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Special Legal Instruments for Placement of Shares in the Course of a Joint Stock Company Reorganization: «Stock Conversion Procedure»

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We have analyzed the content and described the procedure of a special legal instrument used in course of issuable securities placement within the framework of reorganization, i.e. *stocks conversion procedure*. We have considered its influence on the equity capital structure of legal successors. We found out that stocks conversion procedure is a sequence of actions aimed at the determination of securities' quantity to be issued to every shareholder in place of cancelled stocks of the legal predecessor using a specific stocks conversion ratio. Differences in the stocks conversion procedure are related to stocks conversion, as to whether every share shall be converted separately, or just a certain set of shares which shall be subject to conversion. We have described three types of candidate procedures aimed at determination of securities quantity to be placed to a shareholder while using the stocks conversion method. We formulated mathematical model for every algorithm. We analyzed the stocks conversion procedure under conditions of cross-shareholding by shareholders of a company under reorganization. The proposed method enables us to determine the real participation interest under the actual control of certain shareholders in the context of their indirect participation in equity capitals by virtue of other legal bodies. Nowadays, it is a very pressing problem to reveal the real dependence and affiliation of the participants in the economic turnover.

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The term “stocks conversion” originates from a Latin word “converto” – (change, transform). Conversion means transformation into anything other. Conversion in the corporate legal practice means – *substitution* of the equity stocks within a certain issue in circulation by the equity stocks within the other issue.

Conversion is the action of an issuer aimed at changing characteristics of the equity stocks placed by him relating to a specific share issue. Such changes result in the share issue originated within the earlier period (part of this share issue) being cancelled; a newer, or an additional, share issue with renewed characteristics shall be issued.

Corporate experience provides a rather significant number of various examples for the conversion of issued stocks. The whole diversity of these examples may be unified as two main groups:

- The shares of an issuer shall be converted into the shares of the same issuer;
- Reorganization of a legal body, in the course of which, the shares of an issuer shall be converted into the shares of another issuer.

Let us consider the second group of transactions in the course of which the stocks of an issuer shall be converted into the stocks of another issuer.

The conversion is a universal means of shares placement used for all types of reorganization of joint stock companies (with the exclusion of company transformation). It is the only one feasible solution for share placement in course of such reorganization types as accession, merger, division. In the course of a reorganization such as separation, two other means of shares placement may be allowed, i.e. distribution of shares of the newly-founded company among shareholders of the reorganized company as well as acquisition of shares of the company newly-created by this reorganized company. These means are derived from the stocks conversion (i.e. its modifications).

No matter how complex the stocks conversion-related transactions might be, their content is subject to actions undertaken by the issuer as regards the cancellation of securities within a certain issue and placement (i.e. deposit to the custody account of shareholders whose shares were cancelled) of securities of a replacement issue. These actions shall be

performed simultaneously. The shareholder shall lose the right to the shares of the earlier issue and obtain the right to those of the replacement issue, without any period of time when he owns no shares at all.

The content of stocks conversion is initiated by an issuer (in specific cases of reorganizations – by issuers) aimed at the execution of two simultaneous transfer records in the shareholders' register: that of writing-off and of cancellation of shares of the respective issue, as well as that of deposit to the shareholders' custody account of shares of another issue.

In case of conversion of issuable equity stocks within the frameworks of reorganization, the proportion within which the substitution of equity stocks of a certain issuer by those of another issuer is significant. These ratios have influence on volume of the shareholder's corporate rights as well as on the market value of the shares package owned by him.

As regards specific types of the equity stocks (e.g. bonds or issuer options) the conversion ratio may be established by law. «Bonds and issuer options may be converted only into bonds and issuer options respectively. In this case, a single bond shall be converted into another bond with the same rights; a single issuer option shall be converted into issuer option with the same rights»³.

As regards the shares placement, these proportions shall be established by the participants of the reorganization at their own discretion.

Irrespective of how the stocks conversion ratios have been calculated, in most cases they are expressed as fraction which may result in the “part- of-a-share effect”. Due to the fact that the effective law does not permit a “fractional share”, in this case it requires elimination of this effect. Discussion on the admissibility of the rounding of the estimated numbers, created as a result of use the fractional ratio of a stocks conversion (distribution), brings us to conclusion that such rounding was allowed under the legislation which regulates the equity stocks issue procedure. «The share issue (additional issue)-related solution which include the stocks conversion ratio (distribution ratio) based on which the estimated number of shares, subject to be issued to the Shareholder (Shareholders) of a joint stock company under reorganization, is expressed as a fraction, shall provide for the rounding procedure of the

³ Issue and Registration Standards for securities and offering statements. Adopted by Order. № 07-4/ПЗ-Н. Cl. 8.1. issued by FFMS RF of January, the 25th, 2007

estimated number of shares expressed as a fraction to round the number of shares subject to placement within the process of reorganization.

Unless otherwise provided by the reorganization solution of a joint stock company, the rounding procedure of the estimated number of shares expressed as a fraction shall provide for the calculation according to rules of mathematic rounding. In this case, if the estimated number of shares is express by a fraction which is less than one the rounding procedure shall provide for rounding of such number of shares subject to placement to the full share»⁴. Unlike the various approaches to calculation of the stocks conversion ratios which, to a greater or lesser degree, have been already discussed in the legal literature, such a legal instrument as «*stocks conversion procedure*» is rarely explored. As a rule, in the corporate practice the researchers do not pay any attention to the feasibility of using various procedures of the stocks conversion under condition of the same stocks conversion.

The legislation regulating issues of shares within the reorganization process provide for establishing both by reorganization solution and reorganization agreements the stocks conversion procedure, besides the stocks conversion ratio. But this legislation does not include the deal of this concept, which results in the fact that the prevailing part of equity stocks (securities) issue solution, within the reorganization process, does not include any reference to any stocks conversion procedure.

Inter alia, the «*stocks conversion procedure*» is an important instrument for issuable equity stocks (securities) placement within the reorganization process. The result of the stocks conversion, i.e. the quantity of shares subject to be placed to every Shareholder, significantly depends on this procedure.

The stocks conversion procedure is sequence of steps aimed at determination of shares number subject to be issued to every Shareholder, in exchange for cancelled shares of the company-legal predecessor, by using a specific stocks conversion ratio. The variances of different stocks conversion procedures derive from the choice of the stocks conversion methodology: whether every share shall be converted separately, or shall be converted a certain set of shares.

As a rule, if it is separate shares that shall be converted, the stocks conversion ratios shall be expressed as a fraction. In this case, the estimated factors shall be rounded, which

⁴ Issue and Registration Standards for securities and offering statements. Adopted by Order. № 07-4/ПЗ-Н. art. 8.1. issued by FFMS of January, the 25th, 2007. Cl. 8.1.3 enacted by Order N 08-22/ПЗ-Н issued by FFMS RF of June, the 6th, 2008.

may result in redistributive effects. In case of rounding downward, some Shareholders lose part of their corporate rights and the value of share package owned by them; in case of rounding upward the result is opposite.

Let us consider the following example: stocks conversion of JSC «Legal Predecessor» shares with Shareholders as follows:

Table 1: Shareholders of JSC «Legal Predecessor»

SHAREHOLDERS	NUMBER OF SHARES
Shareholder «A»	7
Shareholder «B»	6
Shareholder «C»	4
Shareholder «D»	3
Company's Equity Capital	20

The routine of «Moscow Corporate Strategies Centre» revealed the volume of influence the various stocks conversion procedures have on the results of the stocks conversion. In the course of our research, we used three means of the stocks conversion.

Conversion of every share separately. The number of shares subject to be placed to Shareholders as the result of stocks conversion may be determined by multiplying every share subject to conversion by the respective stocks conversion ratio. Using this conversion procedure, the number of roundings shall equal to the number of shares subject to stocks conversion; in this case the redistributive effect resulted from the rounding shows up to the maximum extent.

Let us consider the following example: the stocks conversion ratio equals a value using which the rounding shall be performed upwards. As the result of the stock conversion, a Shareholder shall receive the number of shares multiplied by that he owned, plus the same number of fractional shares of the legal successor; the fractional part equals or exceeds 0,5. Due to the fact that the law does not permit the placement of the fractional shares the estimated indicators shall be rounded upwards.

Table 2: Conversion “Every Share Separately”

(Stocks conversion ratio = 1,5)

Company legal predecessor	Number of shares subject to conversion	Stock conversion procedure	Additional (new) issue of legal successor shares
Shareholder «A»	7	$1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$	14
Shareholder «B»	6	$1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$	12
Shareholder «C»	4	$1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$	8
Shareholder «D»	3	$1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$ $1 \times 1,5 = 1,5$	6
Company’s Equity Capital	20		40

20 shares of the Company “Legal predecessor” shall be converted into 40 shares of the Company “Legal Successor”.

Let us define the results of conversion in general terms:

K_{conv} –stocks conversion ratio.

For any figure X (unity or fraction), let us introduce two mathematical notations. X_o shall be defined as the value of rounding (rounded in accordance to rounding rules). $[X]$ shall be defined the integral value (unity) X , i.e. the highest integral value (unity) not exceeding X ;

n – number of shares owned by a Shareholder in the Company “Legal predecessor”;

N – number of shares subject to be placed to Shareholder as the result of the stocks conversion.

It is obvious that the stocks conversion ratio falls within the range as follows:

$$[K_{conv}] \leq K_{conv} < [K_{conv}] + 1$$

If the stocks conversion ratio falls within the range as follows:

$$[K_{conv}] \leq K_{conv} < [K_{conv}] + 0,5,$$

the rounded stocks conversion ratio (K_o) equals to the integral part of the stocks conversion ratio $[K_{conv}]$.

If the stocks conversion ration falls within the range as follows:

$$[K_{conv}] + 0,5 \leq K_{conv} < [K_{conv}] + 1,$$

the rounded stocks conversion ratio (K_o) equals to the integral part of the stocks conversion ratio plus unity $[K_{conv}]+1$.

$$(K)_o = \begin{cases} [K_{conv}], & \text{if } [K_{conv}] \leq K_{conv} < [K_{conv}] + 0,5 \\ [K_{conv}] + 1, & \text{if } [K_{conv}] + 0,5 \leq K_{conv} < [K_{conv}] + 1 \end{cases}$$

If the stocks conversion ration falls within the range as follows:

$$[K_{conv}] \leq K_{conv} < [K_{conv}] + 0,5,$$

the number of shares subject to be placed to a Shareholder as the result of the stocks conversion (N) equals to product of the integral value of the stocks conversion ratio $[K_{conv}]$ multiplied by number of shares subject to conversion (n).

$$N = [K_{conv}] n$$

If the stocks conversion ratio falls within the range as follows:

$$[K_{conv}] + 0,5 \leq K_{conv} < [K_{conv}] + 1,$$

the number of shares subject to be issued to a Shareholder as the result of the stocks conversion (N) equals to product of the integral value of the stocks conversion ratio added by unity ($[K_{conv}]+1$) multiplied by number of shares subject to conversion (n).

$$N = ([K_{conv}] + 1) n$$

$$N = (K)_o n = \begin{cases} [K_{conv}]n, & \text{if } [K_{conv}] \leq K_{conv} < [K_{conv}] + 0,5 \\ ([K_{conv}] + 1)n, & \text{if } [K_{conv}] + 0,5 \leq K_{conv} < [K_{conv}] + 1 \end{cases}$$

ADD – additional (new) issue of shares of the Company “Legal predecessor”.

$$ADD = N_1 + \dots + N_k$$

If a stock conversion ratio equals to a value for which the rounding shall be performed upwards, in this case, following the results of this stock conversion, the respective Shareholder shall receive the number of shares, added by n, which he/she would have obtained under conditions of using the stocks conversion ratio expressed by an integral value, or by a value under which the rounding would be performed downwards.

Conversion of shares package owned by Shareholder. The number of shares subject to be placed to Shareholder as the result of stocks conversion may be determined by multiplying the whole number of shares subject to conversion available on the Shareholder’s custody account in the register of the Company “Legal predecessor” by the respective stocks conversion ratio. Using this conversion procedure, the number of roundings shall equal to the number of shares subject to stocks conversion; in this case the redistributive effect resulted from the rounding shows up to the maximum extent.

If the whole package of shares owned by Shareholders is subject to conversion, the quantity of roundings shall equal to number of custody accounts owned by these Shareholders, whose equity stocks (securities) are subject to conversion.

Table 3: Conversion of A Shares Package Owned By Every Shareholder of The Company
Legal Predecessor
(Stocks conversion = 1,5)

Company Legal Predecessor	Number Of Shares Subject To Conversion	Stock Conversion Procedure	Additional (New) Issue Of Legal Successor Shares
Shareholder «A»	7	$7 \times 1,5 = 10,5$	11

Shareholder «B»	6	$6 \times 1,5 = 9$	9
Shareholder «C»	4	$4 \times 1,5 = 6$	6
Shareholder «D»	3	$3 \times 1,5 = 4,5$	5
Company's Equity Capital	20		31

Using this conversion procedure 20 shares of the Company “Legal predecessor” shall be converted into 31 shares of the Company “Legal Successor”.

Let us define the results in general terms:

$n_1 - \dots - n_k$ – total number of shares subject to stocks conversion on the Shareholders custody accounts in the register of the Company “Legal predecessor”.

In case the whole package of shares shall be converted the Shareholder shall receive N of new actions.

In case the production of stocks conversion ratio by number of the shares subject to stocks conversion falls within the range as follows:

$$[K_{conv} n] \leq K_{conv} n < [K_{conv} n] + 0,5,$$

the number of shares subject to be placed to a Shareholder as the result of the stocks conversion (N) equals to the integral value of the production of the stocks conversion ratio $[K_{conv}]$ by the number of shares subject to conversion (n).

$$N = [K_{conv} n]$$

If the production of the stocks conversion ratio by the number of shares, subject to conversion, falls within the range as follows:

$$[K_{conv} n] + 0,5 \leq K_{conv} n < [K_{conv} n] + 1,$$

The number of shares subject to be placed to Shareholders as the result of the stocks conversion (N) shall equal to the integral value of the production of the stocks conversion ratio K_{conv} by the number of shares subject to conversion (n) added by unity.

$$N = [K_{conv} n] + 1$$

$$N = (K_{conv} n)_o = \begin{cases} [K_{conv} n], & \text{if } [K_{conv} n] \leq K_{conv} n < [K_{conv} n] + 0,5 \\ [K_{conv} n] + 1, & \text{if } [K_{conv} n] + 0,5 \leq K_{conv} n < [K_{conv} n] + 1 \end{cases}$$

ADD – additional (new) issue of shares of the Company “Legal predecessor”.

$$ADD = N_1 + \dots + N_k$$

If a value subject to the rounding exceeds that using which the rounding shall be performed upwards the number of shares due to a Shareholder as a result of the stocks conversion shall exceed by one share in case the value subject to the rounding does not exceeds this value.

Let us compare these means of the stocks conversion with conversion of every share separately.

In case of the rounding upward and the stocks conversion of every share separately to the respective Shareholders is due the larger number of shares than it might be in case of the conversion of the shares package.

$$([K_{conv}] + 1) n > [K_{conv} n] + 1$$

In case of the rounding downward and the stocks conversion of every share separately, to the respective Shareholders is due the same number of shares as it were in case of the stocks conversion of the shares package.

$$[K_{conv}] n = [K_{conv} n]$$

In general, all shares issued by the Company “Legal Predecessor” and subject to stocks conversion shall be converted; the result of stocks conversion shall be distributed to the participation interest owned by the Shareholders.

If the reorganization shall be performed in the form of accession or amalgamation, this implies the stocks conversion of the total equity capital; in case the reorganization shall be performed in the form of separation, or in case of division, the conversion of its part. The total number of shares subject to stocks conversion shall be multiplied by the stocks conversion ratio. The result shall be distributed among Shareholders as provided by the agreement reached by them. If it is the total equity capital or any other set of equity stocks of the Company “Legal Predecessor” which shall be converted the only one rounding may be performed.

Table 4: Conversion of equity capital of part of equity capital of the company legal predecessor

Company	legal	Number of shares	Stock	Distribution of additional issue of

predecessor	subject conversion	to conversion procedure	legal successor shares	
			Option 1	Option 2
Shareholder «a»	7		11	10
Shareholder «b»	6		9	9
Shareholder «c»	4		6	6
Shareholder «d»	3		4	5
Company's equity capital	20	$20 \times 1,5 = 30$	30	30

ADD – additional (new) issue of shares of the Company “Legal predecessor” equals to the rounded value of product of the stocks conversion ratio by the total number of shares subject to stocks conversion:

$$ADD = ((n_1 + \dots + n_k) K_{conv})_o$$

The reorganization participants may agree about various options for placement of additionally issued shares as well as for their placement among the Shareholders of the Company “Legal predecessor”.

The extent of the redistribution of the corporate rights during reorganizations of joint stock companies is directly influenced by the stocks conversion procedure selected by Shareholders. Using the same stocks conversion ratio, but a different stocks conversion procedure Shareholders may receive differing number of shares and subsequently differing participation interest of the equity capital of the Company “Legal Successor”.

The above examples clearly show the correctness of this conclusion. The same number of shares subject to the stocks conversion (20 shares) and the same stocks conversion ratio ($K_{conv}=1,5$) may be converted into different number of shares depending on the used stocks conversion procedure.

In case every share is to be converted separately, 20 shares of the Company “Legal Predecessor” will result in 40 shares of the Company “Legal Successor”.

In case a package (set) of shares owned by every Shareholder is to be converted, 20 shares of the Company “Legal Predecessor” will result in 31 shares of the Company “Legal Successor”.

In case a total number of shares of the Company “Legal Predecessor” is to be converted, 20 shares of this Company will result in 30 shares of the Company “Legal Successor”.

Even such small numerical values may lead to significant divergence in final results.

According to experience gained by the “Moscow Corporate Strategies Centre”, we may say that the stocks conversion procedure based on that of package of shares owned by every Shareholder of the Company “Legal Successor” has been used more often. This choice was determined purely by considerations of usability; nevertheless, this kind of stocks conversion is not the only solution feasible. There are some conditions under which the stocks conversion of the total equity capital of the Company “Legal Predecessor” is the only feasible means of the stocks conversion.

Stocks conversion procedure under conditions of the cross-shareholding

Basing on our consulting experience, we often happened to meet situations when some joint stock companies were to undergo reorganization (in the form of accession, amalgamation) under conditions of cross-shareholding.

Let us consider example as follows: optimization of metallurgic holding company which implied accession of three companies to (A, B, C) company D.

Table 6: Reorganization Under Conditions of Cross-Shareholding

Companies- Participants In Reorganization	Shareholders	Interest Of Share - Holders Within Equity Capital (%)	Equity Capital (Number Of Shares)	Stocks Conversion Ratio
COMPANIES LEGAL PREDECESSORS SUBJECT TO ACCESION				

A	Person – Φ_1 Person – Φ_2 Company – B	45 25 30	5223	$K_A = 1,02$
B	Person – Φ_2 Person – Φ_3 Company – C	35 35 30	2271	$K_B = 1,98$
C	Person – Φ_1 Person – Φ_3 Company – A	35 35 30	1154	$K_C = 2,20$
COMPANY LEGAL SUCCESSOR				
D	Person – Φ_1 Person – Φ_2 Person – Φ_3	33 33 34	12272 – additional issue of shares subject to placement among Shareholders of the reorganized Company	

The Companies participating in the reorganization own the shares of each other (cross-shareholding effect).

The reorganization shall result in termination of the companies subject to accession. Before being reorganized, they had six Shareholders each. After reorganization of the Company, the other companies will have only three shareholders among whom shall be placed the additionally issued shares.

The shares additionally issued by the Company “Legal Successor” shall be distributed among the persons Φ_1 , Φ_2 , Φ_3 .

In this case, the number of equity stocks to be issued to a Shareholder can not be defined as a product of every share or total share package (in the Company subject to

accession) owned by this Shareholder by the stocks conversion ratio. In any Company subject to accession the part of shares is owned by the legal bodies which shall be terminated after this reorganization.

The Shareholders –persons may participate in the companies which are to be affiliated to the Company “Legal Successor” both directly and indirectly. The direct participation is the direct ownership of shares issued by the Company to be affiliated; indirect participation is the ownership of the shares issued by the Company which is the Shareholder of that Company to be affiliated.

After reorganization, the intermediated companies shall be terminated; the Shareholders-persons shall participate directly in the Company “Legal Successor”.

The task: the indirect participation of the Shareholders - persons in the companies which are subject to affiliation within the process of the accession shall be transformed into the direct participation i.e. «to distribute shares» of the Company subject to be affiliated owned by another Company, among the Shareholders of this Company.

Experts of the «Moscow Corporate Strategies Centre» have developed the instruction how to transform the indirect participation of the Shareholders in the respective Company (through control of other Shareholders) into the direct one.

The multilateral accession agreement provides for the stocks conversion procedure as follows:

A, B, C – number of shares issued by every Company subject to be affiliated within the accession process which shall be converted.

KconvA, KconvB, KconvC, –stocks conversion ratio for shares issued by every Company subject to be affiliated within the accession process.

ADD – additional (new) issue of shares of the Company “Legal predecessor”.

The shares issued by every Company subject to be affiliated within the accession process, which shall be converted, are to be multiplied by the respective stocks conversion ratio. The results shall be summed up.

$ADD = A KconvA + B KconvB + C KconvC$

The shares issued additionally by the Company to which the respective Companies shall be affiliated within the accession process shall be placed among its three “new”

Shareholders-persons in proportion to their interest in the equity capital of the above companies.

The persons are both Shareholders of the Companies A, B, C, and dispose of their equity stocks indirectly through participation in legal bodies which are, in their turn, Shareholders of the above companies.

Let us introduce symbols necessary for solution of this task and define the participation interests in the equity capital of the Company A, directly owned by the persons as follows:

- those owned by the person Φ_1 as ϕ_1^A ;
- those owned by the person Φ_2 as ϕ_2^A .

Let us define the participation interests in the equity capital of the Company A, directly owned by the Company B as w_B^A .

The equity capital of the Company A is structured as follows:

$$\phi_1^A + \phi_2^A + w_B^A = 1$$

Let us define the participation interests in the equity capital of the Company B, directly owned by the persons as follows:

- those owned by the person Φ_2 as ϕ_2^B ;
- those owned by the person Φ_3 as ϕ_3^B .

Let us define the participation interests in the equity capital of the Company B, owned by the Company C as w_C^B .

The equity capital of the Company B is structured as follows:

$$\phi_2^B + \phi_3^B + w_C^B = 1$$

Let us define the participation interests in the equity capital of the Company C, directly owned by the persons as follows:

- those owned by the person Φ_1 as ϕ_1^C ;
- those owned by the person Φ_3 as ϕ_3^C .

Let us define the participation interests in the equity capital of the Company C, owned by the Company A as w_A^C .

The equity capital of the Company C is structured as follows:

$$\phi_1^C + \phi_3^C + w_A^C = 1$$

The cross-shareholding creates the “rotary effect” as follows: the equity capital of the Company A is consisted of the participation interests owned by the persons Φ_1 , Φ_2 and the Company B. Accordingly, the equity capital of the Company B is consisted of the participation interests owned by persons Φ_2 , Φ_3 and the Company C; the equity capital of the Company C is consisted of the participation interests owned by persons Φ_1 , Φ_3 and the Company A.

Such rotary of the cross-shareholding for the equity capital of the Company A may be illustrated by the configuration pattern as follows:

$$A: \phi_1^A$$

$$\phi_2^A$$

$$w_B^A \quad B: \phi_2^B$$

$$\phi_3^B$$

$$w_C^B \quad C: \phi_1^C$$

$$\phi_3^C$$

$$w_A^C$$

While considering this “circle” step by step, we may divide the participation interest owned by the respective Company into those owned by respective persons who are Shareholders of this Company and that owned by the Company following within the circle. Let us, A- number of shares of the Company A. The number of shares of the Company A, which is actually controlled by the person Φ_1 shall be expressed by formula as follows:

$$x(\Phi_1, A) = A \frac{\phi_1^A + \phi_1^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

Participation interest in the equity capital of the Company A, which is actually controlled by the person Φ_1 shall be expressed by formula as follows:

$$w(\Phi_1, A) = \frac{\phi_1^A + \phi_1^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

The number of shares of the Company A, which is actually controlled by the person Φ_2 including by means of “indirect ownership” through possession of the shares of the company B shall be expressed by formula as follows:

$$x(\Phi_2, A) = A \frac{\phi_2^A + \phi_2^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

Participation interest in the equity capital of the Company A, which is actually controlled by the person Φ_2 shall be expressed by formula as follows:

$$w(\Phi_2, A) = \frac{\phi_2^A + \phi_2^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

The number of shares of the Company A, which is actually controlled by the person Φ_3 including by means of “indirect ownership” through possession of the shares of the company B and C shall be expressed by formula as follows:

$$x(\Phi_3, A) = A \frac{\phi_3^B w_B^A + \phi_3^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

Participation interest in the equity capital of the Company A, which is actually controlled by the person Φ_3 определяется формулой:

$$w(\Phi_3, A) = \frac{\phi_3^B w_B^A + \phi_3^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C}$$

Using such algorithm of distributing the shares of the Companies B and C, we may derive formulas for actual possession of shares issued by the above Companies by persons Φ_1 , Φ_2 and Φ_3 .

Let us illustrate the derived formulas by the data drawn from above example. Let us calculate the participation interest in the equity capital of the Company A, which is actually controlled by the persons Φ_1 , Φ_2 and Φ_3 :

$$w(\Phi_1, A) = \frac{\phi_1^A + \phi_1^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C} = \frac{0,45 + 0,35 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,495.$$

$$w(\Phi_2, A) = \frac{\phi_2^A + \phi_2^B w_B^A}{1 - w_C^B w_B^A w_A^C} = \frac{0,25 + 0,35 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,365.$$

$$w(\Phi_3, A) = \frac{\phi_3^B w_B^A + \phi_3^C w_C^B w_B^A}{1 - w_C^B w_B^A w_A^C} = \frac{0,35 \cdot 0,3 + 0,35 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,140.$$

Let us calculate the participation interest in the equity capital of the Company B, which is actually controlled by the persons Φ_1 , Φ_2 and Φ_3 :

$$w(\Phi_1, B) = \frac{\phi_1^C w_C^B + \phi_1^A w_A^C w_C^B}{1 - w_C^B w_B^A w_A^C} = \frac{0,35 \cdot 0,3 + 0,45 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,150.$$

$$w(\Phi_2, B) = \frac{\phi_2^B + \phi_2^A w_A^C w_C^B}{1 - w_B^B w_B^A w_A^B} = \frac{0,35 + 0,25 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,383.$$

$$w(\Phi_3, B) = \frac{\phi_3^B + \phi_3^C w_C^B}{1 - w_B^B w_B^A w_A^B} = \frac{0,35 + 0,35 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,468.$$

Let us calculate the participation interest in the equity capital of the Company C, which is actually controlled by the persons Φ_1 , Φ_2 and Φ_3 :

$$w(\Phi_1, C) = \frac{\phi_1^C + \phi_1^A w_A^C}{1 - w_C^B w_B^A w_A^C} = \frac{0,35 + 0,45 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,499.$$

$$w(\Phi_2, C) = \frac{\phi_2^A w_A^C + \phi_2^B w_B^A w_A^C}{1 - w_C^B w_B^A w_A^C} = \frac{0,25 \cdot 0,3 + 0,35 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,110.$$

$$w(\Phi_3, C) = \frac{\phi_3^C + \phi_3^B w_B^A w_A^C}{1 - w_C^B w_B^A w_A^C} = \frac{0,35 + 0,35 \cdot 0,3 \cdot 0,3}{1 - 0,3 \cdot 0,3 \cdot 0,3} = 0,392.$$

Let us calculate the number of additionally (newly) issued shares of the Company “Legal Successor” owned by the person Φ_1 :

$$\begin{aligned} x(\Phi_1, ADD) &= K_A A w(\Phi_1, A) + K_B B w(\Phi_1, B) + K_C C w(\Phi_1, C) = \\ &= 1,02 \cdot 5223 \cdot 0,495 + 1,94 \cdot 2271 \cdot 0,150 + 2,2 \cdot 1154 \cdot 0,499 = 4564,81. \end{aligned}$$

Let us calculate the number of additionally (newly) issued shares of the Company “Legal Successor” owned by the person Φ_2 :

$$\begin{aligned} x(\Phi_2, ADD) &= K_A A w(\Phi_2, A) + K_B B w(\Phi_2, B) + K_C C w(\Phi_2, C) = \\ &= 1,02 \cdot 5223 \cdot 0,365 + 1,94 \cdot 2271 \cdot 0,383 + 2,2 \cdot 1154 \cdot 0,110 = 3911,19. \end{aligned}$$

Let us calculate the number of additionally (newly) issued shares of the Company “Legal Successor” owned by the person Φ_3 :

$$\begin{aligned} x(\Phi_3, ADD) &= K_A A w(\Phi_3, A) + K_B B w(\Phi_3, B) + K_C C w(\Phi_3, C) = \\ &= 1,02 \cdot 5223 \cdot 0,140 + 1,94 \cdot 2271 \cdot 0,468 + 2,2 \cdot 1154 \cdot 0,392 = 3802,94. \end{aligned}$$

Let us calculate the number of additionally (newly) issued shares of the Company “Legal Successor” owned by the persons Φ_1, Φ_2, Φ_3 :

$$w(\Phi_1, ADD) = \frac{x(\Phi_1, ADD)}{ADD} = \frac{4564,81}{12272} = 0,372.$$

$$w(\Phi_2, ADD) = \frac{x(\Phi_2, ADD)}{ADD} = \frac{3911,19}{12272} = 0,319.$$

$$w(\Phi_3, ADD) = \frac{x(\Phi_3, ADD)}{ADD} = \frac{3802,94}{12272} = 0,309.$$

The proposed method is universal. It enables us to determine the real participation interest under actual control of certain Shareholders and in the context of indirect participation in the equity capital through other legal bodies. It is an issue of great importance to be able to find the real dependence and affiliation of the market participants.

Reorganization of legal bodies from the point of view of economics is arrangement of assets, liabilities, own (equity) capital and membership of these legal bodies within the process of foundation and termination. The variety of patterns for these elements makes economic sense for different options of consolidation, or division. Arrangement of equity capital is an issue of particular importance due to the fact that it shall determine ratio for both Shareholders' corporate rights and distribution of corporate control within the Company. The more variations there are in this arrangement, the more problems may be resolved within the process of reorganization.

Unfortunately, in contemporary corporate practice, the process of reorganization in various forms "means of stocks conversion" have never been applied as an instrument for stocks issues to the proper extent. This fact sets limits for possibilities of obtaining larger number of options for distributing the Shareholders' corporate rights.

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