

Note on the Study

Alternative Systems of Business Tax in Europe

An applied analysis of ACE and CBIT reforms¹

I. Background of the Study

Current tax systems in Europe favour debt financing over equity financing. While, in general, interest on debt is deductible from the corporate tax base, return on equity is not. This leads to a higher leverage of firms since financing investments with debt is more attractive. The investigation of the tax distortion of investment financing and possible measures against this distortion lie at the heart of the study.

In principle, two opposing measures exist that might eliminate this distortion by treating both sources of finance in the same way: An Allowance for Corporate Equity (ACE) or a Comprehensive Business Income Tax (CBIT). The ACE would grant the same deduction for the return on equity as for interest paid. This would abolish the tax advantage of debt. At the same time, ACE reduces the tax burden on marginal investment. However, ACE would also lead to a narrower tax base. In order to collect the same amount of tax revenue either the statutory corporate tax rate or other taxes have to be increased to finance such a reform. The CBIT, on the contrary, broadens the tax base by disallowing a deduction for interest payments on debt. If the tax rate remains unchanged, this leads to an increase in tax revenue. The additional revenue can be either used for a reduction in the statutory corporate tax rate or of other taxes if the reform is supposed to be revenue neutral. The neutrality of the financing decision is the same as in the ACE case since equity and debt financing are also treated equally for taxation.

ACE and CBIT have been discussed extensively in economics. Both systems are appealing due to their efficiency properties with regard to the financing decision of companies; however, there is no clear recommendation which system is favourable and the study clearly highlights the key trade-offs faced when designing a reform towards any of these pure systems. While in the context of open economies ACE is more prone to profit shifting (in particular when its narrow tax base is accompanied by higher corporate tax rates), CBIT might lead to increased distortions of the marginal investment. In order to mitigate these effects one might also consider a combination of the two systems. On the one hand this would lead to financing neutrality. On the other hand it would reduce possible negative effects of the pure systems. Such a combination of ACE and CBIT has not been analyzed in detail yet. The study presents simulations of different reform options, also comparing the implementation of ACE and CBIT as pure systems with a combination of both. These different types of reforms are investigated both in case of individual implementation by each European country (with the

¹ The views expressed in the study are solely those of the authors and do not necessarily reflect the views of the European Commission.

others sticking to their current tax systems) and in the case of simultaneous implementation by all 27 Member States. Under the model assumptions, it is shown that combining the two ACE/CBIT systems leads to the same neutrality in investment financing as each single reform and also improves welfare, both in the case of unilateral reforms and of Europe-wide reforms.

II. General Comments on the Methodology

The interesting results of this study will hopefully lead to fruitful discussion. As is the case for all simulation studies, the results rely on different assumptions which are necessary to set up the model.

The model used for the simulations is CORTAX which has already been used for different studies in the field of international taxation. CORTAX is a computable general equilibrium (CGE) model representing the economies of the 27 EU Member States plus US and Japan (in the basic version of the model, and outside tax havens in an extended version of the model). Countries are connected by international linkages introduced via the multinationals' behaviour, the capital and commodity markets. It is state-of-the-art for the analysis of international taxation.

Individuals and firms (domestic firms and multinationals parents and subsidiaries) maximize their utility and profit in the different scenarios according to standard objective functions. In turn, the governments' behaviour is exogenous. The government consumes a fixed part of the GDP. The budget is financed by taxes and debt. Strategic tax competition between governments is not modelled in CORTAX. Instead, the analysis focuses on two cases. Firstly, one country introduces a reform unilaterally, while all other countries stick with their current tax system. Secondly, all countries introduce a reform in a coordinated manner.

All firms produce one homogenous good at the given world market price with the same production function featuring three inputs: capital, labour and a fixed factor. There is perfect competition in all markets. In the basic version of CORTAX, this fixed factor creates location-specific economic rents, which are immobile and taxed at source. In an extended version of the model, firm-specific rents, which can move across the EU countries' borders, are introduced and influence the location choice of firms within the EU. However, the model does not capture all mechanisms that could attract additional foreign investments from outside the EU.

The model's numerical outcomes show the medium/long run implications of a change of tax policy, after all adjustments have taken place.

As in all CGE-models, the structural parameters are calibrated by using generally accepted numerical assumptions, historical data and econometric estimations on the elasticities that

drive the behaviour of responses induced by the tax changes under analysis. Sensitivity analyses are used to check how the results change if critical assumptions are relaxed. This is a standard procedure in simulation studies and is one control for the plausibility of the assumptions made. However, CORTAX is of course a simplified description of the real world and is based on specific hypotheses, and it cannot fully anticipate behavioural changes due to tax policy measures. For these reasons, numerical outcomes should be taken with proper care when it comes to policy conclusions.

III. Relevance of the goal of the study

The discussion on reforming the tax system towards more financing neutrality has gained even more momentum in light of the current financial crisis and the economic downturn which highlighted that for many companies the debt ratio is too high. This could lead to liquidity constraints especially in times when banks tend to restrict their credit supply more strictly than usual. A well-designed tax base that reduces the distortion of the leverage could make companies less vulnerable to a short-term reduction in credits offered on the capital market.

Despite the advantages of financing neutrality, ACE or CBIT reforms can be found only in very few Member States. The aim of the study is to gain a deeper understanding of the potential effects of ACE and CBIT for the Member States and the related efficiency and welfare aspects. It also analyses the above mentioned combination of ACE and CBIT since a mix of the two reforms might be more efficient and less difficult to implement. Furthermore, the study gives ground for discussion on some of the elements to consider when reflecting on the coordination of corporation tax base policies at the EU level.

The study is designed to reveal some of the main economic mechanisms underlying the effects of these two possible reforms on corporate taxation. On this basis, it tries to give further ingredients for prompting an open debate between policy makers, scholars and other stakeholders to discuss possible directions for such tax base reforms in Europe. Hence, this interesting study provides additional "food for thought".

Comments are welcome and can be sent to Taxation and Customs Union Directorate-General (TAXUD-STRUCTURES@ec.europa.eu).