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Theory and practice of capital structure in Central and Eastern Europe

THESES

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I. THE AIM OF THE RESEARCH

Financing, or capital structure decisions is one of corporate finance's major fields that dates back to the era of Miller and Modigliani's pioneering propositions (1958, 1963).

Academic research focusing on the determinants of capital structure has led to numerous theoretic models in the last 50 years. These models show both similarities and differences in the way they explain corporate financing behaviour; therefore, there are multiple ways to classify them. For giving a clear definition, in my thesis I differentiate between (1) the models focusing on the cost-benefit optimum of indebtedness, called the *static tradeoff theory* in general; (2) the models concentrating on the problem of asymmetrical information, or the *pecking order theory;* and (3) the models explaining the capital structure by agency considerations, namely the *agency theory.*

As my main field of interest is the corporate financing behaviour and related preferences in the Central and Eastern Europe where the traditional agency costs between shareholders and debt holders, and between shareholders and managers are difficult to identify and measure, in the followings I put the main emphasis on testing the theoretical implications of the static tradeoff and pecking order theories; however, during the discussion of results, I may occasionally refer to the considerations of the agency theory too.

The purpose of my thesis, in brief, is to test the relevance of the two capital structure theories (presented in the next section), as well as to discuss their application in practice in Hungary and the regional countries, with a particular focus on the sector of small and medium-sized enterprises (SMEs).

With our investigations we have set two goals. *In the first place*, we intended to ease the relative scarcity of empirical evidence on capital structure determinants that is characteristic to the Central and Eastern European (CEE) region. This is explained by the fact that the regional countries do not operate large and active stock and debt markets; and therefore, they got less attention in international researches since 1990. Furthermore, even the little evidence published so far is rather related to the few listed companies domiciled in the region. In consequence, as main scope of research, we have analysed the determinants of capital structure adjustment behaviour among a comparatively large sample of closely-held companies that are the most representative ones in the region's economic structure.

In the second place, in addition to testing a merely quantitative model as widely seen in similar researches, we wished to contribute to a deeper understanding of capital structure of CEE firms with an alternative, qualitative approach. A questionnaire addressed to the

management allows to by-pass the serious difficulties of defining proxy variables and to ask directly the makers of financing decisions about their background and preferences. The collected answers not only provide basis to directly investigate the theoretical implications of capital structure theories, but also to assess whether financial managers effectively decide according to their explicit preferences.

In the following section (Section II), a brief overview of the capital structure theories and their relevance in firms' financing practice from the past is given. I also summarise the most important methodological aspects and the methods of analysis we (my supervisor and I) applied in our research. Section III is reserved for our results, conclusions and theses.

II. THEORETICAL BASES AND THE RESEARCH METHODOLOGY

II.1. The static tradeoff theory

The static tradeoff theory (STT) hypothesises that there is an optimum capital structure for each firm at which the value of firm can be maximized. The increase in value is driven by the tax savings on interests paid (stemming from the use of debt) that is added to shareholder value. However, limitless use of debt is restrained, as increasing leverage creates its own costs deriving from everyday financial encumbrances and the growing present value of bankruptcy costs. The two effects counteract, and at a given level of leverage the marginal benefit and the marginal cost of an incremental portion of debt equalize: at this point the firm is not interested in any further increase, nor in decrease of debt, in other words, it operates with an optimum capital structure. The two cornerstones of the theory are the advantage of tax savings and the costs of financial distresses, in reference to which empirical researches have tested the impact of a large number of financial and other firm-specific determinants.

If the STT prevails in financing behaviour of the companies, then one can expect a continuous adjustment towards a predefined target leverage, either in negative or in positive sense, as well as a strong correlation between relevant capital structure determinants, e.g. profitability, tangibility of assets, tax rate, etc., and the firms' debt-equity ratio.

The two characteristics above – that is (1) a strong and observable cross-sectional determination of leverage ratios; and (2) the motivation of adjusting the debt-equity mix if pushed away from the optimum – have been the main pillars of the theory's empirical testability for long time. The more simple tests, which are focusing on cross-sectional determinants of leverage ratios in a static framework, represent the bulk of academic research in this field. Among these ones, Breadley et al. (1984) provided evidence on the inverse

relationship of leverage ratio and financial distress costs. Breadley et al., Long and Malitz (1985) and Titman and Wessels (1988) found proofs to the inverse relationship of future growth opportunities, in other words, the relative intangibility of company's assets, and leverage. By analysing the capital structure theories in the G7 countries, Rajan and Zingales (1995) show for the first time that determinants of leverage in other countries (size, growth rate, profitability, tangibility of assets) coincide with those previously found relevant in the US. Booth et al. (2001) undertook a similar research among listed firms in the developing world, and extended the validity of aforementioned determinants to ten developing countries.

Gaud et al. (2007) highlight however that conventional regressions are static, and fail to capture an important dimension, which is the dynamic nature of financing policies. A more suitable form of analysis is therefore to study the debt-equity choice of firms conditional on the optimum ratio that is existing and computable. Only a few of the more recent academic papers chose this methodology (see Hovakimian et al. (2001), Gaud et al. (2007) and Kayhan and Titman (2007)) to test motivations that govern corporate financial policy through observing financing transactions. By doing so, the intention of adjustment toward a target ratio, which is once again, the cornerstone of the STT, can be justified. Furthermore, the method puts emphasis also on firm-specific operating metrics and market performance (if relevant for the sample), the impact of which is assumed and tested in determination of the optimum leverage ratio.

In our investigation, we apply this dynamic approach to test the strength of the tradeoff theory among firms in the CEE countries, which to our knowledge has not been done before in this framework, neither on the basis of a large sample of unlisted companies. More than this complex quantitative approach, we also aim to complement our knowledge on tradeoff-driven attitude with a survey in which questions are addressed verbally on preferences and motivations regarding the target leverage and its flexibility. The questionnaire we rely on was first introduced by Graham and Harvey (2001) in the US, and applied later by Brounen et al. (2006) for developed Europe, both of which our sample size is comparable to. To our knowledge, this questionnaire has not been surveyed before in entirety, or in part for the CEE region.

II.2. The pecking order theory

As an alternative to the STT in explaining firms' observable financing practice, the pecking order theory (POT) gained ground in the 1980s thanks to, among others, the pioneering contribution of Myers (1984) and Myers and Majluf (1984). The theory challenges

the existence of a leverage optimum, instead it considers the observable debt-equity mix as the cumulative result of historical financing transactions, assuming a firm that in every decision opts for minimizing the costs of financing. The choice between financing alternatives is determined by the costs related to asymmetrical information between insiders (management) and outside investors (shareholders, creditors, other investors) of the company. Following the POT, the 'least expensive' fund for managers are the retained earnings which are entirely consumed before they have recourse to the next cheapest fund, the external debt. The debt-equity ratio increases thus when the firm's cash flow is not sufficient to cover its all cash-out items (dividend, Capex, etc.), while it decreases when this relation is inverse. Consequently, the pecking order theory assumes a hierarchy of funds that originates from asymmetrical information and the information effect of financing decisions. In this hierarchy, internal funds are always preferred to external ones, while among these ones debt is preferred to equity.

Testing the relevance of pecking order driven financing policy is not as straightforward as we see it in case of the STT. Early researchers, like Myers (1984), relied on simple statistical measures of the observable volumes of funds, and concluded that retained earnings are the dominant by far, which external debt falls short of; whereas net equity issuance can even be below zero on an aggregate basis in a given period. More than a decade later Shyam-Sunder and Myers (1999) set a numerically testable model to justify the POT by defining the funds flow deficit variable and assuming a statistical relationship between new debt issuance and the size of deficit. Their results strongly support the pecking order theory on the basis of 157 listed companies in the US whose shares were traded continuously between 1971 and 1989. Other researchers found a very similar pattern for public firms' financing in the '80s, but they experienced a much weaker relevance of the model in the subsequent period (from 1990 on, see Frank and Goyal (2003), Seifert and Gonenc (2008)) and among smaller firms. In the developed Europe, Mulkay and Sassenou (1995) find supporting evidence for a pecking order consistent behaviour among unlisted SMEs in France, whereas Michaelas et al. (1999) do so in the UK and Sanchez-Vidal and Martin-Ugedo (2004) in Spain.

Throughout the analysis of debt and equity transactions and their determinants, the two-stage dynamic model (Hovakimian et al. (2001), Gaud et al. (2007)), which we apply and investigate to test the STT is also suitable to test the implications of the POT. In addition to this, the survey method we use is once again proven to be the most direct and less distorted way to examine the true and decisive motivations behind capital structure decisions,

consequently we compile a number of questions that aims to assess directly the pecking order driven financing governance among regional companies.

With our analyses we intend to assess the extent to which the static tradeoff theory and the pecking order theory can describe the financing decisions of SMEs in the CEE region in the 2000s by testing the aforementioned model and the survey. We also investigate the time-consistency of the theories. In both the quantitative and survey approaches, we use the Bureau van Dijk's Amadeus database for sample construction purposes and as source of data (Desai et al. (2003), Hutchinson and Xavier (2006)).

III. ANALYSES AND RESULTS

III.1. The debt-equity choice

We analysed the debt-equity choice with a dynamic model over the period 2002 to 2007 covering eleven CEE countries. Our approach concentrates on the adjustment towards an estimated target leverage ratio. In other words, we test whether SMEs behave according to theoretical assumptions when they decide to increase or decrease a given fund, or on the contrary, they follow other preferences in their capital structure decisions. The analysis of adjustment process requires the determination of target level of leverage, which we estimated with a technique similar to Hovakimian et al. (2001). Such an approach results in a two-stage estimation method. We considered the CEE region as one homogeneous block of countries, for which we apply a common model.

At the first stage, we regressed capital structure determinants on leverage ratios to determine the ones that could be used to estimate the optimum leverage ratio. Since among the competing theories only the STT hypothesises a fixed debt-to-equity ratio, we selected the determinants significant and consistent with the tradeoff theory, applying TOBIT regression, to use them subsequently for constructing the estimator of target leverage (Table 1, Panel C). On the contrary, those explanatory variables that were found to be contradictory to the STT and/or consistent with the POT were directly allocated to the equations of debt and equity transactions (second stage).

After having estimated a time-variant leverage optimum with the restricted set of tradeoff-consistent factors, a leverage deviation could be easily calculated for all firm-year observations. The deviation, which is the difference of observed and estimated leverage ratios, was our most important regressor in explaining the increase and decrease of financing funds.

The model was supplemented with the variables expected to impact the debt-equity choice of firms according to the POT that were not relevant for estimation of the target leverage.

		Regression of Total Leverage ratio					
			2004				
		Panel A		**Panel B**		**Panel C**	
Variable	**Mean**	**z-stat**		**Mean**	**z-stat**	**Mean**	**z-stat**
C	**-0.247**	*-6.24* ***		**-0.233**	*-5.99* ***	**-0.166**	*-4.36* ***
TAX	**0.003**	*0.98*		**0.003**	*1.00*		
ROA	**-0.232**	*-12.70* ***		**-0.234**	*-12.84* ***		
RISK	**-0.003**	*-0.18*					
SIZE	**0.032**	*13.04* ***		**0.031**	*12.89* ***	**0.029**	*11.87* ***
D_SIZE	**0.057**	*7.99* ***		**0.058**	*8.14* ***	**0.039**	*6.27* ***
OI	**-0.064**	*-2.29* **		**-0.075**	*-2.74* ***		
TANG	**0.081**	*7.06* ***		**0.078**	*7.07* ***	**0.083**	*7.58* ***
V_TANG	**0.433**	*9.66* ***		**0.441**	*9.91* ***		
CASH	**-0.498**	*-16.73* ***		**-0.499**	*-16.79* ***	**-0.561**	*-18.74* ***
CASH_1	**-0.210**	*-7.12* ***		**-0.209**	*-7.08* ***	**-0.225**	*-7.60* ***
V_CASH	**-0.623**	*-9.64* ***		**-0.621**	*-9.68* ***	**-0.468**	*-7.48* ***
DEPR	**0.214**	*4.10* ***		**0.241**	*4.84* ***		
V_DEPR	**0.066**	*1.88* *					
INTAN	**0.020**	*0.26*					
V_INTAN	**0.094**	*0.58*					
ATG	**-0.116**	*-7.04* ***		**-0.116**	*-7.08* ***		
ICE	**0.097**	*1.58*		**0.102**	*1.68* *		
D_P	**-0.087**	*-8.38* ***		**-0.086**	*-8.33* ***	**-0.083**	*-8.07* ***
D_HR	**0.064**	*5.77* ***		**0.060**	*7.14* ***	**0.069**	*8.94* ***
D_CZ	**-0.028**	*-2.86* ***		**-0.033**	*-4.66* ***	**-0.046**	*-7.14* ***
D_HU	**-0.106**	*-9.37* ***		**-0.112**	*-12.09* ***	**-0.110**	*-12.57* ***
D_PL	**-0.111**	*-11.63* ***		**-0.115**	*-17.03* ***	**-0.126**	*-20.12* ***
D_SK	**-0.005**	*-0.42*					
D_BG	**0.018**	*1.32*					
D_EE	**0.024**	*1.86* *		**0.019**	*1.72* *		
D_LV	**0.129**	*10.59* ***		**0.124**	*11.90* ***	**0.107**	*10.35* ***
D_RS	**-0.127**	*-11.97* ***		**-0.132**	*-16.06* ***	**-0.130**	*-16.47* ***
D_MANU	**0.029**	*4.97* ***		**0.028**	*5.21* ***	**0.025**	*4.77* ***
D_CONS	**0.048**	*5.85* ***		**0.045**	*5.94* ***	**0.050**	*6.56* ***
D_WHOLE	**0.047**	*6.91* ***		**0.046**	*7.38* ***	**0.039**	*6.33* ***
D_RET	**0.043**	*5.27* ***		**0.041**	*5.39* ***	**0.039**	*5.21* ***
D_SERV	**0.006**	*0.64*					
Mean Leverage		0.245					
OLS R-square		20.8%			20.8%		18.9%
McFadden R-square		42.1%			42.0%		38.3%
Akaike info criterion		0.381			0.380		0.404
HQ criterion		0.385			0.384		0.406
Number of observations		18 645					
Left-censored observations		3 538					

Table 1: Regression of total leverage ratio (sum of long-term liabilities plus current loans divided by the sum of book equity, long-term liabilities and current loans) on the independent variables. Panel A shows the estimated coefficients and their z-stat based on the full set of analysed variables. Panel B reports the re-estimated coefficients and their z-stat after the elimination of insignificant variables, with the exceptions of TAX and ICE. In the Panel C, the remaining variables are only the ones consistent with the STT and significantly related to the leverage ratio.

In the second stage, independent variables in period t were applied for explaining significant events of financing in period $t+1$. Realised transactions of debt and equity were chosen to be the dependent variables of LOGIT regressions. When defining these events we took into account the specificities of financing SMEs, so we considered increase and decrease of subscribed capital (representing external equity transactions), engagement and repayment of short-term bank loan (low-risk debt), engagement and repayment of long-term bank loan (riskier debt), and increase and decrease of non-subscribed equity capital (retained earnings). We restricted the analysis of financing to events where the transaction volume reached at least 5% of the total assets (significant events).

Our results show that, similar to numerous earlier tests, size and asset tangibility are significantly positively correlated with the leverage ratio in the CEE region, but the other explanatory variables of the STT do not support the theory of leverage-optimising firms (Table 1, Panel A and B). To start with, we reject the positive relationship between profitability and leverage, as well as that between effective tax rate and leverage. Similarly, we do not find evidence for the negative impact of non-debt tax shields and business risks on the leverage ratio. On the contrary, there is a clear signal that country-effects count in leverage decisions of CEE firms, although their impact is weaker than in the sample of Booth et al. (2001). Based on this, it seems that the decision-making of regional SMEs is more homogeneous than that of other, more diverse developing countries.

In spite of the general weakness of tradeoff-consistent factors (we effectively rejected the most fundamental proxies controlling for the costs and benefits of leverage), we found the outstanding steadiness of relevant capital structure determinants over the period 2002 to 2006, both for the total and the long-term leverage ratios. Our model exhibits a special time-varying characteristic in which conventional explanatory variables become systematically stronger between 2002 and 2006, whereas dummies controlling for country effects weaken in the meantime. The calculated R^2 increases from 30.5% (2002) to 54.4% (2006). Based on the above, we conclude accordingly:

Capital structure decisions among the regional small and medium-sized enterprises rely on similar theoretical bases as in the most developed economies. Conventional capital structure determinants become stronger in function of time in explaining leverage, whereas country-specific effects weaken. As a whole, the predictive power of capital structure models continuously increases.

Regression analyses of the second stage provide further evidence against the static tradeoff theory resulting from the controversies found between the sign of leverage deviation and the occurrence of financing transactions. Companies with leverage below the optimum do not clearly intend to increase their debt as suggest the STT. On the contrary, we find a positive relationship between the level of profitability and the probability that the firm repays its loans, which is an outcome that is strongly expected in the pecking order theory. By assessing the dominance of financing with retained earnings over external debt, we find further support on side of the POT. Furthermore, we show a spectacular weakness of the impact of corporate tax, one of the most conceptual elements of the STT, in both the estimation of optimum leverage and the debt-equity choice of firms, which clearly questions the consideration of corporate tax aspects at all in capital structure decisions.

Nevertheless, while also consistent with the complex interpretation of the POT our results do not invalidate the static tradeoff theory in all the ways, as we can confirm among the SMEs a previously documented attitude about that currently overleveraged firms yet try to repay their debt. That implies that companies with a leverage ratio over the optimum exhibit a reaction in the same direction as the STT predicts, say, they decrease their loans, although we see that this intention to adjust is asymmetrical and not noticeable in the opposite direction. As it might be seen consistent with insiders' and outsiders' knowledge gap on the firm, we also document a 'learning effect' among external creditors and managers based on their historical partnership that manifests in the positive relationship of historical and current reliance on new short-term debt. In opposition to this, we find that underleveraged firms, which should theoretically have higher additional debt capacity prefer to engage new debt for a long- rather than short-term that contradicts somewhat the strict hierarchy of funds as suggest the POT. To sum up, we conclude as follows:

The intention to adjust leverage towards its optimum is weak among the regional small and medium-sized companies; consequently, we reject the relevance of the static tradeoff theory as a general rule. We find evidence that the pecking order theory is widely relevant among these companies being subject to serious asymmetrical information concerns.

Despite the weakness of intention to adjust towards the optimum leverage, small and medium-sized companies strongly respect an upper bound of leverage unilaterally.

III.2. The practice of financing

The drawback of relying on accounting-based proxies for analysing capital structure is that they could only poorly capture the preferences, and hence the personal viewpoint of the decision-makers apropos of the theories. This is explained by the fact that the competing theories are not easy to be sharply separated in every aspect based on financial metrics of the firm, see for instance the voluntary upper bound of leverage, which may be consistent both with the logic of the STT and the POT. Thus observable trends and relationships in financial statements do not always clearly identify the theoretical background of financing decisions. The other pain of this technique, as highlighted Brounen et al. (2006), is that the relevance of any theory can only be tested via the use of financial variables to such extent that those variables, as independent proxies, can capture properly the assumptions of the theory.

These inconveniences can be eased with a survey technique in which one interrogates directly the person(s) responsible for or involved in the decision-making about their theoretical considerations. This less broadly used approach is part of our analyses, in course of which we notably rely on the questionnaire of Graham and Harvey (2001) directed originally to US listed and private companies, but what we customise to the extent necessary to reflect relevant aspects of financing in the regional countries (e.g. the role of leasing and factoring). In course of compiling our questionnaire, we took into consideration that our questions and answers could be compared, even directly, to findings of previous studies based on different company samples. Besides Graham and Harvey for a sample of 392 firms, Brounen, de Jong and Koedijk (2006) also applied this survey and furnished evidence relying on a sample of 313 firms from four Western European countries, both to which we can directly compare our findings.

Interviews were effectively undertaken by a professional research company whose experts surveyed 498 companies by phone from 10 countries in 2008. The questionnaire we compiled in English was translated into the native language of all ten countries, and the interview was held with the CFOs in their mother tongue. The sample was construed so as to represent the whole CEE region; therefore its structure mirrored the relative economic weight of the countries within the region. This way the sample allows formulating some general conclusions about the relevance of capital structure theories in the region as one entity, assuming a homogenous behaviour within the block; however, there are not enough observations for drawing country-specific conclusions except for the largest countries.

	CEE	CZ	HU	PL	RO
Number of observations	498	72	73	180	68
What percent of equity is owned by the top three					
<5%	67.8	77.1	71.2	87.3	23.9
5-10%	4.2	2.9	0.0	4.9	1.5
10-20%	5.8	1.4	3.0	1.4	14.9
>20%	22.2	18.6	25.8	6.3	59.7

Which of the following sources of long-term funds are / would be important for financing new investments?	Importance		Mean	Importance		Mean	Importance		Mean	Importance		Mean	Importance		Mean
	Low	High		Low	High		Low	High		Low	High		Low	High	
Retained earnings	26.9	73.1	2.97	47.8	52.2	2.55	34.3	65.7	2.79	19.6	80.4	3.18	22.1	77.9	3.01
Restructuring assets	43.1	56.9	2.56	53.0	47.0	2.39	59.2	40.8	2.15	41.9	58.1	2.65	40.0	60.0	2.55
Straight debt	50.0	50.0	2.51	73.5	26.5	1.91	35.7	64.3	2.94	57.2	42.8	2.30	35.3	64.7	2.87
Convertible bond	86.8	13.2	1.48	95.5	4.5	1.21	98.6	1.4	1.16	85.9	14.1	1.48	79.4	20.6	1.75
External common equity	66.3	33.7	2.04	78.3	21.7	1.71	77.5	22.5	1.75	63.5	36.5	2.17	61.8	38.2	2.10

	CEE	CZ	HU	PL	RO
Does your firm have a target value for the leverage ratio?					
yes	26.7	14.1	27.7	38.1	18.2
no	73.3	85.9	72.3	61.9	81.8
If „Yes"					
We usually/permanently depart from it (flexible)	16.4	28.6	29.4	6.6	30.0
We occasionally dep. from it (somewhat tight)	44.0	28.6	11.8	45.9	50.0
We strictly respect it	39.7	42.9	58.8	47.5	20.0
What is this target value (book debt/total assets)?	37.8	44.4	18.3	45.6	16.9
Does your firm take advantage of operating lease?					
yes	46.7	50.7	34.2	54.8	25.0
no	53.3	49.3	65.8	45.2	75.0
In periods when the firm's investment is low, does your firm retain a part of its free cash-flows?					
yes	42.7	46.5	52.9	36.5	57.4
no	57.3	53.5	47.1	63.5	42.6
During the last three years, did your firm apply for new loans or capital leases?					
yes	69.2	59.7	72.2	64.4	86.8
no	30.8	40.3	27.8	35.6	13.2
If „Yes", these applications were					
always approved	94.1	90.7	92.3	93.0	96.6
always denied	1.2	0.0	3.8	0.9	1.7
sometimes approved and sometimes denied	4.7	9.3	3.8	6.1	1.7

What factors affect how you determine the appropriate amount of debt for your firm?	Importance		Mean	Importance		Mean	Importance		Mean	Importance		Mean	Importance		Mean
	Low	High		Low	High		Low	High		Low	High		Low	High	
Projected cash-flow from the assets to be financed	26.3	73.7	2.98	30.8	69.2	2.86	44.6	55.4	2.57	25.0	75.0	2.94	22.1	77.9	3.28
The debt levels of other firms in the industry	57.5	42.5	2.27	39.3	60.7	2.54	76.9	23.1	1.68	64.9	35.1	2.18	50.0	50.0	2.52
The potential costs of bankruptcy or financial distress	44.9	55.1	2.55	50.8	49.2	2.46	61.8	38.2	2.12	46.2	53.8	2.47	20.9	79.1	3.15
The corporate tax rate	49.9	50.1	2.44	61.7	38.3	2.20	76.1	23.9	1.79	51.6	48.4	2.46	30.9	69.1	2.82
The level of depreciation and other non-debt tax shields	44.0	56.0	2.57	59.7	40.3	2.16	55.2	44.8	2.28	34.6	65.4	2.78	41.8	58.2	2.63

Given an investment that could not be taken without modifying the actual balance sheet structure, what action	Likelihood		Mean	Likelihood		Mean	Likelihood		Mean	Likelihood		Mean	Likelihood		Mean
	Low	High		Low	High		Low	High		Low	High		Low	High	
Deviate from the actual capital structure	51.2	48.8	2.45	53.0	47.0	2.36	31.9	68.1	2.88	66.7	33.3	2.09	29.2	70.8	2.97
Cut the dividends	44.5	55.5	2.59	68.7	31.3	1.91	52.2	47.8	2.45	38.8	61.2	2.78	28.8	71.2	2.92
Restructure assets	42.9	57.1	2.56	39.7	60.3	2.54	47.1	52.9	2.37	44.3	55.7	2.56	43.9	56.1	2.59
Forgo the investment opportunity	66.7	33.3	2.11	62.7	37.3	2.10	75.4	24.6	1.87	59.2	40.8	2.32	84.8	15.2	1.86
If you forwent this attractive investment opportunity, which of the following reasons would be relevant?															
in order to hold independence	42.6	57.4	2.69	62.5	37.5	2.08	52.9	47.1	2.35	39.2	60.8	2.81	40.0	60.0	2.60
in order to keep moderate level of leverage	32.1	67.9	2.87	28.0	72.0	2.92	16.7	83.3	3.06	36.0	64.0	2.79	10.0	90.0	3.00
in order to keep the senior shareholders' value	54.5	45.5	2.35	50.0	50.0	2.38	68.8	31.3	1.81	55.9	44.1	2.40	50.0	50.0	2.60
external equity financing is unavailable	50.0	50.0	2.41	56.5	43.5	2.30	70.6	29.4	2.00	50.0	50.0	2.46	10.0	90.0	3.20
borrowing is impossible	58.1	41.9	2.25	72.0	28.0	1.92	93.8	6.3	1.44	52.1	47.9	2.41	10.0	90.0	3.20
debt service is not expected to be satisfied	50.6	49.4	2.42	53.8	46.2	2.35	52.9	47.1	2.12	55.7	44.3	2.39	20.0	80.0	3.10

Table 2: Survey questions and answers for the full sample and country sub-samples (details). Figures show the mean score of importance/likelihood for each question and the distribution of answers '1' and '2,' classified as 'low,' and '3' and '4,' classified as 'high'.

In the first section of the survey (Table 2), we put questions on some general firm attributes, like among others the degree of managerial ownership, the origin of dominant management culture, or the most important goals of the shareholders and the managers (not reported here). The focus of second section's twelve questions is put on the practice of financing and its underlying managerial preferences. We consider this the most straightforward way to test whether financing decision-makers in the region rely effectively

on theoretical implications of the capital structure theories. The questions and answers many times follow the concept of "*How important are...*" and "*What would you do if...*", which is a particularly appropriate way to capture the hierarchy of motivations and to describe CFOs' preferences in predefined situations, exactly the way as the STT and the POT suggest.

In course of our investigation, we go further than simply surveying the practice of financing as we also examine with quantitative tools whether the aspects and preferences verbally expressed by the management are in fact consistent with their subsequent decisions.

CFOs confirm the second-order importance of tax concerns, non-debt tax shields and business risks in debt decisions, that is to say, the weakness of conventional tradeoff considerations. Corporate tax rate, the cornerstone of the STT, is only the fourth most important factor and only moderately important, as around 50% of CFOs assigned it a score '3' or higher (mean is 2.44). The potential costs of bankruptcy/financial distress get a very similar attention, with a slightly higher mean (2.55) and 55% share of answers as "important." Non-debt tax shields perform similarly mediocre.

The answers suggest instead that investments and financing decisions are not independent from each other in the everyday practice of the analysed firms, as debt-positive decisions are first of all dependent on the expected cash flow from the asset to be financed (mean is 2.98). Given that 74% of the firms considered this factor to be important, it is a much more decisive factor in borrowing than any other one. These findings seem to be valid throughout the whole region; nevertheless, there are minor divergences in the strength of tradeoff aspects among the largest countries.

In line with these preferences we show that only 27% of the firms report to have a target leverage ratio, out of which 40% consider the target as a strict anchor; meaning that altogether around 10% of the companies are characterized by a strict target-setting and adjusting behaviour. Looking at the figures on country level, there is a larger share of firms with fixed target in Poland (38%) than in Hungary, while the share of leverage-setting companies is smaller in Romania and the Czech Republic (14%). Such large differences in the number of leverage-targeting firms are surprising; in particular, if we take into account the homogeneity of preferences CFOs declared vis-à-vis the tradeoff-related determinants.

Our answers also make it apparent that firms take retained earnings as primary source of funding new investments, which result clearly supports the POT. Next in the hierarchy, firms weigh the option of restructuring the asset portfolio in place to free up cash, and then engage new external debt before issuing new external equity. The role of convertible funds is broadly considered as unimportant. The hierarchy of financing funds we find evidence for is in line

with the assumptions of Myers and Majluf (1984), and contradicts the earlier empirical results of Delcoure (2007) and Nivorozhkin (2002, 2004) about the reversal of the order of funds at the expense of debt and in favour of external equity, caused by severe credit shortage in the regional countries following the change of regime.

On the contrary, we show that at the end of the 2000s long-term borrowing has become an accessible and viable option, and hence the revealed hierarchy of funds matches that of the more developed and mature economies. Table 2 shows that nearly 70% of the firms answered the question "During the last three years, did your firm apply for new loans or capital leases?" positively, a remarkably high ratio even if we take into account that a substantial number of these firms engage, of necessity, short-term loans. To sum up:

By the mid-2000s, the problem of credit rationing in the region has considerably eased; and as a consequence, the anomaly of reversal of external debt and equity in the financing hierarchy, which had been previously thought to be driven by weak institutions and underdeveloped debt markets (Nivorozhkin (2002), Delcoure (2007)), has dissolved.

Results of the quantitative analysis confirm that conventional tradeoff factors are not strongly present in financing decisions of the broad sample of firms, while the POT is largely supported. This is an outcome that coincides spectacularly well with CFOs' answers, so we believe that financing decisions made are fairly consistent with the motivations uncovered.

Having created sub-samples from the collected questionnaires we analysed whether the companies admitting to have a fixed leverage ratio reported stronger tradeoff considerations in their debt decisions than the ones not having fixed level of leverage. Our regression results show that such an impact exists, although the estimated coefficients are weak in statistical terms. Through creation of sub-samples we show also that the connection/separation of managerial and shareholder roles has a decisive impact on financing policy, while there is no similar proof for the origin of dominant management culture (local or international). We find evidence for the negative relationship between the interconnection of managerial and shareholder roles and the managerial intention to set a fixed leverage ratio, including the discipline of adjustment towards the target. Results are significant at 5% level. In the meantime, we show a rather positive relationship between this interconnection and the probability of entering the external debt market. On the contrary, managers with low or zero ownership follow a more conservative financing policy, which is not only characterized by lower probability of entering into the external markets (an impact significant at 1% level), but

also by a higher likelihood of passing up an otherwise promising investment opportunity if a substantial restructuring of the firm's balance sheet is required. Based on the above mentioned,

We find that only about one quarter of the companies set a predefined leverage ratio in the CEE region, which companies are more likely managed by non-owner managers, as opposed to firms not setting fixed leverage ratio in which managerial ownership is significantly higher. We find that the separation of ownership and management roles has a strong positive impact on the extent to which firms keep to a predefined capital structure.

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