CASE STUDY:

PURCHASING OF THE COAL
MINE PLJEVLJA BY THE
ELECTRIC POWER COMPANY
OF MONTENEGRO (EPCG)

I: SUMMARY

1. Value of the Coal Mine Pljevlja was overestimated at the end of 2017 by at least one-third of the real value, i.e. by around €12 million. The following text primarily confirms that the difference between the estimated value of the appraiser and the value that would have been obtained using the same assessment method, however, based not on data submitted by the purchaser, but on the accounting data from the last few years, is exactly the amount of around € 12 million. Second, almost identical difference is obtained when we compare the estimated value with data on the market value of the shares of the Coal Mine Pljevlja. Finally, third, most powerful arguments to back up the assertion are obtained when we examine the reality of certain assumptions used by the appraiser and apply alternative, more realistic assumptions about the movement of certain variables and values of certain figures.

Thus, in all three cases, the overestimation is around one-third in favour of the estimated value. It is likely that the overestimation of the Coal Mine is even larger, but such finding would require additional data that was not available at the time of preparation of this case study. Thus, although we do not provide an assessment of the value of the Coal Mine, we can show that the value of the Coal Mine is overestimated by around €12 million. Therefore, below are explained calculations on overestimating in relation to certain items for which documentation was available.

2. Reasons for great overestimating of the Coal Mine are double. First, there was a fictitious consolidation of the company through the bookkeeping adjustment of the balance sheet (balance sheets, success and cash flow), causing, from the bookkeeping perspective, for the company to be more valuable than in reality, and only in last year, not in the past decade. The responsibility for this part lies primarily with the management of the Coal Mine, but a significant part of the responsibility has the buyer as well, i.e. the Electric Power Company of Montenegro (EPCG).

The second group of reasons for overestimating of the company should be sought in assesment of the value of the Coal Mine, done by the auditor Deloitte. Its responsibility is huge and relates not only to mistakes made in the assessment itself, but also to the fact that it accepted the contractual arrangement, according to which it should have made an assessment based on data provided by the contracting authority. Thus, the appraiser did not check the authenticity of the obtained data, so its role of the appraiser was in fact reduced to implementation of a set of simple NPV (net present value) arithmetic exercises applied to the data obtained. Apparently, Deloitte has put its brand on stake to justify a high cost of service, and on the other hand it was supposed to serve both the buyer and seller to rely on the reputation of this audit firm.

3. In the estimate itself, as is customary, the yield method or method of cash flow projection and calculation of the current value of that flow is applied. Of course, when a company has some significant potential whose value does not manifest through existing financial statements, because these potentials are not yet used, it is legitimate to make a completely new projection of business flows and cash flows to assess the value of opportunities the company has. However, **the rules for assessing fair market value say**

that these opportunities must be realistic. In this sense, the Coal Mine Pljevlja obviously does not represent a new technology, whose value so far has not been able to manifest itself through financial statements.

Second, more important is that the value of the investments foreseen to expose the "concealed" opportunities of the Coal Mine was around three times greater than the total value of the company's assets as of December 31, 2017. If in these projections the cash flow is only a few percentage points higher than the discount rate, then the company will be much more "worthy" than if it the projections are not corrected in this way. This is precisely the case here and a large "inflating" of investments into new businesses is exclusively done to increase the value of the company. Acting in this way, Deloitte established the fair market value of the company in the amount of € 32,500,000, i.e. the fair market value of the share of € 6.40.

However, if we start from cash flows obtained on the basis of the average for the past six years for which we have data, and assuming that the Coal Mine will be exploited for a period of 45 years, then, applying the same discount rate applied by Deloitte, the result is that the fair market value of the company is barely around €2.5 million. If, however, we adjust the cash flow so as to be at the flow level of net profit using the same method, it will result in yield value of the company at the level of € 20,602,544. And this extremely optimistic value is around a third, that is, around €12 million lower than the value that Deloitte got. Unfortunately, we did not have any additional data to make this standardization of recent financial reports even more accurate and reliable, but the additional analyses which soon follow will improve it. Let us note that such determined value is, in fact, very close to the market value of the Coal Mine.

4. Previously presented projections of Deloitte were based on the project for construction of the Second Block of Thermal Power Plant in Pljevlja, which would start operating in 2023 and work for 40 years, that is, until the end of 2062. However, in December 2017, the Government and EPCG terminated the contract with the Czech company Škoda Praha for the construction of the Second Block because it failed to find the financier. All this suggests that projection of the beginning of work is extremely unrealistic, and consequently has a dramatic impact on the increase in the estimated value of the Coal Mine. It is realistic that implementation of the project will come much later. This means that, even if there are no objections related to the ore reserves, the level of investments and the level of activity, later start of the work of the Second Block would lead to a dramatic drop in the assessment of the value of the Coal Mine. This is because the "opportunities" whose value we are trying to establish would have to be discounted stronger and longer. To put it more simply, the increase in value and the 12 million-Euro overestimation of the company would need to be discounted longer and stronger, which would significantly reduce the value that Deloitte gets. With, let us say, only three years of delay, the estimated value of the company would fall by almost 30% in relation to the 12 million value increase, i.e. the value would be lower for the total amount of €3.6 million (0.30x12 million). With a four-year delay, the estimated value would be less by 42% of the value, or around €5 million (0.42x12 million). Finally, with a five-year delay, the estimated value would be less than the increased value by entire 55% or around € 6.6 million, and so on. Therefore, the possible range of reducing the value of the company due to the real possibility of delay, which Deloitte does not deny, would, with 100% certainty, move in an incredible range from 3.6 million to € 6.6 million.

5. Total value of investments for implementation of the mentioned project is around € 180 million (31.3 for land expropriation, and 148.3 million for the purchase of mining equipment). These investments are around 3.6 times higher than the value of the existing fixed and working capital of the company, i.e. than the value of the assets of the company itself, and even around six times higher than such overestimated fair market value of the company.

However, this is not the end to investments. First of all, costs of reprocessing of the coal mine were not calculated, which is an obligation under the Law on Mining. Second, costs for the construction of new ore landfills, which can amount to dozens of millions of Euros, were also not taken into consideration. Finally, what was also not considered are the enormous costs of relocation of the population which is the prerequisite for activating certain coal bearings. These latter expenditures should be very high due to an extremely aggressive attack on almost all coal bearings. All in all, already on the basis of this item we see that it is about tens of millions of Euros worth of investments. Their introduction into cash flow projections would, obviously, by itself diminish the present value of the company by more than one-third of the estimated value.

6. Major issue of this value assessment are also assumptions about the volume of coal ore that the Coal Mine has. It is a big **uncertainty both in terms of the quantity of coal reserves and in terms of its energy quality.** Both the volume and the quality of the reserves are problematic. Projections are based on the assumption that the Coal Mine has 90.2 million tons of ore. However, the research so far has shown that only 66.8 million tons are certain, while the rest, 26% of the estimated size, is questionable both in terms of quantity and quality.

This means that, if it turns out that the doubts about the coal bearing capacity are justified, the real present value will drop significantly. Certainly not by 26%, but significantly less, still nevertheless significantly because the project could not last as much as it is now projected, but for some ten years less.

- 7. Within the entire investment, attention should also be paid to the fact that there is no answer to the question whether the planned dynamic growth of the Coal Mine's activities, and the associated growth of electricity production from these sources, is optimal from the point of view of Montenegro's electricity sector. Here we have in mind the fact that the electricity is most expensive from coal-fired power plants and that its production should not go beyond the need for a stable functioning of the electric power supply system of consumers.
- **8.** Also, the announcement of the work of the potential Second Block by 2062 is contrary to the policies of the countries of the European Union, which have committed to shut down coal-fired power stations by 2050 and thereby reduce carbon dioxide emissions in the air. Montenegro is a candidate for membership in the European Union, and studies published in 2017 imply that the countries of the European Union could close the coal-fired power plants even earlier, i.e. by 2030. What should be also taken into consideration are possible activities of the very domestic opponents of thermal power plant that could contribute to reducing its work even before 2050. When talking about domestic stakeholders, we imply citizens of Pljevlja who suffer from enormous environmental impact of the work of thermal power plant, which manifests itself in the form of deterioration of the health and quality of life on one hand, and the increase in costs of the health system on the other.

It is surprising that the possibility of such reduction of the work of thermal power plant was not taken into account at all during the projection, not even in terms of expectations (probability) of something like that happening. That would be correct, but not the best possible projection, because the best would be the one in which a precise estimate of all external costs would be required. Since this is a project whose public implications are of great importance, EPCG had to insist on such approach in calculating project cost flows. This would have to be done even if EPCG were 100% privately owned, and the state, in this case, would have to impose such methodology, if it has not already introduced penal taxes for pollutants. The implementation of this methodology would additionally decrease the estimated value of the company.

- 9. Although the current concession agreement, according to which the Coal Mine pays a very low concession fee of €672,000 annually to the state, expires already in 2025, Deloitte estimated that the Coal Mine would pay the same amount of concession fee up until the end of 2062. In this regard, it did not foresee any additional expenditure on public revenues. This projection is precisely the source of legal uncertainty, given the possible changes in the legal framework for such a long period of time. Any significant increase in this fee, which could be expected, would have a downward impact on the company's value. So for example, if the concession fee would increase by only 328 thousand, which would raise the total concession fee from 672 thousand to 1 million Euros per year, then the fair value of the company would fall by the entire €3.5 million.
- 10. When determining provisions of the Coal Mine for litigation, Deloitte pointed to the litigation that the company has with the Municipality of Pljevlja, whose value is €5.067.000. Deloitte stated that the Coal Mine management had estimated the probability of a loss of the litigation at 40%, and accordingly, the fair market value of the company was corrected, i.e. decreased only in that amount, that is, by € 2.027.000, instead of € 5.067.000. We believe that, given the nature of the litigation, the full amount of receivables must take place here. This means that on this basis alone, the value of the company is overestimated by € 3.04 million.
- **11.** To the present value of Pljevlja-based company, Deloitte added an amount of €2,083,000 for non-operating assets, that is, land out of use, identified by Coal Mine management. This property represents 1,138,794 square meters of land on several locations in Pljevlja owned by the Coal Mine. However, the value of most of these assets is determined in a far greater amount than it is really worth. According to our assessment, the value of the company is overestimated on this basis alone in the amount of € 1.7 million.
- 12. Most important position related to "creative adjustment" of the balance sheet relates to the rapid growth in cash and cash equivalent in the last year of work, from an average of €203,000 in the past seven years to €6,127,000 at the end of 2017. The enormous growth in cash and cash equivalent in 2017 was due to the reduction in the amount of receivables from trade in almost the same amount. Main business partner of the Coal Mine is EPCG, which purchases coal for operating of the Thermal Power Plant Pljevlja from the Coal Mine. Unfortunately, Deloitte did not show how the cash was increased and whether the EPCG contributed to it. Deloitte was obliged to explain how an extreme jump in Coal Mine's cash happened, because the company became more expensive precisely by this amount. This is because this value of cash is first deducted from the total value of the debts, which are then, although reduced, deducted from the present value of the financial flow in order to determine the fair market value. This is obviously the same as adding this value of cash to the present value of cash flow.

- 13. It is also important to note that the most important part of short-term liabilities in the end of 2016 consisted of various fiscal and parafiscal obligations. Unpaid taxes and contributions amounted to € 13,437,192 in January 2017. Rest of the tax debt for which the reprogram was approved (minus 30 %) in the total amount of € 9,406,034 will be repaid in 60 monthly instalments in the amount of €156,767, of which the first instalment is due on August 1, 2017, while the final repayment period is July 1, 2022. If we pay attention to the circumstance that the Coal Mine has not been paying any interest for this delay in payment of debts for five years, this means that in the period immediately prior to the assessment of the value, the government of Montenegro significantly influenced the real increase in the value of the property. According to our estimates, the value of the company increased for the entire €2,107,742.
- **14.** Finally, it is clear from the analysis of the study that the Coal Mine Pljevlja is worth around € 20 million. It is also clear that the value of the share in this case is around € 4, not € 6.4, as determined by Deloitte.

In this analysis, we have clearly quantitatively identified the following values:

- First, we found that if there is a delay in implementation of the second block project of only three to four years, the value of the company will decrease for a total of € 4.8 million (with a growth of delay of 5 years, which is closer to our reality, the company's value will decrease for a total of 6,6 million);
- Second, the expected increase in the concession fee by only €328 thousand annually, i.e. the increase of this fee from 672 thousand to 1 million, leads to a decrease in the value of the company by around €3.5 million;
- Third, the amount to be set aside for expected costs arising from court proceedings with the Municipality of Pljevlja should be increased by € 3,040,000;
- Fourth, the value of non-operating assets which Deloitte calculated is without any dilemma overestimated for the entire € 1.7 million.

Based on previously given, fairly precise measurements, which we were able to carry out, we come to the conclusion that the value of the capital of the Coal Mining, only on the basis of these items, is overestimated by at least €12 million.

We have also identified a number of other items that are more significant, but could not be compared in the short period of time. Therefore, we can say that €12 million is the smallest possible measure of overestimation of the company's value. We had no task, no data and no time needed to assess the value of the Coal Mine. The analysis we enclose is rather an evaluation, whose basic conclusion would be the need for re-assessment of the value of the Coal Mine Pljevlja.

II: INTRODUCTORY REMARKS

In February 2018, Deloitte auditing company prepared for EPCG a report on assessment of the value of shares of the Coal Mine Pljevlja¹. The assessment was done on December 31, 2017 and included fair and investment value, in accordance with EPCG's request. On the basis of this study, Deloitte also carried out an assessment of the fair market value of shares on March 28, 2018, which was necessary for decision-making on purchasing of the Coal Mine by EPCG.

According to Deloitte, fair value of the shares is the price that would have been acquired for the sale of assets, or paid for the transfer of liability in a regular transaction between market participants on the date of determining, while the investment value is based on potential additional savings in EPCG operations that increase the available cash flow and generate added value, if it is a majority owner.

The auditor Deloitte determined the market value of shares of the Coal Mine at €6.40 per share, and the investment value at € 6.90. In March 2018, Deloitte submitted to EPCG the Study on the fair value of the shares of the Coal Mine Pljevlja as of March 28, 2018, containing the same data as well as the same assessment of the market value of the Coal Mine in the amount of € 6.40 per share.²

¹ Report on assessment of the fair and investment value of shares of the Coal Mine Pljevlja on December 31, 2017, Deloitte Belgrade, number 1338 - IIF, as of February 23, 2018; link:

https://www.epcg.com/sites/epcg.com/files/multimedia/gallery/files/2014/04/tacka 1 prilog 1 izvestaj deloittea o procjeni fe r iinvest. vrijednosti akcija rup mne.pdf

² Study on the fair value of the shares of the Coal Mine Pljevlja as of March 28, 2018, Deloitte Belgrade, March 7, 2018

III: VALUE OF THE COMPANY IS OVERESTIMATED DUE TO BAD DATA ON WHICH VALUE ASSESSMENT AND DUE TO FICTIVE CONSOLIDATION OF CERTAIN ACCOUNTING ITEMS OF THE COAL MINE BEFORE THE SALE

Starting from data on the net cash flow in the past few years, it is not possible to get even close to the fair value of the capital of the Coal Mine Pljevlja to which the appraiser Deloitte got − around €32.5 million. Applying the same discount rate applied by Deloitte (9.1%) to the net cash flow given in the financial statements for the past five years, we get a value of barely €2.5 million, which is a striking difference which itself requires an explanation, which we did not get in this study. The explanation is likely in the circumstances, to which Deloitte drew attention in a TV debate, that according to the contract it did not take the responsibility to carry out the audit, so we were denied this explanation. It's even more difficult for us to do it in a short period of time with little data.

Certain approximation of assessment of the value is obtained if we standardize the cash flow by assuming that investments in the replacement of fixed assets are equal to depreciation, which in the long run should be the case. In this improved case, the net flow is identified with the flow of net profit, which, using a known methodology for calculating return on equity, gives a value of $\mathbf{c20,602,544}$. If we divide this value with the total number of shares - 5,064,443 shares, we get a value of around \mathbf{c} 4,07 per share. As we know, the market value of shares was \mathbf{c} 4.55 on December 31, 2017. These values are fairly close to each other and for a third less than the estimated fair market value which Deloitte gets. More precisely, such fixed value is around \mathbf{c} 12 million less than the fair market value determined by Deloitte. Of course, standardization of the cash flow of the company could have been done much better along with a more precise estimate, but it required much more accounting data.

The largest share in the capital belongs to the Italian company A2A with 39.49 % of the shares, or 2 million shares. The state of Montenegro has 31.11% of the shares, or 1.575.632 shares, while Aco Đukanović has 11.84% of the capital or 599.798 shares. The remaining 17.56% or 889,013 shares belong to natural and legal persons.

OWNERS	NUMBER OF SHARES	PERCENTAGE
A2A	2.000.000	39,49
State of Montenegro	1.575.632	31,11
Aco Đukanović	599.798	11,84
Others	889.013	17,56
TOTAL	5.064.443	100

Table 1: Ownership structure at the end of 2017

1. DNT methodology used in assessing the value of the Coal Mine Pljevlja

Deloitte chose the method of discount cash flows to determine the value of the Coal Mine in order to determine its fair value. This method of assessment is often referred to as the yield method of assessment, and the so-called substantial method, or method of costs of reproduction, is used as an alternative. According to DNT model, a particular company is worth the same amount as today are worth future cash flows that it will generate. Three main inputs for this method are: free cash flows of enterprises³, capital prices⁴ and long-term growth rates.⁵ Theoretical model on which this assessment is based is known as Gordon's (1966) model.

This is one of the most commonly used methods for determining the value of an enterprise. The method is based on the analysis of the company's financial statements and the method actually determines the present value of the expected cash flows of the companies, discounted at a rate that reflects their risk. If and when financial statements do not reflect the true state of affairs, designing of business flows is used, in particular cash flows, in order to determine the value of the company. Also, and this is more important, when a company has a significant potential, whose value is not manifested through the financial statements because these potentials are not yet used (this is especially important for new technologies), it is legitimate to make a completely new projection of business flows and cash flows to assess the value of the company's opportunities. However, the rules for assessing fair market value say that these opportunities must be realistic.

In this regard, the first thing we can say is that the Coal Mine Pljevlja obviously does not represent a new technology, whose value so far has not been able to manifest itself through financial statements. Second, more important is that the value of the investments anticipated to expose the "concealed" opportunities of the Coal Mine was around three times greater than the total value of the company's assets as of December 31, 2017. If in these projections the cash flow is only a few percentage points higher than the discount rate, the company will be much more valuable than if it projections are not corrected this way. This is precisely the case here and a large "inflating" of investments into new businesses is exclusively done to increase the value of the company.

In order to comprehend how large this investment project is, let us look at the graphic presentation of the movement of cumulative investments in the projected period together with the movement of company's assets in the pre-sales period. For the sake of simplicity, we added the cumulative investment to property value at the time of sale.

Let us pay attention to two things. First, in the period from 2011 until now, we have a permanent and dramatic decrease in the value of assets, i.e. disinvestment in the property of the Coal Mine. Second, now all of a sudden we expect the same Coal Mine to generate assets through investments, which is exactly 3.63 times higher than the one it has now. This is an extremely unrealistic assumption.

³ Free cash flows are obtained when capital investments (investments in tangible and intangible assets) and investments in working capital are deducted from operative results of the company (EBIT)

⁴ Cost of capital reflects the income that an enterprise needs to make on average in order to meet investor's expectations; it is determined on the basis of an average weighted capital expense based on the formula that is the average cost of debt (interest-bearing) and cost of the principal; the obtained discounted rate reduces expected cash flows to the present value

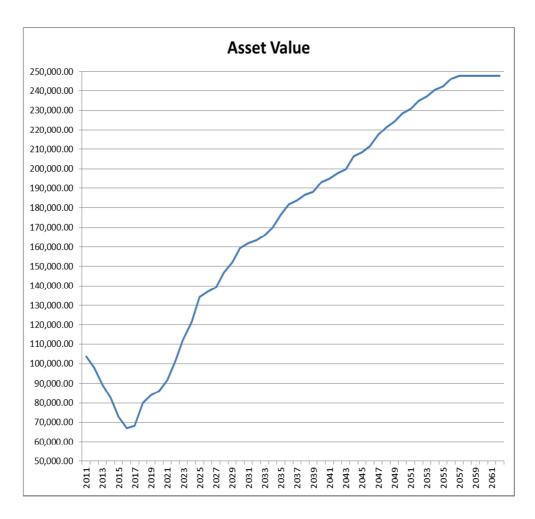
⁵ Long-term growth rate "g" is usually the 10-year average of the Gross Domestic Product (or the assumptions of the growth of Gross Domestic Product) or the growth assumption of a particular industry

By doing so, Deloitte found that the fair market value of the Coal Mine Pljevlja is $\le 39.605.000$, and then reduced this amount by net debt in the amount of $\le 7,161,000$ and provisions for litigation in the amount of $\le 2,027,000$, then increased it by $\le 2,083,000$ based on non-operating assets. Net debt is calculated by deducting from the gross debt the value of cash and cash equivalents as of December 31, 2017. In this way, it established the fair market value of the company in the amount of $\le 32,500,000$, i.e. the fair market value of the share of ≤ 6.40 .

However, if we start from cash flows obtained on the basis of the average for the past six years for which we have the data, and assuming that the Coal Mine will be exploited for a period of 45 years, in this case, applying the same discount rate applied by Deloitte, the result is that the fair market value of the company is barely around €2.5 million. If, however, we adjust the cash flow so as to be at the flow level of net profit using the same method, it will result in yield value of the company at the level of €20,602,544. This value is around a third, that is, around 12 million less than the value that Deloitte got. Thus established, it is, in fact, very close to the market value of the Coal Mine, as well as to the substantive value derived from uncorrected accounting data. Therefore, with great certainty, we can claim that this €12 million difference is equal to the increase in the estimated value arising from the assumptions related to this investment, obtained by Deloitte based on information it received from the contracting authority and on the basis of which, according to the contract, it should have assessed the fair market value of the capital and shares of the Coal Mine.

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⁶ This value was determined on the basis of the present value of discounted cash flows in the amount of € 38,593,000 and the residual value determined at € 1,011,000



Graph 1: Flow of cumulative investments in envisaged period (in thousands)

2. Suspicious projections of coal resources for production and capital investments

As the first prerequisite for defining coal production resources, audit firm Deloitte stated that at the end of 2017 coal reserves amounted to 90.2 million tons, but this estimate is questionable.

Namely, a study by the consultant Fichtner Water & Transporation GmbH (Fichtner), in possession of the MANS Investigative Centre ⁸, shows that at the beginning of 2016 coal reserves in the narrow Pljevlja basin amounted to 66.8 million tons, while the potential reserves, i.e. the ones that have not yet been proven, and therefore their quality is not known, can amount to 24.5 million tons. In addition to the quantity, we especially emphasize quality as a crucial dimension, because it impacts not only the energy content of the coal, which essentially affects the economic efficiency of business content, but also affects environmental impact which, if it turns out to be inadmissibly harmful, can call a complete business collaboration into question.

⁸ Fichtner Mining & Environment, Coal Resources and Reserves Estimation, Essen, Germany, 30 June 2016

⁷ The audit firm referred to the data of the Coal Mine Pljevlja and the consulting company Fichtner

During 2016 and 2017, at least 2.8 million tons of coal was spent for the work of the existing First Block of the Thermal Power Plant as well as through sale to third parties, which means that the actual coal reserves at the end of 2017 amounted to 64 million tons. And even if the potential reserves of 24.5 million tons were added, this would mean that at the end of 2017 there were 88.5 million tons of coals, not 90.2 million, according to Deloitte's report.

As another assumption for defining coal production resources, Deloitte projected that future exploitation would be on a total of nine ore deposits in the so-called narrow Pljevlja basin. In addition to Potrlica deposit, from which the ore is currently exploited, these are: Mataruge (open from 2021), Bakrenjača and Komina (from 2023), Glisnica (from 2024), Kalušići (from 2028), Otilovići (since 2034), Grevo (from 2044) and Rabitlje (since 2050).

However, back in 2009, the very Fichtner was in charge of drafting studies on the economic feasibility of potential ore deposits in Pljevlja for the needs of the Government of Montenegro and development of the Energy Development Strategy until 20309. At that time, Fichtner pointed out that the bearings Kalušići, Grevo, Komina and Rabitlje are economically usable mines that should not be included in any coal reserves scenario on which future energy production will be based. In addition, for the Kalušići bearing, it was pointed out that coal on that site is of poor thermal value and that the area is densely populated, which would require high costs for relocation of the population. There are no huge costs of relocation mentioned in the study. They are, of course, a deductible item in cash, which means that their introduction into the projection would significantly reduce the estimated value of the Mine.

In addition, near Otilovići bearing (where potential reserves are estimated at 3 million tons) there is a water supply source for citizens of Pljevlja, so in the local self-government they believe that the opening of the mine in Otilovići could jeopardize the water supply. 10

Obviously, the appraiser started from unrealistic assumptions that were supposed to make projection of a high level of investment activity convincing (construction of the Second Block), which should have made increased activity more realistic, and thereby increase the value of the company.

Third assumption for coal production is that capital investments are to be used to open new bearings by 2060, which is estimated at a total of 179.6 million. From that amount, 31.3 million is allocated for land expropriation, and 148.3 million for the purchase of mining equipment. Let us pay attention to the circumstance that these investments are around 3.63 times higher than the value of the existing fixed and working capital of the company, i.e. than the value of the assets of the company itself, and even around six times than such overestimated fair market value of the company.

However, this is not the end to investments, since the audit firm Deloitte did not calculate neither fair costs of reprocessing of the coal mine into the capital investments, which is an obligation under the Law on Mining, nor costs for the construction of new ore landfills, which can amount to dozens of millions of

http://www.mek.gov.me/biblioteka/strategije

⁹ Document Energy Development Strategy of Montenegro until 2030, May 2014;

Remark of the Municipality of Pljevlja to the Ministry of Economy from February 26, 2015, and delivered during the public hearing for the concession act for Otilovići bearing

Euros. Of course, here are not calculated previously mentioned enormous costs of relocation of the population, which is a prerequisite for the activation of certain coal bearings.

Finally, there is no answer to the question whether the planned dynamic growth of the Coal Mine's activities, and the associated growth of electricity production from these sources, is optimal from the point of view of Montenegro's electricity sector. It is well known that the cost of electricity produced by thermal power plants (particularly coal-based) is significantly higher than the cost of electricity based on hydro and other resources. Consequently, the greater the share of electricity produced in this way, the higher the price of electricity in a certain system. Electricity from thermal power plants, however, is very useful, since it allows prevention of significant daily and seasonal oscillations in production, and in this way, it ensures stability in the supply of electricity. Optimization of the system implies, therefore, that these resources only meet the mentioned function, while all the energy needs through this need are secured from other, much cheaper sources. In the assessment report, nothing is said about this. In case the investment program is implemented, the citizens will be damaged and will pay a higher price of electricity, and the EPCG system would lose its value. Its internal value, due to increase in operating costs, would drop.

Aforementioned points to the conclusion that, from this point of view, value assessment that would take properly into account the restrictions related to the volume and quality of coal and its deposits, showed that the value of coal was less than estimated by at least one third, i.e. by at least around €12 million. Unfortunately, it was not possible to make such an assessment with the available data, although the inconsistencies made in the assessment on this basis are largest.

3. Ambitious projection of the start of work of the Second Block from 2023

Deloitte based the investment value of shares of the Coal Mine on the project of construction of the Second Block of Thermal Power Plant in Pljevlja, which would start operating in 2023 and work for 40 years, that is, until the end of 2062. However, in December 2017, the Government and EPCG terminated the contract with the Czech company Škoda Praha for the construction of the Second Block because it failed to find the financier.¹¹

By March 2018, the Second Block project was completely uncertain and it is questionable whether in the course of four and a half years, all procedures for obtaining the Environmental Impact Assessment Study and Building Permit will be carried out, and then the Thermal Power Plant itself built.

Even if there were no objections related to the ore reserves, the level of investments and the level of activity, with later start of the work of the Second Block, there would be a dramatic drop in the assessment of the value of the Coal Mine. This is because the "opportunities" would have to be discounted stronger and longer. To put it more simply, the increase in value and the 12 million-Euro overestimation of the company would need to be discounted longer and stronger, which would significantly reduce its value. With, let us say, only three years of delay, the estimated value of the company would, at an assumed

<u>izgradnje-Bloka-II-TE-Pljevlja.html</u>

Information on the website of the Government of Montenegro under the title "Donijeta odluka o okončanju saradnje sa češkom kompanijom Škoda Praha na Projektu izgradnje Bloka II TE Pljevlja" December 27, 2017; Link: http://www.gov.me/vijesti/180092/Donijeta-odluka-o-okoncanju-saradnje-sa-ceskom-kompanijom-skoda-Praha-na-Projektu-

discount rate of 9.1%, fall by almost 30% in relation to the 12 million increase, i.e. the value would be lower in the total amount of €3.6 million (0.30x12 million). With a four-year delay, the estimated value would be lower by 42% of the value. Finally, with a five-year delay, the estimated value would be lower than the marginal value by entire 55% or around € 6.6 million, and so on. Therefore, possible range of reducing the value of the company due to the real possibility of delay, which Deloitte does not deny, should, with 100% certainty, move in an incredible range from 3.6 million to € 6.6 million.

Bearing in mind that environmental initiatives are the reason for the EU's commitment to abolish thermal power plants by 2050, and especially with regard to domestic stakeholders who are affected by large aero and other pollution, what should be also taken into consideration are possible activities of the domestic stakeholders-opponents of the thermal power plant that could contribute to reducing the operation of the thermal power plant even before 2050. When talking about domestic stakeholders, we imply citizens of Pljevlja who suffer from enormous environmental impact of the work of thermal power plant, which manifests itself in the form of deterioration of the health and quality of life on one hand, and the increase in the costs of the health system on the other. The possibility of such reduction of the work of thermal power plant was not taken into account at all during the projection, not even in terms of expectations (probability) of something like that happening. That would be correct, but not the best possible projection. The best would be the one in which a precise estimate of all external costs would be required. Since this is a project where external and public implications are of great importance, EPCG had to insist on such approach in calculating project cost flows. This would have to be done even if EPCG were 100% privately owned. In this case, the state would have to impose the implementation of such methodology or internalize external costs through introduction of penalties for pollutants, in which case imposing of the methodology would be unnecessary.

In addition, Deloitte projects that the existing First Block of Thermal Power Plant will operate in parallel with the Second Block until 2038, which is contrary to other official EPCG documents. Thus, in order to obtain an integrated license for the work of the First Block, EPCG planned, after its ecological rehabilitation, to operate independently until 2043, i.e. without simultaneous operation of the Second Block.

Even Deloitte itself has indicated that there is a risk for implementation of the Second Block project, and therefore for implementation of projected production and sale of coal, which is the basis for assessing of the company's value. Nevertheless, it completely unjustifiably accepted the assumption that the Second Block will be built, without offering an alternative assessment of the value of the Coal Mine Pljevlja if the project is not implemented. Previously given calculations on the decrease in value that would have occurred only due to postponement of the start of work of the Second Block of only three to five years clearly show that this value was likely to be significantly lower than the estimated value. And this is only because of the several-year delay in starting the work. Let us now imagine how big corrections to the value of the estimation would be if we calculated the impacts that we addressed in this chapter.

4. Suspicious estimate of coal consumption to third parties

In addition to selling coal for the work of the First and Second Block of the Thermal Power Plant in Pljevlja, the auditor Deloitte projected a significant increase in sales of coal to third parties, using rather optimistic estimates, not the average consumption from previous years, which was far below the

projected level. Deloitte stated that in 2017 the Coal Mine Pljevlja sold 134,000 tons of coal to third parties, i.e. in wholesale in Montenegro and Serbia, as well as to households in retail. That is an increase of as much as 74 % compared to 2016, when 71,650 tons of coal was sold in wide consumption.

Official data from the Coal Mine show that in the five-year period, that is, from 2012-2016, it sold a total of 327.270 tons of coal in large consumption, which means that the annual average was 65.454 tons of coal. Had Deloitte calculated the average consumption of coal for the last six years, including 2017, it would have reached 76.878 tons of average annual sales, but instead applied a fixed annual turnover of 109,300 tons by the end of the projected period.



Table 2: Deloitte significantly increased the estimation of average annual coal consumption to third parties

Deloitte did not offer a reasonable explanation as to why it established a fixed amount of annual coal sales to third parties rather than average consumption from the previous period. This is especially true because the Coal Mine does not have long-term contracts for the sale of coal with third parties in large consumption, and above all, because the planned heating project in Pljevlja has not been discussed at all and how much its implementation would influence the reduction of coal consumption by the households in Pljevlja. At this moment households in Pljevlja are the largest consumer of coal in large consumption, and the town's thermal power will enable them to heat and eliminate the need to independently buy coal.

The assumptions that Deloitte has in this respect are, therefore, unacceptably unrealistic. **Entering of corrections that would reduce net yields on this basis would also reduce the estimated value of the Coal Mine.**

5. Same amount of concession fee projected for the next half-century

In determining business obligations of the Coal Mine Pljevlja, the auditor Deloitte applied another problematic assumption, which refers to the obligation to pay the concession fee.

Namely, the Coal Mine exploits the ore in Pljevlja on the basis of a concession contract with the Government of Montenegro, which envisages annual fixed concession fee of €672 thousand and a variable fee of 2.5 % of production value, which includes a fixed part.

Although this concession contract expires already in 2025, **Deloitte estimated that the Coal Mine Pljevlja** would pay the same amount of concession fee until the end of 2062, and in this regard did not foresee any additional expenditure based on public revenues. It is precisely this projection that presents the ultimate legal uncertainty, given the possible changes in the legal framework for such a long period of

The source of data on the average consumption of coal in broad consumption is the auditor's reports for financial statements of the Coal Mine Pljevlja for 2016, 2015, 2014, 2013 and 2012, which are publicly available on the website of the Securities and Exchange Commission of Montenegro; link: http://www.scmn.me/emitenti.php?eid=631&sadrzaj=96

time. Any significant increase in this fee, which can be expected, would significantly impact the decline in company's value.

To understand why and where this uncertainty arises from, and why the concession fee should be greater if the potential of the Coal Mine is so large, as assessed value by Deloitte implies, we need to provide additional explanations. In general, the projection of some beneficial but also realistic business content and its flow of return is the only way to assess the value of land, ore commodities or any other natural or other potential, as well as the insufficiently developed companies with strong opportunities, in all those situations where there are no market transactions necessary for the assessment of fair value, or for assessing the value of the factors determining those opportunities. In our case, it is the Coal Mine, or its natural and other potentials. In such projection, we are not including the value of this natural or other factor, i.e. resources into the flow of costs and investments, as opposed to the flows we use in evaluating investment projects. We can, therefore, say that we are dealing here with, conditionally speaking, "phallic" cash flows. If the flow was not "phallic", and if conditions of complete competition existed, then the present value of the project, i.e. the sum of discounted cash flow values (where the discount rate is equal to the required yield rate) of the eligible project would be flat zero. If, however, we do this with the socalled "phallic" cash flow, then the value obtained would be positive. This positive value would be a value of, as they say, unidentified property invested in the project. In our case, this is the value of existing potentials of the Coal Mine. If this value is now put in a "phallic" flow to correct it, and if its present value is calculated, we would get it flat at zero, which is normal, given that this flow is no longer "phallic" now. It is also proof that this method of value calculation is correct.

Here, however, there is a problem, because in the Coal Mine case, we have two types of unidentified property. One belongs to the Coal Mine and its owners, and the other one represents natural wealth, which belongs to society. Natural wealth determines a natural rent that would have to be extracted by the concession fee and appropriated by the state as a representative of the society. The concession fee we now have is extremely low and should be redefined as soon as possible. In turn, Deloitte had to make an estimate of this fee, then deduct it from the cash flow to determine the value of the company belonging to coal owners. This value would be less than the estimated value of the Coal Mine precisely in the amount of the capitalized value of the difference between the real and this current, unrealistic low concession fee. If, say, the concession fee is higher than the current one for only €328 thousand, which implies a total fixed concession fee of €1 million per year, then the estimated value of the capital of the mine would be lower by €3.5 million.

6. Less provisions for court litigations increased the estimated value of Coal Mine by 3 million

While calculating provisions of the Coal Mines for litigation, Deloitte pointed to the litigation that the company has with the Municipality of Pljevlja, whose value is €5.067.000. Deloitte stated that the Coal Mine management estimated the probability of a loss of a dispute of 40%, and accordingly, the fair market value of the company was corrected, i.e. reduced only by this amount, that is, by €2.027.000, instead of €5.067.000.

The Coal Mine Audit Report for 2016¹³ shows that this is a dispute initiated by the Municipality of Pljevlja for fulfilment of obligations under the 2004 Contract on the organization of construction land. On March 17, 2015, the Commercial Court in Bijelo Polje issued a verdict rejecting the lawsuit by the Municipality of Pljevlja, but the Appellate Court of Montenegro issued a decision on June 4, 2015, which abolished the first instance verdict and the case was returned for retrial.

Given that it was a court dispute, Deloitte had to reduce the fair market value of the company not only by €2,027,000, but by the entire €5,067,000. In short, the assessed value of the company was overestimated in this way by entire € 3,040,000.

7. Value of written-off assets overestimated by 1.7 million

To the value of Pljevlja-based company, Deloitte added an amount of €2,083,000 on the basis of non-operating assets, that is, land out of use, identified by the Coal Mine management. This property makes 1,138,794 square meters of land on several locations in Pljevlja owned by the Coal Mine.

However, the value of most of this property is determined in a larger amount than it really is worth. The most drastic example is the land on the location Jagnjilo, where the Coal Mine has a landfill for disposal of waste ore. In Jagnjilo, the Coal Mine has 1,074,768 square meters, which is estimated to cost €1.701,963, i.e. €1.58 per square meter. Given that this is the location of the ore waste and that it is necessary to invest significant funds in order to rehabilitate it in order for it to have a value at all, it is more than clear that the price of the square cannot be €1.58, but it is zero.

The image below from the Geoportal of the Real Estate Administration best illustrates the situation on the ground.



Photo 1: Jagnjilo landfill location with over 1 million square meters; It is estimated that the square meter is worth €1.5

¹³ Independent Auditor's Report for the Financial Report of the Coal Mine Pljevlja for 2016, done by the auditor Deloitte doo Podgorica, link http://www.scmn.me/fajlovi/RUPV201712R.pdf

¹⁴ The document states that this is the fair value of non-operative assets, which is provided in the assessment report of the value of intangible assets, property, plant and equipment as of December 31, 2016 by KPMG auditor

The remaining 64,026 square meters in other locations in Pljevlja were established at a price of €5.9 per square meter. The total amount of overestimated prices is best illustrated by the fact that in Vojvodina, which is among the most fertile land in Europe, the price of a square of agricultural land is one Euro or below.¹⁵

Bearing in mind the aforementioned, without some specific and precise calculations, we can claim that on this basis the fair value of the company was overestimated by at least €1.7 million.

8. "Sudden" growth of cash in the balance sheet to 6.1 million has led to an increase in the estimated value of the company by the same amount

When calculating the net value of the equity of Pljevlja-based company, Deloitte applied a somewhat conventional methodological procedure, by deducting € 6,127 thousand from the long-term and short-term liabilities in the total amount of €13,322 thousand, the amount of the Coal Mine in cash at the end of 2017. In this way, the net debt of the Coal Mine in the amount of € 7,161 thousand was calculated, for which the present value of the established cash flow of Pljevlja-based company was deducted. Since the amount of debt that has been deducted is significantly reduced by the increased value of cash, it turns out that in this way the estimated value of the company's capital is increased just by this amount of cash.

To understand what is the thing here, it should be noted that, based on the available data, it is **completely unclear how the Coal Mine at the end of 2017 increased the cash to as much as €6,127,000**, especially considering that it was a company that in the previous six years never had significant amount of cash, but at the end of all these years, on average, it amounted to €203 thousand. If it is assumed that it really is the cash of the Coal Mine, which was increased regularly at the end of 2017 in the amount of €6,127,000, it is problematic why this money is held in an unproductive way, since it is a company which has huge tax and concessional debts, and why a greater amount of that money has not been used to pay debts for taxes and contributions. It is surprising that debts can be paid before the sale of the company, and yet it was decided to do so only after its sale. This, in fact, implies the way in which cash is deducted from the value of total debts.

Also, even assuming that the methodological approach of **Deloitte** was correct, it **wrongly deducted the total amount of cash, since part of that sum had to be left as working capital so that the company could continue to operate and thus generate cash flows on the basis of which the current value of the company is calculated. Thus, it turns out that this part of the funds is calculated twice, once the cash flow is generated and the second time when it was deducted from the amount of debts, that is, added to the value of the capital.**

A more detailed overview shows that the enormous growth in cash and cash equivalents happened most probably due to a reduction in the amount of receivables from business relationships in almost the same amount. Namely, the amount of trade receivables declined from €6,789,352 in 2016 to €1,767,000 in 2017,

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¹⁵ Link: http://www.agrosmart.net/agro-politika/hrvatskoj-njive-jeftinije-nego-vojvodini.html

The source of the cash data is the auditor's report for financial statements of the Coal Mine Pljevlja for 2016, 2015, 2014, 2013 and 2012, which are publicly available on the website of the Securities Commission of Montenegro; link: http://www.scmn.me/emitenti.php?eid=631&sadrzaj=96

i.e. it decreased by a total of €5,022,000. At the same time, the cash balance rose from negligible €336,693 in 2016 to an impressive €6,127,000 in 2017, which is an increase by €5,790,000.¹⁷ Obviously, this increase is almost identical to the decrease in the value of receivables from business relations.

The main business partner of the Coal Mine is EPCG, which purchases coal from it for operation of the Thermal Power Plant Pljevlja. Unfortunately, Deloitte did not explain how the cash was increased and whether EPCG contributed to it. Also, if the EPCG contributed to this, it was necessary to explain whether this entire operation was carried out in a legitimate manner, i.e. whether there was a justified reduction in the collection period and the resulting cash increase on this basis, or this is a temporary operation which needed to improve the bookkeeping image of the Coal Mine. The suspicion about the temporary nature of this operation stems from the fact that the reduction of the company's debts could have been carried out by repayment before the sale, and not by here applied bookkeeping operation of withdrawing cash from total debts. Deloitte, without a doubt, was obliged to explain how an extreme jump of the Coal Mine cash occurred, because by exactly that amount, the capital of the company increased. This is because this value of cash is first deducted from the total value of the debts, which are, such reduced, deducted from the present value of the financial flow in order to determine the fair market value. This is obviously the same as adding this value of cash to the present value of cash flow. This is a huge amount of €6.1 million.

9. Working capital in general and short-term debts

The Assessment Report, that is, the projected cash flow, show that an additional reduction in working capital from the current level of inefficient level of around €14 million is planned for another €2.217.000 in the first three years of the cash flow projection. This divestment in permanent working capital appears as an additional inflow in cash flow. It is a significant inflow that increases the value of the company by around €1,900,000. Let us note that after the third year there is an outflow of assets for working assets, i.e. investments in permanent working capital, but this is not related to the evolution of the current situation, instead, it is the result of new investments and the need for larger investments in permanent working capital.) Together with the previously analyzed contribution of cash in the amount of 6.1 million, it turns out that the contribution of total working capital increases the company's value to around €8 million. This is an impressive amount.

On the other hand, looking at the nominal value of the planned decrease in working capital of €2,217,000 and the value of cash that is deducted from total debts, €6,127,000, it turns out that the total value of working capital is decreased for the entire €8,344,000. Since the total value of working capital at the end of 2017 was at the level of €14,354,000, it turns out that after these operations, the value of working capital will decrease to approximately €6 million. This is a significant rationalization and significant reduction that has contributed, as we have seen, to a significant increase in the value of the company as well.

Such consolidation of working capital had to be accompanied by an appropriate consolidation of debt sources, i.e. a corresponding reduction in short-term debts. When looking at the state of short-term debts at the end of 2017, we see that it amounts to around €12.4 million. When we deduct from this amount the amount of cash resources that reduce debts, it turns out that short-term debts are reduced to some €6 million. However, in addition to explanation for the previously mentioned issue of the sudden increase in

¹⁷ If we add to this pre-paid reprogrammed tax liabilities and payments to AVR, it turns out that the cash increase was significantly stronger and amounted to over €7 million

cash in 2017, Deloitte also owes us a more detailed explanation that the level of working capital in the amount of 6 million is precisely the one that is rational and sustainable. The assumptions explain the way in which these items were treated, but no adequate explanation is given. Of course, this reasoning should be given from the Coal Mine's standpoint as an independent company, which it is now, and not from the Coal Mine's point of view as part of EPCG.

10. Reprogramming of debts and help of the state in the value increase in the amount of €2,107,742

Also, the Coal Mine Pljevlja is a company that has not paid taxes and contributes to the State of Montenegro for years, and has also been late with paying concession fees and thus further increased its fiscal obligations. In April 2017, the Ministry of Finance issued a Decision authorizing the reprogramming of Coal Mine Debt to the Tax Administration for outstanding liabilities for taxes and contributions in the amount of €13,437,192, which were not paid in the period from January 2015 to January 2017. The Coal Mine made a payment of 30% of the basic tax debt in the amount of €4,031,158 on February 28, 2017 and on May 18, 2017. The rest of the tax debt for which the reprogram was approved (minus 30%) in the total amount of €9,406,034 will be repaid in 60 monthly instalments in the amount of €156,767, of which the first instalment is due on August 1, 2017, while the final repayment period is July 1, 2022..

This means that the Ministry of Finance also enabled the Coal Mine to improve its business performance thanks to the debt reprogramming, which directly influenced the significant increase in real and estimated value. Of course, Deloitte has no responsibility at all with this, it only included in its assessment the increase in the value of the Coal Mine donated by the state. In order to understand what this is about, let us pay attention to the circumstance that the Coal Mine does not pay any interest for this delay in payment of debts for five years, which means that in this manner, the State of Montenegro in the period immediately prior to the assessment significantly influenced the real growth of property value. According to our estimation, value of the company increased by the entire €2,107,742. We calculated it as the difference between the nominal value of the remaining reprogrammed debt and its present value, which is obtained as the present value of future five-year repayments of the repaid debt. This is the de facto amount which the Government donated to the company in the period immediately prior to this business collaboration.

Also, Deloitte report reveals that the long-term loan obligations of the Coal Mine Pljevlja towards Prva Banka at the end of 2017 amounted to €3,333,000, however, the auditor does not show for what purpose this loan was taken, in what period in 2017, its total amount and the like. The aforementioned credit transaction is particularly problematic from the aspect of conflict of interest, since the majority owner of Prva Branka is Aco Đukanović¹⁹, who is also the third largest shareholder in the Coal Mine Pljevlja. He, of course, had a direct interest in increasing the value of the Coal Mine, and therefore its shares, so it would be interesting to examine this credit transaction in more detail. Unfortunately, we did not have any data based on which to do something like that.

¹⁸ Independent auditor's report on Financial Statements AD Coal Mine Pljevlja for 2016, done by the auditor Deloitte doo Podgorica, link http://www.scmn.me/fajlovi/RUPV201712R.pdf

¹⁹ Link: http://www.cbcg.me/index.php?mn1=kontrola banaka&mn2=finansijski izvjestaji banaka

In addition, official data of the Real Estate Administration²⁰ show that in the part of the real estate of the Coal Mine in Pljevlja in May 2017 a mortgage was established in favour of EPCG based on debt of the Coal Mine in the amount of €4 million. Final repayment period was determined on April 26, 2027, so this business transaction directly suited the Coal Mine and opened the possibility of increasing its value and the value shares, all at the expense of EPCG and the State of Montenegro.

²⁰ Link: https://ekatastar.me/ekatastar-web/action/elogin; last search carried out on April 1, 2018

IV: DELOITTE DISTANCED ITSELF REGARDING THE CONTENT OF REPORTS

In addition to the report, which refers to the engagement and preparation of documents, Deloitte stated that it does not offer any assurances regarding feasibility of expected revenues. "With regard to future-related data, we would like to emphasize that there are usually differences between projected and actual results because events and circumstances often do not take place as expected, and the differences can be materially significant," Deloitte stated.

It further states: "Deloitte does not give any assurances regarding feasibility of expected revenues until the end of the projected period. We emphasize that if the plans and assumptions used in the preparation of the Report are not achieved for any reason, this may affect the conclusions that have been presented. Such influences can be materially significant. We did not revise, review or compile financial information that was provided to us, and consequently we do not express an audit opinion or other form of confirmation regarding these data."

From the aforementioned, it is obvious that the Deloitte completely distanced itself from any legal liability that could arise due to the assessment. All legal liability is on other persons. However, what remains as the legacy of Deloitte is its responsibility for disrespecting the ethical code that auditors, evaluators and consultants must follow. In our opinion, Deloitte was obliged to reject working in case in which it is obvious that the information provided by the contracting authority is not based on real facts. Deloitte, as one of the most respected consulting companies, and its associates from the Belgrade office, as people with unquestionable professional commitments, had to be aware of the inaccuracy of data on which the assessment was based. Truth be told, it should be said that there is nothing strange and unusual in this choice of Deloitte. This is, for now, usual practice of distancing applied by all auditing and consulting companies.

All legal liability is on the back of the EPCG as the contracting authority, and the Coal Mine. What is particularly interesting here is that data overestimating the value of the company is provided by EPCG, as a buyer of the Coal Mine. The buyer is, therefore, a key player in "inflating" of the fair value of the company. For its part, the Coal Mine, through its diverse fictitious consolidation of financial statements, also contributed to "inflating" of the fair market value. However, while the interest of the Mine as a seller can be understood, EPCG's interest as a buyer to purchase the Coal Mine Pljevlja at a more expensive price, is unclear.

Podgorica, May 2018
MANS Investigative Centre

Financial consultant, Prof. Dr. Milenko Popović MANS Investigative Centre, Coordinator Ines Mrdović