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The Capital Structure of Swiss Companies: An Empirical Analysis Using Dynamic Panel Data

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Abstract:
In this paper, we analyze the determinants of the capital structure for a panel of 106 Swiss companies listed in the Swiss stock exchange. Both static and dynamic tests are performed for the period 1991-2000. It is found that the size of companies, the importance of tangible assets and business risk are positively related to leverage, while growth and profitability are negatively associated with leverage. The sign of these relations suggest that both the pecking order theory and trade off hypothesis are at work in explaining the capital structure of Swiss companies, although more evidence exists to validate the latter theory. Our analysis also shows that Swiss firms adjust toward a target debt ratio, but the adjustment process is much slower than in most other countries. It is argued that reasons for this can be found in the institutional context.

Executive Summary:
One of the most important decisions in the field of corporate finance pertains to financial policy. Using debt financing can have both positive and negative effects on the value of the firm. On the one hand, debt financing is value-enhancing for the firm because it provides a tax shield.

Furthermore, debt allows to reduce the conflicts of interest between managers and shareholders. On the other hand, the use of debt may increase bankruptcy costs and may lead the managers of firms with growth opportunities to accept sub-optimal investment opportunities. In addition, debt often does not constitute an appropriate solution to finance highly innovative start-up companies. Empirical research in this area has mainly focused on the U.S market, and less evidence exists for European countries. The aim of this paper is to contribute to the empirical literature by analyzing the determinants of the capital structure of Swiss companies. We analyze a panel of 106 firms for the period 1991-2000.

The capital structure decisions of firms can be explained by two alternative theories: the trade off theory (TOT) and the pecking order theory (POT). The TOT posits that there exists a trade off between the costs and benefits of debt financing that leads to an optimal capital structure. In order to maximize the value of the firm, managers should determine the optimal level and then aim at reaching that level. In contrast, according to the POT, firms adopt a pecking order behavior: they first use internal financing, then debt and issue equity as a last resort only. This is because of informational asymmetries between managers and outside investors. The debate as to which theory better explains the capital structure choices of firms is unresolved. Empirical research has shown that managers have a preference for internal sources of financing, but this does not imply that an optimal capital structure does not exist.

Indeed, from a dynamic perspective, the preference for internal financing can be viewed as a slowing factor in the adjustment process towards an optimal capital structure.

Financing decisions are dynamic by nature and any empirical study, which hypothesizes that firms aim at a debt-to-equity target, must take into account the adjustment process towards that target. We investigate the determinants of a target capital structure for Swiss firms and the role of the adjustment process, which is a trade off between the adjustment costs towards a target ratio and the costs of being in disequilibrium. The method used allows us to consider that the observed debt-to-equity ratio is not the optimal level and that the latter can change over time. Our results are often in contradiction with pecking order theory. First, according to this theory, firms with few tangible assets should be more sensitive to informational asymmetries. However, we observe a positive relationship between tangible assets and leverage which may suggest that firms use tangible assets as collateral when issuing debt. Second, according to the POT, informational asymmetries should be more severe for small size firms, but we observe a positive correlation between size and leverage. This leads us to reject the hypothesis that size acts as an inverse proxy for informational asymmetries, but rather that size is an inverse proxy for the probability of bankruptcy which is consistent with the TOT. Third, in our sample, growth firms are less levered than non-growth firms, which suggests that equity is preferred to debt to avoid bankruptcy costs.

In our sample, we find a negative relationship between profitability and debt level. This result is

usually interpreted as evidence for the pecking order theory (POT). However, such a relationship is also consistent with the TOT in the short run. For example, according to the TOT, despite the fact that the contemporaneous profitability is a determinant of leverage, the cash-flow generated during the year can be used partly to decrease the level of debt. Overall, our results suggest that both the pecking order theory and trade off hypothesis are at work in explaining the capital structure of Swiss companies, although more evidence exists to validate the latter theory. Our analysis shows that Swiss firms adjust toward a target debt ratio, but the adjustment process is much slower than in most other countries. A possible explanation for this is that being in disequilibrium is not costly for Swiss firms. It is argued that reasons for this can be found in the characteristics of Swiss firms, which are mature firms, and the institutional context that favored easy credit. In particular, Swiss companies experienced rather low growth during the 1990s, which implied that internal financing was sufficient to cover new capital expenditures. In such circumstances, firms did not aim towards their target ratio.