P1.T4. Valuation & Risk Models

Aswath Damodaran, Country Risk: Determinants, Measures and Implications - The 2015 Edition

Bionic Turtle FRM Study Notes

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Aswath Damodaran, Country Risk: Determinants, Measures and Implications, 2015 Edition (Pages 1-45 only)

IDENTIFY SOURCES OF COUNTRY RISK.............................................................. 3

EXPLAIN HOW A COUNTRY’S POSITION IN THE ECONOMIC GROWTH LIFE CYCLE, POLITICAL RISK, LEGAL RISK, AND ECONOMIC STRUCTURE AFFECT ITS RISK EXPOSURE........................................ 4
Identify sources of country risk.

If we accept the proposition that exposure to risk can vary across countries, the next step is looking at the sources that cause this variation.

Sources of country risk include the country’s position in the economic life cycle, political risk, legal system and/or dependence on a particular product or service:

- Some of the variation can be attributed to a country’s position in the economic growth life cycle, with countries in early growth being more exposed to risk than mature companies.
- Some can be explained by differences in political risk, a category that includes everything from whether the country is a democracy or dictatorship to how smoothly political power is transferred in the country.
- Some variation can be traced to the legal system in a country, in terms of both structure (the protection of property rights) and efficiency (the speed with which legal disputes are resolved).
- Country risk can also come from an economy’s disproportionate dependence on a particular product or service. Countries that derive the bulk of their economic output from one commodity (such as oil) or one service (insurance) can be devastated when the price of that commodity or the demand for that service plummets.
Explain how a country’s position in the economic growth life cycle, political risk, legal risk, and economic structure affect its risk exposure.

Life Cycle

Countries in the “early growth” stage are more vulnerable to country risk

- Just as young, growth companies are more exposed to risk because they have limited resources to overcome setbacks and they are more dependent on the macro environment staying stable to succeed, the same is true of countries in the early stages of their life cycle. Countries that are in early growth, with few established business and small markets, being more exposed to risk than larger, more mature countries.

A global recession takes a far greater toll of small, emerging markets than it does in mature markets, with biggest swings in economic growth and employment.

- A recession in mature markets like the United States or Germany may translate into only a 1-2% drop in the gross domestic products of these countries and a good economic year will often result in growth of 3-4% in the overall economy.

- In an emerging market, a recession or recovery can translate into double-digit growth, in positive or negative terms. In markets, a shock to global markets will travel across the world, but emerging market equities will show greater reactions, both positive and negative to the same news.

- Example: the banking crisis of 2008, which caused equity markets in the United States and Western Europe to drop by about 25%-30%, resulted in drops of 50% or greater in many emerging markets.

The link between life cycle and economic risk illustrates the limitations on the powers that countries have over their exposure to risk. *A country that is in the early stages of economic growth will have more risk exposure than a mature country*, even if it is well governed and has a solid legal system.

Political Risk

Political risk sub-issues include continuous (versus discontinuous) risk, corruption, physical violence and expropriation.

Political Risk > Continuous versus Discontinuous Risk:

While the chaos of democracy creates *continuous risk* (policies that change as governments shift), dictatorships create *discontinuous risk*. While change happens rarely in an authoritarian system, it is likely to be difficult to protect against. The nature of authoritarian systems is such that the more stable policies that they offer can be accompanied by other costs (political corruption and ineffective legal systems) that overwhelm the benefits of policy stability.

The tradeoff between the stability of dictatorships and the volatility of democracy makes it difficult to draw a strong conclusion about which system is more beneficial to higher economic growth.
Przeworski and Limongi (1993) provide a summary of the studies through 1993 on the link between economic growth and democracy and report mixed results.

- Of the 19 studies that they quote, seven find that dictatorships grow faster, seven conclude that democracies grow at a higher rate and five find no difference. Glaeser, La Porta, Lopez-de-Silane and Shleifer (2004) argue that it is not political institutions that create growth but that economic growth that allows countries to become more democratic.

**Political Risk > Corruption and Side Costs:**

Investors and businesses have to make decisions based upon rules or laws, which are enforced by a bureaucracy. If those who enforce the rules are impulsive, inefficient or corrupt in their judgments, there is a cost imposed on all who operate under the system. *Transparency International* tracks perceptions of corruption across the globe, using surveys of experts living and working in different countries, and ranks countries from most to least corrupt.

Based on the scores from these surveys, Transparency International also provides a listing of the ten least and most corrupt countries in the world in table 1 (with higher scores indicating less corruption) for 2014.

**Table 1: Most and Least Corrupt Countries - 2014**

<table>
<thead>
<tr>
<th>Least Corrupt</th>
<th>Score</th>
<th>Most Corrupt</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>92</td>
<td>Korea (North)</td>
<td>8</td>
</tr>
<tr>
<td>New Zealand</td>
<td>91</td>
<td>Somalia</td>
<td>8</td>
</tr>
<tr>
<td>Finland</td>
<td>89</td>
<td>Sudan</td>
<td>11</td>
</tr>
<tr>
<td>Sweden</td>
<td>87</td>
<td>Afghanistan</td>
<td>12</td>
</tr>
<tr>
<td>Norway</td>
<td>86</td>
<td>South Sudan</td>
<td>15</td>
</tr>
<tr>
<td>Switzerland</td>
<td>86</td>
<td>Iraq</td>
<td>16</td>
</tr>
<tr>
<td>Singapore</td>
<td>84</td>
<td>Turkmenistan</td>
<td>17</td>
</tr>
<tr>
<td>Netherlands</td>
<td>83</td>
<td>Eritrea</td>
<td>18</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>82</td>
<td>Libya</td>
<td>18</td>
</tr>
<tr>
<td>Canada</td>
<td>81</td>
<td>Uzbekistan</td>
<td>18</td>
</tr>
</tbody>
</table>

It can be argued that corruption is an implicit tax on income that reduces the profitability and returns on investments for businesses in that country directly and for investors in these businesses indirectly. Since the tax is not stated, it is also likely to be more uncertain than an explicit tax, especially if there are legal sanctions that can be faced as a consequence, and thus add to total risk.
Political Risk > Physical violence:

Countries that are in the midst of physical conflicts, either internal or external, will expose investors/businesses to the risks of these conflicts. Those costs are not only economic (taking the form of higher costs for buying insurance or protecting business interests) but are also physical (with employees and managers of businesses facing harm). Figure 1 provides a measure of violence around the world in the form of a Global Peace Index map generated and updated every year by the Institute for Economics and Peace.

*Figure 1: Global Peace Index in 2014*

Source: Institute for Peace and Economics

Political Risk > Nationalization/Expropriation risk:

If you invest in a business and it does well, the payoff comes in the form of higher profits (if you are a business) or higher value (if you are an investor). If your profits can be expropriated by the business or your business can be nationalized, you will be less likely to invest and more likely to perceive risk in the investment.

Some businesses seem to be more exposed to nationalization risk than others, with natural resource companies at the top of the target list. An Ernst and Young assessment of risks facing mining companies in 2012, lists nationalization at the very top of the list of risk in 2012, a glaring contrast with the list in 2008, where nationalization was ranked eighth of the top ten risks.
Legal Risk

Investors and businesses are dependent upon legal systems that respect their property rights and enforce those rights in a timely manner. To the extent that a legal system fails on one or both counts, the consequences are negative not only for those who are immediately affected by the failing but for potential investors who have to build this behavior into their expectations.

- If a country allows insiders in companies to issue additional shares to themselves at well below the market price without paying heed to the remaining shareholders, potential investors in these companies will pay less (or even nothing) for shares.
- Companies considering starting new ventures in that country may determine that they are exposed to the risk of expropriation and either demand extremely high returns or not invest at all.

**Legal risk is a function not only of whether it pays heed to property and contract rights, but also how efficiently the system operates.** If enforcing a contract or property rights takes years or even decades, it is the equivalent of a system that does not protect these rights, since neither investors nor businesses can wait in legal limbo for that long. A group of nongovernment organizations has created an international property rights index, measuring the protection provided for property rights in different countries. The summary results, by region, are provided in Table 2, with the ranking from best protection (highest scores) to worst in 2014:

**Table 2: Property Right Protection by Region**

<table>
<thead>
<tr>
<th>Region</th>
<th>Overall Property rights</th>
<th>Legal Property Rights</th>
<th>Physical Property Rights</th>
<th>Intellectual Property Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>5.23</td>
<td>4.95</td>
<td>5.76</td>
<td>4.98</td>
</tr>
<tr>
<td>Western Europe</td>
<td>5.19</td>
<td>4.91</td>
<td>5.73</td>
<td>4.92</td>
</tr>
<tr>
<td>Central/Eastern Europe</td>
<td>4.78</td>
<td>4.64</td>
<td>5.47</td>
<td>4.22</td>
</tr>
<tr>
<td>Asia &amp; Oceania</td>
<td>4.77</td>
<td>4.42</td>
<td>5.44</td>
<td>4.44</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>4.76</td>
<td>4.61</td>
<td>5.42</td>
<td>4.26</td>
</tr>
<tr>
<td>Latin America</td>
<td>4.57</td>
<td>4.23</td>
<td>5.23</td>
<td>4.25</td>
</tr>
<tr>
<td>Africa</td>
<td>4.53</td>
<td>4.26</td>
<td>5.17</td>
<td>4.16</td>
</tr>
</tbody>
</table>
Economic Structure

Some countries depend highly on a specific commodity, product or service for their economic success, which creates additional risk for investors and businesses, since a drop in the commodity’s price or demand for the product/service can create severe economic pain that spreads well beyond the companies immediately affected. For example, Venezuela is highly dependent on oil exports.

In a comprehensive study of commodity dependent countries, the *United National Conference on Trade and Development (UNCTAD)* measures the degree of dependence upon commodities across emerging markets and Figure 2 reports the statistics. Note the disproportional dependence on commodity exports that countries in Africa and Latin America have, making their economies and markets very sensitive to changes in commodity prices.

**Figure 2: Commodity Dependence of Countries**

![Map showing commodity dependence of countries](image)

*Developing Country Dependency on Commodities 2012-2013 (map)*

Source: Special Unit on Commodities, UNCTAD, using data from UNCTADStat

Note: Commodity exports as a percentage of merchandise exports

It is not easy for countries that derive an uneven amount of their economy from a single source to diversify their economies for two reasons.

- First, while it is feasible for larger countries like Brazil, India and China to try to broaden their economic bases, it is much more difficult for small countries like Peru or Angola to do the same. These small countries have to find a niche where there can specialize, and niches will lead to over dependence upon one or a few sources.

- Second, the wealth that can be created by exploiting the natural resource will be far greater than using the resources elsewhere in the economy. If a country with ample oil reserves decides to diversify its economic base by directing its resources into manufacturing or service businesses, it may have to give up a significant portion of near term growth for a long-term objective of having a more diverse economy.