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SECTOR IN-DEPTH
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**Contacts**

Lucie Villa +33.1.5330.1042
*VP-Sr Credit Officer*
lucie.villa@moodys.com

Lenaic Couderc +44.20.7772.1799
*Associate Analyst*
lenaic.couderc@moodys.com

Julie Cocheteux +44.207.772.5429
*Associate Analyst*
julie.cocheteux-ndiaye@moodys.com

Marie Diron +44.20.7772.1968
*MD-Sovereign Risk*
marie.diron@moodys.com

Anne Van Praagh +1.212.553.3744
*MD-Gbl Sovereign Risk*
anne.vanpraagh@moodys.com



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Sovereigns – Global

# FAQ on post-pandemic sovereign debt dynamics

We expect debt levels among advanced economies (AE) and emerging market (EM) sovereigns will remain around historic highs after the sizeable increase last year triggered by the coronavirus crisis. This report addresses some key questions about the implications for creditworthiness of sovereign debt dynamics and the differentiating factors between sovereigns' ability to rebuild buffers.

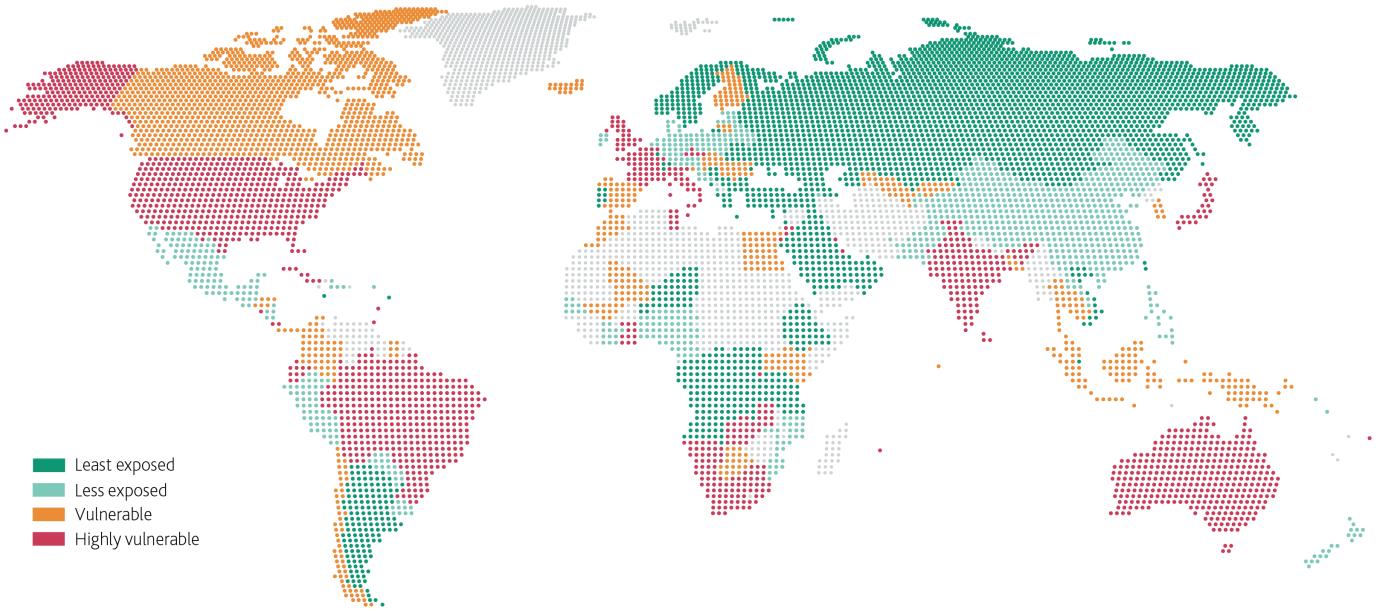
» **What will differentiate sovereigns' capacity to reduce debt after the pandemic?** While most sovereigns now face higher debt levels as a result of the pandemic, the ability of governments to stabilise and reduce debt after a crisis and rebuild fiscal space before the next shock is critical to our assessment of credit risk. Sovereigns face different debt dynamics, which depend on fiscal developments, GDP growth and borrowing costs. Combined with different starting levels of the debt burdens, these varying debt dynamics shape the policy challenge that sovereigns face.

» **Which advanced economies are more likely to suffer a long-term loss of fiscal flexibility as a result of the crisis?** Our forecasts generally show a gradual fiscal consolidation and a return to our views on medium-term growth within a few years. However, even assuming that financing conditions tighten only slowly and without further shocks, it will take several years for many AEs to regain fiscal flexibility. Sovereigns including France (Aa2 stable), Japan (A1 stable), the United Kingdom (UK, Aa3 stable) and the United States (US, Aaa stable) will carry significantly higher debt burdens than pre-pandemic unless they achieve much faster fiscal consolidation and/or sustained growth than we currently expect, and than they have in the past. By contrast, economies like Cyprus (Ba1 stable), Germany (Aaa stable), Norway (Aaa stable), Portugal (Baa2 stable) and Taiwan, China (Aa3 positive) are more likely to regain their (varied) fiscal standing more rapidly after the pandemic shock.

» **How about emerging markets?** Debt trends are likely to differ markedly between EM sovereigns. Assuming a return to growth similar to pre-pandemic rates, steady fiscal consolidation and a gradual but faster increase in interest rates, some EM sovereigns will see the pandemic-induced debt shock broadly unwind in the medium term. However, a range of EM sovereigns including Brazil (Ba2 stable), Costa Rica (B2 negative), India (Baa3 negative), Namibia (Ba3 negative) and South Africa (Ba2 negative) amongst others will see debt continue to rise. Given that they entered the crisis with already elevated debt burdens, credit pressures could intensify unless they achieve faster fiscal consolidation than we currently expect and/or higher growth on a sustained basis.

Exhibit 1

**Sovereigns facing challenging debt dynamics are vulnerable to a long-term loss of fiscal flexibility**




The assessment of vulnerability to a long-term negative impact on fiscal and credit strength is based on the pace and extent of decline in debt/GDP in the next five years according to our projections, assuming a gradual fiscal consolidation, a return to our medium-term views on growth beyond 2022 and a gradual rise in interest rates; and how high each sovereign's debt burden was pre-pandemic. We look at relative vulnerability among AEs and EMs separately.
*Source: Moody's Investors Service*

## What will differentiate sovereigns' capacity to reduce debt after the pandemic?

Debt dynamics – which are a function of fiscal developments, GDP growth and borrowing costs and determine debt sustainability – are an essential part of our assessment of sovereign credit risk. Although the global increase in government debt levels that has happened during the pandemic need not have significant credit implications in an ordinal rating assessment, the ability of governments to stabilise and reduce debt after a crisis and rebuild buffers before the next shock is critical to our assessment of credit risk.

Debt-to-GDP ratios increased by more than 11 percentage points (pp) on average for AEs and EMs in 2020 (see Exhibit 2). At the same time, monetary policy easing in AEs has contained any immediate deterioration in fiscal strength. For instance, we estimate that the drop in borrowing costs in the US saved the government almost 0.6% of GDP (2% of revenue) in 2020 in interest payments. The relief has been more modest, but still tangible, for those countries with already low interest rates before the crisis like in the euro area. By contrast, EM sovereigns that rely mainly on non-concessional funding continue to face much higher debt-servicing costs than AEs. This, together with a larger drop in revenue and weaker economic resilience, partly explains why we lowered our assessment of fiscal strength for more than half of EM sovereigns, compared to less than a third of AEs (Exhibit 3).

When interest rates normalise, higher financing costs will constrain fiscal space and aggravate debt affordability challenges. As a result, the capacity of governments to rebuild buffers before the next shock will be essential in our assessment of credit risk, both for AEs and EMs.

Where we conclude that policymakers will shortly stabilise debt burdens and then begin to reduce them, the credit implications of the pandemic will be contained - everything else equal. For example, the reactivation of fiscal rules and debt limits that were paused during the crisis in countries that have demonstrated their adherence to them pre-pandemic will support policy credibility. Conversely, downward credit pressures are likely to build where policy effectiveness is insufficient to achieve sustained GDP growth rates and a

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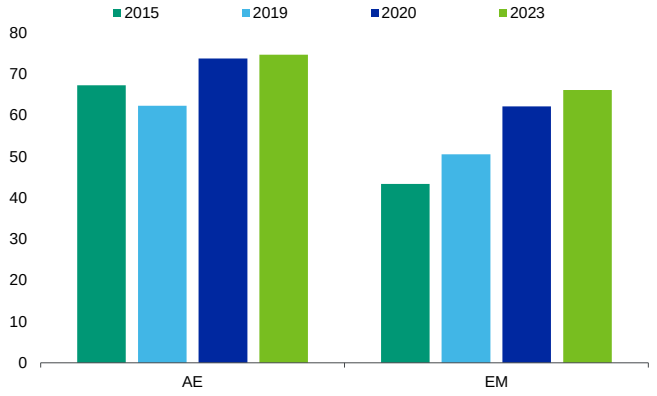
primary balance that point to a declining debt burden and regained fiscal flexibility. The size of the challenge and each sovereign's track record on economic and fiscal policy effectiveness provide indications about their ability to rebuild some fiscal flexibility.

Exhibit 2

**Debt burdens increased by 11pp on average for both AEs and EMs in 2020**

**Average debt burden (% of GDP)**

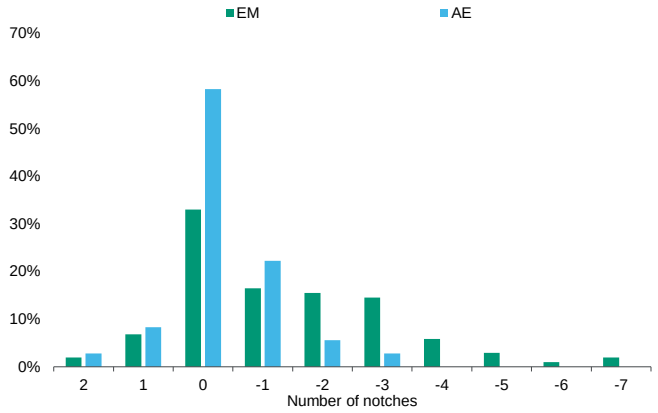



*Source: National authorities and Moody's Investors Service*

Exhibit 3

**We have adjusted our fiscal strength assessment down more for EMs than AEs**

**Change in fiscal strength scores since January 2020**




*Source: Moody's Investors Service*

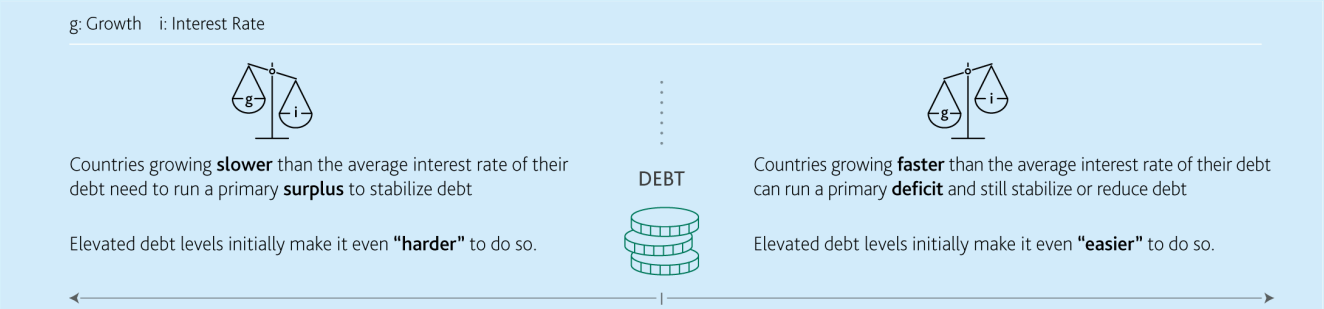
### Box 1: Factors driving sovereign debt dynamics

Government debt dynamics, which ultimately determine debt sustainability, are primarily determined by the evolution of the primary balance, the interest paid on debt (combined, the "fiscal balance") and GDP growth. For sovereigns issuing debt in foreign currency (primarily EMs), the exchange rate can also play a determining role in debt dynamics by changing the value of the debt stock. In addition, cash adjustments impacting government borrowing (for example, the sale or acquisition of financial assets, the crystallization of contingent liabilities or stock-flow adjustments) but not reflected in deficits influence debt trends. As illustrated in the graphic below, the growth-interest differential - the difference between nominal GDP growth and the average interest rate that governments pay on their debt - is a key driver of debt dynamics.

Our debt projections are based on our current assumptions about primary balances, and hence the pace of fiscal consolidation, GDP growth, and the cost of debt. While outcomes may differ from our current expectations, this analysis gives us a measure of the policy challenge facing governments if they are to reduce their debt burden and regain fiscal space before a potential next shock.

Exhibit 4

**Countries growing at a slower rate than the interest rate on their debt face greater fiscal challenges stabilising their debt**



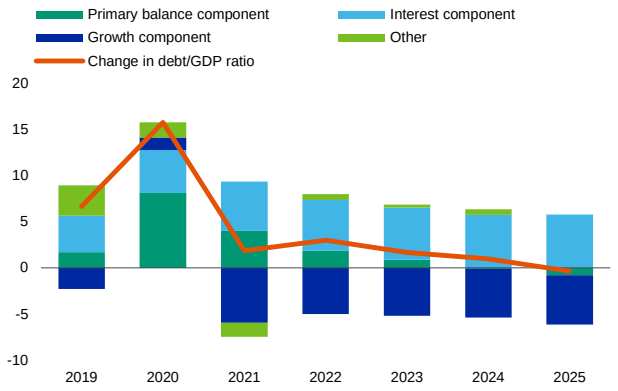

Note: Each statement considers that all other variables are constant.
*Source: Moody's Investors Service*

If the growth-interest differential is negative, as is the case for South Africa, a primary fiscal surplus is necessary to stabilise or reduce the debt-to-GDP ratio. We do not expect the sovereign to achieve that until 2025 and, despite growth returning, the overall debt burden will continue to edge up (Exhibit 5). In Hungary (Baa2 stable), we also expect a primary deficit to persist, but growth is higher than the cost of debt, allowing the debt burden to decline in the next few years (Exhibit 6). Qualitatively similar dynamics are seen in AEs. In the UK, while the growth-interest differential is positive, the primary deficit is likely to remain wider than necessary to stabilise the sovereign's debt burden (Exhibit 7). By contrast, in Sweden (Aaa stable), not only do we expect the growth-interest differential to be positive but the primary balance may also turn to a surplus and contribute to lower the debt burden (Exhibit 8).

Exhibit 5

**Debt dynamics of South Africa**

**Percentage points of GDP**

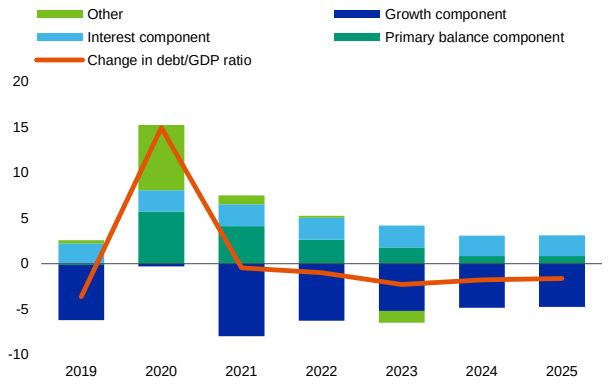



*Source: Moody's Investors Service*

Exhibit 6

**Debt dynamics of Hungary**

**Percentage points of GDP**

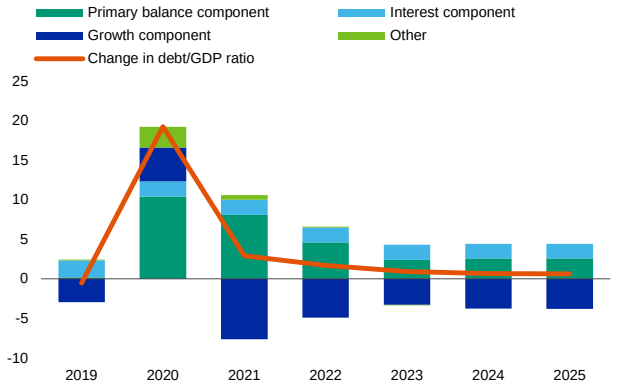



*Source: Moody's Investors Service*

Exhibit 7

**Debt dynamics of the UK**

**Percentage points of GDP**

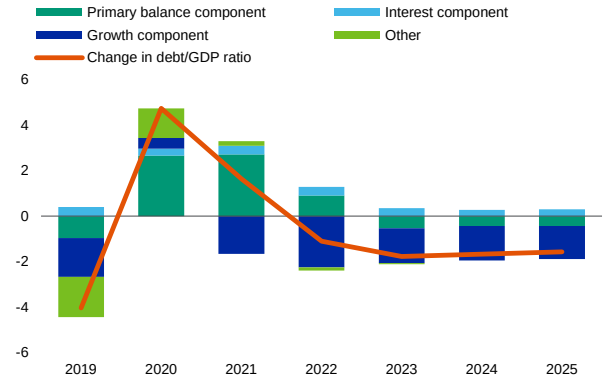



*Source: Moody's Investors Service*

Exhibit 8

**Debt dynamics of Sweden**

**Percentage points of GDP**




*Source: Moody's Investors Service*

In this report, we look at the vulnerability of sovereigns to a long-term negative impact on credit strength considering a few complementary metrics related to our fiscal strength assessment: (a) debt/GDP in five years compared with the peak within the next five years which indicates whether debt dynamics are reversing and if so at what pace; (b) debt/GDP in five years compared with 2020, which gives a measure about the extent to which the initial debt shock is reversed; (c) debt/GDP in five years compared with 2019 to assess how far from pre-pandemic levels the debt burden will remain in the medium term; and (d) the pre-pandemic debt/GDP levels since sovereigns face this unprecedented shock from very different initial positions.

Fiscal strength is one of the four components of our sovereign methodology, which also includes economic strength, institutions and governance strength and susceptibility to event risk. Higher economic and institutional strength reduce the impact of a deterioration in fiscal strength on the creditworthiness of countries.

## Which advanced economies are more likely to suffer a long-term loss of fiscal flexibility?

While a number of governments will likely stabilise or be close to stabilising their debt-to-GDP ratios as soon as next year, it will take in general many more years across AEs to bring debt burdens back to their pre-crisis level, a measure of the policy challenge to regain fiscal flexibility.

Assuming a gradual economic recovery and fiscal and monetary tightening – our projections broadly depict a gradual fiscal consolidation and a return to potential growth – debt burdens will remain materially higher for many years. In a few cases, they may not return to pre-crisis levels for many years, unless governments achieve unprecedented fiscal consolidation and/or much higher economic growth. The longer it will take for sovereigns to restore some fiscal flexibility, the more susceptible they will be to a negative shock materialising in the meantime.

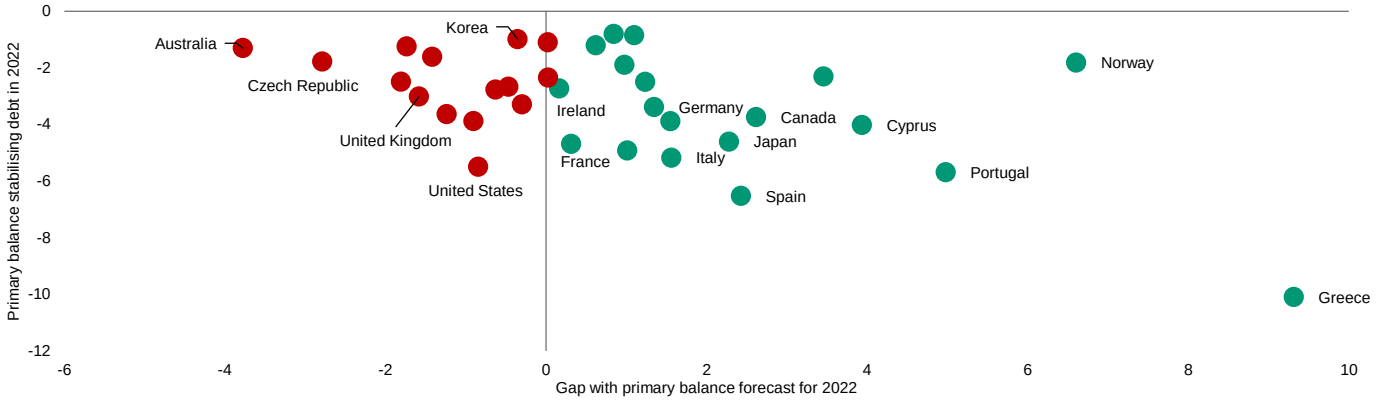
### AEs' debt burdens likely to stabilise soon, even with wider deficits

Norway and Taiwan are the only AEs for which we forecast debt to return to pre-crisis levels as soon as 2022, after a mild increase last year[1]. Still, a number of AEs will be able to stabilise their debt ratios this year or next while running larger primary deficits than they did pre-crisis (Exhibit 9). This is partly explained by lower interest rates and a rebound in economic activity making the interest rate-growth rate differential more favourable. It is also easier to stabilise debt with wider deficits when the initial debt burden is already elevated. For example, Cyprus, Greece and Portugal, where debt loads are high, can stabilise their debt burdens with wider primary deficits as long as growth is at least as high as the cost of debt (see Box).

Exhibit 9

**We expect that the debt burdens will stabilise next year for a number of AEs**

**% of GDP**




A positive gap (green dots) indicates that the debt burden will fall. The more negative the debt stabilising primary balance, the lower the fiscal policy challenge in stabilising the debt burden, everything else equal.

*Source: Moody's Investors Service*

Provided refinancing interest rates remain relatively low over the medium term, the average interest paid on debt will fall further in the next few years as sovereigns continue to refinance debt and fund new deficits with less expensive debt, facilitating a stabilization in debt/GDP.

However, lower rates will not in and of themselves offset the medium-term fiscal and economic impact of the crisis on debt given the significant increase in debt loads in 2020. The degree to which borrowing costs influence the average interest rate on the stock of debt depends on the size of new borrowings, which is itself a function of the fiscal deficit and the debt amortization profile.

As a result, the key determinant of debt dynamics and credit profiles is if governments are able to use a period of low interest rates to reduce primary deficits enough to start reversing the dynamics of their debt before rates normalize.

**Governments will face a significant economic and fiscal policy challenge to regain fiscal flexibility**

Our forecasts generally show that fiscal deficits will gradually decrease and growth will return to our views about each economy's potential within a few years. Assuming this remains the case over the medium to long term and that the cost of newly issued debt rises gradually - we assume an annual increase of 15 basis points from 2023 onwards - some AE sovereigns will be able to return their debt burdens back to pre-pandemic levels around the middle of the decade. For Cyprus, Germany, Greece (Ba3 stable), Portugal, Sweden or Switzerland (Aaa stable) for instance, a return to sizeable primary surpluses takes their debt burdens down materially, although in the case of Greece, Cyprus and Portugal they will remain high.

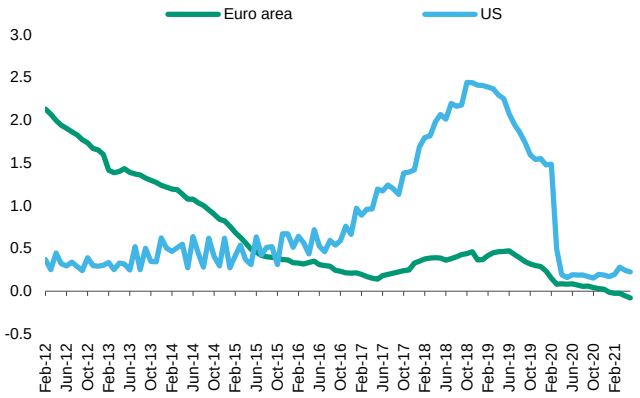
By contrast, weak GDP growth and/or structural primary deficits compound challenges for some highly indebted sovereigns like France, Italy (Baa3 stable), Japan, the UK or the US, all of which also saw large debt increases in 2020. In the absence of proactive and effective measures that more rapidly reduce the deficits and/or lift GDP growth, their debt burdens are likely to remain on a gradual upward trend from already higher, and historically high, levels with the exception of Italy where debt will decline slowly from the pandemic jump.

It has been historically difficult for this group of sovereigns to achieve materially higher growth over a sustained period. In addition, productivity growth was already on a secular downward trend before the pandemic while many AEs face the prospects or the reality of rapid population ageing. More rapid fiscal consolidation also seems unlikely for sovereigns facing increasing social demands as the pandemic has highlighted and exacerbated inequalities. As shown on Exhibit 11, the highest primary balance recorded since 2009 is much smaller than the primary balance that would return debt to pre-pandemic levels by 2025, highlighting the scale of the policy challenge.

Exhibit 10

**US interest rates rose more quickly than in the euro area after the last crisis**

**Average cost of new issuance (%)**

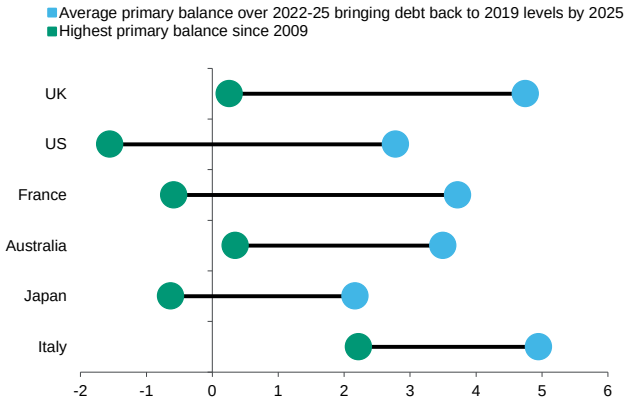



*Source: ECB, Fed and Moody's Investors Service*

Exhibit 11

**Reversing debt to pre-crisis levels in the foreseeable future would require unprecedented improvements in primary balances**

**% of GDP**




Note: Primary balance estimated over 2022-25

*Source: National authorities and Moody's Investors Service*

Meanwhile, Australia (Aaa stable), which started with a smaller debt load, is also likely to face hurdles in rebuilding buffers and carry a higher debt burden for longer. The country has not established a track record of being able to rein in deficits independent of commodity price fluctuations.

A more rapid tightening in financing conditions than we currently assume would increase the size of the policy challenge. In particular, if not accompanied by stronger growth (and therefore likely related to wider risk *premia*), higher interest rates could significantly derail debt reduction for some countries like Italy and, on the contrary, keep the debt burden on an upward trajectory. Conversely, very low interest rates for very long would support debt trends all else equal, although if this was accompanied by weaker growth, the net impact on debt dynamics could be negative.

## How about emerging markets?

Like for AEs, EM debt levels will remain higher for some years, even though a number of them will also likely stabilise or be close to stabilising their debt-to-GDP ratios as soon as next year. Over the long term, and under similar assumptions regarding economic growth, primary balances and a gradual but somewhat faster normalization of interest rates than in AEs, EMs face very different debt dynamics. Moreover, EMs are generally more susceptible to a sudden rise in interest rates. Those sovereigns where foreign investors hold a sizable portion of sovereign debt are particularly susceptible if monetary policy tightens in AEs.

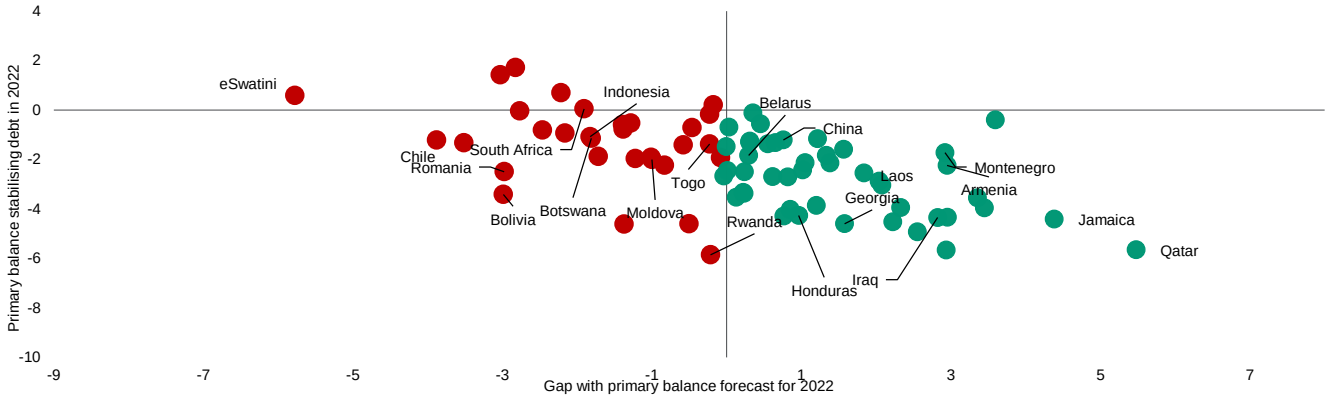
### EM sovereigns face sharply contrasting debt dynamics

A majority of EM sovereigns we rate will be able to stabilise their debt burdens in the short term while still being able to run primary deficits that exceed pre-crisis levels. However, for a significant group of EMs, debt/GDP will continue to drift upwards, including sovereigns like Bolivia (B2 stable), Namibia, South Africa or eSwatini (B3 stable) (red dots on Exhibit 12). The unfavourable interest rate-growth differential of Namibia and South Africa means that the countries cannot stabilise debt without generating primary surpluses while the others will continue to run larger deficits than their debt-stabilising primary balance.

Exhibit 12

**EM sovereigns will emerge from the pandemic facing markedly different policy challenges**

**% of GDP**




A positive gap (green dots) indicates that the debt burden will fall. The more negative the debt stabilising primary balance, the lower the fiscal policy challenge in stabilising the debt burden, everything else equal.

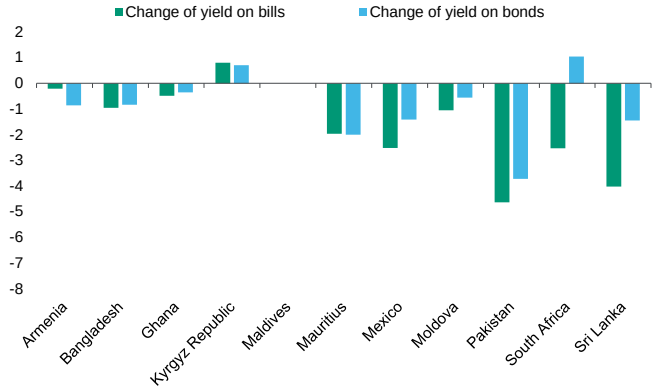
*Source: National authorities and Moody's Investors Service*

Accommodative monetary policy has contained the increase in debt in 2020 somewhat and will generally remain favourable to debt dynamics in the near term although some EM central banks have started raising rates in response to rising inflation. While the picture in EMs is more disparate - and the data less complete than for AEs - EM governments' local-currency interest rates have also fallen, having benefitted from external monetary policy and local actions through conventional policy rate cuts (see Exhibit 13). Government bond purchases by central banks, which has been sizeable only in a handful of EM countries like the Philippines (Baa2 stable) and Croatia (Ba1 stable), also contributed to stabilise domestic financial markets and provide market liquidity in the face of foreign capital outflows at the height of the crisis (see Exhibit 14). Asset purchases have been effective in reducing bond yields, easing pressures on government borrowing costs. That said, real interest rates remain at higher levels than in AEs.

Exhibit 13

**Short- and long-term interest rates at issuance have fallen in 2020 in EMs**

**2020 level minus 2019 level (percentage point)**

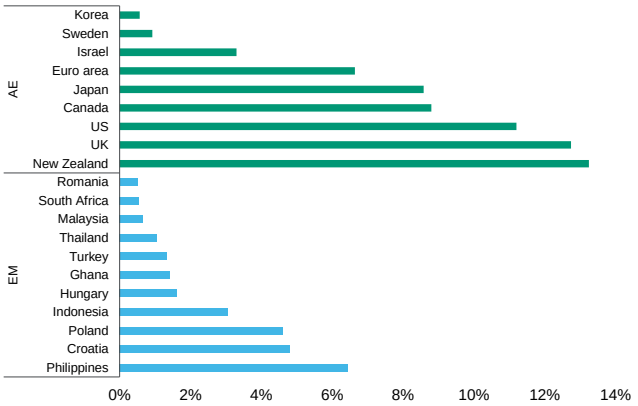



*Source: IMF and Moody's Investors Service*

Exhibit 14

**Quantitative easing was concentrated in a few EMs**

**Government securities purchase in 2020 (% of GDP)**




*Source: National central banks and Moody's Investors Service*

### It will take several years at best for EM sovereigns to bring debt burdens down significantly

As with AEs, our projections generally show a gradual fiscal consolidation, a return to our views on medium-term GDP growth. We assume a gradual but quicker increase in interest rates than for AEs of 30 basis points per year from 2023.[2]

Sovereigns with an improving or a track record of healthy fiscal positions and/or strong economic growth are more likely to regain fiscal flexibility in the near to medium term. Niger (B3 stable), Pakistan (B3 stable) and Vietnam (Ba3 positive), for instance, will see a return to pre-crisis debt/GDP levels as soon as 2022, mostly on account of the small increase in debt ratios they recorded in 2020. For Pakistan, this only slightly mitigates an already very high debt burden before the pandemic. Some, mainly in Europe, will see their debt burden start declining and the pandemic-related debt shock is likely to be more or less unwound in a few years, including Bosnia and Herzegovina (B3 stable), Hungary, Ukraine (B3 stable), Turkey (B2 negative), as well as Mongolia (B3 stable) and Kazakhstan (Baa2 stable).

By contrast, a relatively large number of EM sovereigns will continue to carry significantly higher debt loads than before the crisis for many years to come. For some, debt levels will stabilise at higher levels like Cote d'Ivoire (Ba3 stable), Romania (Baa3 negative), Thailand (Baa1 stable) and Uruguay (Baa2 stable). However, in several cases, particularly in Latin America and Africa, debt will likely remain on a continuous upward trend such as Brazil, South Africa or Tunisia (B3 negative). Given that these countries entered the crisis with already elevated debt burdens, they may face downward rating pressure in the absence of significant fiscal consolidation and/or higher growth on a sustained basis.

The recovery in oil prices will help oil exporters stabilise debt dynamics and improve debt ratios but some countries such as Bahrain (B2 negative) and Kuwait (A1 stable) will face high policy effectiveness hurdles to unwind the extraordinary jump in their debt ratios caused by the oil price shock.

Although Bolivia, Costa Rica, eSwatini and Namibia entered the crisis with moderate debt loads, very large primary deficits bode ill for these sovereigns' capacity to narrow the deficits significantly, particularly given the challenges they face in mobilising revenue. Meanwhile, and even though less vulnerable because of their lower debt burdens and a smaller initial shock in 2020, the debt ratios of sovereigns like Bangladesh (Ba3 stable), Chile (A1 negative) and Mexico (Baa1 negative) will remain on the gradual upward trend they were on before the crisis.

Moreover, as highlighted earlier, EMs are generally more susceptible to a sudden rise in interest rates than AEs. In that regard, sovereigns where monetary policy easing has been significant but that lack a track record of fiscal policy effectiveness are vulnerable to a more rapid reversal in interest rates. A rise in interest costs not accompanied by stronger growth would significantly derail debt

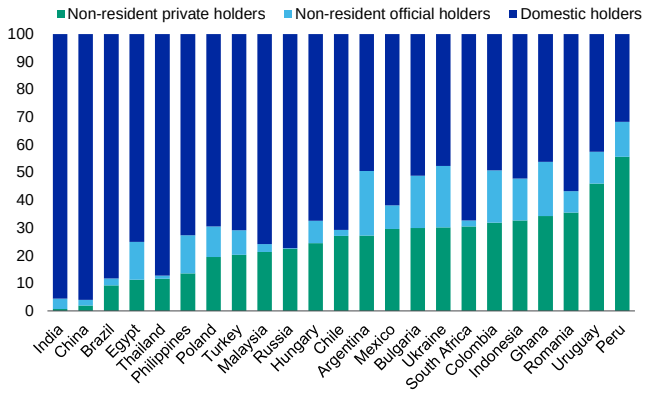
stabilization. In addition, sovereigns where foreign investors hold a sizable portion of debt are particularly susceptible if monetary policy tightens in AEs, particularly in the US. Peru (Baa1 stable), Indonesia (Baa2 stable), Romania and Ghana (B3 negative) are particularly exposed given their high share of foreign private investors (see Exhibit 15).

Sudden capital outflows, while not our baseline forecast, would also put pressure on the exchange rate, adding to the challenge of higher rates on debt trends by increasing debt burdens for those with a large share of foreign currency debt. As shown on Exhibit 16, some countries like Argentina (Ca stable), Lebanon (C no outlook), Suriname (Caa3 negative) and Zambia (Ca stable) would be most affected by a depreciation of their currency because of large external obligations and weak buffers. These sovereigns' ratings take into account vulnerability to exchange rates.

Exhibit 15

**High share of foreign investors exposes some sovereigns to monetary policy tightening in the US**

**Debt holders at the end of 2020**

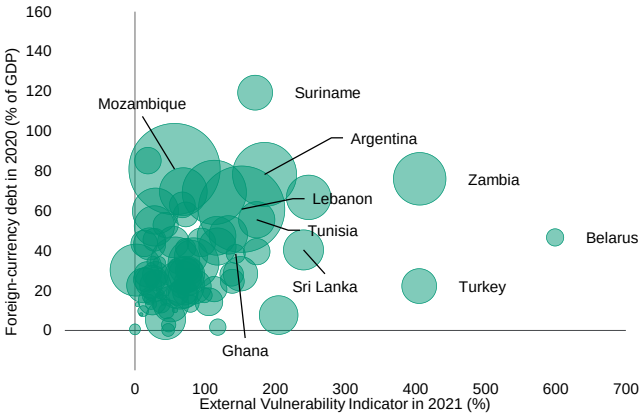



*Source: IMF and Moody's Investors Service*

Exhibit 16

**Large external obligations could put pressure on currencies, compounding challenges for some**

**2020**




Size of the bubble = Foreign-currency debt in 2020 (% of current-account receipts)

*Source: National authorities and Moody's Investors Service*

# Appendix

Exhibit 17

**Drivers of fiscal vulnerability in exhibit 1: Advanced Economies**

**For each question, the colour-coding is relative to all AEs**

Key Drivers: ● LEAST EXPOSED ● LESS EXPOSED ● VULNERABLE ● HIGHLY VULNERABLE

| Country | Will governments reverse debt trends by 2025? | How much higher will debt be by 2025? | Will governments return to pre-crisis (2019) debt levels by 2025? | How high were debt levels pre-crisis? | Overall fiscal strength vulnerability to shocks |
|---|---|---|---|---|---|
| **Advanced economies** | | | | | |
| Australia | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | LESS EXPOSED | HIGHLY VULNERABLE |
| Austria | LESS EXPOSED | LESS EXPOSED | VULNERABLE | VULNERABLE | LESS EXPOSED |
| Belgium | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Canada | VULNERABLE | LESS EXPOSED | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE |
| Cyprus | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Czech Republic | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | LEAST EXPOSED | HIGHLY VULNERABLE |
| Denmark | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED |
| Estonia | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | LESS EXPOSED |
| Finland | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| France | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Germany | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| Greece | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Iceland | LESS EXPOSED | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Ireland | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | VULNERABLE | LESS EXPOSED |
| Israel | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Italy | LESS EXPOSED | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Japan | VULNERABLE | LESS EXPOSED | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Korea | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Latvia | VULNERABLE | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Lithuania | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Luxembourg | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Malta | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | LESS EXPOSED | HIGHLY VULNERABLE |
| Netherlands | VULNERABLE | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| New Zealand | LESS EXPOSED | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED |
| Norway | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Portugal | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Singapore | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Slovakia | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Slovenia | VULNERABLE | LESS EXPOSED | VULNERABLE | VULNERABLE | VULNERABLE |
| Spain | LESS EXPOSED | LESS EXPOSED | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE |
| Sweden | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Switzerland | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Taiwan, China | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| United Kingdom | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| United States of America | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |

*Source: Moody's Investors Service*

Exhibit 19

**Drivers of fiscal vulnerability in exhibit 1: emerging markets part 1**

**For each question, the colour-coding is relative to all EMs**

Key Drivers: ● LEAST EXPOSED ● LESS EXPOSED ● VULNERABLE ● HIGHLY VULNERABLE

| Country | Will governments reverse debt trends by 2025? | How much higher will debt be by 2025? | Will governments return to pre-crisis (2019) debt levels by 2025? | How high were debt levels pre-crisis? | Overall fiscal strength vulnerability to shocks |
|---|---|---|---|---|---|
| Emerging Markets | | | | | |
| Albania | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| Angola | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Argentina | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Armenia | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| Azerbaijan | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Bahamas | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Bahrain | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Bangladesh | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| Barbados | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Belarus | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Belize | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | HIGHLY VULNERABLE | LESS EXPOSED |
| Benin | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Bolivia | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Bosnia and Herzegovina | VULNERABLE | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED |
| Botswana | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE |
| Brazil | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Bulgaria | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Cambodia | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| Cameroon | VULNERABLE | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Chile | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| China | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Colombia | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Costa Rica | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Cote d'Ivoire | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Croatia | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| Cuba | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| DRC | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Dominican Republic | VULNERABLE | LESS EXPOSED | VULNERABLE | LESS EXPOSED | LESS EXPOSED |
| Ecuador | VULNERABLE | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Egypt | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | VULNERABLE | VULNERABLE |
| El Salvador | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| eSwatini | VULNERABLE | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Ethiopia | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Fiji | LESS EXPOSED | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Gabon | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LEAST EXPOSED |
| Georgia | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Ghana | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |

*Source: Moody's Investors Service*

Exhibit 20

**Drivers of fiscal vulnerability in exhibit 1: emerging markets part 2**

**For each question, the colour-coding is relative to all EMs**

Key Drivers: LEAST EXPOSED LESS EXPOSED VULNERABLE HIGHLY VULNERABLE

| Country | Will governments reverse debt trends by 2025? | How much higher will debt be by 2025? | Will governments return to pre-crisis (2019) debt levels by 2025? | How high were debt levels pre-crisis? | Overall fiscal strength vulnerability to shocks |
|---|---|---|---|---|---|
| Emerging Markets | | | | | |
| Guatemala | VULNERABLE | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED |
| Honduras | LESS EXPOSED | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Hungary | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| India | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Indonesia | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| Iraq | LEAST EXPOSED | LEAST EXPOSED | VULNERABLE | LESS EXPOSED | LEAST EXPOSED |
| Jamaica | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Jordan | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Kazakhstan | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Kenya | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Kuwait | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | LEAST EXPOSED | HIGHLY VULNERABLE |
| Kyrgyz Republic | VULNERABLE | LESS EXPOSED | VULNERABLE | VULNERABLE | VULNERABLE |
| Laos | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | VULNERABLE | LESS EXPOSED |
| Lebanon | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Malaysia | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Maldives | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE |
| Mali | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Mauritius | VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Mexico | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Moldova | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| Mongolia | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | VULNERABLE | LEAST EXPOSED |
| Montenegro | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | VULNERABLE | LEAST EXPOSED |
| Morocco | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Mozambique | LEAST EXPOSED | LEAST EXPOSED | LESS EXPOSED | HIGHLY VULNERABLE | LESS EXPOSED |
| Namibia | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Nicaragua | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Niger | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Nigeria | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED |
| Oman | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | VULNERABLE | LEAST EXPOSED |
| Pakistan | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LESS EXPOSED |
| Panama | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | LESS EXPOSED | VULNERABLE |
| Papua New Guinea | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Paraguay | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | LESS EXPOSED |
| Peru | HIGHLY VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | LESS EXPOSED |
| Philippines | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | LESS EXPOSED |
| Poland | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Qatar | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | VULNERABLE | LEAST EXPOSED |

*Source: Moody's Investors Service*

Exhibit 21

**Drivers of fiscal vulnerability in exhibit 1: emerging markets part 3**

**For each question, the colour-coding is relative to all EMs**

Key Drivers: ● LEAST EXPOSED ● LESS EXPOSED ● VULNERABLE ● HIGHLY VULNERABLE

| Country | Will governments reverse debt trends by 2025? | How much higher will debt be by 2025? | Will governments return to pre-crisis (2019) debt levels by 2025? | How high were debt levels pre-crisis? | Overall fiscal strength vulnerability to shocks |
|---|---|---|---|---|---|
| **Emerging Markets** | | | | | |
| Republic of the Congo | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | LEAST EXPOSED |
| Romania | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | LESS EXPOSED | VULNERABLE |
| Russia | VULNERABLE | VULNERABLE | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Rwanda | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Saudi Arabia | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Senegal | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | VULNERABLE | LESS EXPOSED |
| Serbia | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | VULNERABLE | LEAST EXPOSED |
| Sharjah | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| Solomon Islands | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | LEAST EXPOSED | LESS EXPOSED |
| South Africa | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Sri Lanka | VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |
| St. Maarten | LEAST EXPOSED | LESS EXPOSED | HIGHLY VULNERABLE | LESS EXPOSED | LESS EXPOSED |
| St. Vincent | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Suriname | LEAST EXPOSED | LEAST EXPOSED | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE |
| Tajikistan | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Tanzania | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Thailand | VULNERABLE | VULNERABLE | VULNERABLE | LEAST EXPOSED | VULNERABLE |
| Togo | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED |
| Trinidad & Tobago | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Tunisia | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | HIGHLY VULNERABLE |
| Turkey | LESS EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Uganda | HIGHLY VULNERABLE | HIGHLY VULNERABLE | VULNERABLE | LESS EXPOSED | VULNERABLE |
| Ukraine | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| United Arab Emirates | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED | LEAST EXPOSED |
| Uruguay | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE | VULNERABLE |
| Uzbekistan | VULNERABLE | HIGHLY VULNERABLE | LESS EXPOSED | LEAST EXPOSED | VULNERABLE |
| Vietnam | LESS EXPOSED | LESS EXPOSED | LEAST EXPOSED | LESS EXPOSED | LEAST EXPOSED |
| Zambia | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE | HIGHLY VULNERABLE |

*Source: Moody's Investors Service*

## Moody's related publications

- **Sector In-Depth**: Moody's Financial Monitor: Unexpected policy tightening would generate market volatility, 13 July 2021
- **Sector In-Depth**: Sovereigns – Africa: Varied availability of domestic funding sources in Africa drives liquidity risks, 6 July 2021
- **Sector In-Depth**: Sovereign – Euro Area: Rebuilding fiscal shock-absorption capacity will be a key post-pandemic credit driver, 2 July 2021
- **Sector In-Depth**: Policy Challenges – Global: Risks from phasing out policy support have receded as recovery progresses, 30 June 2021
- **Sector In-Depth**: Non-Investment-Grade Sovereigns - Global: Weak and delayed economic recovery will make it more challenging to restore fiscal and liquidity positions (Slides), 22 June 2021
- **Sector In-Depth**: Sovereigns – Emerging Markets: Credit implications of higher debt to depend on persistence of shock, policy buffers, 1 September 2020
- **Sector In-Depth**: Sovereigns – Advanced Economies: Coronavirus will raise debt burdens; credit differentiation in capacity to reverse shock, 22 June 2020
- **Methodology**: Sovereign Ratings Methodology, 25 November 2019

### Contributor

- Matt Bridle – AVP Research Writer

## Endnotes

1 Norway mostly financed its fiscal response to the pandemic by drawing on its sovereign wealth fund. Effective containment of the pandemic in Taiwan resulted in the government providing relatively contained fiscal support, limiting the increase in debt.

2 For some EMs, we do not expect growth to return to pre-pandemic rates which were particularly high for specific reasons; or primary balances to reach surpluses that reflected particularly intense fiscal consolidation. We use domestic local-currency rates for borrowing costs where possible. However, for economically and financially less developed EMs, which typically borrow from external, foreign-currency sources often on concessional terms and countries where detailed interest-rate data are not available, we use the average interest rate on the stock of debt, which we see as broadly equivalent.

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