

# Why are Developing Countries Heavily Indebted, Again?

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## Executive summary

Do low-income countries systematically over-borrow, leading to recurrent debt crises, or are their current debt difficulties primarily driven by external shocks? To address this question, we examine debt dynamics in 2019, prior to a series of adverse shocks affecting developing economies.

We challenge the cynical view that for poor countries, a debt crisis is destiny. Instead, we highlight significant heterogeneity in borrowing patterns and outcomes. While some countries exhibit debt distress consistent with historical cycles, others face distinct challenges shaped by external shocks. By analyzing macroeconomic trends and debt accumulation, we find that among nations that borrowed extensively after the large-scale debt relief initiatives of the 2000s, experiences vary widely. Not all borrowed significantly, and among those that did, some invested effectively, while others did not.

Furthermore, even among successful investors, exposure to external shocks was uneven. While our findings are descriptive, they help illustrate the different pathways through which some—but not all—heavily indebted countries ended in crisis. These results underscore the need for a nuanced understanding of sovereign debt vulnerability.

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## 1. Introduction

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In the wake of the global pandemic and the subsequent poly-crisis triggered by major conflicts, natural disasters, and the challenges of post-COVID recovery, many developing countries—particularly low-income economies—are once again grappling with severe debt issues. However, for many, concerns about debt fragility are not new. As early as 2018, the World Bank had already raised alarms about troubling trends in the external and public debts of developing nations, warning against a looming ‘new’ debt crisis.

By the end of 2019, out of the 70 developing countries (DC) assessed under the Debt Sustainability Analysis (DSA) framework, 28 were classified as either facing a high risk of debt distress or already in debt distress. More concerning, among these, 16 had received significant official debt relief less than fifteen years earlier (Ferry and Raffinot, 2019). This troubling pattern seems to suggest a cyclical nature of debt crises in these countries, recurring approximately every two decades. Skeptics argue that debt restructuring merely leads to new debt accumulation, setting the stage for yet another crisis in the future (Easterly, 2002).

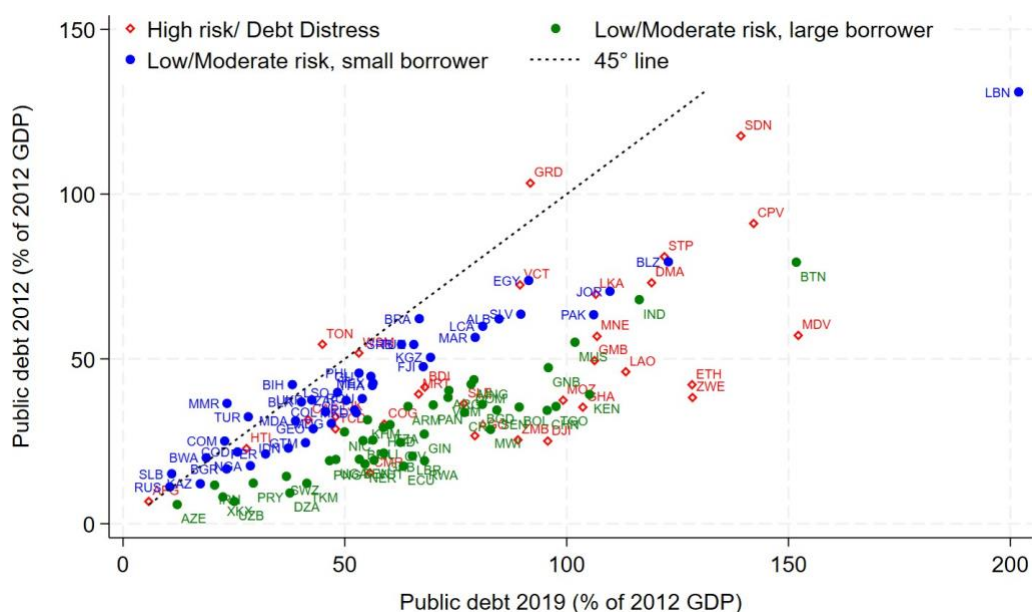
**In this paper, we aim to dispute this view by demonstrating that recent evidence reveals a much greater heterogeneity of cases than suggested by deterministic pessimism.** Drawing on correlations between macroeconomic trends and indebtedness assessments, we find that among countries that have borrowed extensively after the latest massive debt reduction schemes—namely the Heavily Indebted Poor Countries (HIPC) initiatives and the Multilateral Debt Relief Initiative (MDRI)—, there are 3 distinct groups of countries: (i) one group that failed to invest the funds efficiently, resulting in lower economic growth and ongoing debt problems; (ii) a second group that invested those funds to generate enough returns to cover higher debt repayments but subsequently faced adverse shocks in commodity terms of trade, leading to debt challenges; and (iii) a third group of countries that invested the funds, maintained good economic policies that increased its resilience against shocks, and achieved low debt ratios. There is also a group that borrowed little. Our goal is to first show that not all countries over-borrow and become high risk; and second, to understand why among those that borrow, some become highly indebted, while others do not.

**To illustrate this diversity, we plot in Figure 1, 3 groups of countries:** one group that borrowed heavily and faces a high risk of distress (represented by red dots) over 2012–2019; a second group that also borrowed significantly but maintains low to moderate debt levels (indicated by green dots); and finally, a group that borrowed minimally (shown in blue). The 3 groups are about equally populated. The first observation is that the blue and green dots are positioned to the right of the 45° line, indicating that the majority of countries have borrowed during this period, even though only the red countries have become at risk of debt distress. Secondly, the red countries are distributed almost everywhere to the right of the 45° line – some have borrowed a little, while others have borrowed extensively. This shows that their problems are not linked directly to the volume of borrowings (a stock effect) and that, instead, it must be connected to how efficiently these loans were used.

**The main goal of the paper is to investigate in detail how some countries end up at high debt risk while others, despite borrowing similarly, do not.** The question is whether there are identifiable common structural factors among the countries of each group. We begin in Section 2 by reviewing the

determinants of over-indebtedness identified during the past public debt crisis (in the early 1980s and in the late 1990s). Section 3 explores the evolution of the drivers of public indebtedness in developing countries over the period 2012–2019 – first defining a method, then comparing high and low-risk countries, and finally, HIPC and non-HIPC countries. We intentionally exclude the COVID-era crisis to reduce potential bias from factors linked to the health crisis. Our method follows Easterly (2002) to assess whether the economic and governance structure in over-indebted countries diverges significantly from those in nations with low or moderate risk of debt distress. We estimate simple econometric models designed to capture differences in averages across various macroeconomic indicators, including structural imbalances, creditor heterogeneity, exposure to international commodity price shocks, and the return on public capital investments. These findings are descriptive and do not imply definitive causal relationships, the goal being to examine whether these countries faced comparable challenges or distinctly different ones in managing their public debt.

**Figure 1: High and low borrowers, and high and low debt**



Notes: The figure plots the ratio of public debt as of 2019 expressed in percentage of 2012 GDP against the public debt-to-GDP ratio as of 2012. A deviation on the right from the 45° line indicates an increase in the stock of public debt as compared to 2012. Countries are classified according to their risk of debt sustainability as of 2019. Countries experiencing a debt distress situation or a high risk of debt distress are grouped together, while those with a low or moderate risk of debt distress form another category. This last category is then divided between countries that recorded the above median increase in public debt between 2012 and 2019 (i.e., the “large borrower” group) or below median increase in public debt (i.e., the “small borrower” group).

**The results indicate that certain features commonly associated with past debt crises are re-emerging.** Between 2012 and 2019, countries with weak macroeconomic governance, widespread corruption, minimal transparency, and fiscal mismanagement were more likely to end up with debt distress at the end of the study period (i.e., in 2019). Additionally, a more fragmented external public debt structure—characterized by an increased reliance on external private banks and Chinese creditors and a decline in multilateral financing—was more evident among over-indebted countries

in 2019. To further refine the analysis, we categorized over-indebted countries at the end of 2019 based on their participation in the HIPC initiatives. We also examined the composition of external public debt. Countries heavily indebted to private external creditors and exposed to adverse commodity terms-of-trade shocks were particularly vulnerable, as these external factors likely compounded their debt challenges. Many of these countries were former HIPCs. Conversely, fiscal mismanagement and the inefficient use of incurred debt appeared less prominent among countries reliant on private creditors, while it was more pronounced in those heavily dependent on multilateral financing.

**These findings offer a more nuanced perspective**, suggesting that while some countries' current debt difficulties mirror past patterns, others face challenges that are distinct and influenced by external shocks or constrained international liquidity. In the absence of such exogenous factors, more countries would have maintained sustainable debt levels. The conclusion discusses the policy implications of these findings, with a focus on strategies for improving public debt management in countries that seem more susceptible to over-indebtedness crises.

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## 2. Historical drivers

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**Numerous studies have focused on understanding public debt accumulation in developing countries.** Most papers explored the factors that led these countries into a debt overhang, undermining their economic potential (Krumm, 1985; Lancaster and Williamson, 1986; Greene, 1989; Mistry, 1991; Easterly, 2002). These studies emphasized both internal and external factors that led to the 1980s debt crises. Internally, the massive financing of development projects in the aftermath of independence, riding on optimistic assumptions about earnings, encouraged the government's profligacy and made their finances vulnerable to external shocks. The trigger was, however, external, starting with the oil shock of 1979 and the collapse of commodity prices<sup>1</sup>, and later, to the interest jump created by a restrictive US monetary policy. These shocks created financial stress in DCs, leading to a significant fall in capital inflows, only partially offset by official funding, ultimately culminating in a collapse in growth.

**The second major debt crisis of DCs, at the end of the 1990s, was related to policies more than to exogenous factors.** Easterly(2002), in his paper entitled "How Did Heavily Indebted Poor Countries Become Heavily Indebted?", examines factors at the roots of the debt crisis of the 1990s. His findings indicate that sustainability challenges in public debt - primarily owed to official and multilateral creditors - originated mainly from poor policies in DCs, including governance deficiencies, real exchange rate overvaluation, and limited financial depth, rather than adverse external shocks. The same context resulted in reduced private capital inflows, such as foreign direct investment.

**Other analyses have stressed the impact of official funding, which predominated in the past.** A particular alleged culprit is defensive lending, a result of the need to roll over debts to avoid default,

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<sup>1</sup> Commodity-exporting countries most affected by the reversal in commodity prices include Burundi, the Central African Republic, Ethiopia, Kenya, Madagascar, Tanzania, Sierra Leone (coffee), Ghana (cocoa), Côte d'Ivoire (cocoa and coffee), Gambia (groundnuts), Senegal (groundnuts and phosphate), Malawi (sugar and tobacco), Togo (phosphate), the Democratic Republic of the Congo, Zambia (copper), Liberia, Mauritania (iron), the Republic of the Congo, Nigeria, and Gabon (oil).

even when new loans are not used productively. [Birdsall et al. \(2003\)](#) and [Ratha \(2005\)](#) have found that a larger debt burden has been associated with such flows from bilateral and multilateral donors. However, other studies have contested this ([Marchesi and Missale, 2013](#); [Geginat and Kraay, 2007](#)).

**Against these potential negative factors, however, the policy environment** following the reforms of the 1990s led to an improved investment environment and rapid growth in many DCs ([Ndulu and O'Connell, 2021](#)). The more recent debt difficulties arise on the heels of the 2008 global financial crisis, which caused international liquidity to surge, similar to the 1970s, leading to large private sector lending to DCs. Moreover, after 2000, China also increased its lending to DCs. These more commercial debts, contracted at high costs, have created vulnerabilities and refinancing risks. At the same time, however, the loans contracted have helped many countries build productive human and infrastructure assets, which must have improved their resilience to shocks. Thus, how these costs and benefits were balanced is the main subject of our inquiry.

**In sum, in the past, countries got over-indebted:** (i) either due to poor fiscal and economic policies, such as government profligacy induced by a strong preference for the immediate benefits and possibly driven by poor governance and/or weak institutional quality; and/or (ii) as a result of external terms of trade shocks. While such shocks were less severe in the 1990s compared to the 1980s, commodity prices did collapse around 2015. In the past, poor countries primarily borrowed at concessional rates from multilateral institutions. In more recent times, in addition to large official flows, the 1990s witnessed: (iii) the emergence of new creditors from the private sector, including China, and the fact that these loans were contracted at high interest rates brings in a third dimension of vulnerability.

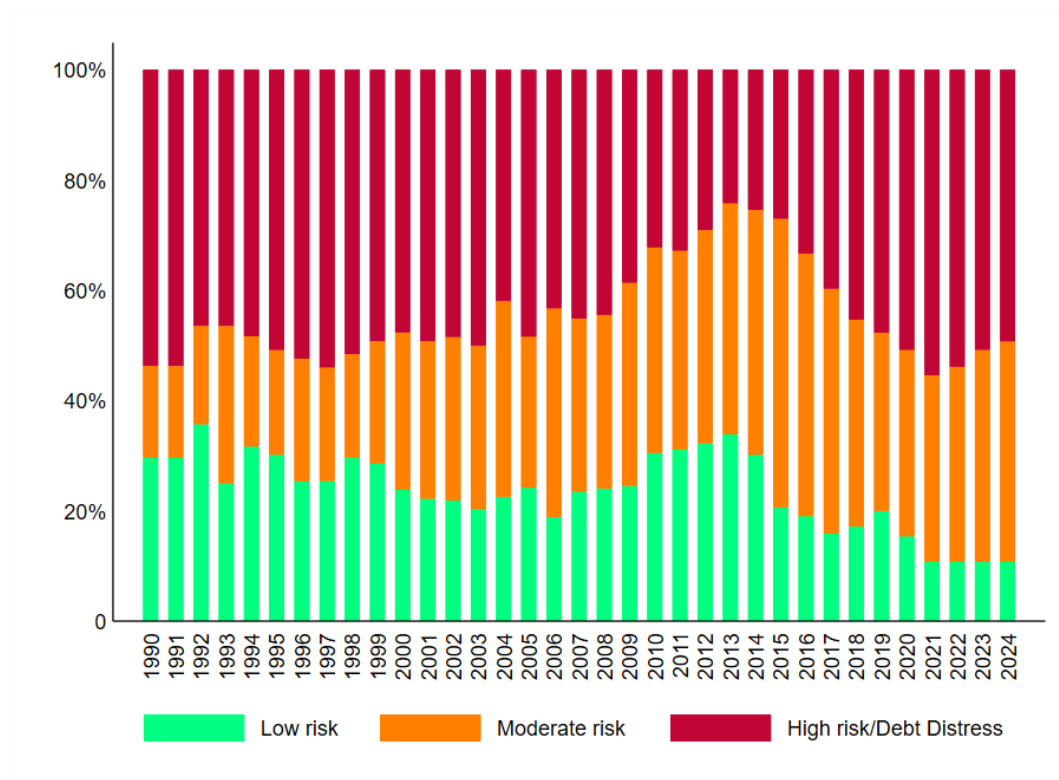
**While many DCs had regained public debt sustainability by the late 2000s**, largely due to the HIPC and MDR initiatives, the situation deteriorated significantly from 2014 onwards. By 2021, the share of developing countries either at high risk of debt distress or already in debt distress, as evaluated by the World Bank and IMF DSAs, had returned to levels comparable to those seen in 1990 (Figure 2).<sup>2</sup> Although the COVID-19 crisis exacerbated the deterioration of public finances globally, concerns about debt sustainability were already evident for numerous LICs in 2019, prior to the onset of the pandemic.

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<sup>2</sup> DSAs have been accused of being too conservative and too lenient. However, in retrospect, they seem to over-predict crises, given that fewer than ten DCs had defaulted by 2024. This is partly due to the way the thresholds underlying them are constructed to favor the existence of false positives over false negatives ([Paduano, 2024](#)).



**Figure 2: Evolution of risk of debt sustainability since 1990**



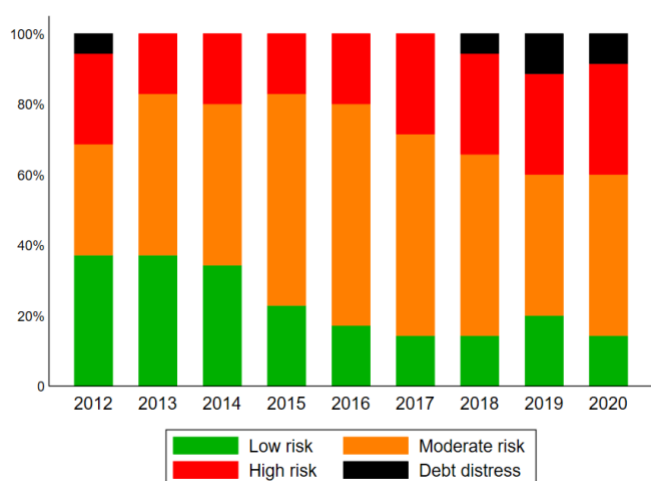
Notes: The figures above include 67 countries that received an evaluation of their debt sustainability from the World Bank prior to 2006, categorized as "Less Indebted," "Moderately Indebted," or "Severely Indebted." Additionally, those with a DSA assessment from 2006 onwards are classified into four categories: "Low risk," "Moderate risk," "High risk," and "In Debt Distress." To maintain consistency across these categories, the "High risk" and "In Debt Distress" categories have been combined into a single category equivalent to the "Severely Indebted" category used before the DSA was introduced.

**The evolution of over-indebtedness from 1990 to 2020** provides insights into the recurrent occurrence of sovereign debt crises. To examine the trend, we compile data from the debt sustainability assessments (DSAs) performed by the IMF and the IDA spanning the period 2006-2020, which we complement with an assessment from the World Bank for the previous years (1990-2006). Figure 2 indicates a rise in the risk of over-indebtedness. Initially, by the end of 2012, a considerable proportion of low-income countries (LICs) exhibited a relatively favorable evaluation of the sustainability of their debt, with nearly 80% classified as experiencing either moderate or low risk of debt distress. Afterwards, the percentage of countries at low risk of debt distress began to decline, eventually undergoing significant deterioration from 2015 onwards. By 2020, more than 40% of these countries were either at a high risk of debt distress or already in a state of actual debt distress. Were these the same countries that were involved in HIPC – i.e., is over-indebtedness destiny for a certain type of countries? To check this, we then disaggregate these DSA rankings based on the HIPC status of the countries, i.e., whether they participated in the Highly Indebted Poor Countries (HIPC) initiative of the early 2000s and the subsequent Multilateral Debt Relief Initiative (MDRI).

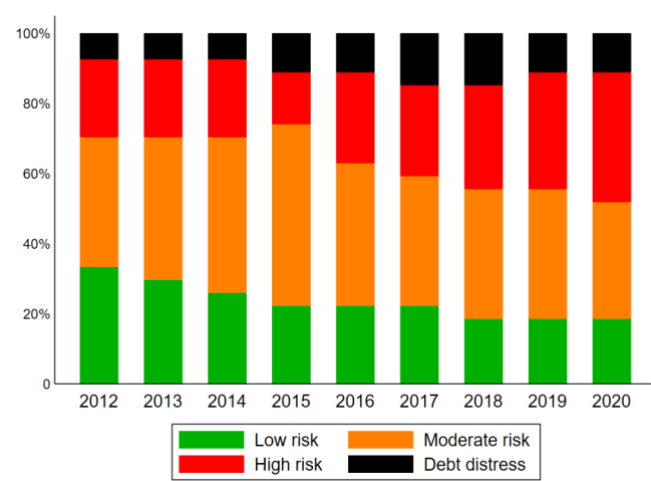
Figure 3 illustrates the evolution of DSA rankings for former HIPCs and non-HIPCs between 2012 and 2019. Notably, the evolution of DSA rankings during the study period shows a striking similarity across both groups of countries. Considering that the HIPC group received substantial debt relief in the

2000s (approximately \$100 billion in present value), while non-HIPCs did not, one could infer that receiving debt relief in the early 2000s did not exempt countries from the risk of debt distress, at least not to a significantly greater extent than non-HIPCs. This raises questions about the efficacy of previous debt restructuring in addressing structural weaknesses or vulnerabilities in these countries. Nevertheless, it also suggests that new causes of over-indebtedness are at play.

**Figure 3: Evolution of DSA rankings - by HIPC status**



(a) Former HIPCs (n= 33)



(b) Non-HIPCs (n= 27)

Notes: The figures above include only countries with a Debt Sustainability Analysis (DSA) ranking for each year from 2012 to 2019.

### 3. Empirical investigation: Method and data

**To explore the factors influencing the recent debt challenges faced by DCs before the Covid crisis,** we propose conducting straightforward conditional cross-country comparisons. Although simple, these comparisons could yield significant insights into the presence of structural drivers behind debt crises. More specifically, we replicate and extend the empirical analysis of [Easterly \(2002\)](#) to the more recent period with the aim of identifying the macroeconomic and governance factors shared by different sub-groups of countries in debt distress in 2019. This statistical analysis aims not to infer causal relationships from performance to over-indebtedness status but rather to assess whether the increase in debt was, on average, accompanied by specific economic developments that might be seen as structural weaknesses, resonating with the drivers of past crises.

**To do so, we examine all developing countries for which we could obtain an assessment of debt sustainability in 2019.** We estimate the differences in mean for several macroeconomic indicators observed between 2012 and 2019, either in level or in change, conditional on their initial level of development and geographical region. The decision to limit the reference period from 2012 to 2019 is motivated by two reasons. First, 2012 marks the end of the HIPC and MDRI initiatives for most eligible countries. It also represents the year in which debt relief countries reached their lowest level of public debt and were then able to resume borrowing. Second, 2019 is the last year before the health crisis. Considering 2019 as the end of the study period allows for an analysis of the factors associated

with growing over-indebtedness independently of the COVID-crisis.<sup>3</sup>

As noted in [Easterly \(2002\)](#), the econometric specification aims to capture differences in the mean of macroeconomic indicators over the study period (i.e., 2012–2019) between high-risk/debt distress countries and those considered to be at moderate/low risk of over-indebtedness by the end of the period, while accounting for their level of development and geographical region (i.e., controlling only for initial per capita GDP in log as of 2012 and a dummy for each region). Thus, the specification takes the following form:

$$Y_{i,(2012-2019)} = \alpha + \beta \text{OverIndebt}_{i,2019} + \nu \text{Log}(\text{GDP pc})_{i,2012} + \gamma \text{Region}_i + \epsilon_i \quad (1)$$

$Y_{i,(2012-2019)}$  is the indicator of interest for estimating the discrepancy between indebted and non-indebted countries. This indicator pertains to macroeconomic performance, such as the GDP growth rate or the level of policies expressed by the CPIA. It is measured for each country  $i$  and averaged over the reference period i.e. 2012–2019.  $\text{Log}(\text{GDP pc})_{i,2012}$  is the GDP per capita of country  $i$  in the first year of the period of study, i.e., in 2012, expressed in logarithm. While [Easterly \(2002\)](#) compared average performance in policies controlling for nothing but initial income, we extend his regression by adding a variable capturing the geographical region of each country  $i$ , which leads comparisons to be restricted to countries from the same geographic area.<sup>4</sup>

To assess mean differences in average performance according to the indebtedness status, the  $\text{OverIndebt}_{i,2019}$  variable captures the DSA assessment of the risk of debt distress for country  $i$  in 2019. Since not all countries underwent DSA evaluations, especially middle-income countries subject to Market Access Countries (MAC) analyses, we refine the  $\text{OverIndebt}_{i,2019}$  variable as a dummy variable equal to one if the country  $i$  satisfies one of the two criterion:

- i. Having been classified by the most recent DSA conducted before 2020 as either in debt distress or at a high risk of debt distress: 28 countries (20 at high risk of debt distress and 8 in debt distress, see Criteria 1 countries in Table A1 in the Appendix).
- ii. Having three or more breaches of debt sustainability thresholds over the pre-COVID period, i.e., throughout 2015–2019, as assessed by our own calculation: 4 countries (see Criteria 2 countries in Table A1 in the Appendix).

**The inclusion of non-DSA over-indebted countries** helps to extend the overall sample of countries considered for this analysis by including as control countries both low- and middle-income countries. We end up with a sample of 123 developing countries, among which 32 are categorized at high risk of debt distress, and 91 are associated with a low or moderate risk of debt distress (see Table A2 in the Appendix for the list of countries included in each category). Table 1 indicates that 26% of countries were classified as being at a high risk of debt distress or already in debt distress in 2019,

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<sup>3</sup>When they were not available for 2019, we extrapolated the DSA assessment of prior DSA reports (2018, or 2017 at the earliest).

<sup>4</sup>The Region variable is a set of dummy variables that capture sub-Saharan Africa, Latin America and the Caribbeans, South Asia, Eastern Europe and Central Asia, East and South-East Asia, Pacific Islands, and Middle East and Northern Africa.

across the entire sample of developing countries considered for the analysis.<sup>5</sup> Among these, we then define two sub-categories of over-indebted countries - half are former HIPCs, and half did not participate in HIPC initiatives.

Referring to equation 1, the coefficient of interest is denoted by  $\beta$ , which is associated with the variable  $OverIndebt_{i,2019}$ . This variable captures the difference in the mean of the indicator  $Y$ , over 2012-2019, between countries classified as being at high risk of debt distress (or already in debt distress) and those deemed to be at moderate or low risk of debt distress. Although these cross-country comparisons across a subset of developing nations serve as an indicative measure of these structural disparities and may result in a reduced number of observations, Table 1 suggests that there is enough countries grappling with debt issues to generate meaningful differences in means.

**Table 1: Sample of Over-indebted Countries and Credit History**

	Unit	# Obs.	Mean	Sources
High Risk of/ in Debt Distress	(0/1)	32/123	0.26	DSA/own calculations
• o/w Former HIPC	(0/1)	16/123	0.13	Paris Club website
• o/w Non-Former HIPC	(0/1)	16/123	0.13	Paris Club website

Notes: DSA: Debt Sustainability Analysis & own calculations (see Table A1 in the Appendix).

**Drawing on findings from the literature** regarding factors contributing to past debt crises and recent trends in debt composition among developing countries, we investigate three types of hypotheses about countries that found themselves highly indebted by 2019:

1. They were more impacted by a fall in commodity price fluctuations between 2012 and 2019 than countries with low or moderate risk of debt distress.
2. They had worse economic policies and governance than countries with low or moderate risk of debt distress.
3. They contracted more expensive public debt between 2012 and 2019 than countries with low or moderate risk of debt distress.

**To examine these hypotheses, we gathered a large set of country-year-level data averaged over the 2012-2019 period.** We obtained data from the World Economic Outlook Database (WEO) of the IMF for the current account balance, the budget balance, and the primary budget balance (net of interest payments). We utilized the World Development Indicator (WDI) database to collect

<sup>5</sup> This proportion (26%) is considerably lower than the one reported in Figure 3, and it is due to the inclusion of Market Access Countries in the sample, which dilutes the proportion of countries at risk.

information on the depth of the financial sector (proxied by the broad money-to-GDP ratio), control over monetary policy as assessed by the inflation rate (in percentage change), and the real interest rate of the economy (in percentage). Table A4 presents descriptive statistics; it reveals, for example, that on average, over the study period, countries exhibit large current account and fiscal deficits, inflation remains moderate, but real interest rates tend to be high.

**We collect CPIA indices to evaluate the quality of governance**, with a particular focus on those that assess the effectiveness of fiscal policy and macroeconomic management, as well as the degree of transparency, accountability, and control of corruption in public administration. The CPIA index for macroeconomic management evaluates “the monetary, exchange rate, and aggregate demand policy framework,” while the one dedicated to fiscal policy assesses the “sustainability of fiscal policy and its impact on growth.” These indicators range from 1 (lowest) to 5 (highest performance). All these variables are averaged over 2012–2019, representing the average “level” (rather than “change”) in economic policies and institutional quality. Table A4 indicates relatively poor performance in transparency, accountability, and control of corruption, while the rankings are relatively high for macroeconomic management and fiscal policy.

To investigate whether structural vulnerabilities related to the composition of developing countries’ exports could drive debt difficulties, as occurred in the 1970s and 1980s, we utilize the Commodity Terms of Trade database (Gruss and Kebhaj, 2019), which provides comprehensive data on country-specific commodity terms-of-trade indices. We calculate the average annual change in commodity terms of trade for our sampled countries based on commodity exports and overall commodity trade (i.e., net exports).

**Our cross-country comparisons will use several debt indicators.** Using the International Debt Statistics (IDS), we decompose external public debt into six types: (i) bilateral concessional debt; (ii) bilateral non-concessional debt; (iii) multilateral concessional debt; (iv) multilateral non-concessional debt; (v) bonds; and (vi) banks.<sup>6</sup> Based on these six categories, we compute the proportion of each type of debt. Table A4 in the appendix shows that most external public debt (averaged over 2012–2019) is owed to official creditors, particularly multilateral institutions, which account for 40% of the total (on average). Bilateral creditors primarily engage in non-concessional lending during this period.<sup>7</sup> This can be attributed to the significant presence of China, which averages 11% across our sample and time frame. Finally, we use these categories to calculate an index of debt fragmentation. This index is simply one minus a Herfindahl–Hirschmann index based on the share of external public debt across the six categories – the closer the index is to one, the more fragmented the external public debt is. Table A4 suggests that, on average over 2012–2019, the debt of the sampled countries is rather fragmented (0.59), with a maximum value of 0.79 for Albania and a minimum value of 0.14 for Turkmenistan.

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<sup>6</sup> We focus on external public debt as it makes up the majority of the public debt in developing countries, even though there has been a significant rise in domestic debt. Additionally, information on domestic debt is quite limited.

<sup>7</sup> We also calculate the debt owed to other emerging countries, specifically BRICS (excluding China), which hold only a marginal share of external public debt compared to China.

**The final type of data we utilize aims to provide information about the efficiency with which the incurred loans have been used.** The underlying notion is that debts incurred to fund public investment can generate economic returns that help sustain such financing. Conversely, debts that primarily fund increases in civil servants' compensation only stimulate consumption and do not translate into long-term income-generating activities. The average annual growth in public investment flows (measured as a percentage of GDP) is calculated using data from the IMF Investment and Capital Stock Dataset, which provides information on both stocks and flows of public capital. The Government Financial Statistics (GFS) database, also from the IMF, includes information about employee compensation for only 82 out of 123 sampled countries. We calculate the average annual growth rate over the study period. Table A4 shows that, on average, countries experienced a decline in public investment while employee compensation tended to increase annually between 2012 and 2019. Lastly, we retrieve GDP growth rates from the World Development Indicators database to assess disparities in economic growth performance between over-indebted and non-indebted countries.

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## 4. Comparing countries with high and low debt

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**Countries can enter a debt crisis by mismanaging borrowed funds, experiencing negative external shocks, or borrowing from costly sources.** What do the correlations observed between over-indebtedness, growth, and external conditions from 2012 to 2019 suggest as a more plausible explanation for over-indebtedness? Alternatively, have some countries managed to borrow extensively yet still remain at low risk of debt distress? If so, can we identify dimensions where these countries differ from the others in our dataset?

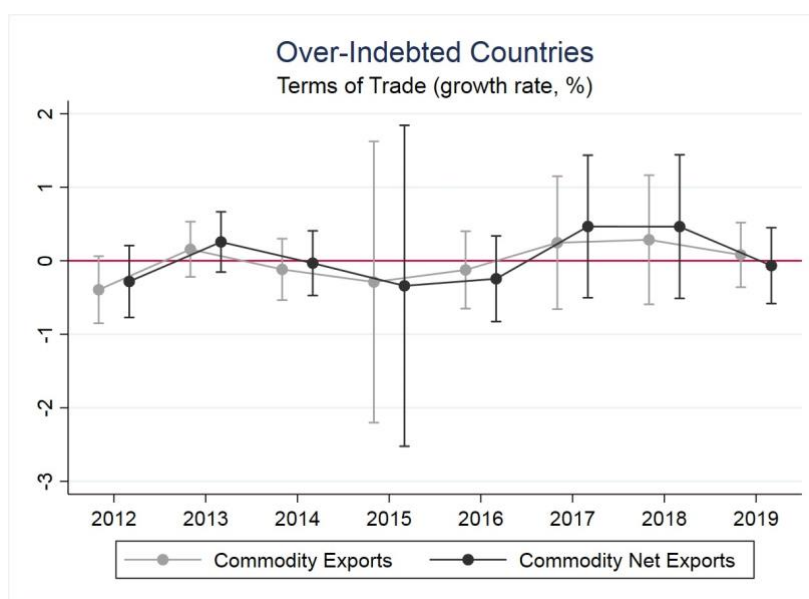
**High vs. low debt** Starting with hypothesis 1, that countries have ended over-indebted because of the occurrence of negative external shocks, we first note that around 2013, the prices of primary commodities, which many developing countries export, underwent a major decline, as visible in Figure S.A1 in the supplementary appendix. Were the over-indebted countries more affected by terms of trade shocks than those that did not become over-indebted? Table 2, panel B, presents the differences in mean terms of trade growth rates. It suggests that, on average, over-indebted countries as a group did not experience (significantly) more adverse terms of trade evolution between 2012 and 2016 compared to countries with low debt. This suggests that the deterioration of debt observed in the 2010s is more attributable to weak policies and poor governance quality than to exposure to declines in international commodity prices, as was the case in the 1990s. However, while both low and high debt countries appear to have experienced similar shocks, it remains possible that those countries that became over-indebted have underlying structural factors, such as poor governance, that rendered them more vulnerable to such shocks.

To illustrate this, we also look at the dynamic differences between the terms of trade (ToT) effects of over-indebted relative to low-debt countries. Using the complete panel data from our sample covering 2012 to 2019, we expand specification (1) by integrating year-fixed effects and interacting them with the `OverIndebti,2019` variable. The estimate of year-fixed effects provides the yearly

average for the entire group regarding the dependent variable under consideration, while its interaction with the `OverIndebti,2019` variable captures the average difference for a specific year between over-indebted and low-debt countries. Panel regressions control only for the initial GDP level (in logarithm) and include fixed effects for region and year. The analysis is also detailed in the supplementary appendix.

**Applying this dynamic analysis to the growth rate of terms of trade**, and as evident in Figure 4, ToT fluctuated in similar ways between the two groups of countries over the period, whether we focus on exports, or net exports.

**Figure 4: Terms of Trade on Traded Commodities - Dynamics 2012-2019 compared to non-overindebted countries**



*Notes: Standard errors are corrected for heteroskedasticity when the terms of trade growth rate is used as the dependent variable, given the determination of commodity prices in international markets, which affects all developing countries and increases the likelihood of correlation between observations. Estimate bounds denote statistical significance at the 10% level.*

**We are thus led to look at the impact of policies**, hypothesis 2. To assess whether debts incurred between 2012-2019 have been efficiently used, we compare the average performance of over-indebted countries in the use of public expenditures, part of which is externally financed. Differences in mean between over-indebted countries and countries with low or moderate risk of debt distress are reported in Table 2, panel D. On average, over-indebted countries recorded a lower expansion in public investment and a larger expansion in employee compensation compared to countries that did not end up over-indebted. This could mean that debts incurred from 2012 up to 2019, were mostly dedicated to finance spending with low growth returns, leading those countries to struggle in generating enough income to repay their debts. This result seems confirmed by the lower GDP growth rate recorded on average by the over-indebted countries.

**This important result suggests that similar to the debt crisis of the 1990s, poor policies played a central role.** However, we note the low level of significance of these results, indicating the presence of significant sources of variability. Below, we will explore whether sub-groups of over-indebted

countries performed differently on this efficiency score.

To explore further the source of these poor policies, Table 2, panel A, reports differences in the means of several policy variables between countries that ended with high vs moderate or low debt by 2019, controlling for the initial level of income (in 2012).

**Table 2: Correlates with high debt and sustainability risks**

	Estimate	Standard error	R <sup>2</sup>	N
<b>A. Macroeconomic Imbalances and Governance</b>				
<i>Average 2012-2019</i>				
Current Account Balance/GDP	-4.943	1.90**	0.148	117
Budget Balance/GDP	-0.331	(0.76)	0.151	117
Prim. Budget Balance/GDP	0.175	(0.77)	0.144	115
Broad Money/GDP	-0.475	(6.36)	0.413	113
Log (1+ Inflation rate)	0.146	(0.21)	0.413	113
Real interest rate (%)	0.226	(1.69)	0.113	98
CPIA Fiscal Policy	-0.232	(0.13)*	0.182	73
CPIA Macro Management	-0.365	(0.12)**	0.238	73
CPIA Transp. Account. Corr.	-0.250	(0.14)*	0.363	73
<b>B. Terms of trade shocks</b>				
<i>Growth rate of (in %)</i>				
ToT Commodities (Exports)	0.009	(0.12)	0.110	114
ToT Commodities (Net Exports)	0.044	(0.13)	0.108	114
<b>C. External Financing Composition</b>				
<i>% of PPG Ext. Debt Stock to</i>				
Debt Frag.	0.077	(0.03)**	0.056	117
Bilat Cred. (Conc.)	-0.331	(0.76)	0.151	117
Bilat Cred. (No Conc.)	9.478	(3.21)**	0.221	117
Multi Cred. (Conc.)	-6.751	(3.69)*	0.583	117
Multi Cred. (No Conc.)	-7.373	(2.88)**	0.271	117
Com. Ext. Banks	3.905	(1.56)**	0.172	117
Bond Holders	-6.107	(3.52)*	0.463	117
China	8.688	(3.29)***	0.346	117
BRICS excl. China	0.948	(1.58)	0.363	117
<b>D. Public Spending Efficiency</b>				
<i>Growth rate of (in %)</i>				
Public Investment	-0.178	(0.09)**	0.074	105
Publ. Employ. Compensation	0.550	(0.31)*	0.145	82
GDP	-0.911	(0.40)**	0.328	117

Notes: Standard errors are corrected for heteroskedasticity when the external financing variables are used as a dependent variable since international liquidity volatility as well as financing capacity of official donors affect all developing countries, increasing the likelihood of correlation between observations. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.010$ .

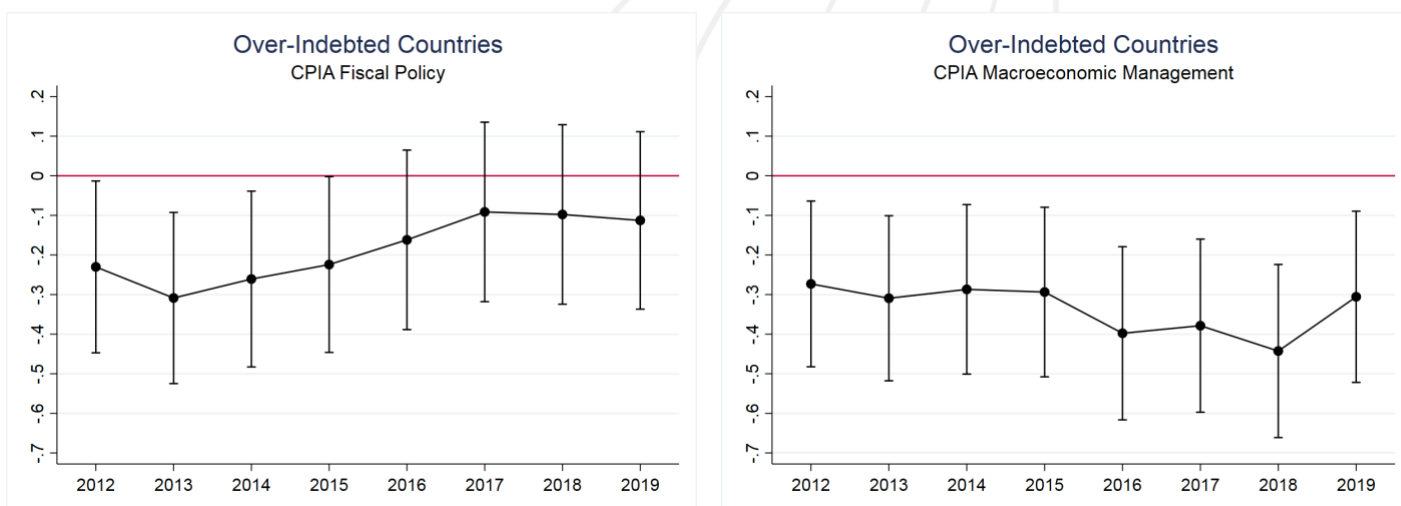


While it is quite intuitive that over-indebted countries would have larger current account deficits (around 5% of GDP), they did not show significantly larger budget deficits or worse monetary policies. Financial deepening, inflation rates, and real interest rates did not differ much (on average) either. As Figure S.A2 in the supplementary appendix suggests, larger foreign exchange gaps remained rather persistent throughout the study period for over-indebted countries. Yet, while fiscal gaps slightly deteriorated between 2012 and 2014, they were not systematically or significantly lower than those of low-debt countries during the study period.

However, indicators of governance quality show that, while over-indebted countries scored lower on fiscal policy management, as expected given their high debt, they also receive worse scores for their overall macroeconomic management. Moreover, the extent of transparency and accountability of public institutions, as well as the control of corruption, is also weaker (albeit the difference has low statistical significance). These results point to the potential role played by the management and costs associated with the financing intended to close the external financing gap.

**Figure 5 below expands the static cross-country analysis** to examine the dynamics of macroeconomic indicators in over-indebted countries (see Appendix A for the method). It reports the evolution of the average differences in CPIA indices between over-indebted and low-moderate risk countries, showing that countries experiencing debt distress by 2019 display much lower levels of efficiency in the conduct of their fiscal policy and macroeconomic reform. They also struggled more to ensure good practices in public administration between 2012 and 2019. Although they began to catch up with the average policy level of low-risk countries from 2016 onward, the difference remained negative throughout the entire period. However, the quality of macroeconomic management significantly worsened from 2015 onward, potentially due to the challenges associated with debt accumulation from more expensive sources.

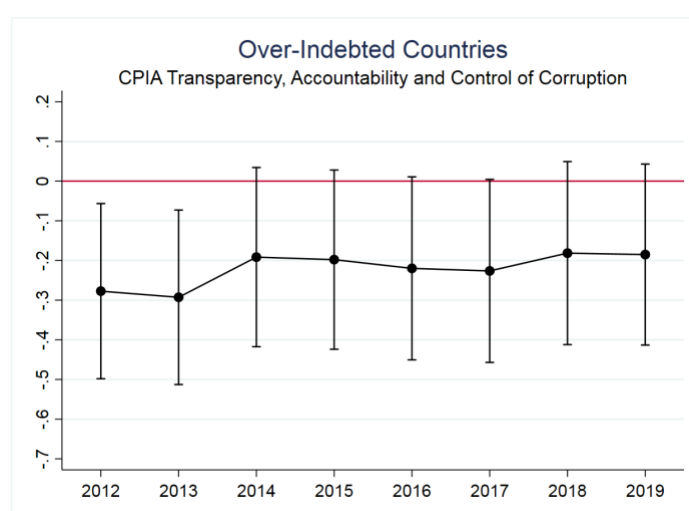
**Figure 5: Institutional Quality - Dynamics 2012-2019 compared to non-overindebted countries**



Note: Estimate bounds denote statistical significance at the 10% level.

Indeed, issues of debt sustainability and repayments could also arise from a differential evolution in the composition of external public debt, as suggested by hypothesis 3. Since the late 2000s, many developing countries have accessed international capital markets; some resumed borrowing from commercial banks, others began issuing bonds for the first time, and many started borrowing from China.

**Table 2, panel C, illustrates the differences in mean in terms of financing composition.** Contrary to [Easterly \(2002\)](#), the current debt overhang episode does not stem from excessive borrowing from the Bretton Woods Institutions. Instead, regression results indicate that between 2012 and 2019,

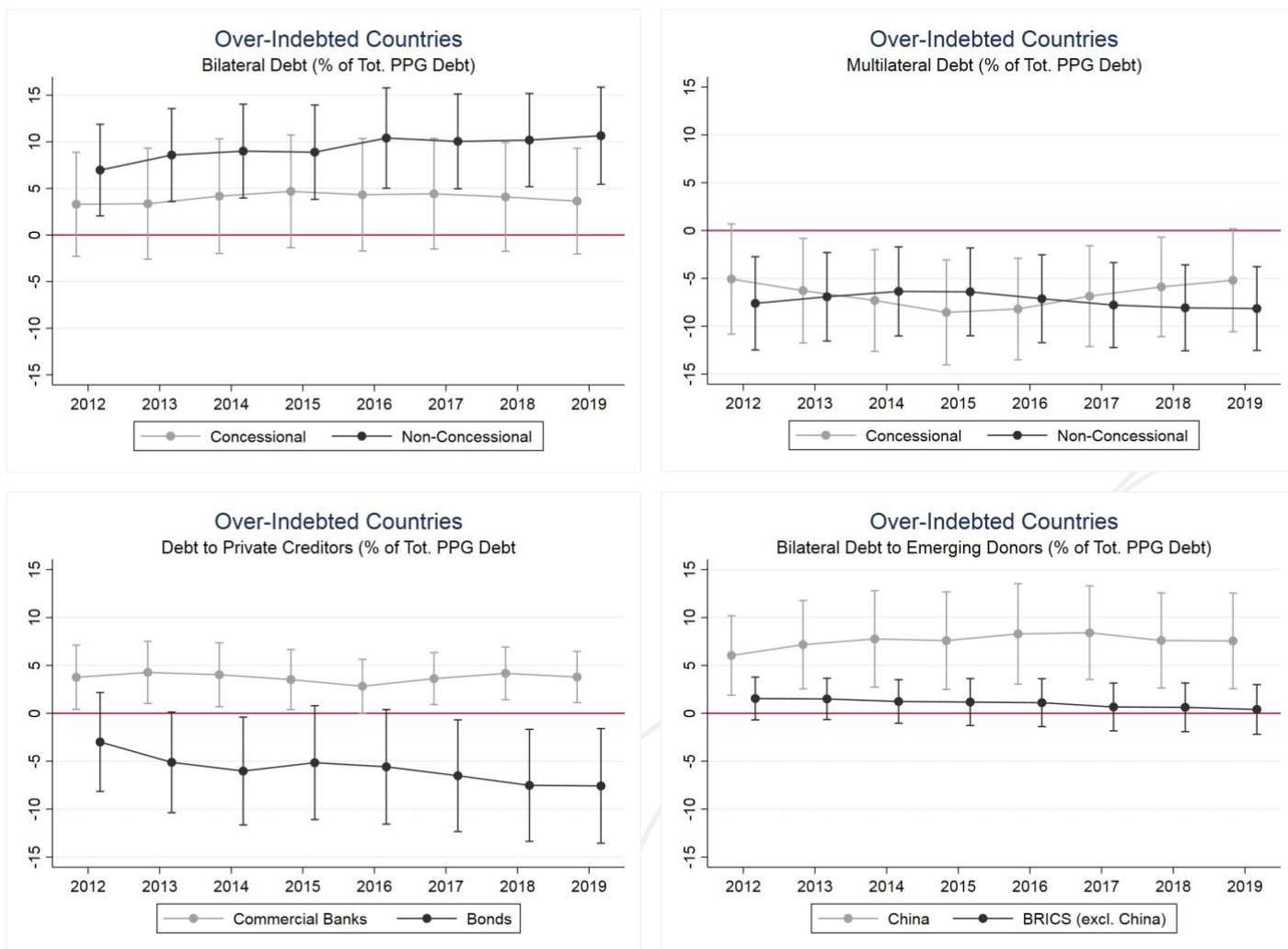


over-indebted countries had a lower share of multilateral debts in their total debt stock, both concessional and commercial, by about 7 percentage points compared to low-risk countries. However, this is offset by a higher share of debt owed to bilateral creditors, particularly non-concessional loans, and notably to China. The results also reveal that over-indebted countries carried a larger share of their external public debt owed to commercial banks, which may have led to higher debt servicing costs. Nevertheless, over-indebted countries exhibit a lower share of bonds in their total debts, suggesting that bond markets have been more reluctant to engage with risky countries compared to commercial banks.

Again, looking at the dynamics in Figure 6, which illustrates the rise in indebtedness to various creditors, provides a better understanding of the underlying factors driving the increased risk associated with debt. Over-indebted countries exhibit a larger share of external public debt owed to bilateral creditors, particularly on commercial terms, a trend that persisted from 2012 to 2019 without significant fluctuations. Multilateral funding shows a notable decrease over the study period, likely due to reduced flows to former HIPC countries following the Multilateral Debt Relief Initiative. This decline leads distressed countries to seek alternative sources, including non-concessional loans from bilateral creditors, particularly China. The significant share of Chinese lending, especially in non-concessional terms, is evident in both debt stock and disbursement data (refer to Figures [S.A2](#) and [S.A3](#) in the Supplementary Appendix). Furthermore, private creditors, especially commercial foreign

banks, play a crucial role in financing debt-distressed nations from 2012 to 2019. The increased presence of China and private creditors highlights the necessity to evaluate the sustainability of this borrowing pattern.

**Figure 6: Financing Sources - Dynamics 2012-2019 compared to non-overindebted countries**



Notes: Standard errors are adjusted for heteroskedasticity when the external financing variables serve as a dependent variable, as the volatility of international liquidity and the financing capacity of official donors influence all developing countries, raising the likelihood of correlation between observations. Estimate bounds indicate statistical significance at the 10% level.

**What makes debt sustainable?** So far, we have discovered some peculiarities of countries that end up over-indebted - mainly that they consumed more than they invested and that they had lower governance scores and borrowed from more expensive sources. We now investigate the flip side of this question: what characterizes countries that borrowed a lot but did not end up with distressed debt? This is not the exact opposite of the earlier case, as previously, the comparators were all countries without a debt crisis, while here, our focus is on those among them that have borrowed significantly.

**To identify these occurrences, we analyze the relationship between debt ratios and macroeconomic**

**developments** in countries experiencing low to moderate debt distress. To achieve this, we apply a similar methodology: we identify countries categorized as having a “Low” or “Moderate” risk of over-indebtedness in 2019, which recorded an increase in their PPG debt-to-GDP ratio exceeding the median increase among those countries. We then investigate differences in the mean across various macroeconomic performance metrics between these 43 countries and all other remaining countries (i.e., those at high risk of debt distress or countries with low to moderate risk of debt distress that experienced a below-median increase in their PPG debt-to-GDP ratio). Results are reported below in Table 3 for the few variables where the difference between the two sub-groups is significant.

**Table 3: Correlates with large borrowers that ended with moderate risk**

	Estimate	Standard error	R <sup>2</sup>	N
<b>A. Macroeconomic Imbalances and Governance</b>				
<i>Average 2012-2019</i>				
Current Account Balance/GDP	1.808	(1.35)	0.085	116
CPIA Fiscal Policy	0.373	(0.13)***	0.244	72
CPIA Macro Management	0.436	(0.11)***	0.291	72
CPIA Transp. Account. Corr.	0.250	(0.14)*	0.362	72
<b>B. Terms of trade shocks</b>				
<i>Growth rate of (in %)</i>				
ToT Commodities (Exports)	-0.145	(0.10)	0.133	113
ToT Commodities (Net Exports)	-0.211	(0.12)*	0.136	113
<b>C. Public Spending Efficiency</b>				
<i>Growth rate of (in %)</i>				
Publ. Employ. Compensation	-0.590	(0.27)**	0.164	81
GDP	1.251	(0.34)***	0.384	116

Notes: Standard errors are corrected for heteroskedasticity when the terms-of-trade growth rate is used as the dependent variable, given the determination of commodity prices in international markets, which therefore impact all developing countries, increasing the likelihood of correlation between observations. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.010$ .

Overall, the results from these 43 countries that managed to borrow large amounts without struggling to repay their increasing stock of debt were mainly characterized by better institutional quality. They reduced the growth of their public consumption expenditures, particularly civil servant salaries. They also recorded a higher growth rate than average, approximately 0.6 percentage points (although statistically significant at the 10% level), which may reflect better utilization of the loans incurred over the period. The results do not indicate a specific financing “menu” that allows for more manageable debt. Interestingly, this strong performance occurred even though these countries have been, on average, more exposed to terms of trade depreciation compared to the rest of the sample. This suggests that their economic structure was more immune to shocks than that of the comparators.

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## 5. Are there consistent Differences between HIPCs and non-HIPCs?

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**Although we have treated them thus far as a single group, not all countries at high risk of debt distress are the same.** One notable difference is that a subset of them consists of serial defaulters. To enhance our understanding of how countries become over-indebted, it is tempting to investigate whether the reasons for over-indebtedness differ between serial and non-serial defaulters. Within the group of 32 over-indebted countries, half have benefited from the HIPC and MDRI initiatives. Therefore, we disaggregate the analysis based on whether these over-indebted countries are former HIPCs, aiming to identify the factors behind the cyclical nature of debt distress in these nations. We later further decompose the data on HIPC countries according to their primary source of financing to explore why creditors may have chosen to lend to them again, despite their poor reputation.

**HIPCs vs. non-HIPCs** With this objective in mind, we extend regression (1) by decomposing the dummy variable that identifies over-indebted countries in 2019 (i.e., *OverIndebt*) into those that benefited from earlier debt relief initiatives and those that did not. We end up with two dummy variables: one flagging non-ex-HIPCs that were over-indebted in 2019 and another for ex-HIPCs that were also over-indebted in 2019. Table 4 displays the main results. Both HIPC and non-HIPC countries that ended up over-indebted are found to have been as much affected by ToT shocks as those that did not end up with more risky debt. In contrast, HIPC and non-HIPC countries tended to have, on average, lower CPIA scores than the full dataset.

**So far, so good, but are there areas with a clear distinction between the HIPC and non-HIPC sub-samples?** We can begin observing differences between the two groups when examining economic performance indicators such as the current account balance (as a percentage of GDP), public investment (as a percentage of GDP), employee compensation (as a share of total public expenditures), and the economic growth rate. First, while current account deficits have been, on average, larger for the over-indebted non-HIPC and HIPC countries during the study period compared to low-debt countries, the difference in means appears to be significant for the former group only. Second, results suggest that the over-indebted HIPCs experienced lower growth in public investment and a larger expansion in public wages than non-over-indebted countries from 2012 to 2019. It is, therefore, tempting to link these developments to the lower growth rates that characterize them, which for the HIPCs is about 1 percentage point below low-debt countries on average during that period. In contrast, the over-indebted non-HIPCs have similar investment rates and public employment as countries without a debt crisis. Their growth rates are around 0.8% lower, but the effect is not significant, indicating considerable variability on this front among the group of non-HIPC countries.

**We are left with two questions:** if the HIPC countries that became over-indebted did not invest much, how did they manage to borrow so much despite their poor reputation? As for the non-HIPC countries, why did they end up over-indebted, given that they invested as much as the non-risk countries and were not affected by ToT shocks? We are thus led to investigate whether these puzzles can be explained by the types of external financing that these two groups received. Table 4B shows that over-indebted HIPCs and non-HIPCs that ended up with unsustainable levels of debt exhibit significant differences in their borrowing strategies.

Table 4: Correlates of countries that ended with high debt, by HIPC status

	Estimate	Standard error	R <sup>2</sup>	N
<b>A. Public Spending Efficiency</b>				
<i>Dep. var.: Growth rate of (in %)</i>				
<i>Average 2012-2019</i>				
<b>Over-Indebt. Non-HIPCs</b>				
Public Investment	0.009	(0.12)	0.116	105
Publ. Employ. Compensation	0.055	(0.42)	0.176	82
GDP	-0.802	(0.52)	0.329	117
<b>Over-Indebt. HIPCs</b>				
Public Investment	-0.336	(0.12)***	0.116	105
Publ. Employ. Compensation	0.998	(0.40)**	0.176	82
GDP	-1.043	(0.57)*	0.329	117
<b>B. Terms of Trade and Governance</b>				
<i>Dep. var.: Growth rate of (in %) for ToT only</i>				
<i>Average 2012-2019</i>				
<b>Over-Indebt. Non-HIPCs</b>				
Current Account	-5.996	(2.45)**	0.151	117
Balance/GDP				
ToT Commodities (Exports)	0.087	(0.15)	0.116	114
CPIA Macro Management	-0.459	(0.16)***	0.246	73
<b>Over-Indebt. HIPCs</b>				
Current Account	-3.670	(2.66)	0.151	117
Balance/GDP				
ToT Commodities (Exports)	-0.078	(0.17)	0.116	114
CPIA Macro Management	-0.292	(0.14)*	0.246	73
<b>C. External Financing Composition</b>				
<i>Dep. var.: % of PPG Ext. Debt Stock to</i>				
<i>Average 2012-2019</i>				
<b>Over-Indebt. Non-HIPCs</b>				
Debt Frag.	0.103	(0.03)**	0.056	117
Bilat Cred. (Conc.)	-0.758	(1.94)	0.151	117
Bilat Cred. (No Conc.)	13.600	(4.28)***	0.221	117
Multi Cred. (Conc.)	-0.883	(4.37)	0.600	117
Multi Cred. (No Conc.)	-6.164	(3.69)*	0.273	117
Com. Ext. Banks	4.319	(2.64)	0.172	117
Bond Holders	-11.644	(4.37)	0.600	117
China	12.911	(4.11)***	0.294	117
BRICS excl. China	-1.422	(1.76)	0.207	117
<b>Over-Indebt. HIPCs</b>				
Debt Frag.	0.047	(0.05)	0.056	117
Bilat Cred. (Conc.)	9.944	(7.51)	0.151	117
Bilat Cred. (No Conc.)	4.499	(3.79)	0.221	117
Multi Cred. (Conc.)	-13.840	(4.96)***	0.600	117
Multi Cred. (No Conc.)	-8.833	(3.71)**	0.273	117
Com. Ext. Banks	3.405	(1.98)*	0.172	117
Bond Holders	0.582	(3.81)	0.600	117
China	3.596	(4.94)	0.294	117
BRICS excl. China	3.810	(2.35)	0.207	117

Notes: Standard errors are corrected for heteroskedasticity when the external financing variables are used as a dependent variable since international liquidity volatility as well as financing capacity of official donors affect all developing countries, increasing the likelihood of correlation between observations. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.010$ .

**The HIPCs group received a significantly lower share of multilateral financing compared to low-risk countries.** As discussed above, this may reflect the World Bank's "MDRI Netting-Out" policy. However, this decrease in multilateral financing has been partially offset by larger financing from private commercial banks compared to low-risk countries. This trend was particularly evident following the subprime crisis when capital returns in OECD countries became extremely low (Ferry et al., 2021). Consequently, these countries faced high financing costs and little oversight, resulting in increased consumption and reduced investment and growth, as previously found. Their access to the bond market must have also expanded, but not more than that of low-risk countries.

**This can be contrasted with the borrowing structure of the overindebted non-HIPCs.** This group's loan portfolio is significantly more fragmented than that of countries that did not become highly indebted. Specifically, the group borrowed a larger share of debt from bilateral creditors on commercial terms and a notably higher share from China (13 additional percentage points). Conversely, they borrowed as much as the low-debt countries from commercial banks but significantly less from the bond market. This suggests that countries with high exposure to China do not secure favorable market terms. Given that their investment levels were as high as those in low-risk countries, and their public consumption levels were similarly restrained, as seen above, we are left to think that perhaps their medium-term growth rates were potentially lower due to investment in low-return long-term infrastructure financed by Chinese loans.

In the next section, we examine the data more closely to further clarify the differences between the two groups by dividing them into more refined sub-groups based on the main sources of their loans during the study period.

**Credit History & Debt Composition** To investigate the heterogeneity among sub-groups of over-indebted countries, classified according to their main sources of external financing, we interact dummy variables flagging over-indebted ex-HIPCs and over-indebted non-HIPCs with binary variables indicating whether these countries belong to those with the largest share of external public debt owed to private creditors (alternatively to bilateral or multilateral lenders). Specifically, we ascertain whether their average share of external public debt to these creditors exceeds the median level of the entire sample. Table 5 reports differences in the mean growth rates of terms of trade for over-indebted ex-HIPCs concerning various compositions of external public debt.

We do not report results for the non-HIPCs, as they do not show any significant relation (although they are controlled for in the regressions). This implies that the non-HIPC over-indebted countries appear quite similar in their growth and governance characteristics, even if they have different loan portfolios.

**On the other hand, over-indebted HIPCs seem to fall into two groups.** First, those with above-median debt fragmentation indices and/or above-median shares of debt owed to private creditors

recorded, on average, worse terms of trade. This is noteworthy, as it marks the first sub-group we encounter with this characteristic. This suggests potential answers to the questions posed earlier regarding the reasons they were able to borrow and how they got into trouble. These countries may have managed to resume lending from private creditors, despite their poor reputations, due not only to their new borrowing capacity following debt relief but also to rising commodity prices that increased their appeal. However, the subsequent period, which saw these prices sharply decline—especially between 2012 and 2016—likely made repayments to these creditors more challenging. This plausible interpretation of our results aligns with the main factors that contributed to debt distress at the end of the 1970s, when falling commodity prices adversely affected the sustainability of many developing countries' debts. The correlations involving public investment in Table 5, panel B, reinforce this interpretation, suggesting that over-indebted HIPCs, particularly those with an above-median share of their external debt owed to private creditors, experienced significantly higher growth rates in public investment. This suggests that being mostly indebted to private creditors pushed them to utilize their loans more efficiently, possibly due to the necessity of generating higher returns when borrowing from more expensive private creditors.

**There is, however, a second distinct sub-group among the over-indebted HIPC, and this group has above median exposure to multilateral creditors.** For this subgroup, Table 5, panel C suggests that their share of the wage bill in total public spending increased more than that of the rest of the sample. This sub-group resembles the one described by [Easterly \(2002\)](#), who asserted that after debt reduction, countries would likely rebuild their debt by pursuing the same policies that had previously led them to over-indebtedness. The important point here is that this characterizes a small sub-group, not the entire sample of over-indebted countries.



Table 5: Terms of Trade - by HIPC Status × Debt composition

VAR:	(0/1) Significant share in Ext. PPG Debt of:			
	Debt.Frag.	Private	Bilat.	Multi.
<b>A. Terms of trade shocks</b>				
<i>Dep. var.: Av. growth rate 2012-19 (in %)</i>				
Over-Indebt. HIPCs	0.13 (0.18)	0.21 (0.13)	0.06 (0.20)	-0.26 (0.26)
Over-Indebt. HIPCs ×VAR	-0.60* (0.31)	-0.62** (0.28)	-0.34 (0.30)	0.42 (0.30)
# Observations	114	114	114	114
R <sup>2</sup>	0.183	0.166	0.132	0.143
<b>B. Public Investment (%GDP)</b>				
<i>Dep. var.: Av. growth rate 2012-19 (in %)</i>				
Over-Indebt. HIPCs	-0.78*** (0.15)	-0.70*** (0.16)	-0.23 (0.17)	-0.24 (0.15)
Over-Indebt. HIPCs ×VAR	0.89*** (0.21)	0.59*** (0.21)	-0.16 (0.23)	-0.16 (0.23)
# Observations	105	105	105	105
R <sup>2</sup>	0.274	0.228	0.141	0.144
<b>C. Employee Compensation (% of Tot. Pub. Exp.)</b>				
<i>Dep. var.: Av. growth rate 2012-19 (in %)</i>				
Over-Indebt. HIPCs	1.86*** (0.54)	1.91*** (0.54)	1.27** (0.57)	0.26 (0.52)
Over-Indebt. HIPCs ×VAR	-1.58** (0.75)	-0.92 (0.68)	-0.65 (0.79)	1.64** (0.75)
# Observations	82	82	82	82
R <sup>2</sup>	0.257	0.388	0.190	0.252
<b>D. GDP growth (constant PPP)</b>				
<i>Dep. var.: Av. growth rate 2012-19 (in %)</i>				
Over-Indebt.- HIPCs	-1.50* (0.78)	-1.18 (0.81)	0.35 (0.84)	-0.98 (0.73)
Over-Indebt. HIPCs ×VAR	0.58 (1.11)	-0.21 (1.08)	-2.62** (1.10)	-0.23 (1.12)
# Observations	117	117	117	117
R <sup>2</sup>	0.346	0.358	0.368	0.331

Notes: VAR refers to a dummy variable (0/1) equal to one if countries record a share of each of the reported creditors in their overall external public debt which is above the median of the sample. Standard errors are corrected for heteroskedasticity when the terms of trade growth rate is used as the dependent variable, given the determination of commodity prices in international markets, which therefore affect all developing countries, increasing the likelihood of correlation between observations.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.010$ .

## Conclusion

This study investigates whether the determinants of recent debt distress in developing countries resemble those that prevailed in the past. The empirical approach aims to pinpoint the main differences in macroeconomic and institutional performance between countries identified as over-indebted in 2019 and those with low or moderate risks of debt distress. The results suggest that countries facing recent debt distress, on average, exhibit the following characteristics:

- Larger foreign exchange deficits, primarily financed by non-traditional creditors, notably China and commercial banks, while multilateral financing remained notably lower compared to non-over-indebted countries, led to a riskier debt profile since financing from these sources is less concessional compared to traditional donor lending.
- Unfavorable commodity terms of trade dynamics, particularly evident for over-indebted former HIPCs borrowing from external private creditors.
- Inefficient management in utilizing contracted debts. Over-indebted countries prioritized low-return public consumption spending, coinciding with an increase in public employee remuneration at the expense of public investment and economic growth, both lagging behind countries with low debt. This mismanagement was most pronounced in over-indebted countries experiencing recurrent debt distress, but it was also evident in over-indebted nations borrowing heavily from multilateral institutions as well as creditors.

While several of our findings align closely with those related to the past debt crises of the late 1970s and the 1990s, there are also notable differences, especially in terms of the larger heterogeneity of the current circumstances. There seem to be four different “debt regimes”:

**1. Countries that borrowed extensively but failed to invest the funds** efficiently, primarily using them for public consumption rather than productive expenditures, and which experienced lower economic growth.

**2. Countries that successfully accessed international financial markets borrowed heavily from private creditors and invested those funds** to generate returns sufficient to cover higher debt repayments compared to official loans. Unfortunately, these countries faced adverse shocks in commodity terms of trade. Some former HIPCs appear to fall into this category.

**3. Countries that borrow a lot**, especially from private markets, but managed to sustain strong governance and economic policies throughout the period of study, hence increasing their resilience against potential exogenous shocks.

**4. Countries that borrow little** have kept their debt levels down to manageable levels, considering their debt-carrying capacity.

Each of these regimes is shaped by distinct structural characteristics of debtor countries and their ability to adapt to the evolving international environment. Consequently, the debt challenges observed since the onset of the pandemic vary significantly across countries, necessitating tailored responses and solutions. While some core factors from past debt crises reappear today, the increased diversity of creditors compared to previous crises underscores the need for more integrated debt restructuring processes. Additionally, economic policies must balance sustainability

with the ability to support essential borrowing.

## Appendix

**Table A1: Sample of countries with real or high risk of debt distress**

**Criteria 1 countries:** DSA = High Risk/Debt Distress

Afghanistan	Djibouti	Lao PDR	<i>Somalia</i>
Burundi	Dominica	Maldives	St. Vinc. & Grenad.
Cabo Verde	Ethiopia	Mauritania	<i>Sudan</i>
Cameroon	<i>Gambia, The</i>	<i>Mozambique</i>	Tajikistan
Central Afr. Rep.	Ghana	Samoa	Tonga
Chad	<i>Grenada</i>	<i>Sao Tome &amp; Princ.</i>	Zambia
<i>Congo, Rep.</i>	Haiti	Sierra Leone	<i>Zimbabwe</i>

**Criteria 2 countries:** 3 or more threshold breaches (2015-19)

Angola	Sri Lanka	Jamaica	Montenegro
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Notes: Countries in *italic font* are countries declared in debt distress before 2020.

**Table A2: Sample of countries with low or moderate risk of debt distress**

Albania	Dominican Rep.	Liberia	Rwanda
Algeria	Ecuador	Madagascar	Senegal
Argentina	Egypt	Malawi	Serbia
Armenia	El Salvador	Mali	Solomon Isl.
Azerbaijan	Eritrea	Mauritius	South Africa
Bangladesh	Eswatini	Mexico	St. Lucia
Belarus	Fiji	Moldova	Syria
Belize	Gabon	Mongolia	Tanzania
Benin	Georgia	Morocco	Thailand
Bhutan	Guatemala	Myanmar	Timor-Leste
Bolivia	Guinea	Nepal	Togo
Bosnia & Herz.	Guinea-Bissau	Nicaragua	Tunisia
Botswana	Guyana	Niger	Turkey
Brazil	Honduras	Nigeria	Turkmenistan
Bulgaria	India	North Macedonia	Uganda
Burkina Faso	Indonesia	Pakistan	Ukraine
Cambodia	Iran	Panama	Uzbekistan
China	Jordan	Papua New Guinea	Vanuatu
Colombia	Kazakhstan	Paraguay	Venezuela
Comoros	Kenya	Peru	Vietnam
Congo, Dem. Rep.	Kosovo	Philippines	Yemen
Costa Rica	Kyrgyz Rep.	Romania	
Cote d'Ivoire	Lebanon	Russia	

Table A3: List of countries in over-indebted countries sub-samples

High risk/Debt Distress	
Non-HIPCs	Former HIPCs
Angola	Afghanistan
Cabo Verde	Burundi
Djibouti	<b>Cameroon</b>
Dominica	<b>Central Afr. Rep.</b>
Grenada	<b>Chad</b>
<b>Jamaica</b>	<b>Congo, Rep.</b>
Lao PDR	<b>Ethiopia</b>
Maldives	<b>Gambia, The</b>
Montenegro	<b>Ghana</b>
Samoa	Haiti
Sri Lanka	<b>Mauritania</b>
St. Vint & the Grenad.	<b>Mozambique</b>
<b>Sudan</b>	Sao Tome &
Prin.	
Tajikistan	<b>Sierra Leone</b>
Tonga	Somalia
Zimbabwe	<b>Zambia</b>

*Notes:* Countries in **bold font** are countries considered as serial defaulters. Note that Sudan is classified as non-HIPC as the country only reached the Decision Point in June 2021, i.e. after the study period.

Table A4: Summary Statistics - 2012-2019 average

Variables	Unit	# Obs.	Mean	Std. Dev.	Min	Max	Sources
<i>Macroeconomic Imbalances</i>							
Current Account Balance	(% of GDP)	122	-4.89	8.90	-32.18	54.25	WEO
Fiscal Balance	(% of GDP)	121	-3.36	3.69	-33.36	1.92	WEO
Primary Fiscal Balance	(% of GDP)	119	-1.69	3.64	-33.32	7.16	WEO
Broad Money	(% of GDP)	117	52.68	35.06	12.22	246.68	WDI
Inflation (CPI)	% change	117	1.26	1.00	-1.87	4.60	WDI
Real interest rate	%	100	7.46	6.98	-9.65	47.31	WDI
<i>Governance and Trade vulnerability</i>							
CPIA Fiscal policy	[1-5]	77	3.23	0.58	1.5	5	WDI
CPIA Macro Management	[1-5]	77	3.56	0.58	1.5	4.5	WDI
CPIA Transp. & Corr. control	[1-5]	77	2.86	0.65	1.5	4.5	WDI
Terms of trade (Exports)	% change	119	-0.41	0.49	-2.27	0.33	IMF
Terms of trade (Net Exports)	% change	119	-0.02	0.59	-2.19	1.17	IMF
<i>Ext. Pub. Debt Creditors Compo.</i>							
Debt Frag.	(1-HH)	123	0.59	0.14	0.13	0.79	IDS
Bilat Cred. (Conc.)	(% Ext. Pub. Debt)	123	9.12	12.38	0	90.42	IDS
Bilat Cred. (No Conc.)	(% Ext. Pub. Debt)	123	20.89	17.52	0	92.91	IDS
Multi Cred. (Conc.)	(% Ext. Pub. Debt)	123	22.91	22.96	0	81.94	IDS
Multi Cred. (No Conc.)	(% Ext. Pub. Debt)	123	20.71	17.5	0	90.63	IDS
Bonds Holders	(% Ext. Pub. Debt)	123	5.61	9.38	0	72.79	IDS
Com. External Banks	(% Ext. Pub. Debt)	123	19.22	24.27	0	91.86	IDS
China	(% Ext. Pub. Debt)	123	11.41	15.05	0	65.43	IDS
BRICS excl. China	(% Ext. Pub. Debt)	123	3.55	8.41	0	68.67	
<i>Public Spending Efficiency</i>							
Public Investment	(% GDP) % change	109	-0.07	0.42	-2.26	0.66	IMF
Employee compensation	(% GDP) % change	84	0.11	1.26	-1.93	5.25	GFS
GDP (constant PPP)	% change	122	3.59	2.52	-8.40	9.25	WDI

## References

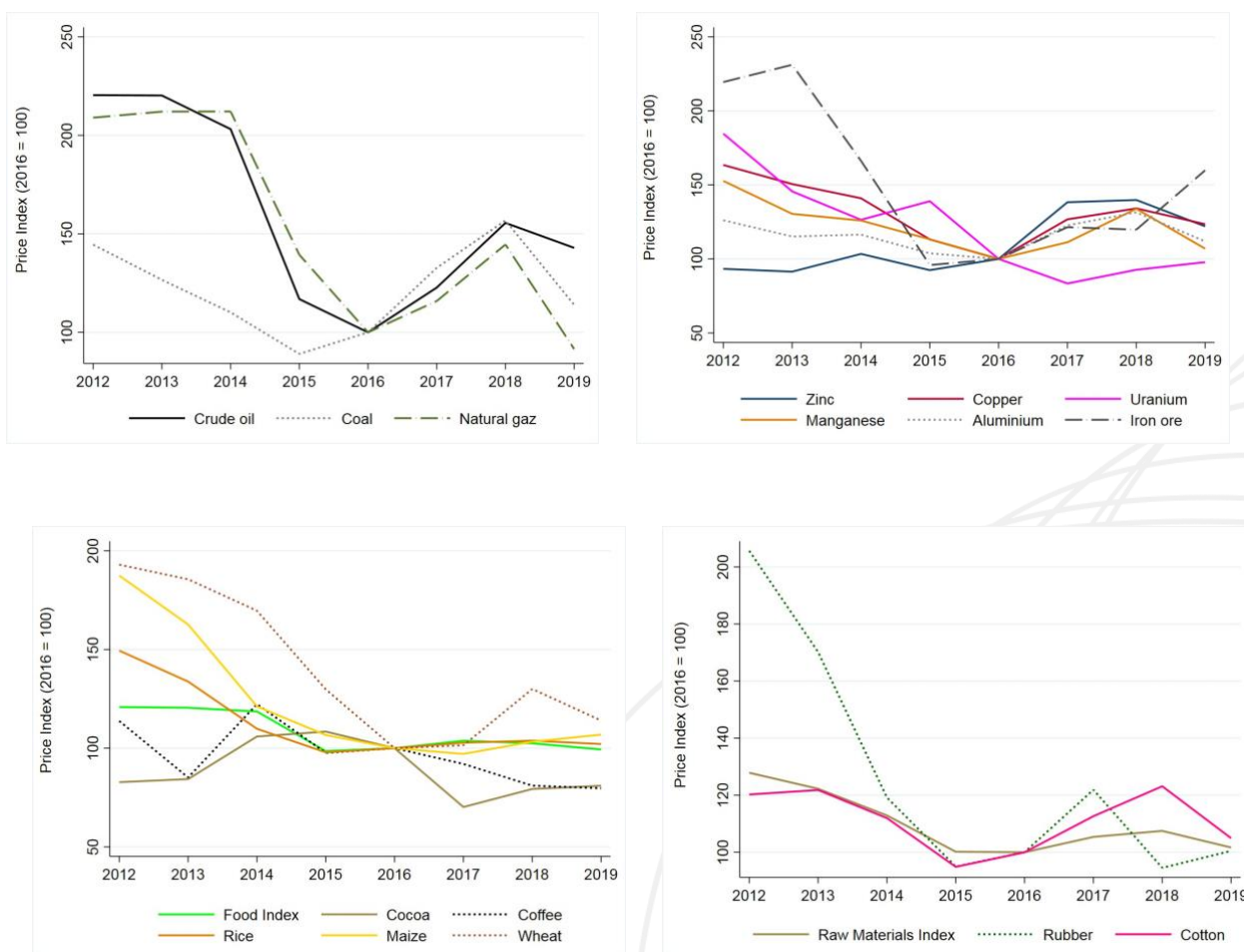
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# Supplementary Appendix

## Commodity Prices: 2012-2019 dynamic

**Figure S.A1: Primary Commodity Prices - 2012-2019**

Source: IMF Primary Commodity Prices Dataset



## Temporal comparisons

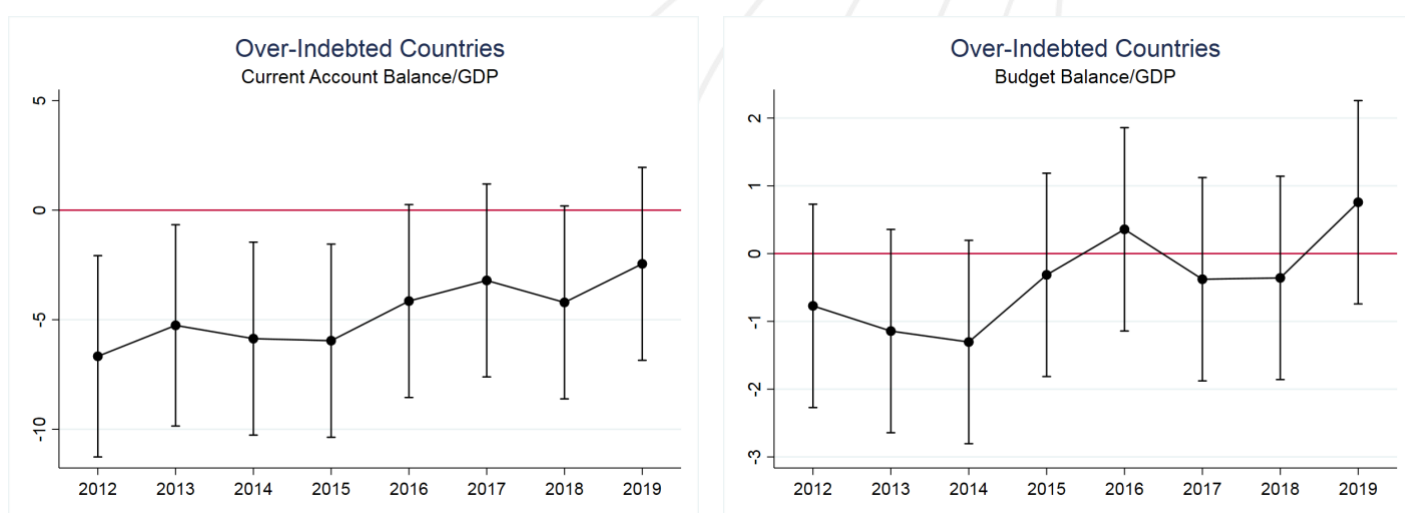
We complement the cross-country static analysis presented above by looking at the yearly evolution of these macroeconomic indicators in over-indebted countries, still as compared to developments observed in other developing countries, which should contribute to having a more comprehensive approach to the evolution of their debt issues. To achieve this, we simply estimate the average trend for over-indebted countries over the entire period of study by resorting to a panel data regression model where we do not control for anything but the initial level of GDP (in logarithm) and region and year-fixed effects. Through the inclusion of year fixed effects ( $\delta_t$ ), which measure the average value

of the outcome variable  $Y_{i,t}$  for each year of the study period, the estimates of  $\beta_t$  (i.e.,  $\text{year} \times \text{Overindebt}_{i,2019}$ ) make it possible to identify whether over-indebted countries, on average, deviate from this average performance, and how this potential deviation evolves over the whole period.

Considering the above results pointing to the larger foreign exchange gap for indebted countries, Figure S.A2 below confirms the cross-country differences in mean estimates, as heavily indebted nations regularly experienced larger current account deficits throughout the study period. Specifically, they recorded deeper current account deficits in the first four years of the study, likely leading to the accumulation of significant external debt. Consistent with cross-country findings, the right-hand graph of Figure S.A2 also shows no statistically significant differences in budget balance between over-indebted countries and those deemed at moderate or low risk of debt distress as of 2019, although it tended to be more negative for indebted countries during the early stages of the 2012–2019 period. Intuitively, the debt situation of countries at risk in 2019 is clearly connected to various financing gaps, with the foreign exchange aspect appearing to be the main contributing factor to the accumulation of debt.

While this shortage of foreign exchange may arise from lower export revenues due to the negative trends in commodity prices observed between 2012 and 2016, temporal comparisons of commodity-related terms of trade between over-indebted countries and those with low or moderate risks of debt distress do not indicate any statistical differences, as shown in Figure 5 in the main text. Whether considering terms of trade on commodity exports or net exports, over-indebted countries do not appear, on average, to have experienced greater suffering from the decline in commodity prices compared to other countries with a debt considered sustainable in 2019.

**Figure S.A2: Financing Gaps - Dynamics 2012–2019 compared to non-overindebted countries**



Notes: Estimate bounds denote statistical significance at the 10% level.

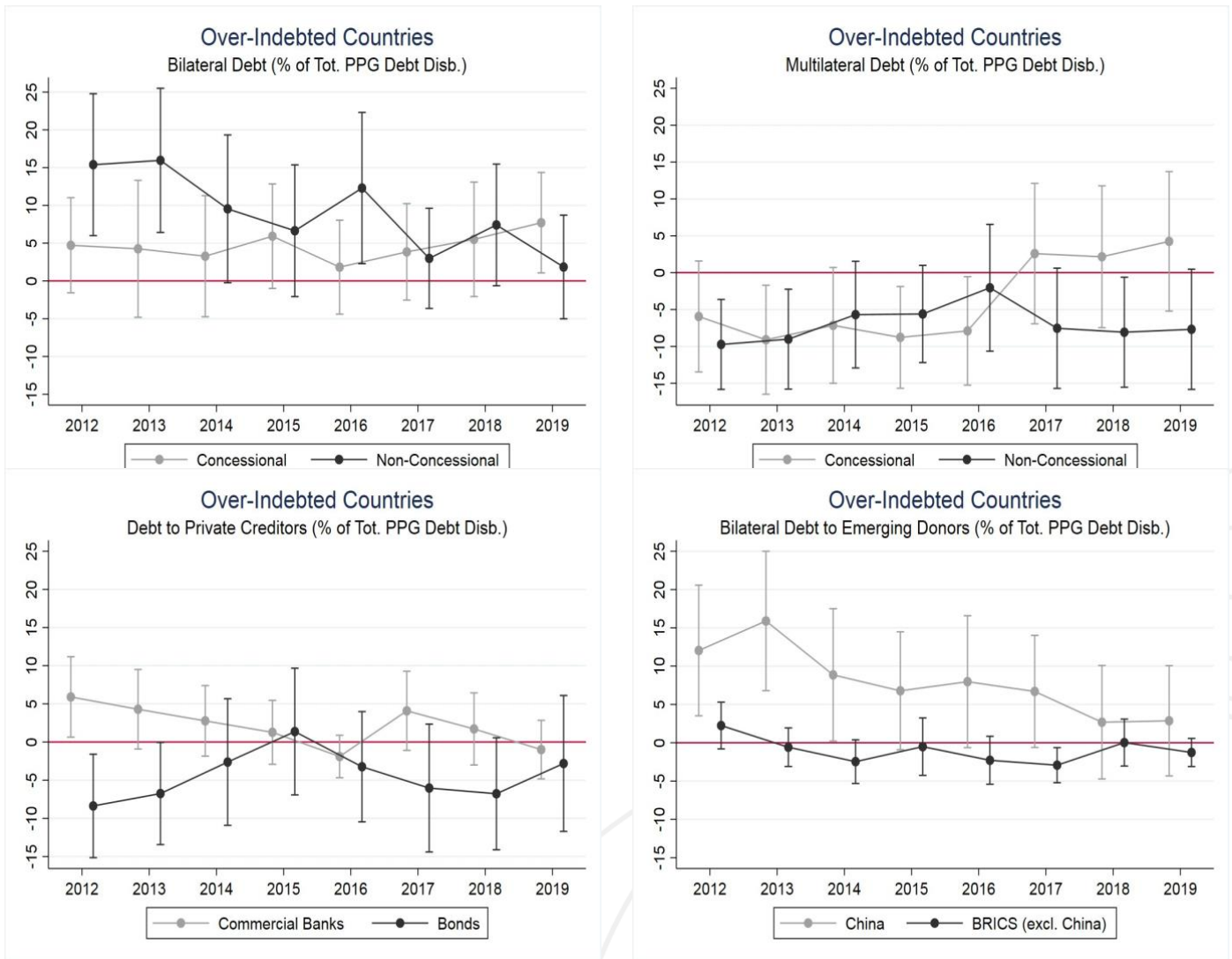
Figure 6 in the main text shows the average differences in the composition of the debt stock between both groups of countries. Looking first at the top-left sub-figure, one can clearly see that debt distress countries experienced on average, a significantly higher share of their debt denominated on



commercial terms i.e. with a grant-element inferior to 25% to bilateral creditors, by around 5 to 10 additional percentage point of their total stock of external public debt. Most of the study period is associated with lower financing from multilateral institutions, something quite different from what [Easterly \(2002\)](#) identified in the late 1990s debt crisis. These lower share of external debt owed to multilateral creditors could reflect the policy adopted by the World Bank in the aftermath of the MDRI. To ensure equity among its debtors, the institution decided to reduce the amount of financing provided to countries that had previously benefited from the HIPC and MDRI initiatives, by “deducting” (the MDRI Netting-Out) their new financing from the amounts provided under the debt relief initiatives.

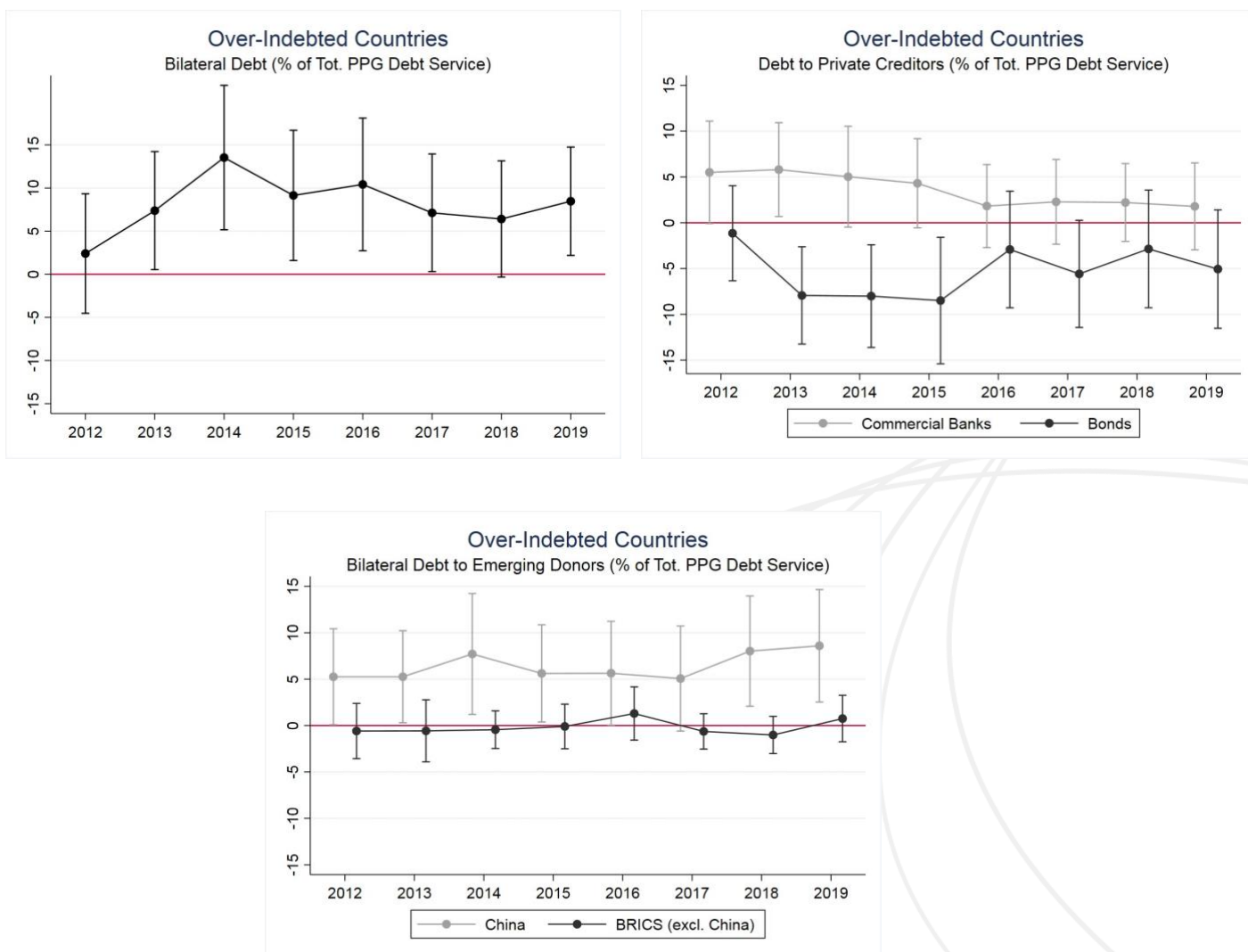
The reduction in multilateral financing coupled with larger structural financing needs potentially pushed these countries to look for other financing sources, among which they seem to have mostly turned to non-concessional loans from bilateral creditors and especially China as the evolution of the share of Chinese bilateral debt in total external public debt (bottom right graph of [Figure 7](#)) closely mimics the one of bilateral debt and especially the evolution of commercial bilateral debt share. The expansion in non-concessional bilateral debt induced by more financing from China seems to be even more evident when considering debt disbursements over the study period. Looking at sub-figures of [Figure S.A3](#) below, the evolution of commercial debt flows incurred to bilateral creditors is closely matching the one of borrowing from China, which could have therefore taken the withdrawal of the World Bank in some developing countries as an opportunity to become one of the most prominent lender in developing countries. The raising importance of both China and private creditors (especially commercial foreign banks) in the financing of debt distress countries is also noticeable when focusing on their share in total external public debt service as shown by [Figure S.A4](#).

**Figure S.A3: Financing Sources - Dynamics 2012-2019 compared to non-overindebted countries**



Notes: Standard errors are corrected for heteroskedasticity when external financing variables are used as the dependent variable, as international liquidity volatility and the financing capacity of official donors impact all developing countries, thereby increasing the likelihood of correlation between observations. Estimate bounds indicate statistical significance at the 10% level.

**Figure S.A4: Financing Sources - Dynamics 2012-2019 compared to non-overindebted countries**



Notes: Standard errors are adjusted for heteroskedasticity when external financing variables are used as the dependent variable, as international liquidity volatility and the financing capacity of official donors impact all developing countries, increasing the likelihood of correlation between observations. The estimate bounds indicate statistical significance at the 10% level.



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