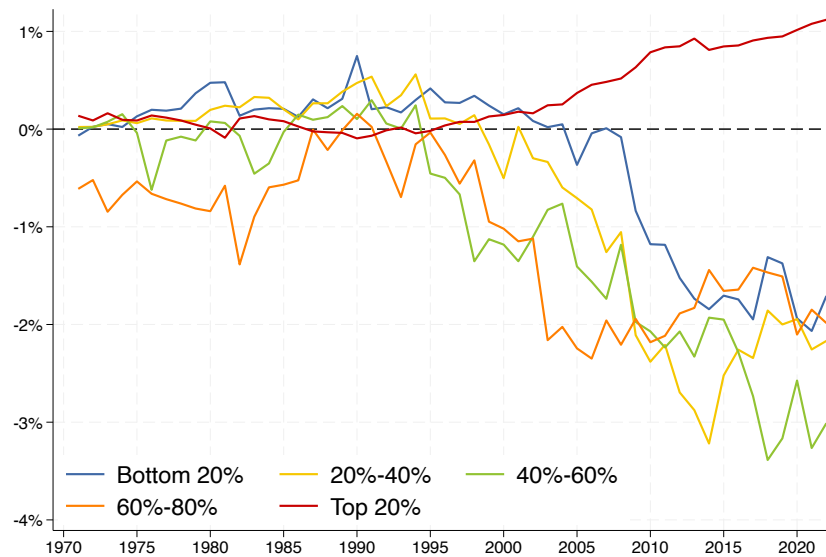
Net foreign capital income as a share of GDP, raw data



Graph shows aggregate net foreign capital income with offshore wealth correction, as a share of income group GDP.

Figure A89

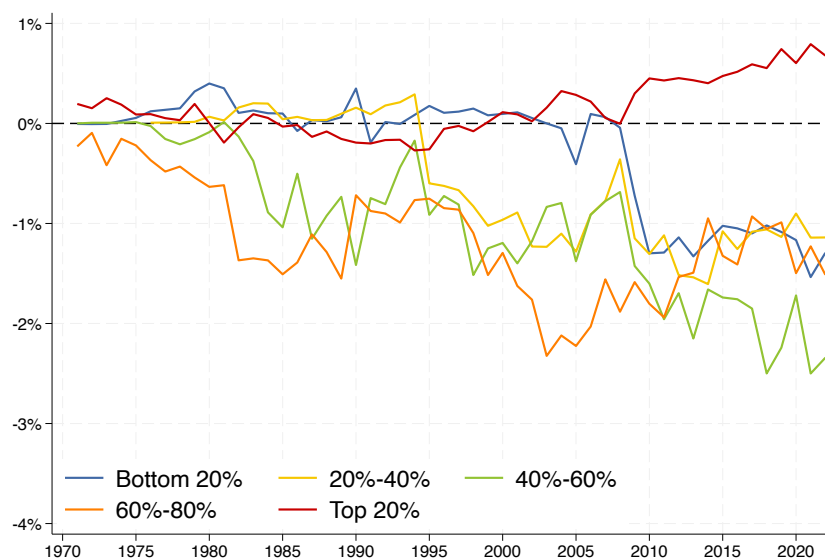
Excess yield as a share of GDP, with tax havens correction



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

Figure A90

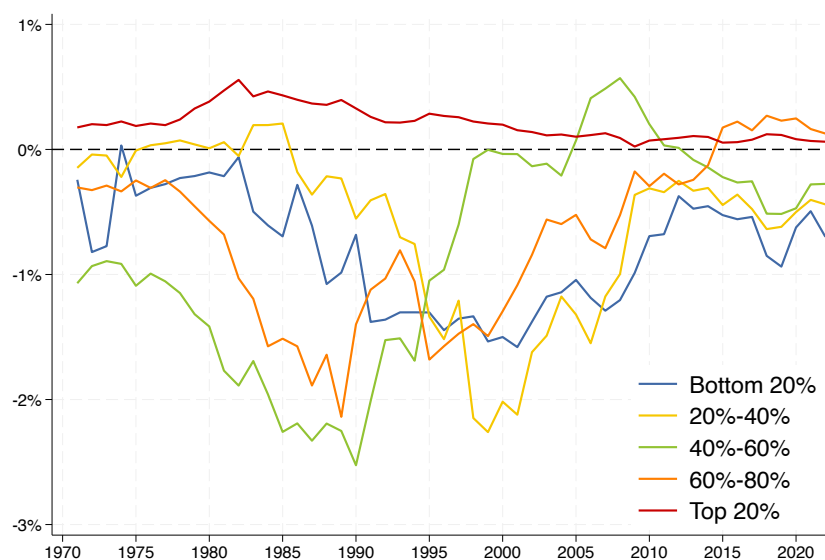
Excess yield as a share of GDP (raw data)



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 A91

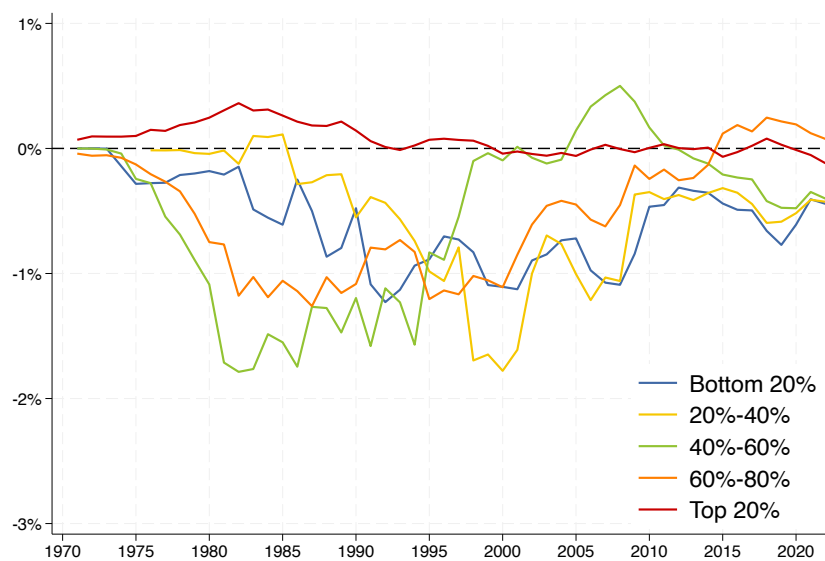
Net foreign capital income minus excess yield income as a share of GDP, with tax havens correction



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, with offshore wealth correction, as a share of group GDP.

Figure A92

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



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, using raw data series. National income does not include FDI income paid correction due to shifted profits.

Table 41*Total Returns by Quintile (raw data)*

Quintile	Period		Total Assets		Equity		Debt		FX Reserves	FDI	
			Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Assets	Liabilities
Bottom 20%	1970-1999	Avg rate	6.80%	7.02%	59.76%	7.65%	25.25%	3.90%	0.00%	7.00%	3.39%
		SD	(0.09)	(0.05)	(1.31)	(0.23)	(0.17)	(0.05)	(0.00)	(0.22)	(0.07)
	2000-2023	Avg rate	1.50%	4.53%	5.02%	19.18%	8.98%	2.37%	0.24%	10.48%	9.37%
		SD	(0.04)	(0.05)	(0.14)	(0.29)	(0.11)	(0.03)	(0.05)	(0.15)	(0.08)
20%-40%	1970-1999	Avg rate	5.87%	7.59%	40.74%	54.22%	5.97%	4.53%	3.20%	0.97%	-4.11%
		SD	(0.07)	(0.05)	(0.44)	(0.58)	(0.08)	(0.04)	(0.03)	(0.17)	(0.10)
	2000-2023	Avg rate	-0.95%	5.36%	3.32%	16.68%	0.89%	1.73%	-1.01%	2.92%	12.17%
		SD	(0.04)	(0.07)	(0.27)	(0.31)	(0.09)	(0.06)	(0.05)	(0.10)	(0.11)
40%-60%	1970-1999	Avg rate	4.27%	9.01%	41.97%	97.13%	4.82%	12.82%	0.00%	21.21%	9.63%
		SD	(0.05)	(0.03)	(0.42)	(1.41)	(0.07)	(0.07)	(0.00)	(0.31)	(0.07)
	2000-2023	Avg rate	1.88%	6.64%	12.68%	16.90%	2.12%	5.96%	-0.97%	4.55%	5.34%
		SD	(0.02)	(0.06)	(0.30)	(0.40)	(0.06)	(0.06)	(0.03)	(0.08)	(0.07)
60%-80%	1970-1999	Avg rate	7.13%	10.14%	42.89%	75.04%	11.62%	15.98%	6.10%	20.03%	8.69%
		SD	(0.03)	(0.03)	(0.23)	(0.61)	(0.06)	(0.06)	(0.07)	(0.16)	(0.09)
	2000-2023	Avg rate	2.14%	6.33%	5.59%	12.99%	-0.42%	5.12%	1.00%	8.69%	6.12%
		SD	(0.03)	(0.07)	(0.20)	(0.30)	(0.04)	(0.04)	(0.04)	(0.09)	(0.10)
Top 20%	1970-1999	Avg rate	11.53%	10.43%	20.75%	18.97%	18.74%	15.98%	2.65%	17.33%	14.22%
		SD	(0.04)	(0.04)	(0.14)	(0.14)	(0.08)	(0.07)	(0.06)	(0.10)	(0.08)
	2000-2023	Avg rate	5.53%	5.33%	9.11%	8.21%	6.10%	6.07%	0.09%	8.60%	7.49%
		SD	(0.07)	(0.07)	(0.20)	(0.19)	(0.08)	(0.08)	(0.05)	(0.12)	(0.11)

The table reports the average total return rates (yields + valuation changes) and the standard deviations of total returns by quintile over the periods 1970–1999 and 2000–2022, using raw data series.