

Financial evaluation of oil licensing contracts in Mayssan oil company for the period from 2012-2020 (case study)

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Abstract

The main objective of this study revolves around creating a framework for knowledge and application on the ground about how to evaluate the oil licensing rounds in (MOC) at the financial level as one of the important stages in the strategic strategy management stages. The main problem with the (MOC) remains that it does not have at least a real evaluation of the oil licensing contracts at the financial level, before and after the oil licensing contracts in the company. There must be a real evaluation of the licensing contracts in the (MOC) based on the foundations and integrated studies to judge the feasibility of these contracts in proportion to the nature of its work and the challenges it faces. Case study approach was adopted, and selected forms of financial criteria were used to assess the efficiency of the financial performance of its licensing rounds in line with the nature of its business. Based on all of the foregoing in this study, the results indicate that the appropriate evaluation for the current period is at least the financial evaluation of oil licensing contracts in the (MOC), given the importance of this criterion on performance and success. Organizations in light of the rapid and continuous developments and changes in the modern business environment.

Key words: Oil contracts, Iraqi oil licensing contracts, financial evaluation of licensing contracts, Mayssan oil company (MOC)

Introduction:

Performance evaluation is one of the most important foundations of modern management of investment projects that always strive to achieve its goals of growth, survival and adaptation in a dynamic environment characterized by intense competition for limited financial and economic resources between various economic units. The evaluation of the project depends on studies and integrated bases to judge its feasibility. The nature of the evaluation and its stages differ according to the type of investment projects and the beneficiary of them, whether they are private, public or concerned with environmental and social considerations, and over the course of these developments and rapid and continuous changes in the modern business environment that have been affected by the quantity and quality of information that organizations need in measuring and evaluating the efficiency of their economic and financial performance in order to strategic objectives, and given the great sensitivity of the oil resource among members of Iraqi society. Society we are dealing with a sovereign wealth that belongs to all of society, and according to the Iraqi constitution, it belongs to the people. In order for the MOC to keep pace with these rapid changes in the modern business environment, especially after the recent investments of the oil licensing rounds projects in Iraq at the beginning of 2009, of which the MOC's share was (technical and development service contracts), which included each of the (Abu) fields. Gharb, Fakka, Bouzerkan). any and any of them; Halfaya) In the first and second rounds, there was an urgent need for the existence

of criteria to evaluate the efficiency of the financial performance of licensing contracts in the MOC, provided that these criteria are compatible with the nature of the company's work and the nature of its work. The nature of the company's business. The challenges you face. In order to understand this, this research has been divided into four sections. The first dealt with the research methodology. The second: It included the (theoretical) aspect of the research, which included the concept of oil contracts and oil licensing contracts in Iraq. And the third: It included the practical application of this study by evaluating the efficiency of the financial performance of licensing rounds in the MOC according to selected financial criteria. The fourth topic has clarified the most important conclusions and recommendations reached by the researcher through the current study.

Section One: Study Methodology

First: The problem of the study: As a result of the acceleration of events and the increase in the strength of competition in various industries and businesses in the world, we see that there is an urgent need for the existence of criteria for evaluating the efficiency and financial performance of the MOC for oil licensing contracts that are compatible with the nature of its business and the challenges it faces. Although more than (11) years have passed since the first contract for the licensing rounds was concluded in 2009, the main problem for MOC is that it still lacks a real evaluation of the oil licensing contracts on the financial level before. After the oil licensing contracts in the company, this basic problem can be expressed through the following questions:

1. Can MOC evaluate oil licensing rounds projects?
2. What is the appropriate type of evaluation for MOC, which corresponds to the nature of its business and the challenges it faces within the rounds of oil licensing contracts?
3. Did the oil licensing rounds at the (MOC) achieve the expected financial profits for the project owners and major shareholders?

Second: The importance of the study: Oil is one of the most important natural resources important in the process of economic development in Iraq, being the first and main source in the state budget. Therefore, the importance of the research is focused on the following:

1. Contribute to supporting organizational knowledge and creating a clear perception among researchers and academics with different frameworks and perspectives on the process of evaluating oil licensing rounds in the MOC.
2. The importance of having standards for evaluating the efficiency of financial performance in the MOC to keep pace with the rapid and continuous changes in the modern business environment.

Third: Objectives of the study: In light of the study's problem and its importance, the

study's goal revolves around the formation of a knowledge and application framework on the field on how to evaluate the rounds of oil licensing contracts in (MOC) as one of the important stages of the strategic management stages. The objectives of this study can be summed up as follows:

1. Determining the appropriate type of evaluation for the oil licensing contracts rounds for the MOC, which is consistent with the nature of its business and the challenges it faces within the oil licensing contracts rounds.
2. Evaluation of the profitability of investment projects for the oil licensing contracts rounds in (MOC) and the comparison between them.

Fourth: The website of the study community: The population of the current study represents the group of fields (Abu Gharb, Fakka, Bouzerkan, and Halfaya) located within the fields of the MOC.

Fifth: Methods for analyzing study data: Selected forms of financial criteria have been used to evaluate the efficiency of the financial performance of the oil licensing rounds in MOC, in line with the nature of its business and the challenges it faces within the oil licensing rounds, as follows:

Financial Evaluation Criteria (Business Profitability):

1. Payback period criterion: This criterion is used to clarify the period of time during which the value of the primary investment can be recovered, in order to select a project whose investment costs are recovered within a short period, compared to the operating life of the project. Payback period means the period that the project needs to cover the investments from the annual net cash flows, and it can be calculated in several ways including:

- First method: If the annual cash flow is equal, the equation will be as follows:

$$\text{Payback period} = \frac{\text{Initial investment value}}{\text{Total net flow}}$$

- The second method: when the cash flows are irregular, the formula is:

$$\text{Payback period} = \frac{\text{Initial investment value}}{\text{Average cash flow}}$$

2. Accounting rate of return (ARR): This standard is based on the accounting profit that results in matching the expected revenues for each year of the economic life of the project with the expected costs of obtaining these revenues.

$$\text{Accounting rate of return} = \frac{\text{Average internal cash flow}}{\text{Initial investment on the project}} \times 100$$

3. The criterion of the benefit-cost ratio: This criterion is called the profitability criterion and is defined as the criterion that measures the ability of the investment project to achieve profits. All of the following are calculated:

$$\text{The criterion of the benefit-cost ratio} = \frac{\text{The sum of the present value of the return}}{\text{The sum of the present values of costs}}$$

Section Two: Theoretical Framework

Contractual agreements in the oil markets, Iraq as a model:

The contract is defined as meeting the need to deal with others, and because dealing with others is a social necessity inherited since the inception of societies that have passed the stage of isolation and isolation around themselves in the past and tend to coexist with the group to secure their basic needs through the doors of cooperation and exchange with others. And that these exchanges have multiple aspects and forms, and all of them are subject to what is known as the contract theory that regulates the movement of free trade, and controls the organization of the principles of dealing and exchanging things, and most important of all that it is considered the first engine of economic activity in the state, the course of our daily private and public life is not without conclusions Contracts of all kinds. Accordingly, in this section, the concept of contracting and its importance will be reviewed. In addition, we will address selected models of the types and forms of contractual agreements in the oil markets, with special reference to Iraqi oil licensing contracts within the first and second rounds of MOC for the period (2012-2020).

1. The concept of contracting

The primary purpose of contract law is mostly to make concessions to the parties in order to facilitate private matters and this is the best thing to secure their interests while keeping the law as far away as possible from these transactions. However, facilitating voluntary exchange remains the primary objective of contract law. Voluntary exchange is not a zero-sum game. Contracting parties are mostly allowed to benefit from trade. Regardless, the underlying assumption for gains from trade is the economic basis for contract facilitation law. The basic conundrum of contract law is the answer to the question why a contract is executed even when there is no credit? The answer shows how the contract can best be executed (Goldberg, 2005:491-492). And the contract can be summarized: it is everything that a person is bound by, whether it is public or private, and it has a payoff or not. Through the convergence of two wills to produce a specific legal effect. It is always subject to the law of the will of the contracting parties

2. Contractual agreements in the oil markets

Oil contracts are one type of land use contract. They share with soil use contracts distinct features and characteristics that allow them to be separated into a separate set of contract types. A soil use contract is an agreement between the parties to carry out a specific type of underground use: mineral exploration, mining, and joint exploration. (Inshakov, et al, 2019:46)

3. Types of oil contracts

In order to understand the importance of oil contracts, we will generally review the most important types of international oil contracts through their three stations: oil concession contracts; production sharing contracts; Service contracts.

3.1. Oil concession fuel:

A franchise is defined as a contractual agreement between two legally and financially separate companies, the franchisee and the franchisor. Under franchise agreements, the franchisor not only gives intangible property, for example a brand, to the franchisee, but also includes advice and assistance in running their business. (Morschett, et. al., 2010: 283). As for oil concession contracts, they are the first type of oil contracts in general, as they appeared in the United States of America in the eighteenth century, then the idea of those contracts was transferred to other oil-producing countries through international oil companies. This type of contract is governed by United States law, which states that ownership of the land includes everything contained in it and on its entire surface. (Boyket et al, 2012:26). It can be summed up with us that the concession contract: is the granting of the private right to a national or foreign oil company by the state over a specific area of its territory within a specified time or for an indefinite period.

3.2. Contracts for participation in oil production:

Participation played an important role in enhancing the negotiating power of natural resource exporting countries, which ultimately contributed to the preference for joint venture agreements, which are based on the argument that host country governments have the right to be instrumental in managing most large and important sources of wealth such as oil and gas. And the natural minerals of some countries (Al-Emadi, 2019: 75). Indonesia was the first country to use Public Participation Contracts in 1966, and it remains one of the most favored users. In direct response to some of the criticism of the concessions, the Indonesian government refused to grant new concessions in the 1960s, and established acceptable (production sharing agreements) that allowed governments to retain ownership of national production resources, with the foreign investor accepting all the risks and expenses of exploration and production by compensating his efforts with a share of production. (Olawuyi, 2018: 205). We believe that the oil partnership contract is: an agreement between three main parties, the first party of which is the state (the sovereign over the oil wealth and the exclusive owner of it), and the second party participates in it, as a representative. By the local oil company or the private sector, which in turn is (authorized by the state to operate, while the third party represents the foreign oil investment company for oil, and this agreement occurs with the aim of establishing a joint oil project within a specific geographical area and a specific period of time, in which the conditions and shares of participation are determined. Sharing the risks and

managing production between the two parties, and the project usually ends with the transfer of ownership of the joint venture to the state or its national oil company.

3.3. Oil Service Contracts:

In recent years, some oil and natural gas producing countries have shown a growing interest in adopting various forms of service contracts rather than production-sharing contracts or concessions in oil and natural gas exploration projects. This is on the one hand, while on the other hand, the host countries needed the capital of international oil companies to develop their own oil and natural gas fields (Ghandi & Lin, 2014: 63). This type of oil and gas contract allows the host country to exercise more control over its oil exploration and exploitation activities. By bringing in TNCs to perform carefully defined tasks, the host country contracts only with the TNC to perform a specific service under which foreign companies explore hydrocarbons at their own risk and expense on behalf of the NOC, and are compensated in cash on the basis of successful explorations (Adebayo, 2018 : 143). The service contract takes various organizational forms, including: oil contracting contracts, production sharing contracts; technical service contracts; risk service contracts; Return contracts (repurchase). The oil service contracts can be summarized: They are those contracts that oil-producing countries have resorted to as a result of the growing fears of sovereignty and the political environment on the one hand, in addition to the need for the international oil capital. Companies developing oil and natural gas fields in the host countries on the other hand. By employing foreign companies to do some limited or comprehensive oil business under a single or multiple oil contract during a specified period of time in return for an agreed percentage of wages, usually paid in cash or in kind oil.

4. Iraqi oil licensing contracts within the first and second rounds of the MOC for the period (2012-2020).

The nature of licensing agreements varies depending on the value chain activity, for example production or distribution and marketing In process licenses, the licensee is given the right to use a specific production technology, often based on a patent, but in the case of product licensing, the licensee is given the right to manufacture A specific product or products according to certain procedures, processes, or formulas. For contractual licensing: It is a contractual agreement between a company and a foreign producer, under which the foreign producer manufactures the company's product (Morschett et.al., 2010: 282). The concept of "license" is an authority granted by one party (licensed) to another party (licensee) to carry out certain activities, generally license contracts and alternative licenses are entered into in the same way as contracts unless there are legal provisions that require compliance with certain formal requirements (Metzger, 2016: 295 -297). The impact of the Iraqi wars and the past political events that occurred after the nationalization was clear on the continuous decline in the production of the oil sector during the past two decades, which at best amounted to an average of (2.5) million barrels per day. Which led to the emergence of an urgent need to invest in the oil sector and develop oil fields after 2003 by the Iraqi government, and this was done in (2009) through the conclusion of oil service contracts in the form of five rounds. For licensing contracts. The MOC's share in the first licensing round was the transfer of three oil fields (Bouzerkan, Fakka, and Abu Gharb) to the Chinese companies CNOOC and the Turkish TPAO, with the aim of raising the production of the three Mayssan fields to (450,000) thousand barrels / day. As for the Halfaya oil field, it was referred within the second licensing round to a group of companies (China's Petro China, Malaysia's Petronas, and France's Total) with the aim of raising the field's production to (400,000). b / d.(Ministry of Oil, 2019). Table (1) Shows the content of the technical service contract for the MOC fields within the first licensing contract rounds.

Table No. (1) The technical service contract for the MOC fields within the first licensing contracts

Source: Prepared by the researcher based on the data contained in the report of the Iraqi Ministry of Oil (2019) "The Oil Fields That Have Been Invested," Baghdad, Contracts and Licensing Department, several pages.

Fields (MOC) first round	Oil reserves billion / barrels	Corporate Alliance Ratio	Service fee dollars/barrel	Training fee dollars/barrel	Signature fee dollars/barrel	start production line barrels/day	Peak production required upon signing the contract b/d	Date of contract	Duration of the contract
Bouzerkan	2,4	(CNO)Chinese 63,75%	2.30	5	100	88000	450000	20\05\17 10	20Year
Fakka		(TPAO) % 11,25 Turkish							
Abu Gharb		government partner IDC 25 %							

It is also clear to us that the combined reserves of these fields are estimated at (2.4) million barrels. As for the share of the government partner's contribution in the Mayssan regions: Abu Gharb; Fakka; And Bouzerkan 25%, which was owned by the government partner represented by the Iraqi Drilling Company (IDC), while the share of the consortium of companies represented by the Chinese company (CNO) with a large participation rate of 63.75 percent, and a Turkish company. a company. a company. (TPAO) with a large participation rate of (11.25%).with a profit of \$2.30 per barrel, determined by the Ministry of Oil. As for the production starting line, it reached (88000) barrels / day, rising to (450,000) barrels / day at the peak of production within (6) years from the signing of the contract. Contract duration (20) years. Training fees (5) million dollars. As for the fees for signing the contract reward, it amounted to (100) million dollars, to be paid by the contractor within (30) thirty days from the date of contract entry into force. Cost (non-refundable). Table (2) also shows the content of the Halfaya field development contract in the MOC within the second licensing contract rounds.

Table (2) The contract for the development of Halfaya field in the Maysan Oil Company within the second licensing contracts

Source: Prepared by the researcher based on the data contained in the report of the Iraqi Ministry of Oil (2019) *“The Oil Fields That Have Been Invested,”* Baghdad, Contracts and Licensing Department, several pages.

It becomes clear to us that the reserves of this oil field are estimated at (4.1) million barrels. While the share of the government partner’s share of the Halfaya field was (10%), which belonged to the government partner represented by the Basra Oil Company (BOC) (formerly the South Oil Company), while the share of shares for the alliance of companies represented by the Chinese company (Petro china) was a participation rate of (45%). The Malaysian company Petronas with a participation rate of (22.5%) and the French Total with(22.5%) in return for the profitability wages of (1.4) dollars per barrel, which was determined by the Ministry of Oil. As for the production start line (70,000) barrels per day when signing the contract, and a maximum of (535,000) barrels per day, at the peak production required within (6) years from signing the contract. For a contract period of (30) years, and training wages of (\$ 5) million. The contract-signing fee was \$150 million.

The third section: the results of the study

Financial evaluation of licensing contracts in MOC, first and second rounds

Fields (MOC) first round	Oil reserves billion / barrels	Corporate Alliance Ratio	Service fee dollars/ barrel	Training fee dollars /barrel	Signature fee dollars/barrel	start production line barrels /day	Peak production required upon signing the contract b/d	Date of contract	Durati on of the contract
Halfaya	4,1	Petrochina 45% Chinese	1.4	5	150	70000	40000 0	20\01\18 10	30 Years
		Petronas Malaysian 22,5 %							
		Total French % 22,5							
		government partner BOC10%							

1. The financial evaluation of the Mayssan field contract (Bouzerkan, Fakka, Abu Gharb), the first round:

Table (3) shows the volume of production and total revenue for the technical service contract for the fields of the MOC (Fakka, Abu Gharb, Bouzerkan) in addition to the volume of production above the start line (88000) barrels / day, and the total revenue generated from that, in the (MOC) for the period 2011 - 2020.

Table (3) The volume of production and total revenue of the technical service contract for the fields of the MOC (Fakka, Abu Gharb, Bouzerkan) within the first licensing contracts for the period 2012-2020.

first column	second column	third column	Fourth column	Fifth column	Sixth column	Seventh column
decade years	Annual production million / barrel	Barrel price/dollar	Total revenue in billion/dollars	Production above start-up million/barrels	Revenue above start-up billion dollars	Cost recovery billion/dollar
2012	9,151,529	104	954,934,597	1,924,309	200,795,871	100,397,936
2013	40,179,635	102	4,093,669,519	12,106,486	1,231,496,576	615,748,288
2014	41,474,502	69	3,827,890,373	14,805,010	1,358,997,684	679,498,842
2015	47,408,828	36	2,109,776,630	22,072,812	977,397,251	488,698,626
2016	51,439,634	40	1,831,514,592	27,303,192	978,613,799	489,306,900

2017	58,760,379	57	2,930,814,129	35,894,624	1,795,672,930	897,836,465
2018	71,971,664	61	4,695,673,513	50,249,196	3,278,805,853	1,639,402,927
2019	87,198,463	60	5,348,010,793	66,562,118	4,081,583,870	2,040,791,935
2020	64,121,879	41	2,509,995,802	44,462,597	1,741,981,995	870,990,998
Total	471,706,513		28,302,279,948	275,380,344	15,645,345,829	7,822,672,915

Source: Prepared by the researcher based on the data contained in the reports of the MOC (2020), "Annual Reports", the Financial Commission, the Costs Department, the Audit Department, the First Contracts and Licensing Division, multiple pages. OPEC (2020), "World Oil Outlook 2045", Vienna, Austria

It is clear to us from Table (3) that the political and marginal environment had a clear impact on the fluctuation and slowdown in the production of foreign companies in the past period, especially after the deterioration of the security situation in Iraq in 2014, as well as with the emergence of the last Corona epidemic in 2020, as it became clear to us The annual revenues for 2013, after they amounted to (4,098,322,770) billion dollars, decreased to reach in 2014, (2,861,740,638) billion dollars, equivalent to (2) billion dollars from the previous year and this was repeated also, after the emergence of the Corona epidemic (Covid-19) and the decision (OPEC) to reduce the amount of production due to the decrease in demand for oil during that period interval . After the year 2019 achieved the highest rate of return during the past eight years, amounting to (5,231,907,780) billion dollars, it decreased in 2020 very significantly, reaching (2,628,997,039) billion dollars, i.e. Equivalent to (3) billion dollars, a marked decrease of (-26.46%) from the previous year.

Table (4) shows the annual costs, service fees and net service fees to which the foreign contractor is entitled to the fields of the MOC (Fakka, Abu Gharb, Bouzerkan) within the first rounds of licensing contracts for the period 2012-2020.

Table (4) Annual costs and service fees for the contracting of the MOC fields (Fakka, Abu Gharb, Bouzerkan) within the contracts of the first licensing round for the period 2012-2020

Source: Prepared by the researcher based on the data contained in the reports of the MOC (2020), "Annual Reports", the Financial Commission, the Costs Department, the Audit Department, the Contracts and First Licensing Division, multiple pages and table (3)

The results of the financial evaluation of the Mayssan field contract (Bouzerkan, Fakka, Abu Gharb) first round using profitability criteria:

1.1.- Payback period criterion: Under the terms of the licensing contracts, foreign companies are entitled to recoverable costs (50%) of revenue generated for each increase of (10%) above the starting line of (88,000) barrels/day. The total recoverable costs in the Mayssan fields (Fakka, Abu Gharb, Bouzerkan) during the study period amounted to (7,822,672,915) billion dollars, and to measure the recovery period for the period (2012 - 2020) we take the following steps:

- Total cost recovery appropriations = 7,822,672,915 billion/\$
- The total costs spent by the contractor during the period = 6,895,624,749 billion dollars/

Cost recovery allocation rate = total costs recovered / time period

- Cost recovery allocation rate = 7,822,672,915 / 8 years

first column	second column	third column	Fourth column	Fifth column	Sixth column	Seventh column	Eighth column	ninth column
decade years	Annual costs in billion/dollars	service fee	Production increase above the starting line drums/year	Total service revenue, million/dollars	Contract or share 75% million/dollar	The share of the government partner is 25% million/dollars	Tax deduction 35% million/dollars	Net service fee to the contractor in million/dollars
2012	308,374,795	2.3\$0	1,924,309	4,425,911	3,319,433	1,106,478	1,161,802	2,157,631
2013	526,104,300	2.3\$0	12,106,486	27,844,918	20,883,688	6,961,229	7,309,291	13,574,397
2014	927,897,808	2.3\$0	14,805,010	34,051,523	25,538,642	8,512,881	8,938,525	16,600,117
2015	785,169,285	2.3\$0	22,072,812	50,767,468	38,075,601	12,691,867	13,326,460	24,749,140
2016	645,624,542	2.3\$0	27,303,192	62,797,342	47,098,006	15,699,335	16,484,302	30,613,704
2017	690,917,997	2.3\$0	35,894,624	82,557,635	61,918,226	20,639,409	21,671,379	40,246,847
2018	994,333,936	2.3\$0	50,249,196	115,573,151	86,679,863	28,893,288	30,337,952	56,341,911
2019	1,156,854,235	2.3\$0	66,562,118	153,092,871	114,819,654	38,273,218	40,186,879	74,632,775
2020	860,347,851	2.3\$0	44,462,597	102,263,973	76,697,980	25,565,993	26,844,293	49,853,687
Total	6,895,624,749		275,380,344	633,374,791	475,031,093	158,343,698	166,260,883	308,770,211

• Cost recovery allocation rate = 977,834,114 billion/dollars

$$\text{Payback period} = \frac{\text{Total costs incurred by the contractor during the period}}{\text{Cost recovery allocation rate}}$$

Payback period = 6,895,624,749 / 977,834,114 Payback period = 7.05 years.

It is noted that the total costs incurred by the contractor can be recovered within a period of approximately (7) years, and this was already achieved at the beginning of 2019, as the foreign partner was able to recover all capital and operational costs incurred. In (extraction and production of oil for the

past period) during only eight years. Which is a very short period if we compare it to the specified period of the contract, which is 20 years.

1.2. Accounting rate of return: To extract the accounting rate of return, we do the following steps:

- (TRR) = Average Net Cash Flow / Investment Amount x 100
- Net cash flow rate (service fee) = net cash flow / time period
- Net cash flow rate (service wages) = 8,131,443,126 / 8 years
- Net cash flow rate (service wages) = 1,016,430,391 billion dollars
- Total investment cost = 6,895,624,749 billion dollars

$$(TRR) = \frac{1,016,430,391}{6,895,624,749} \times 100 \quad (TRR) = 14.7 \%$$

• We note that the accounting rate of return has reached (14.7%), which is a desirable rate in the extractive oil industry.

1.3. Benefits/costs criterion: To extract the benefits/costs criterion, we do the following steps:

- $(B \setminus C) = \text{sum of present values of cash inflows} / \text{sum of present values of cash outflows}$
- Total present values of cash inflows = 8,131,443,126 billion dollars
- Total present values of cash outflows = 6,895,624,749 billion dollars

$$(B \setminus C) = \frac{8,131,443,126}{6,895,624,749} \quad (B \setminus C) = 1.18$$

• Which is a number greater than one and therefore such projects are considered profitable.

2. Financial evaluation of the service contract for the development and production of oil for Halfaya field in MOC within the second round of licensing contracts:

Halfaya field is considered one of the largest Iraqi oil fields that have been explored, with reserves estimated at (4.1) million barrels. Halfaya field is located 35 km southeast of the city of Al-Amarah in the Mayssan Governorate. It began producing oil in 1976, but with small quantities of up to (70,000) barrels / day when operating. According to the plan to develop Iraqi oil fields within the second licensing round, and in order to reproduce this field, it was referred to a group of companies (China's Petrogina, Malaysia's Petronas, and France's Total) with the aim of raising the field's production. The level to (400 thousand) barrels / day. This field is considered one of the green fields in the terms of the contract, and the terms of the contract related to the financial aspects of the Halfaya contract within the second round do not differ from the Mayssan field contract (Bouzerkan, Fakka, Abu Gharb) in the first round (Contracts and Licenses, 2013). Table (5) shows the volume of production and total revenues from the service contract to develop the oil production of Halfaya field in the MOC, in addition to the volume of production above the starting line of (70,000). Barrels / day with the total revenue generated from it, in addition to the total costs recovered to the foreign partner during the last period of the second license contracts in (MOC) for the period 2012-2020.

Table (5) The volume of production and total revenue of the service contract for the development of the production of the Halfaya field in the MOC within the second licensing contracts rounds for the period 2011-2020.

first column	second column	third column	Fourth column	Fifth column
decade years	Annual production million/barrels	Price per barrel/dollar	Total revenue billions/dollars	Allocation of cost recovery 50% billion/dollars
2012	18,713,401	104	1,969,955,061	984,977,531
2013	37,183,174	102	3,823,049,219	1,911,524,610
2014	47,892,176	69	4,272,607,514	2,136,303,757
2015	75,647,489	36	3,252,511,552	1,626,255,776
2016	73,957,925	40	2,617,113,002	1,308,556,501
2017	84,111,518	57	4,193,473,406	2,096,736,703
2018	94,063,591	61	6,123,196,742	3,061,598,371
2019	138,775,196	60	8,513,498,333	4,256,749,167
2020	78,440,637	41	2,573,026,945	1,286,513,473
Total	648,785,107		37,338,431,774	18,669,215,887

Source: Prepared by the researcher based on the data contained in the reports of the MOC (2020), "Annual Reports", the Financial Commission, Costs Department, Audit Department, Contracts and Licensing Division Two, multiple pages

Table (6) shows the costs and service fees, and the net service fees to which the foreign contractor is entitled to the Halfaya field contract in the MOC within the licensing offers for the period 2011-2020.

Source: Prepared by the researcher based on the data contained in the reports of the MOC (2020), "Annual Reports", the Financial Commission, the Costs Department, the Audit Department, the Contracts and Licensing Division II, multiple pages and table (5)

The results of the financial evaluation of the Halfaya field contract in the MOC, the first round, using profitability criteria:

2.1. Payback period criterion: foreign companies are entitled within the terms of licensing contracts to recover 50% of the revenues generated, and in order to measure the payback period for the period (2012-2020), we take the following steps:

- Total cost recovery appropriations = 18,669,215,887 billion dollars
- Total costs incurred by the contractor during the period = 11,519,446,399 billion dollars

Cost recovery allocation rate = total costs recovered / time period

- Cost recovery allocation rate = 18,669,215,887 / 8 years
- Cost recovery allocation rate = 2,333,651,986 billion dollars

Total costs incurred by the contractor during the period

first column	second column	third column	Fourth column	Fifth column	Sixth column	Seventh column	Eighth column
decade years	Annual costs in billion/dollars	service fee	Total service revenue, million/dollars	Contractor share 90 % million/dollar	The share of the government partner is 10 % million/dollars	Tax deduction 35% million/dollars	Net service fee to the contractor in million/dollars
2012	1,353,769,241	1.4\$	26,198,761	23,578,885	2,619,876	8,252,610	15,326,275
2013	1,044,515,126	1.4\$	52,056,444	46,850,799	5,205,644	16,397,780	30,453,020
2014	1,832,450,416	1.4\$	67,049,046	60,344,142	6,704,905	21,120,450	39,223,692
2015	1,537,857,309	1.4\$	105,906,485	95,315,836	10,590,648	33,360,543	61,955,293
2016	1,120,906,730	1.4\$	103,541,095	93,186,986	10,354,110	32,615,445	60,571,541
2017	996,615,036	1.4\$	117,756,125	105,980,513	11,775,613	37,093,179	68,887,333
2018	1,820,927,052	1.4\$	131,689,027	118,520,125	13,168,903	41,482,044	77,038,081
2019	931,561,380	1.4\$	194,285,274	174,856,747	19,428,527	61,199,861	113,656,886
2020	880,844,109	1.4\$	109,816,892	98,835,203	10,981,689	34,592,321	64,242,882
Total	11,519,446,399		908,299,150	817,469,235	90,829,915	286,114,232	531,355,003

$$\text{Payback period} = \frac{\text{Total Investment}}{\text{Cost recovery allocation rate}}$$

• Payback period = 11,519,446,399 / 2,333,651,986 Payback period = 4.9 years

• It is noted that the total costs incurred by the contractor can be recovered over a period of approximately (4-5) years, and this was actually achieved in 2017, which is a very short period if we compare it to the contract period of 30 years.

2.2. Accounting rate of return: To extract the accounting rate of return standard, we do the following steps:

• (TRR) = Average Net Cash Flow / Investment Amount x 100

- Net cash flow rate (service fee) = net cash flow / time period
- Net cash flow rate (service wages) = 12,050,801,402 / 8 years
- Net cash flow rate (service wages) = 1,506,350,175 billion dollars
- Total investment cost = 11,519,446,399 billion dollars

$$(TRR) = \frac{1,506,350,175}{11,519,446,399} \times 100 \quad (TRR) = 13.07 \%$$

• We note that the accounting rate of return has reached (13.07%), which is a desirable rate in the extractive oil industry.

2.3. Benefits/costs criterion: To extract the net present value criterion, we do the following steps:

- $(B \setminus C)$ = sum of present values of cash inflows / sum of present values of cash outflows
- Total present values of cash inflows = 12,050,801,402 billion dollars
- Total present values of cash outflows = 11,519,446,399 billion dollars

$$(B \setminus C) = \frac{12,050,801,402}{11,519,446,399} \quad (B \setminus C) = 1.18$$

• It is a number greater than one and therefore such projects are considered profitable.

3. Comparing the results of the financial evaluation of the two contracts in the MOC:

Table (7) shows the most important results of the financial evaluation and the most important points of the financial criteria used in evaluating the financial performance of the two contracts in the MOC within the first and second round of oil licensing contracts. We note from the available data in Table (7) that the Halfaya field contract (the second round) is clearly superior to the Mayssan field contract (Fakka, Bouzerkan, Abu Gharb) for the first eight years, which is the specified period for the current study.

Table (7) Comparison of the results of the financial evaluation of the two contracts in the MOC

Source: Prepared by the researcher based on the data of the verified results for the two decades.

We note in paragraph (4) that the total production quantities achieved during the current study period for the Mayssan fields (Fakka, Bouzerkan, Abu Gharb) amounted to (471,706,513) million barrels during eight years. While the production quantities for the Halfaya field contract that were achieved during the eight years were (648,785,107) million barrels, with a clear increase of (177,078,594) million barrels over the fields (Fakka, Bouzerkan, Abu Gharb) combined. We note in paragraph (4) that the total production quantities achieved during the current study period for the Mayssan fields (Fakka, Bouzerkan, Abu Gharb) amounted to (471,706,513) million barrels during eight years. While the production quantities for the Halfaya field contract that were achieved during the eight years were (648,785,107) million barrels, with a clear increase of (177,078,594) million barrels over the fields (Fakka, Bouzerkan, Abu Gharb) combined. As for the total revenue achieved, which is illustrated by point (5), we also find that the Halfaya field outperformed the total, revenue achieved during the study period, as the total revenue achieved by the Halfaya contract was (37,338,431,774) billion dollars. While the fields of (Fakka, Bouzerkan, Abu Gharb) achieved a total revenue during the current study period of (28,302,279,948) billion dollars, making a difference of (9,036,151,826) billion dollars between the two contracts. We also find the superiority of Halfaya field clear at point (6) which relates to the amounts of

costs spent by foreign companies and the amounts recovered by the contractor from these costs, after the Mayssan fields (Fakka, Bouzerkan, Abu Gharb) achieved an amount of (21,406,655,199) billion dollars to the state treasury due to The latter paid all the costs incurred by the contractor, amounting to (6,895,624,749) billion dollars, at that time Halfaya field achieved an amount of (25,818,985,375) billion dollars to the state treasury as a result of the latter's payment of all the costs spent by the contractor, amounting to (11,519,446,399) billion dollars, with a clear difference of (4,412,330,176) billion dollars. The two decades have generated revenue for the state treasury during the current study period of approximately (47,225,640,574) US dollars, a very large amount that is supposed to contribute

The main points for evaluating the financial criteria for the (Halfaya) field contract in the MOC (the second round)			S	The main points for evaluating the financial criteria for contracting the fields (Fakka; Abu Gharb; Bouzerkan) in the MOC (first round)			S	Notes
2010\1\18	Signature date	Direct to work	1	2010\5\17	Signature date	Direct to work	1	The first and second licensing rounds
2010\3\1	Activation date			2010\12\20	Activation date			
The term of the contract is 25 years, extended to 30 years		Duration of the contract	2	Years 20		Duration of the contract	2	Halfaya contract was extended for an additional five years
70000 barrels/day		Start line	3	88000 barrels/day		Start line	3	The peak production of Halfaya field has been adjusted from the previous production (535,000) barrels / day
400000 barrels/day		Peak output		450000 barrels/day		Peak output		
648,785,107 barrel	Total production in 8 years	Total production achieved during the evaluation period of the current -2012) study (2020	4	471,706,513 barrels	Total production in 8 years	Total production achieved during the evaluation period of the current study (2020-2012)	4	
138,77519 barrel 6	Highest production achieved in 2019			87,198,463 barrels	Highest production achieved in 2019			
18,713,401 برميل	Lowest production achieved in 2012			9,151,529 barrels	Lowest production achieved in 2012			
37,338,431,774	Total revenue	Total revenue achieved	5	28,302,279,9 Billion 48 dollar	Total revenue	Total revenue achieved during the	5	

Billion dollar	generated in 8 years	during the evaluation period of the current study (2020)			generated in 8 years	evaluation period of the current study (2020-2012)		
8,513,498,333 Billion dollar	Highest revenue achieved in 2019			5,348,010,79 Billion 3 dollar	Highest revenue achieved in 2019			
1,969,955,061 Billion dollar	Lowest revenue achieved in 2012			954,934,597 million barrels	Lowest revenue achieved in 2012			
11,519,446,399 Billion dollar	Reimbursable costs for the contracto	Total operating and capital costs	6	6,895,624,74 Billion 9 dollar	Reimbursable costs for the contractor	Total operating and capital costs	6	The revenue generated for the state treasury was extracted by subtracting the total recovered costs from the total revenue of production
25,818,985,375 Billion dollar	Realized revenue for the state treasury			21,406,655,1 Billion 99 dollar	Realized revenue for the state treasury			
4 Years		Payback period	7	7 Years		Payback period	7	Very short time
% 13.07		Accounting return	8	% 14.7		Accounting return	8	Desirable rate in the oil industry
1.05		Benefits and costs	9	1.18		Benefits and costs	9	A number greater than one / profitable project

significantly to reviving the national economy of the country. As for the payback period indicated by the seventh point, we find that Halfaya field also outperformed the Mayssan fields (Fakka, Bouzerkan, Abu Gharb) , as the foreign partner of Halfaya field was able to recover all the costs it incurred in production operations within a very short period of (4) years, achieving It is also different from the Mayssan fields (Fakka, Bouzerkan, Abu Gharb), which were able to recover all their costs within a period of (7) years. The payback periods achieved by the two contracts are considered very short if we compare it with the long contract period (20 years, 30 years) for both fields. While the standard of benefits and costs for both contracts achieved a positive number, and accordingly, both contracts make profits for the investment project, as the Halfaya field achieved the equivalent of (1.5), while the fields (Fakka, Bouzerkan, Abu Gharb) achieved a rate of (1.18) for cash inflows and outflows, and this was explained by the (8),(9) point . Through table (8), we see the superiority of the Halfaya field contract over the fields of (Fakka, Bouzerkan, Abu Gharb) on this one hand, but from the other side we also note the extent of the strength of these contracts through the huge revenues they achieved during the last period, which collectively amounted to what Approximately (47,225,640,574) dollars, which had the duty to promote the national economy of the country.

Section IV: Conclusions and Recommendations

Conclusion: After the decline in the capabilities of the local national effort to develop the oil sector in the past period, the rounds of oil licensing contracts in Iraq in general and the MOC in particular have made a historic leap in economic, financial and technical terms, as they were able, within a short period, to increase the rates of production of oil resources in Iraq. In general, as well as at the level of the MOC in particular. The current study has proven the possibility of evaluating oil licensing contracts in MOC within the first and second round, which included each of the fields (Fakka, Bouzerkan, Abu Gharb, and Halfaya) through special procedures for evaluating the efficiency of the economic, financial, technical, administrative and legal performance of licensing contracts in the MOC. Provided that these standards are consistent with the nature of the company's work and the challenges it faces.

Recommendations: Given the importance of the financial criterion on the performance of organizations and their success in investment projects, especially after recent investments in licensing contracts rounds, we recommend a financial evaluation at present related to all real outputs and inputs. This is due to the profitability of the business in relation to the financial assessment, according to special criteria. And working on a real evaluation in the future of the economic, technical, legal and administrative standards that are no less important than the financial evaluation in the success of investment projects, you will be able to develop mechanisms for implementing the oil licensing terms related to contracts from a technical, administrative and legal point of view.

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