International Oil Company Financial Management In Nontechnical Language

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Financial Management for the Petroleum Industry

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The financial concepts in this text go beyond the traditional finance departments that in the past have been solely responsible for collecting, reporting, interpreting, evaluating and making the financial decisions of the firm. The primary purpose is to provide a guide to the theories, quantitative methodologies, and step-by-step application of these concepts in the area of financial management in a nontechnical format.

Individuals can utilize this text as a reference or as a guide to assist in expanding their financial knowledge base. It should be useful to anyone interested in learning more about the functions of finance. Utilizing current computer systems allows easy access to financial information throughout the company. Such access of real time information is a boon to any company manager who must evaluate the firm's financial status for decision-making purposes.

This chapter provides an overview and history of the development of financial procedures and how they affect the petroleum industry. In addition, the interdependencies of price, supply and demand, and their critical implications are highlighted.

The Importance of Understanding International Finance

An understanding of international finance is crucial to not only the large oil companies, numerous subsidiaries, and joint ventures, but also to the small oil companies engaged in exporting, importing, or other international operations. Of the 43,300 U.S. firms that export, 78% have less than 100 employees.

International finance is even important to companies that have no intention of engaging in international oil business. These companies must recognize how their foreign competitors will be affected by movements in price, supply and demand of crude, exchange rates, foreign interest rates, labor costs, and inflation. Such economic characteristics can affect the foreign competitors' cost of production and market pricing policies.

Companies must also recognize how domestic competitors who obtain foreign crude or foreign financing will be affected by economic conditions in those countries. If domestic competitors are able to reduce their costs by capitalizing on opportunities in international markets, they may be able to reduce their prices without reducing their profit margin. This could allow them to increase market share at the expense of the purely domestic companies.

Swaps are flexible instruments and are nothing more than two parties agreeing to exchange some underlying asset for a specified period of time. An oil swap is a commodity swap, which usually involves an oil producer and oil consumer. A financial institution acts as an intermediary, allowing anonymity for the parties involved. In one scenario, when an oil producer expects oil prices to fall, it may pay a floating price per barrel to the intermediary based on an oil index and receive a fixed price in return.

The oil consumer, which may be a refiner, fearing an increase in oil prices will pay the fixed price and receive the floating price through the bank acting as the intermediary. The producer is able to fix the price of the oil it will produce, protecting against a decline in the spot price of oil. The counterpart, the refiner, is protected from a rise in the spot price of oil. Both parties give up their opportunity to benefit from favorable oil-price movement in return for minimizing their respective input or output oil-price risk.

The basic interest-rate swap enables the company to exchange floating-rate payments for another party's fixed-rate payments. The primary reason for interest rate swaps is to change the type of risk and reduce the cost of financing. Typically, two parties want to borrow (or have borrowed) in two different markets. At least one of the borrowers can obtain better pricing than the other in one of the markets. The two markets are typically fixed rate and floating rate. By entering into a swap agreement, both parties can obtain the kind of financing they prefer, while simultaneously taking full advantage of their relative borrowing efficiencies. There is credit risk exposure for a firm entering into interest rate swap arrangements, but it can be minimized through selection of strong financial intermediaries or counterparties if it is a direct arrangement. The risk is also reduced because it does not involve repayment of principal, but only exchange of interest payments.

In currency swaps, each party will have good access to financing in its own currency markets. A typical transaction involves one party that has access to dollar-based financing, but would prefer financing in another currency–Swiss francs, for example. Another party may have excellent access to Swiss franc financing or have large inflows from operations in Swiss francs, but would prefer dollar-based financing

These two parties may both benefit from a swap arrangement. The primary basis for the currency swap is that the two parties can borrow the currencies they need more efficiently (less expensively) through the swap than they can through directly accessing the foreign currency and money markets.

The usual treatment of cash flow, adding all noncash items to net income, incorrectly ignores the need for replenishment of assets. There is sound reasoning behind DD&A. The best definitions of cash flow are those that acknowledge the need for capital to maintain a company as a going concern. Where a company decides to self-liquidate, a pure cash flow analysis that purposely ignores the need for capital infusion is appropriate.

Free cash flow represents cash flow available after the necessary capital expenditures have been made to sustain a company's productive capacity. This treatment is known as maintenance capital and is the fundamental difference between free cash flow and discretionary cash flow. For an oil company, maintenance capital would include funds necessary to drill wells and maintain facilities such as refineries and pipelines.

Most analysts ignore maintenance capital when doing a quick analysis, but they still know the importance of this item. Maintenance capital is virtually the opposite of DD&A. As a company grows, required increases in working capital are also considered a part of maintenance capital.

Cash Flow from Operations

Cash flow from operations (CFFO) is the net amount of cash taken in or lost from operating activities during a specific accounting period. The CFFO appears in the cash flows from operation section of the SCF.

The CFFO figure is sometimes treated as cash flow although it is not the same as the cash flow figures normally quoted. The main difference between CFFO and discretionary cash flow is the treatment of changes in the components of working capital.

Most analysts do not explicitly address the changes in working capital for basic quick-look cash flow analysis. This is one reason why some companies will summarize net cash flows provided by operating activities before changes in components of working capital. This issue involving components of working capital is due to differences between accrual and cash accounting.

SUMMARY

Analysts understand that accounting methods can have a significant impact on reported earnings. Earnings for FC companies are usually considered to be inflated in comparison to SE companies. FC companies pay a price for the opportunity to report relatively higher earnings. They must also pay relatively more in taxes. Yet, ignoring this aspect, the intrinsic value of an oil company is the same regardless of the accounting technique used.

Example Calculation

	Share Price	*# of Shares*	
Market Value	*$36.0*	*2.7 MM*	*$97.2 MM Equity Market Value*
Book Value	*$22.5*	*2.7 MM*	*$60.7 MM Book Value*
Market Value Added			*$36.5 MM*

*2. MVA = (Market value of equity + market value of preferred stock + market value of debt) – total capital**

Definition 2 is more appropriate. This calculation of MVA requires identifying all the capital a company has taken in including equity, debt, bank loans and retained earnings less the firm's total market value, which includes market capitalization as well as market value of debt.

*3. MVA = (Market value of equity + preferred stock + debt + dividends) – total capital**

*Total capital = Market capitalization + market value of debt and preferred stock

Some adjustments may be made for aspects of capital employed that are not represented on the balance sheet. The common example is research and development costs that have been expensed through time. Techniques are employed to capitalize these elements and include them. These adjustments are an effort to convert the corporation's accounting book value to an economic book value which is a better measure of the cash that investors have contributed. These are referred to as equity equivalent (EE) adjustments.

Assume that over the past five years, the firm has spent and written off $17 million in research and development (R&D). It might be likely that the economic value of the R&D expenditures may last well into the future. A decision is made to capitalize these expenditures and add this to the book value of capital employed called an *'equity equivalent* (EE).' In the formula below, this adds $5 per share. It also provides a better comparison of value created for shareholders vs. the total of their contributions.

Calculating MVA with EE adjustment

	Share Price	*# of Shares*	
Market Value	*$36.0*	*2.7 MM*	*$97.2 MM Equity Market Value*
Book Value + EE	*$27.5*	*2.7 MM*	*$74.3 MM Book Value Adjusted for EE*
Market Value Added			*$22.9 MM*

Netback Pricing

There is an assumption that the producer drives the market. This is not always the case. Sometimes a producer will make an agreement to a refinery marketer to sell their products and the producer will guarantee a profit margin. The formula is:

Crude Price = Income from sale of products
– Refining cost
– Transportation cost
– Refiner/marketer's profit margin

Import Duties

Import duties, as well as income taxes, can be minimized. For example, a company benefits economically if it transfers products at low prices to a country with high import duties. All things being equal, the company can reduce the total cost for import duties through transfer pricing. Although import duty minimization sounds easy, frequently it is complicated because "all things" are rarely equal. For example, a country with low import duties may have high income taxes, or a country with high import duties may have low income taxes. Another factor is the tax rate of the country from which the product is shipped. Thus, the company must consider import duties along with income taxes in both the shipping and receiving countries.

Minimization of income taxes and import duties is an important goal. Recently, however, taxing authorities in many countries have begun to pay closer attention to attempts by companies to transfer profit to countries with lower taxes. Overzealous efforts to minimize import duties and taxes may result in short-run gains but long-term losses.

A second economic restriction by some countries is disallowing certain expenses against taxable income. For example, some general administrative expenses or research and development expenses may be disallowed if they are performed elsewhere. Another example is royalty fees charged by management against subsidiary income. To the extent these are disallowed by the host country, the amounts can be recaptured by increasing the price of goods shipped into the country.

Currency Fluctuations

During periods of currency instability, the performance reports of foreign affiliates can be affected dramatically by exchange rate fluctuations. Many United States-based multinational companies find it convenient to evaluate the performance of foreign affiliates with reports stated in U.S. dollars. If currency exchange rates fluctuate during the performance period, however, it may be difficult to evaluate the performance of the affiliate. At the same time, management of

that good business decisions can be made. In order to do this, proper analysis should (in the language of risk analysis) preserve the uncertainty.

Two people may evaluate a drilling deal and their evaluation may look like this:

1st Analyst: *It looks like a good deal, we should participate. The prospect could hold 10 million barrels. The odds look good, the drilling costs are not too high, and the terms are good.*

2nd Analyst: *Our geologists estimate a probability of success of over 30% which is substantially higher than breakeven success probability (SP) of 18%. The most likely reserve estimate is around 10 million barrels, with a range of from 5-18 million barrels. The regional success rate is close to 25%. The expected reserves on this prospect are 3 million barrels and the expected monetary value (discounted at 15%) at a 30% chance of success is over $1 million. Dry hole costs are less than $1.5 million. The prospect meets our basic investment criteria and ranked with the other good prospects is No. 3 behind Prospect X and Prospect F.*

This example may appear to be a bit drastic, yet it captures the diversity of perspective fairly well. The degree of sophistication can range from rank amateur to the lofty reaches of analytical sophistication. However, there is not a perfect correlation between sophistication and accuracy. Gut instinct or intuition, backed up by 30 years of experience, can seem very unsophisticated at times but can be very valuable.

It is important to communicate at all levels, as hard as that may be at times. And the place to start is with the definition of risk—yet even that is not as simple as it may seem.

Decision analysis, sometimes called 'risk analysis,' is the discipline for helping decision makers choose wisely under conditions of uncertainty.
–John R. Schuyler, *Decision Analysis in Projects*™ (pp. 3)

...And, indeed, an often confusing intellectual tussle ensues over the difference between risks and uncertainties. What do we have here? A risk or an uncertainty?
–Dr. John Lohrenz, *Certain Uncertainties* (pp. 3)

Many people equate risk with uncertainty.

We will consider the words 'risk' and 'uncertainty' to be synonymous"
-Paul Newendorp, *Decision Analysis for Petroleum Exploration* (pp. 59)