

CORPORATE VALUATION IN THE MINING INDUSTRY

MADENCİLİK SEKTÖRÜNDE ŞİRKET DEĞERLEMESİ

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ABSTRACT: The mining industry is no exception as long as valuation is concerned. Valuations of the mining companies have taken a high profile in the recent years as a result of significant changes in metal and mineral commodity prices, mergers, takeovers, the focusing of company activities, etc. Valuation of mining companies requires a specific kind of attention and approach because the mining industry is one of the most risky industries in the world and the industry has special features that other industries do not have. Therefore, the valuation of mining companies requires a specific kind of attention and approach. This article introduces the specific features of the mining industry and discusses the possible methods of valuation, which should be used in this unique industry.

Key Words: Valuation, Mine Valuation, Corporate Valuation.

ÖZ: Değerleme açısından madencilik sektörü diğer sektörlerden farklı değildir. Son yıllarda metal ve mineral fiyatlarındaki değişiklikler, birleşmeler, ele geçirmeler, faaliyetlerin yeniden yapılandırılması vb. nedenlerden dolayı madencilik sektöründe de değerlendirme işi önem kazanmıştır. Madencilik şirketlerinin değerlendirilmesi, madencilik sektöründe en riskli sektörlerden biri olması ve diğer sektörlerde olmayan bazı özelliklere sahip olmasından dolayı özel bir önem ve yaklaşım gerektirmektedir. Bu makalede, madencilik sektörünün özellikleri ve bu sektörde uygulanabilecek olası değerlendirme yöntemleri ortaya konulmuştur.

Anahtar Kelimeler: Değerleme, Maden Değerlemesi, Şirket Değerlemesi.

INTRODUCTION

Every asset, financial as well as real, has value. Any asset can be valued, but some assets are easier to value than others, and the details of valuation will vary from case to case. Thus, the valuation of a share of a real estate property will require different information and follow a different method from the valuation of a publicly traded stock.

There is no requirement of specific methods of valuation for mining companies because the same valuation methods would apply to every areas of business. The valuation of mining operations and the evaluation of new projects are essential factors in the development and maintenance of the mining industry.

The process of assessing a new mining facility is referred to as project evaluation and the term "valuation" is normally used in the context of current operations. As major decisions are taken on the basis of valuations and project evaluations it is necessary to use a suitable financial techniques to integrate all the relevant technical, marketing and environmental factors in the valuation process.

This article analyses the usage of valuation in the mining industry. First, the terms "value" and "valuation" are investigated. Secondly, special aspects of mining operations are explained. Thirdly, the reasons for valuing mining operations are examined. Finally, the valuation techniques of fundamental discounted net cash flow, P/E ratios, and dividend yield methods are examined in detail.

ELABORATION OF THE TERMS VALUE, VALUATION AND EVALUATION

The term of "value" has always been a subjective issue. Indeed, it is said that value is in the eye of the beholder (Gage, W.L., 1969, Hunt, D., 1991). There are different methods and practices for valuing property, as there are industries in which they are applied. For example, there are "book value", "replacement value", "insurance value", "salvage value", and "fair market value", to name a few, although in the mining industry, value usually refers to fair market value (Pratt, S. P., 1998).

Hence value is a relative notion since everybody has different sets of information and his/her own way of vision into the future (Damodaran, A., 1996). However, there is a school of thought that value can be absolute regardless of what the willing buyer or the willing seller thinks the object is worth. Thus, the art and science of valuation has been a constant debate between what something is worth versus what the market thinks it is worth and versus what a strategic or motivated buyer thinks it is worth.

It is reality that there are no comprehensive regulations or guidelines that clearly specify which approaches or methods are appropriate for use in the valuation of mining projects. In addition, methodologies differ depending on whether the project is in the exploration stage or the company in the production stage.

THE SPECIAL FEATURES OF MINING OPERATIONS

There are several financial, technical and environmental aspects, which differentiate the mining industry from most industries. The explanation and understanding of these special features are necessary to conduct a satisfactory analysis and valuation of a new facility or a mining project.

First, long pre-production periods are a special feature of the large and complex mineral projects. It can take a number of years to bring a mine into production. Since the mining industry is capital intensive, this long period of time before production increases the cost of capital for mining companies.

Also, mining operations tend to require heavier fixed costs than those of most other businesses do. Variable costs are those which are incurred only when production takes place. On the other hand, fixed costs are broadly those which are independent of the level of production for a given capacity of equipment and infrastructure. A substantial part of the fixed costs in a mineral project usually comes from the assets that are necessary for the development of the mineral deposit. In the case of an underground mine, for example, these are the tunnels and shafts for the access to the deposit and they often utilize most of the capital cost of the project. In the case of the failure of a project, machinery and buildings might have a saleable value but the capital invested in the shafts and tunnels is usually lost.

In addition, mining operations usually have a rigid nature, since they generally have a high level of fixed costs. Therefore, they are unable to respond to short term changes. For instance, the rate of production for an underground mine is limited by the mineral transport and winding capacity that are fixed in the initial mine plan. It can be increased in the long term,

but mines usually cannot take the advantage of increasing production for sudden profitable short-term increases in demand if they are operating in full capacity. Conversely, during low selling price periods even if the mine is closed, the maintenance costs might be larger than that which would have been lost if it was in production.

Moreover, the mining industry usually has an additional physical risk due to the variable and, to a greater or lesser extent, unpredictable geological and mining conditions. In the case of deep mines, uncertainties about the behavior of rock masses, the amount of water coming into the mine, and the effects of the underground extraction on the surface are some of these unique risks. If unforeseen unfavorable conditions occur, the mining operation could be unprofitable either in the short term or long term.

Since mine reserves are limited and their exact quantities could not be determined in advance, the value of a mining company, among other things, depends on the economic life of reserves.

Finally, as a result of the nature of the mining industry, mines can only be located where the deposits are situated. Therefore, there is not usually the advantage of finding a favorable location as far as infrastructure, labor, climate, transportation and politics, all of which may affect the operation's profitability, are concerned.

On the other hand, the valuation of undeveloped mineral resources presents a curious paradox (Tingley, H.V., 1996, Torries, T.F., 1998).

THE REASONS FOR VALUING MINING OPERATIONS

Valuations of mining operations have taken a high profile in recent years as a result of significant changes in metal and mineral commodity prices, takeovers, the focusing of company activities (Potts, D., 1994, Torries, T.F., 1998).

Valuations of mining companies are required for several reasons, including decisions relating to flotation, divestment, privatization, takeover, merger, management buy out, management buy in, corporate developments, expansions, contraction, and closure. The valuation of a mineral property may be required for merger and acquisitions transactions, stock market transactions, fairness opinions, litigation, assessment of bank security, insurance claims, expropriation, accounting purposes, initial public offerings (IPO's) and asset disposals.

Continuous valuations are available for listed companies as their shares are being bought and sold on the stock exchanges (Flumphreys, D., 1983).

Privatization

The privatization of public enterprises on a worldwide basis has increased in the last two decades for both political and economic reasons. The need to reduce budget deficits has been one of the main driving forces to privatize public assets. Moreover, the necessity, in an increasingly competitive world, to minimize costs by giving ownership to the private sector, has been another reason for privatization. Private ownership allows production to be governed by market conditions instead of dictates of a central plan and provides incentives to minimize costs. It also subjects business to the threat of bankruptcy or takeover, and therefore creates a competitive environment.

The companies to be privatized, and some of them are mining companies, will create requirements for valuations. In the case of a privatization by flotation, if the share price drops significantly after the flotation of the company, it brings about an adverse image for the privatization program for the government. If the opposite situation occurs that there is a big rise in share prices above the initial asking price, it is usually claimed that public assets have been sold too cheaply. Therefore, valuations of state owned companies are one of the most sensitive parts of the privatization process due to the responsibilities to the electorate.

Merger and Takeover

The combination of two companies by mutual agreement by creating a new single company is called a merger. In a merger, a holding company may be set up and the shareholders of both companies may be offered an exchange of the holding company's shares for their existing shares. Another common method of merger is that one of the merging companies may play the role of a holding company and offer the shareholders of the other company an exchange of ordinary shares, cash or a mixture of a number of securities and cash for their shares.

Takeovers, or acquisitions, are also ways of combining companies. A takeover occurs when one company acquires a majority of another company's shares to take the control of the company. These shares can be bought by making an offer to the shareholders of the company to be taken over. This is called a takeover bid. The price of the shares, which is offered, is higher than the market price of the company at the time of the bid and this premium is provided so that shareholders of the target company will be encouraged to accept the offer. A merger or takeover is viable only if the resultant market value of the combination of the two companies is greater than the sum of the market values of the two companies apart.

In common with other business sectors, the mining industry has also been subjected to mergers and takeovers. When a company wishes to take over another

one it has to make a valuation of the individual operations of the company to be acquired in order to decide the bid price. On the other hand, the management of the defending company has to make a valuation to attempt to prove the bid price is lower than they can create for the shareholders.

Flotation

A mine, especially at the initial stages of development, might require a large investment and one way of obtaining this required capital is a flotation on a stock exchange. Moreover, flotation is often used when a company wishes to expand and the management raises further capital through the issue of shares. When private companies are floated on a stock exchange it also enables the initial shareholders to obtain some profit by selling part of their share holdings on the stock market. Flotation is also a method of privatization for public sector enterprises. In all of these cases, a valuation of the operation is central in order to decide the share price and number of shares.

The most important result of a flotation or a listing on a stock exchange is that the performance of the company can be publicly monitored because the company has to provide information about the company's activities to its shareholders and the details are available to the financial media. Since the market gives a continuous valuation of the company, share price movements of the company relative to similar sector shares and all industry shares, are one of the most significant indicators of the company's performance.

Management Buy Out and Management Buy In

Management Buy Outs (MBOs) involve the transfer of the ownership and hence the control of an entity to its current management. Generally, the management team of company takes a majority or total of the equity stake. In the cases of Management Buy Ins (MBIs), a manager or a management team which has not been working for the company before takes the ownership and the control of the company by buying a majority or total of the equity stake in the company. MBOs and MBIs are usually carried out by setting up a new company to bid for the purchase of the company by its current management or any outside bidders. The successful bidder, who could be the current management or another management from outside, takes the control and ownership of the company. In order to decide bid prices, bidders have to make a valuation for the company.

These MBOs and MBIs can result from several factors. Shareholders' dissatisfaction with the share price may promote a buy out or buy in. Also a quoted company that is in financial difficulty may be bought in an MBI as an alternative to the internal rescue the company. Furthermore, in the case of a hostile takeover

attempt, an MBO could be regarded as a defense against the takeover. Transfer of ownership and control of the company to the management by allowing them to have an equity stake might be an incentive for management to increase performance and consequently improve the value of the company. Also some companies may wish to sell a subsidiary, which is no longer regarded as part of the core business, and this may result in a MBO or MBI.

Development and Expansion

Mining companies grow by investing their retained earnings and/or capital, which might be raised on the market, in new projects. Assessments and evaluations of these projects are carried out by conducting several techniques such as Net Present Value (NPV), Internal Rate of Return (IRR) or Payback Period. However, acceptable figures for these techniques may not be enough to select the project. Financiers of the projects, usually shareholders and debt holders, may value the project from different perspectives. From the shareholders' point of view, the project should bring added value to the shareholders' wealth; in other words, the acceptability of the project is based on the objective of maximizing the value of the company to its shareholders. On the other hand, debt holders are particularly concerned about the ability of the project to generate adequate cash to service the debt. Therefore, the assessment of the project for a debt or an equity holder may be made from different perspectives.

VALUATION TECHNIQUES

Whether someone is valuing a house, a boat, a business, jewellery or a mineral property, these properties fall within one or more of three basic approaches to valuation. The value of a mining operation is sum of the present values of the future operating free cash flows (Storarr, C.D., 1981). As seen from Figure 1, it usually has two main components: debt value and share value. The value of the debt equals the present value of the cash flows, which goes to the debt holders. Similarly, value of shares is sum of the present value of free cash flows, which goes to the shareholders. The total of the share and debt value gives the operating value of the operation.

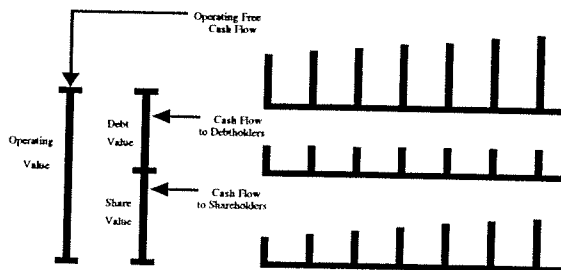


Figure 1. Components of value of a typical operation (Copeland, T., et al, 1990).

There are two classes of valuation techniques in common use for valuation of mining operations (Storarr, C.D., 1981). These are:

- 1- Valuation based on Discounted Net Cash Flow (DCF).
- 2- Valuation based on Price-Earnings (P/E) Ratios and Dividend Yields taking from the income statement and comprising cash and non-cash items.

Discounted Net Cash Flow Method

Valuation of mining companies, as with developed resources, has to start with DCF. DCF is the standard method used by the mining industry to value mineral properties.

However, the DCF method has inherent dangers when applied to undeveloped resources (Tingley, H.V., 1996). Firstly, it presents an often undeserved aura of accuracy. A DCF value is no more accurate than the least accurate of the assumptions incorporated into the calculation and assumptions about an undeveloped resource are usually questionable. Secondly, the single greatest influence on the result is the choice of the discount rate, although discount rates are easy to misunderstand and misapply. Thirdly, there is a temptation to use a higher discount rate to adjust for higher risk, but without solid ground for equating the discount rate chosen to the risk involved, the evaluator usually makes mistakes.

The DCF method is a valuation method widely used both in the mining industry and other industries. The method involves four main steps:

- 1- Free cash flow forecast
- 2- Discount rate selection
- 3- Continuing value forecast
- 4- Calculation of value by discounting

Free Cash Flow Forecast

The estimation of free cash flows starts with the detailed historical analysis of a company and takes into account the technical and financial performance over at least two or three years. For an historical year, it starts with the investigation of the balance sheets at the beginning and end of the year. The decrease and/or increase in assets and liabilities are considered. Then, in the same way, the income statement of the year is examined by dividing into its components. For example, sources of revenue such as grades, production rates and sale prices are checked. Annual sources and uses of funds are then calculated by combining the difference in the balance sheets and income statement.

Although the cash flow statement is provided in the annual report, a cash flow statement from the analytical point of view can be produced. After this the process is repeated for the other historical years, a historical perspective of the company regarding its

management performance, grades, reserves, costs, markets, taxation rates, mining methods and exploration success rate is developed. Then they are used with all other relevant factors e.g. inflation and interest rates to forecast future financial parameters of the company or operation such as revenue, capital costs, working costs, tax payments and interest payments. The last step of this process is the calculation of free cash flows or dividends. The free cash flow forecast is made for each year for a period of years, which is sometimes called as horizon period. Since the immediate cash flows are more effective on the value of the operation than more distant ones, the cash flows after this period are not forecast individually.

Discount Rate Selection

The second step in the DCF method is the selection of the discount rate, which is appropriate to the operation. Discount rates exist because money has a cost related to its use and the discount rate for an investment is dependent on three main components: the expected inflation rate, the risk free real rate of return, and the risk premium for the operation.

The starting point for estimating the discount rate is the expected rate of inflation. An investment must have a rate of return, which is higher than the inflation rate to compensate for the fall in the value of money. The difference between the total or nominal rate of return of an investment and the inflation rate is known as a real rate of return.

The risk free real rate of return is the second factor to be taken into account when selecting the discount rate. The long-term index linked government security yields are commonly used for this rate.

The third component of the discount rate is the risk premium. For a mining operation the principal factors affecting the risk premium are uncertainties on reserves, ore grades, applicability of mining method, environmental regulations, minerals and metal prices, capital costs, operating costs, exchange rates and new technological improvements, host country's social, economic and political factors.

The Capital Asset Pricing Model (CAPM) is a widely used method, which has been gaining popularity in recent years to quantify cost of equity capital. The method uses the assumption that the cost of equity for a specific company quoted on a stock exchange equals the risk free rate of return plus the company's systematic risk relative to the market risk (beta factor) times the market risk premium (Brealey, R.D., et al, 1991, Gallagher et al., 1991). This relationship is set up in the formula 1.

$$r_e = r_f + (r_m - r_f) \beta \quad (1)$$

Where;

r_e = Expected return from equity

r_f = Risk free rate of return

r_m = Average return on the market

β = Beta factor for the equity

In the case of a valuation of an operation to all its financiers, the weighted average cost of capital (WACC) is the common method to calculate the discount rate. For a company, which uses two main funds; share capital and debt capital, WACC can be calculated by the formula 2;

$$r_{WACC} = \left(\frac{D}{V} \times r_d \right) + \left(\frac{E}{V} \times r_e \right) \quad (2)$$

Where;

r_{WACC} = Weighted average cost of capital (%)

r_d = Expected rate of return from debt (%)

r_e = Expected rate of return from equity (%)

D = Debt capital employed

E = Equity capital employed

V = Total capital employed (D + E)

The cost of debt or expected rate of return from debt is the interest rate which providers of the debt capital require. This rate is usually set before lending. Cost of equity capital can be estimated by using CAPM.

Continuing Value Forecast

A continuing value forecast is the third stage in the DCF process. The immediate cash flows have a larger impact than more distant ones on the value of an operation. Therefore, expected cash flows are divided into two groups as stated in the following equation.

$$\text{Value} = (PV \text{ of free cash flows during specific forecast period}) + (PV \text{ of free cash flows after specific forecast period})$$

Free cash flows during the specific forecast period are estimated individually at the first step of the DCF valuation process. The continuing value is the value of the operation's expected free cash flows after the specific forecast period. As the time period gets longer it is more difficult to forecast free cash flows. Therefore, a continuing value is calculated by using simplifying assumptions during this period of the operation. If a single mine is valued, the time period of the continuing value is determined by reserves and production rates. However, in the case of the valuation of a mining company which has several operations and grows by its retained earnings the time period for the continuing value could be considered as infinite. There

are several ways in common use of calculating continuing value as given below.

Dividend as a Growing Perpetuity

In this case, average dividend growth during the specific forecast period is calculated and it is assumed that dividends after this period will grow at that rate in perpetuity. The formula for this technique is given in the formula 3.

$$CV = \frac{FCF}{r - g} \quad (3)$$

Where;

CV = Continuing value of the operation at the end of specific forecast period.

FCF = Free cash flow or dividend for the last year of the specific forecast period.

r = Required rate of return.

g = Average dividend growth rate.

Constant Dividend

Assuming a fixed level of free cash flows after the forecast period is another approach for the continuing value calculation. The formula 4 for the continuing value, which is given below, is the same formula for the value in perpetuity (Brealey, R.D., et al, 1991).

$$CV = \frac{FCF}{r} \quad (4)$$

Residual Book Value

Residual book value is the value, which is equal to the total asset value in the balance sheet of the company minus current liabilities and debt. The assumption for this type of continuing value is that the company's return on equity will exactly equal to the cost of equity. Therefore, book value is considered as the present value of future free cash flows after the horizon period.

Calculation of Value by Discounting

After estimating free cash flows, the discount rate and the continuing value, the calculation of the operation's value is the last step in the DCF process. As stated in the formula 5, the value of the operation requires the discounting of the free cash flows and continuing value of the operation into present at the required rate of return.

$$\text{Value} = \frac{FCF_1}{(1+r)} + \frac{FCF_2}{(1+r)^2} + \dots + \frac{FCF_n + CV}{(1+r)^n} \quad (5)$$

Where;

FCF_{1,2,...n} = Free cash flows for the years 1,2...n

Price/Earnings Ratios and Dividend Yields

The valuation method based on P/E ratios and dividend yields involves comparing an operation's financial performance with those of similar types of companies, which are quoted on a stock exchange. From the company's balance sheet and profit and loss account, the company's profit after tax (PAT) or earnings can be calculated. Dividing PAT by the number of shares gives Earnings per Share (EPS).

The P/E ratio of the company is then obtained by dividing the share price by the EPS. This ratio indicates the market price of a company as a multiple of its earnings. Dividends are paid out of PAT. Dividing the dividend payment by the share price gives the dividend yield, which is expressed as a percentage.

A high P/E ratio or a low dividend yield compared with the stock market averages for a company usually means that the company is highly valued.

As stated previously, these ratios are used to measure companies' performances and used as a basis for valuation. The main factor in the valuation of a company by the P/E ratio method is the P/E multiple for similar companies on the stock market. The market P/E ratio multiplied by the company's earnings gives a share value for the company.

Also the value from the dividend basis is obtained by finding the share price which gives the market average dividend yield from the formula [(estimated dividend / share price) x 100]. For example, if the market average dividend yield is 4% and the estimated dividend of the company is 10 US cent, then the value is X where (10 US cent/X) x 100 = 4.

Although this method is very easy to conduct relative to the DCF method, it is probably too simplistic if based on historic dividends. Particularly, in the mining industry, even for the companies, which produce the same products, there are a considerable number of different aspects unique to the companies. For example, physical characteristics of mines such as geological structure, reserves, grades and depth, are usually different and these consequently affect the profitability of companies.

CONCLUSIONS

Value is a relative notion because everybody has different sets of information and his/her own way of vision into the future. It is said that value is in the eye of the beholder. Thus, the art and science of valuation has been a constant debate between what something is worth versus what the market thinks it is worth.

There are different methods and practices for valuing any property, such as "book value",

“replacement value”, “insurance value”, salvage value”, and “fair market value”.

Major reasons for the valuation of mining operations are privatizations of public assets to increase productivity and reduce budget deficits, flotation of companies on a stock exchange to raise finance, mergers and takeovers to combine companies for a higher market value, management buy outs and management buy ins to attempt to increase share prices of companies and development and expansion programs.

There are no comprehensive regulations or guidelines that clearly specify which approaches or methods are appropriate for use in the valuation of mining projects. In addition, methodologies differ depending on whether the project is at the exploration stage or the producing stage.

The analysis of historical cash movements in a mining project plays a central role in forming a basis for the valuation of a project or company. It identifies the major operating parameters, which are essential for making pragmatic and realistic forecasts from which to generate the net cash flows for the owners.

The value of a company based on the DCF method can be assessed by constructing a valuation model by using spreadsheet software. The sensitivity of the value to the operating parameters are then determined more accurately and quickly. Furthermore the final cash flow value can be compared with the valuations obtained from P/E ratios and dividend yields which reflect current market sentiment.

Mining industry has several financial, technical and environmental aspects, which can not be seen in other industries. In utilizing common valuation techniques i.e. Fundamental Discounted Net Cash Flow, P/E Ratios and Dividend Yields for a mining operation, these unique aspects of the mining industry have to be reflected in the valuation models.

Consequently, the valuation of a mining company should make use of the best approach applicable to the circumstances and use a variety of other applicable approaches as cross checks.

ÖZET

Şirket değerlemesi, bilimsel olarak en fazla tartışılan ve üzerinde henüz uzlaşmaya varılamamış bir kavramdır. Kişilerin, sahip olduğu bilgilerin nitelik ve niceliği ile geleceğe yönelik beklentilerinin farklı olması nedenleriyle değer göreceli bir kavramdır. Bir kişi için değerli olan birşey, başka bir kişi için değer ifade etmeyebilmektedir. Bu özelliği ile değer göreceli bir kavram olma özelliğini korumaktadır.

Değerlemenin amacına ve nedenine bağlı olarak farklı değerler elde edilir. Bu bakımdan; değerlemede,

değerlemenin amacı ile neyin, kim için değerlemesinin yapılacağı önemli bir faktördür.

Şirket değerlemesi; bir şirketin satışı, yeniden organizasyonu veya bir ortağın ölümü gibi çeşitli nedenler için yapılabilir. Aşağıda belirtilen durumlarda, şirket değerlemesi ihtiyacı ortaya çıkmaktadır. 1) Verimliliği artırmak ve bütçe açığını azaltmak amacıyla kamu varlıklarının özelleştirilmesi, 2) Finansman sağlamak amacıyla şirket hisselerinin menkul kıymetler borsalarına kote edilmesi, 3) Daha yüksek piyasa değerine ulaşmak için şirketlerin birleşmeleri ve şirket ele geçirmeleri, 4) Madencilik şirketinin, kendi yöneticileri veya başka bir şirket yöneticileri tarafından borçlanarak satın alınma girişimleri, 5) Şirket faaliyetlerinin geliştirilmesi ve genişletilmesine yönelik programlar.

Değerleme işinde geçerli tek bir hesaplama yöntemi bulunmamaktadır. Birden fazla yöntem birbiri ile karşılaştırma yapmak için kullanılmaktadır. Değerleme gerçekte bir görüş, bir bakış açısı olup matematik olarak kesin değildir. Herhangi bir nesneye makul bir değer biçilmesi işi, büyük ölçüde değerlendirme yapan uzmanın bütünü görme, doğruluk ve takdir etme yeteneğinin bir fonksiyonudur.

Değerlemede; defter değeri, yenileme değeri, sigorta değeri, hurda değeri ve makul piyasa değeri gibi farklı yöntemler kullanılmaktadır. Madencilik şirketinin değerlendirilmesi için uygun yaklaşım ve yöntemleri açık olarak belirleyen herhangi bir düzenleme bulunmamaktadır. Ayrıca, değerlendirme yöntemleri projenin araştırma veya işletme aşamasında olup olmamasına göre de değişebilmektedir.

Şirket değerlendirme işinde yaygın olarak nakit akımı yöntemi kullanılmaktadır. Değerlemede madencilik projesinin geçmiş nakit akımları analiz edilir. Bu şekilde, nakit akımında etkin olan parametreler belirlenerek hissedarlar açısından gerçekçi nakit akımları tahmin edilebilir.

Nakit akımına dayalı değerlendirme, bilgisayar ortamında bu amaçla hazırlanmış değerlendirme programı ile yapılabilir. Bu şekilde, değer madencilik faaliyetine ilişkin parametrelere duyarlılığı daha doğru ve hızlı bir şekilde belirlenebilir. İlaveten, nihai nakit akımı mevcut piyasa şartlarını yansıtan fiyat/kazanç ve temettü verimi ile bulunan değerler ile karşılaştırılabilir.

Madencilik sektörü diğer sektörlerde olmayan mali, teknik ve çevre boyutuna sahiptir. İndirgenmiş nakit akımı, fiyat/kazanç ve temettü verimi gibi yöntemler ile madencilik şirketinin değerlendirilmesinde, bu sektöre özgü unsurların değerlendirme modeline yansıtılması gerekmektedir. Bu nedenle, bir madencilik şirketinin değerlendirilmesinde mevcut şartlara en uygun yaklaşım ve yöntem kullanılmalı, bu şekilde bulunan değer diğer yöntemler ile bulunan değerler ile karşılaştırılmalıdır.

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