Frying pans and Fires...

Country Risk: A 2023 Update

An Annual Ritual on Country Risk

- For the last decade, I have looked at country risk, in all its dimensions, towards the middle of each year for many reasons.
 - One is *curiosity*, as political and economic crises roll through regions of the world, roiling long-held beliefs about safe and risky countries.
 - The other is *pragmatic*, since it is almost impossible to value a company or business today without a clear sense of how risk exposure varies across the world, since for many companies, either the inputs or output are often in foreign markets.
- Since country risk is multidimensional and dynamic, my annual country risk update runs to more than a hundred pages, but I will try to summarize what the last year has brought in this post.

Drivers of Country Risk

Political Structure

- The degree of political freedom/democracy affects business risk, but the <u>effects can cut both ways</u> (good and bad).
- Democracies expose businesses to <u>more</u> <u>continuous risk</u>, as laws and regulations can change, when elections create government changes.
- Authoritarian regimes often offer the promise of predictability, and less risk on a period-to-period basis, but face <u>more discontinuous risk</u>, since regime change is often violent and significantly disruptive.

Corruption

- Corruption operates as a <u>hidden tax</u>, reducing profitability and value for private businesses
- Businesses operating in corrupt locales face a choice of either accepting corruption as part of the cost of doing business or operating at a disadvantage to competitors who are less scruplous.

Country Risk

War & Violence

- Operating a business in a country that is more exposed to violence, from war, terrorism or internal strife, is more difficult than operating that business in a more peaceful environment.
- Businesses will face higher costs in operations and/ or from trying to insure themselves against violence.

Legal & Property Rights

- The value of a private business is dependent on a legal system that <u>respects property rights and enforces those rights</u>.
- In a country where there are no or weak property rights or that has a <u>legal system that does not</u> <u>enforce those rights</u>, businesses face more risks and have less value.
- <u>Timeliness</u> in enforcing legal rights matters as much as the due process, since rights not enforced in a timely manner provide weak protection.

1. Democracy, in degrees...

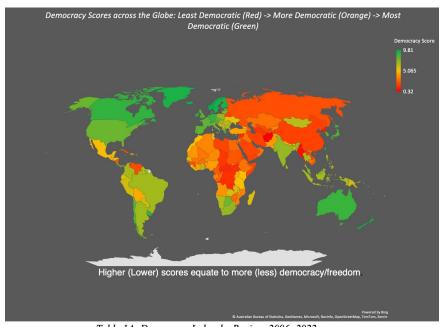
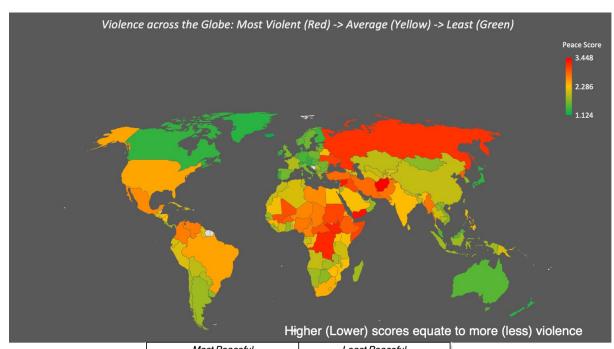


Table 1A: Democracy Index, by Region: 2006 -2022

	EIU Democracy Index Score (Higher = More Democratic)								
Region	2022	2021	2016	2011	2006				
Asia & Australasia	5.46	5.46	5.74	5.51	5.44				
Eastern Europe	5.39	5.36	5.43	5.50	5.76				
Latin America	5.79	5.83	6.33	6.35	6.37				
Middle East & North									
Africa	3.34	3.41	3.56	3.62	3.53				
North America	8.37	8.36	8.56	8.59	8.64				
Western Europe	8.36	8.22	8.40	8.40	8.60				
Sub-Saharan Africa	4.14	4.12	4.37	4.32	4.24				
World average	5.29	5.28	5.52	5.49	5.52				

2. Violence and its Consequences



Most Peaceful		Least Peaceful				
Country	Score	Country	Score			
Iceland	1.124	Afghanistan	3.448			
Denmark	1.310	Yemen	3.350			
Ireland	1.312	Syria	3.294			
New Zealand	1.313	South Sudan	3.221			
Austria	1.316	Congo (Dem Rep)	3.214			
Singapore	1.332	Russia	3.142			
Portugal	1.333	Ukraine	3.043			
Slovenia	1.334	Somalia	3.036			
Japan	1.336	Sudan	3.023			
Switzerland	1.339	Iraq	3.006			

3. Corruption, an implicit tax

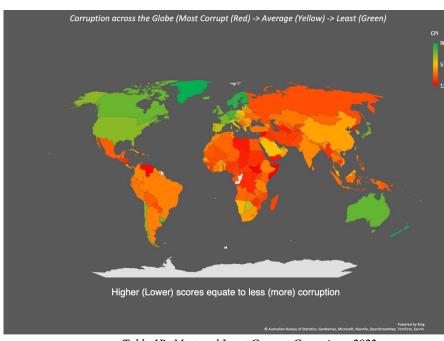


Table 1B: Most and Least Corrupt Countries – 2022

Leas	st Corrupt	Most Corrupt				
Country	Corruption Score	Country	Corruption Score			
Denmark	90	Somalia	12			
Finland	87	South Sudan	13			
New Zealand	87	Syria	13			
Norway	84	Venezuela	14			
Singapore	83	Yemen	16			
Sweden	83	Burundi	17			
Switzerland	82	Equatorial Guinea	17			
Netherlands	80	Haiti	17			
Germany	79	Korea, North	17			
Ireland	77	Libya	17			

4. Legal Protection or its Absence!

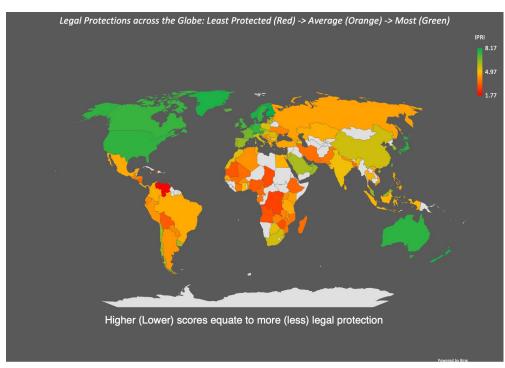


Table 2: Property Right Protection by Region – 2022

Region	IPRI	LP	PPR	IPR
Africa	4.1586	3.8824	4.2890	4.3044
Asia	5.4142	5.2175	5.8313	5.1939
Central America	4.3503	4.0418	4.3809	4.6282
European Union	6.4144	6.6245	6.1400	6.4789
North America	6.5538	6.0333	6.2315	7.3967
Oceania	7.7728	8.3443	7.5844	7.3898
Rest of Europe	5.2692	5.1637	5.3599	5.2839
South America	4.3253	4.1020	4.3227	4.5510

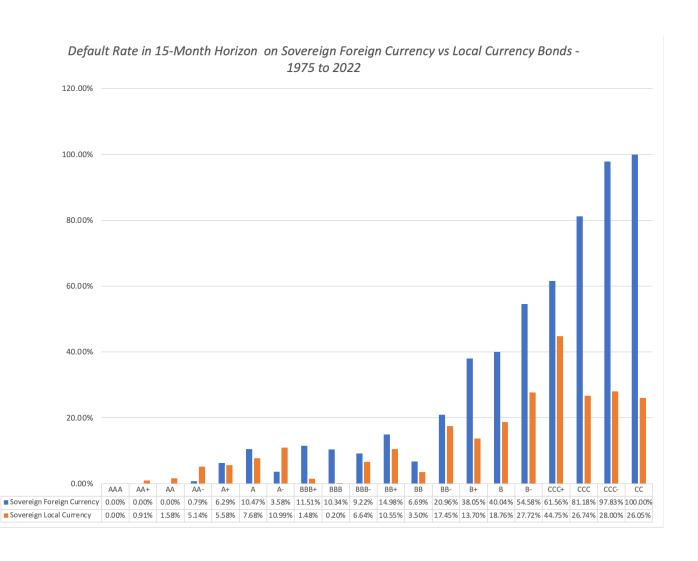
Measuring Country Risk

- **Default Risk**: Countries can default on their borrowings, and default risk looks at that likelihood.
 - <u>Sovereign Ratings</u>: Moody's, S&P and Fitch (among others) rate countries on both local and foreign currency debt.
 - Sovereign CDS spreads: This is a market-based estimate of how much it will cost you to buy insurance against sovereign default on an annual basis.
- **Composite Risk Scores**: There are services like PRS, the Economist and the World Bank that measure country risk on many dimensions and with a score.
 - Pluses: Bring in risks that may not be captured in default
 - <u>Minuses</u>: No standardization, Subjective, Difficult to compare across countries
- Equity/Ownership Risk: Should be greater than default risk, since equity investors are last in line, behind lenders.

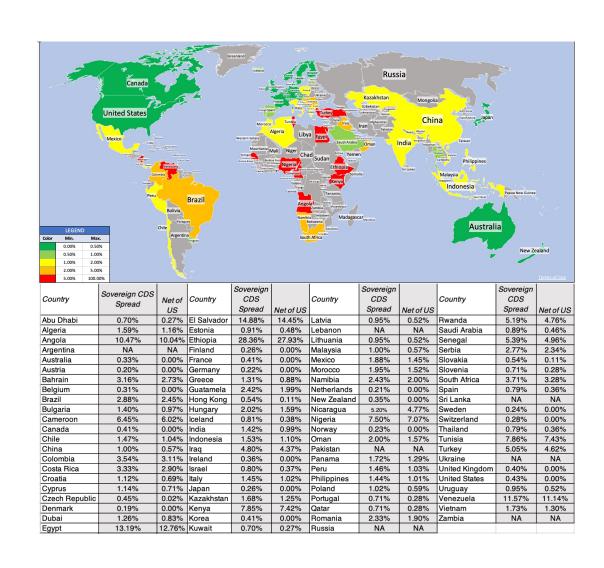
1A. Sovereign Ratings

			1		I			l	ı		
Country	S&P	Moody'	Country	S&P	Moody's	Country	S&P	Moody's	Country	S&P	Moody's
	Rating	s rating		Rating	rating	-	Rating	rating	8	Rating	rating
Abu Dhabi	AA+	Aa2	Curacao	BBB	Baa2	Laos	NA	Caa3	Rwanda	B+	B2
Albania	B+	B1	Cyprus	BBB	Ba1	Latvia	A+	A3	Saudi Arabia	Α	A1
Andorra (Principality of)	BBB+	Baa2	Czech Republic	AA-	Aa3	Lebanon	D	С	Senegal	B+	Ba3
Angola	B-	B3	Denmark	AAA	Aaa	Liechtenstein	AAA	Aaa	Serbia	BB+	Ba2
Argentina	CCC-	Ca	Dominican Republic	BB	Ba3	Lithuania	A+	A2	Sharjah	NA	Ba1
Armenia	B+	Ba3	Ecuador	B-	Caa3	Luxembourg	AAA	Aaa	Singapore	AAA	Aaa
Aruba	BBB	Baa2	Egypt	В	B3	Macao	NA	Aa3	Slovakia	A+	A2
Australia	AAA	Aaa	El Salvador	CCC+	Caa3	Macedonia	BB-	Ba3	Slovenia	AA-	A3
Austria	AA+	Aa1	Estonia	AA-	A1	Malaysia	A-	A3	Solomon Islands	0	Caa1
Azerbaijan	BB+	Ba1	Ethiopia	CCC	Caa2	Maldives	NR	Caa1	South Africa	BB-	Ba2
Bahamas	B+	B1	Fiji	B+	B1	Mali	NR	Caa2	Spain	Α	Baa1
Bahrain	B+	B2	Finland	AA+	Aa1	Malta	A-	A2	Sri Lanka	NA	Ca
Bangladesh	BB-	B1	France	AA	Aa2	Mauritius	NR	Baa3	St. Maarten	NA	Ba2
Barbados	B-	Caa1	Gabon	NA	Caa1	Mexico	BBB	Baa2	St. Vincent & the Grenadines	NA	B3
Belarus	NA	С	Georgia	BB	Ba2	Moldova	NR	B3	Suriname	Na	Caa3
Belgium	AA	Aa3	Germany	AAA	Aaa	Mongolia	В	B3	Swaziland	NA	B3
Belize	B-	Caa2	Ghana	NA	Ca	Montenegro	В	B1	Sweden	AAA	Aaa
Benin	B+	B1	Greece	BB+	Ba3	Montserrat	BBB-	Baa3	Switzerland	AAA	Aaa
Bermuda	A+	A2	Guatemala	BB	Ba1	Morocco	BB+	Ba1	Taiwan	AA+	Aa3
Bolivia	B-	Caa1	Guernsey (States of)	AA	Aa2	Mozambique	CCC+	Caa2	Tajikistan	B-	В3
Bosnia and Herzegovina	В	B3	Honduras	BB-	B1	Namibia	NR	B1	Tanzania	NA	B2
Botswana	BBB+	A3	Hong Kong	AA+	Aa3	Netherlands	AAA	Aaa	Thailand	BBB+	Baa1
Brazil	BB-	Ba2	Hungary	BBB-	Baa2	New Zealand	AA+	Aaa	Togo	В	B3
Bulgaria	BBB	Baa1	Iceland	Α	A2	Nicaragua	В	B3	Trinidad and Tobago	BBB-	Ba2
Burkina Faso	CCC+	Caa1	India	BBB-	Baa3	Niger	NR	B3	Tunisia	NA	Caa2
Cambodia	NA	B2	Indonesia	BBB	Baa2	Nigeria	B-	Caa1	Turkey	В	В3
Cameroon	B-	B2	Iraq	B-	Caa1	Norway	AAA	Aaa	Turks and Caicos Islands	BBB+	Baa1
Canada	AAA	Aaa	Ireland	AA	Aa3	Oman	BB	Ba2	Uganda	В	B2
Cape Verde	B-	В3	Isle of Man	N/A	Aa3	Pakistan	CCC+	Caa3	Ukraine	ccc	Ca
Cayman Islands	NA	Aa3	Israel	AA-	A1	Panama	BBB	Baa2	United Arab Emirates	AA	Aa2
Chile	Α	A2	Italy	BBB	Baa3	Papua New Guinea	B-	B2	United Kingdom	AA	Aa3
China	A+	A1	Jamaica	B+	B2	Paraguay	BB	Ba1	United States	AA+	Aaa
Colombia	BB+	Baa2	Japan	A+	A1	Peru	BBB	Baa1	Uruguay	BBB+	Baa2
Congo (Democratic Republic of)	B-	В3	Jersey (States of)	AA-	Aa3	Philippines	BBB+	Baa2	Uzbekistan	BB-	Ba3
Congo (Republic of)	CCC+	Caa2	Jordan	B+	B1	Poland	A-	A2	Venezuela	NA	С
Cook Islands	В	B2	Kazakhstan	BBB-	Baa2	Portugal	BBB+	Baa2	Vietnam	BB+	Ba2
Costa Rica	B+	B2	Kenya	В	B3	Qatar	AA	Aa3	Zambia	NA	Ca
Côte d'Ivoire	BB-	Ba3	Korea	AA	Aa2	Ras Al Khaimah (Emirate of)	A-	A3	-		
Croatia	BBB+	Baa2	Kuwait	A+	A1	Romania	BBB-	Baa3			
Cuba	NA	Ca	Kyrgyzstan	NA	B3	Russia	NR	Ca			
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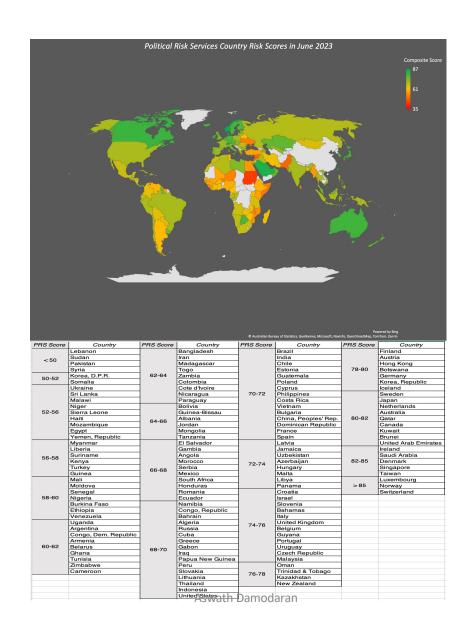
A History of Sovereign Default



1B. Sovereign CDS Spreads



2. Country Risk Scores



3. Equity Risk Premiums: My Approach

ERP Estimation Procedure

Step 1: Mature Market Premium

Step 2: Assess country risk

Step 3: Convert country risk measure into an additional country risk premium for equity

Step 4: Estimate an ERP for country

ERP for country = US

ERP

ERP for country

+ Default Spread ×

Relative Equity Market

= US ERP

Volatility

Estimate the implied equity risk premium for S&P 500

In July 2023, ERP for S&P 500 was roughly 5.00% (down from 5.95% on 1/1/23) Check the sovereign local currency rating for the country, with

Moody's.

If rating not available on Moody's, check on S&P & convert into Moody's equivalent if sovereign rating is AAA

If sovereign rating is less than

AAA, get a default spread for the country, using one of 1. Spread on sovereign bond

- in US\$
- 2. CDS spread
- 3. Ratings table

Sovereign default spreads, On July 1, 2023 = 1.42

by ratings class, updated on 7/1/23

If there is no sovereign rating, get a country risk score from PRS.

Estimate an ERP based on PRS score

Relative Equity

Market Volatility =

Std dev of

emerging market

equity index/ Std

dev of emerging

market bond index

ERP for country = PRSbased ERP

Monthly

Every six months (in January and July)

												Albania	BI	6.7
Andorra		1	Baa2	2.89%	7.89%	-	Ba	_		8.33%		Armenia	Ba3	5.4
Austria			Aa1	0.61%		Jersey (States of	(i) Aa	a3 0.9	1%	5.91%		Azerbaijan	Bal	3.8
Belgium			Aa3	0.91%	5.91%	Liechtenstein	A	aa 0.0	0%	5.00%		Belarus	С	24.
Cyprus			Ba1	3.80%	8.80%	Luxembourg	A	aa 0.0	0%	5.00%		Bosnia and Herzegovina	В3	9.8
Denmarl	ζ.		Aaa	0.00%	5.00%	Malta	A	2 1.2	8%	6.28%		Bulgaria	Baa1	2.4
Finland			Aa1	0.61%	5.61%	Netherlands	A	_		5.00%		Croatia	Baa2	2.5
France			Aa2	0.75%	5.75%	Norway	A	_		5.00%		Czech Republic	Aa3	0.9
Germany	у	\rightarrow	Aaa	0.00%		Portugal	Ba	_		7.89%		Estonia	A1	1.0
Greece		-	Ba3	5.46%	10.46%	Spain	Ba	_		7.43%		Georgia	Ba2	4.3
Guernse	y (Stat	es of)	Aa2	0.75%	5.75%	Sweden	A	_		5.00%		Hungary	Baa2	2.5
Iceland			A2	1.28%	6.28%	Switzerland	A	_		5.00%	- 23	Kazakhstan	Baa2	2.3
Ireland		\rightarrow	Aa3	0.91%	5.91%	Turkey	В	_		14.86%	-	Kyrgyzstan	В3	9.8
Isle of M	1an		Aa3	0.91%	5.91%	United Kingdon	n Aa			5.91%	2	Latvia	A3	1.8
	v				100	W.Europe		1.3	/%	6.37%		Lithuania	A2	1.3
		1					5					Macedonia	Ba3	5.4
			1			• /	3				1	Moldova	В3	9.1
						Angola	B3	9.86%	1	4.86%	1	Montenegro	B1	6.8
Canada	Aaa	0.00	% :	5.00%		Benin	B1	6.83%	1	1.83%		Poland	A2	1.3
United States	Aaa	_	_	5.00%		Botswana	A3	1.82%		6.82%	~	Romania	Baa3	3.3
US & Canada	_	0.00	$\overline{}$	5.00%			$\overline{}$	11.38%	$\overline{}$	6.38%		Russia	Ca	18.
CS & Canada	•	0.00	70	10070	1		B2	8.35%	-	3.35%		Serbia	Ba2	4.5
				1		- I	B3	9.86%	-	4.86%		Slovakia	A2	1.2
Caribbean	14	4.38%	19	.38%	VI	Congo ((DR)	В3	9.86%	-	4.86%		Slovenia	A3	1.8
'					1		_	13.66%	-	8.66%		Tajikistan	B3	9.8
					1		Ba3	5.46%	_	0.46%		Ukraine	Ca	18.
Argentina	Ca	18.21%	_	3.21%	1	Egypt	B3	9.86%	-	4.86%	-	Uzbekistan	Ba3	5.4
Belize	Caa2	13.66%	_	3.66%		I	_	13.66%	-	8.66%		E. Europe & Russia	Dao	10.
Bolivia	Caa1	11.38%	$\overline{}$	5.38%		Ghana	Caa1 Ca	11.38% 18.21%	-	6.38% 3.21%		El Europe & Russia		10.
Brazil	Ba2	4.57%	_	9.57%			B3	9.86%	-	4.86%				
Chile	A2	1.28%	$\overline{}$	5.28%			$\overline{}$	13.66%	-	8.66%		Abu Dhabi	Aa2	0.
Colombia	Baa2	2.89%	_	7.89%			3aa3	3.33%	$\overline{}$	8.33%		Bahrain	B2	8.
Costa Rica	B2	8.35%	_	3.35%			Bal	3.80%	-	8.80%		Iraq	Caa1	11
Ecuador	Caa3	15.18%	_	0.18%			_	13.66%	-	8.66%		Israel	A1	1.
El Salvador	Caa3	15.18%	_	0.18%		1	B1	6.83%	-	1.83%		Jordan	B1	6.
Guatemala	Bal	3.80%	_	8.80%		Niger	ВЗ	9.86%	1	4.86%		Kuwait	A1	1.
Honduras	B1	6.83%	_	1.83%		Nigeria (Caa1	11.38%	1	6.38%		Lebanon	С	24
Mexico	Baa2	2.89%	_	7.89%		Rwanda	B2	8.35%	1	3.35%		Oman	Ba2	4.
Nicaragua Panama	B3 Baa2	9.86%	_	4.86% 7.89%		Senegal	Ba3	5.46%	_	0.46%		Oatar	Aa3	0.
			_			South Africa	Ba2	4.57%		9.57%		Ras Al Khaimah (Emirate	A3	1.
Paraguay Peru	Baal	3.80% 2.43%	_	3.80% 7.43%		Swaziland	B3	9.86%	1	4.86%		Saudi Arabia	A1	1
Suriname	_	15.18%	_	0.18%		Tanzania	B2	8.35%	$\overline{}$	3.35%		Sharjah	Bal	3.
Uruguay	Baa2	2.89%	_	7.89%		Togo	B3	9.86%	$\overline{}$	4.86%		United Arab Emirates	Aa2	-
Venezuela	C	24.82%	_	9.82%			$\overline{}$	13.66%	_	8.66%		Middle East	1102	2.
Latin America	_	6.03%	_	.03%			$\overline{}$	8.35%	_	3.35%		Indust Engl		1 2.
Laun Amurka		0.03 /0	. 11	.00 /0		Zambia	_	18.21%	$\overline{}$	3.21%				
						Africa		9.26%	14	1.26%				

Albania B1 6.83% 11.83% Armenia Ba3 5.46% 10.46% Azerbaijan Ba1 3.80% 8.80% Belarus C 24.82% 29.82% Bosnia and Herzegovina B3 9.86% 14.86% Bulgaria Baa1 2.43% 7.43% Croatia Baa2 2.89% 7.89% Czech Republic Aa3 0.91% 5.91% Estonia A1 1.07% 6.07% Georgia Ba2 4.57% 9.57% Hungary Baa2 2.89% 7.89% Kazakhstan Baa2 2.89% 7.89% Kyrgyzstan B3 9.86% 14.86% Latvia A3 1.82% 6.82% Lithuania A2 1.28% 6.28% Macedonia Ba3 5.46% 10.46% Moldova B3 9.86% 14.86% Montenegro B1 6.83% 11.83% Poland A2 1.28% 6.28% Romania Baa3 3.33% 8.33% Russia Ca 18.21% 23.21% Serbia Ba2 4.57% 9.57% Slovakia A2 1.28% 6.28% Slovenia A3 1.82% 6.82% Tajikistan B3 9.86% 14.86% Ukraine Ca 18.21% 23.21% Uzbekistan B3 9.86% 14.86% Ukraine Ca 18.21% 23.21% Uzbekistan B3 9.86% 10.46% E.Europe & Russia Ca 11.38% 16.38% Iraq Caa1 11.38% 16.38% Isael A1 1.07% 6.07% Lebanon C 24.82% 29.82% Oman Ba2 4.57% 9.57% Qatar Aa3 0.91% 5.91% Ras Al Khaimah (Emirate A3 1.82% 6.82% Saudi Arabia A1 1.07% 6.07% Sharjah Ba1 3.80% 8.80% United Arab Emirates Aa2 0.75% 5.75% Middle East 2.16% 7.16%					
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Belarus C 24.82% 29.82% Bosnia and Herzegovina B3 9.86% 14.86% Bulgaria Baa1 2.43% 7.43% Croatia Baa2 2.89% 7.89% Czech Republic Aa3 0.91% 5.91% Estonia A1 1.07% 6.07% Georgia Ba2 4.57% 9.57% Hungary Baa2 2.89% 7.89% Kazakhstan Baa2 2.89% 7.89% Kyrgyzstan B3 9.86% 14.86% Kyrgyzstan B3 9.86% 14.86% Macedonia Ba3 5.46% 10.46% Moldova B3 9.86% 14.86% Montenegro B1 6.83% 11.83% Poland A2 1.28% 6.28% Romania Baa3 3.33% 8.33% Russia Ca 18.21% 23.21% Serbia Ba2 4.57% 9.57% <tr< td=""><td></td><td></td><td></td><td></td><td></td></tr<>					
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Bulgaria Baal 2.43% 7.43% Croatia Baa2 2.89% 7.89% Czech Republic Aa3 0.91% 5.91% Estonia A1 1.07% 6.07% Georgia Ba2 4.57% 9.57% Hungary Baa2 2.89% 7.89% Kazakhstan Baa2 2.89% 7.89% Kyrgyzstan B3 9.86% 14.86% Latvia A3 1.82% 6.28% Macedonia Ba3 5.46% 10.46% Moldova B3 9.86% 14.86% Montenegro B1 6.83% 11.83% Poland A2 1.28% 6.28% Romania Baa3 3.33% 8.33% Russia Ca 18.21% 23.21% Serbia Ba2 4.57% 9.57% Slovakia A2 1.28% 6.28% Ukraine Ca 18.21% 23.21% Uzbek					
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Light	Tajikistan	В3	9.86%		V
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Middle East 2.1076 /.1076		AtaZ			-
	Middle East	ı	2.10%	/.10%	L

Γ	Frontier (un	rated	d)	Cour	ıtr	ies
Ţ,	Algeria	68.75		5.469		10.46
Ī	Brunei	81.75	5	0.919	6	5.919
-	Gambia	66		8.35%		13.35
	Guinea	57.5		13.66	%	18.66
	Guinea-Bissau	64.5		8.359	6	13.35
4	Guyana	75		2.439		7.439
L	Haiti	54.5	╛	18.21	%	23.21
_	Iran	62.75	5	9.869		14.86
-	Korea, D.P.R.	51	4	18.21	_	23.21
-	Liberia	56.25	\dashv	15.18		20.18
	Libya	73.75	_	2.899		7.899
	Madagascar	62.75	_	9.869	_	14.86
-	Malawi	52.75	5	18.21		23.21
-	Myanmar	56	\dashv	15.18	_	20.18
-	Sierra Leone	53	\dashv	18.21		23.21
-	Somalia Sudan	51.5 43	\dashv	18.21 24.82	76	23.21
- 1-	Syria	48.75	H	24.82		29.82
	Yemen, Republic	55.75	_	15.18		20.18
	Zimbabwe	61.25	_	11.38		16.38
Ŀ	Ziiiibabwe	01.2.	-	11.50	/0	10.50
	Bangladesh	B1	(5.83%	1	1.83%
	Cambodia	B2	8	3.35%	13	3.35%
2	China	A1	1	1.07%	- (5.07%
ü	Fiji	B1	(5.83%	11	1.83%
)	Hong Kong	Aa3	(0.91%	- 5	5.91%
	India	Baa3	1	3.33%	- 8	3.33%
	Indonesia	Baa2	2	2.89%	1	7.89%
	Japan	A1	1	1.07%	- (5.07%
	Korea	Aa2	-	0.75%	-	5.75%
١	Laos	Caa3	1	5.18%		0.18%
)	Macao	Aa3	-	0.91%		5.91%
۳	Malaysia	A3	_	1.82%	-	5.82%
	Maldives	Caa1	1	1.38%	-	5.38%
	Mongolia	В3	-	9.86%	_	4.86%
	Pakistan	Caa3	-	5.18%	-	0.18%
1	Papua New Guinea	B2	_	3.35%	-	3.35%
	Philippines	Baa2	-	2.89%	-	7.89%
	Singapore	Aaa	-	0.00%	_	5.00%
_	Solomon Islands	Caa1	1	1.38%	16	5.38%

Australia	Aaa	0.00%	5.00%
Cook Islands	B2	8.35%	13.35%
New Zealand	Aaa	0.00%	5.00%
Aus & NZ		0.00%	5.00%

Ca

Aa3

Ba2

0.91%

2.43%

23.21%

5.91%

7.43%

9.57%

6.74%

Sri Lanka

Taiwan

Thailand

Vietnam

Asia

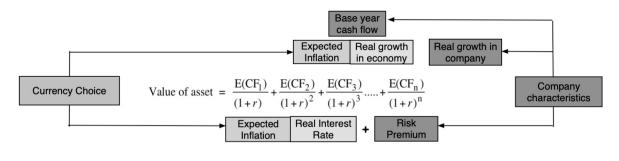
Blue: Moody's Rating Red: Added Country Risk Green #: Total ERP

Caveats and Questions

- I am not a country risk researcher, and I try not to let my personal views alter the numbers that emerge from the analysis, since that would open the door to my biases. I will use three countries in the latest update to illustrate my point:
 - 1. <u>Saudi Arabia</u>: As I noted earlier, using default spreads as my starting point can result in understating the risk premium for countries like Saudi Arabia, which score low on default risk but high on other risks.
 - 2. <u>Libya</u>: As indicated in the last section, the equity risk premium for Libya, an unrated country, is entirely based upon the country risk score from PRS. That country risk score is surprisingly high (indicating low risk) and it results in an equity risk premium that is low, relative to other countries in the region.
 - 3. <u>China</u>: In the aftermath of a Beijing crackdown on Chinese tech giants and talk of a trade war between China and the US, the perception seems to be that China has become a riskier place to invest. That may or may not be true, but looking at how Chinese equities are priced, trading still at some of the highest multiples of earnings in the world, investors in equity markets don't seem to share that view (yet).
- With all three of these countries, I have chosen not to change the numbers that resulted from my analysis, lest I be accused of bias, but if you have strong views on these countries or others, nothing is stopping you from replacing my numbers with yours.

Company Hurdle Rates: The Currency Question

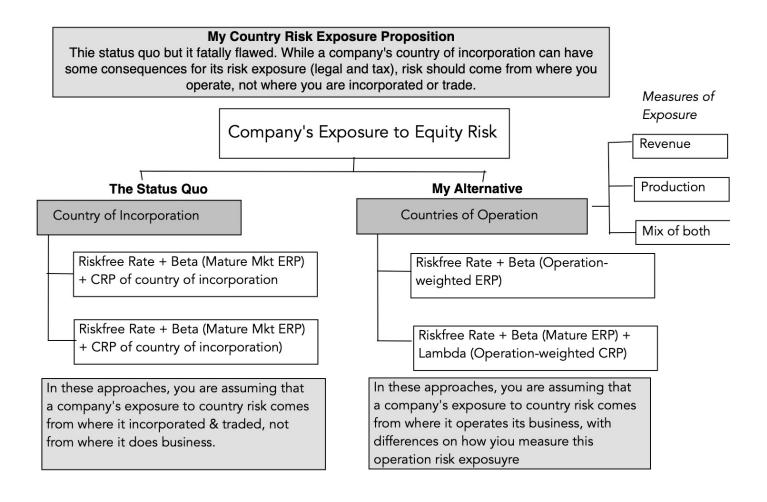
• Currency Choice: Each currency brings its own expectations of inflation, with higher inflation currencies leading to higher growth rates for cash flows and higher discount rates.



The Currency Invariance Proposition: When you change the currency in which you do your valuation or investment analysis, you change the expected inflation that you incorporate into your numbers, but your real growth and risk premiums remain what they are.

- Currency Risk: While analysts are often tempted to try to adjust discount rates for currency risk, caution is called for:
 - To the extent that currency risk adds to the operating risk of a company, it is, in my view, already embedded in the equity risk premiums that I have computed in the last section.
 - The other reason to tread lightly with currency risk is that for investors with global portfolios, it becomes diversifiable risk, as some companies benefit as a currency strengthens or weakened more than expected and other companies lose for the same reason.

Company Exposure to Country Risk



Conclusion

- Work in progress: I do hope that you get a chance to read the paper or at least review my country risk measures in this post, since there is significant room for improvement.
 - I don't have all the answers, and I probably never will, but progress is incremental.
 - Each year, I hope that I can add a tweak or a component that will move me in the right direction.
- It is not personal: Please don't take any of these numbers personally. If you feel that I have overestimated the risk in your country and given it an equity risk premium that you believe is undeservedly high, it is not because I do not like you or have bad feelings about your country. It is entirely Moody's fault for giving your country too low a rating, and you should take it up with them.