# How firms decide between risk retention and transfer finance essay

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Generally, the purpose of risk management is value maximization for a for-profit organization. In other words, risk management aims to maximize value by minimizing the cost of risk. Total costs of pure risk include costs of control and costs of financing. This essay focuses on risk financing. There are two broad methods of risk financing: risk retention and risk transfer. Risk transfer contains insurance and other contractual risk transfers. At the beginning of this assay, I am going to introduce the concept of retention, insurance, and contractual risk transfers, and their advantages and disadvantages. Then I will discuss how a firm should decide between risk retention and risk transfer, if a captive insurer is not to be employed. Finally, I will discuss how a firm, having a captive insurer, should finance its pure risk losses.

" With retention, a business retains the obligation to pay for part or all of the losses. When coupled with a formal plan to fund losses for medium-to-large businesses, retention often is called self-insurance." (Harrington and Niehaus 1999 Page 12)

Retention can be financed via a captive insurance company (an insurance company owned by a non-insurance company which is also its customer), a risk retention group, cash flows from ongoing activities, and general working capital (the excess of the firm's liquid assets over its short-term liabilities). In addition, firms can also obtain funds by borrowing, loans, issuing new stock and selling other business asset, such as buildings and cars. Funds to pay retained losses should be large so that there is enough money to pay retained losses. In addition, the retained losses are unpredictable, and they may be large or small. However, there is an opportunity cost for a fund. The opportunity cost is the difference between the return on the fund and the

firm's normal rate of return. As a result of this, if funds are large, the opportunity costs will be large; if funds are small, they may fail to pay all losses. In addition, there may also be costs incurred in converting non-liquid assets into cash for settling losses. (Dr. David Ayling 2009)

Risk transfer includes insurance and contractual risk transfers. Insurance is a form of risk management primarily. A firm could purchase insurance contacts to cover risk losses. " Insurance is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for a premium, and can be thought of as a guaranteed and known small loss to prevent a large, possibly devastating loss. An insurer is a company selling the insurance; an insured or policyholder is the person or entity buying the insurance." (Web 1) Firms can transfer some of risk losses to insurance company by insurance contracts. According to Dr. David Ayling (2009), the benefits of insurance include reduction of uncertainty, loss control advice, liquidity of company protected, long term planning mire feasible, and access to large risk combination services. On the other hands, insurance does not cover loss of goodwill, loss of market share, lost customers and suppliers, and so no. In addition, some risks are not insurable, such as risk losses are too large, risks are not measurable, risks are not predictable, and so on.

Firms can also use some contractual risk transfers to transfer risk to another party. For example, if a firm wants to build a house, and hire a construction company to build the house, it could perform some task routinely into contracts, such as if workers or pedestrians are injured by accidence when the house is building, the construction company pay for these losses; and if

the house crashes after it is completed, the construction company will be responsible for it.

Having introduced risk retention and risk transfer, the following will discuss how a firm should decide between risk retention and risk transfer, if a captive insurer is not to be employed.

Both risk retention and risk transfer is important and primary methods for risk financing. How should a firm decide the methods of risk management? The severity and frequency probability of risk losses determine which method should be used to finance risk losses. According to Dr. David Ayling (2009), when the frequency probabilities of pure risks are low and their severities are high, then the method of risk transfer would be better to finance the risk losses, because the severities are high, which means the risk losses may be large. If using risk retention, they need large funds to finance the risk losses so that the opportunity costs of the funds will be large. As a result, the risks could be transferred to insurer or another party by buying insurance or making contracts. However, risk retention may be better, if the frequency probabilities of pure risks are low and their severities are low. Because they need only small funds to cover the risks as both frequency probabilities and severities are low. In addition, the insurance may be expensive; commonly the price of the insurance is high than the opportunity cost of retention. Even more, the risk losses may not be covered by insurance. When the frequency probabilities of risk losses are high, both retention and insurance are not better methods, because the risk losses will continually happen. As a result, if the severities of the risk losses are high, we should avoid these risks. In the other words, we should abandon these

businesses, because they are too dangerous; if the severities of the risk losses are low, we should control it by increasing precautions and limits on risk activity designed to reduce the frequency and severity of accidents. (Harrington and Niehaus 1999 Page 23)

There is an important factor that may affect firms' decision between retention and insurance. The factor is tax. " When calculating its taxable income, a noninsurance company can only deduct losses that were paid during the year. In contrast, an insurer can deduct the discounted value of incurred losses, which equals losses paid during the year plus the change during the year in the discounted value of its liability for unpaid claims. This distinction essentially allows insurers to deduct losses earlier than noninsurance companies, which all else equal increases the present value of expected tax deductions if a loss exposure is insured. Although the tax break is granted to insurers, competition among insurers for business will cause most or even the entire tax break to be given to policyholders through lower premiums." (Harrington and Niehaus 1999 Page 218)

In practice, many large companies have established captive insurance companies. These companies make payment to their captive insurers, which then pay losses to the large companies. It is an important method of financing losses for large firms, and can be viewed as a special type of retention and self-insurance. If a firm has a captive insurer, the firm should finance risk losses by buy insurance from its captive insurer. A firm could benefit a lot by using a captive insurer. To begin with, the parent company could reduce expected tax payments relative to retention. As I have discussed before, insurance has a tax advantage compared with retention. In

addition, Dr. David Ayling (2009) mentioned that the parent company could access to the reinsurance markets through its captive. The parent first buys insurance through its captive, which then purchases reinsurance. Finally, Harrington and Niehaus (1999) said captive also can be used to reduce risk. The parent's risk exposures will be pooled with other unrelated companies' exposures, if its captive sells insurance or reinsurance to other unrelated companies. Consequently, a large firm will benefit from its captive insurer in reducing expected tax payments, accessing to the reinsurance markets, and reducing risk through the captive's transaction.

In conclusion, as retention and insurance have their own advantages and disadvantages, the frequency probabilities and severities of risks determine which methods of risk financing should be used. Insurance is a good risk financing method for a low frequency and high severity risk; in contrast, retention is a good risk financing method for a low frequency and low severity risk. For many large companies, using a captive insurer becomes an important method of financing losses. Captives could benefit their parent company from reducing expected tax payments, accessing to the reinsurance markets, and reducing risk through the captive's transaction. However, according to Dr. David Ayling (2009), if risk losses could be transferred to someone other than an insurer at a cheaper cost, or can be prevented or reduced at a cost cheaper than insurance, insurance and retention are not the best methods of risk losses financing, because risk management aims to maximize value by minimizing the cost of risk.

## Bibliography and Reference

Dr. David Ayling (2009) Corporate Risk Management's handout,

Bangor University.

Harrington, S. E, Niehaus, G. R, (1999) Risk Management and Insurance, Boston: Irwin/McGraw-Hill.

Web 1: Wikipedia (2009) Insurance (Online) Wikimedia Foundations, Inc: USA. Available from: http://en. wikipedia. org/wiki/Insurance

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