

# [The upstream-downstream hypothesis and corporate international diversification th...](https://assignbuster.com/the-upstream-downstream-hypothesis-and-corporate-international-diversification-theory/)

[](https://assignbuster.com/)[Science](https://assignbuster.com/essay-subjects/science/)

ABSTRACT

The study of multinationals has received much attention in literature. Certainly, it has become a subject of controversy among the scholars. On the one hand, some researchers including Reeb & Mansi (2001), Chkir & Cosset (1999) and Chen et al. (1997) point out to the diversification benefits to multinationals due to risk reduction inherent in operations within imperfectly correlated markets. While on the other hand, the more recent research by Reeb, Kwok & Baek (1998) and Bartove, Bodnar & Kaul (1996) notes a positive relationship between internationalization and high debtholder monitoring costs. Against this backdrop, this analysis suggest an alternative upstream-downstream hypothesis whereby the overall effect of internationalization on the risk and leverage of multinationals is dependent on the market conditions of the host and target country. The paper examines the theory that multinationals should have lower risk and higher leverage than non-multinationals and explains the difference between this theory and the upstream-downstream hypothesis. Also included in this analysis, is an explanation for the documented puzzle that multinationals tend to have lower levels of long-term debt but more use of short-term debt than non-multinational firms.

INTRODUCTION

The study of multinationals has received much attention in literature. Over the last few decades, it has become a subject of controversy among the scholars. It has generated more heat than light with some suggesting diversification benefits to multinationals, while others point out to the positive relation between a firm risk and internationalization. Against this backdrop, we suggest an alternative upstream-downstream hypothesis whereby the overall effect of internationalization on the risk and leverage of multinationals is dependent on the market conditions of the host and target country.

Previous researchers including Reeb, Mansi & Alee (2001), Chkir & Cosset (2001) and Chen et al. (1997) found a positive relationship between internationalization and debt ratio due to risk reduction inherent in operations within imperfectly correlated markets. On the contrary, Burgman (1996) and Lee & kwok (1988) demonstrated a negative relationship between internationalization and debt ratio that results from increased risks due to agency costs, and political and exchange rate risks.

Similarly, while the findings obtained from Initial research by Hughes, Logue & Sweeny (1975) are consistent with the diversification benefits, the more recent research by Reeb, Kwok & Baek (1998) and Bartove, Bodnar & Kaul (1996) found a positive association between the risk of a firm and internationalization. Additionally, while focusing on leverage, Burgman (1996) noted that internalization may result in higher debtholder monitoring costs and thus significantly reducing the levels of leverage. Consistent with greater agency costs, Lee & Kwok (1988) and Chen et al. (1997) found that the domestic corporations would in general tend to have significantly higher debt ratios relative to the MNCs. Clearly, from what can be discerned, the study of internationalization of firms has become a controversial issue among scholars.

This analysis is thus an attempt to shed light on the above by exploring on both international diversification benefits and the upstream downstream hypothesis. We begin out analysis by examining the upstream and downstream hypothesis

UPSTREAM-DOWNSTREAM HYPOTHESIS

Kwok & Reeb (2000) argue that there is an increase in risk and a reduction in debt usage when firms from stable economies make investments internationally (downstream). Conversely, the risk is reduced and debt usage increased when firms from weaker economies make investments internationally (upstream). It therefore follows that the overall effect of internationalization on firm’s leverage and risk is dependent on the characteristics of the home and target economy.

The firms’ behaviour towards international activity or rather the overall effect of internalization on firms leverage and risk is dependent upon whether the firm is moving upstream or downstream (Kwok & Reeb 2000). For example, for multinationals based in the United States (which is among the most stable economies in the world), their overseas expansion tend to exacerbate risk. This increase in risk may not be totally offset by the risk reduction due to international diversification and thus resulting in a downward adjustment of the firms’ leverage.

On the converse, for firms in the emerging economies, investment internationally in the developed economies leads to a reduction in corporate risk and subsequently an upward adjustment of leverage.

## INTERNATIONALIZATION AND SYSTEMATIC RISK

The upstream downstream argument can be extended to the systematic risk area. Multinationals, by definition, have their operations diversified into various countries. The systematic risk of an ith operation can therefore be defined as ? i (Reeb, Mansi & Allee 2001).

? i = (? im ? i)/ ? m

Where ? im represents the correlation between the market return and firm’s return

? i represents the firm’s return standard deviation

? m refers to the market return’s standard deviation

An ith operation is thus influenced by the nature of the business operation and the economic system of the country where the operation takes place (Reeb, D. M., S. A. Mansi and J. M. Allee, 2001). Take for example a project that is located in a more volatile emerging economy. This project would tend to have a higher value of total risk, ? i. Unless there is an offset of the high standard deviation by a lower correlation coefficient ? im, the systematic risk ? i would be higher.

On the converse a project that is located in a more stable economy tend to have a lower value of its total risk, ? i. Similarly, unless there is a substantially higher value of correlation efficient ? im, the systematic risk ? i tend to be lower.

For any multinational, its overall systematic risk is simply the weighted average of the betas (? i) of all its business operations within the various countries (Reeb, Mansi & Allee, 2001).

? mnc = ? Wi ? i

Where Wi represents a fraction of the total capital invested by the MNC in the ith country’s operation.

Therefore, for a firm that is headquartered in a more stable economy, expansion of its operations into a less stable market would increase the overall beta (? mnc) of the firm, due to potentially greater environmental risk for the new operation (Reeb, Mansi & Allee, 2001). Conversely, when a firm that is headquartered in an emerging economy expands its direct investments into a developed economy, its overall beta may decrease.

The ability to arbitrage markets may as well differ due to the economic differences of the home and target economies (Reeb & Kwok 2000). Take for example, the shift of income. The ability to have the income shifted among different tax regimes depends on the degree of sophistication of the host and target government (Reeb & Kwok 2000). Firms that are based in economies which are more developed and with greater resources, tend to have fewer opportunities for shifting their income (Reeb & Kwok 2000).

In contrast, firms that are based in the volatile emerging economies tend to have different opportunities to arbitrage labour and capital markets (Reeb & Kwok 2000). That is, firms that are moving upstream have more opportunities to hire employees with different sets of skills and experience than those that are moving downstream. This implies that firms’ behaviour towards international activity varies with the characteristics of the home and target market. Therefore, the overall effect of internationalization on the firms risk and leverage depends on whether the firm is moving upstream or downstream.

## INTERNATIONALIZATION AND LEVERAGE

Aligning with the above, the association between internationalization and firm risk suggests a leverage effect as well. Traditional capital structure theory posits that as firm risk increases the debt utilization decreases (Reeb & Kwok 2000). Hence, for firms that are based in the more volatile emerging economies, their overseas expansion may lead to more debt utilization, as they may gain access to debt that was not previously available. The converse is also true.

This view of the leverage aspect of upstream-downstream hypothesis suggests a negative association between leverage and internationalization for firms based in the more developed economies and vice versa (Reeb & Kwok 2000). That is, firms that are moving upstream tend to have a positive relationship between the firms leverage and internationalization while those moving downstream tend to have a negative association. This implies that the overall effect of internationalization on the leverage of multinationals is equally dependent on the home and target market conditions.

This next section will explore on the corporate diversification theory and the effect of agency costs and internal capital markets on the firms’ leverage. In particular, the agency conflicts and efficiency of internal capital markets will be used in providing an explanation as to why multinationals tend to have lower levels of long-term debt but more use of short-term debt than non-multinational firms.

CORPORATE INTERNATIONAL DIVERSIFICATION

The corporate international diversification theory posits that multinationals should have lower risk and higher financial leverage than the domestic corporations (Doukas & Pantzalis 2001). One of the main reason as to why corporations would not take 100% debt in their capital structure is because of the risk of insolvency (Doukas & Pantzalis 2001). Given that this risk is not linear but increases with higher debt levels, firms can thus limit their leverage in order to avoid incurring bankruptcy costs.

There are a variety of business risks as well as opportunities that stem from corporate international diversification. Business risk which is typically measured by the volatility of the operating net income refers the cost of financial distress or rather bankruptcy cost (Doukas & Pantzalis 2001). Both the domestic and multinational firms are also faced with exchange rate risk. That is, the risk that fluctuations in currencies will affect the demand and supply, price and cost characteristics of the corporation.

There is also the risk of higher agency costs which faces multinational firms. MNCs face higher agency costs due to auditing costs, monitoring costs, different accounting systems, different legal systems, sovereignty uncertainties, language differences, labour market and capital imperfections as well as the different asset structures (Doukas & Pantzalis 2001). Agency costs are known to have a significant impact on the optimal debt level as will be discussed below (Doukas & Pantzalis 2001).

Political risks arise from political events that may have adverse effects on the economic wellbeing of the firm. For example, potential conflicts may arise between thegoalsof the government and those of the foreign firms. This is especially the case with foreign direct investment, given their effect on the host economy.

Among the benefits put forth by scholars is the view that through international diversification, firms are able to increase on their debt capacity and reduce their bankruptcy costs (Doukas & Pantzalis 2001). It has been argued that risks are reduced by portfolio effects due to the imperfect correlation of foreign cash flows. In this regard, Fatemi (1984) and Agmon & Lessard (1977) point out that diversification benefits reduce the bankruptcy costs and increase the debt usage by multinationals.

## AGENCY COSTS AND FINANCIAL STRUCTURE OF MULTINATIONALS

The documented puzzle that multinationals tend to have lower levels of long-term debt but more use of short-term debt than non-multinational firms warrants an explanation. There are many reasons as to why one would expect multinationals to have different leverage ratios relative to the domestic corporations. First, given the international nature of their operations, MNCs are expected to have access to more capital sources unlike the domestic firms (Doukas & Pantzalis 2001). Therefore, they can raise more capital via foreign debt financing and at more favourable terms than the domestic corporations (Doukas & Pantzalis 2001).

Consider, for example, the case of multinationals that have subsidiaries in countries with different tax rates. These multinationals can benefit a lot by borrowing through foreign affiliates exposed to high tax rates, hence increasing their tax shields (Butler 1999). It therefore follows that due to access to external sources of financing, these multinationals should in general have higher debt ratios than the domestic firms (Butler 1999).

Another reason as to why Multinationals should exhibit higher debt ratios than non-multinational firms is that the foreign debt can be used as a hedging instrument against the risk of foreign exchange (Butler 1999). Given that multinationals have higher levels of foreign exchange exposure in comparison to the domestic firms, they are thus expected to make greater use of debt financing than the local firms (Butler 1999). Additionally, since multinationals are subject to political and exchange rate risk exposures, it is expected that these multinationals should have higher overall debt ratios relative to the local firms (Butler 1999).

Thirdly, due to industrial and geographical diversification of operations of MNCs, they are expected to have lower business and financial risk than the domestic firms (Doukas & Pantzalis 2001). This has the impact of reducing the cost of debt and therefore increasing leverage. This implies that the leverage of multinationals should have a positive relation with foreign involvement while financial distress should have a negative and greater bearing on DMCs’ leverage (Doukas & Pantzalis 2001).

However, while hedging, financial distress, liquidity and operating considerations imply that multinationals are more likely to have greater leverage than the domestic corporations, findings from empirical studies show that these multinationals have instead lower long-term leverage relative to the domestic firms (Doukas & Pantzalis 2001).

Three possible explanations can be given for this finding. These include: (Doukas & Pantzalis 2001)

Efficiencies of internal capital markets   
Agency costs of debt   
Legal and institutional differences across counties where multinationals operate.

### INTERNAL CAPITAL MARKETS

Since MNCs have numerous divisions operating across countries, they tend to create extensive internal capital markets which may provide cheaper financing relative to the external markets (Doukas & Pantzalis 2001). Hence, where the internal capital market is efficient, MNCs tend to rely more on internal financing than the external one. As a result, they tend to have lower leverage than the domestic firms. Consequently, a non-positive relation between the firms leverage and its foreign operations can emerge when internal capital markets bypass external capital market informational asymmetries (Doukas & Pantzalis 2001).

In a recent study, Matsusaka & Nanda (1997) and Scharfstein & Stein (1997) examined the improved capital allocation in internal capital markets and the associated agency costs for firms that had diversified their operations. They found that diversified firms could use internal capital markets in funding profitable projects, which would not be financed in external capital markets due to agency costs and information asymmetries.

This implies that the external debt financing need for multinationals can be attenuated and that the low levels of leverage for Multinationals should reflect the strengths of internal capital markets (Doukas & Pantzalis 2001). This view certainly indicates a negative relation between industrial diversification and the leverage of multinationals. That is, MNCs debt ratios should exhibit a negative and more pronounced association with industrial diversification than the domestic firms.

### AGENCY COSTS OF DEBT

The agency cost of debt effect on leverage of multinationals arises from their industrial diversification. Since their operations are geographically dispersed, the cost of gathering and processing information is generally more costly for MNCs than the domestic firms (Doukas & Pantzalis 2001). Therefore, multinationals are expected to have more inherent agency problems between the debtholders and shareholders due to their diverse geographic structure.

It therefore follows that bondholders will require higher interest payment on loans to firms that have greater monitoring costs and are more susceptible to asymmetric information problems (Doukas & Pantzalis 2001). This implies that firms which have diversified their operations are more likely to have their debt ratios lower than domestic firms. Further, firms with greater foreign involvement are expected to have a negative and more pronounced relation between the firms leverage and agency costs of debt, than the domestic firms (Doukas & Pantzalis 2001).

Several authors have suggested that, unlike the domestic firms, multinationals are likely to support more debt in their capital structures. Burgman (1999), however, contests this claim and in fact argues that multinationals have, in the actual sense, less debt in their capital structure. He addresses whether factors such as the political and exchange rate risk and the agency costs can explain this phenomenon. The findings of his study show that multinationals tend to have higher agency costs and that diversifying their operations does not lower their earnings volatility.

CONCLUSION

Clearly, there are inherent business risks as well opportunities that stem from corporate diversification. While we do not ignore the cross-border benefits of corporate diversification, we suggest that the overall effect of internationalization on the firms risk and leverage can be predicted by an upstream-downstream hypothesis.

REFERENCE

Agmon, T. and D. Lessard, 1977. “ Investor recognition of corporate international diversification”. Journal ofFinance, 32: 1049-55.

Bartov, E., G. Bodnar, and A. Kaul, 1996.“ Exchange rate variability and the riskiness of US multinational firms: Evidence from the breakdown of Bretton Woods”. Journal of Financial Economics, 42: 105-132.

Burgman, T. A., 1996. “ An empirical examination of multinational corporate capital structure” Journal of International Business Studies, Vol 30, pp. 553-570.

Butler, K. C., 1999, Multinational Finance, 2nd edition, Cincinnati, OH: South-Western College Publishing

Chen, C. J. P., C. S. Cheng, H. J. Agnes, and K. Jawon, 1997. “ An investigation of the relationship between international activities and capital structure” Journal of International Business Studies, p. 563-577.

Chkir, I. E. and J. C. Cosset, 2001. “ Diversification strategy and capital structure of multinational corporations”. Journal of Multinational Financial Management 11, 17–37.

Doukas, J. A. and C. Pantzalis, 2001. Geographic diversification and agency costs of debt of multinational firms. Old Dominion University. http://papers. ssrn. com/abstract= 282850 {accessed on 30th December 2011}

Fatemi, A. 1984. “ Shareholders Benefits from Corporate International Diversification”, Journal of Finance Vol. 39 No. 5.

Hughes, L., D. Logue, and R. Sweeney, 1975. “ Corporate international diversification and market assigned measures of risk and diversification”. Journal of Financial and Quantitative Analysis, 10: 627-37.

Kwok, C. Y. Chuck and D. Reeb, 2000.” Internationalization and Firm Risk: An Upstream-Downstream Hypothesis”, Journal of International Business Studies, 31, 4; 611-629.

Lee, K., and C. Y. Kwok, 1988. “ Multinational corporations vs. domestic corporations: International environmental factors and determinants of capital structure”. Journal of International Business Studies, vol 19, pp. 195-217.

Matsusaka. J, and V. Nanda, 1997, Internal capital markets and corporate refocusing, Working Paper, University of Southern California.

Reeb, D. M. and C. Kwok and H. Y. Baek, 1998. “ Systematic Risk of the Multinational Corporation”, Journal of International Business Studies, Second Quarter.

Reeb, D. M., S. A. Mansi and J. M. Allee, 2001. “ Firm internationalization and the cost of debt financing: evidence from non-provisional publicly traded debt”. Journal of Financial and Quantitative Analysis 36, 395–414. Chkir & Cosset (1999)

Scharfstein, D. S, 1997, The dark side of internal capital market II, Working Paper, MIT press.