

## [Government Debt Management and Inflation with Real and Nominal Bonds](#)

CFM-DP2024-13

Lukas Schmid<sup>1,3</sup>, Vytautas Valaitis<sup>4</sup> and Alessandro T. Villa<sup>2</sup>

<sup>1</sup>Centre for Economic Policy Research, <sup>2</sup>Federal Reserve Bank of Chicago, <sup>3</sup>University of Southern California, <sup>4</sup>University of Surrey

The resurgence of inflation has become a significant concern, notably in the United States, where the annual inflation rate remains above 3 percent, exceeding the Federal Reserve's target. This rise in inflation, after a prolonged period dominated by fears of deflation, is attributed to multiple factors, one of which is the significant accumulation of government debt. This raises concerns that governments and central banks may be tempted to restore budget balance by monetizing debt, thereby exacerbating and creating persistent inflationary pressure.

We ask if the governments can use inflation-indexed bonds to stabilize inflation. While the share of Treasury Inflation-Protected Securities (TIPS) has been low and stable at around 10 percent of the U.S. government debt portfolio since they were first issued at the end of the 1990s, inflationlinked gilts amount to about a quarter of the UK government debt portfolio since the early 1980s. Should the U.S. government issue more or less indexed debt? In this paper, we provide theoretical and quantitative guidance on how to think about the trade-off between issuing nominal and real debt and the implications for inflation.

Starting from the simple observation that real or indexed debt cannot be inflated away ex-post, we examine the government's optimal debt portfolio when it has access to both nominal and real non-state-contingent bonds in a novel framework of optimal debt management in the presence of sticky prices. Nominal bonds can be inflated away giving ex-ante flexibility, but are more expensive as their prices reflect elevated inflation expectations. Real bonds, on the other hand, are cheaper but constitute a real commitment ex-post. As a benchmark, we first consider a government that can commit to future policies under Full Commitment and then characterize the policies of a government that responds strategically to the actions of future governments under No Commitment. Under Full Commitment, the planner actively managed bond portfolios and inflation to create insurance against fiscal shocks. Under No Commitment, the policy is strategically biased as future governments have incentives to monetize debt ex-post. Debt policy is then driven by the planner's anticipation of the future government's policies.

The realistic optimal debt portfolio emerges as a trade-off between insurance and incentives in a quantitatively relevant way. The model rationalizes the low and stable share of inflation-indexed debt along with a stable inflation rate. We find that under No Commitment, the inclusion of indexed bonds in the government's debt portfolio robustly and significantly lowers inflation. By reducing future governments' incentives to monetize debt, indexed debt thus acts as a commitment device to keep inflation stable.