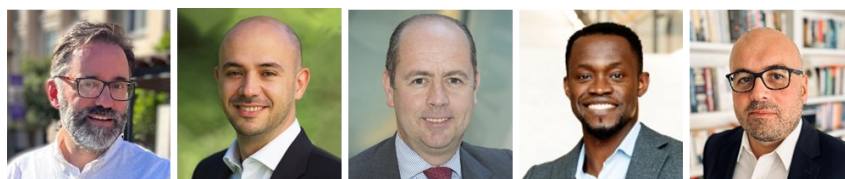


High Debt Levels Can Impede Monetary Policy*



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The COVID-19 crisis pushed sovereign debt to record levels, and central banks are grappling with challenges posed by inflationary pressures. This policy brief explores whether high government debt levels may hamper efforts to contain inflation, focusing on how unanticipated debt changes affect inflation expectations. Evidence shows that, in emerging markets, such debt surprises persistently raise long-term inflation expectations, unlike in advanced economies.

Sovereign debt across the globe has surged in recent years, reviving questions about the implications of high debt levels for monetary policy. The fiscal expansion in response to the COVID-19 crisis led to an increase in advanced economy (AE) debt from 104 to 113 percent of GDP between 2019 and 2022. For emerging market economies (EMEs), sovereign debt levels climbed from 55 to 65 percent of GDP over the same period. With public spending pressures and rising interest burdens, debt levels are expected to remain high. This raises the question of whether, and under what conditions, monetary policy could be hindered in its effort to rein in persistent inflationary pressures.

In our study ([Brandao-Marques et. al, 2023](#)), we find evidence that higher sovereign debt levels may complicate the fight against inflation in emerging market economies with high- and dollarized debt levels, and weaker monetary policy frameworks.

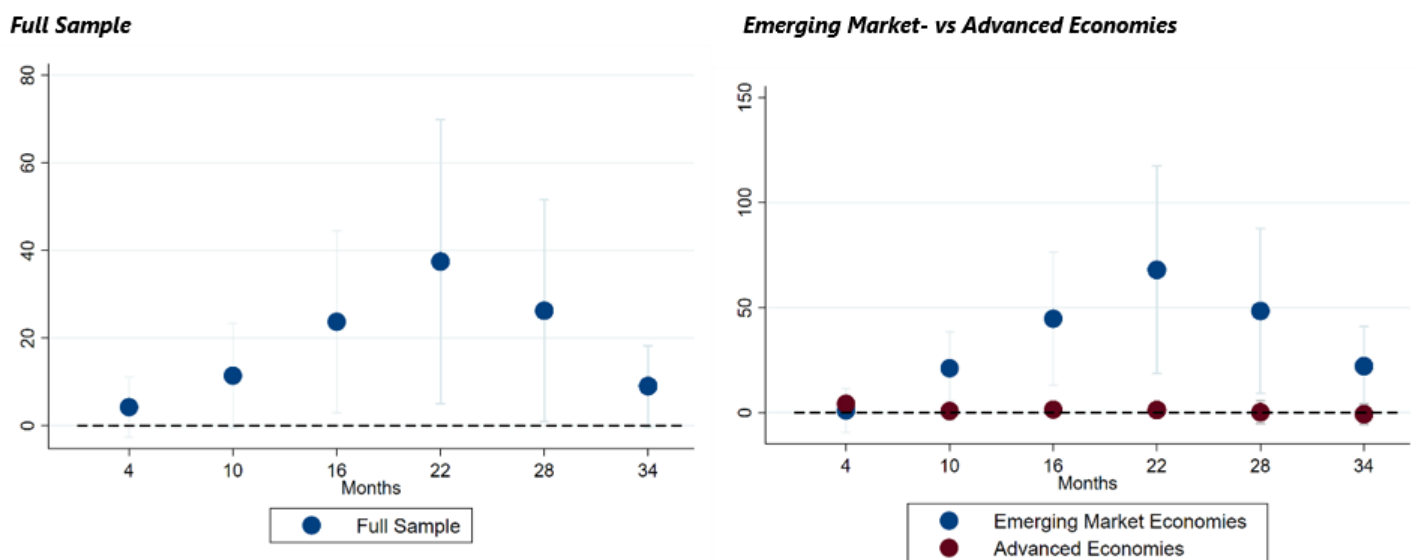
*This Policy Brief is based on [BIS Working Papers No. 1141](#). The views expressed are those of the author(s) and do not necessarily represent the views of the Bank for International Settlements, the IMF, its Executive Board, or IMF management.

Debt surprises raise long-term inflation expectations in emerging market economies...

The analysis is based on panel data for 48 EMEs and 34 AEs between 2000 and 2019. Our empirical model examines whether rising debt raises inflation expectations. We identify unanticipated surprises to government debt using forecast errors from the October release of the IMF's World Economic Outlook (WEO) publications. These forecast errors capture changes in debt that do not necessarily move one-for-one with the budget deficit and are less likely to be driven by changes in government expenditures. For example, debt surprises may capture the materialization of contingent liabilities. We focus on long-term inflation expectations (i.e., 5-year ahead expectations) which are less likely to be affected by short-term aggregate demand effects. To further mitigate aggregate demand effects and simultaneity concerns, we also condition our estimations on existing debt levels: if debt surprises raise long-term inflation expectations more the higher pre-existing debt levels are, this is unlikely to stem from such demand effects or other shocks.

As illustrated in Figure 1, we find that for emerging market economies, a surprise increase in government debt can significantly raise long-term inflation expectations. For example, a surprise 10-percent-increase in government debt-to-GDP leads to a 20-basis point hike in long-term inflation expectations within the first year after the shock, and reaching a peak of 70 basis points within the second year. The corresponding response in advanced economies is zero across all horizons. The results suggest that, on average, economic agents in EMEs are more sensitive to fiscal dominance issues—in which the fiscal authority's solvency constraint determines inflation—than in advanced economies. The heightened sensitivity of inflation expectations to debt changes may also capture broader concerns that emerging market central bank independence is less secure than in advanced economies, given weaker institutional frameworks and protections (Unsal and others, 2022, Vorisek and others 2022).

**Figure 1: Response of 5-Year Inflation Expectations to Government Debt Shocks
(Basis points, annual rate)**



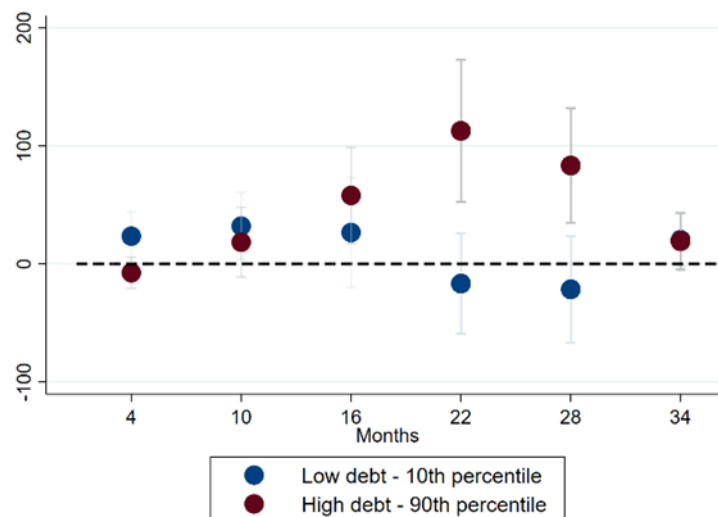
Notes: $t=0$ is the quarter of the shock. The figures plot for the relevant horizon the 5-year ahead inflation expectations response to a 10 percent surprise in the debt-to-GDP ratio. The blue dots denote the inflation expectations response for emerging market economies in our sample while the red dots denote the corresponding response for advanced economies. The whiskers represent 90 percent confidence intervals. The chart on the left shows the response for the full sample.

...more so when pre-existing debt, inflation, or debt dollarization is high, or when monetary policy frameworks are weak.

What roles do pre-existing economic conditions play? The sensitivity of inflation expectations to debt surprises depends on the debt level, suggesting that the change in inflation expectations is driven by debt concerns. Figure 2 illustrates the state dependence by tracing out the response of inflation expectations for economies with government debt-to-GDP levels at the 10th and 90th percentiles of the EME sample. High debt countries experience as much as a 100-basis point increase in long-term inflation expectations two years after a 10-percent surprise increase in the government debt-to-GDP ratio. By contrast, the impact of the unanticipated debt rise on inflation expectations is statistically insignificant in low debt countries.

Interestingly, the effects are more pronounced with high shares of foreign-currency debt. We find a positive and statistically significant effect of the interaction between foreign currency debt levels, debt levels, and the debt surprises. This suggests that concerns about foreign currency debt amplifying an economy's vulnerabilities to external shocks are more substantial than the counterbalancing impact of the central bank's inability to convert foreign currency debt into money. Additionally, during a debt crisis, a higher foreign currency debt share requires a higher inflation level to reduce the real value of total debt.¹

Figure 2: Emerging Market Economies' Response of 5-Year Inflation Expectations to Government Debt Shocks, by Initial Debt Level (Basis points, annual rate)



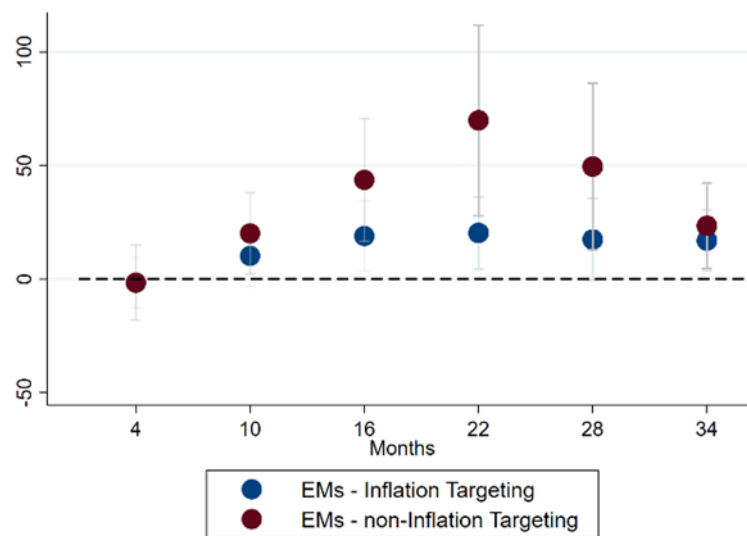
Notes: $t=0$ is the year of the shock. The figure plots the inflation expectations response to a 10 percent surprise in the debt-to-GDP ratio. The blue dots denote the inflation expectations response for economies with a debt level at the 10th percentile of the relevant country group sample, while the red dots denote the corresponding response for economies with a debt level at the 90th percentile of the relevant country group sample. The whiskers represent 90 percent confidence intervals.

Economies without a formal commitment to inflation targeting (IT) by their central banks demonstrate a somewhat greater sensitivity of long-term inflation expectations to a debt surprise. However, the difference vis-à-vis IT economies is not statistically significant. Nonetheless, the pattern of the response exhibited by emerging market economies without IT aligns with the delayed emergence of de-anchored expectations seen in the baseline findings for EMEs (Figure 3). These findings imply that central banks of emerging market economies that employ inflation targeting are more effective at stabilizing long-term expectations in the face of fiscal shocks, compared to their non-IT counterparts.

¹Focusing on shorter horizons and using a Phillips-curve framework, Banerjee et al. (2023) find that higher foreign currency debt and a greater share of foreign investors magnify the inflationary effects of higher deficits.

Overall, our analysis provides fresh insights into the dynamic interactions between fiscal and monetary policies. Our findings present innovative evidence regarding the influence of government debt levels in shaping inflation expectations (see Grigoli and Sandri 2023 for a different approach). In emerging market economies characterized by elevated government debt, bringing debt to a sustainable path is likely to be important for containing inflation. This is especially pertinent in the current landscape, marked by unprecedented levels of sovereign debt and strong, enduring inflationary forces across the globe. In the medium term, adopting modern, forward-looking monetary policy frameworks like inflation targeting holds the potential to mitigate concerns regarding inflation associated with government debt. This, in turn, creates additional room for both monetary and fiscal policy to operate effectively.

Figure 3: Emerging Market Economies' Response of Inflation Expectations to Government Debt Shocks, by Inflation Targeting Regime Classification (Basis points, annual rate)



Notes: $t=0$ is the year of the shock. The figure plots the response of 5-year inflation expectations to a 10 percent surprise in the debt-to-GDP ratio. The blue dots denote the inflation expectations response for economies with inflation-targeting central banks in the relevant country group sample while the red dots denote the corresponding response for economies with non-inflation targeting central banks. The shaded region represents 90 percent confidence intervals.

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