



Drivers of Public Debt in East Asia and Pacific Economies

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Public debt in developing East Asia and Pacific (EAP) economies has increased markedly since the recession in 2020 induced by COVID-19 pandemic. This Brief uses standard debt dynamic accounting decomposition to quantify the main drivers of debt accumulation in developing EAP countries since 2000. In the aftermath of the COVID-19 pandemic, larger primary deficits have been the main drivers of the increase in the ratio of public debt to GDP in most developing EAP economies. While strong GDP growth and, to a certain extent, inflation have helped deflate public-debt-to-GDP ratios during the past two decades, they have, on average, been more muted since the COVID-19 shock.

A Surge in Public Debt in Developing East Asia and Pacific Economies

The pandemic-induced economic shock in 2020 was accompanied by the largest single-year surge in the public-debt-to-GDP ratio in the past 30 years for developing East Asia and Pacific (EAP) economies (figure 1). For the region excluding China, the increase in the public-debt-to-GDP ratio in 2020 (10.7 percentage points) was more than 2 times larger than during the global financial crisis (GFC) of 2008–09 (4.7 percentage points), and about 1.7 times larger than during the Asian financial crisis (AFC) of 1997–98 (6.3 percentage points). As a result, the average public-debt-to-GDP ratio reached 63.9 percent in 2021 and is estimated to increase to 64.6 percent in 2022 for the region excluding China.

The COVID-19 shock accelerated the upward trend in the public-debt-to-GDP ratio observed in most developing EAP economies since the global financial crisis. The ratio of public debt to GDP increased from about 40 percent in 2008 to about 47 percent in 2019, and close to an estimated 65 percent in 2022: that is, a cumulative increase of 18 percentage points since 2019. Since the start of the pandemic, the ratio of public debt to GDP has increased by more than 38 percentage points in Fiji, more than 33 percentage points in Lao People’s Democratic Republic (PDR), more than 23 percentage points in the Philippines, and more than 21 percentage points in Thailand (figure 2).

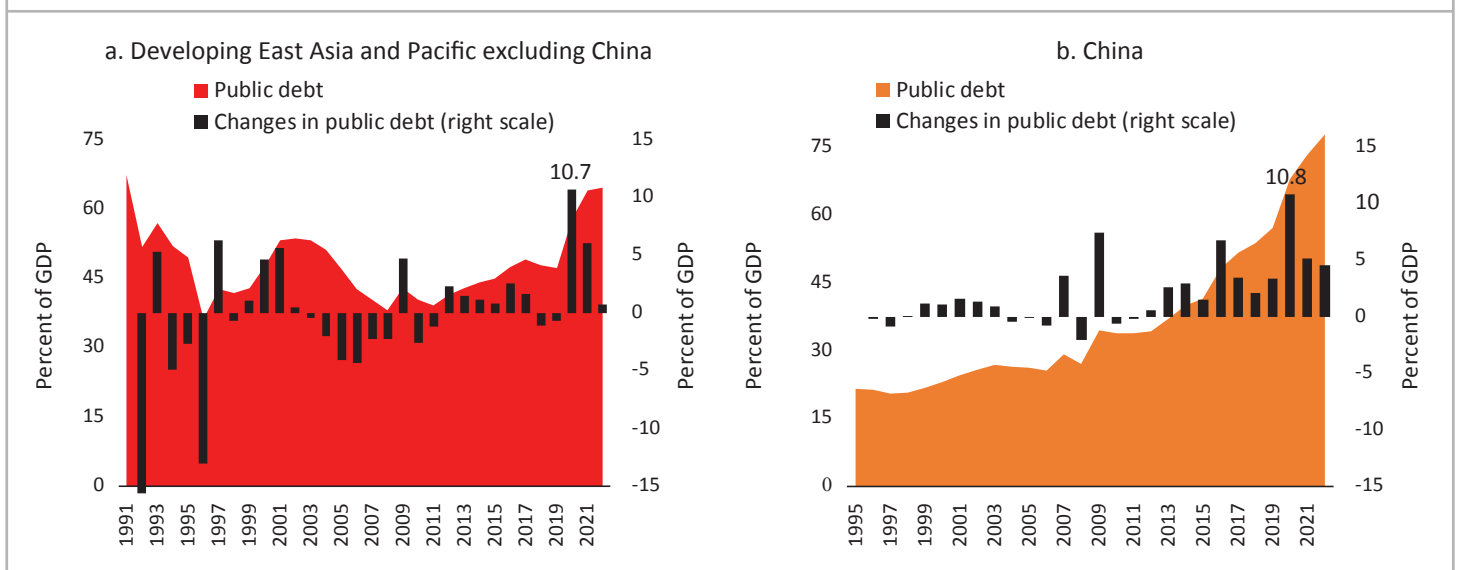
This Brief analyzes the drivers of public debt accumulation in developing EAP economies using standard debt dynamic accounting decomposition. Specifically, it quantifies the main drivers of debt accumulation in developing EAP economies since 2000. Changes in debt in any given year can be decomposed into the primary fiscal deficit (defined as revenues minus expenditure net of interest payments), economic growth, interest payments, inflation, exchange rate depreciations, and a residual.

The sample includes Cambodia, China, Fiji, Indonesia, Lao PDR, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam. The analysis focuses on the 2000–22 period due to varying data availability in earlier years. The residual term in the debt accounting decomposition is also referred to as the stock-flow reconciliation because it reconciles the deficit, which is a flow variable, with the evolution of debt, which is a stock variable. In practice, it covers changes in debt that come from factors such as privatization or the realization of contingent liabilities.

The analysis finds that several factors have contributed to the accumulation of public debt in developing EAP economies during the last two decades:

1. High economic growth rates have helped to reduce the public-debt-to-GDP ratio, on average, by 2.3 percentage points per

Figure 1. The public-debt-to-GDP ratio has been increasing in developing East Asia and Pacific economies during the last decade



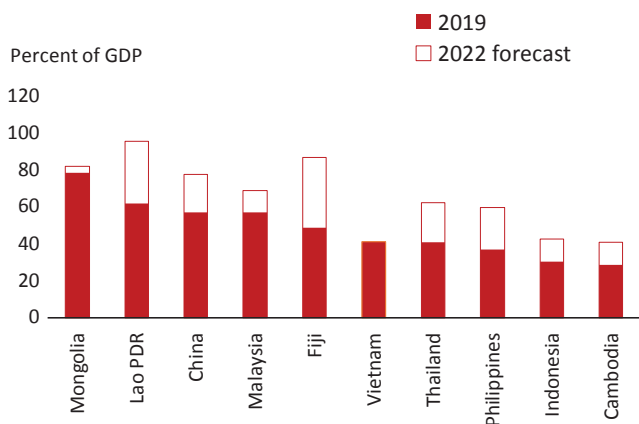
Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates. Note: Public debt refers to general government debt. Panel a presents unweighted averages.

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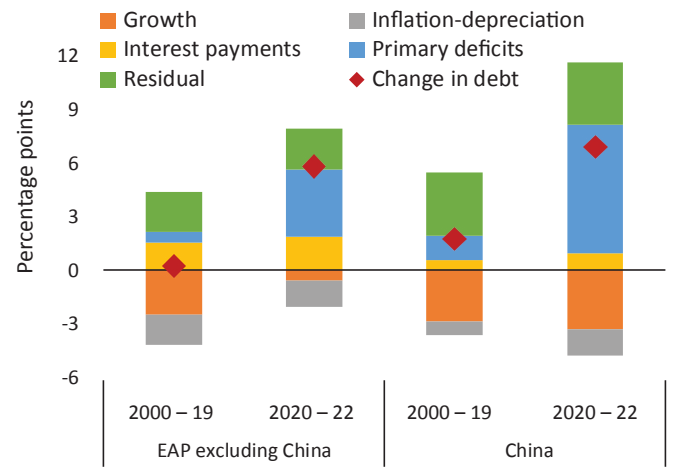
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Figure 2. The COVID-19 shock has accelerated the upward trend in the public-debt-to-GDP ratio in developing East Asia and Pacific economies



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.

Figure 3. Higher primary deficits were the main contributors of higher public-debt-to-GDP ratios in developing East Asia and Pacific economies



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.

Note: The figure presents unweighted averages. Public debt refers to general government debt. Standard debt dynamic accounting decomposition is used to express changes in the general-government-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits. EAP = developing East Asia and Pacific.

year during the 2000–22 period. Economic growth helped reduce the public-debt-to-GDP ratio by 2.6 percentage points during the 2000–19 period, but that contribution declined to 0.8 percentage points during 2020–22.

- Inflation helped EAP economies reduce the public-debt-to-GDP ratio, on average, by 1.6 percentage points per year during the 2000–22 period. During the pandemic-induced recession of 2020, among developing EAP economies excluding China, inflation helped reduce the public-debt-to-GDP ratio by only 0.1 percentage points, compared to 2.3 percentage points during the global financial crisis. On average, the reduction in the public-debt-to-GDP ratio due to higher prices dwarfs the increase in the public-debt-to-GDP ratio driven from depreciating currencies.
- Interest payments helped increase the public-debt-to-GDP ratio, on average, by 1.5 percentage points per year during the 2000–22 period. The contribution of debt service to debt accumulation did not rise significantly during the COVID-19 shock relative to the GFC due to low interest rates across the world and strong fundamentals, as reflected in moderate increases in sovereign risk and relatively low interest rates. Only Lao PDR registered an increase of more than 1 percentage point in the contribution of interest payments to debt accumulation after the COVID-19 shock.
- Primary deficits have contributed to increasing the public-debt-to-GDP ratio, on average, by 1.1 percentage points per year during the 2000–22 period. The COVID-19 shock has accelerated an upward trend in primary deficits that has been occurring in most developing EAP economies. Since 2020, primary deficits have added about 3.8 percentage points per year to the public-debt-to-GDP ratio in developing EAP economies excluding China. In some EAP economies, including Fiji, Indonesia, the Philippines, and Thailand, fiscal surpluses during the 2000–19 period helped reduce public-debt-to-GDP ratios.

Overall, our results show that the upward trend in the public-debt-to-GDP ratio observed in most developing EAP economies is mainly driven by larger primary deficits. While strong GDP growth and, to a certain extent, inflation have helped decrease public-debt-to-GDP ratios during the past two decades, their contribution has declined in the aftermath of the COVID-19 shock (figure 3).

Drivers of Debt Accumulation

Growth

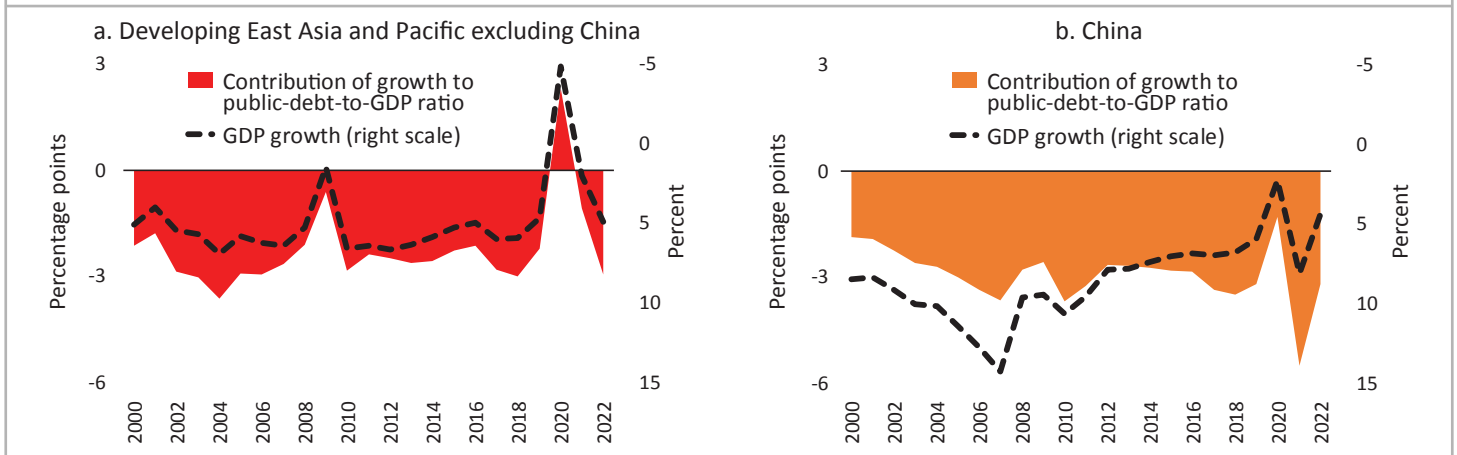
Historically, economic growth rates in developing EAP economies have been sufficiently high to exceed nominal interest rates, helping to reduce the public-debt-to-GDP ratio. Economic growth helped EAP economies reduce the public-debt-to-GDP ratio, on average, by 2.3 percentage points per year during the 2000–22 period (figure 4). Even during the global financial crisis of 2008–09 economic growth helped reduce the debt burden. However, growth contraction during the COVID-19 recession in EAP economies excluding China led to an average increase in the public-debt-to-GDP ratio of 2.2 percentage points in 2020. In 2021, growth rates in EAP economies excluding China contributed to reducing the public-debt-to-GDP ratio by only 1.1 percentage points. However, estimates for 2022 suggest that economic growth will contribute to reducing the public-debt-to-GDP ratio by 3.0 percentage points.

The change in the public-debt-to-GDP ratio driven by economic growth rates consists of two components: (1) the stock of debt; and (2) the growth rate of GDP. Therefore, a large decrease in the public-debt-to-GDP ratio driven by economic growth could be explained either by large stocks of debt or by high economic growth rates. For instance, the decrease in the public-debt-to-GDP ratio due to economic growth in Lao PDR and Mongolia is about 1.6 times larger than in Cambodia, even though the average growth rate in Cambodia is larger than in Lao PDR and Mongolia (figure 5). In the aftermath of the COVID-19 shock, lower growth rates relative to pre-pandemic rates have led to moderate contributions to reductions in the public-debt-to-GDP ratio in most developing economies in EAP. In contrast, in Fiji, the lack of economic growth contributed to increasing the public-debt-to-GDP ratio by 1.5 percentage points per year during the 2020–22 period.

Inflation

Inflation helped EAP economies reduce the public-debt-to-GDP ratio, on average, by 1.6 percentage points per year during the 2000–22 period (figure 6). In 2008, the average inflation rate in developing EAP excluding China increased to 13.4 percent, which led to an average decrease in the public-debt-to-GDP ratio of 5.1 percentage points. In contrast, during the pandemic-induced recession of 2020, moderate

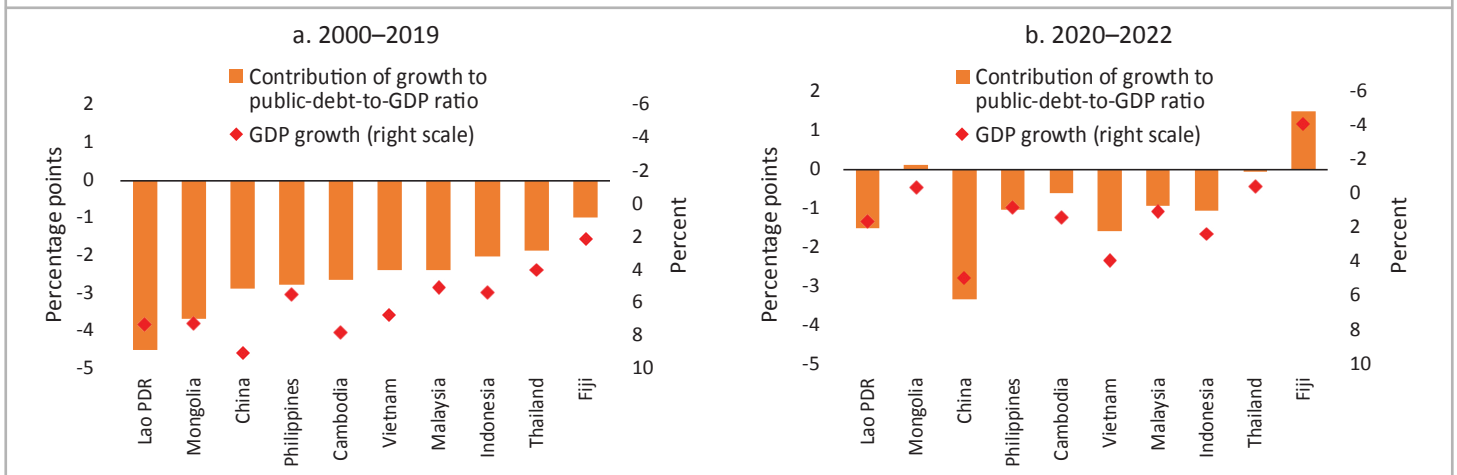
Figure 4. Economic growth has helped reduce public-debt-to-GDP ratios in developing East Asia and Pacific economies



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.

Note: Public debt refers to general government debt. The red (orange) area represents the average annual contribution of growth to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies (China). Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits. Panel a presents unweighted averages.

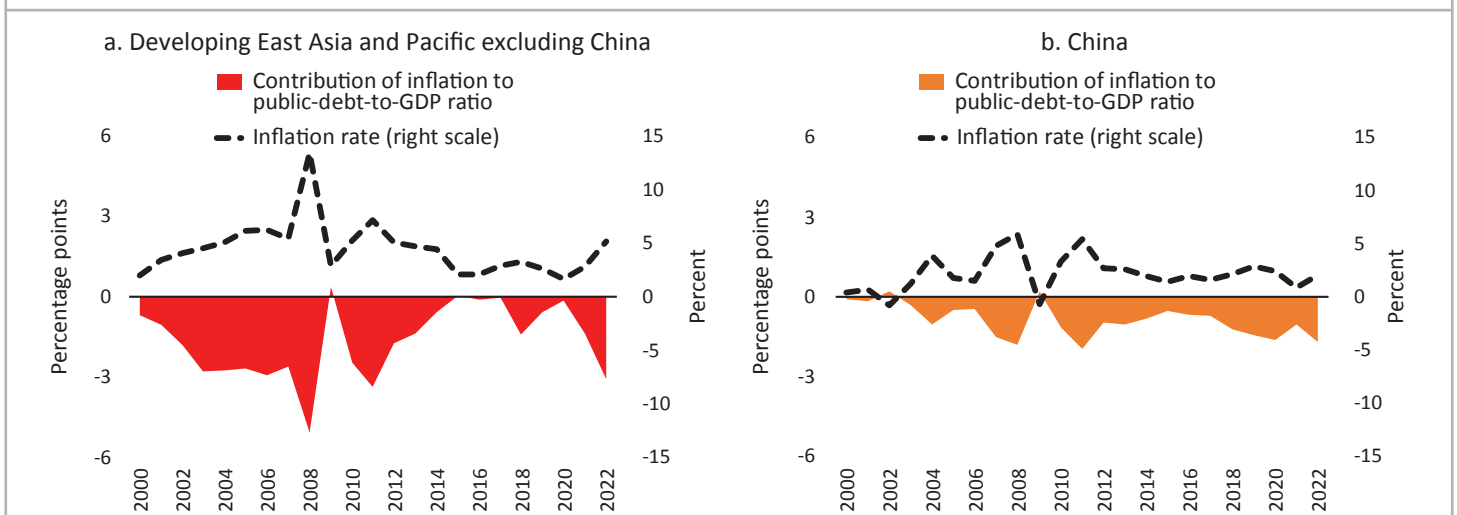
Figure 5. The contribution of economic growth to reducing public-debt-to-GDP ratios declined in the aftermath of the COVID-19 shock across developing East Asia and Pacific economies



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.

Note: Public debt refers to general government debt. Bars represents the average annual contribution of growth to changes in the general-government-debt-to-GDP ratio for developing East Asia and Pacific economies. Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits.

Figure 6. Inflation has helped decrease the public-debt-to-GDP ratio in developing East Asia and Pacific economies



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.

Note: Public debt refers to general government debt. The red (orange) area represents the average annual contribution of inflation to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies (China). Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits. Panel a presents unweighted averages.

inflation, averaging 1.6 percent, contributed to reducing the public-debt-to-GDP ratio by only 0.1 percentage points in developing EAP excluding China. Overall, the contribution of inflation in reducing debt burdens decreased over time as inflation across developing economies declined, corresponding to the widespread adoption of inflation targeting regimes and an increase in central bank credibility. Inflation helped developing EAP economies excluding China reduce the public-debt-to-GDP ratio, on average, by 2.2 percentage points per year during the 2000–07 period (pre-GFC), but only by 1.2 percentage points per year during the 2010–19 period (post-GFC). The contribution of inflation to the public-debt-to-GDP ratio has increased slightly in 2021 and 2022 as inflation has increased.

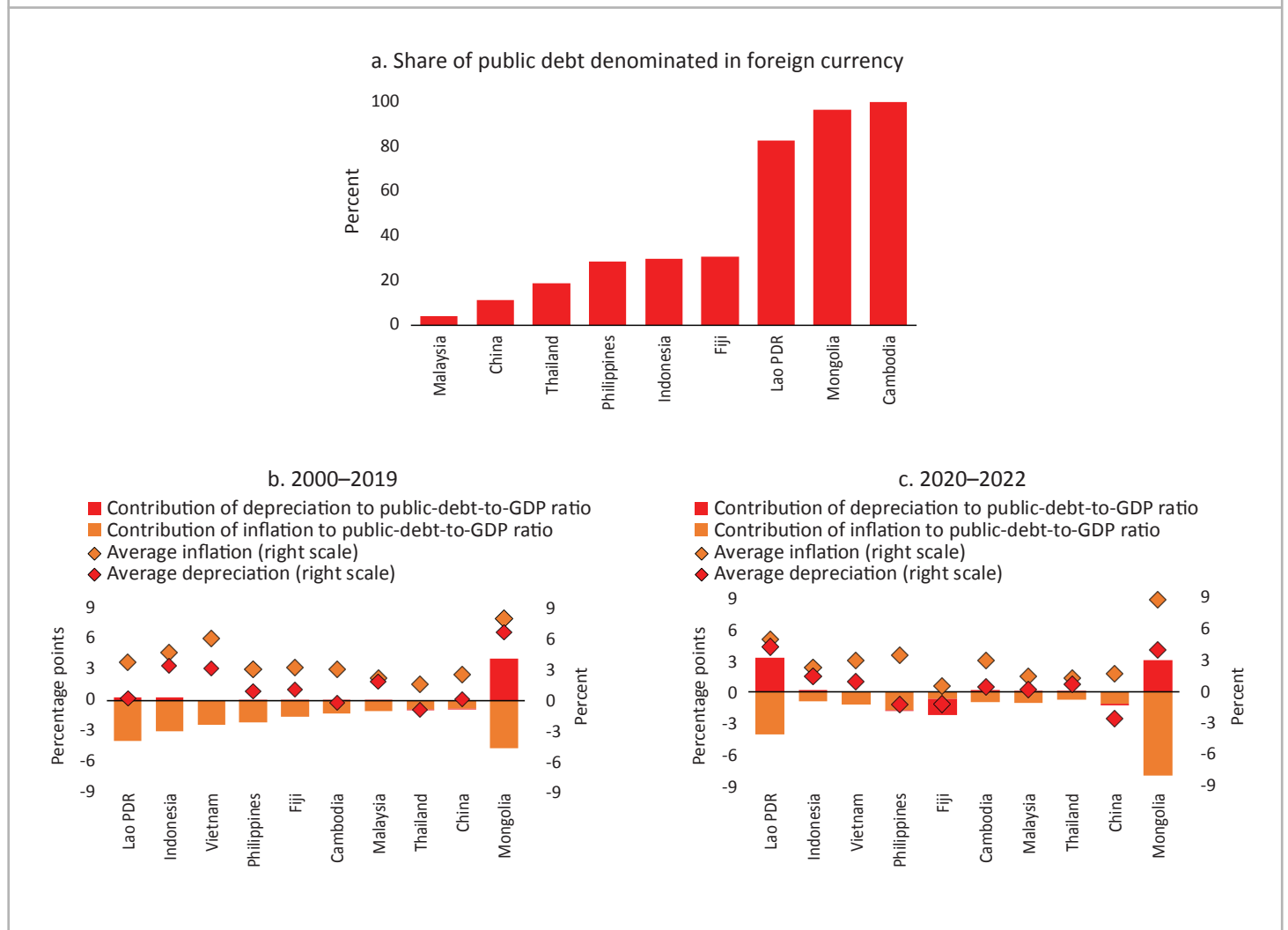
In principle, the effect of inflation on the real value of the public-debt-to-GDP ratio depends on the composition of debt. On one hand, inflation helps to lower debt burdens by diluting the real value of public debt. On the other hand, higher inflation rates could depreciate the exchange rate and increase the nominal value of debt denominated in foreign currency. Foreign currency debt as a share of total debt is high in Cambodia (100 percent), Mongolia (96 percent), and Lao PDR (83 percent), while in Thailand, China, and Malaysia debt denominated in foreign currency represents less than 20 percent of total debt (figure 7). Among economies that are highly indebted in

foreign currency (Cambodia, Lao PDR, and Mongolia), currency depreciation contributes to an increase of 1.5 percentage points in the public-debt-to-GDP ratio. The effect of currency depreciation on debt accumulation is negligible among most EAP economies except for Mongolia and Lao PDR, where depreciation has increased the ratio of public debt to GDP by 3.3 percentage points and 0.8 percentage points per year, respectively. Overall, inflation has contributed to reducing public-debt-to-GDP ratios above and beyond the increasing effect due to exchange rate depreciations (figure 8).

Interest payments

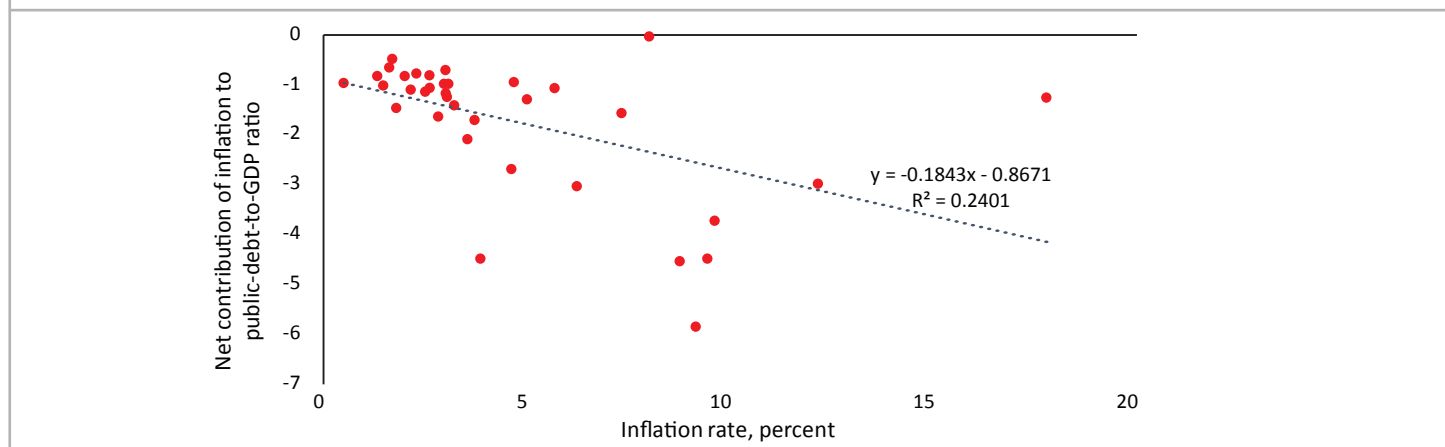
On average, interest payments have contributed to increasing the public-debt-to-GDP ratio by 1.5 percentage points in EAP economies during the 2000–22 period. Despite an increasing trend since 2012 which accelerated in the aftermath of the COVID-19 shock, interest payments in developing EAP economies remain on average below 2 percent of GDP. Interest payments contributed to increasing the public-debt-to-GDP ratio in developing EAP economies excluding China, on average, by 1.7 percentage points per year during the 2000–07 period (pre-GFC). During the 2010–19 (post-GFC) period and post-COVID period, interest payments contributed to increasing debt burdens by 1.5 percentage points and 1.8 percentage points per year, respectively (figure 9).

Figure 7. While higher inflation has helped lower public-debt-to-GDP ratios in developing East Asia and Pacific economies, exchange rate depreciations have inflated those ratios



Source: World Economic Outlook, International Monetary Fund; World Bank staff estimates.
 Note: In panel a, data are as of 2021. In panel b bars and diamonds show the average of 2000–2019. In panel c, bars and diamonds show the average of 2020–2022. The red (orange) bars represent the average annual contribution of nominal exchange rate depreciation (inflation) to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies. Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits.

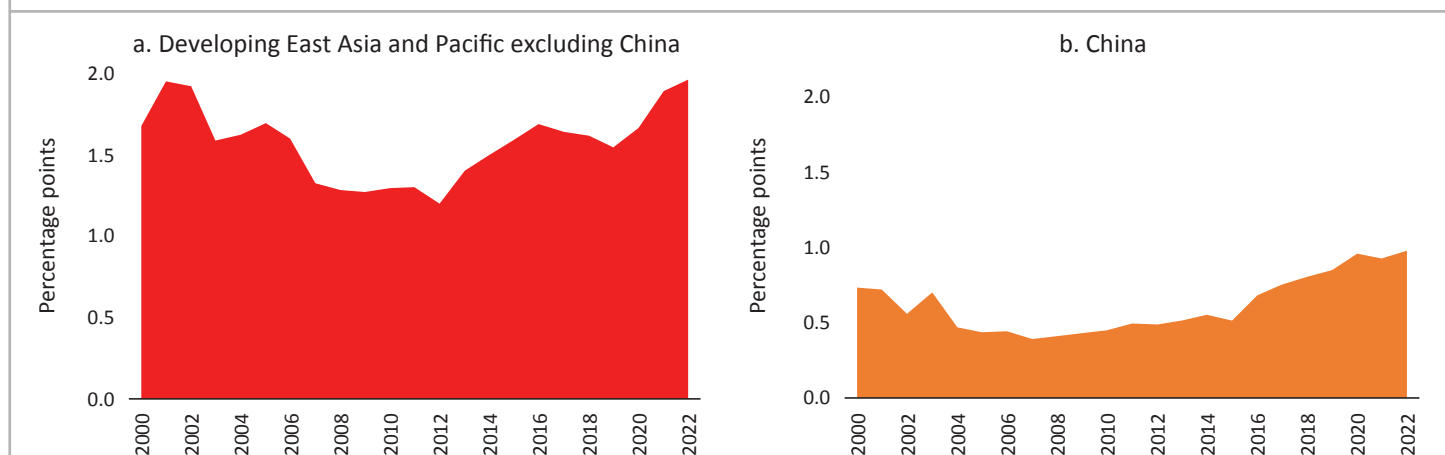
Figure 8. Inflation has helped reduce public-debt-to-GDP ratios more than exchange rate depreciations have increased those ratios in developing East Asia and Pacific economies



Source: *World Economic Outlook*, International Monetary Fund; World Bank staff estimates.

Note: Public debt refers to general government debt. The Y-axis shows the average annual contribution of inflation plus nominal exchange rate depreciation to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies. Dots represent averages for each country in four different periods: (1) 2000–07; (2) 2008–09; (3) 2010–19; (4) 2020–22. Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits.

Figure 9. The contribution of interest payments to public-debt-to-GDP has increased slightly, but remains relatively low across developing East Asia and Pacific economies



Source: *World Economic Outlook*, International Monetary Fund; World Bank staff estimates.

Note: Public debt refers to general government debt. The red (orange) area represents the average annual contribution of interest payments to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies (China). Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits. Panel a presents unweighted averages.

The rise on sovereign spreads (defined as the differential between the interest rate of domestic bonds issued on international markets and US government bonds) has been relatively muted in the aftermath of the COVID-19 shock across EAP economies. For instance, during the global financial crisis of 2008–09, the average sovereign spreads in developing EAP economies excluding China increased, on average, by 513 basis points from November 2007 to November 2008. In contrast, during the pandemic-induced recession of 2020, the average sovereign spreads in developing EAP economies excluding China increased, on average, by 181 basis points from March 2019 to March 2020, and returned to pre-COVID levels in less than 12 months (figure 10). These results likely reflect low interest rates across the world and strong fundamentals in EAP economies.

Among developing EAP economies in the pre-COVID period, interest payments added the most to the public-debt-to-GDP ratio in the Philippines and Fiji: 3.2 percentage points and 2.8 percentage points per year, respectively. In Thailand, Lao PDR, China, and Cambodia, interest payments contributed to increasing public-debt-to-GDP ratio by less than 1 percentage point per year

during the same period (figure 11). Even though debt levels in all developing EAP economies have increased due to the COVID-19 shock, the average contribution of interest payments to debt accumulation increased only by 0.4 percentage points, reflecting relatively low interest rates. Only in Lao PDR was the increase in the contribution of interest payments to the debt-to-GDP ratio higher than 1 percentage points per year in the aftermath of the COVID-19 shock. For instance, in Lao PDR, the contribution of interest payments to debt accumulation went from an average of 0.7 percent per year, before the pandemic, to an average of 2.2 percent per year after the COVID shock. In contrast to Lao PDR, in the Philippines the average contribution of interest payments to debt accumulation after the COVID shock (1.9 percent) is lower relative to pre-pandemic levels (3.2 percent), which is surprising because the public-debt-to-GDP ratio in the Philippines increased by 23.1 percentage points. This small contribution of interest payments to debt accumulation in recent years is driven by the lower interest rates the Philippines is enjoying, which is a consequence of strong fundamentals, a high degree of fiscal prudence, and efforts to develop domestic capital markets.

Figure 10. The increase on sovereign spreads during the COVID-19 shock has been moderate relative to the global financial crisis in developing East Asia and Pacific economies

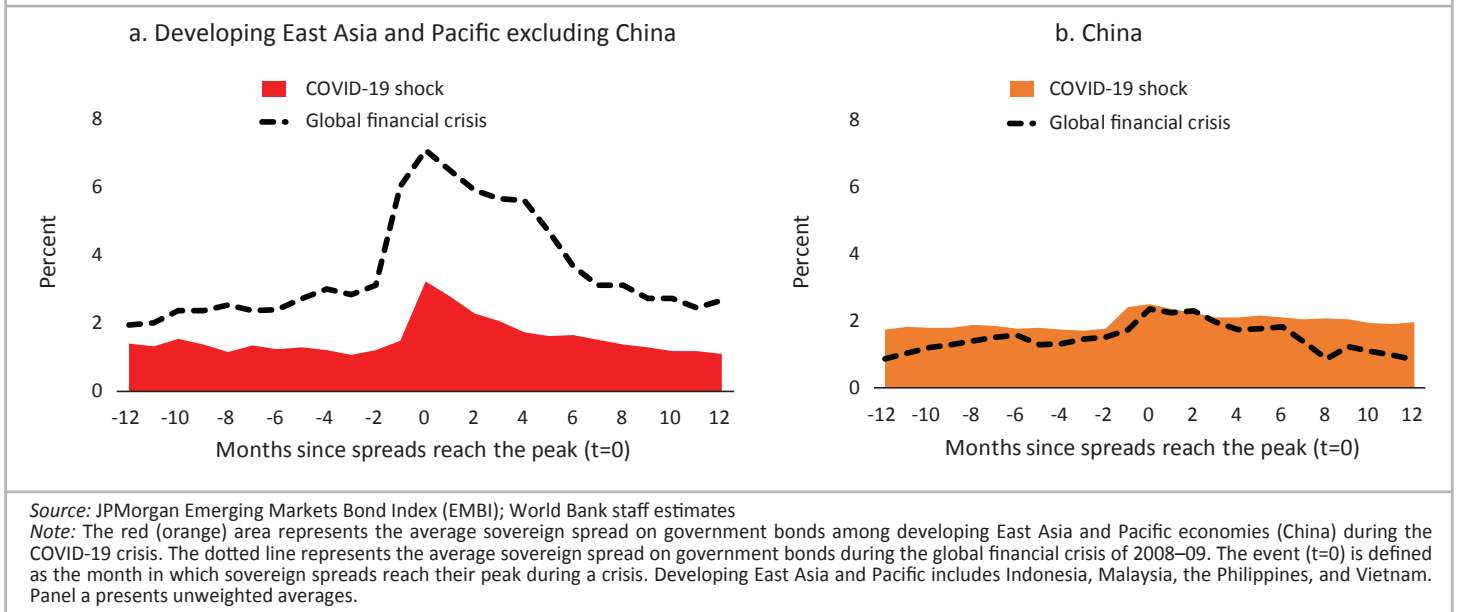
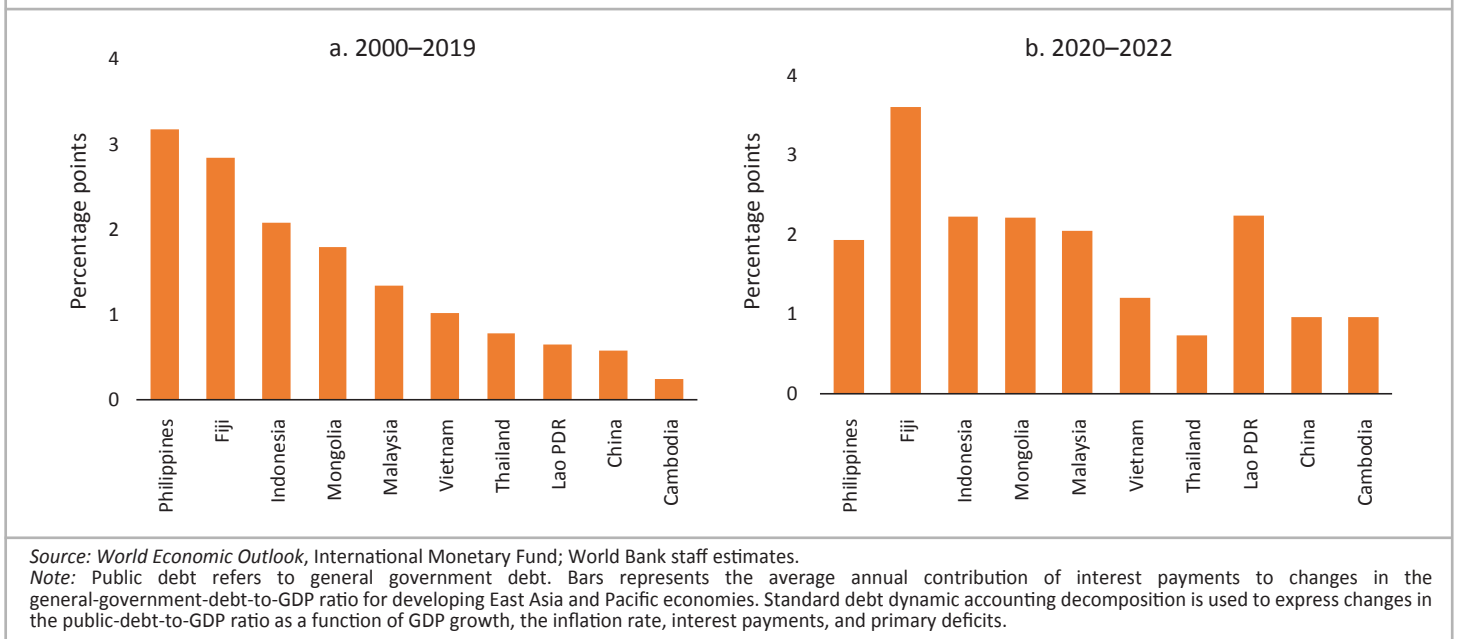


Figure 11. The contribution of interest payments to public-debt-to-GDP ratios across developing East Asia and Pacific economies remained moderate after the COVID-19 shock



Primary deficits

On average, primary deficits have led to increasing the public-debt-to-GDP ratio by 1.1 percentage points (figure 12). Primary deficits contributed to increasing the public-debt-to-GDP ratio in developing EAP economies excluding China, on average, 0.3 percentage points per year during the 2000–07 period (pre-GFC). This contribution rose to 0.7 percentage points per year during the 2010–19 period (post-GFC). However, during the period following the COVID-19 shock, primary deficits contributed to increasing public-debt-to-GDP ratios by 3.8 percentage points per year, on average, in developing EAP economies excluding China.

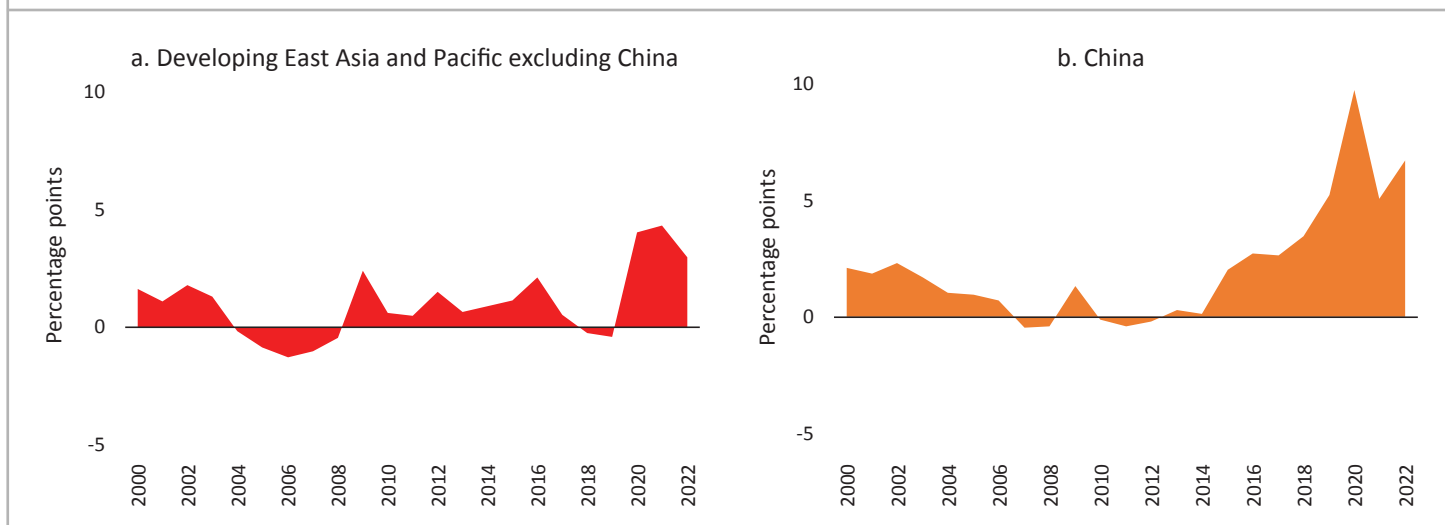
The Philippines, Indonesia, Fiji, and Thailand lowered public-debt-to-GDP ratios through primary surpluses during the 2000–19 period. For instance, primary surplus helped the Philippines, Indonesia, Fiji, and Thailand reduce the public-debt-to-GDP ratio, on average, by 1.9, 0.7, 0.7, and 0.5 percentage points per year,

respectively, during the 2000–19 period (figure 13). However, primary deficits in these economies added to public-debt-to-GDP ratios by 5.0 percentage points, on average, during the 2020–22 period.

Policy Implications

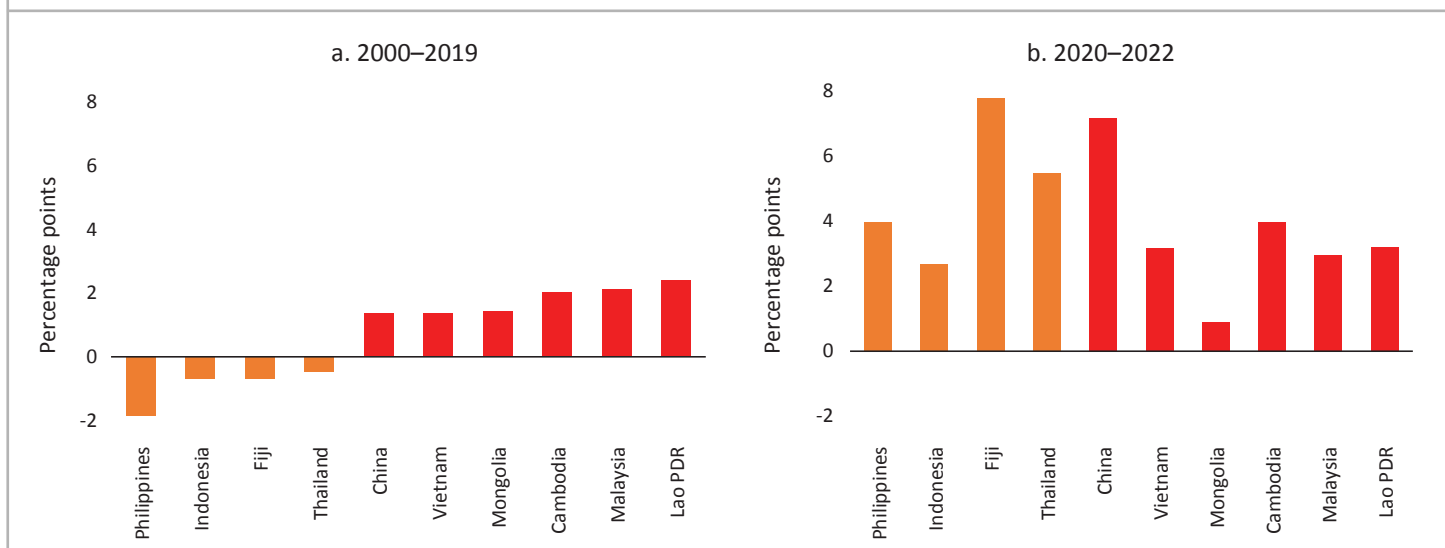
Public debt has been trending upward in EAP economies since the global financial crisis of 2008–09, and it accelerated in the aftermath of the COVID-19 shock. High GDP growth rates and, to a certain extent, inflation, have contributed to reducing public-debt-to-GDP ratios for the region’s economies during the past two decades. However, the contribution of inflation in reducing debt burdens has decreased over time as inflation across EAP economies has declined. At the same time, most economies in the region have run primary deficits since the global financial crisis. Only the Philippines and Thailand have consistently run surpluses in the last decade. However, low global interest rates have made it possible for interest payments to add to existing public-debt-to-GDP ratios only marginally.

Figure 12. Primary deficits have led to increasing the public-debt-to-GDP ratio in developing East Asia and Pacific economies



Source: *World Economic Outlook*, International Monetary Fund; World Bank staff estimates.
 Note: Public debt refers to general government debt. The red (orange) area represents the average annual contribution of primary deficits to changes in the general-government-debt-to-GDP ratio among developing East Asia and Pacific economies (China). Standard debt dynamic accounting decomposition is used to express changes in the general-government-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits. Panel a presents unweighted averages.

Figure 13. The contribution of primary deficit to the public-debt-to-GDP ratio across developing East Asia and Pacific economies has increased in the aftermath of the COVID-19 shock



Source: *World Economic Outlook*, International Monetary Fund; World Bank staff estimates.
 Note: Public debt refers to general government debt. Bars represent the average annual contribution of primary deficits to changes in the general-government-debt-to-GDP ratio for developing East Asia and Pacific economies. Standard debt dynamic accounting decomposition is used to express changes in the public-debt-to-GDP ratio as a function of GDP growth, the inflation rate, interest payments, and primary deficits.

Starting in 2020, fiscal deficits have been the main driver of the increase in public-debt-to-GDP ratios for the region’s economies. Going forward, fiscal deficits may continue because output gaps are still negative, and economies need to deal with the ongoing external pressures from the war in Ukraine and financial tightening by central banks in advanced economies. Less fiscal space, combined with financial tightening, is likely to translate to higher costs of refinancing debt, which will further increase interest payments in the future. Other potential risks include lower growth rates, contingent liabilities as the veil of regulatory forbearance is lifted, and exchange rate depreciation pressures for economies that have a high share of debt in foreign currency, such as Cambodia, Lao PDR, and Mongolia.

While policy makers in developing EAP economies deal with the aftermath of COVID-19, the war in Ukraine, and global financial tightening, they should commit to curbing their increased deficits in a timely manner. Economies that have relaxed fiscal rules should provide clear guidance as to when they plan to return to the preexisting rule (World Bank 2022a). More efficient and targeted support to households and firms would limit pain from the cumulative shocks and create space for investment in the infrastructure of trade, energy, and technology diffusion (World Bank 2022b). Committing to fiscal rules and future reforms of revenue and expenditure would help reconcile spending needs with tightening budget constraints amidst growing debt.

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