NON-ECONOMIC RISK EVALUATION

IN MULTINATIONAL BANKS

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FOR DISCUSSION PURPOSES ONLY

Non-Economic Risk Evaluation in Multinational Banks

I   Introduction

In the past five years "political risk" analysis for multinational cor-
porations and banks has become extremely fashionable. Dozens of articles and
several books have appeared in the literature, and in the United States an
Association of Political Risk Analysts even has been formed. As each new
analyst attempts to stake a claim for better assessment or "less subjectivity",
the water has become rather muddy. Just what can be added to the debate at
this point?

The present article contains three views that should prove useful to
analysts and students alike. First, it defines political risk, or non-
economic risk, in terms that easily can be used to classify other perspec-
tives found in the literature. Second, it presents an empirical survey of
the assessment methods used by US-based multinational banks. Third, it lays
out a straightforward and reasonably comprehensive analytical technique which
can be used by multinational banks in their lending decisions. A brief sur-
vey of some of the most useful literature is included, though fuller reviews
are available elsewhere.[1] Thus, we are concerned here with the concept of
non-economic [political] risk and its relevance to the operations of multi-
national banks.

A. Risk vs. Uncertainty

A recurring assertion in the literature is that other authors' analyses
are subjectively-based, while whoever is writing possesses a more objective
scheme. Much in these claims is specious, since at some level a subjective
rating is necessarily part of any such analysis. Some of the available tech-
niques are, however, superior to others in their use of the same data—so this
argument cannot simply be ignored.

To focus on this issue, we need a definition of two of the central terms: risk and uncertainty. Though other perspectives may have usefulness elsewhere, we argue that the theory of finance is relevant here. In this discipline, risk may be either non-systematic and diversifiable (i.e., firm-specific) or systematic and non-diversifiable (i.e., a characteristic of the full economic system under question.) That is, for any potential investor (lender), the risk of doing business in any country has a component that is specific to that firm (Robock's "micro risk"[2]) and a second component that all firms face in that country (Robock's "macro risk"). From the standpoint of an individual investor, the firm-specific risk can be eliminated by investing in a portfolio of firms in the country. The systematic, non-diversifiable risk of investing in that particular country remains. Finally, uncertainty is a term reserved for the variability in future returns which is not measurable in a given situation. Uncertainty may be defined as "subjective doubt" which may persist in the absence of data for measuring expected variability. Also, uncertainty may be converted into risk by use of appropriate data and actuarial calculations of prospective outcomes. The best political risk assessment techniques that exist thus far can translate much of the initial uncertainty into risk measures, always leaving some uncertainty.

Note that the above discussion focusses on investment (lending) in one country or economic system. Similar to the strategy of reducing variability of returns by diversifying domestically, to eliminate firm-specific risk, the investor (lender) may also diversify internationally to reduce global variability of returns. Several empirical studies have shown that, in fact, investors will experience lower earnings variability by holding internationally-diversified portfolios.[3] In the end, regardless of how precise a model may

be in specifying political risk, investors/lenders will still benefit from international portfolio diversification.

The goal in our effort to assess non-economic risk, then, will be to specify the risky conditions and the possible losses that a bank may face, and then to recognize explicitly the subjective factors which enter the analysis and hence leave some uncertainty.

B. Non-economic Risk

It may appear trivial to distinguish between political risk as others have defined it and non-economic risk as we will use the term. For example, we basically agree with Robock's generic definition that,

> "political risk in international business exists (1) when discontinuities occur in the business environment, (2) when they are difficult to anticipate, and (3) when they result from political change. To constitute a "risk" these changes in the business environment must have the potential for significantly affecting the profit or other goals of a particular enterprise."[4]
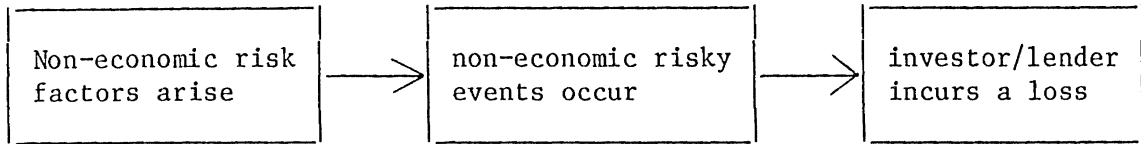
Our concern is that almost every political risk analyst includes factors which might better be considered social or cultural in nature--e.g., social unrest and disorder (Robock); overt behavior of labor unions and nationalistic groups (Root); internal violence, public unrest (Haendel et al)--and other factors which are primarily economic--e.g., balance of payments, monetary inflation (BERI); GNP growth per capita, energy consumption per capita (Haendel et al). While one could argue that political factors really are the focus of these analysts, such reasoning in the limit would require us to build additional models for social risk and perhaps even religious risk. This problem can be circumvented by (1) agreeing that economic/financial risks already fit into well-known and widely-used methods for evaluating investments or loans.[5] Then, (2) the other risk factors which remain can be labeled, as done by Kobrin: non-economic risks. Substituting "non-economic" for "political" in Robock's definition leaves us with a useful, basic definition.

Alternatively, we could work with "country risk", as the bankers prefer

to do. This broad label includes economic, political, and social factors, as

in many of the "political risk" analyses. In using the country risk label,

bankers distinguish between risks of lending to all borrowers in a given

country and (commercial) risks of lending to any particular firm or bank

that could experience financial problems. Their country risk is a "macro risk"

because it generally applies equally to any foreign lender in the country. It

includes "sovereign risk" on loans to the host government—while loans to

individual private borrowers are excluded. This framework has some advantages

in that it avoids the problem of distinguishing among economic, political, and

social variables: all of them are included. The concern in this paper is to

investigate those non-economic factors which should be included, so we will

keep a narrower focus than country risk.

Another difficulty still needs to be overcome, however. Early analyses

tended to lump together all types of political, social and economic issues,

from which to estimate loss probabilities for the investor/lender. More

sophisticated investigators now distinguish among factors, events, and out-

comes for the firm. Environmental factors in the host country are existing,

underlying conditions which could lead to risky events (e.g., existence of

strong and militant extremist groups; weak power base of present government;

strong and militant unions). Politically risky events occur as a result of

some factor's influence, and these events have some probability of leading

to a loss for the firm (e.g., government overthrow by an extremist group;

strikes; war). Outcomes for the firm include the following for

    (a) investors: expropriation, tax changes, capital controls,...
    (b) lenders : default, renegotiation, rescheduling, and blocked funds.

Overall, we see this sequence over time:

| Non-economic risk factors arise | $\longrightarrow$ | non-economic risky events occur | $\longrightarrow$ | investor/lender incurs a loss |

and the goal is to estimate the probability of arriving at a loss, plus the value of the prospective loss.

C. Banks vs. Multinational Companies

All of the issues thus far have related equally to multinational companies that want to evaluate direct investment projects and to international banks that want to evaluate foreign loans. A number of critical differences do exist, however. Figure 1 distinguishes between the concerns of companies and banks in dealing with non-economic risk.

While the multinational company typically commits not only funds but also equipment and managers to a foreign investment project, banks usually commit only funds. This fact does not illuminate the full value of the commitment, however. A bank may well lend $10-20 million to a country's borrowers—a sum easily equal to or greater than most foreign investments. Therefore, it is not possible a priori to draw any conclusions about the relative size of assets at risk for companies vs. banks in assessing non-economic risk.

[Figure 1 goes here.]

Figure 1

Non-Economic Risks for Foreign Investors and Foreign Lenders

issue	foreign direct investor	bank lender
form of commitment in the host country	machinery, people, and money	money loan to government or private sector
duration of commitment	usually indefinite (i.e. many years)	short-term or long-term
possible losses may occur from:	1. expropriation 2. nationalization 3. kidnapping of executives 4. strikes 5. riots . . .	1. default 2. renegotiation 3. restructuring 4. blocked funds
size of possible loss	depends on the event	depends on the event
means of protection	OPIC contract (US investors); international diversification; risk adaptation	EXIMBANK contract (US lenders); international diversification

The duration of the investor/lender's commitment does differ substantially between the two. Ordinarily, a company invests in a mine, manufacturing plant, or sales office to do business in the country indefinitely—or at least until such time that the operation proves unprofitable. A bank, on the other hand, lends for a specified contract period, almost always less than ten years and often less than one year. For banks that specialize in trade financing or other short-term lending, the risks to be evaluated seldom exceed one year in duration. Non-economic risk assessment for banks, therefore, is highly dependent on the maturity structure of the proposed loan or portfolio.

Means of protecting the firm's investment or loan vary from country to country as well as between banks and companies. In the United States, for

example, the Overseas Private Investment Corporation will insure some invest-
ment projects in some countries; similarly the EXIMBANK will insure some loans
for U.S. lenders. Where such coverage is not available, often private insur-
ance companies such as Lloyds of London will offer policies.[6] The use of
insurance is often called risk transfer, in contrast with the two other pos-
sible strategies of risk aversion and risk adaptation. Risk aversion can be
accomplished by requiring a higher rate of return on risky projects or loans;
and risk adaptation can be achieved by pursuing a policy of adaptation to the
perceived requests or demands of the host government or other host country
actors. Also, the use of international diversification of a project or loan
portfolio can reduce global risk to the company/bank, though not the risk
within any country.[7]

The question of possible losses is rather extensive—so Figure 1
presented some of the major causes of losses resulting from non-economic
risks, and Sections III-VI below explore the issue in the case of banks only.

II   Schemes for Non-Economic Risk Assessment

Methods used by companies, banks, and outside assessment groups can be
categorized along a variety of dimensions. An initial dichotomy can be
drawn between (1) those techniques which employ ex post data on political
conditions, that can be tabulated and projected using time series or causal
regression analysis, and (2) those techniques which involve the collection of
expert opinions on political conditions, which can be synthesized and pre-
sented in a structured fashion. At present, almost all of the schemes in use
are based on the latter technique, with the exceptions of Rummel & Heenan
[1978] and Haendel et al [1975, 1979].

A second dimension that may be useful for classifying assessment methods is the degree of specification of the political process. That is, one group of schemes utilizes explicit models of causation running from political (or non-economic) underlying conditions in a country to ultimate loss-causing events; while the other group does not attempt to model political systems on a single basis (which would be applied to all countries). These groups and other useful dimensions are shown in Figure 2.

[Figure 2 goes here]

A third dimension, not presented in the table, is the context of the results of the analysis. That is, the way in which political concerns are presented, relative to social and economic ones. Only BERI [Haner 1975] and Nagy [1979] formally point out the fact that they are examining full "country risk", and relegate political variables to a subordinate position in their presentations. Clearly, Rummel and Heenan, and indeed each of the others, include economic variables in their analyses; and they really can be said to be doing "country risk" analysis, too. In every case, a final set of country rankings is tempered by presentation of subsets of variables for each country, and all of them focus on non-economic variables (with the exception of Nagy). So the distinction probably is more apparent than real, and it is not pursued here.

Consider next the analysis used in each method.

1. Rummel and Heenan focus on those risky events which may harm a foreign firm operating in the given country. They use secondary sources to track key indicators which historically have been followed by the risky events. Events are grouped into four clusters: domestic instability (e.g., riots, assasinations, guerilla wars), foreign conflict (e.g., diplomatic explusions, military violence), political climate (e.g., size of the Communist

Figure 2

Characteristics of Methods for Non-Economic Risk Analysis

founder or method name	type of information used in analysis	specification of the political process	results of the analysis	user(s) of the results
Rummel and Heenan	time series of events and factors (e.g., riots, diplomatic expulsions, size of Communist party, GNP)	causal model of predictive signs→events→loss	graphs of each cluster of factors (i.e., domestic instability, foreign conflict political climate, economic climate) and qualitative comments for each country	multinational companies in mining and manufacturing
Haendel, West and Meadow	time series of events and factors (e.g., energy consump. per capita, demonstrations, coup.d'etat) in 65 LDC's	causal model of political system's stability	a table comparing the countries on "societal conflict", "socio-economic characteristics", and "governmental processes", plus a total index and confidence intervals	government or company analysts needing forecasts of a country's political stability
BERI (Haner)	160 individual experts, 5-10 of whose opinions are pooled on each country of 45	specification only of factors and events; no model of process	index number rankings for each country at present and in 5 years; short narratives on each country	multinational companies and banks
Frost and Sullivan	at least 3 experts provide their opinions on each of 63 countries	causal model of: actors→events→loss	table of probabilities of occurrence of each factor (socio-economic conditions, factional activity, political activity, gov't. actions), plus probability of a major loss, for each country over 18 months and 5 years	multinational companies and banks
Burn and Mustafaoglu	pooled responses from a group of experts	causal model of: factors→events→ (additional events)→ losses	table of probabilities of occurence of each of 10 political risky events for each country	multinational companies (esp. oil companies
Nagy	pooled responses from a group of experts	causal model of: factors→events→ additional events→ losses→size of expected loss	two tables for each country depicting probabilities of loss events (viz., default renegotiation, rescheduling, and transfer impossibility)	multinational banks

Sources: Kobrin [1981]; Haendel [1979]; articles by each method's proponents.

party, socialist seats in the legislature), and economic climate (e.g., GNP, inflation, foreign debt). By looking at current indicators, future events are predicted, and a graph of each event cluster over time is presented, including a range of expected future conditions. No single index number or other cross-country single result is generated; only a scenario for each country results.

This method has the shortcomings that (1) it presumes that previous indicator/event relationships will continue; (2) it does not offer any ready means of comparing countries; (3) it ignores the possible benefits of using expert opinions; and (4) it fails to explain what kinds of losses could occur.

2. <u>Haendel, West & Meadow</u> attempt to demonstrate "the role the political subsystem plays in establishing power relationships and norms for resolving conflicts in a society. It [their index] assumes that the degree of political stability in a country may indicate the society's capability to cope with new demands."[8] Their method is similar to that of Heenan & Rummel, in that they cluster risky events into several categories, then try to obtain leading indicators to forecast those events. Their categories are: socio-economic characteristics (indicators include, e.g., ethnolinguistic fractionalization, GNP growth per capita), societal conflict (e.g., riots, demonstrations, armed attacks, internal security forces per 1000 people), and governmental processes (e.g., legislative effectiveness, irregular chief executive changes). Once data are collected, countries are numerically ranked on each indicator, and the index is constructed through first building the three sub-indices, then adding them. The final output is a table of country rankings, with Haendel et al.'s "confidence estimates" included.

This method has the shortcomings that: (1) it presumes that previous indicator/event relationships will continue; (2) it does not obtain the

possible benefits of expert opinion; and (3) it does not show what kinds of losses could occur.

3. BERI, the Business Environment Risk Index, includes "the political scene", along with the business environment and monetary conditions, in estimating country risk. Actual analysis is done by 5-10 experts on each country. They rate the same 15 factors which affect the business climate on a scale of 0-4. Factors include: political stability of government, balance of payments, bureaucratic delays, long-term credit availability and terms,.... These factors are [arbitrarily] weighted from 1-3 by the company, so that the weights add to 25, and a perfect score is 100. Scores are reported for each factor, as well as for the total. Ratings are for current time and for "+ 5 years". Thus, the results are a set of country rankings in two time frames with rankings on individual factors as well as the total for each country.

This method has the shortcomings that: (1) it does not directly reconcile various experts' opinions, so the scaling across countries may be misleading; (2) it relies on no explicit specification of the political process (i.e. the relationships between indicators and loss-causing events); and (3) it does not show what kinds of losses could occur.

4. Frost and Sullivan look at political risk as the "probability that a major loss will be sustained by foregin business in the next 18 months as a result of: regime change, political turmoil, expropriation, and repatriation restrictions".[9] They utilize a deductive model of the political process that is applied to all countries. That is, a group of experts identify actors in each country who are interested in each of the four issues above. Next, the experts rank each of the identified actors in terms of position regarding each issue and ability to influence it (finally giving a degree-of-confidence estimate of his/her assessment). Lastly, an estimation of the probability

of a major loss during the period (i.e., either 18 months or 5 years) is given, based on the factor evaluations. Thus, the full process, from instigating factor to ultimate loss, is modeled. Results are given for each issue and for overall risk of loss for each country.

This method overcomes the shortcomings mentioned previously. It, however, along with the others: (1) does not offer a formal means of generating a consensus among the experts (Frost & Sullivan simply discuss divergences of opinion with their experts until some clarification or consensus is reached); (2) does not illuminate the different degrees of risk for different industries; and (3) does not estimate the size of the potential loss.

5. Bunn and Mustafaoglu follow a similar line of reasoning as do Frost and Sullivan. That is, they specify a set of factors or indicators which may lead to risky events and ultimate losses to the firm. Based on a group of experts' opinions as to the probability of each event occurring, due to the occurrence of a given indicator, structural relationships can be defined. Based on historical evidence, a set of "cross-impact" probabilities can be generated to show how often occurrence of one event is accompanied by occurrence of another. These probabilities can add information to the expected loss estimation, though they do not affect the experts' evaluations. The experts' evaluations are pooled using a beta subjective probability density function,[10] which has the "nice" characteristic that it is a (Bayesian) statistic developed to deal with, though not eliminate, this pooling problem of subjective data. Ultimate results of this analysis are a set of probabilities of occurrence of risky events, which can be compared across countries.

This method has the shortcomings that: (1) it does not specify the losses which could occur; and (2) it does not deal with inter-industry differences in risk.

6. <u>Nagy</u> looks at political risk strictly in the context of country risk

analysis for banks lending to others countries. Nonetheless, his method is

similar to those discussed above, and it could be adapted for use by foreign

investors. Nagy hypothesizes a set of factors which may lead to risky events,

which may lead to losses. The losses are of four kinds: default, renegotia-

tion, rescheduling, and currency inconvertibility (blocked funds). A group of

experts rates the probability of each <u>event</u> occurring, as well as its most

likely year of occurrence. The experts also rate the type of loss most likely

to occur if each event occurs, and its most likely year of occurrence.

(Losses are specified as mutually exclusive to avoid complicating the calcula-

tions.) Nagy has calculated a set of maximum possible (percentage) losses by

type of risk, based on explicit assumptions about interest rates and various

other parameters. By imposing these expected percentage losses on the ex-

perts' ratings, one can generate four risk measures and, by summing, a single

measure of country risk.

This method has the shortcomings that: (1) it does not offer a formal

means of generating a consensus among the experts; and (2) its parameters

are specified for the banking industry and must be changed for other

industries.

III Current Practices of Multinational Banks: Assessment Methods

The next four sections draw on information obtained in eleven formal

interviews at the home offices of U.S.-based multinational banks plus brief

discussions and written materials from two more. The sample includes seven

of the ten largest banks in the United States, plus two larger regional banks.

Our intent was to obtain empirical evidence about the "state of the art" of

non-economic risk analysis by the banks most centrally involved in it, i.e.,

those banks with assets in many countries. Thus our findings are not in any

sense representative of the evaluations used by banks in general; but we be-

lieve that they do reflect generally the methods used by the world's largest

multinational banks.

From previous discussions with bankers involved in non-economic risk

assessment and a survey of the literature, we expected that banks would fol-

low one of these general methods of analysis:

Figure 3

General Methods of Non-Economic Risk Assessment

1. Follow a systematic numerical scheme of country classification for
   political as well as commercial and currency risks. For example, use
   a checklist of factors which are scored on some scale that is con-
   sistent across countries.

2. Develop "scenarios" of potential political and economic conditions
   for each country. The typical good, medium, and bad sets of assump-
   tions generate three scenarios which can then be debated as to their
   probabilities of occurrence.

3. Use a Delphi technique of assembling a group of experts on each
   country, letting them present their views on a likely future for
   relevant conditions in the country, and debating until a consensus
   opinion results.

4. Follow the basic lending guidelines of the Fed and guidelines for
   country risk stated by Euromoney, Institutional Investor, or some
   other evaluation service.

5. Utilize a standard investment (loan) model with provision for non-
   economic risk discounting.

6. Adhere to the limits of the Fed's rules, then simply evaluate foreign
   loans individually, attaining some diversification internationally.
   Non-economic variables may appear in a loan's evaluation.

While it became clear that these banks do pursue rather different stra-

tegies of non-economic risk assessment, we found that their methods all were

classified by the bankers themselves as pertaining to either (1) or (2) from

Figure 3. That is, while the actual variables, collection procedures, and

uses of results differed widely across banks, the basic principle and form did

not. 64% of the banks interviewed use a checklist format, and 55% of them use scenario development as their bases, including two banks which use both. Two of the executives also pointed out that the form of scenario development in their banks included discussions among internal and external experts, basically following the delphic approach toward a consensus view.

This result contrasts sharply with several investigators' findings concerning multinational manufacturing and extractive firms.[11] In those cases, non-economic risk assessment was found to be quite unsystematic, even though the firms recognized that such risk is very important for evaluating a potential direct investment project. In one of his surveys of managers, Root found that "...no executive offered any evidence of a systematic evaluation of political risks, involving their identification, their likely incidence, and their specific consequences for company operations."[12]

The most-current surveys of managerial strategies toward non-economic risk show that more formal assessment processes are now coming into use; Rummel and Heenan [1978] have found that some companies use the same two general techniques as the multinational banks, while others still rely on individual managers' perceptions of general riskiness as their main assessment method. Perhaps a common method will emerge for both kinds of firms; for the moment it appears that banks generally are substantially more advanced in their attempts to evaluate non-economic risk.

Banks which use the "checklist" method vary in the form of presentation of their assessments. The common use of an actual checklist, such as that shown in Figure 4, is tempered often with additional commentary on the headings in that list. So that the final presentation carries numerical results plus paragraphs of clarification that aid in interpreting the numbers. Even with the added commentary, a final presentation follows the

same format for each country evaluated, and thus comparisons can be drawn

directly.

Figure 4

Political - Legal Factors in Country Risk Assessment

1) Political Stability		Score
a. Long-Term stability not probable	( )	10
b. Strong government but vulnerable institutions	( )	6
c. Activist internal opposition factions	( )	4
d. Strong probability of overthrow	( )	2

2) Likelihood of Internal Disorder

a. Little or no threat of civil unrest or disorder	( )	10
b. Isolated cases of unrest or disorder	( )	8
c. Frequent cases of unrest or disorder	( )	4
d. Probability of social revolution or civil war	( )	2

3) Government Intervention in Business Activity

a. Basically market economy or free enterprise system	( )	10
b. Moderate government restrictive controls	( )	8
c. Strong but selective government intervention	( )	6
d. Tightly restricted economy, virtually impossible to operate	( )	2

4) Climate for Foreign Investment

a. Favorable climate with promotional incentives	( )	10
b. No restrictions on any type of foreign investment	( )	8
c. Selective investment policy	( )	6
d. Lukewarm climate for foreign investment	( )	4
e. Hostile foreign investment climate	( )	2

5) Limits on Foreign Ownership

a. No ceiling on foreign equity percentage	( )	10
b. Local majority required in many or key industries	( )	6
c. Strict joint venture requirements	( )	4
d. No foreign minority position tolerated	( )	2

6) Restrictions on Capital Movements

a. No restrictions on any transfers	( )	10
b. Minimum controls	( )	8
c. Limits on specific inflows or outflows	( )	6
d. Strict restrictions on remittances and repatriation	( )	4
e. No transfers permitted	( )	2

Political/Legal Factors (cont'd)   Score

7) Probability of Nationalization

    a. No threat, or already nationally-owned   ( ) 10
    b. State participation in selected firms or industries   ( ) 6
    c. Nationalization of key firms or industries probable   ( ) 4
    d. Large scale nationalization a possible prospect   ( ) 2

8) Restrictions on Foreign Trade (next three years)

    a. No restrictions   ( ) 10
    b. Minor restrictions   ( ) 8
    c. Significant restrictions   ( ) 4
    d. Tight and pervasive restrictions   ( ) 2

9) Corporate Tax Level

    a. Low (income tax less than 35%)   ( ) 10
    b. Fair (income tax 35% to 50%)   ( ) 8
    c. High (income tax above 50%)   ( ) 4

Source:

The checklist method (including commentary) has the advantages that:

(1) it formalizes the criteria to be used in assessing non-economic factors;

(2) it permits direct comparisons between countries, for better or worse; (3)

it allows any number of evaluators to complete the checklist, and then results

can be pooled; and (4) it can be updated as frequently as evaluators gather

new information.

Its disadvantages arise primarily from the fact that cross-country com-

parisons of items in the list may be inadequate, unless somehow weighted dif-

ferently. That is, religious factors may be extremely important in some

countries (e.g., Iran) and less so in others; government overthrows may be

frequent and generally unimportant to foreign lenders in some countries (e.g.,

Bolivia), yet very important in others. Because governments, social customs,

religions and other non-economic factors differ tremendously across countries,

it is difficult to assess a common significance for them. Subsequently, it is

very difficult to estimate a risk probability or loss probability that is transferable among countries.

Thus, it can be argued that the checklist method offers several useful contributions to the assessment process, but by itself this method may not convey a full understanding of non-economic conditions that is comparable internationally. It remains to be seen in Section VI below how the banks incorporate this tool into their decision-making.

Banks which use the "scenario development" method vary in their generation of the scenarios as well as in presentation of the results. This method involves the forecasting of economic, political, and social conditions in the target country under different sets of assumptions. Typically, a best, a most likely, and a worst set of assumptions are hypothesized, leading to better, "normal", and worse results in terms of the conditions that the lender will face in that country in the future. For example, the distinction among the assumptions may be just three different oil prices for the coming year. Or it may be a whole set of factors that could range from very bad to very good situations from which to evaluate the likelihood of problems in repaying loans.

What emerges from this intoduction is that the scenario development method is really a range of methods with the common basis in using several different assumptions to generate a set of results--leaving it to the next group of decision-makers to utilize this information. The method itself is difficult to criticize, because it is so amorphous.

Two banks in the sample have arrived at a method which possesses substantial intuitive appeal. They regularly assemble a group of internal and outside experts on political, social, and economic conditions in various countries. These experts then present their views in a delphi process, leading

to a consensus view. Their consensus, however, is an array of two or three possible situations, with the key assumptions explicitly stated. So, a set of scenarios is created, in this case by combining the reasoning of a group of experts—again leaving the use of these scenarios to the next group of decision-makers.

The main criticism which can be levied against scenario development is that it easily can be highly subjective. It depends entirely on the thinking of the scenario developers for its results. This problem is somewhat mitigated when a delphi group of experts pools the individuals' subjective points of view, but it remains in principle.[13]

A very desirable attribute of both methods chosen by these bankers is that both utilize expectations of future conditions rather than pure extrapolations of past conditions. Just as econometric models have great difficulty in projecting turning points in the trends of different key variables, so do extrapolations of past political and social conditions lack the content necessary to foretell such turning points in key variables here. Both the checklist method and the scenario development method free analysts from depending on past trends and allow them to anticipate future shifts.

Among the models not chosen by the sampled banks is the present value technique, which is fairly widely used in investment project evaluations. As shown by Shapiro [1978], it is relatively easy to adjust either the discount rate or future cash flows to account for expected risks, e.g. non-economic ones. While the technique is transferrable to loan evaluation, any numerical estimation of the non-economic risk is subject to criticism, since current knowledge does not show any clear, measurable relationships (i.e. between non-economic factors or events and expected losses/gains to the bank). On the other hand, these same banks do project economic conditions in the

borrowing countries with formal models--since economic relationships are
better understood at present. They then combine the two kinds of information
to evaluate full "country risk".

The other assessment models not chosen by these banks are more-or-less
naive diversification models, requiring less expense by the user. It was
expected by the authors that some of the banks would leave detailed analysis
to outside agencies (e.g., Euromoney or Institutional Investor) and simply
avoid countries perceived as being very risky while diversifying somewhat
internationally. At least at the level of these multinational banks, each one
carries out its own country risk analysis, including evaluation of
non-economic factors. The large regional banks assign fewer people to the
task, but all are clearly beyond the stage of naive diversification.

IV Sources of Non-Economic Risk Data

Bankers responsible for the assessment process draw their basic infor-
mation from a wide variety of sources. Much more than simply flying to the
prospective borrower's country to "get a feel for the situation" (in the terms
of Rummel and Heenan, a "grand tour"), the bankers rely on a whole range of
sources which are frequently updated. The first source is generally personal
experience, as one might expect, given the use of checklist and scenario
development models. In most cases, the risk assessors are officers of the
bank who have experience overseas, and who therefore already possess some qua-
litative and even quantitative knowledge about some countries. Beyond per-
sonal experience, the standard sources of information include those presented
in Figure 5.

[Figure 5 goes here.]

Figure 5

Sources of Information

(Non-Economic Conditions in Potential Borrowing Countries)

	source/number of times cited	1	2	3	4	5	6	7	8	9	10	11
1	affiliate managers											
2	agents and outside counsel											
3	business periodicals											
4	consultants											
5	headquarters personnel											
6	international organizations											
7	local (host) government managers											
8	newspapers, television, radio											
9	other banks											
10	regional office (EAC) managers											
11	U.S. government agencies											

Source: Eleven interviews at multinational banks, 1981.

Although there was no single source preferred by all bankers in the sample, information from colleagues at other banks and from U.S. government agencies (especially the State Department) was cited most often. Very likely, the reliance on information from other banks stems from the fact that the bankers "speak the same language" and can communicate more readily than those with different backgrounds and interests. Also, of course, it is possible to discover if there have been any problems in loan repayment by talking with other lenders to the particular country. Reliance on information from the State Department probably stems from : (1) the fact that State Department country desk officers usually have the same (national) cultural background

as the bankers, so they think similarly, and (2) the country desk officers are responsible for keeping up-to-date information on current economic, political, and social conditions in each country.

This apparent cultural bias in obtaining information shows up again in the relative lack of reliance on government officials in the borrowing country. If the potential loan will be made directly to the government, then perhaps the use of third-party information is justified. Also, given the language barrier with respect to most foreign countries, it is possible that communication with the government managers may be somewhat difficult. But with the exception of the bank's own affiliate managers in the borrowing country, there appears to be no common, regular source of inside-the-country information that is widely used.

Among international organizations that provide useful information, almost exclusively the IMF and World Bank were cited. These institutions are used far more significantly in obtaining economic data, but they also serve as sources of socio-political information.

These results compare with the findings of Kobrin et al [1980] in a survey of MNC's, in which managers were found to rely most heavily on other managers within the same firm, and on banks. Figure 6 shows the findings of this survey of company managers.

Figure 6

Relative Importance of Information Sources

	% of Respondents Rating 1 or 2	Median Rating
Subsidiary managers	74.6	1
Regional managers	68.9	1
HQ Personnel	64.7	2
Banks	44.6	2
Consultants	27.9	3
Business periodicals	24.9	3
Other firms	22.8	3
Agents & outside counsels	22.3	3
U.S. embassies	17.2	4
Domestic agencies of U.S. gov't	16.6	4
Professional journals	14.5	3-4
Trade associations	12.9	4
International organizations	10.8	4
Newspapers, radio, TV	10.3	4
Academics	9.4	4
Journalists	8.3	5
American chambers of commerce	8.3	4

Source: Kobrin et al [1980] p. 38.

Perhaps the most striking difference between the two surveys is the companies' reliance on internal sources, compared to the banks' reliance on external sources of information.

V   Key Variables in the Assessment Process

Because of the different assessment methods used by these banks, no single list of variables can demonstrate the ways in which each item is evaluated. Therefore, this section imposes a framework on the variables and notes the number of banks which include each variable, regardless of how it is included. Then, the commentary attempts to elucidate some of the evaluation techniques.

Returning to the sequence of assessment which was presented in the first section, factors, events, and risks can be laid out as in Figure 7.[14] Moving

from left to right across the Figure, we go from underlying conditions in the

country, to potentially risky events, to the actual losses which may occur.

[Figure 7 goes here.]

VI Organizational Structure for Utilizing Non-Economic Risk Information

There is no single manner of incorporating non-economic risk information

into decision-making that is common among the sampled banks. Instead, each

bank utilizes the information at the home office in some stage of the process

of international lending. Rather than discuss eleven different ways to do

this, we will present an idealized version which incorporates the key points

from several of these banks' procedures.[15]

Figure 8 describes the stylized sequence of events that place non-

economic risk information in a multinational bank's international lending

process.

Figure 7

Non-Economic Factors, Events, and Risks

FACTORS which may lead to risky events [i.e., "structural background"]	EVENTS which may occur that reduce the bank's value of assets	RISKS which specifically reduce the bank's value of assets
government instability (5)	changes in taxes (5)	default
foreign investment climate (4)	change in rules on foreign investors' operations	
labor unrest (7)	strikes (7)	
the country's international relations	war	rescheduling
religious, tribal or ethnic unrest	violence	
gov't policy of income redistribution	civil disturbances	
increased public sector investment (4)	change in rules on foreign banks (4)	renegotiation
foreign banking climate	a coup d'etat	
strength of the military	civil war	
strength of leftist/ nationalist groups	limits on int'l financial transfers (5)	blocked funds
takeover by an extremist government	trade embargo	
assassinations	expropriations (5)	
professional capability of the govt's top leaders	devaluations	

CAUSATION ————————⟶   ————————⟶

Figures in parentheses are the number of banks in the sample which include each factor or event in their country risk assessments.

Source: extensively amended from Nagy [1979].

Figure 8

Non-Economic Risk as it fits into Foreign Lending Decisions

Step 1   Step 2a   Step 2b

| n-e risk information gathering | n-e risk evaluation and analysis | combination with economic data for "country risk" assessment |

Step 3

| creation of proposals for country lending limits |

Step|6   Step 5   Step 4

| review for next period | individual loan decisions | approval of country lending limits |
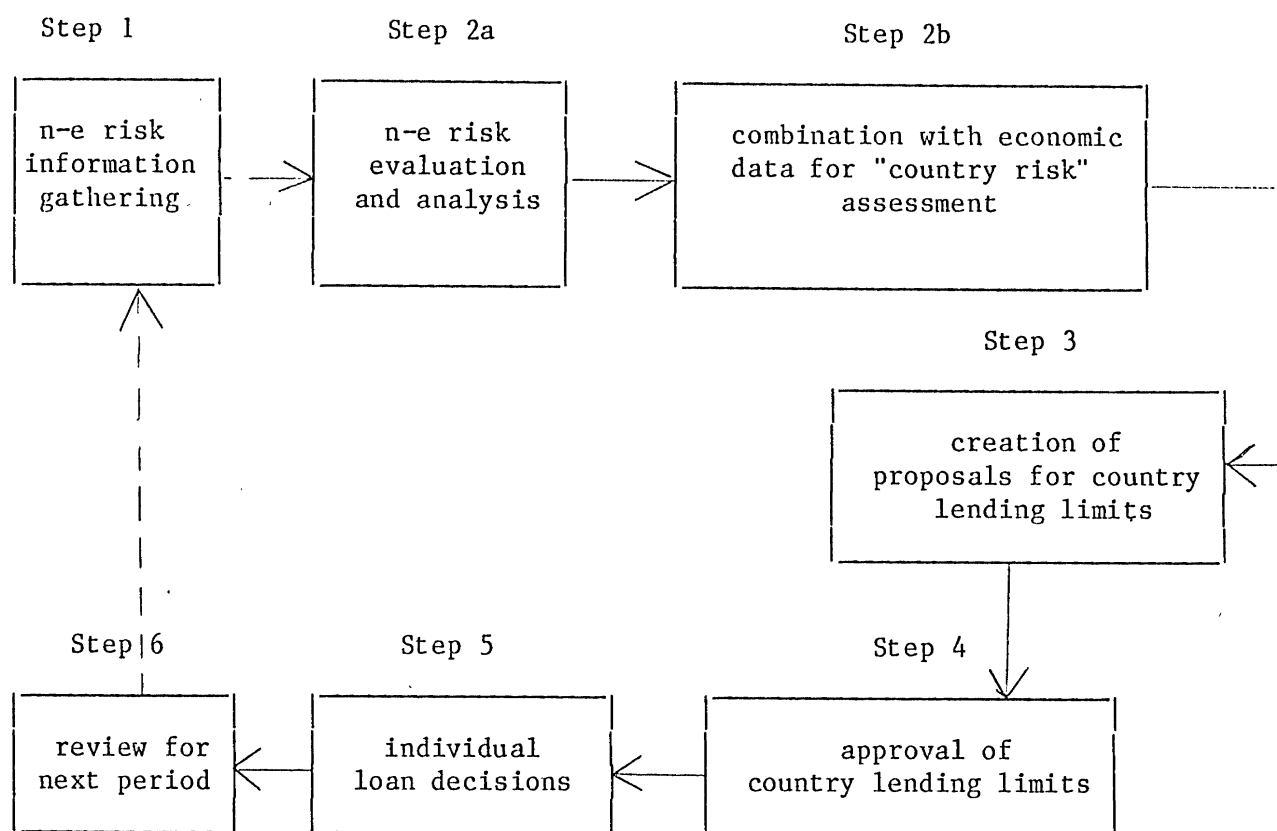
Source: Stylized version of responses from eleven multinational banks.

While the organizational location of each step in the process often differs from bank to bank, the sequence is reasonably common to them all. For example, information gathering, the first step, often is assigned to the bank's economics department, or to country officers in the international division—or part to each. In fact, steps 1 and 2 generally are performed by the same people, who are economists and in some cases political scientists. Thus, the preparation of non-economic risk assessment generally is assigned to "technical" people, who provide the interface between the bank and the borrowing country's macro environment.

Organizationally, these analysts generally work in the bank's international division (55% of the cases), its economics department (36%), or its

Step 5 occurs during the year, as individual loans are made, limited by the aggregate dollar value established in Step 4. These loans usually are made by country lending officers of the bank within the international division, under the final authority of the international division. In cases where the lending limit has been reached, additional lending in that country normally requires executive committee approval before a commitment is made.

Step 6, finally, is a review of the results of lending in the present period and earlier, which is fed into the next period's process, beginning again with Step 1.

Our primary concern in the present analysis has been with Steps 1 and 2, and we will conclude with the sketch of a system of non-economic risk assessment that could be utilized by banks in the above process.

VII Suggestions for the Assessment Process

The main problem in assessing non-economic risk is _not_ that analysts are too subjective in their procedures; rather, it is that current knowledge does not show us the relationships between socio-political risk factors and events and ultimate risk of default or other failure to fulfill loan commitments. Therefore, no matter how objective our method of analysis, the only way to get better projections of risk is to gain better understanding of each country's future. In the limit, this suggests hiring 160-plus country experts, or more, to avoid "biased" views, and incorporating them in the process.

Without going to such a ridiculous extreme, what can a bank do? Our reasoning leads us to recommend a dual assessment scheme, using both a checklist and a delphi technique. We see no reason to alter the steps in decision-making from Figure 8. Instead, we recommend specific improvements in Step 2.

executive committee (27%), with some instances of dual responsibility. In every case these same people collect economic data, and with both sets of information they examine the broader "country risk". While the step 1 assignments generally fall to individual analysts, the actual evaluation of this information is done by a group of them, or by the country assessment group in step 2a.

Step 2b, the actual designation of country risk, involves the people from earlier steps, plus additional "experts" who may add their rankings of countries on a checklist or participate in the generation of scenarios. The process through this step generally is viewed as technical background for subsequent establishment of country lending limits.

Step 3 is the development of a proposal for establishment of a new lending limit (i.e., a dollar ceiling on the total amount of lending to all borrowers in the country) for each country under review. The new limit may be higher, lower, or the same as the previous limit, or it may be the first limit set on lending to a new country for the bank. At this stage, bankers (in addition to technical people) such as the country desk officer or a regional officer become involved, since they need to "sell" the new limit to the bank's top management.

Step 4 consistently takes place at the level of the home office executive committee in all of these banks. That is, country lending limits are set by a group of top decision-makers, including those people involved in Step 3, plus the bank's chief domestic and international credit officers, and a small number of other executives--bringing the total number of people in this Step to less than a dozen. At this point all of the macro evidence is weighed and lending limits are set for the subsequent period (generally, one year).

All of the banks involved in this study have been working with political, or non-economic, risk for several years in their international lending. They all realize that the likelihood of the various types of loss:

1. default

2. rescheduling

3. renegotiation

4. blocked funds

is much higher for the last three and very low for default (based on past experience). What is needed, then, is a better understanding of the events which lead to rescheduling, renegotiation, and blockage of funds transfer.

Although no widely-accepted list of variables has been shown to foretell these risky outcomes, some progress has been made in identifying potentially relevant variables. Banks should use a checklist of some 20-30 non-economic variables, including both factors and events from Figure 7. Analysts should then subjectively estimate the likelihood of each item occurring during the time period of interest (e.g., the next year, or a 5-8 year horizon). The idea is to illuminate those variables which are likely to affect the likelihood of loan rescheduling or renegotiation, or limits on funds transfer. At present we have no reliable estimates of probabilities between events and risky outcomes; so the expert opinions simply lead to a set of expectations concerning risky events. The link to loss outcomes must be presented in qualitative terms (or the experts can subjectively estimate those probabilities, too.)

It is possible, though perhaps not desirable given our imperfect understanding of the political process, to model the linkage between factors and events. That is, some analysts have aggregated data over many years related to both factors and events in Figure 7. If one is willing to assume

cross-national comparability of relationships, and comparability over time

(a tall order!), then probabilities can be derived. For example, a probabi-

lity estimate can be made of the likelihood of changes in taxes on foreign

firms/banks, when some measure of government instability occurs during the

previous year or other time period. (The conditional probability of a change

in taxes, given government instability, is the parameter to be estimated.)

Ultimately, with a set of these estimates, one can define a full range of con-

ditional probabilities. If confidence in the estimates is assumed, then the

group of experts need only speculate as to the likelihood of factors occur-

ring. Expected values of event probabilities could be generated mechanically

from the model. This whole scheme represents a goal for the future, rather

than a tool for the present.

Predictions of the likelihood of each event and factor that are offered

by the experts can be combined as suggested by Bunn and Mustafaoglu [1978],

so that a single probability for each item results from several experts'

ratings.[16]

Next, the experts can estimate likelihoods for each event leading to one

of the four loss outcomes. This step is analogous to the previous one, in

that any number of experts can offer estimates, and the results can be pooled

in the same way.

These expert opinions lead to numerical measures of expected loss out-

comes. The size of expected losses could be estimated as in Nagy [1979], by

hypothesizing "average" conditions that occur with each outcome (e.g., length

of debt moratorium, change in loan spread, costs of negotiating the change.)

We prefer to stop short of that measure, since views of these average con-

ditions may vary substantially from bank to bank. Countries then can be

compared along all four outcome dimensions, or the outcomes can be weighted to develop a single number for each country.

We strongly support the use of a structured qualitative presentation to accompany the above calculations. Each country should be discussed in words by the experts, following a standard set of categories. The categories can be the same as the list of events, and the length of presentation is left to the bank's managers.

The quantitative and qualitative output of this process then feeds into Step 2b of the international lending process. (Step 2b itself could follow the same format; i.e., economic variables could be rated similar to the non-economic ones.)

As observation-based probability measures are developed in the future, banks can insert them into the checklist format to generate expected loss (gain) values. Again, these estimates should be used in establishing country desirability ratings, which feed into Step 2b of the lending process.

While there is nothing wholly new in these recommendations, we explicitly are supporting the use of an indicators method, that can be applied across different countries. We reject the methods of Rummel and Heenan [1978], and Haendel et al. [1975], until probability relationships between events and losses are established, and we reject the pure delphi technique unless it is based on previously compiled checklist results. Also, we reject the scenario development method, which is a reasonable technique for dealing with unknown events, but which does not lead to improved analysis when knowledge of the events' impacts improves over time.

XIII Conclusions

The foregoing analysis has examined the problems inherent in non-economic risk evaluation, especially as done by multinational banks. It has been suggested that, while the problem of estimation will remain clouded until the political process is better understood, a reasonable interim measure is possible. Namely, the use of a panel of experts to subjectively estimate likelihoods of occurrence of risky events and loss outcomes can yield manageable information to use in subsequent loan/investment decisions.

One very desirable aspect of non-economic risk analysis for the banking industry is that the risk is relatively macro, i.e., it affects all lenders looking at the given country. This contrasts with the case of non-economic risk analysis for manufacturing firms and extractive firms, in which the risk may differ from one firm to the next or because of political sensitivity of the specific industry. The risk of building a plant in the case of ITT likely differs from that of GTE, and certainly differs from that of Exxon. The non-economic risk of lending to Chile is likely to be the same for Citibank as it is for Girard Bank or Bank of America (ignoring portfolio effects). Micro, or firm-specific, risk is far less important in banking, and thus a single method of non-economic risk analysis is capable of generating usable results for the whole industry.

In considering the implementation of non-economic risk analysis within a bank, we recommend a simple yet critical policy. Some person or group at the home office should be employed to function as intermediary between outside information sources concerning non-economic factors/events and the bank's own analysts and decision-makers, who may need this information "translated" into their ways of thinking. There is no lack of variables today, but rather a lack of understanding their significance.

Finally, the bank's decision-makers should recognize that, however good the process of analysis may become, some non-systematic risk will remain in loans to any country. This part of total risk always can be reduced by diversifying the loan portfolio across countries. An optimal diversification strategy requires combination of the economic and non-economic factors that affect loan payback, and then cross-country comparison over time, which is well beyond the present scope.

Footnotes

[1]See, Dan Haendel, [1979] Chapters 3 and 4 for an excellent literature survey. Also see Stephen Kobrin [1979], and [1981].

[2]Stefan Robock [1971] p. 10.

[3]See, for example, Jacquillat and Solnik [1978] concerning individual investors and Alan Rugman [1979] concerning company strategy.

[4]Stefan Robock [1971] p. 7.

[5]These methods appear in basic textbooks on capital budgeting, such as...

[6]See Haendel, West, & Meadow [1975].

[7]Unless the existence of outside projects or loans (e.g. manufacturing of the same product in a nearby country) dissuades the host government or other pressure group from damaging the firm.

[8]Haendel [1979]. p. 106-7.

[9]Frost and Sullivan, Political Risk Services "World Summary" (February 1981). p. 2.

[10]Bunn and Mustafaoglu [1978] p. 1,559. The density function is derived in C. Peterson, "Cascaded Inference" Organization Behavior and Human Performance Vol. 10. No. 3 (1973).

[11]See Root [1968]; Zink [1973]; La Palombara and Blank [1976]; and Van Agtmael [1976].

[12]Root [1968] p. 75.

[13]Bunn and Mustafaoglu [1978] tried to reduce the problem even more, using Bayesian statistical technique.

[14]This presentation is quite similar to that of Pancras Nagy [1980] in his "Country Risk Flow Chart".

[15]An excellent statement of one bank's procedures appears in Laurence Brainard, "Bankers Trust Approach to International Risk Assessment", Bankers Trust Co., 1981 (Xerox).

[16]Each expert, k, is asked to estimate subjectively the probability of event i occurring subsequent to factor j in the relevant time period. Thus, $\sum_{i,j,k} P_{ijk}$ = the estimate of expert k concerning the probability of occurrence of event i, given factor j. If each expert also subjectively estimates n_{ijk}, which is "the empirical equivalent of the assessor's subjective information base in terms of being the number of hypothetical j occurrences which would have given the same firmness of belief as the assessor's current intuitively based opinion "[Bunn & Mustafaoglu p. 1,560.], then we have a measure of his/her confidence in the p estimate. All expert opinions can be pooled for event i to get the mean probability:

$$\bar{P}i = \sum_{k=1}^{k} \sum_{j=1}^{ji} (P_{ijk} n_{ijk}) / \sum_{k=1}^{k} \sum_{j=1}^{ji} r_{ijk}$$

Once we obtain mean estimates for all events i = 1,..., I, it is possible to proceed to the relationship described in the next paragraph: namely, the probability of a loss outcome, given occurrence of a risky event. There one can estimate m_{ik} values = probability of occurrence of outcome m given event i as seen by expert k.

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