

Special Commentary — May 11, 2021

Do Developing Economies Have an External Debt Problem?

Part I: Which Economies Are Most Vulnerable?

Summary

- External debt in the developing world has risen markedly in recent years and currently exceeds \$11 trillion. Although many developing economies have experienced strong rates of economic growth, GDP has not kept up with external debt in many cases.
- In this report, we develop a framework based on a number of indicators to evaluate the viability of a country's external debt position. We then use this framework to provide a sense for which developing countries could potentially be at risk of an external debt crisis.
- Economies in our 25-country sample that appear to be most vulnerable at the present time include Argentina, Chile, Indonesia, Turkey and Venezuela.
- At the other end of the spectrum, Hungary, Malaysia, Saudi Arabia, South Korea and Thailand appear to be less vulnerable. There are 15 countries with intermediate degrees of vulnerability.
- Although we are not suggesting that a wave of external debt crises in the developing world is necessarily imminent, we would expect that any crises that do occur would be more likely in countries that our framework characterizes as "highly vulnerable" than in countries that we determine have "low vulnerability."

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External Debt in the Developing World Has Risen Considerably in Recent Years

Most forecasters, including us, look for global economic growth to strengthen significantly over the course of the year as many economies emerge from the pandemic. Specifically, we forecast global GDP will grow in excess of 6% in 2021 which, if realized, would be the strongest year of global economic growth in at least 40 years. (See our [International Economic Outlook](#) for details.) We look for this momentum to carry into next year, with a forecasted GDP growth rate of roughly 4% in 2022.

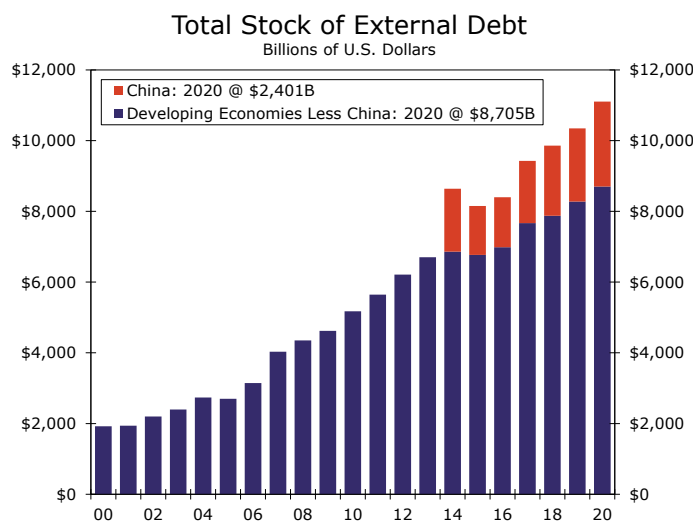
But in an 11-part series of [reports](#) we wrote in January and February, we discussed a number of factors which impart some risk to that sanguine outlook. We did not include the external debt situation in many developing countries in that initial list of risks, but its inclusion may have been warranted. In this first report in a two-part series, we will examine external debt in a sample of 25 large developing economies to determine which countries may have a “problem.” In a forthcoming follow-up report, we will analyze which creditor countries could be adversely affected if developing economies are unable to service their debts.

By definition, external debt is the amount of debt that the household, business and public sectors in a country owe to foreign creditors, regardless of currency. For example, a corporation that is domiciled in Peru could issue bonds that are denominated in U.S. dollars. If foreigners buy these bonds, the amount of their purchases are classified as Peruvian external debt. If that corporation also issued bonds that were denominated in Peruvian soles and foreign investors bought those bonds, then the amount of those purchases would also be included in Peruvian external debt. But the dollar-denominated corporate bonds that are owned by Peruvian residents would be not included in Peruvian external debt.

As shown in [Figure 1](#), the aggregate amount of external debt among 62 developing economies for which the Institute of International Finance has data has grown to more than \$11 trillion last year from nearly \$2 trillion in 2000. Excluding China—data on Chinese external debt are not available until 2014—the external debt of the remaining 61 economies totaled \$8.7 trillion in 2020. Of course, the size of many developing economies has also grown significantly over the past two decades, so external debt needs to be scaled by GDP. But even accounting for the significant rise in GDP in the developing world, the aggregate external debt-to-GDP ratio, excluding China, has risen markedly over the past decade ([Figure 2](#)). Although we do not have data extending back to the 1990s for all the countries in our sample, it appears that the aggregate external debt-to-GDP ratio is higher today than it was in the mid-1990s, before a tsunami of financial and economic crises swept through the developing world.

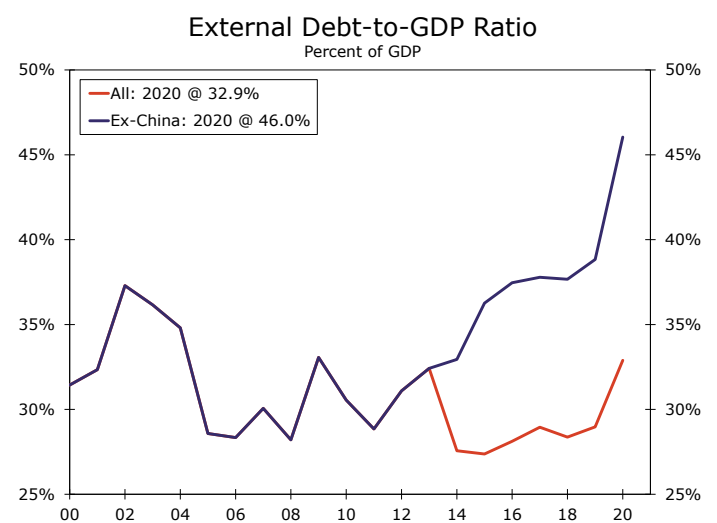
The aggregate external debt-to-GDP ratio in the developing world has risen markedly over the past decade.

Figure 1



Source: Institute of International Finance and Wells Fargo Securities

Figure 2



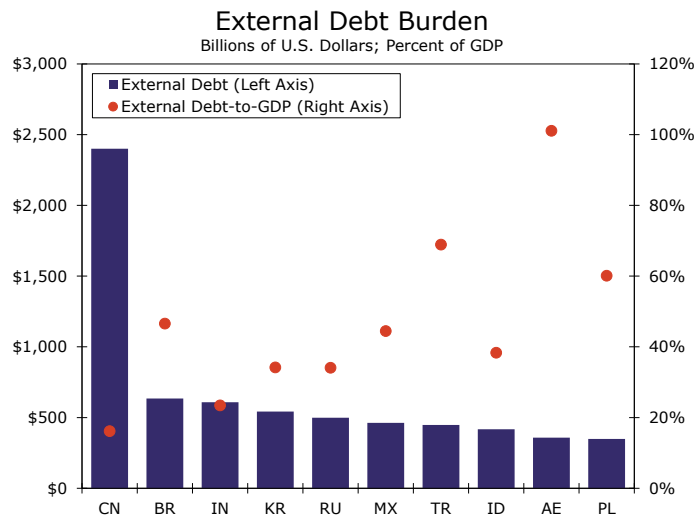
Source: Institute of International Finance and Wells Fargo Securities

[Figure 3](#) shows the ten countries with the highest amounts of external debt in 2020. China clearly tops this list with \$2.4 trillion worth of external debt, which would seem to indicate that China is a prime candidate for an external debt crisis. But China is also the second largest economy in the world, so its external debt-to-GDP ratio is quite low at only 16%. Among the ten countries that are shown in

Figure 3, the United Arab Emirates has the highest external debt-to-GDP ratio at over 100%. Foreign exchange reserves of the UAE appear quite hefty, with UAE foreign exchange reserves at nearly \$100 billion. However, when benchmarking foreign exchange reserves against the stock of external debt, UAE foreign exchange reserves may not look as impressive (Figure 4).

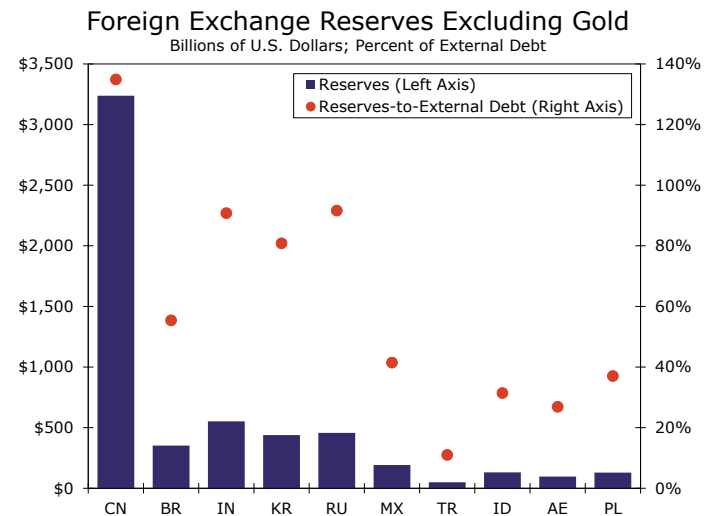
Qualifications, such as measuring debt against GDP or taking into account the amount of a country's foreign exchange reserves, show that the viability of a country's external debt depends on more than simply the total amount of debt. In the following sections, we develop a framework based on a number of indicators to evaluate the viability of a country's external debt position and provide a sense for which developing countries could be at risk of an external debt problem.

Figure 3



Source: Institute of International Finance and Wells Fargo Securities

Figure 4



Source: Institute of International Finance and Wells Fargo Securities

Developing a Framework to Measure External Debt Vulnerability

Before outlining the results of our framework, it is worth discussing the variables we included and why they are important in identifying countries that could have an external debt problem. In assessing the viability of a country's external debt, we selected metrics that have historically acted as reliable early warning indicators to a potential debt crisis. In aggregate, these metrics should help to identify countries that could be particularly vulnerable as well as countries where debt may not pose an immediate threat.

The first indicator we used in our framework is the total stock of external debt. More often than not, developing countries with a large stock of external debt could be ripe for some type of debt crisis. Intuitively, incorporating the overall stock of external debt makes sense; however, as noted above, external debt also needs to be scaled by the size of a country's economy. As economies grow or contract, the stock of debt relative to the size of the economy will likely also change. In that sense, incorporating the external debt-to-GDP ratio as a variable can also be used as a leading indicator to identify vulnerable countries. In our view though, the evolution of the external debt-to-GDP ratio is more telling. A track record of rising external debt relative to GDP is more indicative of a country with a potential problem. In order to account for a track record of rising external debt, we utilize the change in the external debt-to-GDP ratio between 2014 and 2019. (We exclude 2020 due to the COVID-induced lockdowns in many economies last year that led to one-off declines in nominal GDP.) This change in the external debt-to-GDP ratio not only tells us how external debt has evolved, but also the likely trajectory of the ratio going forward, which can help identify at-risk countries.

Two countries with identical amounts of external debt and debt-to-GDP ratios could face different degrees of vulnerability depending on the maturity profile of the debt and its currency composition. Included in our framework is the proportion of total external debt that matures in less than one year, which we view as a potential vulnerability. Countries with an excessive amount of short-term debt typically face a higher likelihood of repayment issues. Also, elevated amounts of short-term debt introduce refinancing risks that could result in a higher cost of debt in the future and may also

Vulnerability to a crisis rises along with the total amount of external debt, the external debt-to-debt ratio, and the proportions of short-term debt and foreign currency debt.

increase the probability of default. The share of external debt denominated in foreign currency, as opposed to local currency, also represents a possible source of vulnerability. In the event that a local currency comes under pressure and weakens significantly, debt denominated in foreign currencies becomes more expensive and more difficult to service. As debt becomes more expensive, the ability of borrowers across all sectors to repay debts would likely deteriorate.

Also included in our framework are metrics associated with debt service (*i.e.*, funds required to cover interest and principle payments). In our model, we incorporated ratios aimed at revealing how much debt service a country has as well as a country's ability to generate income to pay its debt service obligations. The first ratio we used is debt service as a percent of total external debt. This ratio is designed to reveal how much in interest and principle repayments a country has relative to the overall level of external debt. In this case, a country becomes more vulnerable as its debt service ratio rises. In addition, we included debt service as a percent of current account receipts to measure the amount of foreign exchange a country earns to service interest and principle payments. Similar to the previous debt service ratio, a country becomes more vulnerable as the proportion of debt service-to-current account receipts rises.

We also included a measure of foreign exchange reserves in our framework. FX reserves are typically used by central banks in developing economies for a number of reasons including limiting volatility in their respective currencies or to repay debt obligations. An adequate amount of FX reserves that can cover debt payments can provide a country with a buffer in a crisis scenario, while an insufficient amount of FX reserves can exacerbate a balance of payments issue or external debt problem. To that point, we use the foreign exchange reserves-to-external debt ratio in our framework as a gauge of the adequacy of FX reserves. In contrast to other ratios in our model, a country's vulnerability rises as the FX reserves-to-external debt ratio declines.

Which Countries Are Most Vulnerable?

[Table 1](#), which lists the largest 25 developing economies that together account for 85% of external debt in our 62-country sample, shows the final results of our framework. For each variable listed, we established thresholds that we believe are significant in segmenting different levels of vulnerability. These thresholds help us identify which countries have High, Moderate or Low vulnerability as it relates to each of the individual indicators included in the table. We also use a scorecard approach to aggregate these variables into an overall level of external debt vulnerability, the column furthest to the left. The intricacies of the scoring system are a bit complex, but in an effort to simplify, we adopted a color scheme to highlight High, Medium and Low vulnerability for each variable. Green represents "Low Vulnerability," yellow suggests "Moderate Vulnerability" and red suggests "High Vulnerability."

Vulnerability rises with debt service.

FX reserves can provide a country with a buffer in a crisis scenario.

Table 1

Country	External Debt Vulnerability ¹	Stock of External Debt (\$)	Change in External Debt-to-GDP Ratio	Short-term Debt (% of External Debt)	FX Debt (% of External Debt)	Debt Service (% of External Debt)	Debt Service (% of Curr. Acct Receipts)	FX Reserves (% of External Debt)
Turkey	Red	Red	Red	Red	Red	Red	Red	Red
Argentina	Red	Yellow	Red	Red	Red	Yellow	Red	Red
Venezuela	Red	Green	Red	Red	Red	Yellow	Red	Red
Chile	Red	Yellow	Red	Green	Yellow	Red	Red	Red
Indonesia	Red	Red	Yellow	Green	Yellow	Red	Red	Red
South Africa	Yellow	Green	Red	Yellow	Red	Yellow	Yellow	Red
Ukraine	Yellow	Green	Red	Green	Red	Red	Red	Red
Brazil	Yellow	Red	Yellow	Green	Yellow	Red	Red	Yellow
Poland	Yellow	Green	Green	Yellow	Red	Red	Red	Yellow
China	Yellow	Red	Green	Red	Red	Yellow	Yellow	Green
Colombia	Yellow	Red	Red	Yellow	Red	Red	Red	Yellow
Romania	Yellow	Green	Green	Red	Red	Yellow	Yellow	Red
Vietnam	Yellow	Green	Yellow	Red	Red	Red	Yellow	Yellow
UAE	Yellow	Red	Red	Red	Red	Green	Green	Red
Qatar	Yellow	Yellow	Red	Yellow	Red	Green	Green	Red
Russian Federation	Yellow	Red	Green	Yellow	Red	Red	Red	Green
Egypt	Yellow	Green	Red	Green	Yellow	Yellow	Yellow	Red
Mexico	Yellow	Red	Yellow	Green	Yellow	Yellow	Yellow	Yellow
India	Yellow	Red	Green	Yellow	Red	Yellow	Yellow	Green
Czech Republic	Yellow	Yellow	Red	Red	Yellow	Yellow	Green	Green
Malaysia	Green	Yellow	Yellow	Yellow	Red	Green	Green	Yellow
Hungary	Green	Yellow	Green	Green	Red	Green	Green	Red
Korea	Green	Red	Green	Red	Red	Yellow	Green	Green
Saudi Arabia	Green	Yellow	Yellow	Yellow	Red	Green	Green	Green
Thailand	Green	Green	Green	Red	Green	Yellow	Green	Green

¹Red suggests "High Vulnerability"; Yellow suggests "Moderate Vulnerability"; Green suggests "Low Vulnerability"

Source: Institute of International Finance and Wells Fargo Securities

Our external debt vulnerability column uses the same color scheme to highlight individual countries and their overall level of vulnerability. Countries highlighted as "red" at the top of the column are the countries our framework identify as the most vulnerable to an external debt crisis. These countries include Turkey, Argentina, Venezuela, Chile and Indonesia, two of which—Argentina and Venezuela—have already experienced debt crises and sovereign debt defaults recently. In addition, Turkey has experienced multiple large currency devaluations over the past few years and could be ripe for some type of external debt crisis as well.

Our framework identifies Turkey, Argentina, Venezuela, Chile and Indonesia as the countries that are most vulnerable to a potential external debt crisis.

Intuitively, Chile, whose sovereign debt the major ratings agencies classify as investment grade, may come as a surprise. However, a deeper dive into external debt fundamentals reveal that Chile has some vulnerabilities. The country's external debt-to-GDP ratio has climbed almost 12 percentage points over the past five years, one of the larger increases in our sample. In addition, debt service ratios are weak, with Chile having the highest ratio of debt service-to-external debt in the developing world at close to 28%. It's ratio of debt service-to-current account receipts is also elevated at close to 94% which, aside from Venezuela, is the highest in our sample of countries. Chile's foreign exchange reserves, which total only \$40 billion or so, may also be inadequate if a crisis were to erupt as the country's ratio of FX reserves-to-external debt is also among the lowest in our 25-country sample.

Three of the five countries in the green zone are in Asia.

At the other end of the spectrum, our framework suggests that countries labeled as "green" have lower degrees of vulnerability. Three of these countries, Malaysia, South Korea and Thailand, are in Asia. These countries generally have low debt service ratios and generally possess ample FX reserves. Saudi Arabia also appears to have low vulnerability to an external debt crisis. Although the country's external debt exceeds \$200 billion, it has a warchest of FX reserves that are valued at more than \$450 billion, and its debt service ratios are at the low end of the spectrum. If Saudi Arabia has a vulnerability, it is that the vast majority of the country's external debt is denominated in foreign currencies. If the Saudi Arabian riyal, which is essentially fixed *vis-à-vis* the U.S. dollar, were to be devalued, then the household, business and public sectors in the country could potentially experience difficulties servicing their external debt. That said, a devaluation of the riyal does not seem likely anytime soon.

Surprisingly, our framework places China in the yellow zone.

Then there are a number of countries labeled "yellow" that have intermediate degrees of vulnerability. A few of these countries are worth mentioning specifically. In our view, South Africa and Ukraine possess some notable vulnerabilities. Both countries have a high proportion of their external debt denominated in foreign currencies, their respective debt service ratios are high, and they have low levels of FX reserves. Furthermore, the South African government has struggled to stabilize fiscal

and debt dynamics and COVID has run rampant across the country, potentially putting households and local businesses under economic and financial pressure. As far as Ukraine, the government has teetered on the brink of a sovereign debt default for years, and renewed geopolitical tensions with Russia could tip the government and the private sector further into debt repayment issues.

Surprisingly, our framework places China in the yellow zone as well. Intuitively, the likelihood of an external debt crisis in China may seem to be rather low given its immense stockpile of FX reserves that totals more than \$3 trillion. However, as we highlighted in our risks to the economic outlook [reports](#), China's system-wide debt issues and corporate defaults have risen recently. Our framework suggests China's debt issues may be just as much of a risk to the global economic outlook as we thought.

Conclusion

External debt in the developing world has risen markedly in recent years to exceed \$11 trillion at present. Although many developing countries have grown significantly, GDP has not kept pace with external debt in many cases. To determine which countries may be most vulnerable to an external debt crisis, we developed a framework to assess potential vulnerability. Economies in our 25-country sample that appear to be most vulnerable at the present time include Argentina, Chile, Indonesia, Turkey and Venezuela. At the other end of the spectrum, Hungary, Malaysia, Saudi Arabia, South Korea and Thailand appear to be less vulnerable. There are 15 countries with intermediate degrees of vulnerability.

We are not suggesting that a wave of external debt crises in the developing world is necessarily imminent. History shows that the ability of analysts to accurately predict external debt crises is rather poor. The triggers of crises are not well understood. But if external debt crises were to occur in the near term, we would expect that they would be more likely among the countries that are characterized as red in our framework. The probability of a crisis in the green countries should be rather low.

As the experience of 1997 and 1998 showed, a wave of external debt crises in the developing world can lead to financial stress in advanced economies. Which creditor countries would be vulnerable today to debt crises in the developing world, should one occur? We will address that question in Part II of this series.

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