Rating the Raters of Country Creditworthiness

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Like corporations, countries are rated on their creditworthiness. What criteria do rating agencies apply, and what can countries do to improve their credit ratings?

ATTEMPTS to rate the creditworthiness of corporate borrowers have a long history. Recently, several commercial services began to compile and publish credit ratings for countries, in an attempt to estimate the risks involved in lending to them—in particular, the likelihood of a country's defaulting on its debt-servicing obligations.

These credit ratings have played a critical role in determining both the volume and the spread over LIBOR (the interest rate at which London banks lend to each other) of syndicated commercial bank loans to developing countries over the past two decades. The share of syndicated loans in total capital flows to developing countries has diminished as other sources of foreign private capital for these countries have opened up. Nevertheless, the concepts of country risk and creditworthiness are no less important, as many institutional investors from industrial countries are allowed to invest only in instruments that meet or exceed a minimum credit rating standard. Credit ratings therefore determine not only whether a country is able to get loans at a reasonable cost but also whether it is able to attract other types of capital.

Countries whose credit ratings decline need to rebuild their creditworthiness by implementing policies that address the concerns of potential creditors. To identify the policies and economic performance variables on which credit ratings are based and assess how useful ratings are in determining a country's creditworthiness, we carried out an econometric evaluation of the most widely used commercially available ratings.

Raters of country risk

Which economic, political, and social factors influence credit ratings, and to what extent are these factors consistent with the theories developed by economists about creditworthiness? To answer these questions, we studied the credit ratings compiled by two magazines, *Institutional Investor* and *Euromoney,* and by the Economist Intelligence Unit (EIU), a publisher of business reports. Although the ratings of all three measure a country's ability and willingness to service its financial obligations, they are based on different methodologies and compiled by different types of experts.

The ratings are based on an evaluation of a number of macroeconomic, financial, and political variables (see table), including a country's economic growth rate, its current account balance relative to GDP, and various ratios—savings to investment, external debt to GDP, debt-service payments to GDP, and interest payments to GDP. In addition, a country's vulnerability to external shocks is gauged by the degree to which it relies on a single export. A country's willingness to service its financial obligations is measured both by financial variables such as arrears on international bank loans, debt reschedulings, access to bond markets, and cost of various forms of trade credits, and by political considerations, which typically include policies toward foreign creditors, the likely policies of opposition parties, the government's capacity to implement measures needed to stabilize the economy and meet external payments, and the likelihood and potential effects of political instability.

While the criteria for assessing credit risk summarized in the table suggest a precise relationship between a country's credit rating and the political, economic, and financial variables specific to that country, the judgment of the rating analysts plays an important role, both in evaluating

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Rating agencies: criteria for assessing country risk

Rating agency	Criteria for ratings
Institutional Investor	Information provided by 75–100 leading banks that grade each country on a scale of 0–100, with 100 representing least chance of default. Individual responses are weighted using a formula that gives more importance to responses from banks with greater worldwide exposure. Criteria used by the individual banks are not specified.
Euromoney	Assessment based on three main indicators: Analytical indicators (40 percent): Political risk (15 percent) Economic risk (10 percent) Economic indicators (15 percent) (debt service/exports, external debt/GNP, balance of payments/GNP) Credit indicators (20 percent) Payment record (15 percent) Rescheduling (5 percent) Market indicators (40 percent) Access to bond markets (15 percent) Selldown on short-term paper (10 percent) Access to discount available on forfeiting (15 percent)
Economist Intelligence Unit	Medium-term lending risk (45 percent) Total external debt/GDP, total debt-service ratio, interest-payment ratio, current account/GDP, savings/investment ratio, arrears on international bank loans, recourse to IMF credit, and the degree of reliance on a single export. Political and policy risk (40 percent) Short-term trade risk (15 percent)

economic and political variables (e.g., drawing conclusions about the degree of political stability) and in determining how much weight should be attached to different variables within each group of factors. Thus, a fair amount of subjective judgment goes into the final evaluation.

Regional variations

Ratings by all three sources show considerable variation across countries and over time. The average ratings for different regions are shown in the chart. For the indices published by *Institutional Investor* and *Euromoney,* available since 1981 and 1982, respectively (the EIU did not issue ratings until 1989), the data suggest three distinct periods that correspond to the debt crisis, consolidation after the crisis, and the restoration of creditworthiness. During the debt crisis of the early 1980s, *Institutional Investor* and *Euromoney* ratings generally declined across all regions. In the late 1980s, after a period of consolidation, the ratings for countries in Asia, Latin America and the Caribbean, and the Middle East showed improvement, but those for countries in Africa and Europe declined.

The data suggest that the response of various ratings to changes in the economic situations of countries occurs at different speeds. *Euromoney's* ratings improved in 1988, at the beginning of the third period, when countries began to rebuild creditworthiness, whereas *Institutional Investor's* ratings did not improve until 1990.

Measuring creditworthiness

The variables to be used to explain a country's credit rating must be consistent with the factors that the compilers of the ratings have indicated they used in assessing a country's performance and what the theoretical literature has stressed as important in determining the capacity and willingness to service external debt.

Two different theoretical approaches underlie attempts to predict the risk of default. One approach regards default as arising out of an unintended deterioration in the borrowing country's capacity to service its debt. The other, in contrast, views the rescheduling of (or default on) a country's external debt as a rational choice made by the borrower based on an assessment of the costs and benefits of rescheduling or defaulting.

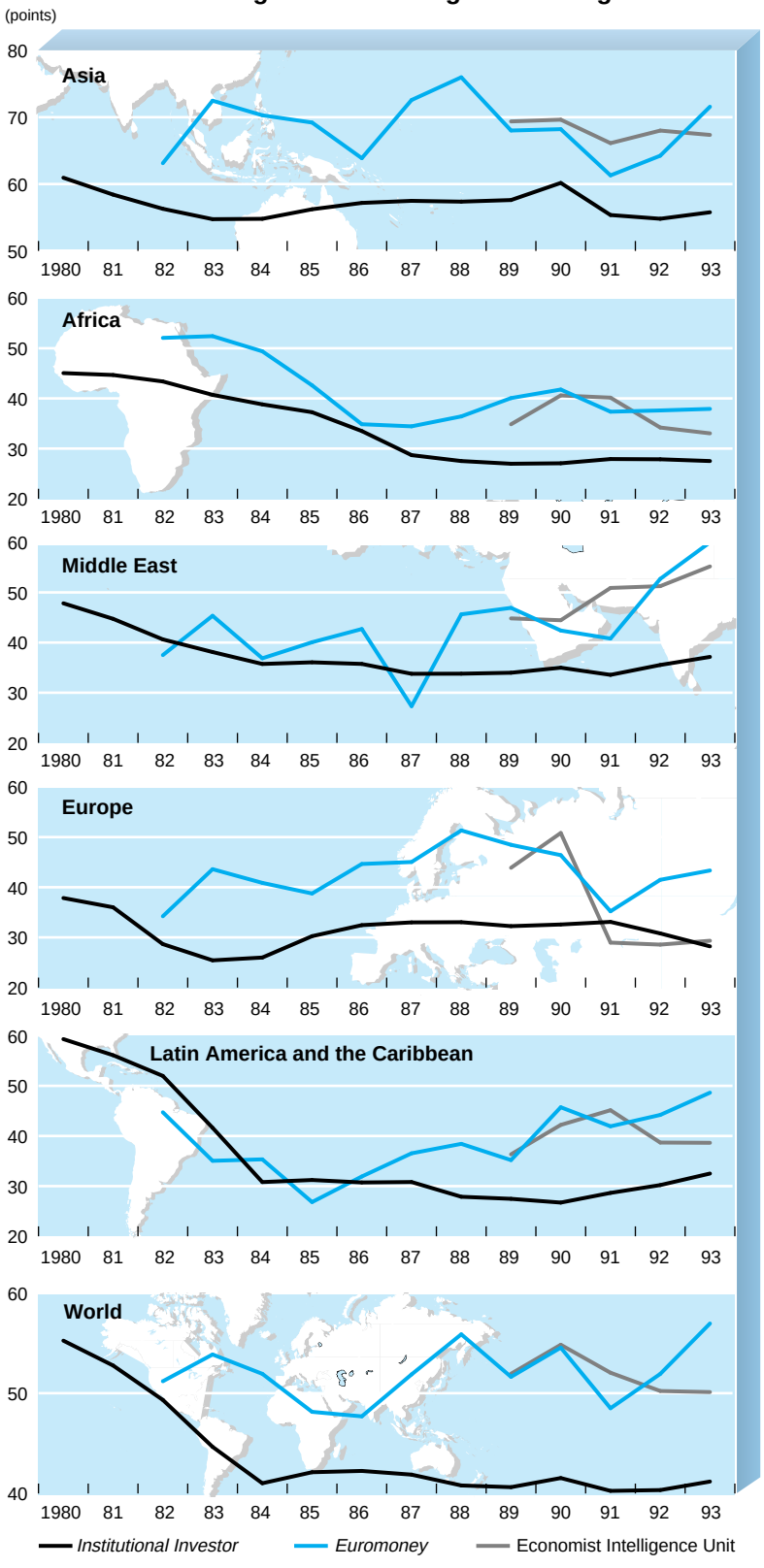
In the debt-service-capacity approach, the probability of default is seen as a function of the unsustainability of a given level of external debt, either as a result of short-term illiquidity or of long-term insolvency reflected in liquidity problems. It is assumed that the debtor's budget constraint is breached, either because of short-term economic mismanagement, long-term structural problems, domestic policy, or domestic shocks such as harvest failures, or because of external shocks such as an increase in international interest rates, deterioration in a country's terms of trade, and slowing growth in industrial countries.

With this approach, a number of key economic variables could serve as indicators of future liquidity and solvency problems. In any given period, for example, lower export earnings are likely to increase the likelihood of short-term liquidity problems and hence difficulties with debt servicing, whereas a decline in the growth of output could contribute to long-term insolvency problems and reduce creditworthiness. Similarly, the higher the ratio of debt to GDP, or the lower the ratio of international reserves to imports, the greater the threat of a sudden liquidity crisis and the lower the country's risk rating. Conversely, if the balance of payments on the current account is positive, or if there is a positive terms of trade shock in the period immediately preceding the year of the rating, the creditworthiness indicator would be expected to be higher. The inflation rate can be regarded as a proxy for the quality of economic management. Thus, the higher the inflation rate, the lower the creditworthiness rating. The real exchange rate variable can be included to measure the trade competitiveness of the economy, with a highly appreciated real rate expected to affect the credit rating adversely.

The cost-benefit approach argues that, in the absence of legal institutions to enforce international loan agreements, a market mechanism emerges in the form of a threat of future exclusion from voluntary international capital flows. In the extreme case, the cost of repudiating debt is a loss of welfare for the debtor country, which would be forced into autarky or, at the very least, barter. The benefit of defaulting on debt is the windfall gain from the economy's total outstanding debt. Consequently, any variables that make a default more advantageous for the debtor would increase the probability of a default, and variables that increase the cost of a default would reduce the probability of one.

Under this approach, a country would have four motives for incurring sovereign

Credit ratings over time: regional averages



Sources: *Institutional Investor*, *Euromoney*, and Economist Intelligence Unit (EIU). Data for EIU are available only from 1989 onward.
Note: Unweighted averages. Ratings range from 0 (least creditworthy) to 100 points (most creditworthy).

external debt: a consumption-smoothing motive; a transaction or "reputation" motive, where the debtor has an incentive to maintain its reputation; an investment motive, arising from an expectation of relatively high domestic productivity; and an adjustment motive, arising from a measure of current account sustainability. These motives are regarded as instrumental in determining the probability of default and therefore play a fundamental role in measuring country creditworthiness. For example, countries susceptible to shocks have a greater incentive to smooth consumption by maintaining access to international markets (the consumption-smoothing motive). The more open the domestic economy, the greater its vulnerability to innovations in the international market and the higher the costs of defaulting (the transaction motive). Higher domestic growth rates can indicate a higher domestic productivity that will make it more beneficial to remain a borrower and postpone default (the investment motive). A large current account deficit might create a concern on the part of lenders about a country's ability to service such debts (the adjustment motive).

Economic performance is measured in terms of a country's rate of growth and its rate of inflation. Our preliminary analysis of the data revealed that countries experiencing high inflation appear to have been treated differently in the ratings. To account for the differential treatment, we sorted countries into groups of "high" and "low" inflation and attempted to distinguish between the effect on the ratings of being in these categories and the incremental effect of increases in the rate of inflation.

The influence of a country's external position on its creditworthiness is measured in terms of the scale of its existing obligations and the factors affecting its ability to service these obligations. The scale of a country's external payment obligations is measured by the ratio of its external debt to GDP. As with high-inflation countries, we consider the possibility that the credit rating agencies may treat "high"–debt countries differently from "low"–debt countries. A country's capacity to service its external obligations is assumed to be reflected in the growth rate of its exports, its current account position, the ratio of its nongold international reserves to imports, and its real exchange rate.

The influence of international developments on a country's credit rating is examined in terms of two variables that capture the effects of external shocks to a country's

trade and financial flows. Shocks to a country's trade flows are represented by changes in a country's terms of trade. We also use the 3-month US treasury bill rate to capture the effects of external financial developments.

What the ratings reveal

While our empirical results suggest that a set of common economic variables influence the credit ratings by all three of the sources studied, there are significant differences in the relative importance attached to individual economic factors. Moreover, there is clear evidence that a country's rating persists over time; that international factors influence country ratings independently of developments in the country; and that regional considerations and a country's export profile often have a strong influence on a country's rating. As can be expected, the ratings do not appear to favor either of the theoretical approaches, but draw on aspects of both.

Persistence. Of the three rating agencies, the ratings issued by *Institutional Investor* show the most persistence. This suggests that, in the absence of new information, the ratings remain virtually constant over time.

Country-specific factors. The domestic factors that appear to have most influenced the rating analysts are a country's reserve holdings and current account balance in the year before the rating. While a higher real GDP growth rate had a significant, positive effect on the ratings issued by *Institutional Investor* and *Euromoney*, it had a statistically insignificant positive effect on the EIU's rating. In contrast, an increase in the rate of growth of a country's exports significantly raised the country's EIU and *Institutional Investor* ratings, but had a smaller positive effect on *Euromoney's* rating.

An interesting point is that, once developments in reserves, current account balances, exports, and GDP growth are taken into account, terms of trade do not appear to have a significant impact on country ratings.

The estimation results also suggest that the rating agencies designate some countries as "problem" countries according to whether or not they experience "high" inflation. Once a country is placed in the problem category, its rating goes down dramatically, and the rating analysts ignore small changes in inflation. *Euromoney* imposes the largest penalty for high inflation—a country's rating may fall 60 to 80 points (out of 100). Moreover, countries that are not in the high-inflation group were penalized in both the *Euromoney* and *Institutional Investor* ratings when their inflation rates went up. Although we expected to find a similar pattern for high and low ratios of external debt to GDP, our analysis did not bear this out; however, *Institutional Investor* seemed to penalize low-debt countries when their debt/GDP ratios rose.

Regional contagion effects and structural characteristics appear to have influenced country ratings independently of economic fundamentals. Regional effects are evident in ratings by all three organizations. After accounting for the domestic and external factors, we find that *Euromoney* has traditionally given developing countries in Asia, Europe, and the Middle East ratings 10 to 20 points higher than it gives countries in Latin America and the Caribbean and Africa. Similarly, the EIU's ratings tend to be highest for countries in Asia and Europe and lowest for African countries.

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In our analysis, the effect of a country's export orientation is measured relative to that for developing countries exporting manufactured goods. *Euromoney* and *Institutional Investor* appear to give significantly higher rankings to countries exporting manufactured goods than to exporters of other types of goods. In contrast, the EIU appears to give strongly negative ratings only to fuel exporters and producers of primary products.

Although it may seem that countries that borrow in the financial markets or from a diversified group of lenders should score higher than those dependent on official sources of loans, the advantage in terms of credit rating seems relatively modest, except in *Euromoney's* ratings.

External variables. Although the criteria used by the three rating services focus primarily on domestic economic variables, our results indicate that conditions in external financial markets influence the ratings of all developing countries independently of the quality of domestic policies and economic performance. In particular, a 100 basis point (1 percentage point) increase in international interest rates (as represented by the US treasury bill rate) would reduce a country's rating in the short term by 2 points in the cases of the EIU and *Institutional Investor*, and 7 points in the case of *Euromoney,* independently of any domestic economic developments.

Conclusion

The economic fundamentals that economists ordinarily use to determine a country's capacity and willingness to service external debt appear to play a key role in determining a developing country's credit rating. Our analysis also shows that a country tends to retain its rating over time unless significant adverse or positive developments occur.

The most important domestic economic variables influencing a country credit rating were found to be the ratio of nongold foreign exchange reserves to imports, the ratio of the current account balance to GDP, the country's rate of growth, and its rate of inflation. The effect of inflation on credit ratings was found to be nonlinear, with high-inflation countries being heavily penalized relative to countries with low or moderate inflation. Moreover, a country's credit rating has often been affected by its regional location and the types of goods it exports. Although international financial market conditions are rarely mentioned as factors influencing a country's credit rating, it was found that an increase in international interest rates would adversely affect all developing country ratings, regardless of the quality of domestic economic fundamentals.

These findings suggest that certain policies could help in rebuilding a country's credit rating during a stabilization program. It is important to note that the persistence of country ratings means that it would normally take a long time to improve a country's creditworthiness rating—from 5 to 10 years. However, the analysis suggests that certain measures can accelerate the process. For countries that have been experiencing a high rate of inflation, a sharp reduction in inflation would significantly improve the country's rating. Rebuilding the ratio of nongold foreign exchange reserves to imports would also be an important step. Finally, an improvement in the country's current account balance and a revival of growth would also appear to be important for improving the country's rating. F&D