

# The role of sunk investment costs in calculating damages<sup>1</sup>

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## I. ALTERNATIVE APPROACHES TO DAMAGES

Depending on the circumstances, two alternative approaches may be appropriate to assess the pecuniary damages resulting from a wrongful action or non-contractual performance:

- An expenditure-revenue approach, focused on the increase in costs and reduction in revenues.
- An asset valuation approach, focused on the value of the asset expropriated, terminated or destroyed.

Their main features, when they should be applied, and the potential relevance of sunk investment costs are summarized in this table:

Approach	Components of damage	Example	Effect of breach on revenue producing -asset	Are “sunk costs” relevant?
Expenditure-Revenue Approach	Incremental costs ( <i>damnum emergens</i> ) + reduced revenues ( <i>lucrum cessans</i> )	Supply of defective equipment, which has to be repaired and leads to reduced sales	Temporary	No
Asset Valuation Approach	Value of asset or contract being expropriated, destroyed or terminated	<ul style="list-style-type: none"><li>• Expropriation</li><li>• Illegal termination of contract (e.g. JV between commercial bank and insurance company)</li></ul>	Permanent and complete	Maybe, depending on the valuation methodology

### 1. The expenditure-revenue approach

#### Damnum emergens

This category includes, in turn, two different concepts:

- Pecuniary damages:

= additional/incremental out-of-pocket expenses (e.g. repair works) resulting from breach of contract or non-performance

Not to be confused with “sunk costs” (i.e. purchase price or investments already made).

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- Non-pecuniary damages (i.e. “moral damages”)

= non-pecuniary harm (e.g. physical or mental suffering, loss of moral reputation...) resulting from wrongful behavior

### **Lucrum cessans**

= decrease in revenue (e.g. loss of sales while the machine is being repaired) resulting from breach of contract or non-performance

What if the presumably lost benefits were likely, but not certain, or are difficult to quantify?

This is the origin of the concept of “*loss of opportunity*” or “*loss of chance*,” a partial recognition of *lucrum cessans*, as reflected, for instance, in the Unidroit Principles:

“Compensation may be due for the *loss of chance* in proportion to the probability of its occurrence” (Unidroit Principles, 7.4.3-2)

This expenditure-revenue approach, typical of contractual breaches, should be applied in keeping with any specific contractual clauses limiting contractual responsibility (e.g. clauses establishing “liquidated damages” *in lieu* of actual damages, excluding consequential damages or foregone profits, or capping pecuniary liabilities resulting from breach of contract).

## **2. The asset value approach**

As indicated, this is the appropriate valuation approach when the breach of contract or wrongful behavior resulted in the expropriation, destruction or termination of the asset or contract.

When this approach is used, the key practical problem for arbitrators will be to determine whether it will be reasonable to apply the ideal forward-looking valuation methods -whose epitome is the Discounted Cash Flow (DCF) method- or whether they will have to rely instead on the imperfect, but sometimes inevitable backward-looking valuation method based on sunk investments costs or related concepts (like book value).

In the remainder of this article this key decision on the potential relevance of sunk investment costs will be discussed and illustrated with some arbitral awards awards.

## **II. HOW TO ASSES VALUE**

### **1. The traditional controversy on the Theory of Value**

Economists have traditionally followed two different alternative avenues when measuring asure the economic value of a good, service, asset or contract:

- The value of the resources (**inputs**) required for its production or acquisition
- The value of the services or flows (**outputs**) that it will produce from now into the future

This distinction was at the heart of a famous change of paradigm among economists in XIX century’s Europe when discussing the “Theory of Value”. Even if subsequently the

“output/market approach” got the upper hand, the distinction is still relevant today, because some items are still valued on the basis of “inputs” or historic costs, as the following table illustrates:

Item	How to determine value		Observations
	Inputs	Outputs	
Goods	Labor theory of value (Classical Economists: Ricardo, Marx...)	Utility theory (Marginal Revolution: Jevons, Walras, Menger)	In Alfred Marshall’s famous analogy <sup>3</sup> , costs (supply) and utility (demand) determine the market price jointly, as the upper and lower blades of a scissors
National Accounts: GDP components	Government-provided services (e.g. health services, education) <sup>4</sup>	Market-provided <u>final</u> goods and services (i.e. excluding “intermediate transactions”)	The UK’s Atkinson Report <sup>5</sup> made an effort to develop output-based measures for government-provided services <sup>6</sup>
Accounting Standards (e.g. IAS, IFRS...): Valuation of balance sheet items	Historic Value Accounting (i.e. historic value less amortization)	Fair Value Accounting (i.e. “mark-to-market” valuation) <sup>7</sup>	Since the 90s, there has been a gradual shift towards Fair Value Accounting. But some items can still be valued at “book value”, even if sometimes subject to “impairment tests”
Legal services (including arbitrators’ fees)	Hourly rates	<ul style="list-style-type: none"> <li>• Success fees</li> <li>• <i>Ad valorem</i> fees (e.g. X% of amount in dispute)</li> </ul>	
Investment	<ul style="list-style-type: none"> <li>• Investment costs (“sunk costs”)</li> <li>• Book value</li> </ul>	<ul style="list-style-type: none"> <li>• Discounted Cash Flows (DCF)</li> <li>• Market approaches (multiples, comparable transactions/companies...)</li> </ul>	

The difference in approaches to valuation of an asset was nicely captured in a funny survey run years ago by the new 2017 Nobel Prize in Economics, Richard Thaler, together with his

<sup>3</sup> *Principles of Economics* (1890), Book V, Chapter III, 27

<sup>4</sup> In “The Valuation of the Social Income”, *Economica*, 7:26, (1940), pages 105-124, John Hicks, one of the fathers of the UN’s System of National Accounts, recommended that government provided goods and services should be evaluated at costs, since no market prices are available and “the benefit of the services is at least as good as their costs”. His colleague Simon Kuznets accepted this view in “On the Valuation of Social Income – Reflections on Professor Hicks’ Article” *Economica*, 15:57, (1948).

<sup>5</sup> Anthony Atkinson, “Atkinson Review: Final Report Measurement of Government Output and Productivity for the National Accounts”, Norwich, U.K., HMSO, 2005.

<sup>6</sup> See, for instance, Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi, “Report by the Commission on the Measurement of Economic Performance and Social Progress” (2009), Chapter 1, section 3.3, pages 97-101.

<sup>7</sup> In the case of international accounting and reporting standards, Fair Value Accounting is defined by IFRS 13, available at <https://www.iasplus.com/en/standards/ifrs/ifrs13>.

colleague Eldar Shafir among subscribers to a wine newsletter, *Liquid Assets*.<sup>8</sup> Respondents were highly knowledgeable wine consumers with substantial home cellars, most of them economists or business executives.

The question they put to subscribers, in three separate experiments, was:

*“Suppose you bought a case of a good 1982 Bordeaux in the futures market for \$20 a bottle. The wine now sells at auction for about \$75 a bottle.*

*You...*

*[...have decided to give one bottle of this wine to a friend as a gift]*      Scenario 1  
*[...have decided to drink a bottle of this wine with dinner]*      Scenario 2  
*[...inadvertently dropped the bottle and broke it]*      Scenario 3

*Which of the following amounts best captures your feeling of the cost to you of [giving away/drinking/breaking] this bottle?*

They got the following responses (in %):

Subjective cost		Scenario 1 (Giving away)	Scenario 2 (Drinking)	Scenario 3 (Breaking)
Amount (\$)	Rationale			
0	I already paid for the bottle	30%	30%	8%
+20	This was the amount I paid years ago	26%	25%	35%
+75	This is the amount I would need to replace it	30%	20%	55%
-55	This is the saving I am making (i.e. \$75 - \$20)	14%	25%	2%

Arbitration disputes are typically closer to Scenario 3 of Thaler and Shafir’s experiment and there is a natural inclination -frequently enshrined in BITS- to prefer the “output/market/fair value” approach.

## 2. Ideal conditions for the application of the DCF method

Arbitrators have come to realize, however, that the DCF approach is indeed the ideal valuation methodology, but only provided several conditions are met.

Recently, two Arbitral Tribunals -both chaired by my good friend Juan Fernández-Armesto- have spelled out those ideal conditions:<sup>9</sup>

<sup>8</sup> Eldar Shafir, Richard Thaler, “Invest now, drink later, spend never: On the mental accounting of delayed consumption”, *Journal of Economic Psychology*, 27 (2006), pages 694-712.

<sup>9</sup> *Rusoro Mining Limited vs The Bolivarian Republic of Venezuela*, ICSID Case No.ARB (AF) 12/5, 22 August 2016, paragraph 759, which draws on *OI European Group B.V. vs The Bolivarian Republic of Venezuela*, ICSID Case No.ARB/11/25, 10 March 2015, paragraphs 658-660.

- The enterprise has an established historical record of financial performance;
- There are reliable projections of its future cash flow, ideally in the form of a detailed business plan adopted *in tempore insuspecto*, prepared by the company's officers and verified by an impartial expert;
- The price at which the enterprise will be able to sell its products or services can be determined with reasonable certainty;
- The business plan can be financed with self-generated cash, or, if additional cash is required, there must be no uncertainty regarding the availability of financing;
- It is possible to calculate a meaningful WACC, including a reasonable country risk premium, which fairly represents the political risk in the host country;
- The enterprise is active in a sector with low regulatory pressure, or, if the regulatory pressure is high, its scope and effects must be predictable: it should be possible to establish the impact of regulation on future cash flows with a minimum of certainty.

In the DCF methodology, only the future is relevant and "sunk investment costs" do not play any role.<sup>10</sup>

### **3. Sunk investment costs, an imperfect (but sometimes useful) measure of value**

When a DCF or market approach to valuation is not practical, arbitrators are frequently forced to rely -very much as national Statistical Offices when estimating the value of Government-provided services- on "inputs", i.e. on the investment made in the project or the book value at which the asset was carried.

But sunk investment costs or book valuations may be inadequate whenever any of two opposite problems are suspected to be at work.

#### **The problem of overvaluation**

Sunk investment costs may overestimate the real value of an enterprise or project in at least cases:

- Over-invoicing and extravagant investment expenditures

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<sup>10</sup> Economists rightly point out that, from a normative economic point of view, "bygones are bygones" and hence decision-makers need only consider the effects of their actions going forward, without taking into account prior investments or costs, since they are already inevitable. Sunk costs must be ignored. There is however ample evidence that, in practice, human decision makers fall prey to the so-called "sunk-cost fallacy". For an explanation of this empirical phenomenon based on the concept of "mental accounts", see Richard H. Thaler, "Mental Accounting Matters", *Journal of Behavioral Decision Making*, 12, September 1999, particularly pages 190-192, or Chapter 8 of his book "Misbehaving. The Making of Behavioral Economics", Norton Company, 2015. For a recent review explaining the pervasiveness of the fallacy, see Corina Haita-Falah, "Sunk-cost fallacy and cognitive ability in individual decision-making", *Journal of Economic Psychology*, 58, 2017, pages 44-59.

- Post-investment adverse changes which made “sunk costs” become “stranded costs”<sup>11</sup>

This may happen as a result of:

- Regulatory changes (e.g. liberalization of previously regulated markets).
- Emergence of disrupting technologies or new competitors (“Schumpeterian innovation” and “the alchemist’s fallacy”)<sup>12</sup>.
- Unexpected adverse market trends (e.g. steep, sustained decline in the price of the mineral or hydrocarbon being mined or extracted).

The emergence of new competitors may be particularly disruptive in sectors requiring significant upfront investments in which, once investments are sunk, variable costs of operation are relative small (at least compared with the average unit costs, including fixed costs). This is so because competition may lead competitors (even if they are very few, even just two) to pricing strategies based on marginal costs, which are too low to allow them to recover their sunk costs, which then become “stranded”.<sup>13</sup>

### **The problem of undervaluation**

Conversely, sunk investment costs may blatantly underestimate the real value of an enterprise or project when any of the following conditions obtain:

- De-risking: the investor, working in an uncertain environment against adverse odds, overcame barriers and risks before achieving economic success
- Windfall gains: post-investment favorable market changes (e.g. increased sale prices) produced a significant upside

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<sup>11</sup> The concept of “stranded costs” emerged during the liberalization of electricity markets and, consequently, was defined as “those costs that cannot be recovered by regulated firms during the transition from traditional regulation to an open, competitive environment”. See, for instance, José Antonio García Martín, “Stranded Costs: An Overview”, *Working Paper No.0108* Universitat Pompeu Fabra and CEMFI, 2001, available at <http://www.cemfi.es/wp/01/0108.pdf>. But the concept can be understood in a broader sense, as in this paper, to describe any sunk investment costs that, due to unexpected post-investment developments reducing the company’s revenues, are unlikely to be recovered by the investor. Hence the term “stranded” (in Spanish, “varado”, like a boat sitting on the sand during low tide).

<sup>12</sup> In “Schumpeterian Profits and the Alchemist’s Fallacy Revised”, *Yale Working Papers on Economic Applications and Policy*, Discussion Paper No.6, 2005, American economist William D. Norhaus argues that, due to competition, innovators are unable to capture most of the potential monopoly profits resulting from the innovation, the bulk of those benefits being passed on to consumers through lower prices.

<sup>13</sup> This type of competition is known by economists as “Bertrand competition”, since it was French mathematician Joseph Louis François Bertrand, French mathematician who in 1883, when reviewing Antoine Augustin Cournot’s book *Recherches sur les Principes Mathématiques de la Théorie des Richesses*, Bertrand argued that if firms choose prices rather than quantities, then the competitive outcome would occur with price equal to marginal cost.

Under any of these circumstances, the *ex post* rate of return on the initial investment may become exceptionally high, and this may induce the host Government to claim that the resulting profits are “excessive”, “unfair” or even “obscene” and should be taxed away, or, alternatively, that the business should be expropriated, at a price not in excess of investment costs.

This way of reasoning is at the root of what in the early 70’s American economist Raymond Vernon called the “obsolescing bargain model” (OBM) between foreign multinationals and host Governments.<sup>14</sup> In the OBM, the initial bargain when the foreign investment is negotiated favors the multinational, but relative bargaining power shifts gradually to the host country government as investments become sunk, which leads the government to impose new conditions on the multinational, ranging from higher taxes to complete expropriation. Thus, the original bargain obsolesces.

Such reasoning, however, would be a blatant case of “hindsight bias”, as it neglects the *ex ante* risks faced by the successful investor only because he/she overcame them and the project did not flounder.

In the case of an initially risky, but eventually successful investment the reason for an *ex post* high rate of return was lucidly explained centuries ago by the famous Scottish economist Adam Smith:<sup>15</sup>

“In a perfect fair lottery, those who draw the prizes ought to gain all that is lost by those who draw the blanks. In a profession where twenty fail for one that succeeds, that one ought to gain all that should have been gained by the unsuccessful twenty. The counsellor at law who, perhaps, at near forty years of age, begins to make something by his profession, ought to receive the retribution, not only of his own so tedious and expensive education, but that of more than twenty others who are never likely to make anything by it”.

#### **4. A way-out: “adjusted investment costs” as a proxy for real value**

In order to overcome the limitations of the raw figure of investment costs, arbitrators may occasionally introduce adjustments, including:<sup>16</sup>

- Negative adjustment for wasteful investment (or to cover operating losses)
- Positive adjustment for windfalls or implicit capital gains (e.g. to reflect the increase in sales prices)
- Positive adjustment for loss of opportunity, when the amount of foregone profits is uncertain, but the likelihood of obtaining profits was very high.

Such adjustment may well be justified, but only to the extent that it does not capture the full net present value of the investment’s future cashflows, as this would entail “double counting”.

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<sup>14</sup> Raymond Vernon, “Sovereignty at bay: The Multinational spread of multinational US enterprises”, *New York Basic Books*, 1971.

<sup>15</sup> Adam Smith, “The Wealth of Nations” (1776), Book I, Chapter X, Part I on Inequalities arising from the Nature of the Employments themselves”.

<sup>16</sup> See case law section below.

As explained below when discussing *Karaha Bodas*, there is a fine line between adjusting investment costs for loss of opportunity or lost profits -which may be legitimate- and “double dipping”, which is not.

### III. CASE LAW

This section will analyze three arbitration cases in which the concepts discussed above lie at the heart of the dispute and of the Tribunal’s decision.

#### 1. Karaha Bodas Company (KBC) vs. Pertamina & PLN<sup>17</sup>

##### Basic Facts

- In 1994, US Caithness Energy and Japan’s Tomen set up a company (KBC) to build, own and operate a 400 MW geothermal electricity-generating facility in Indonesia.
- The foreign investors entered a contract with two State-owned companies, Pertamina –an oil and gas Company- and PLN- an electric utility, which entered with KBC a 30 year pay-or-take energy sales contract, with the price set in US\$.
- Under the Contract, acts of the Indonesian Government could not be considered force majeure relieving Pertamina and PLN from fulfilling their contractual obligations.
- In 1997-1998, in the wake of the East Asian financial crisis, when the project was not yet in operation (but KBC had invested US\$ 94 million) three Presidential decrees ordered Pertamina and PLN not to perform their contractual obligations, as
  - the demand for electricity had slumped; and
  - the steep devaluation of the rupiah made it impossible to pass on to Indonesian electricity users the agreed US\$ price of the electricity

##### The Claim

- Claimant (KBC) asked for US\$ 94 million in *damnum emergens*, plus US\$512 as the present value, discounted at 8,5%, of the lost profits associated with the “loss of geothermal development opportunities”.

##### The Award

- The Award granted KBC US\$93 million in *damnum emergens* and US\$ 150 as lost profits.<sup>18</sup>

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<sup>17</sup> *Ad-hoc* procedure in Switzerland under UNCITRAL Rules. Award dated 18 December 2000.

<sup>18</sup> In his well-known book “Valuation for Arbitration. Compensation Standards, Valuation Methods and Expert Evidence” (Wolters Kluwer, 2008, page 87, footnote 281), Mark Kantor argues that “the Karaha Bodas panel significantly reduced the total damages that would otherwise have been calculated under DCF computation. Moreover, the panel did so in a manner that does not permit a reader of the award to recreate the calculations”.

## Comment

In a famous article, Harvard Business School Professor Louis T. Wells criticized the award as a case of “double dipping”<sup>19</sup>. He drew the following analogy:

*“Consider an individual saver whose bank account is covered by deposit insurance. Say the saver’s bank fails, and deposit insurance pays both the amount of the deposit and foregone interest for 30 years into the future. The large award, parallel to the apparently awarded in the KBC case, leaves the saver better off with bank failure than without, because it can deposit the principal elsewhere and earn interest again, ending up with principle plus twice the interest. Of course, the US Federal Deposit Insurance Corporation does not pay future interest when a bank fails”.*

In my view, Mr. Well’s analogy is unfair, insofar as a bank deposit yields a low short term variable rate, with no potential upside. A more apposite comparison would have been the unexpected expropriation of an old 30-year Treasury bond with a high coupon, well in excess of market yields at the time of the expropriation/default. In that case, the value lost by the investor would have been not only the principal of the bond, but also its above-market yield.

My impression is that the Tribunal in *Karaha Bodas* did allow KBC any “double dipping”, but used the “adjusted investment costs” criterion described above, with an add-on of US\$150 million (i.e. some 30% of Claimant’s DCF calculation) to account for the “loss of opportunity” for KBC owners of making significant profits over a 30-year period, particularly bearing in mind that under the Contract decisions by the Indonesian Government could not be considered *force majeure*.

## 2. Rusoro Mining Ltd. vs. Venezuela<sup>20</sup>

### Basic Facts

- During the period 2006-2008, Rusoro, a Russian-owned company listed in the Toronto Stock Exchange, bought 5 gold mines in Venezuela. Rusoro’s investment (acquisition costs and new investments, net of funding for operating losses) amounted to US\$ 774 million.
- Starting in 2009, the Chávez Government introduced measures (e.g. gold export restrictions) which affected adversely foreign mining companies. Those measures reduced significantly the price of Rusoro’s shares in the Toronto Stock Exchange.
- In September 2011, less than one month after gold reached its all-time peak of US\$1,838/oz., Venezuela effectively nationalized Rusoro’s mines.

### The Claim

- Besides other minor claims, Rusoro fundamentally asked for US\$ 2.23 billion as the FMV of the nationalized investment, calculated as a weighted average of the prices resulting from comparable public traded companies (50%), comparable transactions (30%) and a partial DCF analysis (20%).

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<sup>19</sup> Louis T. Wells, “Double Dipping in Arbitration Awards? An Economist Questions Damages Awarded to Karaha Bodas Company in Indonesia”, *Arbitration International*, Volume 19, No.4, 2003.

<sup>20</sup> ICSID Case No.ARB (AF)/12/5, 22 August 2016.

### The Award

- “The Tribunal must thus calculate the fair market value of an Enterprise which no well-informed purchaser would buy, at a fair price”.
- “The effect of the increased export restrictions must be excluded from the valuation of Rusoro’s Enterprise –otherwise the State would be deriving advantage from its own wrong”
- The Tribunal valued the company as the weighted average of three concepts, as illustrated in the following table:

Concept	Explanation	Value (US\$ million)	Weight (%)
1. Adjusted Investment Valuation	Historical investment in each company, adjusted for increase in Gold Index Value from purchase date up to September 2011	1,128	50
2. Net book value of investments		908	25
3. Rusoro’s Maximum Market Valuation)	The maximum valuation was reached in mid-2008, before Venezuela’s Measures	700	25
Result		<b>966.5</b>	

### Comment

This is a good example of a case in which a Tribunal considered the DCF and market approaches (e.g. use of comparable companies) as too speculative and uncertain, and preferred to use instead a very sensible “adjusted investment” methodology.

### 3. Caratube International Oil Company vs. Republic of Kazakhstan (“Caratube II”)<sup>21</sup>

#### Basic Facts

- In 2002 Caratube, a company owned by the Palestinian, US-based Devinci Hourani and his family, spent US\$9 million entered a Contract with Kazakhstan’s Ministry of Energy and Mineral Resources (MERM) to explore and develop the Caratube fields, already discovered and partly appraised in the 1960’s (particularly the supra-salt deposits), but in need of a 3D seismic survey and the drilling of two sub-salt exploration wells.
- A 5-year Exploration Period was foreseen (which the Contractor could extend twice for up to 2 years each time), with the Production Period extending for 25 additional years once the Contractor made a “commercial discovery”.

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<sup>21</sup> ICSID Case No. ARB/13/13, 27 September 2017,

- In November 2006 Caratube asked for a 2-year extension of the Exploration period and submitted a Revised Work Program, which the MERM approved in February 2007, with the corresponding Amendment to the Contract being signed in July 2007.
- In May 2007, Mr. Rakhat Aliyev, then son-in-law of President Nazarbayev, and brother-in-law of one of the Hourani brothers, was removed from his post of Kazakhstan' Ambassador to Austria and accused of two kidnappings. Claimants argue that this was in retaliation because Mr. Aliyev had criticized Mr. Nazarbayev's declared intention to change the Constitution and run again for President, and announced his own intention to run for such office.
- According to the Claimants, this was followed by a harassment campaign against not only Mr. Aliyev, but also against those who were perceived as assisting him, including the Hourani family, and was not limited to Caratube, but also directed against all the investments of the extended Hourani family.
- In September 2007, the regional Prosecutor's Office issued a "Recommendation on elimination of disregard of the rule of law" and invited the MERM to terminate its contract with Caratube, due to its breaches of obligations provided in the Work Program. A few weeks later, on 1 October 2007, the MEMR sent to Caratube a "Notice of Termination of Operations", which it subsequently confirmed in May 2008.
- During the 2002-2008 period Caratube invested US\$ 39.2 million (out of which US\$ 20.8 million were out of pocket expenses).

### **The Claim**

Claimants requested the following compensation:

- US\$ 941 as the FMV of Caratube at the time of expropriation, calculated using the DCF methodology.

Claimants argued that if the Tribunal rejected such claim for absence of the required degree of certainty, then they were entitled to the "loss of opportunity" to obtain profits from the field (which they assess at 99% of FMV!).

They rejected compensation based on "sunk costs", as they would not only be contrary to the principle of full reparation, but also to any business rationale in the oil industry where the field had been de-risked and reserves confirmed". "An award of sunk costs would also create an incentive for states to transfer all risks of the exploration stage to the investor".

- US\$ 50 million in compensation for the moral damages caused by:
  - (i) The pain, stress, shock, anguish, humiliation and shame that Mr. Devincci Hourani has suffered as a result of Kazakhstan's acts and omissions in relation to his investments, which forced him to leave the country for his own safety and the subsequent harassment and threats to Mr. Devincci Hourani and his family;
  - (ii) The harm to Mr. Devincci Hourani and Caratube's reputation;
  - (iii) The harassment of Caratube' employees.

## The Award

By majority, the Tribunal concluded that

- It had not been demonstrated that MERM rightfully terminated the Contract based on its material breach by Caratube.
- The investor was “substantially deprived of the value of its investment”, as a result of a “sovereign act” (e.g. the actions and recommendations of the Prosecutor’s Office) which amounted to an “unlawful expropriation”.
- “FMV [does] not provide a basis for damages that are sufficiently certain. Therefore, for a majority of the Tribunal, in these circumstances Caratube’s sunk investment costs best express in monetary terms the damages incurred by Caratube as a result of the unlawful expropriation”.<sup>22</sup>

Reasons for rejecting the application of FMV:

- Caratube was not a going concern with a proven record of profitability
- It had been in existence and performed the Contract for just over 5 years.
- Claimants have not sufficiently established that Caratube would have become a going concern but for the termination of the Contract.
- At the time of termination, Caratube was still in the exploration phase of the Contract and did not dispose of a long-term contract that guaranteed a certain level of profits. The majority of the investment was yet to be made.
- The Claimants have not established with a sufficient degree of certainty the oil reserves.
- Caratube’s contractual performance was sub-standard from the early stages of Contract performance.
- Lack of reliable oil price estimates for a cash-flow projection over a a period of 37 years.

Reasons for rejecting “loss of opportunity”:

- “Any damage, including damages for lost opportunity, must be sufficiently certain in order to be recovered (...). Claimants must show that it is more probable than not, by a preponderance of evidence, that the facts they allege are true”.

Reasons for applying the “sunk costs” criterion (i.e. compensation of US \$ 39.2 million):

- “The breach deprived the sunk costs of purpose for the Claimant”.
- Caratube reinvested into the Project all of the revenues generated from trial production, and such investment also is part of Caratube’s investment.

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<sup>22</sup> Paragraph 1087.

- The Tribunal “was troubled by the ‘conspicuous timing’ of some of the alleged acts of harassment which coincided with the developments in this Arbitration”.

However, “Claimants have not satisfied their burden of proof with respect to the Respondent’s [i.e. State’s] alleged involvement in any acts of harassment against the Claimants”.<sup>23</sup>

#### IV. CONCLUSIONS

- When assessing “*damnum emergens*” (i.e. incremental expenditures) and “*lucrum cessans*” (i.e. foregone benefits) resulting from a breach of contract, if the income-producing asset or contract is not expropriated or terminated, sunk investment costs should be generally disregarded, as they do not represent an additional/incremental expenditure.

Doing otherwise may result in excessive compensation.

- Sunk investment costs may, however, be useful as an imperfect valuation basis of an expropriated assets or terminated contract, when income or market-based valuation methods (DCF, market approaches) cannot be used or relied upon.

When using such input-based valuation method, it may be exceptionally appropriate to adjust investment costs to capture subsequent post-investment windfall gains or a clear “loss of opportunity”. But such upward adjustment should be less than the NPV of the asset’s future cash flows, as, otherwise, there would be double-counting.

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<sup>23</sup> Paragraph 1203.