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# **FINANCIAL ARCHITECTURE ADAPTATION OF ENTERPRISES: QUANTITATIVE DOMINANTS IN THE CYCLICAL ECONOMIC DEVELOPMENT**

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**Abstract:** The article presents a study on the properties of adaptation of business financial architecture in a cyclical development of the economy. The importance of the ability to regulate both individual components and the architecture as a whole in accordance with the stages of the business cycle in terms of reducing business and financial constraints and reducing capital costs is emphasized. The adaptation of financial architecture of large metallurgical companies for the period of business cycle in Ukraine is considered. The speed of the dynamic adjustment of architecture based on key industrial enterprises in Ukraine, as well as the acceleration for models of adaptive changes are estimated.

**Key words:** financial architecture, adaptation, capital structure, speed of adjustment.

**JEL:** G3.

**I**n terms of existing macroeconomic, institutional, market and legal environment, formed as evolution and transformation result of the economic development, including the cumulative effect of business cycles is a natural process of adapting businesses to such conditions. This process manifests in the formation specific characteristics of a particular economic system financial architecture business. It occurs as accumulated result of

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conscious business decisions taken influenced financial constraints and often aims to simplify the business relationship between the business participants and reduce both direct current expenses from ordinary activities and indirect (transaction) costs resulting frictional markets.

A critical review of Myers S. research [15], as an author of the corporate financial architecture idea as well as Barclay M. [1], Ivashkovskaya I. [10], Bychkova N. [2] and other related literature allowed to determine financial architecture as a dynamic system (integrity) of connected characteristics that embodies the fundamental laws and determines the qualitative features of entity's financial activities (in part of its structure, volume and capacity of reproduction), its effectiveness and impact on the market value of business.

Given the different perspectives on components of the financial architecture authors determine the following of them: ownership structure, corporate governance, organization form of business and financing structure, which is endogenous, most adaptive, and at the same time, the central part of the financial architecture. Thus, on the one hand, the financial architecture is essentially the institutional structure of the entity within its financial dealings are built. On the other hand, it is a system of internal factors that determines the financial resources value, and therefore the market value of a company.

Using the cluster analysis method and based on the theoretical foundations of the concept, we identified certain types of financial architecture that most often appear in the Ukrainian business environment and made it possible to talk about the general features of enterprises financial architecture in Ukraine. Thus, some clusters are formed from companies with highly concentrated ownership, effective corporate governance that balances the interests of shareholders, management and other agency groups, providing space for making independent decisions of private interests. The share of debt financing in the capital structure adjusts from high values to suboptimal, which indicates the possibility to rise required additional funding quantities at an adequate price for the whole business cycle. Furthermore, it shows an ability of companies to pay their debts in time. We noted that all the companies of this type (including, LLC "Metinvest Holding" LLC "DTEK", JSC "Agroholding Avangard", JSC "Poltava GOK" JSC "Interpipe Nizhnedneprovskiy Rolling Plant", JSC "Druzhkivka Engineering plant", etc.) are in financial-industrial groups.

At the same time, the most of large and smaller entities in the Ukrainian business are characterized by high concentration of ownership and ineffective corporate governance (the share of debt in the financing structure, as a rule, is either substantially increased, or minimal). A separate cluster is formed from small companies which property is distributed among several

shareholders, who do not create a special, balancing agency relationship, body. The activities are funded at the expense of own sources and current payables due to complexity of rational credit resources raising. Such combinations of structural characteristics in themselves manifest as internal factors of financial constraints for companies and complicates the already limited market access to additional, sufficient capital.

At the same time, although there are some prevailing features of the financial architecture of enterprises in Ukraine, the authors define financial architecture as a dynamic integrity, which is characterized by adaptation to changes in the business environment, first of all, to the cyclical nature of its economic development. Adaptation of individual elements of financial architecture differs in a procyclical, countercyclical or acyclic trend. In this way, the following tendencies were revealed:

- debt load level increasing in the capital structure of large enterprises during economic stability periods and returning to the lower leverage during recession periods (procyclicality);

- smaller assets companies show a predominantly opposite tendency, indicating a small reserve of financial flexibility. In both cases, the capital structure was defined as the most variable element of enterprises financial architecture;

- the ownership concentration level of business changed according to the economic trend (procyclically): the most active major shareholders buy-outs took place in the stable period of 2011-2012, while the restrained decline of the ownership concentration took place in the recession of 2014-2015. Additionally, there is a higher ownership concentration in large companies;

- the size of companies, which is estimated at the book value of assets, is determined as the acyclic value;

- the state of business corporate management receives the signs of higher efficiency in stable periods by improving the quantitative and qualitative composition of management bodies.

At the same time, financial architecture dynamic changes are not always rational for business entities from the point of reducing financial constraints and increasing the ability to access adequate external financing. As a rule, they are emergency response to market shocks and new institutional requirements.

The adaptation in terms of financial constraints reduction can be estimated from the fact of the countercyclical nature of net cash flow and net investment. Net cash flow decreasing leads to a lack of liquidity and therefore, necessitates borrowed funds attraction, facing with financial constraints. The efficiency of financial architecture adaptive changes can be identified by the possibility of investments volume increasing during periods of net cash flow

declining, financing them either due to simplified, cheaper loans or due to unrealized (accumulated) financial potential. In this case, net cash flow is formed according to Ukrainian accounting standards methodology from retained earnings (uncovered expense) that have been corrected for depreciation [7].

Thus, one of the sufficient indicators of the financial architecture rational adaptation at a current time is the minimum negative value of the ratio of net operating cash flow change and net investment change, provided net operating cash flow decreasing. The cumulative negative value of the ratio for the seven-year period allows to estimate the degree of business adaptation rationality over the entire cycle, that is:

$$(1) IA_{FA} = \begin{cases} \frac{\sum_t(-\Delta NOCF)}{\sum_t(+\Delta NI)} \rightarrow \min, \\ \Delta NOCF < 0 \end{cases}$$

where:  $IA_{FA}$  – financial architecture adaptation efficiency indicator;  
 $-\Delta NOCF$  – net operating cash flow reduction;  
 $+\Delta NI$  – net investment increase.

According to the results of calculating for the period from 2008 to 2015 only 32 from 100 companies of statistical sampling showed a negative cumulative value of the ratio of net cash flow and investment change during declining periods, accompanied by net cash flows decreasing. In other words, enterprises, in the terms of reducing their own resources and in the presence of the investment needs, had and used the real opportunity to attract required for investing borrowed resources for an affordable price. As a result, there is the net investment growth in the relevant years. In general, the similar companies' behavior indicates their significantly lower level of financial constraints relative to other ones, and thus allows to judge about more rational financial architecture adaptation during the business cycle as a main factor of financial constraints reducing.

However, the formed types of financial architecture continue to bring the financial constraints and risks for most companies, that manifests at an excessively high level of accumulated debt burden, a violation of financial stability and the inability to switch from one source of funding to another according to their costs. As a result, the high investment dependence on the internal cash flows as the main source of own financing, and therefore almost complete lack of investment in recession periods, when cash flows are reduced and the company suffers from a liquidity shortage.

The main cause of these imbalances is the inadequate financial capital structure, as well as the impossibility of its adaptive adjustment due to the high level of direct expenses (related to the interest rates increasing and

bankruptcy risk) and indirect – transaction, agency (related with the conflicts between agents' groups, information opacity and asymmetry, limited rationality of counterparties). At the same time, the deeper crisis processes in the economy, the higher the level of these expenses.

Thence, there are need to increase the enterprises financial architecture adaptation rationality precisely in terms of reducing the negative impact of internal financial constraints (minimizing the associated costs) and achieving such flexible financial behavior. It allows to adjust the capital structure in accordance with the business cycle stages in order to maintain financial sustainability in each period, minimizing total capital costs and accordingly increasing the value of business.

At the same time, it must be considered that in practice every adaptation change connected with financial and time losses that are not always compensated by a positive effect. That is why companies financial architecture adaptation should be justified taking into account the indicators:

- speed of adaptation;
- cost (aggregate expenses of adaptation);
- efficiency (impact on the capital value).

In this paper authors focused on analysis and quantitative estimation of the financial architecture adaptation speed as an indicator that allows to determine how quickly financial constraints have reduced and, accordingly, how quickly the financial resources cost have reduced due to architectural changes in business.

As mentioned above, the capital structure management is one of the priority issues to be decided by company in its operations, since it determines the capital costs and consequently affects its market value. In this order, the representatives of the dynamic compromise theory of capital structure suggest to determine the individual target level of the company's financial leverage (the share of borrowed capital in total capital) in each new period. This ratio is calculated based on the certain determinants for the base period and reflects maximum allowable debt load level in the current period.

The need to calculate target financial leverage (targeting) is as follows: the company must focus on the lower debt level in the absence of a significant investment need during recession and crisis periods, when the capital costs and associated indirect expenses reach their maximum. As a result, in the case of profitable investment project appearance in the recovery period the company is able to raise additional debt capital for its financing on the most favorable conditions and, thus, not to fall into debt dependence.

In order to study the companies capital structure in the cyclical economic development, it was decided to choose a partial adjustment model assumed by the dynamic compromise theory for growing markets. According

to this model, the target capital structure value changes to a certain level in each period, setting only the upper bar for acceptable value (in practice there can always be a certain reserve of under-borrowing). As Haas R. notes, a firm is able to function some time with a leverage below the target (suboptimal) if the cost of adjusting to the target level exceeds the benefits of its achievement [6].

Within the framework of the partial adaptation model De Angelo G. [3], Faulkender M. [5], Rajan R. [16], Lemmon M. [14], Drobets V. [4], Kokoreva M. [12], and other authors investigate the influence of intra-firm determinants on the companies capital structure. The analysis of works allows to systematize the factors of influence and to formulate the linear regression equation, which has the following form:

$$(2) L_t = \gamma + \beta_1 \left(\frac{M}{B}\right)_{t-1} + \beta_2 \left(\frac{EBITA}{A}\right)_{t-1} + \beta_3 \ln(S)_{t-1} + \beta_4 \left(\frac{PPE}{A}\right)_{t-1} + \beta_5 \left(\frac{NOCF}{A}\right)_{t-1} + \beta_6 \left(\frac{NIOCF}{A}\right)_{t-1} + v_t,$$

where:  $L_t$  – financial leverage in the reporting period;

$\gamma$  – a constant;

$\frac{M}{B}$  – ratio of the company's market value to the balance sheet;

$\frac{EBITA}{A}$  – ratio of operating profit to the value of assets;

$\ln(S)$  – natural logarithm of the volume of assets;

$\frac{PPE}{A}$  – ratio of the non-current assets value to the total assets value;

$\frac{NOCF}{A}$  – relation of operating net cash flow from activities to assets.

Thus, by the means of a model, it becomes possible to determine the extent and direction of the previous year domestic financial indicators influence on the company's financial leverage of the current year. Moreover, it allows to calculate the target financial leverage for any actual period by substituting appropriate data:

$$(3) L_t^* = \gamma + \beta_{it-1} * X_{it-1},$$

where:  $L_t^*$  – target financial leverage of the company in the actual period;

$\gamma$  – a constant;

$\beta_{it-1}$  – corresponding regression coefficient for the previous year;

$X_{it-1}$  – value of the corresponding financial indicator for the previous year.

Knowing the target and the actual values of a financial leverage, it becomes possible to calculate the speed at which the actual leverage ratio changes annually compared to the target ratio. The speed of adjustment (SOA) allows to determine how long a company can potentially optimize capital structure.

Consequently, the speed of financial leverage adjusting can be found by the formula:

$$(4) L_i - L_{i-1} = \alpha(L_i^* - L_{i-1}),$$

respectively:

$$(5) \alpha = \frac{L_{it} - L_{it-1}}{L_i^* - L_{it-1}},$$

where:

$\alpha$  – speed of financial leverage adjustment;

$L_{it}$  – actual value of the financial leverage in the reporting period;

$L_{it-1}$  – actual value of the financial leverage in the previous period;

$L_i^*$  – target value of the financial leverage in the reporting period.

According to the compromises theory, each time the company's actual leverage deviates significantly above, it tries to get as close as possible to the target value in the next period. Fama E. and French K. cast doubt on this position of the compromise theory, since, suggesting speed of adjustment of the financial leverage is too high and does not allow companies to get necessary freedom in the borrowing process, if it is cost-effective for them at the moment.

Modern empirical studies of American authors confirm this view and estimate the average speed of adjustment for companies at the 1/3 - 1/12 level of "distance" to the target leverage for each year. Having information about the dynamics of companies' adjustment speed changing over several years it becomes more clearly to trace the dynamics of their investment activity. Estimating the actual business environment in Ukraine as a recession, authors assume that domestic enterprises would show lower speed of financial leverage adjustment compared foreign studies results.

The results of the regression analysis, which have sufficiently high reliability according to the obtained indicators of descriptive statistics (R-square), allowed to determine a number of regression coefficients that correspond to the direction and level of determined factors influence on the companies' speed of leverage adjustment (Table 1). The consistency of the data with the law of normal distribution indicates the analysis of the standard deviation ratio to the average for each indicator ( $\geq 33\%$ ). In addition, a correlation analysis did not reveal evidence of autocorrelation of data. To assess which capital structure determinants were most significant during the business cycle, the obtained regression coefficients were normalized accordingly for different phases of the cycle.

**Table 1. Regression analysis results of the internal determinants influence on the speed of capital structure adaptation to target values**

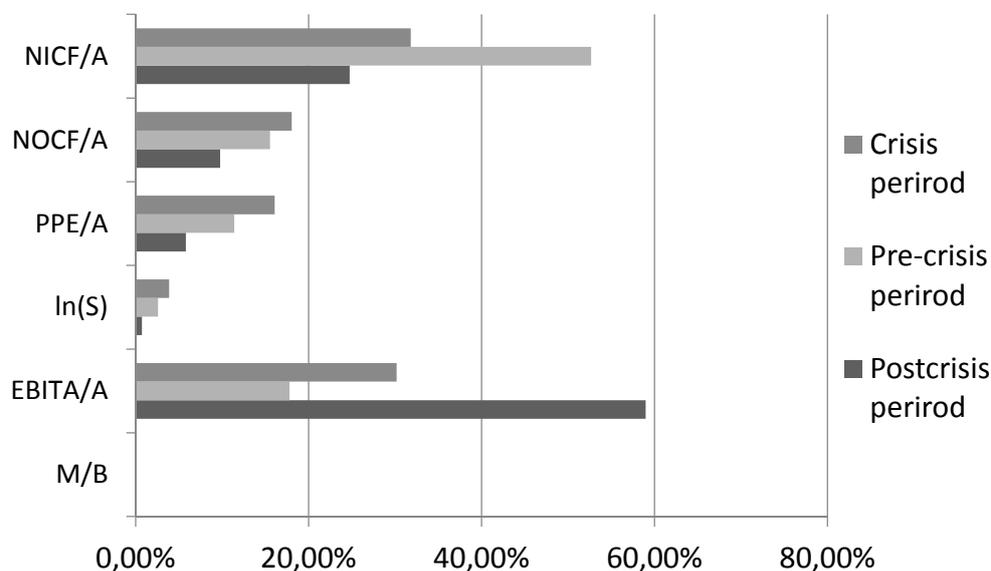
Years	2009	2010	2011	2012	2013	2014	2015	Normalized coefficients		
Multiple R	0,98	0,78	0,93	0,88	0,64	0,87	0,98			
R-square	0,96	0,61	0,87	0,77	0,42	0,75	0,97			
Standard mistake	0,09	0,28	0,15	0,27	0,57	0,33	0,19			
Constant	-1,63	-0,25	0,48	0,91	-0,70	0,95	1,89	Postcrisis period	Pre-crisis period	Crisis period
$\frac{M}{B}$	-0,00	-0,00	-0,00	0,00	-0,01	0,01	0,00	0,00	0,00	0,00
$\frac{EBITA}{A}$	-0,59	2,55	-3,43	3,90	1,34	-16,49	0,65	0,59	0,18	0,30
$\ln(S)$	0,17	0,06	0,02	-0,00	0,62	-0,68	0,00	0,01	0,03	0,04
$\frac{PPE}{A}$	-0,38	-0,08	-0,47	1,49	-1,62	-1,11	-2,18	0,05	0,11	0,16
$\frac{NOCF}{A}$	-0,17	-0,83	-0,25	-1,04	2,95	-6,57	-2,22	0,10	0,16	0,18
$\frac{NICF}{A}$	-0,52	-2,38	0,42	9,55	5,48	-7,38	4,01	0,25	0,53	0,32

Thus, in this course of the analysis authors received the following results of financing police determinants influence on the financing policy of business entities:

a) profitability has a significant positive impact on the ability of companies to attract loan financing during relative stability periods and significant negative in crisis periods. So, provided income receiving during recession and crisis periods companies will be able to finance expenses from their own financial resources, which reduce dependence on external financing, and therefore, adjust the capital structure;

b) size of assets did not prove to be a significant influencing factor of the company's financing policy during the business cycle. At the same time, in the crisis of 2014, this indicator had a negative impact on the debt level. It confirms the earlier conclusion about wider possibility of capital structure adjusting and avoiding critical levels of debt by large enterprises;

**Figure 1. Regression model normalized coefficients of capital structure influencing factors**



c) the proportion of non-current assets during the business cycle had a negative impact on the ability to attract borrowed capital, which may be explained by the weak investment need of companies with a high level of real assets and a reduced share of the most liquid working capital;

d) the net operating cash flow has an increased negative impact on the debt, which is consistent with the trade-off theory. Consequently, companies use free cash to reduce the debt burden, but if there is a need for financing working capital companies can use debt sources. Influence on the speed of capital structure adjustment is evaluated as positive;

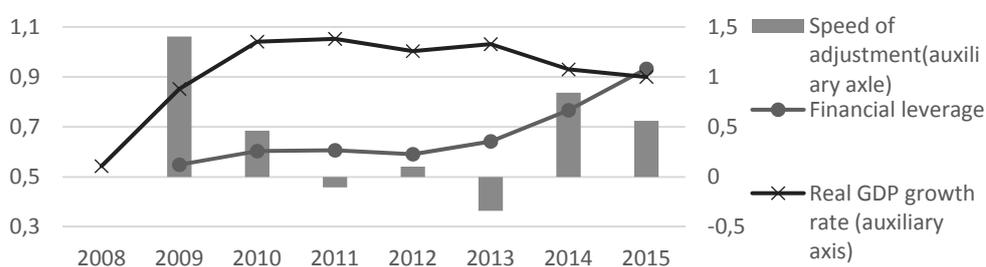
e) the effect of the net investment flow that is normalized to the size of aggregate assets, was significant and nonlinear: negative in crisis years, positive in the stable ones. It allows to confirm the conclusion that the debt capital attraction for financing investment projects by companies in Ukraine is limited and provides mainly during recovery periods, when the lending cost is reduced. In other periods, investments are financed from own resources due to their significantly lower costs;

f) the ratio of market value to balance sheet turned out to be insignificant signal in the financing structure formation throughout the study period, which indicates the information lack of the domestic stock market from the point of companies' growth prospects monitoring and assess their

fair market value. Accordingly, it was decided not to take this indicator into account as a criterion for choosing the capital structure of enterprises.

The high frequency of changes in the business cycle, and therefore the high volatility of companies' financial leverage and financial indicators determining the target leverage, define the high frequency of changes in the speed of financial leverage adjustment. It significantly complicates the ability to follow the strategic approach in Ukrainian companies' financial management. Fig. 2 presents the dynamics of the studied enterprises financial leverage and its speed of adjustment during the business cycle.

**Figure 2. Dynamics of enterprises financial leverage and speed of its adjustment in Ukraine in 2009-2015**



The negative indicators of adjustment speed point to a trend of the distance from the target leverage. In general, the companies financial leverage speed of adjustment for 2009 – 2015 has a wide range from -34% to 140% on average per year. The high volatility of this indicator in Ukraine explains by disparity in financial markets including: 1) significant bankruptcy and instability expenses violations appearing with increasing debt burden that stimulate economic agents to adjust the capital structure; 2) expenses are connected with such adjustments, because of restraining effect.

Thus, the average speed of capital structure adjustment of Ukrainian companies in the changing phases of the business cycle have the following meanings:

- post-crisis period (2010 – 2011): 18%, which is low speed in terms of recovery of companies business activity, investment needs and reduction of barriers to credit access;
- pre-crisis period (2012 – 2013): -12%, which corresponds to the distance from target capital structure cause of as well as investment needs increasing (the volume of investments in 2012 increased by 70% and in 2013 by 35%) and decreasing of financial market limits;
- crisis period (2009 and 2014 - 2015): 94%, proving the highest level of companies recapitalization which can be explained by highest

expenses of capital structure state above target levels and increased risk of bankruptcy in crisis periods;

In general, speed reduction of the capital structure adjustment during stable periods and increasing during the crisis are not relevant with the positions of the dynamic compromise theory. However, sometimes the capital structure adjustment is described as more regular and by fewer steps in periods of boom, while in times of recession – as rare and by larger iterations.

Except for the determinants of companies' financial activity, which is the main form of financial resources ensuring policy, the intrafirm structural characteristics that directly determine the system of finance organization are particularly important in a highly cyclical market environment. It is especially evident in the crisis times when business activity is reduced, as well as the equity volume and credit costs are increased. According to the theory of interest contradictions, a combination of agency conflicts different forms and existing tools of their resolution affect the level of financial constraints companies both directly and indirectly.

Thus, a comprehensive estimation of the financial architecture speed adaptation in terms of the financial cost reduction becomes important. It allows to determine the company's ability to reduce the level of financial constraints due to internal characteristics such as the ownership structure, corporate governance, organizational forms of business. In other words, it determines the adaptation speed of business in the cyclical economic development.

The complex estimation of enterprises financial architecture adaptation speed as a multi-characteristic requires an integrated approach that simultaneously takes into account the speed of adjustment each elements of the financial architecture and demonstrates its adaptive dynamics over the business cycle. Within this connection it is interesting the methodological approach of polynomial dependencies in three-dimensional space by Klymchuk S., who investigates financial architecture of economic systems in terms of transformations [11]. According to such approach the interaction of three financial mechanisms that were represented graphically by the way of special space. The volume changing of obtained space determines the system's ability of the adaptive development.

Partially taking into account such methodology authors consider it is possible to implement the calculation of enterprises financial architecture adaptation speed using index-graphic technique that involves following steps:

1) defining the speed indices of each financial architecture element changing for each year successively:

$$(6) I_{in(1:5)} = \frac{x_i - x_{i-1}}{x_i^*},$$

where:

$I_{in(1:5)}$  – index of changing speed for appropriate financial architecture indicator:  $I_1$  – capital structure;  $I_2$  – ownership structure;  $I_3$  – corporate governance;  $I_4$  – attitude to financial and industrial groups;  $I_5$  – assets size in the reporting period.

$x_i$  – value of each indicator in the reporting period;

$x_{i-1}$  – value of each indicator in the previous period;

$x_i^*$  – value of each indicator (the actual or target – necessary for financial leverage speed of adjustment determining);

2) obtained values of five speed indicators are laid on five axes of petal diagram. Then through connecting lines the unique configuration polygonal shape appears;

3) financial architecture adaptation speed as a multidimensional indicator, calculated as the area of complex shape obtained by dividing it into simple triangles and summation their squares for module:

$$(7) S_i = \sum \left| \frac{1}{2} * I_{in-1} * I_{in} * \sin(\pi) * 2N_i \right|$$

where:  $S_i$  – speed of financial architecture adaptation in the reporting period;

$N_i$  – number of values  $I_{n(1:5)}$  different from 0 for the company.

Based on the obtained data it is possible to calculate the acceleration of adaptation such as measuring the catalyzing of architectural changes:

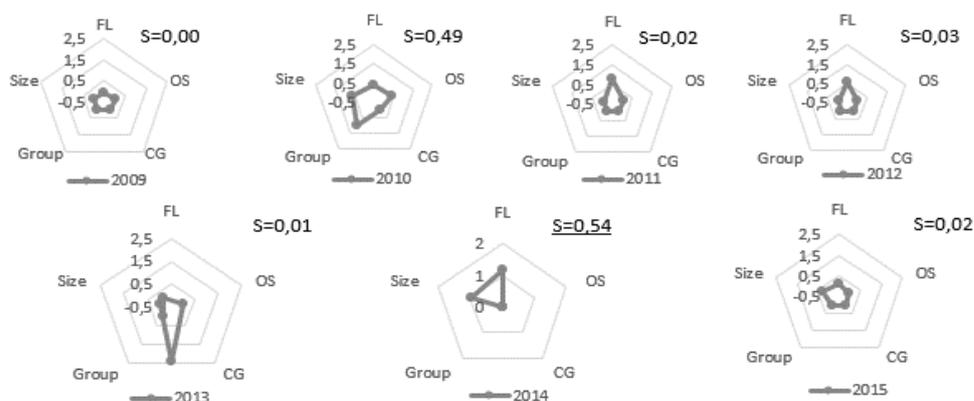
$$(8) \Delta S_i = S_i - S_{i-1},$$

The estimate of adaptation financial architecture acceleration in dynamics allows to make a conclusion about phases of business cycle and external factors (shocks) which cause the changing business architecture. Then, the findings allow to calculate the expensive effect of financial architecture adaptation, shown through the reduction of financial constraints on the weighted average cost of financial capital (taking into account the costs of adaptation that it includes).

With applying of proposed method authors calculated the speed and acceleration of financial architecture adapting for nine major Ukrainian incorporated companies from agriculture, metallurgy, fuel and energy industries. Fig. 3 demonstrates speed dynamic of financial architecture adaptation by JSC "Ilyich Iron and Steel Works of Mariupol", one of the largest technology companies in Ukraine with a complete production cycle, which since 2010 through the participation in a vertically integrated mining and metallurgical holding "Metinvest" is a member of leading diversified

financial and industrial SCM group. The company operates with a high level of ownership concentration: 68,24% of shares belong to SCM owners.

**Figure 3. Speed dynamics of financial architecture adaptation JSC "Ilyich Steel Works of Mariupol" in 2009 – 2015**



As a result of preliminary testing of a sample of companies for dependence on the investment capacity of the net cash flow, the company showed a negative cumulative ratio, indicating a rather low barrier on financing markets which was confirmed by growth of financial leverage from 0,32 in 2011 to 0,50 in 2012. In this case, the validity of the highly leveraged capital structure is approved by adjustments of financial leverage to methodologically set target values (speed of adjustment above zero).

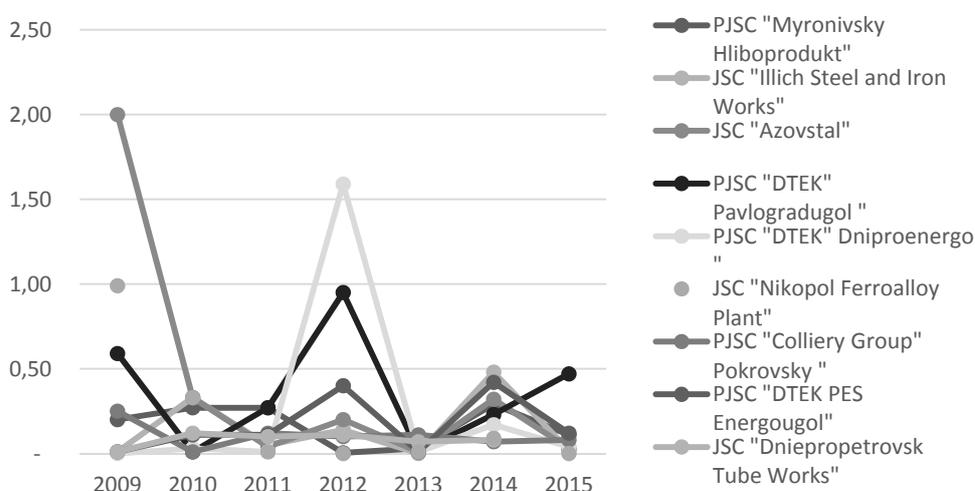
The analysis found that during the investigated period (corresponding to the amplitude of the business cycle in Ukraine) the company's financial architecture as an integrated dynamic system, characterized by some adaptive changes that occur with non-monotonic speed and due to different factors. The highest adapting speed and acceleration of financial architecture JSC "Illich Steel and Iron Works" was recorded in the acute phase of the economic crisis in 2014 – 0,54 (due to adjusting debt reduction and increasing of the book assets value though investments rising by 22%).

Furthermore, a significant speed increase of adaptive changes (0,49) took place in 2010, when the agreement of entry to the financial and industrial group Metinvest was completed. It was because of majority ownership increasing in the quarter and a corresponding increasing in the share of dominant shareholder's votes. As a characteristic of any mergers and acquisitions agreement, in the 2010 the financial restructuring took place; share capital was increased 3,7 times (while the volume of borrowed resources increased 1,6 times). It acted as a source of capital structure

adjustment towards the target. The stable phase of the business cycle in 2011 – 2013 was characterized by an almost complete absence of adaptive changes in the financial architecture that confirms the adaptation speed reduction to 0,01 – 0,03.

The analysis of financial architecture adaptation speed for a sample of nine incorporate enterprises identified certain generalized dynamic patterns that show three "waves" of enhance financial architecture adaptation changes (Fig. 4).

**Figure 4. Speed dynamics of enterprises financial architecture adaptation in Ukraine in 2009 - 2015**



Thus, the most significant changes in companies financial architecture entities took place are:

- 2010 (0,31) – mostly through the renewal trends of redistribution of property rights, mergers and acquisitions agreements between large business groups and companies met difficulties during the financial crisis 2008 – 2009. The procyclicality dynamics of M&A processes in the global market have been approved by KPMG analytics: the average number of agreement with the business combination falls to 30% in crisis [13]. According to the report „Aequo” of Investment Portal „InVenture”, in 2010 the number of M&A agreements in Ukraine increased more than doubled compared to 2009, reaching 69 ones and the total value of 3.4 billion Euro (31 agreements and 1.7 billion Euro in 2009) [8].

- 2012 (0.31) – processes of business consolidation and concentration as proved effective form of corporate restructuring and business development

are becoming more widespread (the number of M&A is 87, but their total value – 0.75 billion Euro). The reason is increase in investment needs during the economic boom on the one hand and the availability of free investment capital, which large corporations willing to invest in long-term projects, on the other. As a result, accelerating architectural changes were also contributed by the increase of total assets.

- 2014 (0.25) – adjustment of debt burden in crisis mainly due to equity replenishment of and fixed assets revaluation in order to avoid financial difficulties. The relatively high speed of adaptation changes in Ukraine during the crisis points to the significant costs of state financial architecture in the previous (unchanged) configuration.

Thus, in any case the processes of enterprises financial architecture adaptation lead to financial restructuring, which is directly aimed to optimizing the financing structure and to minimize the cost of debt capital servicing. In this connection, the speed of adaptation is considered as highest in periods of economic boom, when the new investment opportunities and capital needs appear as well as in crisis periods when the saving of unchanged financial architecture form is the most expensive in terms of funds costs.

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# **ECONOMIC ARCHIVE**

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