

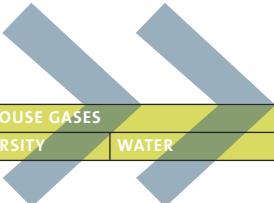
Hellfire Economics

Multinational companies and the contract dispute over Kashagan, the world's largest undeveloped oilfield

By Greg Muttitt of PLATFORM



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EXTRACTION	HEALTH	GREENHOUSE GASES
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extractive industries: blessing or curse?



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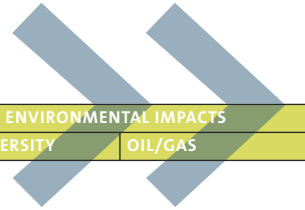


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Executive summary



	ECONOMICS	HEALTH	SEVERE ENVIRONMENTAL IMPACTS	
INVESTMENT		SOCIAL ISSUES	BIODIVERSITY	OIL/GAS

“You drill through a layer of thick salts, hit gas and then go to hell.”

Richard Matzke,
former Vice President of Chevron



The scent of sulphur.
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Oil executive Richard Matzke could easily have been talking about the economics of developing the Kashagan oilfield rather than the geology. It seems that as the government of Kazakhstan has drilled down into those economics, it has found a dangerous mess.

This briefing paper aims to explore the mess it found.

In summer 2007, the Government of Kazakhstan announced that it wanted a better deal from development of Kashagan, the world’s largest undeveloped deposit.

The field is being developed under a 40-year contract, signed in 1997 with a consortium of oil companies now led by Italy’s Eni. Located in the shallow waters of the northern Caspian Sea, the field is one of the world’s most technically complex, containing large quantities of sulphur, for which no safe disposal or storage solution has yet been found. Sulphur can become toxic in certain conditions found in Kazakhstan (such as high temperatures), posing a serious threat to local communities and to wildlife. It is also a major cause of acid rain.

But whilst the geology of the field may present fears arising from the brimstone (the old name for sulphur), the economics of its development can be seen as hellfire.

This briefing paper looks at the role of the contract itself at the heart of the problem – and for the first time brings those ‘hellfire economics’ into the public domain. We examine the central question of who benefits and who pays, under the terms of the contract.

Public risks, private profits

The Kashagan project has been dogged by delays and technical problems, as the oil companies have repeatedly underestimated the time and money they would require to develop the field. But it is not the companies who will pay for their problems.

The latest setback came earlier this year, when Eni announced that oil would start flowing two years behind schedule, in 2010, and that costs had more than doubled.^a

By constructing an economic model of the project^b, we find that as a result of the delays and over-runs:

- The revenue to be received by Kazakhstan in the period up to 2017 is cut from \$28 billion to just \$8 billion. This loss of \$20 billion dollars over the next ten years equates to nearly 40% of the country’s gross domestic product (GDP) at the official exchange rate.
- Meanwhile, Eni and its partners continue to receive a high rate of profits after the changes, with returns of 14.5%.
- Looking at the whole life of the project, the delays and over-runs reduce the Kazakhstan state’s NPV from the project by 21.4% (\$20 billion), whereas the foreign companies’ NPV is not affected (actually a fractional increase).



In short, the state of Kazakhstan is bearing most of the economic risks of delays and cost increases – precisely the risks we would have expected to be carried by investors, arising from falling exchange rates, rising equipment costs and their having underestimated the scope of the project.

These economic features are no accident. In fact, the contract, a production sharing agreement (PSA), was specifically written so as to allocate risk to the state party.

The Kashagan contract is one of a new breed of economically “flexible” PSAs, often referred to as the “World Bank model”. The approach was first used in the 1980s, but was really pushed and developed in the former Soviet states during the 1990s.

In this model, the fiscal terms vary with the investors’ profitability and other economic factors. Whilst this approach helps the state to capture excess profits if the project is more successful than expected, when applied in the form used in Kashagan, it penalises the state heavily if the project is less successful. The state receives almost nothing until the companies have achieved their profits, so in the event, the cost increases we have seen are deducted primarily from the state’s revenues, rather than company profits.

The current dispute

On this basis, it is unsurprising that the Kazakhstan government is seeking a renegotiation of the contract, and/or economic compensation. For nearly six months, the Kazakhstan government has been arguing with the companies over the project economics.

The primary measures under discussion are a compensation payment of \$7 billion or a doubling of the share of the state-owned oil company, KazMunaiGas, in the project.

However, our economic model shows that either of these would have only a very marginal impact on the relative balance of project benefits, recouping at best only a quarter of the \$20 bn Kazakhstan lost. In the case of the \$7 billion payment, the dependence of fiscal terms on profitability results over \$2 billion of the payment being returned to the companies therein the following few years, through reallocation of the subsequent profits, and almost all of it over the full life of the project.

Even the stronger measures that some commentators have suggested – such as a royalty payment, a limit on profit oil or giving KazMunaigas a majority stake – would not fully restore the Kazakhstan state’s economic position from before the delays and over-runs.

Meanwhile, all of the measures leave the investors with high profits (over 13% return). As such, the proposed changes are all extremely mild, and it is surprising the companies are resisting them so strongly.

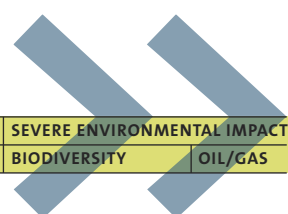
Enforcing corporate power

The terms of a production sharing contract determine not just how the extracted resources will be shared between state and investor, but also the legal rights and obligations of both parties. In this area too, the Kashagan PSA is grossly unbalanced.

Part of the reason the current dispute is focussing on such mild measures is that, under the contract, the Kazakhstan government knows it has very limited legal options to renegotiate.

In fact, the contract gives a right of renegotiation *to the foreign companies* – in particular in the event of “economic hardship”, caused for example by an environmental accident (a major risk in this project, due to the high levels of sulphur in the reservoir). No such right is given to the Kazakhstan state, whatever the level of its “economic hardship” from the project.

Nor is it just economic terms on which the government’s hands are tied. The contract stipulates that if any new law is passed during the 40-year life of the project (except environmental or health and safety laws), which affects the companies’ profits, the terms of the contract will be changed so as to restore those profits. Even where international treaties are signed, or where existing laws conflict with the contract, the government must exempt or compensate the companies.



HEALTH	SEVERE ENVIRONMENTAL IMPACTS
SOCIAL ISSUES	BIODIVERSITY OIL/GAS



Floorman making connection during drilling on a drilling rig in Kazakhstan.
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These provisions are enforceable through international investment tribunals, under international law.

Profits guaranteed

The combination of all these provisions means that company profits are protected from:

- Changes in economic circumstances (such as equipment costs and exchange rates;)
- Management failures; and
- Accidents.

If any of these risks materialises, it is the people of Kazakhstan who must pay.

Company profits are also protected from:

- Change of law
- International treaties; and
- Expropriation.

In these respects, Kazakhstan is constrained in its ability to legislate or regulate, or to manage its economy. Meanwhile, citizens will not have the benefit or protection of international human rights, environmental or other instruments.

In short, the companies' profits are effectively guaranteed, whilst the people of Kazakhstan carry most of the risks..

Breaking the cycle

The Kashagan contract was one of a family of contracts with similar features, signed in post-Soviet countries in the 1990s, whilst international financial institutions, western governments and corporations were pushing the former Soviet bloc to adopt extreme forms of economic liberalisation.

Two factors made possible this dramatic roll-back of state sovereignty and leap in corporate ascendancy: the weakness and instability of the host states at the time of signing; and the absence of public discussion on government policy or on the contracts.

Yet these conditions were used to sign contracts that would bind the countries for many decades. In the case of the Kashagan PSA, Kazakhstan's economy would effectively be locked into the circumstances of 1997.

To remedy this problem, such contracts should contain a periodic right of renegotiation (for both sides), to reflect changing circumstances, and the weakness of the government at the time of signing.

The other key to just, stable and fair contracts is for an active public debate to take place – involving civil society groups, oil experts and academics. Yet, in the case of Kashagan, the contract has still not been published, ten years after it was signed. (A copy was leaked to civil society organisations – on which we base our analysis).

Emerging best practice, in a number of countries, is for such contracts to be published. Indeed, publication is recommended by a number of international financial institutions, governments and civil society groups.

Those who argue that to publish their contracts would weaken them commercially, and give advantage to their competitors, are no longer seen as credible. Such contracts are available in any case to oil companies, governments, and in fact anyone who can afford them. The Kashagan PSA is included in a volume of 'Basic Laws and Concession Contracts', a directory that is held in the legal libraries of all oil companies, which can be purchased for \$7,200.

Whilst the Kazakhstan government complains of unfairness, and the foreign companies complain of contract instability, publishing the contract might be the first step in rectifying both problems.



A drilling rig in Kazakhstan.
© dreamstime

a Whilst the full development costs have not been disclosed, Eni did reveal that the first two tranches of development would cost \$19 billion – whereas it had previously estimated \$10 billion for the first three tranches.

b We have used a discounted cashflow model – essentially a spreadsheet projecting the incomes and expenditures on the field year-by-year. Full methodology is given in Appendix 1.



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	ECONOMICS	HEALTH	SEVERE ENVIRONMENTAL IMPACTS	
INVESTMENT		SOCIAL ISSUES	BIODIVERSITY	OIL/GAS

Introduction

1

“You drill through a layer of thick salts, hit gas and then go to hell.”

Richard Matzke,
former Vice President of Chevron¹



The companies with participating interest in the Kashagan oil field.
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Oil executive Richard Matzke could easily have been talking about the economics of developing the Kashagan oilfield rather than the geology, the latter being characterised by high pressures and significant levels of sulphur in the oil. It seems that as the government of Kazakhstan has drilled down into the economics, it has found a dangerous mess.

In summer 2007, Kashagan hit the headlines when the Government of Kazakhstan announced that it was getting an unfair deal from development of the field, the world’s largest undeveloped deposit.

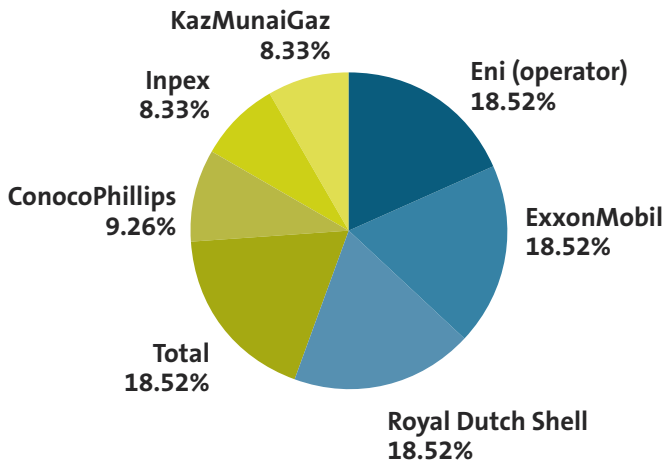
The government wanted to be paid financial compensation from the companies involved, and perhaps to renegotiate the project contract. The contract, a type known as a production sharing agreement, was signed in 1997 with a consortium of multinational oil companies, now led by the Italian company Eni. Over recent years, the project has grown increasingly controversial.

The government’s objections were sparked by an announcement by Eni in February 2007 that the costs of the project were to increase dramatically, whilst production of the first oil would be delayed from 2008 to 2010.

But whilst the geology of the field may present fears arising from the brimstone (the old name for sulphur), the economics of its development can be seen as hellfire.

This briefing paper looks at the role of the contract itself at the heart of the problem – and for the first time brings those ‘hellfire economics’ into the public domain. We examine the central question of who benefits and who pays, under the terms of the contract. The people of Kazakhstan? The government? The oil companies? Consumers in industrialised nations?

figure 1.1 Membership of the Agip KCO consortium





Panorama of Bautino Bay location of Bautino Atash marine and support base
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Shepherd in the Kuryk Village.
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Sanitary protective zone of the Bolashak Onshore Processing Facility (Refinery).
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The Kashagan project

Named after a famous Nineteenth-Century Kazakh poet, the Kashagan field is the world's largest oilfield found since Alaska's Prudhoe Bay in the late 1960s. At its peak, it is expected to produce 1.5 million barrels of oil per day, nearly 2% of current world production.

It is located in the shallow waters of the north Caspian Sea, where the project has been beset with technical challenges. During winter, the water is completely frozen, which would damage and rupture traditional facilities; for this reason the field is being developed through the construction of a series of artificial islands, on which drilling and other facilities will be located. Furthermore, the oil in the field contains unusually high levels of sulphur, for which no safe disposal or storage solution has yet been found. Sulphur can become toxic in certain conditions found in Kazakhstan (such as high temperatures), posing a serious threat to local communities and to wildlife. It is also a major cause of acid rain.

Oil has been produced onshore near Kazakhstan's coast since 1911. From the 1970s, it was suspected that oil might also lie offshore. From 1993 to 1997, seismic studies were carried out to explore for oil in the area, by the government of Kazakhstan and a consortium of foreign oil companies – mostly the same companies that would later develop the field.

In November 1997, the government signed a 40-year production sharing contract with a consortium of European and American companies, at a ceremony in the US State Department, overseen by Kazakhstan President Nursultan Nazarbayev and US Vice President Al Gore. The contract covered a vast area of 6,000 square kilometres, which has been found to include at least four smaller fields (Kalamkas, Aktote, Kairan and Kashagan Southwest), as well as the supergiant Kashagan.

Parallels with the Sakhalin II contract in Russia

The dispute over the Kashagan field is seen by many in the industry as a repeat of Russia's 2006 fight with a Shell-led consortium over a gas and oil project off Sakhalin Island in the country's Far East. (See Box 4.1).

There are indeed several similarities:

- The respective governments became concerned about project economics just a few years after signing the contracts.
- An announcement by the operator company that costs had increased – and hence the flow of revenues to the state would be delayed by a few years – provoked strong government reaction.
- The government was legally unable to directly amend the fixed terms of the contract, so used the threat of withdrawal of environmental permits to force a renegotiation (although in both cases the environmental problems were real).

A note for economists

The economic analysis of this briefing paper is based on a discounted cashflow model.⁶ Full details of the methodology and data we used are given in Appendix 1. In our base case, we use the oil price projections of the Energy Information Administration (part of the US Department of Energy) – which vary between \$50 and \$65 per barrel. Higher- and lower-price scenarios are considered in Appendix 3. We consider only the Kashagan field (not other fields in the contract area), and only oil, not associated gas. All figures are in real terms (2007 prices).

This briefing paper is written for a general policy audience, rather than technical specialists; it therefore aims to use accessible concepts. In particular, in the main text of the report, we do not give discounted figures for project revenues (these, and full economic results of the analysis, are given in Appendix 3), as these would be likely to confuse lay readers. On the other hand, recognising the 'time value of money', nor do we give undiscounted figures for the whole 40-year life of the project. Whilst simple to understand what they represent, these would be likely to be misleading.

Instead, we use three measures, all of which aim to be both accessible and meaningful: the investors' internal rate of return, the Kazakhstan state's revenues in the period to 2015, and graphs of cashflows over time.

We hope this approach will allow a non-economist to be able to observe the inner economic workings of the project.

**box 1.1 Environmental and social concerns regarding the project**

The Kashagan field poses serious risks to the delicate ecology of the north Caspian Sea, and to the health and livelihoods of local communities.

Local and international civil society groups have been closely monitoring the project, and are calling for significant changes to the project, for an independent assessment of its impacts, and for full disclosure of key information; they insist that the project should only proceed if local communities give their free, prior, informed consent.

A recent fact-finding mission to the region gathered data and testimonies from affected people. It found that:²

- Biodiversity is dropping in the Northern Caspian area, including fish, marine mammals and birds.
- Endangered Caspian seal are dying as a result of sulphur and other pollutants.
- The whole Caspian Sea could suffer a biological death if pollution continues at the same rate, according to a study of the Kazakh Oil and Gas Institute.
- Villagers report drops in their fish catches and skin diseases on the fish they did catch, making them unmarketable. This has severe socio-economic impacts for local communities because in some villages up to 40 percent of the population is employed in the fishing industry.
- Workers at Kashagan are exposed to sulphate and other pollutants, causing direct impact on human neurological systems.
- There is a serious risk of a catastrophic accident, which could kill tens of thousands of people through exposure to toxic gases.
- Young people are suffering increasingly from cardiovascular illnesses, respiratory illnesses, anaemia and blood illnesses such as leukaemia.
- Extraction at the Kashagan oil field is particularly risky because of the specific chemical composition of Kashagan crude oil - it contains very high levels of sulphur and other toxic pollutants such as mercaptans. There are also onerous exploration conditions - including very high oil pressure and temperature, a harsh climate and an offshore location.

The organisations are also concerned that key environmental documents – including a full environmental impact assessment – have not been made public.

^c essentially a spreadsheet that projects the flows on income and expenditure, year-by-year.



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The anatomy of a dispute

The impact of cost over-runs and delays

2

The Kashagan project has been dogged by delays and technical problems, as the oil companies have repeatedly underestimated the time and money they would require to develop the field. But how have the setbacks affected the project's economics, and Kazakhstan's economy?

Delays and cost increases

Following signature of the North Caspian contract in 1997, appraisal of the contract area began, with Shell as technical leader. Disputes emerged during that initial work, resulting in a competition for the operatorship; eventually Eni took over from Shell in 2001. In June 2002, Eni declared that a commercially exploitable field had been found.

The project suffered delays and over-runs right from the start. The first exploration well, originally planned for 1998, was finally completed in 2000, after a jack-up drilling rig had to be modified in order to operate in shallow water. Thus when the companies presented a development plan in January 2003, it proposed a startup of production in 2007, rather than the originally promised 2005.

The Kazakhstan government was far from happy with the plan, and insisted on compensation for its losses, and for what it saw as a breach of the agreement. A year-long negotiation ensued, with a development plan finally approved in February 2004, and startup now put back to 2008, with peak production of 1.2 million barrels per day (bpd) in 2016. Development costs were estimated at \$29 billion. The consortium agreed to pay the government \$150 million in compensation for the delays.

The following three years, there were persistent rumours about further delays and cost increases. These rumours were confirmed by Eni in February 2007: production would now not begin until the second half of 2010, and would only peak in 2019; meanwhile development costs would spiral. The full development cost has still not been disclosed; however Eni has announced that the first phase, previously projected to cost \$10 billion, would now cost \$19 billion. The one bit of good news for the project was that the peak rate of production would be increased to 1.5m bpd.^d



Map of Mangistau Region.
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table 2.1 development plan changes announced in 2007

	Original plan	Changed to
Start of production	2008	2010
Development cost (1st stage)	\$10 bn	\$19 bn
Peak production	1.2m bpd (2016)	1.5m bpd (2019)

Impact of delays and cost increases

These changes will have a profound effect on Kazakhstan's economy, especially in the coming years. Based on our economic model, the revenue to be received by the state in the period up to 2017 is cut from \$28 billion to under \$8 billion. This loss of \$20 billion dollars over the next ten years equates to nearly 40% of Kazakhstan's (annual) gross domestic product (GDP) at the official exchange rate.

On this basis, it is unsurprising that the Kazakhstan government is seeking a renegotiation of the contract, and/or economic compensation.

The impact of the changes is illustrated by the graph below, which shows the project net cashflow^e both before and after the delay in production and cost increase.

It is notable how high the pre-revision IRR is – this would be a very high level of profits. (Of course, this high profitability is partly due to the high oil price).

The graph of company cashflows shows how strikingly differently the changes impact the project economics for the companies, from how they do so for the state. In contrast to the state cashflows, we can see that:

- In the early years, post-revision company revenues lag the original plan by just two years.
- Immediately after the negative impact of the cost increase, by 2015 the revised cashflows exceed those from the original plan, and continue to exceed them (by up to a factor of four) for the remainder of the project.

figure 2.1 Projected cashflows to the Kazakhstan state

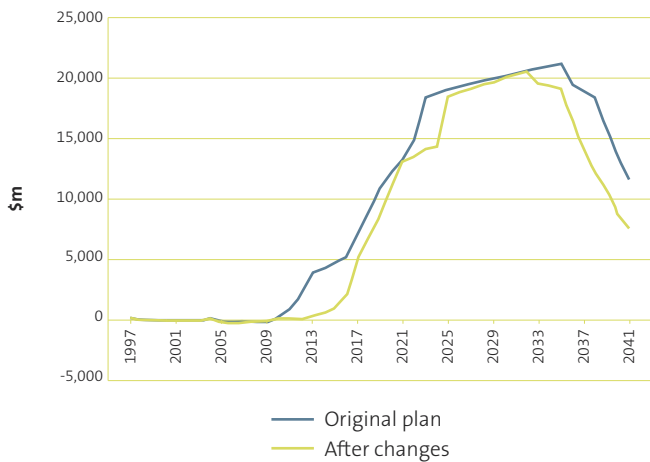
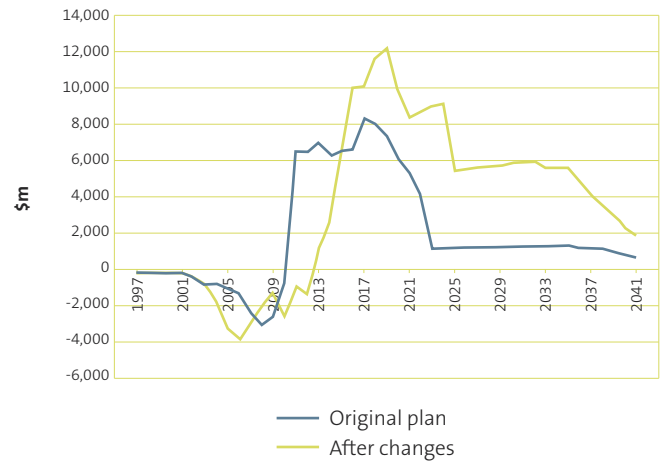


figure 2.2 Projected cashflows to the foreign companies



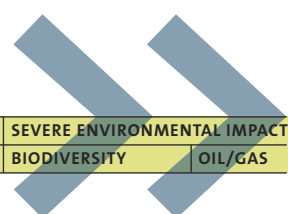
From the graph, we can see that:

- Kazakhstan's initial receipt of revenues is delayed by about five years.^f
- Throughout the entire project, every year's cashflow is significantly worse under the new scenario than was previously expected.

The delay and cost increase also have an effect on the companies' profits, reducing internal rate of return (IRR) from 20.6% to 14.5%. Although this reduction is significant, the reduced rate remains a high level of profits. Most oil companies aim for an average (real terms) internal rate of return of 12% on risked projects such as Kashagan. Anything returning more than the cost of capital (estimated around 7.5-8%) is profitable (as opposed to loss-making); anything above 12% is more profitable than average risky projects.

Risk of further delays and cost increases

The revised full-field development costs have still not been announced (Eni has said they will be announced in late 2009), although the first stage of the project has been declared to require capital expenditure of \$19 billion (up from \$10 bn in the original development plan^g). The Kazakhstan Prime Minister stated in July that total, full-project had risen to \$136 bn³: at a conference call with financial analysts in October, Eni confirmed that this figure included operating costs and general & administrative costs, as well as capital expenditure.⁴ In our model, we have estimated total capital expenditure at \$78 billion.



But what happens if the costs rise again? According to financial analysts at Santander bank, one consortium member already estimates that the first stage will go up again, to \$24 bn⁵. And some rumours suggest a further delay in startup, to 2011 or 2012.⁶

If the total capital costs were to increase by a further 25% for the remainder of the project, to a total of \$96 billion, state revenues up to 2017 would fall further to \$5.8 billion. This is shown in the table below.

table 2.2 economic impact of cost increases and delays

	Before delay + cost increase	After delay + cost increase	Further cost increase
Int'l oil cos (IOC) IRR	20.6%	14.5%	13.9%
State revenue pre-2017	\$28.1 bn	£8.4 bn	\$5.8 bn
IOC NPV ^h	\$29.6 bn	\$30.5 bn	\$28.3 bn
State NPV	\$95.4 bn	\$75.0 bn	\$69.6 bn
Change in IOC NPV	-	+3.0%	-9.6%
Change in state NPV	-	-21.4%	-27.0%

Meanwhile, we see that in all of these cost/delay scenarios, the project remains very profitable for the foreign investors. Even if the development costs inflate further to \$96 billion, the project achieves an IRR of 13.9%, well above the target rate of 12%.

When economists consider long-term investments, they take into account the time at which any money is received or expended. A dollar now is worth more than a dollar in a year's time, because a dollar now can be invested and grow during that year. To factor in the 'time value of money', economists use the concept of 'net present value' (NPV).

We can see from the table that, the state's NPV over the whole project falls by 21.4% as a result of the delays and over-runs, whereas the foreign companies' NPV actually increases fractionally. (This is because of the process of discounting, and the way in which profits are split).

We conclude that the state is carrying most of the risks of delays and cost increases – precisely the risks we would have expected to be carried by the foreign investors.

^d If all this had occurred with a low oil price, development of the field could have become economically unviable for both the companies and the government. However, recent years have seen a steady increase in the price of oil; forecasters now predict that prices will stay relatively high for the foreseeable future.

^e That is, total income minus total expenditure for each year.

^f Although the project startup was only delayed by two years, the cost increase delays the flow of revenues to the state by a further three years, whilst those revenues flow to the companies.

^g And for a reduced scope, from three to two tranches of development.

^h 2007 net present value, at discount rate of 8%.



Sanitary protective zone of the Bolashak Onshore Processing Facility (Refinery).

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Heads I win, tails you lose

The economic terms of the Kashagan contract

3

The economic results we have seen are no accident. In fact, the contract to develop the Kashagan field, a production sharing agreement (PSA), was specifically written so as to allocate risk to the state party.



Existing Oil platform in the Caspian Sea.
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Risk and reward

When critics suggest that companies are making too much profit out of their operations, such as in Kazakhstan, a common argument advanced by the companies or their allies is that those profits are justified by the risks they have taken. For example, Dan Witt, President of the International Tax & Investment Center – and one of the foremost lobbyists for investor interests in Kazakhstan since the early 1990s – has commented that⁷:

It is easy to forget just how difficult it was in Kazakhstan in the early 1990s – when these original big three deals were negotiated and signed – the big political, economic and technical risks. Would you offer these terms today? Probably not. However, could you have done any major oil deal in 1994 under the terms offered today? Probably not.

Indeed, it is a central axiom of capitalist economics that the owner of capital earns profit by risking that capital – and the greater the risk, the greater the potential reward.

However, we saw in the previous chapter that much of the risk of cost over-runs and delays is carried by the Kazakhstan state, rather than the foreign investors. Eni has said that there were three causes for the change of plan, of roughly equal magnitude:

- Rising material and resource costs (such as steel and drilling rigs), combined with a weaker US dollar;
- Under-estimating the scope of the project in the original development plan; and
- Changes to the project plan and layout.

These are precisely the types of risk one would expect an investor to take. Given that Eni is not taking these risks, it should be asked on what basis the foreign oil companies are earning their profits at all.

The structure of the contract

The Kashagan contract is one of a new breed of economically “flexible” PSAs, often referred to as the “World Bank model”. The approach was first used in the 1980s, but was really pushed and developed in the former Soviet states during the 1990s.

This new breed was introduced following arguments from oil companies, international financial institutions and others that fiscal systems should be maximally responsive to company profits, and should avoid taxing the extraction of the resource per se (such as through royalties).

To this end, the sharing of profit oil between investors and state, and also the rate of taxation, are based on sliding scales according to profitability and volume extracted, rather than fixed percentages.

One advantage of this approach is that if the project turns out to be very profitable, the state captures the excess profits (after all, it is the owner of the resource).ⁱ But the Kashagan contract does not protect the state sufficiently against ‘downside’ risks: in fact, the state receives almost nothing until the companies have achieved their profits. As a result, the cost increases we have seen are deducted primarily from the state’s revenues, rather than company profits.

ⁱ See Appendix 3.

^j There is often also a third portion, a royalty: this is a fixed percentage of the total oil extracted (commonly 15%), and is allocated to the state.

^k It can alternatively be achieved by a royalty payment (commonly 15%).

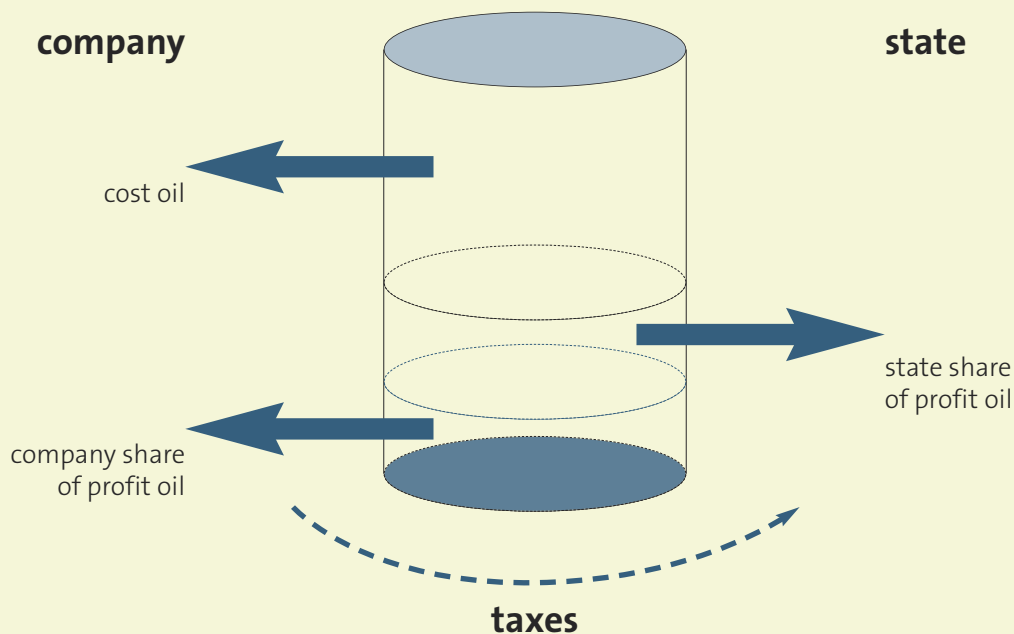
box 3.1 How the contract allocates risk

A production sharing agreement is a contractual structure in which the foreign company provides the capital investment (in exploration, drilling and the construction of infrastructure), in return for legal rights to a proportion of the oil.

The extracted oil is divided into two portions:

- a) **'cost oil'**: this is allocated to the company, which uses oil sales to recoup its costs and capital investment. There is usually a limit (commonly 40-60%) on what proportion of oil production in any year can count as cost oil.
- b) **'profit oil'**: this is divided between state and company in agreed proportions, the company using sales of its share to make a profit on its investment, whilst the state obtains revenues from the depletion of its non-renewable resources. The company is usually taxed on its profit oil.

This is shown in the diagram below.



Unlike a 'traditional' PSA, which divides the profit oil in fixed proportions, in Kashagan, the proportions are variable, determined by a complex formula. In the earlier stages of the project, an extremely high 90% of all profit oil is allocated to the consortium. This continues until either:

- a) the consortium achieves an internal rate of return of 17.5% (a healthy rate of profits), or
- b) cumulative consortium receipts exceed cumulative expenditures by a factor of 1.4 : 1, or
- c) volume of oil produced exceeds 3 billion barrels (a significant proportion of the field).

Whilst such an approach gives the state most of the 'upside' if the project is a success, it equally gives it too much of the 'downside'.

Oil fiscal systems usually set a minimum proportion of revenues that will be received by the state. This is done by setting a limit (commonly 40-60%) to how much of the extracted oil can be used to cover the investor's costs.^k The Kashagan PSA sets this cost recovery limit very high, at 80%, later falling to 50%. Whilst the project is still being developed, only 2% of revenues (a 10% share of the 20% remaining after cost recovery) will go to the state, 98% to the consortium. Even after the cost oil limit drops to 50%, the consortium still receives 95% of revenues (50% plus 90% of 50%), until one of the above three conditions is met.

The one improvement in the Kashagan PSA, compared to some of the other 1990s PSAs signed in former Soviet states, is that the sliding scales consider volume extracted (condition c, above) as well as profitability – thus the production sharing starts to move in favour of the state beyond a certain point in the extraction, even if high profits have not yet been achieved.

However, the combination of the sliding scale, the high top-rate of 90% of profit oil and the high cost oil limit means in effect that the state receives almost nothing until the consortium has achieved healthy profits. As a result, it is state revenues rather than corporate profits that are reduced in the event of cost increases.

(See Appendix 2 for detailed terms of the Kashagan PSA).



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How much compensation?

The effect of proposed corrective measures or contract changes

4

Given that the contract makes the Kazakhstan state pick up the investors' tab following the cost increases, it is unsurprising that the government is looking to be compensated.

Negotiations on the compensation and on possible changes to the contract have been protracted, with both the European Commission and the Italian government coming in on the side of the companies. According to press reports, ExxonMobil has been the most intransigent of the consortium members, and has blocked a series of compromise deals.

Two measures have been widely reported in the press as the most likely:

- A compensation payment of \$7 billion (the initial proposal was for an amount between \$10 billion and \$40 billion);
- An increase of state-owned KazMunaiGas' (KMG's) stake in the consortium from its current 8.33%, to 16.67% (doubling), or 18.3% (the level of the main shareholders).

Some other possibilities have also been mentioned by some commentators:

- Increasing KMG's stake to 50%;
- A royalty of 15% (or according to some reports⁸, 40% - although this seems unlikely);
- A minimum profit oil share for the state of 40%.

In this section, we examine the effect of each of these changes.

Impact of the proposed measures

The graph below shows the cashflows to the state in each of the scenarios.

figure 4.1 Projected state cashflow following compensation or renegotiation





"Bolashak" (future in Kazakh) Onshore Processing Facility

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Kazakh children in the Kuryk Village.

© foee



Fishing boats in the Damba Village - future site of the Northern Caspian Environmental Response Base.

© foee

We can observe the following from the graph:

- Most of the proposals fail to restore the economic position of Kazakhstan prior to the cost increases and delays.
- An increased KMG share to 16.7% has a very marginal effect, as this is still a very small share for a state oil company.
- Increasing the KMG share to 50%, on the other hand, has a marked positive impact after 2012, as it allows the state to share in the consortium's profits; in fact, after 2015, the state would remain better off even than expected under the original plan (before revision), for the rest of the project. However, the capital expenditure that would be required in the early years then also becomes significant, and it is not clear whether KMG could access that much capital.
- The compensation payment (a bonus) gives Kazakhstan's revenues an early boost; but due to the sliding-scale fiscal terms, the state would lose some of it almost immediately – ending up only \$4.9 billion better off than in the base case, in the period to 2017. Over the whole life of the project, almost all of the payment would be surrendered back to the companies (in NPV terms).
- The 15% royalty is an interesting solution, as it reduces the early losses, and continues to have a positive impact throughout the project.

We can also see the impacts of these measures in the table below.

table 4.2 Economic impact of proposed corrective measures

	IOC IRR	State revenue pre-2017	IOC NPV	State NPV
Base case	14.5%	\$8.4 bn	\$30.4 bn	\$75.0 bn
Original plan (before cost increase + delay)	20.6%	\$28.1 bn	\$29.6 bn	\$95.4 bn
\$7bn bonus	13.7%	\$13.3 bn	\$29.6 bn	\$75.9 bn
16.7% KMG share	14.5%	\$9.3 bn	\$27.7 bn	\$77.8 bn
50% KMG share	14.5%	\$12.7 bn	\$16.6 bn	\$88.9 bn
15% royalty	13.1%	\$16.0 bn	\$24.2 bn	\$81.3 bn
Min 40% profit oil	13.8%	\$11.8 bn	\$28.1 bn	\$77.4 bn

From the table, we can see that whilst on any measure, none of the proposed changes come close to restoring the Kazakhstan state's economic position (except the 50% KMG share – which comes with its capital costs), none of them are onerous on the investors: all leave them with high rates of return, well above 12%. As such, the proposed changes seem extremely mild, and it is surprising the companies are resisting them so strongly.

**box 4.1 The Sakhalin II renegotiation**

As we noted in the introduction, the dispute over Kashagan bears striking similarities with that over the Sakhalin II oil and gas project.

That project, on Sakhalin Island in Russia's Far East (north of Japan), is being developed under a production sharing agreement signed in 1994 between the Russian government and a consortium of American, Japanese and European companies. So unbalanced were the terms of this contract that they prompted economist Ian Rutledge to term it a 'production non-sharing agreement'.⁹

As we saw in Box 3.1, a normal PSA divides the extracted oil is divided into 'cost oil' – which is used to pay back the investment and the operating costs – and 'profit oil', which is shared between company and state in an agreed formula. What was unusual about the Sakhalin II PSA was that it effectively guaranteed company profits, by including them in the cost oil portion. Whilst the mechanism was somewhat different from the Kashagan PSA, the effect was broadly the same.

In combination with the absence of a limit to how much of any year's extracted oil could be treated as cost oil, the result was that Russia would not start to receive revenues until the consortium (now led by Shell) had not only covered its costs but also made good profits (17.5% internal rate of return). Even after that point, the state would only receive 10% of profit oil for two years, and then 50% subsequently (very low by world standards). Only after the companies had achieved very high profits (24%) would the state start to receive a (more normal) 70% share.¹⁰

In the event, the project did not go to plan. Having originally been budgeted at \$9–\$10 billion, Shell announced in July 2005 that the project costs had more than doubled to \$22 billion.^m Due to the contract's sharing formula, the cost overrun further delayed the point at which Russia would receive its share of the oil – such that it was effectively Russia (through non-receipt of revenues) that paid for Shell's mistakes and for changes in the economic climate, while company profits were guaranteed.

Russia is now no longer in the weak position it was in when it signed the contract. However Vladimir Putin's government knew that it had no legal basis to push for a renegotiation of the terms of the contract. However, the Sakhalin Consortium was forced to come to the negotiating table after the project's multiple infringements of Russian environmental legislation led to a high-profile showdown with the environmental regulator in autumn 2006. Faced with the prospect of its licence being revoked, the consortium agreed to sell a 50 per cent stakeⁿ (at market price) to the majority state-owned company Gazprom. Although the project's PSA remained unaltered, the deal effectively secured a greater share of the benefits for Russia.

Whilst some of the Western media talked hysterically of a "nationalisation" or of Putin's violation of the "sanctity of contracts", that was an overstatement to say the least. Rather, it was a commercial transaction (albeit a forced one, as the companies were reluctant to surrender their lucrative stakes in the project), wherein a new company (Gazprom) bought a stake in the consortium from the existing companies (Shell, Mitsui and Mitsubishi) – which is allowable within the contract itself.

The result was that the imbalance in the (unamended) contract remained, but with the state now effectively on both sides of the table – so a share of the consortium's profits come back to the state through Gazprom.

^l Note that it makes some difference whether the payment is a bonus (which can be counted as an expense for tax purposes, and in the profit-sharing formulae), or a fine (which cannot). Both have been suggested. In the main text here and the graph, we consider a bonus; the fine is also considered in Appendix 3.

^m Shell gave a number of reasons, including an increase in the price of steel and extra environmental measures, but certainly one central factor was the failure of planning and project management. For example, in April 2004, Shell announced that it would have to change the timing of the development plan because it needed extra time to redesign sub-sea pipelines, to be buried under the seabed, rather than sitting on the seafloor. The reason was that winter ice reaches all the way to the bottom, and scouring action risked snapping unburied pipes. It would seem that in an ice-bound location, checking the depth of ice would be one of the most elementary engineering measures!

ⁿ To be precise, 50 per cent plus one share.



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Transferring sovereignty

The legal terms of the Kashagan contract

5

The terms of a production sharing contract determine not just how the extracted resources will be shared between state and investor, but also the legal rights and obligations of both parties. In this area too, the Kashagan PSA is grossly unbalanced.



Building of ministry of oil and gas is in Astana kazakhstan.

© dreamstime

Fixed economic terms

Whilst so far some discussions have proceeded, the Kazakhstan government knows it has limited legal options to renegotiate the Kashagan contract or seek compensation (See Box 5.1, below). As in the case of Sakhalin, however, threatened action over the project’s multiple breaches of environmental regulations has placed the consortium under pressure to reconsider the PSA.

However, one purpose of a long-term PSA contract is precisely to fix the economic terms for the life of the contract (40 years in the case of Kashagan).

It is argued by some, including Eni¹¹, that there is nothing unusual in such a contractual arrangement. However, it is noteworthy that PSAs are not used in industrialised oil-producing countries, such as the USA, the UK, Norway, Canada or Australia. In those countries, contracts and licenses for oil production have far more limited legal scope, generally leaving fiscal measures (and well as legislation and regulation) as sovereign matters. (The same is true in some developing countries, such as Venezuela). For example, the UK has changed the tax system and rates for North Sea oil production on a number of occasions.

The result of the fixed economic terms is that for 40 years, the sharing of revenues reflects the risk, the low oil price and the government weakness at the time of signing – in other words, Kazakhstan is locked into the economic situation of 1997 for more than a generation.

One-sided right of renegotiation

On the other hand, the contract does provide for a right of renegotiation for the foreign investors. It stipulates that in “extraordinary circumstances” leading to “economic hardship” for the companies, they have a right to renegotiate the allocation of profit oil.¹² The specific example given in the contract is of an environmental accident, which seems a significant risk in this project. (See Box 1.1).

By giving a right to renegotiate economic terms in the event of an accident, the effect is to transfer yet another risk from company to state.

No such right of renegotiation is provided for the state, whatever the level of “hardship” it experiences from the contract.

Above the law?

It is not only the economic terms that are fixed by the contract – but also legislative and regulatory measures. The contract contains a stabilisation clause¹³, which stipulates that for the whole life of the contract, any new laws (except environmental, health or safety laws) or judicial rulings⁹ that affect the consortium’s profits will force an adjustment of the terms of the contract to restore the rate of profits.



The exclusion of environmental, health and safety laws from this “stabilisation” is an improvement compared to some PSAs signed in Russia and Azerbaijan, but still restricts the Republic’s exercise of sovereignty, and indeed compliance with international human rights norms, in other areas: these might include labour law, land expropriation law, third party compensation laws or anti-discrimination laws.

The same approach of stabilisation applies to international treaties – and could include international human rights instruments, or accords on climate change. If Kazakhstan signs any new international treaty, it must insert a clause “protecting the interests” of the oil companies from the treaty, or pay them compensation.¹⁴ Here, no exclusions are made for environmental treaties.

The compensation requirements are likely to discourage future governments from passing such laws, a major intrusion on Kazakhstan’s sovereignty, and potentially compromising the Kazakhstan government’s duty to protect and promote the human rights of its citizens. Meanwhile, the consortium’s profits are effectively guaranteed from many areas of legislative change, as well as economic – so are not subject to the “political risks” the companies so often complain of.

In fact, it is not only future laws the companies are protected from. The contract provides that where any of Kazakhstan’s laws conflict with the terms of the PSA contract, the government will provide “relief” to the companies.¹⁵ No exemption is here made for environmental, health and safety or other laws, although it is not defined what “relief” might constitute.

A similar provision was used to override local law in Georgia when the Baku-Tbilisi-Ceyhan pipeline was being built in 2002. The consortium’s choice of pipeline routing through the ‘support zone’ of an ecologically important national park led to objections by the Minister of the Environment that the project would violate Georgian environmental law.¹⁶ However, the pipeline contract specified that in cases of conflict with other laws, the contract would take precedence; thus the environment laws the Minister referred to were simply irrelevant. Ultimately, on the day of the deadline, the President – pressured by BP and the US government – called the Minister into his office, and kept her there until she signed the environmental permit, in the early hours in the morning.¹⁷

Investment arbitration – enforcing corporate power

Like many PSAs, the Kashagan contract specifies that any dispute between the state and the investor will be resolved not in the country’s courts, but by international investment tribunals.

As the researcher Susan Leibuscher observed,¹⁸

“International commercial arbitration closes the circle of MNE [multinational enterprise] ascendancy [...] That system assigns

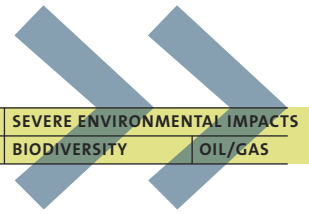
the State the role of just another commercial partner, ensures that non-commercial issues will not be aired, and excludes representation and redress for affected populations [...] It thereby creates a system of private justice which leads to a ‘compartmentalisation of the market that the state judicial system is powerless to control’ and ensures that each holder of economic power is ‘fortified with its own custom-made justice.’”

The Kashagan PSA contract specifies two possible routes for international arbitration: through the World Bank’s International Centre for Settlement of Investment Disputes (ICSID) in cases of “expropriation”, or according to the rules of the UN Commission on International Trade Law (UNCITRAL).¹⁹

The provision of a right to international arbitration in cases of expropriation goes rather further than simply cases of nationalisation. The contract includes in its definition “other actions tantamount to expropriation”.²⁰ Also sometimes referred to as “creeping expropriation” or “indirect expropriation”, for investment lawyers this tends to include anything which affects the investor’s assertion of its property rights – or anything which affects its profits – such as changes of economic terms, or of countries’ broader laws and regulations that affect investor profits. In particular, progressive labour law is widely considered to be a form of creeping expropriation.²¹ All of these are to be treated in the same way as nationalisation, or “direct” expropriation. Thus the stabilisation clauses are significantly reinforced.

Furthermore, the interests of the investors would potentially be defensible under international, rather than Kazakhstani law. There are several international treaties, ratified by Kazakhstan, that could be used to enforce the rights of oil companies under the Kashagan PSA^P:

- **The Energy Charter Treaty** – a multilateral agreement treaty on trade and investment in the energy sector, originally initiated and promoted by the European Union, and signed by 51 European and Asian countries. Inter alia, it provides binding protection for investors, prohibiting the breach of contracts and other agreements²², and providing for international arbitration in case of such breaches²³. It came into force in 1998.
- **Bilateral investment treaties** – generally have similar provisions on protecting investment; sometimes they go even further in denying rights to the host state.⁹ Kazakhstan has BITs with Italy (came into force in 1996), the UK (1995) and the USA (1994), and has also signed BITs, yet to come into force, with France and the Netherlands.
- **The ICSID Convention** – (formally the Convention on the Settlement of Investment Disputes between States and Nationals of Other States). This convention, which entered into force in relation to Kazakhstan in 2000, provides for the mechanism and rules of arbitration or conciliation at ICSID. The Convention makes ICSID’s rulings binding on the state, and obliges the state to observe or enforce any financial penalty.⁴



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As an illustration of the problem, arbitration was used effectively by French company Total to override regulation of its development of the Kharyaga field in Siberia, under a production sharing agreement signed in 1995. That PSA specified that the development required regulatory approval of its budgets and development plans – a common provision in many contracts. In December 2003, the regional and federal governments did not approve Total's expenditure budget for the previous two years, objecting to the inflation of costs on the project. The regional governor warned, 'The state should control investment and the state should know exactly how much and where investments have been made. I am against investments planned in order to avoid taxes'.²⁴ Total took the case to the Stockholm Arbitration Court. Although Total later admitted that some of its costs were indeed inflated,⁵ eventually the Russian authorities backed down in August 2005, and approved the two disputed budgets, in exchange for Total dropping the arbitration case.

Conclusion: Risk? What risk?

We have seen that company profits are protected from:

- Changes in economic circumstances (such as equipment costs and exchange rates);
- Management failures; and
- Accidents.

If any of these risks materialises, it is the people of Kazakhstan who must pay.

Company profits are also protected from:

- Change of law
- International treaties; and
- Expropriation.

In these respects, Kazakhstan is constrained in its ability to legislate or regulate, or to manage its economy. Meanwhile, citizens will not have the benefit or protection of international human rights, environmental or other instruments.

In short, the companies' profits are effectively guaranteed from most risks, whilst the people of Kazakhstan carry the risks.

o The contract does not explicitly exempt environmental and health/safety judicial rulings, only laws

p Although the Kashagan PSA does not make explicit reference to these treaties, all three of them provide generic protection to such contracts – such that a breach of contract could be seen as a breach of treaty obligations.

q For example, the Energy Charter Treaty enforces existing contracts, but stops short of forcing open countries' energy sectors, instead only obliging countries to "endeavour" to provide the same treatment to foreign investors as to its own national investors or those of any other country (Article 10(2,3)). Kazakhstan's BIT with the USA, on the other hand, requires such treatment to be given (Article II(1)), except in sectors listed in the annex to the treaty. This could, for example, preclude Kazakhstan from giving favourable status to its state-owned oil companies in any oil development – a major surrender of sovereignty over its natural resources. [The annex exempts "ownership" of natural resources from the provision. However, most likely this means only that Kazakhstani entities may have privileged opportunities to legal ownership of resource in situ, and not to development, investment and control of those resources.]

r The Convention may only be applied to issues in which both parties have given their consent to have disputes resolved under the Convention (Article 25(1)). In the case of Kashagan, that consent is given in the PSA contract, in cases of expropriation or actions "tantamount" to expropriation.

s According to news agency Interfax (2004b), Total E&P Russia General Director Jean-Pierre Dolla said that the difference arose because of accounting practices, wherein the French company includes as costs a number of items that are posted differently in Russia.

box 5.1 The legal basis for renegotiation

At present, it is unclear whether the current dispute will be resolved within the existing terms of the contract, or through changing those terms. Both routes have been suggested at different times by those involved in the negotiations.²⁵

When the contract was originally signed, a startup date of 2005 was agreed. The contract provides for an extra production bonus to be paid to Kazakhstan in the event that startup were delayed to 2006 - although it does not specify what should happen if it were delayed beyond this.

It is not uncommon for contracts to be renegotiated, where mutually agreed by both parties. At present, the companies appear to be open to discussions. If these discussions are unsuccessful, or if the companies were to choose to insist on the original terms, they could take the matter to international arbitration.

Whilst that route could nominally deliver the best outcome for the companies, it also has its disadvantages. Notably, multinational companies are finding it increasingly difficult to acquire the new reserves that would secure their economic future; and the Kashagan field is the largest field in the world open to investment by those companies. At the very least an arbitration would delay the time at which those reserves became available. At worst, they could end by losing the rights to develop the field – even with compensation, that would damage their long-term economic position. To these extents, the companies will be open to a voluntary renegotiation.

If the government and companies cannot agree on a compensation package or on renegotiated terms, can the Kazakhstan government force the companies to accept amendments to the contract?

Most writers on contract law agree that while there are some legal arguments for a government's right of renegotiation, unless it is either specifically provided for in the contract, it is unlikely to be enforceable, with the principle of sanctity of contract overcoming considerations of public interest.²⁶

It was when faced with these limited options that in September 2007, the Kazakhstan parliament passed a law giving the government a right to renegotiate past contracts that are not in Kazakhstan's interests. However, the effectiveness of the law is likely to be limited, as oil and gas contracts are protected by international treaties, and will thus trump the new law. Indeed, the European Commission has announced that it is considering challenging the law under the Energy Charter Treaty.



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1997 forever

The politics and economics of PSAs

6



Agip KCO.
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So how did Kazakhstan get into this situation?

The Kashagan PSA was one of a number that were signed with post-Soviet states in the 1990s, which contain similar features.

These contracts, signed by Azerbaijan, Kazakhstan and Russia, between 1994 and 1997, were all structured according to the 'World Bank model' with sliding-scale fiscal terms such that significant revenues would only flow to the host states once the investors had obtained their profits. The result was that company profits were effectively guaranteed, whilst the respective states would cover the costs of mishaps, unfavourable economic conditions or even management failures on the part of the investor.

Meanwhile, these contracts gave greater legal rights to the investors than anything since the colonial era of the first half of the Twentieth Century. Bringing together a powerful combination of stabilisation and arbitration provisions, together with the status of international law, they guaranteed profits by preventing any exercise of sovereignty by host states, whether that be the passing of laws or managing their economy.

Two factors made possible this dramatic roll-back of state sovereignty and leap in corporate ascendancy: the weakness and instability of the host states at the time of signing; and the absence of public discussion on government policy or on the contracts.

This also took place at a time when the countries were being pushed to adopt extreme forms of economic liberalisation, by international financial institutions, western governments and corporations.

State weakness

It is not uncommon for international oil companies to use periods of state weakness to achieve long-lasting highly profitable contracts. For example, during the Asian financial crisis of the late 1990s, an editorial in *Petroleum Review* (1998) commented enthusiastically:

The misfortunes of some often produce opportunities for others and the Asian crisis is unlikely to prove an exception. For the international companies the crisis offers the possibility, even the likelihood, that some countries will have to reduce their very high tax rates on upstream development to sustain interest.

The importance of bargaining power can be seen by studying contract practice throughout the history of the oil industry. Until the mid-Twentieth Century, it was clearly the western companies that had the upper hand – largely on the back of the imperial power of their home states. From the 1950s onward, host states began to insist on a fair share of the profits from their resources, a trend that saw the establishment of OPEC in 1960, and nationalisations of the oil industries of most major producers in the 1970s. These changes became possible through coordinated action on the part of the host states, such that companies were unable to play them off against each other as they had previously.



Bautino Village.
© foe



Steppe wind - road to Aktau.
© foe



Oil rig in the Caspian Sea.
© dreamstime

The break-up of the Soviet Union gave oil companies potential access to the largest new reserves to become available for four decades. Equally important was the rapid political change and the push for economic liberalism, driven by scores of corporate lobbyists and by international financial institutions. With a sense of starting from a blank sheet, companies aimed to push the boundaries of contractual practice to a level not attempted before.

The economic dynamics did not favour the host states either. With such enormous reserves becoming available and low oil prices, it became a buyers' market, as countries were forced to compete for a finite pot of investment. Meanwhile, the post-Soviet states were greatly weakened by the economic decline of the early 1990s. Kazakhstan, for instance, signed the Kashagan contract just two years after its GDP had hit its lowest level; although the economy had grown very slightly in 1996 and 1997, the country was still suffering serious economic problems. Having only secured a mere 14.3% stake in Kashagan, the government was forced to sell it within weeks, to plug holes in its budget.

Yet these conditions were used to sign contracts that would likely significantly outlast them, binding the countries for many decades. In the case of the Kashagan PSA, Kazakhstan's economy would effectively be locked into the circumstances of 1997.

Democracy – the best medicine

One of the best mechanisms for ensuring that a long-term contract signed by a government is stable, fair and just, is an active public debate on either the contract, or the policy under which it is signed.

Over recent years, a large body of research has shown that countries rich in natural resources tend to suffer paradoxically worse poverty than resource-poor countries; and on average, even economic growth is weaker. Meanwhile, corruption is generally more widespread, and the risk of conflict higher. Together, these problems are known as the 'resource curse'.

It has become widely accepted that the best defences against the resource curse are the existence of strong and effective institutions of governance, and transparency of revenues and policies, at the time of the investment. It is not hard to see that such considerations apply not only to the performance of the contract, but also its very terms. As the International Monetary Fund puts it, "it could be argued that the obligation to publish contracts should in fact strengthen the hand of the government in negotiations, because the obligation to disclose the outcome to the legislature and the general public increases pressure on the government to negotiate a good deal."²⁷

In the post-Soviet states of the 1990s, not only was there often a significant democratic deficit, but public debate was generally avoided or prevented. For example, in Azerbaijan, the contract for development of the Baku-Tbilisi-Ceyhan pipeline was found in 2001 to be not even available to parliamentarians, let alone members of the public. This was one year after the contract had entered into force, and despite the fact that it had a higher legal status than any of Azerbaijan's laws, other than the constitution.²⁸

The arguments against publishing PSAs are usually on the basis of commercial confidentiality. For the investor, the concern is that their competitors might get information about their commercial position, which would give them an advantage. Meanwhile, the host government may be concerned that investors bidding for future contracts gain advantage by knowing how previous negotiations were settled, whilst other host states could compete by offering slightly more attractive terms.

Neither argument holds much water. As the International Monetary Fund observes,

"In practice, however, the contract terms are likely to be widely known within the industry soon after signing. Little by way of strategic advantage thus seems to be lost through publication of contracts".²⁹



Indeed, contracts are available in any case to oil companies, governments, and in fact anyone who can afford it. The Kashagan PSA is included in 'Basic Laws and Concession Contracts', a directory that is held in the legal libraries of all oil companies. The Commonwealth of Independent States volume of the directory can be purchased for \$7,200 from Barrows, a company which specialises in providing legal and contract information to the oil industry.

Perhaps in recognition of the weakness of the arguments for commercial confidentiality, or more likely due to pressure from civil society, the emerging best practice in the oil industry is indeed to publish PSAs and other contracts. For example, they are now published in Azerbaijan and Timor Leste; developing oil legislation in Iraq also requires publication. The US Treasury Department calls for "ex ante presumption of disclosure of such documents as Host Government Agreements, Concession Agreements, and bidding documents".³⁰

In the Kashagan PSA, publication of the terms is specifically precluded in the contract itself³¹, without the approval of the management committee (which comprises representatives of the Kazakhstan government and of the foreign companies). It is difficult to see a good argument for the management committee not to give this approval.

External pressure

The question of how profits and power are shared between oil investors and host governments has been a central thread running through the history of the oil industry. Often, it is the excesses of one era that lead to problems in the next.

To see this, one only has to look at the Middle East, where grossly unbalanced oil production contracts during the first half of the Twentieth Century^t led to growing resentment and frustration among the people, and ultimately to political instability, repressive regimes and conflict.

The wise course of action would be to recognise that contracts such as the Kashagan PSA are a product of their time, and not appropriate for their decades-long duration; thus a renegotiation would be sensible.

However, the home governments of the Kashagan consortium members are standing up for the interests of the oil companies. Italian Premier Romano Prodi travelled to Kazakhstan in October, to persuade President Nursultan Nazarbayev to announce that he would not change the terms of the contract. The European Energy Commissioner Andris Piebalgs has stated that "The Commission has always supported Eni and is following the matter with a lot of attention", and warned Kazakhstan that "the Commission will take adequate measures if the legal rights of European companies were put at risk".

Again, the investors are not shouldering their risks themselves, as would be expected of members of the private sector, but recruiting powerful governments to bat on their behalf.

^t Contracts signed in Persia (Iran), Iraq, Saudi Arabia, Kuwait, Qatar and Abu Dhabi were all for either 60 or 75 years; they covered vast areas, often the whole country; and they gave the vast majority of profits to the foreign oil companies, and almost nothing to the host states.



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Recommendations

7



Caspian Gull.
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Recommendations on transparency

- The Kashagan PSA should be published, in line with best practice in the international oil industry, and as recommended by the World Bank and others.
- Key economic data on the project should also be made publicly available, including elements of the development plan, to enable the project's economics to be assessed.
- A full public debate should be carried out with civil society groups and with oil experts on whether the terms of the PSA provide for the interests of the people of Kazakhstan.

Recommendations on amending the legal terms of the PSA

- A clause should be inserted into the PSA, providing a specific right of renegotiation for both sides, either on a periodic basis (perhaps every five years), or in the event that economic circumstances significantly change.
- The “stabilisation clauses” (Articles 29.1 and 40.2) should be rewritten. Specifically, they should affirm the government of Kazakhstan’s sovereign right to pass legislation and to regulate its industries, and its duties to protect the interests of its citizens and to comply with international human rights instruments; the limit to these rights and duties should be an obligation on the government to act in good faith, and not to use its sovereign powers simply to seek ever greater revenues.

Recommendations on amending the economic terms of the PSA

- The economic terms should be amended so as to allocate more of the project risk to the investor, rather than to the state of Kazakhstan. Possible mechanisms to achieve this would include:
 - applying a significant royalty (of 15 to 30%);
 - applying a cost oil limit (of perhaps 50%), combined with reducing the maximum company profit oil share on the sliding scale, from the current 90% to not more than 40%.^u
- Any new terms should be analysed such that the foreign companies’ return is estimated to be less than 12% - as there is no justification for major profits, given the changes of economic circumstances and Eni’s management failures.



Recommendations to home governments of the oil companies

- Rather than uncritically defending the interests of powerful corporations, the European Commission, government of Italy and others should respect the right of the Kazakhstan government to renegotiate a contract that does not reflect the interests of its people.
- The Commission and home governments should encourage the European companies involved to publish the PSA contract and key economic data, to allow a proper public debate in Kazakhstan.
- Foreign energy policies should incorporate respect for the principles of democracy, human rights, poverty reduction and the prevention of conflict at their heart; and in no circumstances should “energy security” considerations take priority over these principles. Furthermore, foreign (as well as domestic) energy policy should work to facilitate a transition to sustainable energy, in order to prevent dangerous climate change.

General recommendations on contract practice

- Long-term production contracts should be considered legitimate only to the extent that at the time of signing, the host government was in a bargaining position sufficient to represent the interests of its citizens, and that those citizens had a full and meaningful opportunity to scrutinise and debate policy.
- Contracts should contain a periodic right of renegotiation for both sides - *especially* where the conditions above are not met.
- The Energy Charter Treaty and bilateral investment treaties should be amended to embrace these principles. The Treaty should also explicitly recognise the sovereign rights of governments to pass legislation and to regulate their industries, and their duties to protect the interests of their citizens and to comply with international human rights instruments.
- Stabilisation clauses should not be framed in ways that curtail states’ duties to protect and promote human rights, or to protect the environment and the health and safety of citizens.



A yurta on the Assy plateau, Tien Shan, Kazakhstan.

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u These limits would ensure that in any year, the state of Kazakhstan would receive a minimum of 30% of revenues (60% of 50%).



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Appendix

Appendix 1. Methodology and data

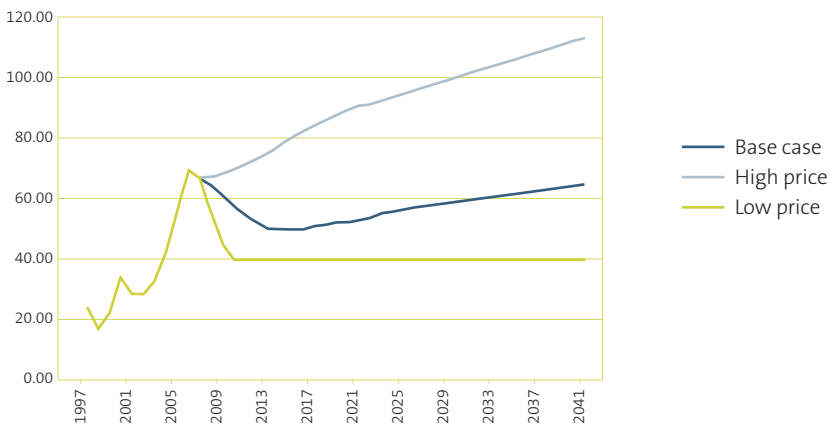
Our analysis is based on a discounted cashflow model. We use a discount rate of 8%.

Figures are all in real terms (2007 prices).

We consider only the Kashagan field (not the other four discoveries in the contract area), and only oil (not associated gas).

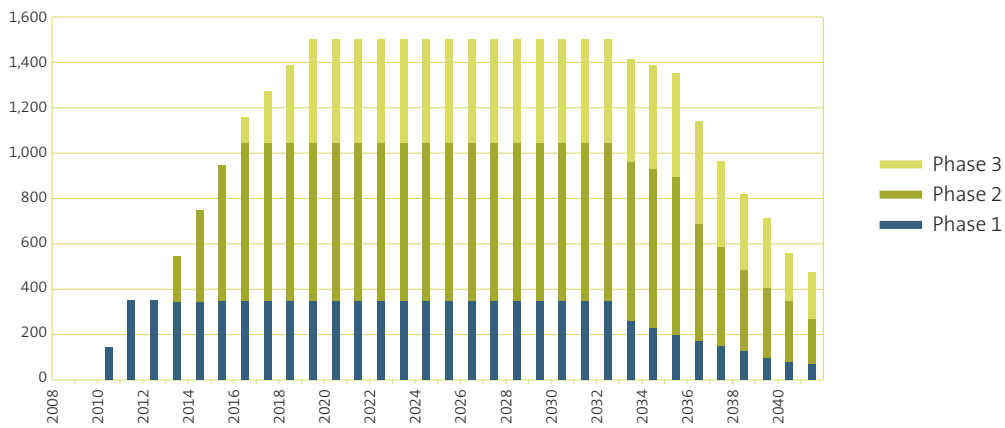
Oil price In our base case, we use the 2007 oil price projections (reference scenario) of the Energy Information Administration, an agency of the US government Department of Energy.³² The EIA projections run to 2030; we have extrapolated the trend for the final ten years of the project. This price projection is shown in the graph below. Also shown are two alternative scenarios examined in Appendix 3: constant \$40/bbl (this is the price at which oil companies are likely to test their model), and EIA's high price scenario.

figure a1.1 Oil price projections used in three scenarios



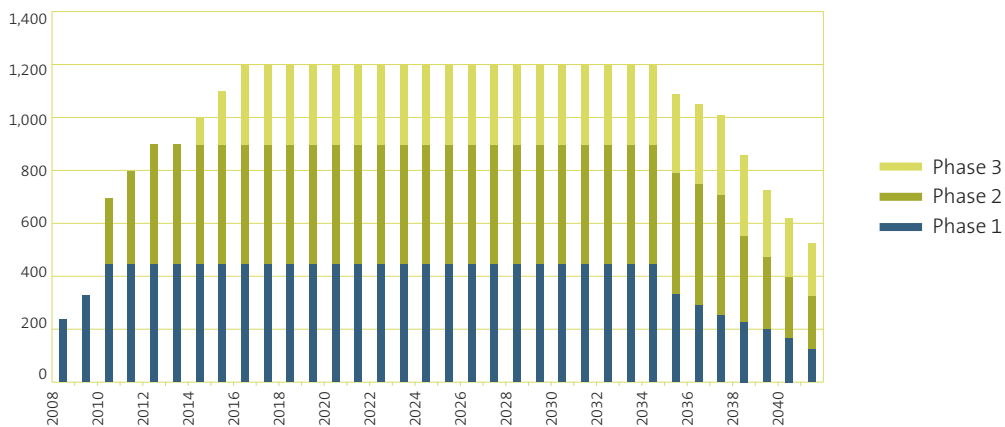
Production profile The production profile used in our model is as shown in the graph below.³³

figure a1.2 Projected production profile used in base case



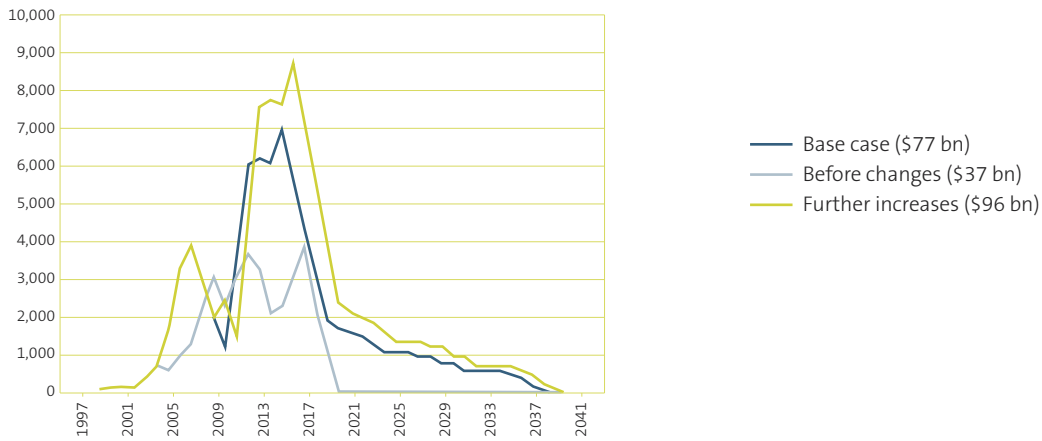
The production profile for the pre-2007 scenario we considered (based on the 2004 development plan) is shown below.³⁴

figure a1.3 Original production profile, projected in 2004 development plan



Capital expenditure Capital expenditure, in each of three scenarios we consider is as shown in the graph below.³⁵

figure a1.4 Capital expenditure projections in three scenarios



Operating expenditure We take variable operating costs of \$4 per barrel,³⁶ and fixed operating costs equal to 5% of development costs.

Transport costs Whereas some models of the project count pipeline construction in the capital costs, we instead consider per barrel tariffs, as the project may use existing pipelines, such as BTC. Following Deutsche Bank³⁷ and Wood Mackenzie, we assume transport costs to be \$6.50 per barrel. Possible transport routes are shown below. Of these, the Baku-Tbilisi-Ceyhan pipeline seems the most likely for the largest share, although smaller amounts may be sent by each of the other three routes.

table a1.1 Per-barrel costs/tariffs of various export routes

Route	Cost ³⁸	Notes
NOVOROSSIYSK (Russia / Black Sea):		
CPC ³⁹	\$5.21	Very limited capacity. Building 2nd pipeline alongside CPC.
CPC II	\$4-6	
Barge across Black Sea	\$1	
Bosphorus bypass	\$2.50	Bosph. tanker traffic already at max capacity.
TOTAL	\$7.50-9.50	With bypass
China:		
Pipeline to China	\$5	
Trans-China pipe to east coast	\$4	
TOTAL	\$9	
Ceyhan (Turkey):		
Pipeline across Caspian Sea	\$2.00	
BTC pipeline to Ceyhan	\$4.00	
TOTAL	\$6.00	
Iran:		
Pipeline to Iran	\$2.00	Politically problematic – unlikely to be possible for US companies
Iran oil swap	\$3.00	
TOTAL	\$5.00	

Appendix 2. The Kashagan PSA contractual terms

The most important economic terms of the contract are summarised as follows.

Cost oil limit⁴⁰ Prior to “payback”, cost oil limit of 80%. After payback, limit of 50%. Payback is defined as the point at which cumulative consortium receipts equal cumulative expenditure (ie ‘R’-factor equals 1).

Profit oil sharing⁴¹ According to a complex formula, the consortium’s share of profit oil will vary from 90% to 10%, equalling the lowest of the IRR percentage, the ‘R’-Factor percentage and the volume percentage.

(i) IRR percentage is equal to:

- 90% if the consortium’s IRR is less than 17%,
- $(90\% - [26.67 \times (\text{IRR} - 17\%)])$ if IRR is between 17% and 20%^v, or
- 10% if IRR is greater than 20%.

(ii) ‘R’-factor percentage is equal to:

- 90% if the R-factor is less than 1.4,
- $(90\% - [66.67\% \times (\text{Rf} - .4)])$ if the R-factor is between 1.4 and 2.6^w, or
- 10% if the R-factor is greater than 2.6;

where R-factor is defined as cumulative consortium receipts (net of tax) divided by cumulative consortium expenditures (including bonuses).

(iii) Volume percentage is equal to:

- 90% if the volume extracted is less than 3 bn barrels,
- $(90\% - [32\% \times (\text{volume extracted} < \text{in billion barrels} > - 3)])$ ^x
- 10% if the volume extracted is greater than 5.5 billion barrels;

except that the volume percentage may not fall below the ‘volume floor’, which equals:

- 60% if the IRR is less than 12.5%,
- 35% if the IRR is between 12.5% and 15%,
- 20% if the IRR is between 15% and 17.5%, or
- 10% if the IRR is greater than 17.5%.

Bonuses⁴² The consortium must pay the following bonuses to the state:

- \$175m signature bonus, on signing the contract (1997),
- \$50m, on declaration of a commercial discovery (2002),
- \$150m, for first delay in production (2004) (not specified in contract; negotiated subsequently), and
- \$250m, on first production (2010).

The consortium must also contribute to social and infrastructure projects, by the lower of \$5m or one hundredth of the capital expenditure in each year.⁴³

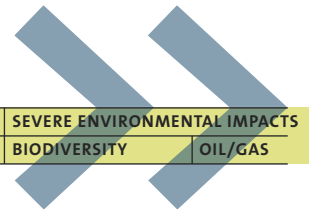
Tax⁴⁴ A profits tax is payable on net consortium income, at a rate varying from 30% to 60%, depending on IRR:

- 30% for IRR up to 20%
- 34% for IRR between 20% and 22%
- 38% for IRR between 22% and 24%
- 42% for IRR between 24% and 26%
- 48% for IRR between 26% and 28%
- 54% for IRR between 28% and 30%
- 60% for IRR over 30%.

^v In other words, the percentage gradually slides from 90% to 10% between IRR of 17% and 20% - proportional to the amount by which IRR exceeds 17%

^w That is, the percentage gradually slides from 90% to 10%, proportional to the amount by which R-factor exceeds 1.4

^x That is, the percentage slides from 90% to 10%, proportional to the amount by which volume exceeds 3 bn barrels



Capital costs are amortized at the following per annum rates:

- Buildings & structures: 7%
- Rail, maritime and river transport: 8%
- Bonuses: 10%
- Vehicles: 15%
- License acquisition cost: 25%
- Exploration & appraisal: 25%
- Other intangible assets: 25%
- Machinery & equipment: 25%.

Appendix 3. Full results of the economic analysis

Sensitivity to price

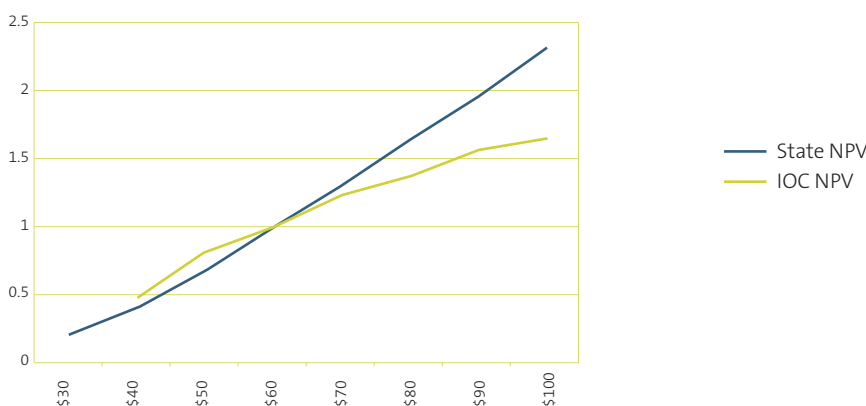
table a3.1 Economic results in three oil price scenarios

	Base case	Constant \$40	High price
IOC IRR	14.5%	11.5%	19.0%
IOC NPV	\$30.5 bn	\$15.7 bn	\$48.2 bn
IOC take (undiscounted)	30.1%	40.5%	15.9%
State NPV	\$75.0 bn	\$38.0 bn	\$185.0 bn
State revenues pre-2017 (undiscounted)	\$8.4 bn	\$2.0 bn	\$32.1 bn

Unsurprisingly, we see the importance of oil price in determining project economics. However, even at a \$40 oil price, the project is comfortably profitable for the investors. Although a little below the target of 12%, the return of 11.5% is well above the cost of capital (estimated 7.5-8%).

We can also see the sensitivity of IOC and state NPV to price in the graph below (taking constant-price scenarios).

figure a3.1 Change in company and state NPV in different constant-price scenarios



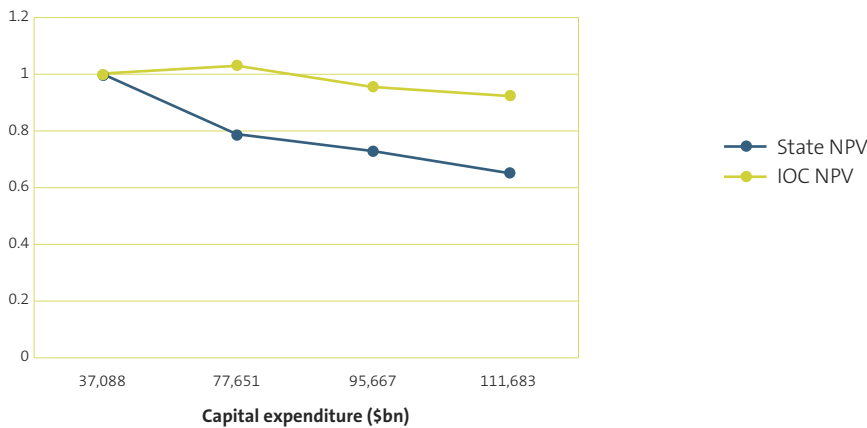
We see from the graph that the upward price-sensitivity of the PSA is slightly progressive, state capture of economic rents curving gently upwards (and investors' NPV curving downwards) as price goes higher. The flipside of this is that the state also carries more of the downside price risk (there are possible fiscal structures which would give the state the upside but less of the downside). At very low prices, however, it starts to turn, becoming more onerous for the investors – to the extent that at a \$30 oil price, the project would (under current capital expenditure plans) become unprofitable. This latter effect is largely because at IRR below 12.5%, it becomes irrelevant to either sharing of profit oil or tax – instead, the volume and 'R'-factor take over as key determinants. However, it should be noted that this effect is occurring in particularly stressed conditions: low oil price and high capital expenditure. We conclude that in such circumstances, the project as a whole becomes unpromising.

Sensitivity to development cost

table a3.2 Economic results in three development plan scenarios

	Base case	Before changes	Further increases
Capex	\$77 bn	\$37 bn	\$96 bn
IOC IRR	14.5%	20.6%	13.9%
IOC NPV	\$30.5 bn	\$29.6 bn	\$28.3 bn
IOC take (undiscounted)	30.1%	16.6%	31.1%
State NPV	\$75.0 bn	\$95.4 bn	\$69.6 bn
State revenues pre-2017 (undiscounted)	\$8.4 bn	\$28.1 bn	\$5.8 bn

figure a3.2 Change in company and state NPV in different development plan scenarios



We see from the graph that the state is clearly taking risk for the cost over-runs, and would continue to do so if the costs rose further.

Effect of compensation or contract changes

table a3.3 Effect of various compensation measures

	Base case	\$7 bn bonus	\$7 bn fine	16.7% KMG share	50% KMG share	15% royalty	40% royalty	60% profit oil cap
IOC IRR	14.5%	13.7%	13.5%	14.5%	14.5%	13.1%	9.5%	13.8%
IOC NPV	\$30.5 bn	\$29.6 bn	\$28.0 bn	\$27.7 bn	\$16.6 bn	\$24.1 bn	\$6.5 bn	\$28.1 bn
IOC take	30.1%	32.0%	30.7%	27.4%	16.4%	28.1%	19.8%	30.2%
State NPV	\$75.0 bn	\$75.9 bn	\$77.5 bn	\$77.8 bn	\$88.9 bn	\$81.3 bn	\$98.9 bn	\$77.4 bn
State revenues pre-2017	\$8.4 bn	\$13.3 bn	\$14.8 bn	\$9.3 bn	\$12.7 bn	\$16.0 bn	\$33.2 bn	\$11.8 bn

Note in particular the significant difference between applying the \$7 billion compensation payment as a fine or as a bonus, and also between the 16.7% and 50% KMG shares.

We also see that a 40% royalty is by far the most favourable adjustment for the state – although unlikely. Second choice would be a 50% KMG share, if KMG could find a way to finance its share of the capital costs.



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 - Initial production delayed from 2008 to third quarter of 2010;
 - Peak production increased to 1.5m bpd, achieved in 2019;
 - Phase 1 reduced from three tranches of 150,000 bpd to two tranches of 150,000 bpd plus an extra 50,000 bpd – hence 350,000 bpd total in phase 1;
 - Tranche 3 takes place in phase 2 instead.
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 - Exploration costs 1997-2002 from Deutsche Bank (Nick Griffin and Caroline Cook, *Kashagan – The Big Sturgeon*, 10 October 2003, p.2)
 - Total investment of \$2.2 billion by July 2002 (*Interfax Petroleum Report*, 'KazMunaiGaz, Agip KCO admit commercial oil discovery at Kashagan', 17 July 2002)
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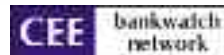
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