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3 Corporate Taxes and the Cost of Capital for U.S. Multinationals

Joosung Jun

3.1 Introduction

Tax rules affect the ability of U.S. firms to compete in foreign markets with local and other foreign firms. The primary channel through which taxes exert this influence is by changing the cost of capital. The competitive ability of firms that face different costs of capital depends on how capital intensive they are and how sensitive the demand for their product is to the price. This paper does not attempt to look at specific products, but does estimate how tax rules alter the cost of capital for U.S. firms and competing firms in a variety of foreign markets.

Past comparative studies of the cost of capital have been mostly concerned with domestic investment between countries. A typical finding of these studies is that, during the past decade, the cost-of-capital gap between countries has been largely attributable to differences in the domestic cost of funds, leaving relatively little room for the role of tax systems.

In the case of multinational investment, however, an international comparison of the cost of capital is complicated by the possibility of overlapping tax jurisdictions and the possibility of raising investment funds in different countries and transferring those funds between the parent and the subsidiary. Thus, comparing the cost of capital for domestic investment between countries may lead to very misleading implications for the competitiveness of multinationals.

This paper attempts to modify the conventional cost-of-capital measure in a way that incorporates the impact of international tax rules. The analysis compares measures of the cost of capital for U.S. firms and their local competitors in major foreign markets, and those of U.S. firms and other foreign multi-

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nationals in a given foreign market. The evidence presented in this paper suggests that, other things being equal, corporate tax rules related to foreign investment make U.S. firms operating in major foreign markets, on average, face about a 20 percent higher cost of capital than domestic firms in the United States when U.S. source equity capital is considered as the marginal source of investment funds. These U.S. firms may very likely face a higher cost of equity capital than local firms in foreign markets. U.S. firms may also face a cost-of-capital disadvantage vis-à-vis firms from other countries in a given foreign market, partly due to the absence of a dividend imputation scheme in the United States and partly due to relatively strict U.S. rules regarding the exemption or deferral of home-country tax on foreign-source income and foreign tax credit utilization.

3.2 The Cost of Capital for Foreign Investment

The appendix to this volume describes the features of tax systems that apply to multinational corporations. This section sets out a framework within which the cost of capital for foreign investment is estimated. The focus is on the way in which corporate tax rules related to international investment influence the cost of capital.

All shareholders are assumed to live and be taxed in the home country. The foreign subsidiary is wholly owned by the domestic parent, which maximizes shareholder wealth. While the subsidiary can finance its investment through a variety of sources, this paper focuses on the case where the parent uses its retained earnings as the basic source of funds for both domestic and foreign investment in order to highlight the differential tax effects on domestic and foreign investment, given the same cost of funds. This paper also ignores personal taxes and focuses on the role of corporate taxes in determining the cost of capital.

The cost of capital is the pretax rate of return that a corporation must earn in order to pay the rate of return required by the providers of capital. The cost of capital depends on the discount rate as well as several other considerations such as the tax treatment of capital income and the depreciation of the investment asset.

The discount rate for domestic investment is determined by the rate of return required by the shareholders, which is the risk-adjusted rate of return on alternative investment opportunities. What is the appropriate discount rate for financing foreign investment? Taking the parent to be a conduit between foreign investment and the shareholders, the discount rate for foreign investment should reflect the taxes associated with repatriated dividends. Let u be the total tax rate on repatriated foreign-source dividends. The parent, whose objective is to maximize the wealth of its shareholders, then requires that foreign investment earn a yield of at least $1/(1 - u)$ dollars per dollar of transfers. Therefore,

the required rate of return on foreign investment is larger than that for domestic investment by the factor of $1/(1 - u)$.

The effective tax rate on foreign-source dividends (u) consists of both host-country and home-country components, as described fully in Jun 1995. Suppose, for example, that domestic and foreign corporate tax rates and the withholding tax rate are 0.5, 0.4, and 0.05, respectively. Under the exemption system, the discount rate for foreign investment will be 5 percent larger than that for domestic investment using the same source of funds. Under the credit system, however, the home country taxes at the rate of 17 cents per dollar of dividends paid by the subsidiary. This surtax translates into a 20 percent higher discount rate.

In the remainder of the paper, various cost-of-capital measures for U.S. firms and their major competitors in foreign markets are presented. The methodology used to calculate the cost of capital is fully described in Jun 1995. A common real interest rate of 5 percent and a common inflation rate of 4.5 percent were assumed for the purposes of focusing on how the tax codes affect the cost of capital and of maintaining comparability between countries.

In summary, the cost-of-capital measures reported in the following sections are the pretax rates of return necessary to earn a given after-corporate-tax rate of return (real interest rate) of 5 percent. All the variations in the cost of capital for foreign investment across countries are purely due to differences in their corporate tax systems. The values for tax parameters are drawn from Organization for Economic Cooperation and Development 1991, and relate to the systems in force as of 1 January 1991.

3.3 U.S. versus Local Firms in Foreign Markets

Consider first the cost of capital for U.S. firms and their local competitors in major foreign markets in table 3.1. The first column reports the cost of capital for domestic investment. The effects of corporate tax rules on the cost of capital differentials for domestic investment between countries do not appear to be large, which is in line with most previous comparative studies. Across countries, the required pretax rates of return on domestic investment are higher in Japan, Germany, Italy, and Australia than in other countries, reflecting their relatively high corporate tax rates.

Now consider the case of U.S. firms investing in foreign markets (column 2). In the sample host countries, U.S. firms face about a 20 percent higher cost of equity capital on average than in the case of U.S. domestic investment (9.3 percent versus 7.6 percent). A 20 percent higher cost of capital for foreign investment might put U.S. multinationals in a disadvantageous position in most foreign markets. Comparing the two columns indicates that U.S. firms face a higher cost of equity capital than their local counterparts in every sample country other than Germany.

Table 3.1 The Cost of Capital for U.S. and Local Firms in Foreign Markets

Host Country	Local Firms	U.S. Firms
United States domestic	7.6	7.6
Japan	9.0	10.6
Canada	8.1	9.5
France	7.3	9.7
Germany	9.5	8.3
Netherlands	7.1	7.8
United Kingdom	7.7	8.6
Italy	9.1	9.9
Sweden	7.2	8.8
Switzerland	6.6	8.2
Australia	9.0	11.5
Average (foreign investment)	8.0	9.3

When only corporate taxes are considered, for example, U.S. domestic firms face a slightly lower cost of capital (7.6 percent) than do Japanese domestic firms (9.0 percent) because of higher corporate tax rates in Japan. Because of the tax costs associated with international investment, U.S. multinational firms face a higher cost of equity capital than do local firms in Japan (10.6 percent versus 9.0 percent), according to the calculations that underlie the figures reported in table 3.1. It has been noted in the literature that Japanese firms have enjoyed a cost-of-capital advantage over U.S. firms due mainly to the difference in the cost of funds between the two countries during the past decade. Since the results reported in this study are based on the assumption that there are no cost-of-funds differentials between countries, the negative impact of international tax rules on the cost of capital can be interpreted as an additional source of disadvantage for U.S. firms operating in Japan when these firms draw transfers from their domestic parents.

3.4 U.S. versus Other Multinationals in Foreign Markets

In a foreign market, U.S. firms compete not only with local firms but also with multinationals from other countries. Table 3.2 shows the cost-of-capital measures for firms from different countries operating in Japan.

In column 1, the cost of capital for U.S. firms is in the lower end of the spectrum (10.6 percent). Note that those firms whose cost of capital is higher than U.S. firms' are from countries with a dividend credit scheme (Canada, France, Germany, the Netherlands, the United Kingdom, Italy, and Australia). In these countries, the cost of two sources of parent equity funds—new equity and retained earnings—may be different. Since personal taxes (therefore, a personal tax advantage for capital gains relative to dividends) are ignored in this paper, the dividend imputation scheme will make the cost of parent new

Table 3.2 **The Cost of Capital for Firms Operating in Japan**

Home Country	Equity Transfers with No Imputation Credits for Foreign-Source Dividends	Equity Transfers with Imputation Credits for Foreign-Source Dividends
Japanese domestic	9.0	9.0
United States	10.6	10.6
Canada	11.1	7.3
France	11.7	6.8
Germany	12.8	2.4
Netherlands	10.6	10.6
United Kingdom	11.3	6.4
Italy	11.8	4.6
Sweden	10.6	10.6
Switzerland	10.6	10.6
Australia	13.9	4.7
Average (foreign investment)	11.5	7.5

equity lower than that for parent retained earnings for financing domestic investment.

If shareholders in these countries are allowed to take such dividend-imputation credits for foreign-source dividends, multinationals from these countries can lower the cost of capital for foreign investment by using parent new equity instead of parent retained earnings as the source of transfers. In this case, as shown in table 3.2, firms from countries with a dividend-imputation scheme have a clear advantage over U.S. firms. For example, the average cost of capital for firms from imputation countries is 5.4 percent, which is about half the cost of capital for U.S. firms. This result suggests the potential importance of integrating personal and corporate taxation in enhancing U.S. competitiveness.

Some countries try to restrict investors' ability to use the dividend-imputation scheme on dividends from domestic corporations financed by earnings from abroad. Typically, countries require that dividends eligible for the dividend-imputation scheme be less than the firm's after-tax profits from domestic operations. Unless a firm desires an abnormally high dividend payout rate, however, this restriction is unlikely to be binding.

There are several additional factors that may add to the competitive burden of U.S. firms operating abroad. Among major international investor countries, the United States has the tightest rules regarding the extent to which home-country taxes on foreign-source income are exempted or deferred and regarding the limitation of foreign tax credits. For example, the Tax Reform Act of 1986 has made pooling of worldwide income more difficult for U.S. firms by confining the eligibility to earnings from majority-owned subsidiaries while many other countries tried to adopt the exemption method by statutes or by

treaties; unlike its major competitors, the United States considers loans a subsidiary makes to its parent to be the equivalent of a dividend to which a U.S. surtax may be applied; a recent U.S. tax bill (H.R. 5270, the Foreign Income Tax Rationalization and Simplification Act of 1992) includes a provision that repeals tax deferral; the United States is the only major developed country that does not grant tax sparing credits to developing countries, possibly making U.S. multinationals face a much higher effective tax rate in a developing country than firms from other countries with a treaty including tax sparing credits.

3.5 Implications for Financing Policy

In the face of a high cost of capital for foreign investment financed through equity transfers by the parent, the subsidiary may seek alternative sources of funds. First, parent transfers can be made in debt instead of equity. Since interest payments face lower withholding taxes than dividends in many cases, debt transfer is often a cheaper way of financing the subsidiary.

A more important source of debt financing lies in host countries. Local borrowing, which is ignored by most previous studies on foreign investment, has been an important source of funds for foreign investment. At the end of 1989, the share of local and other foreign borrowing in total external finance for U.S. firms operating abroad was 60.3 percent. The corresponding figure for foreign firms operating in the United States was 71.2 percent.

Column 3 of table 3.3 shows that the cost of capital for foreign investment financed by local borrowing is much lower than that for equity financing regimes. The deduction benefits are proportional to the marginal corporate tax

Table 3.3 **Advantage of Local Financing for U.S. Multinationals**

Host Country	Transfer of Parent Equity (1)	Subsidiary Retained Earnings with Tax Deferral (2)	Local Debt Financing (3)	Tax Cost of Not Using Subsidiary Retained Earnings (1 − 2) (4)	Tax Cost of Not Using Local Debt (1 − 3) (5)
U.S. domestic	7.6	7.6	2.6	0.0	5.0
Japan	10.6	9.0	1.6	1.6	9.0
Canada	9.5	8.1	3.5	1.4	6.0
France	9.7	7.3	3.2	2.4	6.5
Germany	8.3	9.5	0.6	−1.2	7.7
Netherlands	7.8	7.1	2.8	0.7	5.0
United Kingdom	8.6	7.7	3.5	0.9	5.1
Italy	9.9	9.1	1.9	0.8	8.0
Sweden	8.8	7.2	3.6	1.6	5.2
Switzerland	8.2	6.6	3.1	1.6	5.1
Australia	11.5	9.0	3.6	2.5	7.9
Average (foreign investment)	9.3	8.1	2.7	1.2	6.6

rate in a country, and debt financing is particularly attractive in Japan and Germany because of their relatively high corporate tax rates.

Column 5 indicates that the tax cost of not using debt is much higher for foreign investment than for domestic investment. For domestic investment in the United States, the tax cost of using equity financing is 5.0 percent. For U.S. firms operating in Japan, the cost can be as high as 9.0 percent.

In addition, the nontax cost of using debt may be lower for foreign investment than for domestic investment. A multinational may face less risk of default since it can possibly pool relatively independent risks from its worldwide operations and use its combined assets as collateral for loans. Further, foreign borrowing is an important means to hedge against exchange risks associated with foreign-source income.

When borrowing abroad, a U.S. multinational may have an incentive to concentrate its borrowing where tax benefits are large. Japan, Germany, Italy, and Australia are more attractive places for foreign borrowing for U.S. firms than Canada, France, the Netherlands, the United Kingdom, Sweden, and Switzerland as far as taxes are concerned. This observation has become more relevant as integrated world capital markets have narrowed differences in borrowing costs between countries.

If, for some nontax reasons, a U.S. firm has to finance foreign investment using an equity source, subsidiary retained earnings are typically cheaper than parent equity transfers, except in Germany, where split corporate tax rates discriminate against retained earnings (column 4). Note, however, that the cost of capital for investment financed through subsidiary retained earnings reported in this study implicitly assumes that home-country taxes on unrepatriated earnings can be deferred. As mentioned earlier, U.S. firms have limited abilities to defer some of their home-country tax liabilities.

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