Debt and Fiscal Risks: Managing shocks and surprises

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A more comprehensive view when managing debt

Debt sustainability – avoid costly debt crises
- Disruptive fiscal adjustments
- Debt composition

Economic growth
- Public investment; crowding-out private activity
- Policy space to stabilize economies during cycle
- Effective lower bound for interest rates

Respond to shocks and surprises
- Fiscal risks
Two crises, two debt surges

(in percent of GDP)

Source: IMF’s Global Debt Database
Note: Public Debt refers to the largest category of debt available (Non-Financial Public Sector, General Government and Central government, in decreasing order). Private debt includes only loans and securities. All income and regional groups follow WEO’s (World Economic Outlook) methodology. Total Debt (as a percent of GDP) is close but not exactly equal to the sum of the components of public and private debt. This is because of the difference in country coverage for the corresponding variables - which causes the corresponding country weights to differ. Here, Household Debt is used as the residual. Total debt for the World in 2020 is estimated at 256 percent; AEs at 300 percent; the United States at 298 percent and AEs excl US at 301 percent; the PRC at 269 percent; EMEs excl the PRC at 137 percent and LIDCs at 87 percent of GDP.
NFC = Non-financial corporations; HH = Households; AEs = Advanced Economies; EMEs = Emerging Market Middle-Income Economies; LIDCs = Low-Income Developing Countries.
Government as a risk taker

G-20 Fiscal Policy, 2020-21
(in percent of GDP)

Off-budget Discretionary Policies, 2020-21
(in percent of GDP)

Sources: IMF, World Economic Outlook database; and IMF staff estimates.
Note: Discretionary fiscal support is measured as the change in the cyclically adjusted primary balance (CAPB); nondiscretionary fiscal support is the residual. The allocation between discretionary and non-discretionary measures should be considered indicative because output gap estimates, which are used to drive the CPAB, are subject to a high degree of uncertainty. Argentina and Saudi Arabia are excluded because of data limitations. Spain is a permanent invitee.

Sources: IMF’s Fiscal Measures in Response to the COVID-19 Pandemic Database; IMF staff estimates.
Note: Economies with responses higher than 1% of GDP are included. Quasi-fiscal activities are activities undertaken by public financial and non-financial corporations on behalf of the government. Data labels in the figures are International Organization for Standardization (ISO) codes.
In Asia, private debt has driven debt dynamics post GFC

Asian Country Debt
(in percent of GDP)

Gross Government Debt: Change 2007-21
(in percent of GDP)

Source: IMF’s Global Debt Database.
Note: Asia-Pacific and Central Asian countries, excluding small island developing states.

Note: Red line is median change in debt. Data labels in the figure are International Organization for Standardization (ISO) codes.
Fiscal buffers, safe debt levels, and risks

Debt dynamics
(in percent of GDP)

- Debt limit - high probability of debt distress (unsustainable debt dynamics)
- Fiscal buffers for adverse shocks
- Safe debt level
What drives debt dynamics?

Contributions to Debt Changes, 2010-14 and 2015-19
(in percent of GDP)

Sources: IMF WEO database; IMF staff estimates.
Note: The debt change is decomposed as four parts: \( r \) indicates effective interest rate minus deflator divided by one plus real growth rate, and multiply by the lagged debt (positive); \( g \) indicates the real growth rate divided by one plus the real growth rate, multiply by the lagged debt (negative); primary balance (negative); and the remaining is the stock-flow residual, which is the change in the debt ratio resulting from factors such as bailouts or changes in exchange rates.
Data labels in the figure are International Organization for Standardization (ISO) country codes.
Macroeconomic risks

GDP Growth Uncertainty: difference between outturns and projections (in percent of GDP)

Gross Government Debt 1/
(in percent of Total)

Sources: IMF WEO database; IMF staff estimates.
Note: Outturns (actual values) are from IMF World Economic Outlook (WEO) (January 2022) and the projections are from WEO 2016. Arrow bars are mean +/- one standard deviation. Asia-Pacific and Central Asian countries, excluding small island developing states.

Sources: IMF Debt Sustainability Database; IMF staff estimations.
Note: Data labels in the figure are International Organization for Standardization (ISO) country codes.
1/ Asia-Pacific and Central Asian countries (excluding small island developing states) for which a debt sustainability analysis was conducted in 2018 or later and with a foreign-currency denominated debt share greater than 25 percent.
Demographic pressures

Pension and Health Spending Change, 2020-30
(in percent of GDP)

The PRC is aging faster than G20 peers
(Working age population as a percent of total population)

Source: IMF, October 2021 Fiscal Monitor

Sources: UN population revisions 2019; IMF WEO; IMF staff calculations. Note: Black line represents the PRC’s actual and projected working age population relative to its total population. The other lines represent the other G20 members. Year 0 is defined as the year when the per capita gross national income of the PRC’s G20 peers is equivalent to the PRC’s in 2019. Working age population for all countries defined as those individuals between 15-59 years of age.
Climate change and natural disasters

Weather-Related Disasters, 2000-19
(in percent of total occurrences)


Public Annual Adaptation Costs
(in percent of GDP)

Source: IMF staff calculations.

Note: The purple bars represent Pacific island countries, and the orange bars represent all other Asia-Pacific countries. Bars correspond to the sum of upgrading and retrofitting costs in public sector and coastal protection costs. The level of protection being costed corresponds to the protection that keep average annual losses below 0.01 percent of local GDP for protected areas. Data labels in the figure are International Organization for Standardization (ISO) country codes.

* Missing values in the risk intolerance case for Cambodia and for the private sector for Papua New Guinea.
Broader Public Sector

Non-financial State-Owned Enterprise (SOE) Debt

Sources: IMF, Public Sector Balance Sheet (PSBS) database; S&P Capital IQ; and IMF staff calculations.
Note: Debt drawn from S&P Capital IQ is only for the largest state-owned enterprises in a country. Debt data drawn from the PSBS database represents total liabilities less equity. Data are for either 2016 or 2018. Data labels in the figure are International Organization for Standardization (ISO) country codes.

Public banks’ share of banking system assets, 2016
(in percent)

Note: State-owned banks are those with at least 50 percent of equity owned by the government. Data are for either 2016 or 2018. Data labels in the figure are International Organization for Standardization (ISO) country codes.
Private Debt

High private leverage
- Indirect and direct government support

Beware of correlations and non-linearity
- Economic downturns can trigger multiple shocks
- Non-linearity (large shocks can be much more damaging than smaller shocks)

Sources: IMF’s Global Debt database and the IMF staff estimates.
Note: Data labels in the figure are International Organization for Standardization (ISO) country codes.
A comprehensive approach to managing fiscal risks

Identify risks

Monitoring and transparency

Mitigation strategies

Build fiscal buffers
  - The lower the risks, the less need for fiscal buffers

Response to large crises (taking large risks)
  - Cost vs benefit of different fiscal tools
  - Greater demand on transparency and governance
  - Develop better automatic (semi-automatic?) stabilizers
  - Exit strategy
IMF - Capacity building and tools

Research, Data, and Tools

- IMF’s Global Debt Database (GDD)
- Fiscal-Risks (imf.org)
- Public Sector Balance Sheet

Capacity Development

- Regional Capacity Development Centers:
  - Centers in Fiji, Singapore, Thailand, India, PRC-IMF Capacity Development Center

- TAs and Trainings