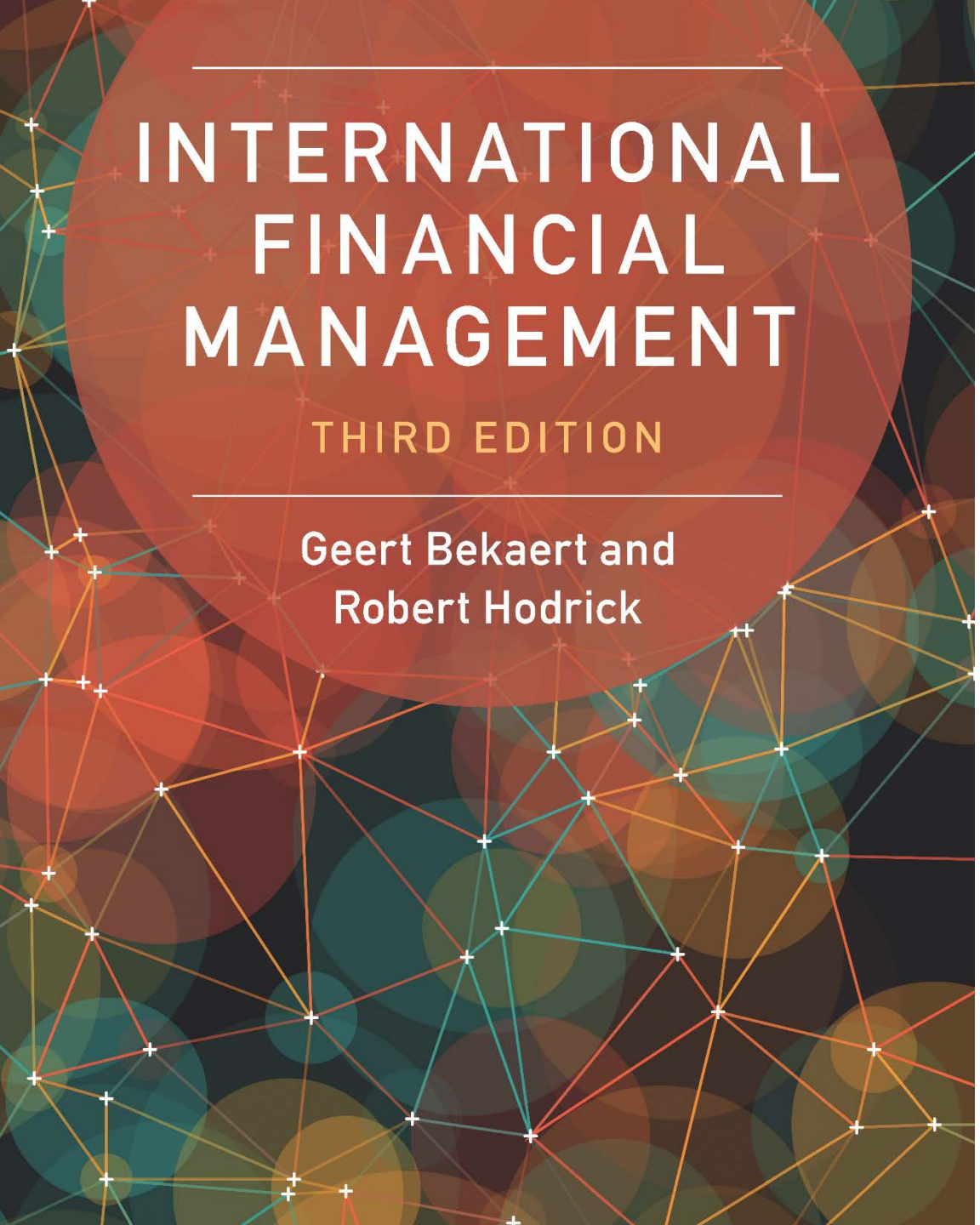


Chapter 14

Country and Political Risk

14.1 Country Risk Versus Political Risk

- Country risk
  - Political and economic risks of operating in a country
    - Country recession, labor strikes, clashes
  - Sovereign risk
    - Risk associated with government defaulting on bond payments
  - Financial and economic risk factors
    - Ratio of a country's external debt to its GDP
    - Ratio of a country's debt service payments to its exports
    - Ratio of a country's imports to its official international reserves
    - A country's terms of trade (export / import prices)
    - A country's current account deficit

14.1 Country Risk Political Versus Risk

- Political risk factors
  - Expropriation / nationalization – worst-case scenario
  - Contract repudiation
  - Taxes and regulation (i.e., hiring / firing, environmental standards, repatriation of funds)
  - Exchange controls (e.g., Argentina in 2002)
  - Corruption and legal inefficiency
    - Transparency International Corruption Perceptions Index for more than 170 countries
  - Ethnic violence, political unrest, and terrorism
  - Home-country restriction

Exhibit 14.1 Legal System Quality

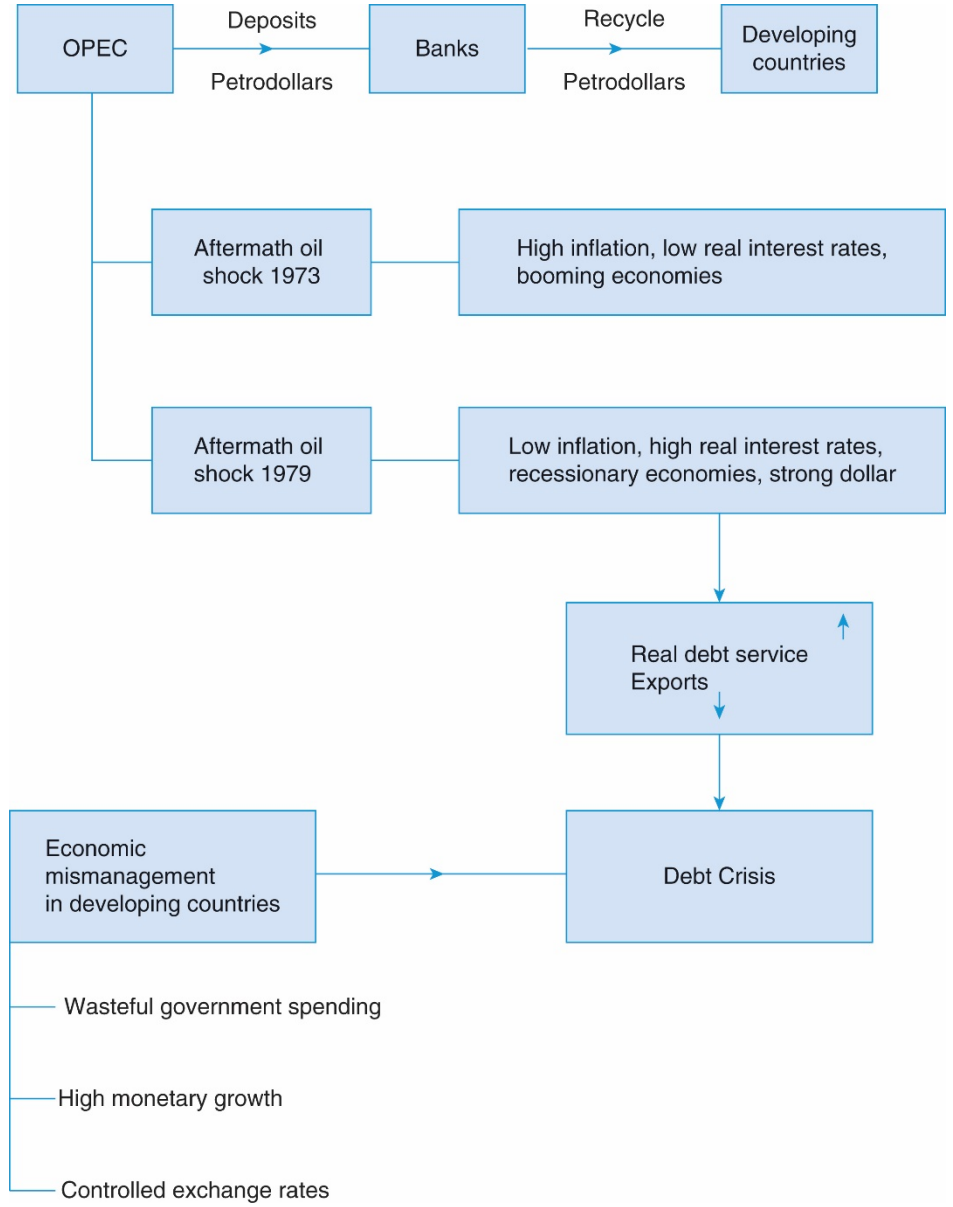
Exhibit 14.1 Legal system quality

	Eviction of a tenant (days)	Check collection (days)
G5 Countries		
USA	49	54
UK	115	101
Germany	331	154
France	226	181
Japan	363	60
Countries with slowest evictions		
Poland	1,080	1,000
Slovenia	1,003	1,003
Lebanon	973	721
Morocco	745	192
Malta	730	545
Sri Lanka	730	440
Countries with fastest evictions		
Uganda	29	99
Tunisia	33	7
Malawi	35	108
Swaziland	40	40
Canada	43	421

14.1 Country Risk Political Versus Risk

- The Debt Crisis (1980s)
  - Origins of the debt crisis
    - Mexico announced in 1982 they could not repay their foreign debt; by the end of the year 24 other countries followed suit
  - Managing the debt crisis: The Baker plan (1985)
    - Loans by banks/World Bank in exchange for agreeing to follow economic advice
    - Debt overhang issue
  - Debt and debt service-reducing operations
    - Debt buyback (at a discount)
    - Debt-equity swap
      - MNC buys discounted debt to invest – helps country and is cheaper way for companies to invest in developing nations

Exhibit 14.2 The Origins of the Debt Crisis



14.1 Country Risk Political Versus Risk

- The Brady plan (1989)
  - Options available to the banks:
    - Buybacks: the debtor country was allowed to repurchase part of its debt at an agreed discount
    - Discount bond exchange: the loans could be exchanged for bonds at an agreed discount, with the bonds yielding a market rate of interest
    - Par bond exchange: the loans could be exchanged at their face value for bonds yielding a lower interest rate than the one on the original loans
    - Conversion bonds combined with new money: loans could be exchanged for bonds at par that yield a market rate; banks had to provide new money in a fixed proportion of the amount converted

Calculating Present Values

- Consider an asset that pays a coupon or dividend of C per period, and has a final value of M at maturity after *n* periods:
  - First, in the case in which the spot rate is a constant, *r*

$$V = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \ldots + \frac{C}{(1+r)^n} + \frac{M}{(1+r)^n}$$

  - When the spot rate is not constant, we write:

$$V = \frac{C}{1+r(1)} + \frac{C}{(1+r(2))^2} + \ldots + \frac{C}{(1+r(n))^n} + \frac{M}{(1+r(n))^n}$$

Calculating Present Values under Default

- Now suppose that the probability each period of getting paid nothing at all is *p*(t), and otherwise the asset pays its promised value. Then (assuming no correlation with the market return), the value of the asset is given by:

$$V = (1-p(1))\frac{C}{1+r(1)} + (1-p(2))\frac{C}{(1+r(2))^2} + \ldots + (1-p(n))\frac{C}{(1+r(n))^n} + (1-p(n))\frac{M}{(1+r(n))^n}$$

- For example, suppose that there is a constant probability of default each period of *p*, but that once default occurs, no further payments will be made.
  - The probability of a payment in period *j* is the probability no default will have occurred by period *j*

$$V = (1-p)\frac{C}{1+r(1)} + (1-p)^2\frac{C}{(1+r(2))^2} + \ldots + (1-p)^n\frac{C}{(1+r(n))^n} + (1-p)^n\frac{M}{(1+r(n))^n}$$

Calculating Present Values under Default

- Almost always when there is default, something is repaid, just not the full amount. That is, there is some “recovery”.
- Let R(t) be the amount that is repaid when there is default.
- Again assume a constant probability of default, p, but now once default occurs, the recovery value is paid in the period of default, and nothing after that.
- So, in period *j* there is a probability of $(1-p)^j$ that the full amount will be repaid.
- The probability that the default occurs in period *j* is $p(1-p)^{j-1}$.
- Then the expected payment in period *j* is $(1-p)^j C + p(1-p)^{j-1} R(j)$
- Even more generally, let the promised payout in period *j* be $C(j)$

Calculating Present Values under Default

- Allowing for some recovery in the period of default, we get:

$$V = \frac{(1-p)C(1)+pR(1)}{1+r(1)} + \frac{(1-p)^2 C(2)+p(1-p)R(2)}{(1+r(2))^2} + \ldots$$

$$+ \frac{(1-p)^n C(n)+p(1-p)^{n-1} R(n)}{(1+r(n))^n}$$

- If we know the price of the bond, V, all of the spot rates, $r(j)$, all of the promised payments, $C(j)$, and all of the recovery payments, $R(j)$, we can use this equation to back out the probability of default, p.
  - You can't solve that by hand. You would need a computer program.

14.3 Country and Political Risk Analysis

- The PRS Group's ICRG Rating System
  - Financial and economic risk factors
    - Assessing a country's ability to repay foreign debt
    - Objective inputs
  - The political risk components
    - Stability based on government
    - Subjective inputs

Exhibit 14.4 Risk Attributes and Political Risk Analysis

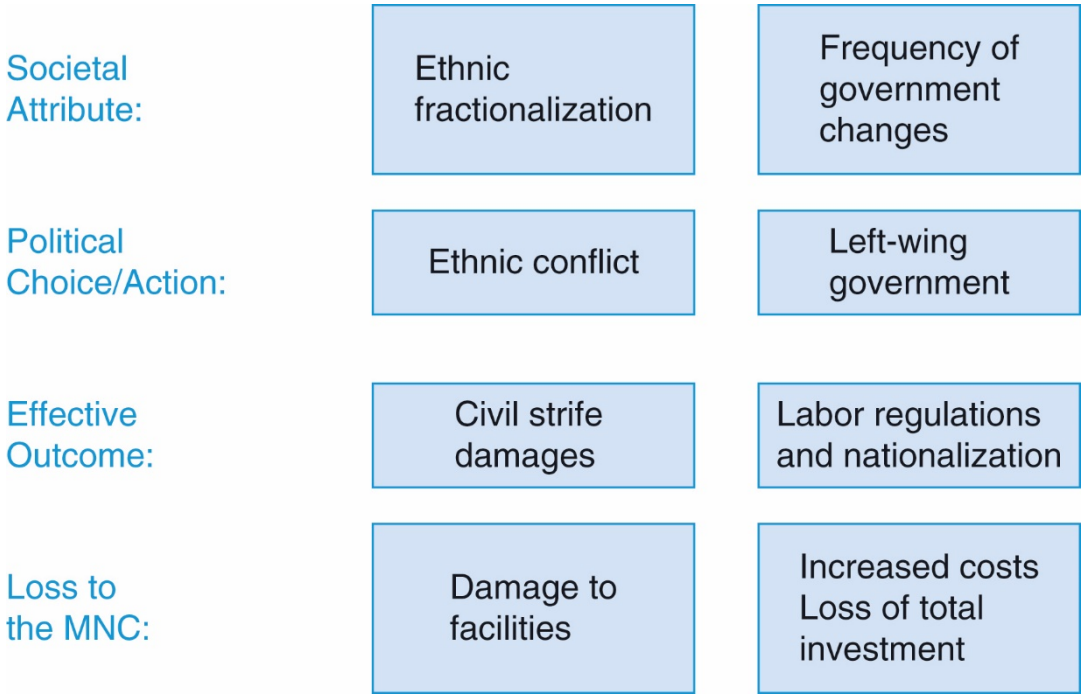


Exhibit 14.5 The ICRG Risk Components

Exhibit 14.5 The ICRG risk components

Political risk components

Component	Points (max.)
Government stability	12
Socioeconomic conditions	12
Investment profile	12
Internal conflict	12
External conflict	12
Corruption	6
Military in politics	6
Religious tensions	6
Law and order	6
Ethnic tensions	6
Democratic accountability	6
Bureaucracy quality	4
Maximum total points	**100**
Financial risk components	**Points (max.)**
Component	
Foreign debt as a percentage of GDP	10
Foreign debt service as a percentage of XGS*	10
Current account as a percentage of XGS*	15
Net liquidity as months of import cover	5
Exchange rate stability	10
Maximum total points	**50**
Economic risk components	
Component	**Points (max.)**
GDP per head of population	5
Real annual GDP growth	10
Annual inflation rate	10
Budget balance as a percentage of GDP	10
Current account balance as a percentage of GDP	15
Maximum total points	**50**

Exhibit 14.6 Country and Political Risk Ratings for Selected Countries

Exhibit 14.6 Country and political risk ratings for selected countries

Country	Overall country risk	Political risk	Quality of institutions	Conflict	Democratic tendencies	Policies	Investment conditions/ corruption
USA	76.8	81.5	81.3	83.3	83.3	79.2	88.9
UK	76.0	80.5	84.4	77.8	100.0	75.0	80.6
France	74.5	78.0	81.3	73.6	95.8	75.0	88.9
Germany	82.3	83.0	87.5	84.7	100.0	73.6	91.7
Japan	82.0	80.5	84.4	84.7	83.3	73.6	88.9
Norway	91.0	89.0	93.8	88.9	100.0	83.3	91.7
Somalia	36.0	24.0	9.4	34.7	16.7	22.2	16.7
Brunei	87.5	82.5	68.8	93.1	45.8	90.3	77.8
Indonesia	67.8	60.5	50.0	61.1	62.5	63.9	66.7
Malaysia	78.5	73.0	59.4	77.8	79.2	72.2	63.9
Singapore	82.5	84.5	84.4	87.5	58.3	90.3	91.7
Vietnam	68.3	65.5	53.1	83.3	33.3	63.9	58.3
Myanmar	51.8	46.5	34.4	66.7	8.3	44.4	22.2
Philippines	72.3	62.5	46.9	70.8	66.7	59.7	61.1
Thailand	68.8	56.0	40.6	58.3	62.5	58.3	52.8

14.3 Country and Political Risk Analysis

- Country Credit Spreads
  - Difference between yields of international bond and government bonds of the developed country
  - Sovereign credit ratings – Moody's, S&P, Fitch
  - Why is sovereign credit risk different?
    - Cannot take a country to bankruptcy court
    - Still, there are consequences
      - Assets may be seized
      - Country will not be able to borrow so easily going forward
      - International trade could be impacted
      - Default could make economic crises worse

Exhibit 14.7 Sovereign Credit Ratings by Standard & Poor's

Exhibit 14.7 Sovereign credit ratings by Standard & Poor's

Albania	B+	Fiji Islands	B+	The Netherlands	AAA
Andorra	BBB–	Finland	AA+	New Zealand	AA
Angola	B+	France	AA	Nicaragua	B+
Argentina	D	Gabonese Republic	B	Nigeria	B+
Aruba	BBB+	Georgia	BB–	Norway	AAA
Australia	AAA	Germany	AAA	Oman	BBB–
Austria	AA+	Ghana	B–	Pakistan	B–
Azerbaijan	BB+	Greece	B–	Panama	BBB
Bahamas	BBB–	Grenada	D	Papua New Guinea	B+
Bahrain	BB	Guatemala	BB	Paraguay	BB
Bangladesh	BB–	Guernsey	AAA	Peru	BB
Barbados	B	Honduras	B+	Philippines	BBB
Belarus	B–	Hong Kong	AAA	Poland	BBB+
Belgium	AA	Hungary	BB+	Portugal	BB+
Belize	B–	Iceland	BBB+	Qatar	AA
Benin	B	India	BBB–	Romania	BBB–
Bermuda	A+	Indonesia	BB+	Russia	BB+
Bolivia	BB	Ireland	A+–	Rwanda	B+
Bosnia and Herzegovina	B+	Isle of Man	A	Saudi Arabia	A–
Botswana	A–	Israel	A+	Senegal	B+
Brazil	BBB–	Italy	BBB–	Serbia	BB–
Bulgaria	B	Jamaica	B–	Singapore	AAA
Burkina Faso	B–	Japan	A–	Slovakia	A+
Cambodia	B+	Jordan	BB–	Slovenia	A–
Cameroon	B	Kazakhstan	BBB	South Africa	BBB–
Canada	AAA	Kenya	B+	Spain	AA
Cape Verde	B+	Korea	A	Sri Lanka	B+
Chile	AA–+	Kuwait	AA+	Suriname	B+
China	AA–	Kyrgyzstan	B	Sweden	AAA
Colombia	BBB–	Latvia	BB+	Switzerland	AAA
Cook Islands	BB–	Lebanon	B–	Taiwan	AA–
Costa Rica	BB–	Liechtenstein	AAA	Thailand	BBB+
Croatia	BBB–	Lithuania	BBB	Trinidad and Tobago	A
Cyprus	BB–	Luxembourg	AAA	Tunisia	BBB–
Czech Republic	AA–	Macedonia	BB–	Turkey	BB
Denmark	AAA	Malaysia	A–	Uganda	B+
Dominican Republic	BB–	Malta	BBB+	Ukraine	B+
Ecuador	B–	Mexico	BBB+	United Arab Emirates	AA
Egypt	B	Mongolia	BB–	United Kingdom	AAA
El Salvador	B+	Montenegro	B+	United States	AAA
Estonia	AA–	Morocco	BBB–	Uruguay	BB
Ethiopia	B	Mozambique	B+	Venezuela	BB–
		Mozambique	B+	Vietnam	BB–
				Zambia	B

14.3 Country and Political Risk Analysis

- Taking Governments to Court
  - Bilateral investment treaties (BITs)
    - Beneficial?
  - International Center for the Settlement of Investment Disputes (ICSID)

14.3 Country and Political Risk Analysis

- Brady Bonds
  - Valued like other fixed-income securities but have special features
    - Principal collateral: all par and discount bonds are collateralized by US Treasury zero-coupon securities
    - Interest collateral: the government issuing Brady bonds deposits money w/ NY Federal Reserve Bank in amounts covering 12 – 18 months of interest payments
    - Sovereign portion: The remaining cash flows are subject to sovereign risk
- Valuing Brady Bonds
    - You first calculate the value of the collateral, using the formula from before. The stream of payments from the collateral has a probability of default of zero.
    - Then you value the promised stream of payments that are not backed by collateral (and therefore subject to default), again using the previous formula.
      - This is called the “stripped value”

14.3 Country and Political Risk Analysis

- Computing political risk probabilities
  - Country credit spreads
    - Do not just add to discount rate
    - Uncover default probabilities
  - Political risk ratings
    - No evidence of predictive ability
    - Could be lagging (and not leading)
  - Political risk insurance premiums