CIFP1 IB 1006

Islamic Capital Market

The Supply of Capital and The Cost of Equity Capital

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The essay looks at the cost of equity capital such as common stock. Common stock is an equity product that runs on the 'No pain no gain" principles of *al-ghorm bil ghonm (*with risk comes profit*)* and *al-kharaj bil daman* (profit is accompanied with responsibility). The capital supplier's main concern is how much he can make from his investment. God has entrusted him with wealth and thus, he must look after this God given bounties the best way possible. If he plans to make an investment, then he must be concern about how many cents he can earn out of every dollar invested. He cannot be negligent and careless to cause erosion of his wealth as this is tantamount to *israf* (ie.wastage and extravagant spending). This is the philosophy of investment in Islam.

In other words, he is interested to know the expected rate of return of capital. One way to compute this expected rate of return is by using the Capital Asset Pricing Model (CAPM).

But not everyone use CAPM. For example, retail investors are more driven by tips and rumors. Some look at the price-earning ratio of the stock. Fund managers use all sorts of models such as technical analysis, charts and also CAPM. Some of them are entrusted with Islamic funds and using CAPM is not an exception. There are other models besides CAPM but CAPM is the simplest. On this note, we will use CAPM to illustrate the factor determining the supply of capital.

The supply of capital is determined amongst other by its expected rate of return (Re).

$$\text{Supply of Capital} = f(Re)$$

Re can be obtained from the CAPM equation.

The CAPM equation is given below:

$$Re = Rf + B\,(Rm - Rf)$$

Where,

Re = expected rate of return

Rf = risk-free rate. This rate is considered free from default risk since the borrowing party is the government.

B = Beta. This variable explains the volatility of the common stock. If beta = 2, it means that 1% increase in the market will increase the common stock by 2%. It means that the stock is quite volatile.

Rm = Market rate; the market rate is represented by a stock index, say in the United States, Standard & Poor 100.

The CAPM equation says that the expected rate of return of a common stock is made up of 1) the risk-free rate and the 2) risk-premium or Beta(Rm-Rf). That is, the risk premium consists of the Beta multiply by the difference between the market rate and risk-free rate (Rm-Rf).

For example, if Rf = 5% and Beta = 1.5 and Rf = 15%. Then

Re = 3 + 1.5(15 – 5) = 3 + 1.5 (10) = 3 + 15 = 18%.

What the above means is that the expected rate of the common stock has a risk premium of 15%. When adding the Rf to this risk premium, the total expected rate of return is 18%.

The question is "can fund managers who are entrusted with Islamic funds use CAPM?" Since CAPM has an interest rate component (Rf), it is easy to say NO. However, there is no consensus regarding the Islamic opportunity cost of capital (ICOC). Some say that it should be based on the real sector performance rather than the financial service sector performance.

If Rf = 0, then:

Re = 0 + 1.5 (15 – 0) = 23.5 which means that the Re without Rf is higher than Re with Rf. Since there is no guaranteed component (Rf), the investment is seen as more risky and thus investors expects to earn more from the investment. To those who are seeking capital, this is no good as the cost of equity capital is now higher than one with Rf.

The cost of equity capital is therefore its expected rate of return (Re).

Discussion Question:

As a Shariah compliant fund manager, how do you apply CAPM in your investment decision?

The Shariah complaint fund manager is expected to practice *ehsan* in making investment decisions. *Ehsan* is an ethical and moral attribute, which means benevolence. The fund manager who practices *ehsan* will strive to do the best for the investors since he considers himself less important than the former. In other words, the customer is NO 1. In

ehsan, the person works as if he sees God in front of him and if he cannot see God, indeed he feels that God is looking at him.

To do the best of the investors, the fund manager is expected to observe professional practice with diligence and discipline. He must be rational (ie uses his *'aql*) and invest on the basis of information available and not from his whims and fancies. For example, to purchase common stocks:

1. He must buy low and sell high.

But how does he know that the market price of, say Stock X is low enough (ie. underpriced) or too high (ie overpriced). Usually we will only buy a stock that is undervalued, which means, it has potential to increase in value. People lost their money usually during booms when stock prices are overvalued. For this reason, it is important to know the theoretical value of the stock. The principle works as follows:

a. When theoretical price > market price --- Buy Stock X

   ie. This stock is undervalued.

b. When theoretical price < market price ---Do not buy Stock X

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   e. This stock is overvalued.

We can use the basic Gordon growth model to find the theoretical value of a particular stock. In this way we can know whether the market price of Stock X is undervalued or overvalued.

Gordon Growth Model

Price of Stock X = Dividend per share / (expected rate of return - rate of growth of dividend)

$$Po = D1 /[r-g]$$

1. Po: value or market price of common stock
2. D1: dividend to be received in 1 year
3. r = investor's required rate of return
4. g: rate of growth

Assume market price of Stock X (Pm) is $40. The dividend to be paid at the end of the month is $4 per share and is expected to grow at a constant annual rate of 6%. Then the theoretical price of the common stock is:

Pt = $4 / (r – 6%).

We can obtain r from CAPM.

r = Re

Re = Rf + Beta (Rm – Rf)

Assume that Re = 18%, thus r = $18

Pt = $4/(18% -6%) = $4/0.12 = $33.30

Pm = $40

Pt = $33

Pm > Pt, ie $40 < $33.30, thus the stock is undervalued.

Decision : Buy Stock X.

Note: if Rf is taken out from CAPM, Re will increase. This also means that Pt will become smaller. Stock X is undervalued even more.

Based on the CAPM example, Re without Rf = 23.50%

Pt = $4/(23.50% - 6%) = $4/0.175 =$22.875