INTELLECTUAL PROPERTY VALUATION: A CRITICAL ASPECT OF IP SECURITIZATION

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Abstract

IP Valuation is a key component of Intellectual property securitization. The feasibility and desirability of investments in IP backed bonds is judged on the basis of projected cash flows from IP asset. The correct calculation of the discount rate can bring windfall gains for the investor of the IP backed bonds. This article thus presents an overview of the various valuation techniques in practice and their importance in judging the feasibility of securitised IP assets as an investment option.

KEY WORDS: INCOME APPROACH, DISCOUNT RATE, IP VALUATION

INTRODUCTION

In the present knowledge based economy, intellectual assets play an increasingly important role in the determination of commercial worth of a firm. Backed by this realization firm managers are continuously trying to devise new mechanisms to extract maximum value from intellectual property assets. An emerging area in this direction is the securitization of intellectual property assets. Although IP backed securitization is a small portion of the total asset backed securitization, it has the potential to become an important asset class for securitization. This article attempts to explore the link between

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valuation of intellectual property assets and securitization of intellectual property assets. The article affirms the idea that proper choice of valuation technique is the key to the success of IP securitization as an asset management technique for firms and as a prudent investment option for investors..

IP SECURITIZATION

IP securitization is a financing technique whereby a company transfers rights in receivables (e.g., royalties) from IP to an entity, which in turn issues securities to capital market investors and passes the proceeds back to the owner of the IP. The revenue from receivables pays the investor/ bondholder back with an interest rate over a fixed period.[1] In a typical IP securitization, the royalty stream is transferred to a special- purpose vehicle (SPV). The SPV then issues securities to capital market investors. The transfer to the SPV places the IP assets out of reach of originator's unsecured creditors.

Ratings are assigned to the securities by a rating agency or agencies such as Standard & Poor's or Moody's. Typically the rating agency takes into account 3-5 years of history with a company's portfolio as being sufficiently reliable to project future performance. IP securitization is one form of future cash flow transactions. However one characteristic that differentiates IP transaction from other tangible asset backed transaction is that they are highly dependent on popular tastes or technological change adding a layer of complexity and risk to the analysis[2].

AN OVERVIEW OF IP VALUATION APPROACHES

A critical aspect of IP securitization is the valuation of Intellectual Property assets. Valuation is necessary to determine if securitization is feasible. The sale price of IP

[1] John. S Hillery, *Securitization of Intellectual Property: Recent Trends from the United States*
[2] Jay Eisbruck, *Credit analysis of patent and trademark royalty securitization: a rating agency perspective*, Moody's Investors Service, New York

backed security is the discounted future earnings but these must be accurately projected with due consideration to all potential sources of risk.

Generally the IP valuation methods fall into three broad categories:

1. Market Approach: Valuation is done on the basis of comparable IP transactions at the market place. Thus the market approach can best be used when information about comparable transactions of similar intellectual property is available. The price at which similar intellectual property has exchanged can serve as a proxy for subject intellectual property.

The major limitation of this approach is it is extremely difficult to ascertain the parameters of comparability. Moreover the price at which such transactions take place is seldom disclosed by the transacting parties.

2. Cost Approach: The Cost Approach seeks to value the intellectual property by quantifying the amount of money that would be required to replace the future service capability of subject intellectual property[3]. The assumption behind this approach is that the cost to purchase or develop new property is an indicator of the economic value of benefits that the subject intellectual property would provide during its lifetime.

The main limitation of this approach is that it takes cost as a determinant of value of intellectual property. Unless economic benefits can be earned from ownership of the property, the value of the property would be low regardless of the huge cost involved in the development of the property.

3. Income Approach: The Income Approach seeks to measure the value of intellectual property on the basis of the present value of the future stream of economic benefits that can be derived from its ownership. Based on the techniques of financial management, this

[3] Russel Par*, Pricing Intangible Assets: Methods of Valuation of Intellectual Property* AUS Consultants, Valuation Services, Moorestown, New Jersey (United States),

technique can provide credible valuable conclusions for many types of intellectual property. The applicability of income approach is based on the following questions:

a) What amount of economic benefits accrues from the ownership of intellectual property?

b) What is the duration of these economic benefits?

c) Will the amount of benefits be increasing or decreasing?

d) What is the inherent risk involved in the attainment of these benefits?

The income approach makes use of the following discounted cash flow equation to measure the value of intellectual property:

$$V = \frac{CF_1}{(1+i)} + \frac{CF_2}{(1+i)^2} + \frac{CF_3}{(1+i)^3}$$

Where:

V = the value of the intellectual property

CF = the amount of net cash flow during each successive time period

i = the discount rate signifying the investor's required rate of return on intellectual property

The required rate of return that investors demand incorporates the various components of investment risk. Thus the quantification of investment risk is an important step in the valuation process. Investment risk in stock portfolio or intellectual property comprises of four basic components[4].

a) Purchasing Power Risk or inflation risk
b) Interest Rate Risk
c) Business Risk
d) Market Risk

[4] *Ibid*

Purchasing Power Risk

Inflation erodes the purchasing power of the future stream of cash flows that are expected to be received by the investor. Thus the investor's required rate of return must incorporate this element of risk.

Interest Rate Risk

When an investor invests in a particular form of intellectual property, he foregoes the interest income available from other sources of investments like corporate bonds, government securities. The return from investment in intellectual property must incorporate the higher interest income available from investing in other investment options.

Business Risk

This kind of risk is particularly attributed to the subject intellectual property being r. The economic benefits derived from intellectual property may be subjected to severe competition from emerging superior technology. This risk may cut short the revenue generation from the subject intellectual property thus the investors required rate of return must incorporate an element of specific business risk.

Market Risk

Market risk affects the returns from assets due to unfavorable market conditions. Market risk is not attributed to any specific company or asset; it affects the investment climate in general. Market risk is a broad term, which incorporates the impact of any unfavorable economic or political condition like inflation, rise in global crude oil prices fall of Government etc. The investors' required rate of return also incorporates this element of risk.

Techniques to measure the required rate of return

There are various approaches used to measure the required rate of return of an investor. The two most common approaches are:

a) Capital Asset Pricing Model

CAPM is an equilibrium model of asset pricing that states that the expected return on a security is a positive linear function of the security's sensitivity to changes in overall market portfolio's return. The key variable in the CAPM model is " beta" which measures the security's sensitivity to changes in broader economy wide parameters, which affect the market as a whole. Thus in other words it can be stated that the investor's requires rate of return increases in direct proportion to beta. Higher the value of beta higher the investor's required rate of return.

The CAPM model an be expressed in the form of the following equation:

$E(R) = Rf + [E(Rm) - Rf] \beta$

Where E(R) = The required rate of return

Rf = The risk free rate (The benchmark rate of return on a government security)

β= beta

E (Rm) = the expected return on the broad market portfolio

This model states that the required rate of return is comprised of two components: the risk free rate and the risk premium.

b) Weighted Average Cost of Capital

According to this approach the investor's required rate of return is a function of the cost of capital for the investor. The cost of capital may be defined as the weighted average of each type of capital. Since debt and equity funds are used to finance investments, the return that is provided from the investment must be sufficient to satisfy the interest due on the debt and also provide a fair rate of return on equity funds. The usual definition of the weighted average cost of capital is to weigh the

after tax cost of debt by the percentage of debt in the firm's capital structure and add the result to the cost of equity multiplied the percentage of equity[5].

$$WACC = Kb\,(1- t)\ \frac{B}{B + S} + Ks\ \frac{S}{B+S}$$

Where Kb (1-t) is the after tax cost of debt

Ks is the after tax cost of equity

$\frac{B}{B+S}$ and $\frac{S}{B+S}$ Represent the respective share of debt and equity in the firm's Capital Structure.

IP VALUATION: A CRITICAL ASPECT OF IP SECURITISATION

a) Credit Rating Agency's Perspective

From the perspective of a credit rating agency, the choice of a relevant IP valuation technique is extremely important. The credit rating agency rates the IP backed bonds on the basis of projected future cash flows from the IP asset. While the cash flows from tangible assets are also subject to risk, the risk associated with the cash flows from IP assets are of a different nature and often hard to quantify. The risk factors specifically attributable to IP assets are:

- Changing fashion or public opinion which may affect the future revenue generation from IP assets
- Unforeseen technological developments (in the case of royalties from patented drugs, a new entry could make the patent obsolete)
- Threat that patent may be declared invalid through litigation

Given the above risks, due diligence on the choice of an appropriate IP valuation technique is required before examining the feasibility of securitization of intellectual property assets.

[5] Hu Pengfei and Hua Yinmin ' *Real Option Valuation in high tech firm*' Gothenburg University School of Economics and Commercial Law

b) Buyer's Perspective

The benefits to the seller/ originator from IP securitisation are visible and obvious. IP securitisation provides funds in the form of lump sum payments from an otherwise illiquid nature of IP assets. In the case of start up companies, the upfront payment may be more valuable to the company's survival and operations than the future royalty stream. The liquidity afforded by securitising IP may be particularly valuable if the seller's options to raise capital are limited or if the cost of capital is high[6].

From the buyer's perspective the benefits of IP Securitisation are more closely linked to the choice of an appropriate valuation technique in general and to the discount rate in particular. A buyer purchases securitised IP for a lump sum payment equating to the discounted cash flows of future predicted royalty streams. The buyer's benefit depends on the discount rate. Often the buyer's discount rate is high. Higher the discount rate, lower the purchase price of the securitised IP for the buyer. The difference between the buyer's cost of capital (mainly in the form of interest on borrowed funds) and that discount rate equates to an arbitrage, which in certain cases may result in windfall gains to the buyer. Thus the quantum of profits that the buyer may derive from the purchase of IP backed bonds depends on prudent calculation of the discount rate.

CONCLUSION

The feasibility and success of Intellectual Property Securitisation as a popular financing mechanism for firms and as a prudent investment option for the investor depends on the thorough consideration of the various Intellectual Property Valuation techniques. The valuation technique must take into account the diversified potential sources of risk associated with intellectual property.

[6] Elliot A Fisherman, ' *Securitisation of IP royalty streams: Assessing the Landscape*, Technology Access Report September 2003