### **Replies to Memo Questions, 11/08/03**

Dear Students,

The answer to my question (does MNE have higher/lower debt-equity ratio? How about MNE systemic risk?) is that in practice, MNE tends to have lower debt-equity ratios and higher systematic risks.

Here are the replies to your questions.

## If American companies are already in the most liquid market, is there any benefit for them to enter the world market?

Yes, there is. You see, the first benefit is diversification. Then, remember that arbitrage is possible if the same asset is traded across different markets.

### If in small cap domestic WACC is greater, why is that an advantage?

Well, actually, in small cap we would expect that the cost of capital is lower for the domestic company.

## If MNE has higher cost of capital then why would MNE enter the international market?

I assume you refer to the international equity & bond markets. The reason why MNE does tap these markets, are many. We will discuss them in class on 11/11. Here I will mention briefly a few. First, sourcing local capital lowers the risks (political, expropriation, foreign exchange rate, etc) that an MNE faces. How? By offsetting existing inflows from these markets, by generating cash outflows (or claims to these) overseas. Then, oftentimes, a company is well position to take advantages between different equity markets (arbitrage, of course). So, for example, in the 1990s, many investors were doing the "yen carry trade" (remember it when we discussed uncovered interest arbitrage). Now, a multinational would be well positioned to take advantage of this (similarly, back in the dot-com bubble many European & Latin American companies sourced capital in the US to take advantage of the bullish investor sentiment). Third, the company can use the securities it issues for the purposes of acquisitions, stock compensation to local managers, etc.

#### I still don't understand why MNE have lower D/E ratios. Could you explain again?

I assume you talk about US-based MNE (the statement above might not be true for MNEs based overseas). I also find it very puzzling that US MNE have lower debt-equity ratios. I thought first that if these companies have higher collateral value (they are usually very large in terms of assets) that they could borrow more. But, you see, the prediction of <u>the pecking order theory</u> we discussed in class, is that mature firms would be "safer" in the sense that they will not go for equity, but rather go for debt, or better yet, for

internally generated cash. Since MNE tend to generate a lot of internal cash (that is in excess of their investment opportunities), they do not really need that much of debt & equity. That's why (and this is my take on it) we see MNE have lower debt-to-equity. Now, Michael Jensen of Harvard Business School developed in 1986 the so-called *free-cash flow theory*, that says that companies w/ a lot of free cash-flow might be less leveraged, since managers might wish to use the free cash flow for private benefits of control, or put it in perk projects, rather than disgorge it to investors in the form of interest payments to debt-holders. The prediction of this theory is that for such companies taking more debt might be optimal. That, in my opinion, might be the case of MNE – perhaps they are less leveraged exactly because of the presence of large internally generated cash flows.

#### Why does issuing in world markets remove segmentation?

Issuing in world equity market alleviates segmentation, since it exposes the company equity to international investors, which would collect information for it and so arbitrage away any differences that might exist between its valuation in the local (segmented) market and the world equity market. Equity & debt claims are like *experience goods* – investors need time in order to acquire info for these. So, issuing in world markets, initially small quantities, and then eventually larger quantities, serves the purpose of overcoming the information asymmetry, which is the basic cause of the market segmentation.

#### Could you elaborate on how $\rho$ (rho) and $\sigma$ (sigma) affect the beta of an MNE?

In class we mentioned that beta is  $\beta = \frac{\rho_{jm} \times \sigma_j}{\sigma_m}$ . So, for MNE, the diversification of equity issuance results in a decrease in  $\rho_{jm}$ , the correlation between the market and the stock. However, the MNE is subject itself to higher risks (political and foreign exchange risks), so  $\sigma_j$  will increase. For MNE, the increase in  $\sigma_j$  is be much higher than the decrease in  $\rho_{jm}$ , so as a result the overall beta (or systematic risk) increases.

#### Could you explain the pecking order? I didn't quite catch the explanation in class.

The pecking order is a theory of capital structure, invented by Stewart Myers of MIT in 1984. The theory says that, when issuing securities to meet their needs for financial funds (or financial deficit), companies will tend to follow a "pecking order" in the following sense: they will always try to first issue <u>less information sensitive securities</u> (like debt) as compared to more information sensitive securities (like equity). So, if the companies have sufficient financial means (cash flow) they will first try to use it, and if they still need funds, then they will first issue debt, and if that is still not enough, they will issue equity. The theory has two components to it. *First, why companies try to issue less information sensitive securities* are concerned to issue securities that contain too much information, because of competition – that is issuing equity would require from the company to make very often report to investors, would

necessitate frequent interviews and public appearances of the CEO, which might hurt the company, since some of its proprietary information now becomes freely available to competitors, too. So, there is a trade off: if the company issues stock, it has to disclose more information to investors in order to support a higher price. Why? Because the lack of information leads to higher risk premium required by investors for holding that particular stock.

The second component to the theory is that it claims equity is more information sensitive than debt. Why? Isn't it true that debt holders (usually banks) tend to closely monitor the debtors ("breathe in their necks" in occasions of likely default)? It is true that debt financing subjects company to stringent monitoring, however, the company does not need to disclose information to many parties (i.e. investors) but only to the bank, which limits the information that would eventually end up in competitors.

Can you explain slide 17, "Is MNE WACC < domestic WACC" in more detail?

# Is MNE WACC < domestic WACC?



Theory: MNE should have low cost & abundant capital.

So, the main message to take from this slide is, that at low capital budget levels, the cost of capital to an MNE might be higher as compared to the cost of capital of a pure domestic play firm. But, at higher levels of capital budgeting, MNE tend to have lower cost of capital (economies of capital scale). Why? This is because, for larger scales of capital budgets, the MNE is capable of keeping its cost of capital the same. So, let's go over the graph. On the graph, we have two investment schedules available. On the left, the downward dotted line represents an investment schedule that required low capital

budgets, i.e. an investment schedule for the pure domestic play firm. On the right, the downward sloping dotted line represents an investment schedule that requires higher capital budgets. Notice that the investment schedules are downward sloping – this is because we have ordered the projects available to the firm by their profitability – the most profitable projects are to leftmost side and the least profitable projects available to the company are to the rightmost side of <u>each</u> of the investment schedules. I have labeled these investment schedules w/ MRR (marginal rate of return) since we have ordered the menu of projects available to the firm based on their marginal rates of return.

The second component of the graph is the marginal cost of capital (MCC) curves. So, the MCC curve for the pure domestic play firm is more curved, that is the marginal cost of capital for the pure domestic play firm increases much faster for lower levels of capital expenditure, as compared to the MNE. Why? Because, the MNE can use its access to more markets to raise more funds, without having a significant impact on the price (cost) it pays to raise equity in any of these markets. That is, the market for MNE stock is more liquid as compared to the one for the domestic play firm, and so, it allows for raising higher capital budgets at lower costs.

Finally, notice in the slide that for large scale capital budgets, the equilibrium cost of capital (i.e. the cost of capital read from the vertical axis at the intersection of the MCC and MRR curves) is lower for the MNE as compared to the pure domestic play firm, while for small scale capital budgets, the equilibrium cost of capital is lower for the pure play domestic firm as compared to the MNE. Again, this is result of the fact that MNE can raise easily larger quantities of capital in international markets, as compared to pure play domestic firms.