

# COUNTRY RISK PREMIUM

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## I INTRODUCTION

The treatment of expropriation risk in quantum assessments in international arbitration is an issue that has recently received a lot of attention,<sup>2</sup> and it is fair to say that nothing that even vaguely resembles a consensus has yet to emerge. The objective of this chapter is to provide a simple and clear overview of the challenges faced by a quantum expert when addressing expropriation risk, and, in particular, to show how a pragmatic approach may be needed to address what is a conceptually complex issue. Relatedly, this chapter explains the importance of distinguishing between country risk and expropriation risk (the former a broader concept that has the latter as one of its components) and ensuring that attempts to incorporate expropriation risk into a quantum assessment do not inadvertently lead to the double counting of other components of country risk.

## II DISCOUNTED CASH FLOW ANALYSIS

In many international arbitrations, whether an investor–state dispute or an international commercial arbitration, the role of the quantum expert is to determine the value of an asset or project, with the results of this valuation exercise being used as an input to the assessment of compensation. In recent years, quantum experts have increasingly relied upon, and arbitral tribunals have increasingly accepted, the discounted cash flow (DCF) method as an approach to these valuations.<sup>3</sup> The implementation of the DCF method requires an estimation of the stream of future cash flows that the asset or project is expected to generate over its lifetime,<sup>4</sup> followed by the discounting of these cash flows back to the date of valuation using a discount rate that accounts for both the time value of money and the risk or uncertainty that is associated with the future cash flow stream.

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2 See, for example, J Alberro, ‘Should Expropriation Risk Be Part of the Discount Rate?’ *Journal of International Arbitration*, 33(5), 2016, pp. 525–547; Ninth Investment Arbitration Forum: Valuation of Damages in Changing Economic and Political Circumstances, 1 July 2018, University of Vienna.

3 See, for example, *Guaracachi America, Inc. and Rurelec Plc v. The Plurinational State of Bolivia* (PSA Case No. 2011-17), Award, 31 January 2014, paragraph 453; *Phillips Petroleum Company Venezuela Limited and ConocoPhillips Petrozuata B.V. v. Petróleos De Venezuela, S.A., Corpoguanipa, S.A., and PDVSA Petróleo, S.A.* (C-20550/ASM), Award, 24 April 2018, paragraph 1127.

4 R Barnes, ‘Issues in Cross-Border Valuation and the Implications for Damages Assessments in Investor-State Disputes’ in *The International Comparative Legal Guide to: Investor-State Arbitration 2019* ICLG, 1st edn, 2018, pp. 22–23, for a discussion of the concept of ‘expected’ cash flows.

However, although opposing quantum experts might agree as to the appropriateness of the DCF valuation method,<sup>5</sup> they often fundamentally disagree on its inputs, in particular, the discount rate. As even a cursory review of any corporate finance textbook will indicate,<sup>6</sup> this is far from unique to international arbitrations – the estimation of expected future cash flows and the determination of the appropriate discount rate are inherently complex exercises. However, there is a specific feature of international arbitrations that potentially makes such disagreements particularly pronounced, namely that these disputes typically arise out of cross-border investments whereby an investor in one country invests in a second, often emerging market country, thus exposing itself to the ‘country risk’ associated with that second country. Consequently, it is often the case that one of the main points of contention between the quantum experts on a given matter relates to the definition and quantification of this country risk, and how it should be incorporated into the asset’s or project’s valuation.

### III COUNTRY RISK

Broadly, country risk ‘is a . . . concept that encompasses both the potentially adverse effects of a country’s political environment and its economic and financial environment’.<sup>7</sup> In simple terms, it refers to those risk factors the foreign investor would not face in its domestic market, such as political instability in the host country and potential shifts in a government’s economic policy; for example, the nationalisation of private industries and the imposition of protective tariffs.<sup>8</sup> In principle, to account for the effect of country risk on value, the quantum expert could either adjust downwards the expected cash flows stemming from the asset or project, or incorporate a ‘country risk premium’ into the discount rate. The rationale for the latter approach – one that is frequently advocated for by quantum experts – is that the higher the degree of uncertainty arising from actions taken by the government in the host country, the higher the discount rate, and therefore the lower the stream of discounted future expected cash flows and, consequently, the value of the asset or project.

However, as explained in a related article, from a conceptual point of view, this approach is problematic.<sup>9</sup> That article introduces the capital asset pricing model (CAPM), which is ‘by far the most commonly used approach for determining discount rates in a wide range of practical settings’,<sup>10</sup> and explains how the CAPM – originally developed in a single country setting – can be modified to an international setting.

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5 This is not necessarily the case. A quantum expert might argue that any assessment of future cash flows is too speculative, and that a valuation based on book value or the original cost of investment is appropriate. Alternatively, the quantum expert may be a proponent of the ‘multiples-based’ approach to valuation, which relies on the identification of comparable investments or transactions, or both. A discussion of the relative merits of these different valuation methodologies is beyond the scope of this chapter.

6 For example, RA Brealey, SC Myers and F Allen *Principles of Corporate Finance*, 12th edn, McGraw-Hill, 2016.

7 G Bekaert and R Hodrick *International Financial Management*, 3rd edn. Cambridge University Press, 2018, p. 603.

8 D Meldrum, ‘Country Risk and Foreign Direct Investment’. *Business Economics*, 35(1), 2000, pp. 33–48.

9 R Barnes, ‘Issues in Cross-Border Valuation and the Implications for Damages Assessments in Investor-State Disputes’ in *Investor-State Arbitration 2019*, ICLG, 1st edn, 2018, pp. 22–23.

10 *id.*, p. 20.

The article goes on to lay out the following ‘recipe’ for cross-border valuations:

- a Estimate expected future cash flows, taking account of country risk – in other words, ensure that any factors that contribute to country risk are accounted for through a reduction in the expected cash flows from the asset or project being discounted.
- b Determine the discount rate as the sum of a risk-free rate, plus a risk premium. The latter is not a country risk premium – rather, it is the premium that investors demand to compensate them for what is referred to as the systematic risk of the cash flows being valued.
- c Do not increase the discount rate to reflect country risk, because ‘[i]ncreasing the discount rate to reflect country risk would be either double counting the project’s systematic risk, or bringing diversifiable, non-systematic risk into the discount rate calculation, neither of which is appropriate’.<sup>11</sup> Discount rates should not reflect risks that are diversifiable.<sup>12</sup>

That a country risk premium should not be added to the discount rate does not mean that the international nature of the valuation is irrelevant to the determination of the appropriate discount rate. To the contrary, an important assumption that a quantum expert is required to make – but one that is often overlooked – when estimating the risk premium component of the discount rate relates to the extent to which capital markets across the globe are integrated. Assuming fully integrated capital markets implies that investors in all countries hold portfolios that are well diversified internationally. However, assuming fully segmented capital markets implies that investors hold portfolios of assets in a particular country (e.g., US investors hold only US investments). The two assumptions lead to potentially quite different risk premiums and, consequently, discount rates, although the degree of difference is essentially an empirical question.

In reality, capital markets are neither fully integrated nor fully segmented. For example, in many countries there are restrictions with regard to foreign investments. Furthermore, even if there were no such restrictions, investments in assets or projects are often not divisible into smaller fractions. As a consequence, for instance, a firm investing in a large power plant or mining operation may have to commit a substantial portion of its capital to a single project, making it impossible to diversify the risk exposure to the host country in which the investment is located.

This, therefore, necessitates a pragmatic approach to the determination of the discount rate, and in particular the risk premium element.<sup>13</sup> The recommendation is that risk premiums should be estimated under both assumptions (fully integrated and fully segmented capital markets). To the extent that these differ significantly, the relative weighting given to the two

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11 id., p. 22.

12 Tim Koller, Marc Goedhart and David Wessels *Valuation: measuring and managing the value of companies*, 6th edn, John Wiley and Sons, 2015, p. 714.

13 The determination of the risk-free rate is somewhat more straightforward, although there are moderately complex issues to address regarding, for example, the maturity or tenor of the rate to use. The key point is that the rate used must match the currency in which the expected future cash flows are denominated. Even if the investment is located in an emerging market country, if the forecasts of expected future cash flows are denominated in US dollars, a US risk-free rate should be used in the discount rate. The rationale is as follows: the emerging market risk-free rate is higher than the US risk-free rate because of an anticipated depreciation of the emerging market currency with respect to the US dollar. However, this anticipated depreciation will (or at least should, if the exercise has been performed properly) have been

estimates should be driven by a consideration of the level of diversification in the portfolio of the investor from whose perspective the valuation is being assessed. This is an admittedly imprecise recommendation. However, that there is no single clear-cut right answer to the question should not be taken to mean that the issue can be ignored – a failure to even address the question can potentially lead to the use of a risk premium, and consequently a discount rate, that is wildly inappropriate.

#### IV COUNTRY RISK AND INTERNATIONAL ARBITRATIONS

Though motivated by questions of quantum in an international arbitration setting, the preceding discussion regarding the appropriate treatment of country risk is in fact applicable to any situation where there is a need to incorporate the cross-border nature of an investment into a valuation.<sup>14</sup> A question that is, however, specific to an international arbitration quantum assessment is whether the resulting valuation is an appropriate starting point for the determination of compensation. Specifically, such a valuation is what may be termed a ‘fundamental value’ or a ‘fair market value’ and is the value that is appropriate when considering an arm’s-length transaction between a willing buyer and a willing seller, because it properly and fully accounts for all of the risks that the investment is exposed to, including country risk. As such, it may also be a suitable basis for a quantum assessment in an international commercial arbitration. Once we move to the investor–state arena, however, the situation becomes considerably less clear.

A key element of country risk is political risk, which may be defined as ‘a special case of country risk in which a government or political action negatively affects a company’s cash flow’.<sup>15</sup> In turn, a key element of political risk is expropriation risk; namely the risk that the host government takes some action that diverts some or all of the cash flows generated by the asset or project being valued away from the investors in the asset or project, and towards that government.<sup>16</sup> Consequently, a valuation that fully and properly accounts – by adjusting downwards the expected cash flows – for country risk will, by definition, reflect expropriation risk. Of critical importance to the investor–state arbitration community is the question of whether this is appropriate – in other words, should expropriation risk be taken into account when determining a measure of compensation?

The argument made in certain investor–state arbitrations against the inclusion of expropriation risk is as follows: the more a host state takes actions that increase the perceived<sup>17</sup>

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incorporated into the expected future cash flow forecasts. Consequently, discounting this expected US dollar denominated future cash flow stream at a discount rate that includes the emerging market risk-free rate, would lead to a double counting of the expected future weakness of the emerging market currency.

14 For example, an investment banker advising a US client on a potential investment in South Africa.

15 Geert Bekaert and Robert Hodrick, *International Financial Management*, 3rd edn. Cambridge University Press, 2018, p. 655.

16 *id.*, p. 605.

17 The repeated use of the word ‘perceived’ in the following discussion is deliberate. Even if a host government knows with certainty that it will take actions in the future that will, in whole or in part, expropriate an investment, what matters when determining the value of the investment at a given point in time is the perceived likelihood that such actions will be taken. Different perceived likelihoods will lead to different valuations – by definition, when attempting to determine the fair market value, what is sought is an estimate of the market consensus as to this likelihood. Though easy to articulate, this is of course an extremely challenging exercise in practice.

expropriation risk, the greater are the downward adjustments to the expected cash flows and the lower is the resulting valuation. If this valuation is then used as the basis for an award of compensation after an expropriation has actually taken place, the host state has benefited – in the form of having to pay a lower amount of compensation – from its actions. This can be analysed with a simple example. Suppose that: (1) an international investor owns a project located in a host country and expects this project to generate a single cash flow of US\$100; (2) there is a perceived probability ‘ $p$ ’ that the government of the host country will expropriate the project with no compensation; and (3) the discount rate is zero. The fair market value of this project is US\$100 multiplied by the perceived probability that the government does not expropriate.<sup>18</sup> If  $p$  is equal to 50 per cent, the fair market value of the project is US\$50.<sup>19</sup> The more the government’s actions increase  $p$ , the lower the fair market value of the project is. For example, if  $p$  increases from 50 to 75 per cent, the fair market value of the project decreases from US\$50 to US\$25.<sup>20</sup> Suppose that the government then exercises its sovereign right to expropriate. If  $p$  becomes very high immediately prior to the expropriation, the fair market value of the project and, therefore, the compensation that the investor receives would be reduced, potentially significantly. However, the host country would pay the investor an amount of compensation that is lower than the compensation that the host country would have paid if this had been based on the fair market value prior to the increase in  $p$ . A tribunal deciding a dispute between the investor and the host state could, in principal, decide to account for the increase in  $p$  in determining compensation. Whether this is appropriate is of course a legal question. Nonetheless, determining how to handle expropriation risk in that valuation generates a number of challenges from the perspective of a quantum expert. In this simple case, the arbitral tribunal could require different calculations depending on its determinations regarding the expropriation:<sup>21</sup>

- a Consider the expropriation risk on the eve of the expropriation of the project without any adjustment. This approach appears to be consistent with tribunal awards in which the expropriation was found to be lawful.<sup>22</sup>
- b Eliminate the expropriation risk in its entirety and compensate the investor at the ‘full’ value that the project would have had absent the expropriation. That is,  $p$  would be set to zero. As explained below, this appears to be the approach undertaken by certain tribunals in the case of an unlawful expropriation.<sup>23</sup> In other words, even if  $p$  was greater than zero, because investors feared a lawful expropriation, if the form of the actual expropriation was unlawful, the concept of full reparation<sup>24</sup> could lead the tribunal to compensate the investor with the full value of the project, eliminating the effect of any government conduct on the expropriation risk.

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18 If the perceived probability that the government expropriates is  $p$ , the perceived probability that it does not expropriate is  $1 - p$ .

19 That is,  $\text{US}\$100 \times (1 - 50 \text{ per cent}) = \text{US}\$50$ .

20 That is,  $\text{US}\$100 \times (1 - 75 \text{ per cent}) = \text{US}\$25$ .

21 These approaches include a list of examples and are not intended to be exhaustive.

22 See, for example, *Tidewater Investment SRL and Tidewater Caribe C.A. v. The Bolivarian Republic of Venezuela* (ICSID Case No. ARB/10/5), Award, 13 March 2015, paragraph 146.

23 See also J Alberro, ‘Should Expropriation Risk Be Part of the Discount Rate?’, *Journal of International Arbitration*, 33(5), 2016, pp. 525–547.

24 *id.*, p. 526 citing the *Factory at Chorzów* judgment (‘It follows that the compensation due . . . is not necessarily limited to the value of the undertaking at the moment of disposition, plus interest to the day of payment. This limitation would only be admissible if the Polish Government had had the right

- c Eliminate the expropriation risk in part and compensate the investor accordingly. The perceived probability of expropriation could be set to the level that prevailed at the time when the investor made its investment. Alternatively, it is possible that expropriation risk has increased after the investment was made because of legal or legitimate policies enacted by the government. In this case, the tribunal may wish to attempt to isolate the perceived increase in the probability of expropriation that can be traced back to unlawful conduct on the part of the host state.

A number of arbitral tribunal awards have focused on the distinction between lawful and unlawful expropriation, and the impact of expropriation risk on the value of the assets or project at issue.<sup>25</sup> For example, in the *Gold Reserve v. Venezuela* award, the tribunal found that the manner by which the state regulatory powers were exercised led to the finding of a serious breach by the state of the fair and equitable treatment standard under the bilateral investment treaty (BIT). The tribunal award stated that the ‘seriousness of the breach shall be duly taken into account when determining the amount of the compensation due to Claimant in that regard’.<sup>26</sup> It appears that, based on this conclusion, the tribunal decided to adjust the expropriation risk component of the discount rate. In particular, the tribunal stated that ‘it is not appropriate to increase the country risk premium to reflect the market’s perception that a State might have a propensity to expropriate investments in breach of BIT obligations’.<sup>27</sup> The tribunal did not engage the parties’ quantum experts to provide a quantification of the effect of the state’s propensity to expropriate on country risk. Instead, the ‘Tribunal decide[d] to adopt a country risk premium of 4% as used’<sup>28</sup> in one of the source documents provided

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to expropriate, and if its wrongful act consisted merely in not having paid to the two Companies the just price of what was expropriated; in the present case, such a limitation . . . would be tantamount to rendering lawful liquidation and unlawful dispossession indistinguishable in so far as their financial results are concerned. The essential principle contained in the actual notion of an illegal act . . . is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed’. See *Factory at Chorzów (Germany v. Poland)*, Merits, Judgment, PCIJ (Ser. A) No. 17 (13 Sept. 1928), p. 47.

- 25 See, for example, *OI European Group B.V. v. Venezuela* (ICSID Case No. ARB/11/25), Award, 10 March 2015; *Flughafen Zürich A.G. and Gestión e Ingeniería IDC S.A. v. Venezuela* (ICSID Case No. ARB/10/19), Award, 18 November 2014; and *Gold Reserve Inc. v. Venezuela* (ICSID Case No. ARB(AF)/09/01), Award, 22 September 2014. See also J Alberro, ‘Should Expropriation Risk Be Part of the Discount Rate?’ *Journal of International Arbitration*, 33(5), 2016, pp. 525–547.
- 26 *Gold Reserve Inc. v. Venezuela* (ICSID Case No. ARB(AF)/09/1), Award, 22 September 2014, paragraph 668.
- 27 *id.*, paragraph 841. Almost without exception, tribunal discussions regarding expropriation risk have been framed around the question of the appropriate country risk premium to add to the discount rate to capture expropriation risk. As explained above, this is conceptually problematic – country risk (including expropriation risk) should be accounted for via adjustments to expected cash flows, rather than the discount rate – although the practical complexities of adjusting expected cash flows in this way are acknowledged. That notwithstanding, the tribunal rulings referenced here are informative in that they address the question of the extent to which (rather than how) expropriation risk should be incorporated into an award of compensation.
- 28 *id.*, paragraph 842.

by the claimant's quantum expert, and explained that it accepted the respondent's quantum expert explanation that this 'premium appropriately considers political risks, together with other risks, but has not been over-inflated on account of expropriation risks'.<sup>29</sup>

There were two main questions that the tribunal believed needed to be taken into account. First, had the expropriation policy enacted by the state led to an effective increase in the expropriation risk between the time Gold Reserve undertook its investment and the time the state expropriated Gold Reserve's investment? If the answer to this question is no, excluding the expropriation risk might lead to an excessively low discount rate, which, in turn, would lead to an overvaluation of the investment. Second, is it reasonable to assume that a sophisticated investor, such as Gold Reserve, would evaluate the existence of expropriation risk – among other political risks – when undertaking its investment decision in an emerging market country such as Venezuela? If the answer to this question is yes, excluding the expropriation risk in its entirety might lead to an excessively low discount rate, which, in turn, leads to an overvaluation of the investment.

## V ACCOUNTING FOR EXPROPRIATION RISK – SOME PRACTICAL CONSIDERATIONS

Given that quantum experts and tribunals face the challenge of measuring expropriation risk, and incorporating this risk into valuations and compensation, an obvious question to ask is how this is actually done in practice. A recent academic article tabulates a number of widely used methods for addressing the question of how to adjust the discount rate to reflect country risk,<sup>30</sup> and, based on anecdotal evidence and a review of arbitral practitioner publications,<sup>31</sup> it appears that the vast majority of the approaches used to account for expropriation risk are based on these methods. In other words, it appears that many quantum experts bring expropriation risk into the picture by adjusting the discount rate using methods that were developed to address country risk. This is potentially problematic for a number of reasons. First, as noted earlier, expropriation risk is only one component of country risk – to the extent that a given method leads to a risk premium that covers components of country risk other than expropriation risk, this may lead to an inappropriately high discount rate, and an inappropriately low valuation. Second, the methods themselves (as noted by Bekaert et al. (2016))<sup>32</sup> are created and modified ad hoc and are therefore based on strong assumptions. Third, the methods all involve adjustments to the discount rate, whereas (as noted earlier) country risk should ideally be accounted for through adjustments to expected cash flows.

This clearly puts a quantum expert into a difficult position. Valuation is a practical endeavour, and the fact that the conceptually 'pure' approach cannot be implemented does not mean that he or she should simply throw up his or her hands and admit defeat. Rather, a pragmatic approach is needed whereby there is a clear identification of the risks that the expert

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29 *ibid.*

30 Geert Bekaert, Campbell R. Harvey, Christian Lundblad and Stephan Siegel, 'Political Risk and International Valuation'. *Journal of Corporate Finance* 37, 2016, pp. 1–23 at Table 1 on p. 5.

31 See, for example, T Duarte-Silva, 'The Guide to Damages in International Arbitration', pp. 251–254 in T. Ogier et al. *Rewarding Expropriation*. PricewaterhouseCoopers, 2017. Available at [www.pwc.co.uk/assets/pdf/rewarding-expropriation.pdf](http://www.pwc.co.uk/assets/pdf/rewarding-expropriation.pdf), accessed on 28 February 2019.

32 'Over time, several ad hoc modifications to the base case were proposed.' See Geert Bekaert, Campbell R. Harvey, Christian Lundblad and Stephan Siegel 'Political Risk and International Valuation'. *Journal of Corporate Finance* 37, pp. 1–23, 2016, p. 4.

is seeking to incorporate into the valuation, followed by a careful qualitative consideration of how closely the various available methods match what the quantum expert is looking to do. In other words, it may be that in many cases, there is no practical alternative to addressing expropriation risk via the discount rate, and that the best a quantum expert can do is identify the risk premium that best accounts for the degree of expropriation risk that is to be included in the valuation.

With that in mind, we now summarise the various approaches to determining a country risk premium – these include different variants of the sovereign spread model, the use of country credit ratings and the use of political risk sovereign spreads.

The starting point for the models that are based on sovereign spreads is, unsurprisingly, the sovereign spread itself – namely, the difference between the yield on a bond issued in US dollars by the host country in which the project is located and a US Treasury bond with similar maturity. The first variation of this model was introduced by Mariscal and Lee (1993), and several ad hoc modifications of this approach were made thereafter by Mariscal and Dutra (1996), Godfrey and Espinosa (1996), Mariscal and Hargis (1999), Damodaran (1999 and 2003), Zenner and Akaydin (2002) and Abuaf (2015).<sup>33</sup> For example, Mariscal and Dutra introduced an adjustment to the sovereign spread by multiplying it by the ratio of the volatility in equity returns in the country at issue and the volatility in equity returns on the world or US markets.<sup>34</sup> Godfrey and Espinosa proposed a similar adjustment, but in the attempt to reduce the potential double counting of political risk, they used a downward adjustment of 60 per cent.<sup>35</sup> Damodaran (1999) proposed adjusting the sovereign spread by multiplying it by the ratio of the volatility in equity returns and the volatility in bond returns in the country at issue, arguing that risk premiums on bonds have to be adjusted upward to be similar to risk premiums on equity.<sup>36</sup>

However, it has long been recognised that a sovereign spread reflects a number of local macroeconomic factors and fiscal conditions beyond political spreads. Therefore, these methods cannot be directly used to measure political or expropriation risks. A similar critique can be levied against the country credit rating model developed by Erb, Harvey and Viskanta (1996). This model focuses on the use of credit ratings, which are assumed by these authors to be a proxy for country risk. Specifically, the model empirically estimates the relationship between equity returns and country credit ratings published by *Institutional Investor*. The results of this empirical analysis are then used to estimate country risk premiums.<sup>37</sup>

Perhaps the most promising approach to identifying the risk premium to be added to the discount rate is to use the concept of the political risk sovereign spread proposed by

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33 See footnote 28.

34 Jorge O Mariscal and Emanuel Dutra ‘The Valuation of Latin American Stocks: Part III’. New York: Goldman Sachs, 1996. See also Geert Bekaert, Campbell R Harvey, Christian Lundblad and Stephan Siegel ‘Political Risk and International Valuation’. *Journal of Corporate Finance* 37, 2016, pp. 1–23 at pp. 4–5.

35 Stephen Godfrey and Ramon Espinosa ‘A Practical Approach to Calculating Costs of Equity for Investments in Emerging Markets’. *Journal of Applied Corporate Finance*, Volume 9.3, 1996, p. 88. See also Geert Bekaert, Campbell R Harvey, Christian Lundblad and Stephan Siegel ‘Political Risk and International Valuation’. *Journal of Corporate Finance* 37, 2016, pp. 1–23 at p. 4.

36 Aswath Damodaran, *Estimating Equity Risk Premiums*. Working Paper, New York: New York University, 1999. See also Geert Bekaert, Campbell R Harvey, Christian Lundblad and Stephan Siegel ‘Political Risk and International Valuation’. *Journal of Corporate Finance* 37, 2016, pp. 1–23 at p. 4.

37 Claude B Erb, Campbell R Harvey and Tadas E Viskanta, *Expected Returns and Volatility in 135 Countries*. Working paper, 1996.

Bekaert, Harvey, Lundbland and Siegel (2014). This is based on a framework that allows for the disaggregation of that element of the sovereign spread that arises from political risk.<sup>38</sup> However, even this framework does not allow for the separation of expropriation risk from political risk.

## VI CONCLUSIONS

There is no question that measuring expropriation and country risks are two of the most challenging issues faced by quantum experts in international arbitrations, and that a careful balance needs to be struck between what is conceptually appropriate and what is practically feasible.

There are three key takeaways from this chapter:

- a* The extent to which expropriation risk should be incorporated into a valuation that is to be used as a basis for an award of compensation is a legal question – the job of the quantum expert is to ensure that his or her valuation comports with the answer to this question.
- b* Expropriation risk is a subset of country risk – consequently, methods used to address country risk need to be reviewed carefully before being adopted to address questions relating to expropriation risk, with a failure to do so likely leading to a biased estimate of expropriation risk, an inappropriate discount rate and an unreliable valuation.
- c* Addressing either expropriation risk or country risk via the discount rate is conceptually problematic and, to the extent possible, these risks should be accounted for via adjustments to expected cash flows. To the extent that this is not possible, the expert should strive to reduce the element of ad hoc subjectivity in the approach taken and to match any adjustment to the discount rate as closely as possible to the risks he or she is seeking to capture.

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38 In other words, 'the political risk spread takes the fraction of the predicted value for the sovereign spread accounted for by the political risk . . . and multiplies it with the current sovereign spread. The computation . . . embeds up to date information from the forward looking sovereign spread at the same time as the current information in the current political risk rating in a particular country (relative to the U.S.)' See Geert Bekaert, Campbell R Harvey, Christian Lundblad and Stephan Siegel 'Political Risk and International Valuation'. *Journal of Corporate Finance* 37, 2016, pp. 1–23 at p. 12. Interestingly, this approach can also be couched in terms of the required adjustments to expected cash flows. R Barnes, 'Issues in Cross-Border Valuation and the Implications for Damages Assessments in Investor-State Disputes' in *Investor-State Arbitration 2019*, ICLG, 1st edn, 2018, pp. 22–23.

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