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Economics Group

Special Commentary

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Which Countries Have External Debt "Issues"?

Executive Summary

Russia is not the only country to have experienced a significant depreciation in the value of its currency over the past few months. Many other developing economies have also suffered erosion in their ability to service their foreign currency-denominated debt recently via the depreciations of their currencies. Are there other countries that could potentially encounter difficulties servicing their external debt in the coming year?

We deploy a simple rank ordering methodology in an attempt to determine which countries, among a sample of 30 of the world's largest developing economies, may have difficulties servicing their external debt in the next year or so. Although our methodology does not allow us to specify absolute probabilities, we find that countries like Ukraine and Serbia are more likely to encounter debt servicing difficulties than are countries like China and the Philippines. What sets off the former economies is their elevated external debt relative to their gross national income and their stock of foreign exchange reserves, their high debt servicing ratios, their current account deficits, and the drubbing that their currencies have already experienced. Although we do not believe a wave of financial crises sweeping through the developing world à la 1997-1998 is imminent, there are some individual countries that bear watching.

Currency Depreciation = More Challenges in Servicing External Debt

In a recent report, we discussed how the collapse in the value of the Russian ruble, which has gone hand in hand with the nosedive in the price of oil, Russia's most important export, has negatively affected Russia's ability to service its external debt.[1] We concluded in that report that the "probability of a default by the Russian government, either on its ruble-denominated debt or on its foreign currency-denominated debt, is low in the foreseeable future." We also found, however, that "the plunge in the value of the ruble may prove to be problematic for some Russian companies and banks that have debt denominated in foreign currencies."

Many developing countries have seen significant currency devaluation this year.

Russia is not the only country in the world to suffer a decline in the value of its currency in recent months. For example, the Hungarian forint has depreciated 10 percent vis-à-vis the U.S. dollar since July 1, and the Brazilian real is down nearly 20 percent against the greenback over the same period (Figure 1). The currencies of most other developing economies have also weakened against the dollar since summer, thereby raising the cost of servicing the foreign currency-denominated debt of each individual country. Are there other countries that could potentially encounter difficulties servicing their external debt in the coming year?

In an attempt to answer this question, we looked at 30 developing economies that, in aggregate, have $6.1 trillion worth of external debt outstanding, which accounts for more than 80 percent of all external debt among developing countries. In this report, we follow a methodology that is similar to the approach we employed in a report on crisis vulnerability in developing economies

[1] **See *"The Ruble's Collapse and Russian External Debt"* (December 11, 2014), which is available upon request.**

that we wrote more than a year ago.[2] That is, we rank order countries according to five indicators that would influence each individual country's ability to service its external debt. We then aggregate the five rank orderings to determine which individual economies may be at greatest risk of running into debt servicing problems in the coming year or so.

Figure 1

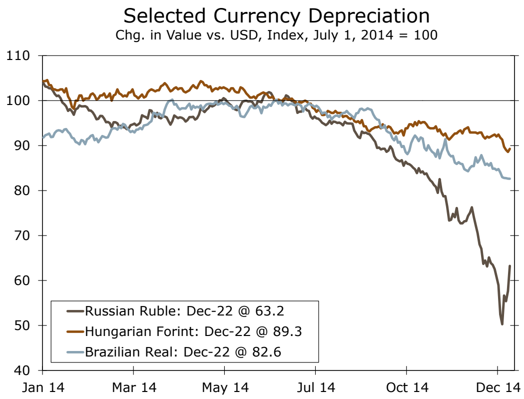
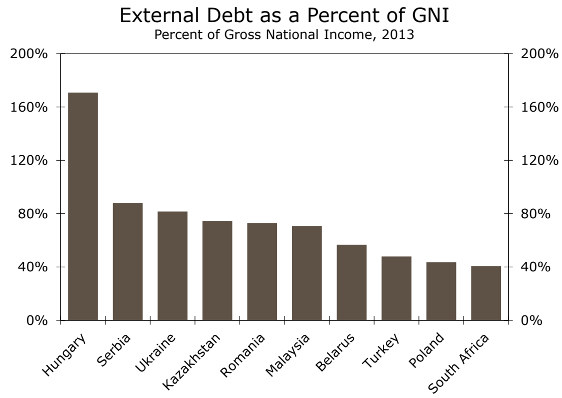


Figure 2



Source: Bloomberg LP, The World Bank and Wells Fargo Securities, LLC

Indicators of External Debt

Among the 30 countries we consider, China has the most external debt at nearly $900 billion while Nigeria has the least at only $14 billion. However, China is the second largest economy in the world so it seems natural that it would have more external debt than Nigeria, which is the world's 21st largest economy (when measured in terms of U.S. dollars). Therefore, we need to scale external debt by some measure of the size of the economy to have a meaningful measure of the relative size of a country's external debt.

FX reserves are a key factor determining a country's ability to pay its external debt.

As discussed by Frankel and Saravelos, researchers that are attempting to predict currency crises often include external debt as a percent of gross national income (GNI) as an explanatory variable in their models.[3] Everything else equal, a country's ability to service its external debt should erode as its external debt-to-GNI ratio rises. Figure 2 shows that as of the end of 2013 (latest available data), Hungary had the highest external debt-to-GNI ratio among the 30 countries that we consider. Serbia, Ukraine, Kazakhstan, Romania, and Malaysia also have elevated ratios relative to the other countries.

The level of a country's foreign exchange (FX) reserves should also help to determine its ability to service its external debt. Even if a country has a "high" amount of external debt, it may be able to successfully service that debt, at least in the near term, if it has a large war chest of FX reserves it can tap to help make the debt servicing payments. We calculated the ratios of external debt-to-FX reserves for all 30 countries and show the 10 countries with the highest ratios in Figure 3. These would be the 10 countries with the least FX reserve "cover" for their external debt. With $148 billion worth of external debt and only $12 billion in foreign exchange reserves, Ukraine has the highest ratio within our 30 country sample. Belarus, one of Ukraine's neighbors, also has an elevated external debt-to-FX reserves ratio, with Kazakhstan a distant third.

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[2] **See *"Developing Economies and Crisis Vulnerability"* (October 30, 2013), which is available upon request.**

[3] **See Jeffrey Frankel and George Saravelos, "*Are Leading Indicators of Financial Crises Useful For Assessing Country Vulnerability: Evidence from the 2008-09 Global Crisis,*" National Bureau of Economic Research Working Paper 16047, June 2010. Gross national income is the GDP of a country plus net income received from abroad.**

Figure 3

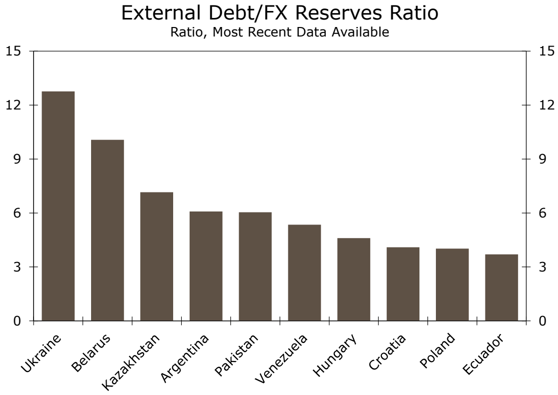
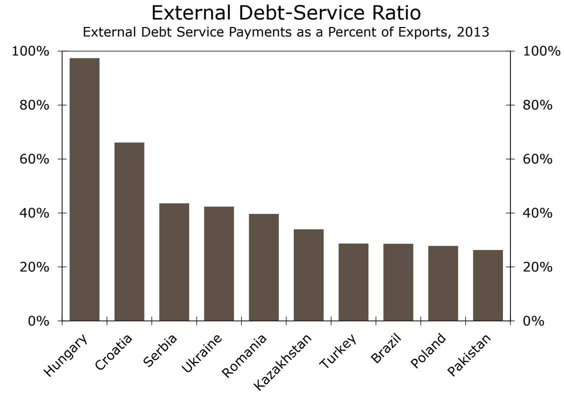


Figure 4



Source: The World Bank, Institute of International Finance (IIF), International Monetary Fund (IMF) and Wells Fargo Securities, LLC

Debt Service

The two indicators we discussed on the previous page refer to the *stock* of outstanding debt. However, indicators related to the *flow* of debt are also important when thinking about a country’s ability to service its external debt. For example, if a country has an onerous schedule of debt service payments (i.e., amortization and interest payments) it may run into debt servicing difficulties. On the other hand, a bountiful amount of exports, which create a flow of foreign exchange receipts, may help a country stay current on its debt service payments. Therefore, many analysts consider the ratio of debt service-to-exports to be an important indicator of external debt sustainability with higher ratios associated with lower ability to service external debt. Figure 4 shows that Hungary, Croatia, Serbia, Ukraine and Romania have the highest ratios in our 30-country sample, In other words, these five countries, especially Hungary and Croatia with ratios in excess of 60 percent, would have the highest probability of having debt servicing problems, everything else equal.

Current Account Deficit

The current account balance of a country is another flow variable that would have relevance when considering the debt servicing capacity of a country. A country that incurs red ink in its current account must finance this deficit via net capital inflows from the rest of the world. Therefore, external debt would tend to grow in a country with a current account deficit. Conversely, a country with a current account surplus would have the capacity to pay down its external debt.

The IMF projects that 20 of our 30 countries will run a current account deficit in 2015.

Because a country’s past current account balances are already reflected in its current stock of outstanding external debt, which we have already measured in our first two variables, we use IMF forecasts of current account positions in 2015, which affect the country’s external debt in the coming year.[4] The IMF projects that 20 of our 30 countries will register red ink in their current account balances in 2015, while the remaining 10 countries will incur surpluses. The IMF forecasts that Belarus will have the largest current account deficit (as a percent of GDP) in 2015, followed closely by Turkey, Morocco, South Africa, Serbia and Peru (Figure 5). If these IMF forecasts are realized, then these economies would add to their existing stocks of external debt at a faster pace than the other countries in our survey.

[4] **The IMF forecasts are taken from the October 2014 edition of the IMF World Economic Outlook database. See http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx.**

Figure 5

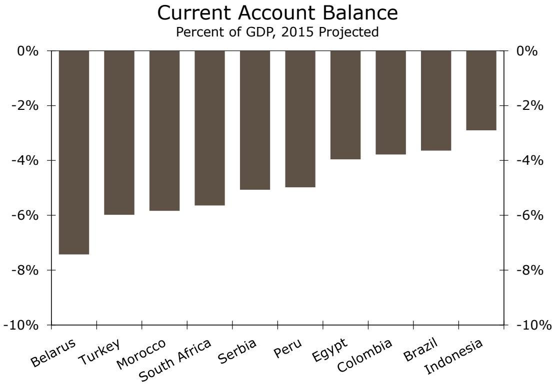
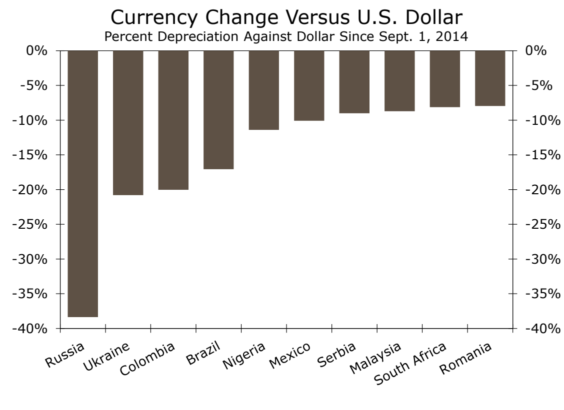


Figure 6



Source: IMF, Bloomberg LP and Wells Fargo Securities, LLC

Exchange Value of Currency

As noted previously, the currencies of many developing economies have weakened by varying degrees against the U.S. dollar over the past few months, and these depreciations affect a country's ability to service its foreign-denominated debt. The nominal dollar value of a country's dollar-denominated external debt would be unaffected by changes in exchange rates. However, any financial institution or company within the country that receives revenues denominated in domestic currency would experience erosion in its ability to service its dollar-denominated debt as the domestic currency depreciates vis-à-vis the greenback. Moreover, the depreciation of the currency would inflate the dollar-denominated debt liabilities of the financial institution or company when those liabilities are measured in domestic currency terms.

Many emerging market currencies were more or less stable on balance against the U.S. dollar for the first eight months of 2014, before starting to slide in earnest against the greenback beginning in September. We calculated the percentage changes in the value of each currency against the U.S. dollar since September 1, and found that Russia has experienced the largest drop in the value of its currency versus the greenback—nearly 40 percent—over that period (Figure 6). Ukraine, Colombia and Brazil have also experienced significant weakness of their respective currencies vis-à-vis the U.S. dollar over that period. These currency depreciations make external debt servicing for debtors in these countries more challenging, everything else equal.

Which Countries Could Have Some External Debt "Issues" in 2015?

Our analysis shows that Ukraine will likely have the most trouble servicing its external debt.

Following the methodology of our October 2013 report that is referenced in footnote #2, we rank ordered the 30 countries for each of the five variables discussed above and then "awarded" points on a descending basis. For example, Figure 2 shows that Hungary has the highest external debt-to-GNI ratio, so we "awarded" it 30 points. Serbia received 29 points, Ukraine 28 points, and so on. We then aggregated the points across all five variables and show the 10 countries with the most points in Figure 7. A complete list of the 30 countries along with the points scored for each variable is contained in the appendix.

Figure 7 shows that Ukraine scored the most points across the five variables discussed above. Not only does Ukraine have the highest ratio of external debt relative to FX reserves among the 30 countries considered, but it also has the third highest ratio of external debt-to-GNI, and the fourth highest ratio of debt service payments-to-exports. Ukraine has been registering red ink in its current account for nearly a decade, and the IMF forecasts that the country will incur a deficit equivalent to 2.5 percent of GDP in 2015. Moreover, the Ukrainian hryvnia has dropped about 20 percent against the U.S. dollar since September 1, which further erodes its ability to service its dollar-denominated debt. If we were looking for a country to experience difficulties in servicing its external debt in 2015, Ukraine would be high on our list.

Figure 7

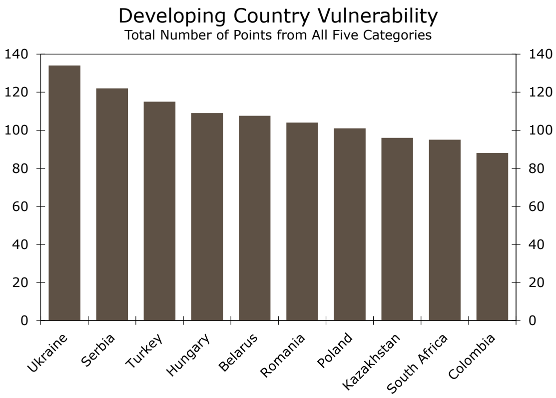
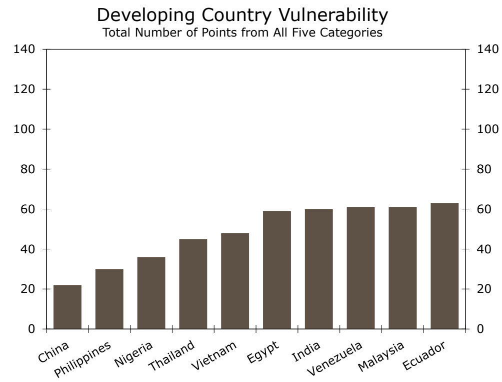


Figure 8



Source: IMF, IIF, The World Bank, Bloomberg LP and Wells Fargo Securities, LLC

Conversely, China, which has the least amount of points in our 30-country sample, would be low on our list (Figure 8). Although the country has the most external debt ($874 billion) among our 30-country sample, its gross national income of roughly $9 trillion brings its external debt-to-GNI ratio down to only 9.5 percent, which is the third lowest ratio in the sample. In addition, it has close to $4 trillion worth of FX reserves, and its debt servicing ratio is the second lowest at only 1.5 percent. The renminbi has weakened only 1 percent against the dollar since September 1, and the country should register another current account surplus in 2015.

Interestingly, Russia ranks in the middle of the pack.

Interestingly, Russia ranks in the middle of the pack. Although the ruble has been pounded more than any other currencies over the past few months, Russia, which has more than $700 billion worth of external debt, also has a large stock of foreign exchange reserves of roughly $400 billion at present. It also has a manageable debt servicing ratio, and the IMF forecast, which was compiled in October, projects a current account surplus in 2015. Although the collapse in the price of oil in recent weeks likely will lead to some deterioration in Russia's current account surplus, the change likely would not be extreme enough to push the country into the top echelons of our table in the appendix.

We should point out some limitations to our methodology. We feel confident saying that countries like Ukraine and Serbia, which score at the top end of our ranking, have higher probabilities of experiencing external debt difficulties in the foreseeable future than do countries like China and the Philippines, which rank at the bottom. However, readers should not infer that Indonesia, which scores 87 points, necessarily has a higher probability of default than Brazil, which scores 85 points. Our methodology is simply too crude to make comparison between countries that rank closely in the table in the appendix.

Second, we are unable to assign an absolute probability of external debt difficulties to any of these countries. Just because Ukraine scores the most points does not necessarily mean that it is "probable" that the country will indeed encounter external debt servicing difficulties in 2015. Specific economies can exhibit weak fundamentals for a long period of time without experiencing a crisis. For example, the external debt-to-GNI ratio in Thailand rose from about 40 percent in the early 1990s to more than 60 percent in the mid-1990s, as its current account position deteriorated drastically. Yet the country did not experience a financial crisis until 1997. Ukraine has weak debt fundamentals at present, but that does not necessarily mean that the country will stop servicing its external debt in the coming year.

We do not believe a wave of financial crises sweeping through the developing world à la 1997-1998 is imminent.

We wrote in a report more than a year ago that "a wave of financial crises in the developing world is not imminent, but developments in those economies bear watching."[5] We based our relative optimism at the time on the observation that external debt in the developing world was, in aggregate, not as high, as a percentage of GDP, as it was in the run-up to the 1997-1998 Asian financial crisis. We also noted in that report, however, that "economic fundamentals in the developing world appear to have deteriorated at the margin."

More than a year later, we remain of the same opinion. That is, we do not believe a wave of financial crises sweeping through the developing world à la 1997-1998 is imminent. That said, there are some individual countries that bear watching. We have taken some rudimentary steps in this report to identify some of those economies, but we would encourage readers with deeper interests in developing economies to bore even further into the data. In that regard, we would refer interested readers to the Bank for International Settlements and the World Bank, which both have publicly available data on external debt.[6]

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[5] **See *"Are Developing Economies Heading for a Crash?"* (October 28, 2013), which is available upon request.**

[6] **BIS data on the exposure that western banks have to developing economies can be found at http://www.bis.org/statistics/about_banking_stats.htm. The World Bank's external debt database is posted at http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=joint-external-debt-hub.**

Appendix 1: Rank Ordering of Countries

Indicators of Developing Country Vulnerability						
Country (Total External Debt Stock, $Billions)	**External Debt as a Percent of GNI**	**External Debt/Foreign Exchange Reserves Ratio**	**External Debt Service Payments as a Percent of Exports**	**Percent Depreciation in Currency vs. USD Since Sept. 1, 2014**	**Current Account Balance as a Percent of GDP**	***Total***
Ukraine ($147.7B)	81.6% (28)	12.8 (30)	42.4% (27)	-20.8% (29)	-2.5% (20)	134
Serbia ($36.4B)	88.1% (29)	2.8 (15)	43.6% (28)	-9.0% (24)	-5.1% (26)	122
Turkey ($388.2B)	47.9% (23)	3.5 (19)	28.7% (24)	-7.6% (20)	-6.0% (29)	115
Hungary ($196.7B)	170.8% (30)	4.6 (24)	97.4% (30)	-6.0% (16)	2.0% (9)	109
Belarus ($39.6B)	56.7% (24)	10.1 (29)	10.4% (12)	-7.8% (13)	-7.4% (30)	108
Romania ($134.0B)	72.9% (26)	3.3 (16)	39.7% (26)	-7.7% (21)	-1.8% (15)	104
Poland ($382.1B)	43.5% (22)	4.0 (22)	27.8% (22)	-6.6% (18)	-2.1% (17)	101
Kazakhstan ($148.5B)	74.6% (27)	7.2 (28)	34.0% (25)	-1.8% (5)	-0.7% (11)	96
South Africa ($139.8B)	40.7% (21)	3.4 (17)	8.3% (8)	-8.1% (22)	-5.6% (27)	95
Colombia ($92.0B)	25.3% (12)	2.1 (10)	14.5% (15)	-20.0% (28)	-3.8% (23)	88
Morocco ($39.8B)	38.7% (19)	2.1 (11)	15.3% (16)	-4.8% (14)	-5.8% (28)	88
Indonesia ($259.1B)	30.8% (15)	2.4 (13)	19.4% (19)	-8.0% (19)	-2.9% (21)	87
Brazil ($482.5B)	21.9% (7)	1.3 (6)	28.6% (23)	-17.1% (27)	-3.6% (22)	85
Mexico ($443.0B)	35.9% (16)	2.4 (12)	10.3% (11)	-10.1% (25)	-2.0% (16)	80
Croatia ($63.3B)	7.2% (2)	4.1 (23)	66.1% (29)	-6.7% (17)	2.2% (7)	78
Russia ($728.9B)	36.7% (17)	2.0 (9)	17.9% (18)	-38.4% (30)	3.1% (4)	78
Pakistan ($56.5B)	22.8% (9)	6.0 (26)	26.3% (21)	1.9% (1)	-1.3% (13)	70
Peru ($56.7B)	29.0% (14)	0.9 (5)	13.8% (14)	-3.5% (11)	-5.0% (25)	69
Argentina ($136.3B)	22.7% (8)	6.1 (27)	13.7% (13)	-1.8% (8)	-1.1% (12)	68
Chile ($130.7B)	14.9% (4)	3.4 (18)	16.3% (17)	-4.1% (12)	-1.4% (14)	65
Ecuador ($20.3B)	22.9% (10)	3.7 (21)	9.8% (10)	0.0% (3)	-2.4% (19)	63
Malaysia ($213.1B)	70.7% (25)	1.7 (8)	3.5% (3)	-8.7% (23)	4.2% (2)	61
Venezuela ($118.8B)	27.5% (13)	5.3 (25)	22.2% (20)	0.0% (2)	6.4% (1)	61
India ($427.6B)	23.0% (11)	1.5 (7)	8.6% (9)	-2.5% (15)	-2.2% (18)	60
Egypt ($44.4B)	16.7% (5)	3.6 (20)	6.6% (6)	0.0% (4)	-4.0% (24)	59
Vietnam ($65.5B)	40.2% (20)	2.6 (14)	3.5% (4)	-0.8% (7)	3.4% (3)	48
Thailand ($135.4B)	37.2% (18)	0.9 (4)	4.4% (5)	-2.9% (10)	2.1% (8)	45
Nigeria ($13.8B)	2.8% (1)	0.4 (2)	0.5% (1)	-11.4% (26)	2.2% (6)	36
Philippines ($60.6B)	18.6% (6)	0.9 (3)	7.8% (7)	-2.7% (9)	2.6% (5)	30
China ($873.9B)	9.5% (3)	0.2 (1)	1.5% (2)	-0.9% (6)	2.0% (10)	22

Source: IMF, IIF, The World Bank, Bloomberg LP and Wells Fargo Securities, LLC

***Numbers in parentheses in the table show the number of points a country was awarded for each variable.*

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