

# PUBLIC DEBT

The inaugural edition of Research Digest, for second quarter 2020, explores the costs and benefits of public debt. The debate surrounding public debt is not a new economic or policy issue, but it has garnered increased attention following the rapid increase in public debt since the 2007–09 global financial crisis. The IMF estimates the average public debt of advanced economies exceeded 100% of GDP in 2019, compared to 74% in 2007, and public debt has steadily risen in emerging markets and developing economies (EMDEs) over this period as well. With government borrowing expected to soar in 2020 because of the unprecedented fiscal measures taken to combat the COVID-19 crisis, several countries with already high public debt could see their debt-to-GDP ratios top their post–World War II highs. Among other things, investors are concerned that massive public debts could weigh on future economic growth, limit governments’ fiscal response in the next crisis, make debt management more challenging, and increase the risk of sovereign debt and financial crises.

This edition of Research Digest summarizes three papers covering a range of views on public debt from two preeminent economists and a major international financial institution:

- The first paper examines the complex relationship between public debt and economic growth and finds that the combination of high and rising public debt can weigh on long-term growth;
- the second paper suggests that today’s low–interest rate environment reduces the fiscal and welfare costs typically associated with high public debt; and
- the last paper concludes that waves of global public debt accumulation increase the risk of financial crises among emerging markets and developing economies.

## IS THERE A DEBT-THRESHOLD EFFECT ON OUTPUT GROWTH?

Alexander Chudik, Kamiar Mohaddes, M. Hashem Pesaran, and Mehdi Raissi, International Monetary Fund, 2015.

A sharp increase in government indebtedness has sparked a renewed interest in the relationship between public debt and economic growth. In this paper, the authors, using data from a sample of 40 countries over the 1965–2010 period, find no evidence of a universally applicable threshold above which public debt levels depress growth after accounting for several country-specific and global factors. Yet, they do find evidence that a persistent increase in the trajectory of public debt over long periods leads to lower levels of economic growth.

Economists tend to accept that an increase in public debt due to fiscal deficit spending can stimulate economic growth in the short run, but there is considerably less agreement about the long-run economic impact of public debt accumulation. There are several theoretical arguments supporting a negative relationship between public debt and economic growth, one of the main arguments being the “crowding out” of private investment. In reality, estimating the relationship between public debt and economic growth suffers from numerous technical issues, such as data limitations and feedback effects. Analysis is further complicated by several country-specific (i.e., composition and maturity profile of public debt) and global factors (i.e., financial cycles) that have contributed to some countries struggling to grow with low public debt levels, while others have experienced strong growth with high public debt levels.

The authors, using a variety of multivariate statistical techniques to address some of the above challenges, examine the interaction of public debt and economic growth across 40 advanced and emerging economies from 1966 to 2010. While they find no evidence for a universally applicable threshold above which public debt levels lead to lower economic growth after considering several country-specific and global factors, they do find that countries with elevated public debt levels and persistently rising debt-to-GDP ratios tend to have lower real growth rates in the long term. Their model suggests that a persistent accumulation in the debt-to-GDP ratio at an annual pace of 3% is eventually associated with annual real GDP growth that is 0.2 to 0.3 percentage points lower on average. These results suggest that the path of public debt is more important for economic growth than the level of public debt itself.

While the authors find evidence of a statistically robust negative relationship between a persistent increase in the debt-to-GDP ratio over long periods and real GDP growth, they did not conclude that a temporary increase in the debt-to-GDP ratio impacts the relationship between public debt and economic growth. Therefore, they conclude that countries can sustain a temporary increase to their debt-to-GDP ratios without depressing real GDP growth, so long as it doesn’t result in a permanent departure in the normal trajectory of public debt over the long run. However, the authors note that their analysis does not specify a causal link between public debt and economic growth, making it difficult to prescribe generic policy advice based on their findings.

## **PUBLIC DEBT AND LOW INTEREST RATES**

Olivier Blanchard, *American Economic Review*, vol. 109, no. 4 (April 2019): 1197–1229

The author examines the benefits and costs of public debt when interest rates are low. It is widely believed that high public debt is economically damaging because of the significant fiscal and welfare costs it imposes on society. However, he argues that these costs may be smaller than believed in a low-interest rate environment. While this observation alone may not justify high public debt per se, it does suggest a richer discourse on public debt policy.

A large body of existing literature suggests that high public debt can have significant fiscal and welfare costs on society. The widely held view is that high public debt eventually leads to higher tax rates in the future (a fiscal cost), and it crowds out private

capital accumulation (a welfare cost), with both costs potentially decreasing future output and consumption. However, in the current environment of low interest rates, the author suggests that these costs may be smaller than believed.

When interest rates are low, particularly when they are lower than growth rates, then higher public debt does not have to lead to higher future tax rates, meaning debt may have no fiscal cost. If economic output continues to grow at a rate above the prevailing interest rate, then governments can just roll over debt, issuing new debt to pay for the interest on existing debt; the debt-to-GDP ratio will decline over time without an increase in taxes. Similarly, there are reasons to believe the welfare costs of public debt may be less severe if interest rates are below growth rates. Under this scenario, the author still believes that higher public debt will weigh on capital accumulation and output; but its impact on consumption is less clear and likely depends on both the risk-free interest rate and the average rate of return on capital. An average rate of return on capital above the growth rate implies a welfare cost of public debt (lower consumption), while a risk-free interest rate below the growth rate implies a welfare benefit of public debt (higher consumption). In sum, the author concludes that the welfare cost of public debt is most likely negative but not as large as previously believed because of these competing factors.

The author acknowledges several valid objections to his conclusion. One is the risk that interest rates will eventually rise above growth rates in the future, leading to larger fiscal and welfare costs of public debt. But, the author points out that the current environment is more the rule than the exception. In fact, in the United States, the one-year T-bill interest rate has been lower on average than the growth rate for the last 150 years. Even if interest rates did increase in the future, the author suggests that governments could provide some protection against an increase in the costs of public debt by partly locking in current low rates by issuing fixed-rate long-maturity indexed bonds today.

He emphatically notes that this is not a call for governments to massively increase public debt issuance. High public debt still has costs, even if they are smaller than previously believed. The author suggests that governments should primarily rely on public debt when the benefits exceed the welfare costs, such as when private demand is weak and the neutral risk-free rate of interest is low or to finance welfare-enhancing public infrastructure projects. But, high public debt is not catastrophic in a low-rate environment, and efforts to reign in public debt could be more economically damaging than the high public debt itself.

#### **THE FOURTH WAVE: RAPID DEBT BUILDUP**

*Global Economic Prospects: Slow Growth, Policy Challenges, World Bank Group, January 2020*

The global economy is amid its fourth wave of rapid debt accumulation since 1970. There is evidence that rapid increases in public debt increase the risk of financial crises, particularly among emerging markets and developing economies (EMDEs). Both public and private debt accumulation among EMDEs have been even larger and more rapid in the current wave as compared to past episodes, raising concerns about their financial stability. The authors recommend four key policy frameworks to help reduce the risk of financial crises among EMDEs arising from the current wave of debt accumulation.

Between 1970 and the 2007–09 global financial crisis (GFC), there were three broad waves of global debt accumulation—between 1970–89, 1990–2001, and 2002–09. In the past, low interest rates and financial market innovations have helped fuel periods of rapid debt accumulation, and these periods have typically ended in widespread financial crises in many EMDEs. To better assess the relationship between debt and financial crises, the authors analyze more than 500 episodes of rapid debt accumulation within EMDEs between 1970 and 2018. They find that substantial increases in either public or private debt raise the likelihood of an EMDE entering a financial crisis, and the probability of a financial crisis increased when the debt buildup was more rapid or when the country was more exposed to financial vulnerabilities (e.g., large external debt burdens, lower international reserves, poor fiscal management, weak regulatory oversight, etc.).

Since the GFC, EMDEs have experienced a fourth wave of rapid debt accumulation. In comparison to previous waves of debt accumulation, both public and private debt buildup have been quicker and larger during the current wave, with total debt in these economies reaching a record high of 170% of GDP in 2018. Additionally, non-residents now own a greater share of outstanding public debt and a growing proportion of corporate bonds are of weaker credit quality and denominated in a foreign currency. The changing composition of EMDE debt and tighter integration in today's global financial markets likely increase EMDEs' exposure to external financial shocks. Lastly, EMDEs' domestic and external vulnerabilities have also grown. For instance, fiscal and current account deficits have been increasing since 2010, limiting governments' ability to respond sufficiently in the event of a downturn, while weaker global growth prospects raise debt sustainability concerns among EMDEs.

Low global interest rates have helped keep down debt servicing costs and reduced concerns about debt sustainability in recent years, but any rise in interest rates is likely to come as an adverse shock to many EMDEs given elevated debt levels and financial vulnerabilities. As a result, the authors conclude that EMDEs remain susceptible to future adverse shocks that could trigger large-scale financial crises as seen following past waves of rapid debt accumulation. In response, they propose four key policy frameworks to reduce the likelihood and impact of financial crises:

- Implement debt management policies, increase balance sheet transparency, and incorporate risk mitigation measures to reduce borrowing costs and enhance debt sustainability.
- Strengthen monetary and fiscal frameworks by implementing inflation-targeting policies, maintaining a flexible exchange rate regime, and managing budget deficits to protect against risks of external financial shocks.
- Improve financial system regulation and supervision to protect against the buildup of financial weakness and increase financial market credibility.
- Promote good corporate governance and strengthen bankruptcy protection procedures to boost investments and facilitate responsible risk-taking in the private sector. ■

---

Copyright © 2020 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC ("CA"). Copying of this publication is a violation of US and global copyright laws (e.g., 17 U.S.C.101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages.

This report is provided for informational purposes only. The information does not represent investment advice or recommendations, nor does it constitute an offer to sell or a solicitation of an offer to buy any securities. Any references to specific investments are for illustrative purposes only. The information herein does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Information in this report or on which the information is based may be based on publicly available data. CA considers such data reliable but does not represent it as accurate, complete, or independently verified, and it should not be relied on as such. Nothing contained in this report should be construed as the provision of tax, accounting, or legal advice. Past performance is not indicative of future performance. Broad-based securities indexes are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly in an index. Any information or opinions provided in this report are as of the date of the report, and CA is under no obligation to update the information or communicate that any updates have been made. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified.

The terms "CA" or "Cambridge Associates" may refer to any one or more CA entity including: Cambridge Associates, LLC (a registered investment adviser with the US Securities and Exchange Commission, a Commodity Trading Adviser registered with the US Commodity Futures Trading Commission and National Futures Association, and a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; Menlo Park, CA, New York, NY; and San Francisco, CA), Cambridge Associates Limited (a registered limited company in England and Wales, No. 06135829, that is authorised and regulated by the UK Financial Conduct Authority in the conduct of Investment Business, reference number: 474331); Cambridge Associates Limited, LLC (a registered investment adviser with the US Securities and Exchange Commission, an Exempt Market Dealer and Portfolio Manager in the Canadian provinces of Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Nova Scotia, Ontario, Québec, and Saskatchewan, and a Massachusetts limited liability company with a branch office in Sydney, Australia, ARBN 109 366 654), Cambridge Associates Investment Consultancy (Beijing) Ltd (a wholly owned subsidiary of Cambridge Associates, LLC which is registered with the Beijing Administration for Industry and Commerce, registration No. 110000450174972), and Cambridge Associates Asia Pte Ltd (a Singapore corporation, registration No. 200101063G, which holds a Capital Market Services License to conduct Fund Management for Accredited and/or Institutional Investors only by the Monetary Authority of Singapore).