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Immobilizing corporate income shifting: Should it be safe to strip in the harbor?☆

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ABSTRACT

Many subsidiaries can deduct interest payments on internal debt from their taxable income. By issuing internal debt from a tax haven, multinationals can shift income out of host countries through the interest rates they charge and the amount of internal debt they issue. We show that, from a welfare perspective, thin capitalization rules that restrict the amount of debt for which interest is tax deductible (safe harbor rules) are inferior to rules that limit the ratio of debt interest to pre-tax earnings (earnings stripping rules), even if a safe harbor rule is used in conjunction with an earnings stripping rule.

1. Introduction

Earnings stripping is a tactic multinational firms use to shift taxable income from high-tax to low-tax countries by financing a subsidiary located in a high-tax country with loans from the parent (internal debt) issued through a subsidiary located in a low-tax country, often a tax haven. Since interest payments on debt are generally tax deductible, while dividend payments on equity are not, the use of internal debt is a preferred form of financing because it reduces a multinational's overall corporate income tax payments. While earnings stripping can benefit host countries by increasing the marginal return to FDI it also erodes a host country's tax base.

The concern among a number of countries about the tax base erosion effects associated with earnings stripping led the OECD to launch its Action Plan 4 on Base Erosion and Profit Shifting (OECD, 2013). The final report (OECD, 2015) calls for the use of best practices in the design of rules to prevent tax base erosion through the use of internal debt interest expenses. In the EU, the negative impact of earnings stripping has been amplified by the U.S. "Check-The-Box" (CTB) legislation.[1] For U.S. multinationals, CTB enables the parent company to structure an affiliate in a host country so that it is treated as a corporation/subsidiary by the host country and as a branch by the United States. In so doing, the U.S. parent can use internal debt to strip taxable income out of a host country into a tax haven without generating an offsetting tax liability in the United States (as subpart F income).[2] The use of CTB by American multinationals to facilitate the use of earnings stripping strategies has generated on-going demands by EU governments for the United States to rescind CTB. The fact that this is unlikely to happen magnifies the need for strong, effective internal debt policies.

Earnings stripping is also at the heart of the contentious debate about corporate inversions. By moving the parent corporation of a multinational from the United States to a country with a lower tax rate (pretty much the rest of the world), the new parent corporation could load up its U.S. subsidiaries with internal debt in order to strip pre-tax income out of the United States. This concern prompted legislators

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[1] CTB was passed in 1997 to simplify the process by which a U.S. firm could elect its tax status as a corporation or a partnership.

[2] Blouin and Krull (2015) provide a more detailed description of the tax implications of CTB.

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such as Senator Charles Schumer to propose legislation specifically intended to curb earnings stripping activity.[3]

A multinational can use internal debt to shift profits out of a high-tax country in two ways: by choosing the amount of internal debt and by choosing the interest rate it will charge. To moderate the tax revenue losses from both choices, a host country can adopt a thin capitalization rule to limit the amount of internal debt[4] and it can audit the interest rate a subsidiary pays on internal debt to assess compliance with an arm's-length standard. The arm's-length standard is imposed as part of a host country's transfer price regulations and is used to ensure that the interest rate is in line with what a third-party lender would charge for a loan of comparable size, term, and risk. However, as with the auditing of other transfer prices on intangibles, host countries face difficulties auditing interest rates since variations in firm risk profiles in each host country are difficult for governments to assess.

In this paper, we develop a general equilibrium framework with both labor and capital that allows us to analyze the welfare effects of the various thin capitalization rules observed in practice, when used in conjunction with a country's transfer price regulations.

Table 1 reports the variation in thin capitalization rules among 160 countries in 2013. In practice, most countries rely only on auditing of interest rates to determine the rate at which an independent lender would have been willing to lend to the firm. Among countries that have thin capitalization rules, most use a safe harbor rule.[5] Safe harbor rules allow a subsidiary to deduct interest payments on internal debt only if the subsidiary's debt-equity ratio does not exceed a given level. For example, if a host country has a safe harbor rule that sets a maximum debt-equity ratio of 3:1, then a subsidiary located in that host country could deduct all of the interest payments it makes to its parent as long as no more than 75% of the subsidiary's capitalization comes from internal debt.

A smaller number of countries use an earnings stripping rule. These are rules in which interest payments on internal debt are tax-deductible in a host country only as long as the total interest payments (amount borrowed internally times the interest rate) do not exceed a given percentage of the subsidiary's pre-tax earnings, normally defined as EBITDA.[6] The use of earnings stripping rules has emerged in recent years because of the perception that safe harbor rules are ineffective. A few countries use both types of rules, whereby a subsidiary must satisfy either both or one of the rules.

Notable countries that use interest rate auditing without a thin capitalization rule include Austria, Finland, Ireland, India, the Netherlands, and Norway.[7] Although the number of countries using an earnings stripping rule, alone or in conjunction with a safe harbor rule is small, they include significant economies. The countries using only an earnings stripping rule in 2013 are Germany (enacted in 2008), Italy (enacted in 2008), Portugal (enacted in 2013), and Spain (enacted in 2012). Denmark (enacted in 2008) and Japan (enacted in 2013) impose both a safe harbor rule and an earnings stripping rule. Bulgaria (enacted 2007), France (enacted 2011), Guam, Northern Mariana Islands, the United States (enacted in 1998 along with its territories), and the U.S. Virgin Islands impose an earnings stripping rule and a safe harbor rule but require that only one be satisfied. For France, a company need only satisfy one of the rules. For Bulgaria, the United States, and its affiliated territories, the earnings stripping rule is marginal in that it is effective only if the safe harbor limit is exceeded. Notice that, with the exception of the United States and its territories, the countries that have enacted earnings stripping rules have done so since 2007. Hong Kong, Sweden, and the United Kingdom do not have thin capitalization rules but use other special rules to limit debt financing.

Our analysis will show that the thin capitalization policy among all possible combinations, including those observed in practice, which maximizes a host country's national income is an earnings stripping rule. Our finding is in accord with the main recommendation in Action Plan 4 (OECD, 2015).

The optimality of an earnings stripping rule comes from the fact that earnings stripping rules create a trade-off among firms between the amount of internal debt issued and the interest rate charged. Standalone safe harbor rules are inferior because they limit the amount of internal debt without imposing any restrictions on the interest rate a subsidiary pays. For the same amount of interest on internal debt, an earnings stripping rule gives multinationals an incentive to reduce its transfer price costs by lowering its interest rate below the transfer price chosen under a safe harbor rule, and increasing the amount of internal debt. Because safe harbor rules constrain the amount of internal debt issued to a subsidiary without limiting the optimal interest rate (transfer price) that is charged, the reduction in the interest rate under an earnings stripping rule has only a second-order reduction in multinational profit while the corresponding increase in internal debt generates a first-order gain. On the margin, for the same amount of interest paid on internal debt, an earnings stripping rule then generates a larger marginal return to FDI and a marginal increase in national income. Simulations suggest an increase in national income ranging from 0.05% to 0.8% if a host country switches from a safe harbor rule to an earnings stripping rule.

The rest of our paper is organized as follows. Section 2 provides a literature review. Section 3 presents a model in which multinational firms can shift profit with debt financing and transfer prices. To allow for the hybrid policies observed in Bulgaria, Denmark, France, Japan, and the United States, a host country will choose a thin capitalization policy that consists of both a safe harbor limit and an earnings stripping limit. Section 4 derives the optimal firm responses to all possible host country thin capitalization policies. Section 5 describes which limits will be binding in any positive-FDI equilibrium. The host country's optimal thin capitalization policy is then derived in Section 6. Two extensions of the base model are discussed in Section 7 and concluding remarks are offered in Section 8. Detailed proposition proofs can be found in Appendix 1.

2. Related literature

The trade-off host countries face from income-shifting by multinationals is well known. When a host country cannot tax income from mobile and immobile investment differently, Hines (2010) and Hong and Smart (2010) show that tax havens can increase national welfare. Slemrod and Wilson (2009) show that with differential taxation, tax havens must reduce national welfare.

The focus in Hong and Smart (2010) was on the welfare effects of safe harbor rules in the absence of transfer pricing. In a companion paper, Gresik et al. (2015) extend Hong and Smart (2010) by adding transfer price behavior and show that the positive investment effect in Hong and Smart (2010) is more likely to dominate in host countries with developed economies whereas the negative tax base erosion effect is more likely to dominate in developing economies. The reason is that transfer pricing, all else equal, has a detrimental effect on welfare that comes into play most when a host country's institutions are weak (e.g., with respect to auditing tax bases). None of these papers looked at the impact of earnings stripping rules.

Two other papers analyze rules that restrict leverage ratios in a theoretical framework. Haufler and Runkel (2012) use a tax competition model to show that if countries set tax rates and safe harbor rules, smaller countries have an incentive to set more permissive safe harbor rules

[3] See McKinnon (2014).

[4] A number of empirical papers find evidence on the tax sensitivity of debt financing and the effectiveness of thin capitalization rules. Desai et al. (2004), Huizinga et al. (2008), Egger et al. (2010), Mintz and Weichenrieder (2010), and Møen et al. (2011) study the tax sensitivity of debt. For evidence of the effectiveness of thin capitalization rules, see, e.g. Weichenrieder and Windischbauer (2008), Büttner et al. (2012), Blouin et al. (2014), and Wamser (2014).

[5] See also Blouin et al. (2014).

[6] EBITDA stands for earnings before interest, taxes, depreciation, and amortization.

[7] Finland and Norway adopted earnings stripping rules in 2014.