Annex B. Methodology for company's financial stability evaluation

According to methodology, described in Subchapter 2.2, the level of company's financial stability is evaluated using these formulas, which is described below.

In this case, the sufficient value of owner equity is identified according to the equation B1 given below (Lace & Sundukova, 2010):

$$SVOE = LA + I - P - LL, \tag{B1}$$

where *SVOE* – sufficient value of owner equity, *LA* – long-term assets; *I* – inventories, *P* – provisions, *LL* – long-term liabilities.

It is assumed that in order to ensure financial stability (balance sheet), low-liquid assets must be funded at the expense of equity and long-term liabilities. When determining the owner's fair value, all stocks are included in the low-liquidity structure.

The sufficient level of the coefficient of financial autonomy is calculated by the equation B2 (Lace & Sundukova, 2010):

$$SLOETAR = \frac{SVOE}{TA}, \tag{B2}$$

where *SLOETAR* – sufficient level of owner equity to total assets ratio, *TA* – total assets.

In that case sufficient short-term liabilities should be expressed by the equation B3 (Lace & Sundukova, 2010):

$$SSTL = CA - LLA, \tag{B3}$$

where *SSTL* – sufficient short-term liabilities, *CA* – current assets; *LLA* – low liquid assets that should be financed at the expense of owner equity.

Sufficient level of company's liquidity (current ratio) can be calculated as following (Lace & Sundukova, 2010):

$$SLL = \frac{CA}{SSTL}, \tag{B4}$$

where SLL – sufficient liquidity ratio.

Comparison of actual and sufficient value of analysed indicators of financial soundness allows approving, that both excess and decrease of actual values against sufficient value has certain negative consequences. Thus, the growth of financial stability at the expense of the growth of owner equity should not take

place uncontrolled because due to the growth of the share of owner equity its profitability may decrease, i.e., profit per unit of owner equity decreases.

In terms of liquidity, there are two possible scenarios (Lace & Sundukova, 2010):

1. actual values do not reach a sufficient value then the enterprises should pay attention on ability to cover short-term liabilities;
2. actual values considerably exceed a sufficient value, it testifies to inefficient use of means, freezingmeans in in-ventures or granting a loan to buyers.

In relation to liabilities and to the net working capital, Lace and Sundukova (2010) apply the term "permissible". Using above-mentioned substantiation of sufficiency of owner equity, the permissible external capital and minimally permissible net working capital are defined using formulas (Lace & Sundukova, 2010):

$$PVL = TA - LLA^*, \qquad\qquad (B5)$$

where PVL – permissible value of liabilities, LLA^* – low liquid assets that should be financed at the expense of owner equity.

$$MPNWC = LLA^*, \qquad\qquad (B6)$$

where $MPNWC$ – minimally permissible net working capital.

For the analysis of dynamics of financial stability, the ratio of actual level of financial coefficient to sufficient should be calculated. For example, in case the actual value of autonomy coefficient decreases, but the ratio mentioned remains unchanged, the level of financial stability may be classified as sustaining. In case the actual level of autonomy coefficient and the ratio mentioned decreases, the level of financial stability also decreases.

Also, these actual indicators of listed companies are calculated (Breuer et al. 2012; Langemeier, 2017):

$$LR = \frac{CA}{CL}, \qquad\qquad (B7)$$

where LR – liquidity ratio, CL – current liabilities.

$$OETAR = \frac{OE}{TA}. \qquad\qquad (B8)$$

Where $OETAR$ – owner equity to total assets ratio, OE – owner equity.