1. Although I greatly respect and esteem my distinguished colleagues and although I generally agree with the outcome of the award, I could not concur with them on important legal findings, which have, in my view, far reaching consequences for the overall balance of the system of international investment arbitration, and as such, are important to the Parties.

2. To be clear, I agree with the majority that there has been an unlawful expropriation, because it did not follow due process and was discriminatory. This opinion is not written in order to take a position on the amount granted to the expropriated investor, an issue it does not address, but has to do with the method used to calculate it.

3. Indeed, as stated by Lao-Tseu, “le but n'est pas seulement le but, mais le chemin qui y conduit”, (“the aim is not only the goal but the way to it.”). I fundamentally disagree with both the theoretical approach followed and its concrete application to the facts of the case as performed by the majority.

4. In order to deal with an alleged expropriation, any tribunal has to follow three steps:
   - the legal qualification of the expropriation (I);
   - the establishment of the standard of compensation (II);
   - the method for the quantification of compensation (III).

5. My main disagreement with my colleagues concentrates on the method used to quantify the proper amount of compensation for unlawful expropriation. I will however briefly comment on the two other steps in order to present a coherent analysis.
I. The legal qualification of the expropriation

6. As far as the legal qualification of the expropriation is concerned, I agree that in this concrete case, the Tribunal was faced with an unlawful expropriation. However, I would be more peremptory than the Award concerning the theoretical dividing line between a lawful and an unlawful expropriation. There is indeed a complex on-going debate relating to the standards of compensation in case of a “lawful expropriation” and an “unlawful expropriation”, resulting from some uncertainties concerning the distinction between these two concepts.

7. In this regard, it is stated in the Award, that “(t)he Tribunal agrees with the Claimants that the BIT does not establish the standard of compensation for internationally wrongful acts. Article VI(2) of the BIT sets out the standard of compensation for lawful expropriations, possibly including expropriations that comply with all legality requirements but for the payment of compensation.”1 Although the main focus of this dissent is not to dwell on the distinction between lawful and unlawful expropriation, I want to indicate here that I would have deleted the word “possibly” in the just cited sentence of the Award. Indeed, in doing so, I am faithful to the findings of the Chorzów case2 in which the PCIJ explained the difference between a lawful and an unlawful expropriation, in the following way:

The action of Poland which the Court has judged to be contrary to the Geneva Convention is not an expropriation – to render which lawful only the payment of fair compensation would have been wanting: it is a seizure of property, rights and interests which could not be expropriated even against compensation.”3

8. It should indeed not be lost of sight that States have in principle the sovereign power to expropriate. Such an expropriation has to respect certain conditions – public interest, due process of law, non-discrimination – and if performed in accordance with such conditions, entails, as a consequence, an obligation to compensate. This appears quite clearly from Resolution 1803 of the General Assembly of the United Nations, which states:

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1 Award, § 326.
3 The Award indeed acknowledges the existence of such a distinction in its § 370, where it is stated that the ICJ in the Chorzów case was “faced with an expropriation that is unlawful not merely because compensation is lacking.”
Nationalization, expropriation or requisitioning shall be based on grounds or reasons of public utility, security or the national interest which are recognized as overriding purely individual or private interests, both domestic and foreign. In such cases the owner shall be paid appropriate compensation, in accordance with the rules in force in the State taking such measures in the exercise of its sovereignty and in accordance with international law.  

This reflects the idea that some expropriations are not authorized and others are authorized. If the conditions for an authorized expropriation are not fulfilled or if the expropriation itself is forbidden by an international treaty, as was the situation in the Chorzów case, the expropriation has to be deemed unlawful.

9. In sum, it results from Chorzów that on one side of the dividing line there are unlawful expropriations which are not authorized and on the other side there are lawful expropriations including expropriations to render which lawful only the condition of payment of fair compensation is wanting.

10. The fact that an expropriation only lacking fair compensation should be treated in the same manner as a lawful expropriation, has indeed been recognized recently by the tribunal in Mobil v. Venezuela, where it is stated:

However, the mere fact that an investor has not received compensation does not in itself render an expropriation unlawful.  

11. It has again been asserted, even more recently, in Tidewater v. Venezuela:

For present purposes, it suffices to conclude that the present expropriation was lawful, since it wants only compensation, a matter vouchsafed by the Parties to this Tribunal to determine according to the standards prescribed in the BIT.  

12. The same analysis had also been performed earlier in the ConocoPhillips v. Venezuela Decision on Liability and Merits, where a lawful expropriation is described as an expropriation which only lacks the payment of the value of the investment at the time of the expropriation:

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4 General Assembly Resolution 1803 (XVII) of 14 December 1962, "Permanent sovereignty over natural resources". Emphasis added.


6 Tidewater Investment Srl, Tidewater Caribe, CA v. The Bolivarian Republic of Venezuela, ICSID Case No. ARB/10/5, ICSID Case No. ARB/10/5, Award, 13 March 2015, § 146.
… the cases cited by the Respondent in which the Tribunal fixed the compensation by reference to the value of the property at the time of the taking are cases where the taking was lawful and the only allegedly wrongful act was the claimed failure to pay the value of the investment to be fixed, either in terms of the relevant treaty or customary international law, at the time of the taking.\(^7\)

13. And once such distinction has been clarified, the PCIJ presented “the guiding principles according to which the amount of compensation due may be determined”\(^8\) and explained that the compensation was not to be the same under both situations.

II. The establishment of the standard of compensation

14. As far as the standard of compensation is concerned, the PCIJ indicated clearly in *Chorzów* that such standard is different in case of lawful or unlawful expropriation.

15. If the conditions for an authorized expropriation are fulfilled, the expropriation has to be deemed a legal expropriation. In fact, whether compensation or reparation is due can only be ascertained when there is a qualification of the allegedly expropriatory act, either by agreement (rare), by a national court or by an international tribunal. This has important theoretical consequences. One of it is that, as long as it has not been finally determined whether there is or is not an expropriation, and whether it is or is not illegal, the obligation to compensate or repair does not arise. Therefore, it is only after it has been determined whether the expropriation is lawful or unlawful that the appropriate standard of compensation can be applied.

16. In case of a lawful expropriation including an expropriation to render which lawful only the payment of fair compensation would have been wanting, the standard of compensation is a *just compensation*:

> It follows that the compensation due to the German government is not necessarily limited to the value of the undertaking at the moment of dispossession, plus interest at the date of payment. This limitation would only be admissible if the Polish Government had had the right to expropriate, if the 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 …

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\(^8\) *Chorzów, op. cit.*, note 2, p. 46.
would be tantamount to rendering lawful liquidation and unlawful dispossession indistinguishable in so far as their financial results are concerned. 9

17. This just compensation is the value of the undertaking at the date of the expropriation plus interests. In other words, an expropriation, which only lacks fair compensation to be lawful has to be treated as a potentially lawful expropriation (or a provisionally unlawful expropriation until the tribunal has awarded the compensation due for the expropriation to be legal): this is so, because, as soon as the fair compensation needed for a lawful expropriation is granted, the situation has been reestablished and that condition for a lawful expropriation has been fulfilled.

18. In case of an unlawful expropriation, the standard of compensation is full reparation:

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 re-establish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it – such are the principles which should serve for an act contrary to international law.10

19. This being stated, the Award rightly indicates the standard of compensation in case of unlawful expropriation:

The Tribunal agrees with the Claimants that the BIT does not establish the standard of compensation for internationally wrongful acts.

…
This reparation must be “full”, i.e., it must eliminate all consequences of the internationally wrongful act and restore the injured party to the situation that would have existed if the act had not been committed. If restitution in kind is impossible or not practicable, the compensation awarded must wipe out all of the consequences of the wrongful act. In this respect, ILC Article 36 provides that “[t]he State responsible for an internationally wrongful act is under an obligation to compensate for the damage caused thereby …11

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9 *Chorzów, op. cit.*, note 2, p. 47. Emphasis added. In the same vein in the *Amoco* case, the tribunal found that the expropriation was lawful but for the lack of compensation and endeavoured therefore to determine the amount of compensation due by a thorough analysis of the *Chorzów Factory* case. In this case, the Iran-US Claims Tribunal made clear that “the compensation to be paid in case of a lawful expropriation (or of a taking which lacks only the payment of a fair compensation to be lawful) is limited to the value of the undertaking at the moment of dispossession.” *Amoco International Finance Corporation v. Islamic Republic of Iran*, reprinted in 15 Iran-US Claims Tribunal, Case No. 189, Partial Award No. 310-56-3, 24 July 1987, with a Concurring Opinion of Judge Brower § 196, Emphasis added.

10 *Chorzów, op. cit.*, note 2, p. 47. Emphasis added. The tribunal in *Amoco* adopted the exact same reasoning, following step by step the PCIJ statements.

11 Award, § 326 and § 328. Footnotes omitted.
20. I agree with these statements, with one caveat. The caveat is that this paragraph does not mention the expression “in all probability”, which I consider of utmost importance, as will be elaborated on later in this opinion.

21. As a matter of fact, the majority also stated later in paragraph 372 of the Award, citing the exact wording of the Chorzów case that

... on the basis that “reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed”, the Court concluded that an unlawful expropriation “involves the obligation to restore the undertaking and, if this be not possible, to pay its value at the time of the indemnification, which value is designed to take the place of restitution which has become impossible.”

22. I would like to cite the same excerpts of the Chorzów decision, but with a different emphasis:

... on the basis that “reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed”, the Court concluded that an unlawful expropriation “involves the obligation to restore the undertaking and, if this be not possible, to pay its value at the time of the indemnification, which value is designed to take the place of restitution which has become impossible..

23. In sum, and in a simplified way, what comes out of the Chorzów case is that the compensation for a lawful expropriation is a just compensation represented by the value of the undertaking at the moment of dispossession and the reparation in case of unlawful expropriation, is restitution in kind or what would have been in all probability its value at the time of the indemnification, i.e. the time of the judgment.

24. It could therefore be said that the Tribunal is unanimous in considering that “full reparation” is due in case of an illegal expropriation. The main difference between my analysis and that of my two co-arbitrators is that I consider that this full reparation is the one foreseen in all probability at the time of the expropriation, while the majority considers that it is the full reparation as reconstructed in the world existing at the time of the award, which

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12 Award, § 372. Emphasis in the Award, footnotes omitted. The two citations are respectively from pp. 47-48 and p. 48 of Chorzów.
might be a completely different world than the one existing at the time of the expropriation, as will be explained in more details now.

III. The method for the quantification of compensation

25. Once the distinction between lawful and unlawful expropriation is accepted, this theoretical approach has to be translated into figures, in other words the damages have to be quantified. It is as far as the method for quantification of the damages is concerned, that my analysis diverges fundamentally from the approach of the Award. First, and foremost, I disagree with the theoretical approach on which the analysis of the majority is based, but – as already indicated – also with the concrete application of the theoretical premises to the different elements of the case, which appears contradictory and incoherent to me.

1. The theoretical approach

26. The majority had stated its approach in the following way: “The Tribunal has determined by majority that ex post valuation is generally appropriate in this case, which entails assessing the value on the date of the Award, in principle using ex post data.”13 However, my colleagues did not elaborate on what made the adopted approach “generally appropriate” in the case at hand.

27. Starting from the idea – which is uncontested – that in case of unlawful expropriation, there should be full reparation (which in Chorzów meant simply that the probable profits until the date of the judgment had to be added to the value lost on the date of the expropriation), the majority adopted in fact a “double” ex post analysis, meaning an analysis performed at the date of the Award AND using hindsight, in other words data postdating the expropriation.

28. The majority attempts to justify its approach based on what is referred to as a careful analysis of the Chorzów case14 as well as on the positions adopted by “several investment arbitration tribunals.”15

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13 Award, § 422.
14 Award, § 371: “The majority has arrived at this conclusion after carefully analyzing the PCIJ’s reasoning in Chorzów.” See, more generally, §§ 371-378.
15 Award, § 378.
In my view, a careful analysis of Chorzów does not support the approach of the majority and it cannot be contested that there are extremely few awards having adopted an ex post analysis as has been used here. These two points will now be developed.

*A careful analysis of the Chorzów case*

I will start by a review of the findings of the PCIJ, put in the legal and economic framework of the beginning of the twentieth century. First, I think that it is worth noting – to put things in perspective – that if the Court indeed considered that in case of an unlawful expropriation, the full reparation implied the payment of a compensation including what was called then the *damnum emergens* and the *lucrum cessans*, it has not considered any “future” lost profits, taking only into consideration probable profits lost between the date of the expropriation and the date of the judgment. **In other words, in no case did Chorzów take into account any lost profits AFTER the date of the judgment.**

The basic principle stated in Chorzów, as already indicated, is that the reparation should reestablish the situation that would *in all probability* have existed in the absence of the illegal act.

This basic principle has to be translated into monetary terms. In order to achieve this, *i.e.* trying to ascertain the compensation to be granted to the expropriated claimant in case of unlawful expropriation, the PCIJ decided to have recourse to an expert enquiry. It posed two questions which are the following:

I. - A. **What was the value**, on July 3rd, 1922, expressed in Reichsmarks current at the present time, of the undertaking for the manufacture of nitrate products of which the factory was situated at Chorzów in Polish Upper Silesia, in the state in which that undertaking (including the lands, buildings, equipment, stocks and processes at its disposal, supply and delivery contracts, goodwill and future prospects) was, on the date indicated, in the hands of the Bayerische and Oberschlesische Stickstoffwerke?

B. **What would have been** the financial results, expressed in Reichsmarks current at the present time (**profits or losses**), which would **probably** have been given by the undertaking thus constituted from July 3rd, 1922, to the date of the present judgment, if it had been in the hands of the said Companies?
II. - What would be the value at the date of the present judgment, expressed in Reichsmarks current at the present time, of the same undertaking (Chorzów) if that undertaking (including lands, buildings, equipment, stocks, available processes, supply and delivery contracts, goodwill and future prospects) had remained in the hands of the Bayerische and Oberschlesische Stickstoffwerke …

32. To develop what was the underlying predicates of the valuation at the time of the judgment, the PCIJ indicated clearly that contrary to the first valuation at the time of the expropriation to which lost profits should be added, no such lost profits should in principle be added to a valuation performed at the date of the judgment, in unambiguous terms:

As regards the *lucrum cessans*, in relation to Question II, it may be remarked that the cost of upkeep of the corporeal objects forming part of the undertaking and even the cost of improvement and normal development of the installation and of the industrial property incorporated therein, are bound to absorb in a large measure the profits, real or supposed, of the undertaking. Up to a certain point, therefore, any profit may be left out of account, for it will be included in the real or supposed value of the undertaking at the present moment.

33. It is interesting to note that in fact the PCIJ has used two methods of calculation of the compensation due to replace restitution in case of unlawful expropriation:

- one on the date of the taking, considering that compensation should be calculated as including the assets-based value of the undertaking at the moment of the interference plus the hypothetical probable lost profits until the date of the judgment;

- one on the date of the judgment, this hypothetical assets-based valuation being supposed to include *ipso facto* most of the hypothetical probable lost profits up to the date of the judgment.

34. The tribunal in *Amoco* has reiterated the same idea as the one expressed by the PCIJ:

The Court deems that, in this second hypothesis [evaluation at the date of the judgment] the profits, real or supposed, accrued between the taking and the judgment would be for the most part incorporated in the supposed value of the undertaking at the time of the

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16 Chorzów, op. cit., note 2, pp. 51-52. Emphasis added.
17 Id., p. 53. Emphasis added.
18 The Court indeed did mention that some lost profits that would not be covered by the book value at the time of the award could be added.
judgment, since they would have been absorbed by the cost of upkeep of the corporeal properties and of improvement and normal development of the installation … If, however, there remains “a margin of profit”, it “should be added to the compensation to be awarded.” On the contrary, if an investment of fresh capital would have been required for the normal development of the undertaking, the amount of such sums should be deducted.\footnote{Amoco, op. cit., note 8, § 204.}

35. To simplify, the approach of the PCIJ in the the Chorzów case, followed by a majority decision of the Iran-US Claims Tribunal in the Amoco case, considered that in case of lawful expropriation, all what was due was the value of what was lost at the time of the expropriation, while for an unlawful expropriation what was due was full reparation, which implied to compensate for what was lost at the time of the expropriation plus what could probably have been earned until the time of the judgement or award.

36. It is interesting to note that Judge Brower’s in a Concurring Opinion in Amoco disagreed with the holdings of Chorzów and Amoco, two decisions which do not consider that lost profits should be granted in case of lawful expropriation, as just mentioned:

In my view Chorzów Factory presents a simple scheme: If an expropriation is lawful, the deprived party is to be awarded damages equal to the “value of the undertaking” which it has lost, including any potential future profits, as of the date of taking; in the case of an unlawful taking, however, either the injured party is to be actually restored to enjoyment of his property, or, should this be impossible or impractical, he is to be awarded damages equal to the greater of (i) the value of the undertaking at the date of the loss (again including lost profits), judged on the basis of information available as of that date, and (ii) its value (likewise including lost profits) as shown by its probable performance subsequent to the date of loss and prior to the date of the award, based on actual post-taking experience, plus (in either alternative) any consequential damages.\footnote{Concurring Opinion in Amoco, op. cit., note 8, §§ 17-18. Emphasis added.}

37. It appears that the solution later adopted in ADC, which will be mentioned below, was already outlined in this Concurring Opinion of Judge Brower.

38. Unfortunately, the PCIJ had never to deal with the results of the expert enquiry, as the parties entered into a settlement and the case did not go to the quantum phase. This has facilitated many inaccurate readings of the Chorzów case. However, a certain number of elements can be underlined.

39. It appears that, according to the Court, both valuations were hypothetical: the first one included the probable profits as foreseeable at the date of the expropriation (“the financial
results … which would probably have been given by the undertaking …”), the second one searched for the probable value at the date of the judgment (“What would be the value at the date of the present judgement …”). This last point has been underscored by the tribunal in *Amoco*:

The other method used by the Court in order to “wipe out” the consequences of the wrongful taking consists of an estimation of the value of the undertaking at the time of the judgment. The valuation of the undertaking is exactly the same, with the same components. Only the date changes. Furthermore, the valuation is hypothetical, since it refers to the undertaking as it would have been if it had remained in the hands of the expropriated owners.\(^{21}\)

40. Moreover, I think that, if the PCIJ clearly suggested that a possible method was to use the date of the award to evaluate the expropriated property, it does not seem that the PCIJ had considered the possibility to use *ex post* information. It always insisted on the fact that the evaluations were to be made “in all probability”, which to me, might well exclude the taking into account of real data. The purpose of the reparation is to compensate the consequences of the illegal act of the State, as appreciated at the time of such expropriation, not the consequences of some posterior evolution of prices or evolution of demand or other circumstances.

41. To summarize it in a simple way, the PCIJ in the *Chorzów* case as well as the *Amoco* tribunal following the directions given by the PCIJ, considered that in case of lawful expropriation, all what is due is a fair compensation equivalent to the *damnum emergens*, while in case of unlawful expropriation the compensation has to cover both the *damnum emergens* and the *lucrum cessans*.

42. The problem is that the evolution of economic analysis and economic tools has rendered the distinction between *damnum emergens* and *lucrum cessans* very different. Indeed, the use of the DCF method\(^{22}\) which has been generalized in order to calculate the fair

\(^{21}\) *Amoco*, *op. cit.*, note 8, § 204. Emphasis added.

\(^{22}\) The discounted cash flow (DCF) analysis is a method of valuing a project or a company using the concepts of the time value of money. All future cash flows are estimated and discounted to give their present values. The sum of all future cash flows, both incoming and outgoing (the result of these incoming and outgoing cash flow representing the profits), is the net present value, which is taken as the value or price of the cash flows in question: “Discounted cash flow value’ means the cash receipts realistically expected from the enterprise in each future year of its economic life as reasonably projected minus that year’s expected cash expenditure, after discounting this net cash flow for each year by a factor which reflects the time value of money, expected inflation, and the risk associated with such cash flow under realistic circumstances. World Bank (eds): “Legal Framework for the Treatment of Foreign Investment. Report to the Development Committee and Guidelines on the Treatment of Foreign Direct Investment”, 31 *I.L.M.* (1992), 1382, p. 7.
market value of an enterprise, introduces so to say the *lucrum cessans* into the calculation of the *damnum emergens*. The vocabulary has changed, but this does not mean that in case of unlawful expropriation, lost profits until the time of the award should not be added to the value of the enterprise at the time of the expropriation. I will revert later to this question.

*An analysis of the case law*

43. The majority relies on case law to support its approach. But, an analysis of the case law of investment arbitral tribunals shows that, in the overwhelming majority of cases having dealt with an unlawful expropriation, the date of the expropriation was adopted in order to calculate damages, based on what was foreseeable at that date. It cannot be contested that the decisions adopting an *ex post* valuation – in the extensive interpretation used by the majority – are extremely few: as a matter of fact, the majority itself, in the footnote relating to the “several investment arbitration tribunals”, mentions only four treaty cases: *ADC v. Hungary*, *Siemens v. Argentina*, *ConocoPhilips v. Venezuela* and *Yukos v. Russia*. These are – to the best of my knowledge – the ONLY cases in almost thirty years of investment arbitration adopting the date of the award and *ex post* data, compared to the hundreds of cases relying on the date of expropriation and what was foreseeable on that date, in other words, the hundreds of awards which have granted, in case of expropriation, both lawful and unlawful, the fair market value of the expropriated property, evaluated at the date of the expropriation, with the knowledge at that time.

44. In other words, the approach adopted by the majority appears to me as an ultra-minority position.

45. The extremely limited number of decisions having adopted the approach chosen by the majority would not be, in my view, a sufficient reason not to adopt it, if these decisions were convincing. But, according to me, this is not the case, as appears from a quick survey of the mentioned cases, which I will now briefly review.

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23 To these, one case has to be added, as mentioned in the Award, which is the case of *AMCO* decided in 1990, which was a contract case.
46. An *ex post* valuation was performed in *ADC v. Hungary*[^24], in 2006, but the decision itself acknowledged that the immense majority of cases adopt the date of the expropriation as the valuation date. It should be noted at the outset that, in *ADC*, the tribunal stated that a valuation at the date of the award is an exceptional situation to be applied only when the value of the property has considerably increased between the date of the expropriation and the date of the award:

The present case is almost unique among decided cases concerning the expropriation by States of foreign owned property, since the value of the investment after the date of expropriation (1 January 2002) has risen very considerably while other arbitrations that apply the *Chorzów Factory* standard all invariably involve scenarios where there has been a decline in the value of the investment after regulatory interference. It is for this reason that application of the restitution standard by various arbitration tribunals has led to use of the date of the expropriation as the date for the valuation of damages.[^25]

47. Thus, the *ADC* tribunal itself recognizes that the **valuation at the date of the expropriation is the mainstream solution, even in case of unlawful expropriation**. In this sense, it supports more the solution advocated in this opinion than the minority position adopted by the majority in the Award.

48. The second case mentioned by the majority – *Siemens v. Argentina*[^26] – is even less convincing, and does not support the position of the majority, as – if read carefully – it uses indeed a valuation at the date of the expropriation. Although it is true that the *Siemens* tribunal has made some theoretical statements adopting the *ADC* approach[^27], the practical calculations were made on the date of the expropriation, as can be seen from the following extracts:

… the Tribunal has the task to value the investment of Siemens at May 17, 2001. [Note that the date of the expropriation was 18 May 2001]

…

The Tribunal considers that the amount profits is very unlikely to have ever materialized

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[^24]: *ADC v. Hungary*, ICSID Case No. ARB/03/16, Award of the Tribunal, 2 October 2006.
[^26]: *Siemens v. Argentina*, ICSID Case No. ARB/02/8, Award, 6 February 2007.
[^27]: *Id.*, § 360.
For these reasons, the Tribunal concludes that Siemens is not entitled to any compensation on account of profit loss. 28

49. The tribunal in Siemens thus considered the value at the date of the award to be the value at the date of expropriation plus lost profits until the date of the award if applicable, which were not considered to be so in the case at hand. As a consequence, this case cannot therefore be counted among the “several” decisions adopting the same approach as the majority.

50. The same theoretical position was then adopted in 2013 in ConocoPhillips v. Venezuela 29 by a majority with a dissent of Georges Abi-Saab: “The Tribunal, on the basis of principle and the authorities reviewed above, concludes that if the taking was unlawful, the date of valuation is in general the date of the award.” 30

51. It is unclear on which authorities exactly the tribunal bases itself, as it mentions mainly awards which said that full reparation shall be granted, but which used a valuation at the date of the expropriation to grant such full reparation. Moreover, although the tribunal has declared that the date of valuation is the date of the award, it has not yet proceeded to the calculation.

52. Finally, in 2014, in Yukos v. Russia 31, again, the date of the award was used, or rather the tribunal considered that the claimants had the right to choose between the valuation at the date of the expropriation and the valuation at the date of the award, a solution already mentioned in ADC. Although it is not the place to enter into the extremely complex specific aspects of this case, it can be mentioned however that as a first step the expert for the claimants has proceeded to a valuation on the date the claimants considered to be the date of expropriation, 21 November 2007. This valuation was then adjusted to the date considered by the tribunal to be the date of expropriation – 19 December 2004 and to the date of the award – 30 June 2014, by the use of an “index” applied to the initial valuation, and not by any

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30 Id., § 343.
autonomous calculation. The point of departure was therefore the date of the expropriation, with the data available on that date.  

53. But the more interesting point, from my perspective, is to analyze how the tribunal tries to justify that the claimant can have the “best of” both worlds – the date of expropriation or the date of the award – a free choice which I consider as inacceptable, as I will explain.

1763. The Tribunal also holds that, in the case of an unlawful expropriation, as in the present case, Claimants are entitled to select either the date of expropriation or the date of the award as the date of valuation. …

1767. … First, investors must enjoy the benefits of unanticipated events that increase the value of an expropriated asset up to the date of the decision …

1768. Second, investors do not bear the risk of unanticipated events decreasing the value of an expropriated asset over that time period. … If the asset could be returned to the investor on the date where a decision is rendered, but its value had decreased since the expropriation, the investor would be entitled to the difference in value, the reason being that in the absence of the expropriation the investor could have sold the asset at an earlier date at its previous higher value. …

1768. … The Tribunal finds support for this conclusion in the fact that this approach has been adopted by tribunals in a number of recent decisions dealing with illegal expropriation.  

54. Interestingly, just as the majority in this Award mentioning several decisions, the “number of recent decisions” quoted under paragraph 1768 of the Yukos Final Award are limited to the following: “ADC ¶¶ 496–97; Siemens ¶ 352; Amoco, pp. 300–301.” It has already been mentioned that ADC and Siemens do not really support the majority’s analysis. As for the reference to Amoco, the note wrongly implies that it is a reference to the decision in Amoco, while the mentioned pages indeed are a reference to the Concurring Opinion of Judge Brower, mentioned earlier.

55. What is the reasoning of the Yukos tribunal on that point? On the one hand, if the value has increased due to changed economic or other conditions, says the tribunal, the claimant has the right to reap the benefits of such increase, although this change is an unexpected fact unrelated to the expropriation. On the other hand, if the value has decreased due to

32 Id., § 1714: “With regard to the DCF method, Claimants describe their approach as an attempt to reconstruct the “pro-forma financial statements” that the relevant Yukos entity would have presented in November 2007, based on the financial and operational data published by Rosneft and Gazprom Neft, which held the majority of Yukos’ assets at that point in time.” Emphasis added.
33 Emphasis added. It is also worth mentioning the reference to unanticipated events, which clearly interfere with the link of causality between the unlawful expropriation and the enhanced damages claimed, as will be explained later.
unexpected changed economic or other conditions, says the tribunal, the claimant has the right to the higher value, because he could have sold its property before the decrease. One wonders why the same reasoning was not adopted in case of increase, as the claimant could have, just as well, sold its property before the increase ...

56. I consider that the solution suggested by ADC and Yukos is biased in favor of the investors and that the solution which systematically applies the harshest damages on the Respondent State resembles punitive damages, which are excluded in international law. A legal solution cannot just be based on what is more favorable to one of the parties.

57. The majority seemed uneasy about this issue and stated:

Some authorities also suggest that such valuation date only applies if the value of the asset increased after the taking, not when it decreased. For present purposes, this issue can be left open.\textsuperscript{34}

58. I do not think that the issue can just be ignored and left open, as did the majority. Indeed, there are only two possible options for the use of the date of the award with \textit{ex post} information, and in my view none of them is satisfactory.

59. If the date of the award with \textit{ex post} information is \textbf{only} used when it is in favor of the expropriated investor, I consider that this would be \textbf{against a fair interpretation} of international investment law. If, in order to be coherent, the date of the award with \textit{ex post} information is \textbf{always} used, I consider that this can result in \textbf{injustice} for the expropriated investor.

60. This comforts my view that the fair solution is to be based on what was foreseeable at the date of the expropriation, which is indeed in line with the respect of the investor’s legitimate expectations. This does not mean that the investor should not receive full compensation, which for the PCIJ in the \textit{Chorzów} case was not restricted to \textit{damnum emergens}, but had also to include the probable \textit{lucrum cessans}, until the time of the judgment. The vocabulary has changed, but the basic ideas remain.

\textsuperscript{34} Award, § 378. Footnote omitted.
2. The concrete application in the case

61. Once the majority had stated that it finds that in this particular case an *ex post* valuation is appropriate, which entails assessing the value on the date of the Award, in principle using *ex post data*, it did not apply such approach consistently for different reasons: data not certain enough, not appropriate, not available.

62. In my view, the difficulties faced by the majority in applying the DCF method at the time of the Award are inherent in their choice to use *ex post* information, which is not adapted to such method.

63. Here, it is worth trying to understand more precisely how the DCF method works for the evaluation of a going concern. It is clear that this method is based on the projection into the future of the past results as well as the business plan for the future of the going concern which has been expropriated. The further in the future, the less reliable the forecasts are: many enterprises do not fulfill their business plan, their directors can change, their board can make wrong strategic decisions and so on. This uncertainty is so to say compensated by the fact that the further in the future a cash flow is considered, the more it will be discounted. This is a form of mathematical stability of this hypothetical method of valuation of an enterprise: data which are possibly erroneous are heavily discounted, so that the added errors do not drastically modify the final outcome. This is the beauty of the DCF method and explains its wide adoption. In other words, the internal equilibrium and the economic acceptability of the system is based on the fact that a cash flow which is far from the date of the expropriation will not have a major impact on the value of the enterprise. If however, the date of the evaluation is shifted to the date of the award – and in our case it is a projection of almost 10 years from the expropriation – the data concerning the enterprise is of very little reliability. And to apply to this probable data concerning the enterprise in a “but for” world elements of the real general economic world does not make that data more reliable. It just confuses the “but for” world and the real world, without rendering the “but for” world more real. In his book entitled 1Q84, the Japanese writer, Haruki Murakami, clearly explained that the rules of our real world with one moon could not apply in his imaginary world with two moons. The same is true here. And the fact that two brilliant arbitrators could not perform the exercise in a coherent manner – as will be indicated – results in my view from the inherent problems with the method they choose.
64. The majority indeed made a series of “pragmatic” adjustments to their chosen theoretical method in order to render it acceptable. This creates in the end a complete patchwork, which I consider contrary to the necessary previsibility of the law. I will now illustrate the different choices made by the majority in the Award, which, in my opinion, render the result somehow unpredictable.

65. In order to evaluate the enterprise, different elements have to be determined: production profile, cash flows – which implies a determination of prices, costs, capital expenditures and exchange rates – discount rate – which depends on the risk free rate of return, the equity risk premium, the country risk premium, the micro-cap size premium, and the cost of debt. In order to follow easily the technicalities presented, I indicate here that Navigant was the Claimants’ expert and Econ One the Respondent’s expert.

**Concerning the production profile, the Award used *ex ante* data from 2001.**

66. Navigant had presented an *ex ante* evaluation of the production profile, going from 59,861MT in 2004 to 171,022 Mt in 2014 and an *ex post* evaluation of 65,386 Mt in 2004 to 224,145 Mt in 2014 (in § 419 of the Award). Econ One has only presented an *ex ante* evaluation of 64,000 Mt in 2004 and 68,000 Mt in 2006, this figure remaining the same until 2029 (in § 421 of the Award). The majority considered that “Navigant’s relying solely on market growth to forecast production is speculative” (in § 422 of the Award). In other words, the majority disregarded the real *ex post* information of the market growth and decided to use rather *ex ante* information dating back to figures projected in the 2001 Supply Contract between Quiborax and RIGSSA, which resulted in taking the Respondent’s expert *ex ante* figures of a production profile of 64,000 Mt in 2004 reaching 68,000 Mt in 2006 and remaining stable (in § 439 of the Award).

**Concerning the cash flows, the Award used *ex post* data, for prices, costs as well as exchange rates, while it used *ex ante* data for capital expenditures.**

67. For the *prices*, Navigant used as prices for ulexite that would have been mined in Bolivia the *ex post* prices of ulexite mined in Chile, based on the average prices for the period 2009-2012 (in § 445 of the Award), while Econ One projected the prices of ulexite that would
have been mined in Bolivia based on the *ex ante* prices of that Bolivian ulexite in 2004 (in § 447 of the Award). The majority retained the *ex post* Chilean prices for the longer period of 2004-2012, meaning prices based on *ex post* data (in § 450 of the Award).

68. For the **costs**, Navigant used the actual *ex post* costs for water, fuel and transportation costs (in §§ 452-453 of the Award), while Econ One has taken the *ex ante* prices in 2004 and has projected them by applying to them the long term inflation rate expected in the United States at the date of expropriation (in § 454 of the Award). The majority used Navigant’s *ex post* costs, stating that it must be “consistent with the pricing rationale chosen” (in § 455 of the Award).

69. For **capital expenditures**, Navigant has projected a big increase, based on *ex post* data of the evolution of the market (in § 457 of the Award), while Econ One was more conservative, basing its projection on *ex ante* data (in § 458 of the Award). The majority adopted Econ One capital expenditures as it had adopted the latter’s *ex ante* production profile (in § 459 of the Award).

70. For the **exchanges rates**, the majority “has used the exchange rates used by Navigant in its *ex post* valuation, to which Econ One does not appear to object.” (in § 462 of the Award).

**Concerning the discount rate, the Award used sometimes *ex post* data and sometimes *ex ante* data for the different constituent elements.**

71. Econ One has calculated the WACC in 2004 at 22.99 %, while Navigant calculated the WACC in 2013, at 14.61 % in its First Report and 10.78 % in its Second Report (in § 466 of the Award). The majority found a WACC of 18.4 % (in § 501 of the Award) based on an *ex post* risk free rate of return, an *ex post* equity risk premium, an *ex ante* country risk premium, an *ex ante* micro-cap size premium and finally an *ex post* cost of debt.

72. For the **risk free rate of return**, Navigant based its calculation on the 10-year US Treasury bond which had a yield of 2.52 % in 2013 (in § 469 of the Award), while Econ One calculated the risk free rate based on the yield of a 20-year US Treasury bond in June 2004, which amounted to 5.43 % (in § 472 of the Award). The majority considered it more
appropriate to choose the *ex post* calculation of Navigant based on data of 2013 (in § 474 of the Award).

73. For the **equity risk premium**, Navigant calculated such premium to be 5% as of 2009 (in § 476 of the Award), while Econ One calculated it at 7.2% as of 2004 (in § 478 of the Award). The majority retained Navigant’s *ex post* calculation, based on data of 2009, noting that these “figures are more current than Econ One, and thus more appropriate for an *ex post* valuation.” (in § 479 of the Award), i.e. 5%.

74. For the **country risk premium**, Navigant measured the country risk premium at 4.24% for 2009 in its First Report and at 2.67% for 2013 in its Second Report (in § 480 of the Award), Econ One considered that the country risk premium should be 13.83%, being the average between data published by Professor Damodaran in 2004, which was 9.75% and data published the same year by Ibbotson, which was 17.91% (in § 481 of the Award). Although the majority had at its disposal figures of 2013, it choose to use the 2004 *ex ante* figures, with the following explanation: “Given both Parties' reliance on Prof. Damodaran's writings, the Tribunal is persuaded to use the country risk premium according to the data published by this source, i.e. 9.75%. The Tribunal is aware that this premium relates to 2004 and that the chosen *ex post* analysis calls for the use of a figure from 2013. However, the 2013 figure is not in the record, and the Tribunal considers that the 2004 data better reflects actual risk than the low premium proposed by the Claimant's expert.” (in § 488 of the Award).

75. For the **micro-cap size premium**, Econ One included a micro-cap size premium, based on 2004 data of 4.01% (in § 489 of the Award), while Navigant did not present a figure, as it considered that such a factor was not applicable to the Claimants (in § 491 of the Award). The majority decided to use the 2004 *ex ante* figure, stating that “(t)he Tribunal is aware that this premium relates to 2004 and that the chosen *ex post* analysis calls for the use of a figure from 2013. However, the 2013 figure is not in the record, and the Tribunal considers that the 2004 data is reasonable and thus may be applied in the present valuation” (in § 493 of the Award).

76. For the **cost of debt**, the majority reverted to *ex post* data. Navigant has proposed a cost of debt of 9.44% in Bolivianos in its First Report and of 7.44% again in Bolivianos in its Second Report, containing its adjusted *ex post* calculation (in § 496 of the Award), while Econ One proposed 11.93%, based on *ex ante* data (in § 497 of the Award). The majority
concluded: “Navigant … has concluded that the appropriate rate is 7.44%. The Tribunal finds this rate reasonable for 2013. By contrast, it finds Econ One’s rate of 11.93% (which was calculated for 2004) inappropriate.” (in § 500 of the Award).

77. To summarize, the calculations performed by the majority are based on the following parameters, which I consider inconsistent:

- Production profiles based on *ex ante* data of 2001
- Prices based on *ex post* prices during the period 2004-2012
- Costs based on *ex post* costs of 2013
- Capital expenditures based on *ex ante* data of 2004
- Exchange rates based on *ex post* data of 2013
- Risk free rate of return based on *ex post* data of 2009
- Equity risk premium based on *ex post* data of 2013
- Country risk premium based on *ex ante* data of 2004
- Micro size-cap premium based on *ex ante* data of 2004
- Cost of debt based on *ex post* data of 2013.

78. This hazardous choice of dates makes the calculation unpredictable, and is not in line with a fair application of the rule of law, although I reiterate that, if I disagree with the random fashion in which the compensation was calculated by a majority composed of the President and my other colleague arbitrator, I have no specific quarrel in this case with the concrete amount. In other words, I don’t have a problem with figures, I have a problem with the principles that were applied (or not applied) to reach these figures. Again, to be clear, I do not question the competence of my colleagues, I think that the difficulties they encountered in the application of the unusual method of valuation retained are so to say embedded in that method.

79. I will try to explain why, in my view, the valuation should always be made with the expectations of the claimant at the time of the expropriation.
3. Valuation should reflect the claimant’s legitimate expectations existing at the time of expropriation.

80. The PCIJ in the Chorzów case has indeed made a reference to the date of the judgment, but it has to be clear that there is a difference with the method adopted by the majority in the Award: in Chorzów, the valuation at the date of the judgment was used as an alternate method to a valuation at the time of the expropriation and the PCIJ made it clear that it was free to use one or the other method or to make its own calculations. 35

81. In my view, the calculation of the due compensation should always assess the damage as seen at the time of the expropriation. Such damages should be limited to what has been lost in case of a lawful expropriation, but to this has to be added damages for what the investor expects at the time of the expropriation in terms of future profits and expansion, in case of an unlawful expropriation. The evaluation of damages takes place in a but for scenario, in which I consider that real data should not be introduced. This is also entirely coherent with the Chorzów decision.

82. First, it appears to me that the facts known at the date of the expropriatory act should always be the reference.

83. An ex post valuation meaning a valuation taking into account events and evolutions that took place after the illegal act is arbitrary. The facts existing after the date of the award have nothing to do with the facts of the case. The date of expropriation is the only one that is objectively related to the dispute.

35 Of course, it is well known that financial expertise is not a mathematical science, and the Court considered therefore that it was wise to use two methods to determine the value of the expropriated property at the time of the award, and preferred to approach the question from two different angles: “The Court does not fail to appreciate the difficulties presented by these two questions, difficulties which are however inherent in the special case under consideration, and closely connected with the time that elapsed between the dispossession and the demand for compensation, and with the transformations of the factory and the progress made in the industry with which the factory is concerned. In view of these difficulties, the Court considers it preferable to endeavour to ascertain the value to be estimated by several methods, in order to permit of a comparison and if necessary of completing the results of one by those of the others. The Court, therefore, reserves every right to review the valuations referred to in the different formulae: basing itself on the results of the said valuations and of facts and documents submitted to it, it will then proceed to determine the sum to be awarded to the German Government, in conformity with the legal principles set out above.”, Chorzów, op. cit., note 2, pp. 53-54.
84. Second, if *ex post* information is used, **the amount of damages granted will vary with the date of the award.**

85. If the valuation is made using *ex post* information, the use of hindsight is arbitrary in that it considers all facts up to a fixed point in time – the time of the award – that bears no relation to the events in issue (except that it is later). If the award had been rendered a year earlier or three years later, the facts would likely have been different, and the award different in amount.

86. To illustrate this, let us just imagine a plant which has been expropriated. Shortly before the time of the award, it has been destroyed by a hurricane. Using *ex post* information and valuing the compensation that would replace restitution, would result in refusing any compensation to the expropriated investor, which does not seem fair.

87. Third, **a basic rule on reparation is causation**: the damage that has to be compensated has to be the result of the illegal act.

88. Article 31 of the ILC Articles on State Responsibility points clearly to the necessity of a causal link between the damage and the illegal act.

   **Article 31. Reparation**

   1. The responsible State is under an obligation to make full reparation for the injury **caused** by the internationally wrongful act.
   2. Injury includes any damage, whether material or moral, **caused** by the internationally wrongful act of a State.
“consequential” to be the subject of reparation. In some cases, the criterion of “directness” may be used, in others “foreseeability” or “proximity”.  

90. The citation on foreseeability found in paragraph 381 of the Award deals in my view only with the consequences flowing from an illegal act in an uninterrupted chain of events, while the present situation is one of the interplay of complementary events, an illegal act and a fluctuation of the market. The distinction between these two types of situations – not always well perceived – has been extensively developed in my thesis:\(^{38}\)

91. It is my view that the majority has reasoned in terms of what I called “un lien de causalité simple” [“a simple causal link”], while the situation is one of a “lien de causalité complexe” [“complex causal link”]. In order to visualize the two situations I am referring to, I can provide the following schemes:

\(^{37}\) Award, § 381. Footnotes omitted.

\(^{38}\) All this has been discussed at length in my thesis, Brigitte Bollecker-Stern, *Le préjudice dans la théorie de la responsabilité internationale*, Paris, Pedone, 1973.
Foreseeability deals with the causal link, as illustrated in the following chart:

Total damage attributable to the author of the illegal act.

92. Complementary intervention deals with the intervention of several causes of damages and is illustrated in the following chart:

Damage only partially attributable to the illegal act.
93. Foreseeability like proximity is a test to determine the consequences that can be considered as resulting from an illegal act and thus attributable to the author of this illegal act. This appears quite clearly if the citation relied on by the majority is reintroduced in its full context:

94. The Commentary to Article 31, indeed, states:

(9) Paragraph 2 addresses a further issue, namely the question of a causal link between the internationally wrongful act and the injury. It is only “[i]njury … caused by the internationally wrongful act of a State” for which full reparation must be made. This phrase is used to make clear that the subject matter of reparation is, globally, the injury resulting from and ascribable to the wrongful act, rather than any and all consequences flowing from an internationally wrongful act.

(10) The allocation of injury or loss to a wrongful act is, in principle, a legal and not only a historical or causal process. Various terms are used to describe the link which must exist between the wrongful act and the injury in order for the obligation of reparation to arise. For example, reference may be made to losses “attributable to [the wrongful] act as a proximate cause”, or to damage which is “too indirect, remote, and uncertain to be appraised”, or to “any direct loss, damage including environmental damage and the depletion of natural resources or injury to foreign Governments, nationals and corporations as a result of ” the wrongful act. Thus, causality in fact is a necessary but not a sufficient condition for reparation. There is a further element, associated with the exclusion of injury that is too “remote” or “consequential” to be the subject of reparation. In some cases, the criterion of “directness” may be used, in others “foreseeability” or “proximity”.39

95. Foreseeability therefore does not deal with the question of the role played by external causes. Indeed, it is always “foreseeable” that others causes than the illegal act can happen and enhance or diminish the damage.

96. A complementary intervention imposes to distinguish what is the foreseeable damage resulting from an illegal act and what damages result from other causes like the fluctuations in the market:

En cas d’intervention complémentaire d’un acte illicite et d’une autre cause, une ventilation doit être opérée et réparation ne peut être exigée de la part de l’Etat à qui est imputable l’acte illicite, qu’à concurrence de la quote-part du préjudice afférente audit acte illicite seul. 40


40 Id., p. 285.
Free translation:

In the event of complementary intervention of an unlawful act and any other cause, a distinction should be made, and compensation can only be required from the State to which the unlawful act is attributable in proportion to the share of the damage caused by that unlawful act only.

97. Two arbitration cases can illustrate this solution. First, the case of *Yuille & Shortridge v. Portugal*[^41^], in which the applicant was complaining from an illegal act performed by the Portuguese authorities, but where its profits had also diminished because of a general decline in the market. It has been clearly stated in the award, that the damage to be compensated by Portugal was only the damage caused by its own illegal act and not the damage resulting from the general economic situation:

> Il va sans dire que les pertes dues à la situation générale des affaires et à d’autres causes extérieures ne pouvaient entrer en ligne de compte dans le calcul des dommages et intérêts.

Free translation:

> It goes without saying that the losses attributed to the general business climate and other external causes cannot be taken into account in the calculation of damages.^[42^]

98. The same solution in the case of *Lacaze v. Argentina*,[^43^] where a distinction was made between the consequences of the illegal behavior of the Argentine authorities and the consequences of the general economic situation.

99. It is quite clear that the fluctuations of the market do not flow from the illegal act, it is an independent event, although it might indeed aggravate – or diminish – the injury. But in such a situation, only the injury foreseen at the time of the illegal act and unanticipated events – to use the vocabulary of *Yukos* cited earlier – can be attributed to the author of the wrongful act. The question here is the combined existence of an illegal act and of fluctuations in the market. Also if the “fluctuations of the market are objectively foreseeable”, as stated by the majority, this would be true both for increases and decreases of the lost profits and would give credit to the solution consisting of denying any reparation for lost profits if the market has collapsed, which I do not consider to be an appropriate solution. The fluctuations of the market are not a foreseeable consequence of the illegal act, they constitute an external event, which indeed is foreseeable, just as is foreseeable the ever changing nature of human life.

[^41^]: Recueil des arbitrages internationaux, *Lapradelle et Politis*, II, Award, 21 October 1861. p. 94.
[^42^]: *Id.*, p. 110.
[^43^]: *Id.*, p. 290.
100. Using *ex post* data clearly introduces an **externality** as far as the consequences of the illegal act is concerned.

101. This means that evolutions posterior to the illegal act (*ex post* information) that might cause a diminution or an increase of the damage suffered, are not caused by the illegal act and therefore should not be taken into account when calculating the reparation due.

102. Fourth, I want to repeat that the solution **to use alternatively *ex post* information or *ex ante* information**, depending on what is more favorable to the investor, as has been suggested in ADC and Yukos, **is not in line with the certainty of the rule of law.** Such a solution is against a fair interpretation of investment law, which should be a balanced interpretation, as noted in *El Paso v. Argentina*:

> This Tribunal considers that a balanced interpretation is needed, taking into account both State sovereignty and the State’s responsibility to create an adapted and evolutionary framework for the development of economic activities, and the necessity to protect foreign investment and its continuing flow.\(^{44}\)

103. And if it would be said that the **ex post evaluation should always be used in case of illegal expropriation** (which would at least be more coherent), the result might be unfair, and **would not be in line with justice.** Indeed, if the formula “to reinstate the investor in the situation it would have been in the absence of an illegal act” is taken to mean to do this at the time of the award, and implies an *ex post* valuation, it should result as a consequence, that if *ex post* valuation is accepted, in case of a complete collapse in the price of a commodity, the investor could see its compensation reduced to *nil*, while the investor had reasonable expectations of future profits at the time of the expropriation. This is a supplementary – and quite fundamental – reason why I am reluctant to accept *ex post* information.

104. In other words, for all these reasons, I think that the use of *ex post* information is not in line both with legal and economic principles. This does not mean that the expropriated investor is not entitled to receive the value, as foreseen at the date of expropriation, which its property would, in all probability, have at the time of the award. This does therefore mean

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\(^{44}\) *El Paso Energy International Company v. The Argentine Republic*, ICSID Case No. ARB/03/15, Award on Jurisdiction, 27 April 2006, § 70.
that, in case of unlawful expropriation, the damages should not be restricted to the value of the expropriated property at the time of expropriation. Lost profits to the date of the award should indeed be added.

105. Again, I regret to have felt compelled to write this long Opinion, but I consider that the principles at stake are extremely important and were in need of clarification.

Professor Brigitte Stern
Date: SEP 07 2015