Modigliani and Miller Theory: A Societal Perspective

Modigliani and Miller (MM) theory is the foundation of corporate finance. Mostly we apply the theory to corporations. But the theory will offer us great insights about the whole societies as well.

The MM theory states that the risk of a company is determined by the business activities of the company. The risk can't be reduced by financing methods. However, interest payments from the debts are tax free while dividend payments from the stocks are taxable. This means debt financing often reduce the overall risk and cost for a business. More debt financing is usually good for businesses. Since the development of Modigliani and Miller (MM) theory in 1958, the business world relies more and more heavily on debt financing. Usually, the argument stops here.

However, if we apply MM theory to the whole society, the reduced risk and cost for businesses must mean the increased risk and cost for the rest of the society. Indeed, that is the case. During 2008 financial crisis, many debt ridden financial institutions and other companies were bailed out with tax dollars. The stock market has done extremely well since MM theory first appeared at the end of 1950s. But the incomes of the working class have been stagnant for several decades. In the United States, in 1950, corporate taxes accounted for about 30% and social insurance tax 10% of the total tax. In 2019, individual income taxes (federal, state, and local) were the primary source of tax revenue, at 41.5 percent of total tax revenue. Social insurance taxes made up the second-largest share, at 24.9 percent, followed by consumption taxes, at 17.6 percent, and property taxes, at 12.1 percent. Corporate income taxes accounted for 3.9 percent of total tax revenue. Government now taxes more on individuals and less on corporations.

Cost of capital quantifies the level of risk of a business investment. It is the most important concept in corporate finance. Cost of capital is the total cost of financing, from both debt and stocks. From the concept of the cost of capital, we cannot use the interest rate of the debt as the measure of the cost of our capital. When a company face financial trouble, we will layoff workers and cut dividends first. We still have to make interest payment on our debt. The interest rate of our borrowing is relatively low because its payment is safer than the other parts of payments, such as to workers and to equity owners. The overall cost of capital is higher than the cost of debt. When a company borrows too much money, the risk of workers and equity owners, who are left holding the bag, will increase. The overall risk of a business will increase with too much borrowing. In a debt ridden business, workers are less likely to get raise in their pay and are more likely to get laid off. Workers are less committed to their jobs. Customers and suppliers are more wary.

The concept of cost of capital is generally applied in corporations. But this concept can be applied to general society as well. Nowadays, governments often borrow heavily to finance various programs. US government debt to GDP ratio is over 100%. Japanese government debt to GDP ratio is over 200%. Many economists state that since the interest rates on government debts are so low, it is a good deal to borrow more money. However, from the theory of cost of capital, we cannot use the borrowing rate as the measure of the cost of capital. With too much government borrowing, the risk of equity owners, who are supposed to be the whole population of the society, will increase. When the central banks lower interest rate, they only lower the cost of debt, they can't lower the total cost of capital. As a result, when the central banks lower the interest rate, the risk and cost to the majority of the population increases. In particular, the risk and cost to most young people, who don't own large amount assets, increases.

The risk and cost ultimately are reflected in the number of child birth, the most important investment in a society. The US fertility rates have been lower than two per woman for more than a decade. In the past, US fertility rates had been temporarily lower than two in difficult times, during 1930s and 1970s. However, this time, US is amid the longest bull market in history. It means that even in a stock market boom, people are less able to have children, the long term future of our society. In many other wealthy countries, such as Canada, their fertility rates have dropped below replacement rate for a long time. Their populations are aging rapidly. Such societies are unsustainable.

It is often argued that lowering the risk and cost for businesses will stimulate overall economy. However, the overall risk and cost of the whole society are not reduced. They are merely shifted from very few large corporations to the general population. Because of the added burden to the general population, most people are less able to create their own businesses. Because new companies are difficult to get debt financing, the tax benefit of debt financing is largely concentrated in large dominate corporations. In US, the number of publicly listed companies has dropped to half its peak level in 1996. The world is increasingly dominated by small number of gigantic companies that wield great power to our societies. The current social system shifts much of the risk and cost from large corporations to ordinary people. The tax benefit to large corporations stifles instead of stimulates market competition in the economy.

Because of the large tax benefits of debt financing, companies rely heavily on it, even if heavy debt financing may generate great business risk. Take Target Canada as an example. When Target expanded its businesses into Canada, it mainly relied on debt financing. This greatly reduces the cost of expansion for itself but greatly increases the possibility of bankruptcy. It kept its operational performance a secret. Suppliers continue to provide goods to Target without being paid, believing Target, as a huge company, is creditworthy. When Target Canada went bankrupt, many creditors and suppliers suffered heavy losses. This is an example how debt financing shifts risks from powerful large companies, this time, Target, to small suppliers, who have less legal, social and informational power.

A debt ridden system inevitably becomes more fraudulent, with more powerful parties download their risk to and benefit from less powerful parties, with current stakeholders download their risk to and benefit from future stakeholders. This is also true on a society level. When CPP (Canada Pension Plan) was first implemented, the deduction rate was 3.6% of a person's income. Now it is over 10%. Earlier participants are paid handsomely upon retirement, from the contributions from later participants who are still working. National pension systems in many countries are a standard Ponzi scheme. Due to its enormous scale, the pension system will eventually collapse the whole society. But this idea rarely surfaces in mainstream media. Instead, pension system is often trumpeted as a pillar for a stable and prosperous society.

When we apply the Modigliani and Miller theory to understand our society, we learn several things. First, the overall risk of a society is largely determined by the risk levels of economic and social activities. Financing methods can't reduce the overall risk. It only shifts risks around different parties. Second, the cost of borrowing does not represent the overall cost of the economic activities. The overall cost of capital in a society is higher than the cost of borrowing. Third, debt financing is an effective tool to shift risks from more powerful entities, such as large corporations, especially financial institutions, to the less powerful general population. Fourth, too much borrowing generates huge burdens to ordinary people. It will weaken the long term viability of our future.