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Innovation and the Path Not Traveled

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statement of "please consult your own tax and financial advisors ...". It is well established that the gain on the surrender of a life insurance policy is ordinary income to the insured (Section 72(e)) unless specifically to a life settlement company or other purchaser from a terminally-ill person. This tax treatment is consistent with the position that the ordinary income is created from the excess of the cash surrender value over premiums paid. Yet, life settlement companies have argued that a life insurance policy is a capital asset in the hands of one of its investors; therefore, any proceeds over the basis or cost of the policy should be capital gains. The capital asset argument has merit on two counts. First, the life insurance policy itself is a capital asset under Section 1221 of the Internal Revenue Code. That section defines everything which is not a capital asset (stock in trade, property held for sale to customers, etc.). Since life insurance policies are not listed, they can be considered capital assets. Sales of capital assets generate capital gains, either short-term or long-term, but capital gains nonetheless. The second case for labeling the proceeds less basis as a capital gain is more complex but also worth careful consideration. Suppose in the above example, before the elder dies, the investor, who has a basis already in the policy of $500,000, finds someone else who is willing to pay $800,000 for the policy. The sale is consummated, and the original investor now has taxable income of $300,000 ($800,000 of proceeds less $500,000 of basis). This would appear to be a capital gain, being a return from the sale of an investment. By parallel, the same argument is made that, upon death, the policy ends with a "sale" of the policy to the original insurance company for $1,000,000, hence a capital gain of $500,000.5 The capital gains treatment of the insurance proceeds that are more than the investor’s basis increases the return of the investor, if this case is treated statically. However, changing the after tax return to the investor would allow other investors to compete for the policy at a lower cost. Thus if the investor were originally seeking an after tax 10.80 percent return, as in this example, then the change in tax treatment would enable the investor to earn this return with an increased offer to the insured policyholder. Solving for the investment that would result in an after-tax rate of return of 10.80 percent given capital gains treatment, the investor will make an offer price of $554,000, a 10.8 percent increase, freeing funding that previously paid for taxes into direct funding to the insured, who receives it on a tax-free basis. Alternatively, capital gains treatment may still be available to some investors in some circumstances even if ordinary tax treatment holds. An actual resale of a life settlement by one investor to another in a tertiary market for already vested and packaged life settlements would generate capital gains to the original investor.6 The Case for Alternative Tax Approaches Challenges are present in the legal interpretation concerning applicable taxation of life settlement investment gains. Taxing the investor’s gain as ordinary income or capital gains, as previously described, changes the tax character of the original life insurance transaction. The twin challenges offered advance alternative positions such that gains are not to be taxed at all, being instead either a) subrogation recoveries or b) assignment proceeds. Subrogation is defined as follows: The substitution of one person in place of another with reference to a lawful claim ... so that he who is substituted succeeds to the rights of the other (Black’s Law Dictionary, 4th edition, 1995). The substitution of one for another as a creditor so that the new creditor succeeds to the former’s rights (Webster’s, 1967: 876). Subrogation arises when one individual produced value. Empirical research found that the value of innovation varied based upon other contextual criteria, such as industry sector, markets, customer relationship and previous performance. As the understanding of the relationship between innovation and value evolves to a more contextually driven model, so do the metrics used to capture it. The understanding of the range of value that innovation provides to the firm and increasingly sophisticated ways to capture it is progressively greater. The strict reliance upon cost reduction and R&D related metrics as the sole evaluative techniques has past. Empirical research confirms this gap between the aggregate value of innovation and the value assessed through traditional measurement. Monteiro-Barata (2005) reports an often-discovered statistic in the analysis of innovating firms. While both the INDINOVA and SOTIP innovation research projects identified this gap, a fraction of the firms generating process and product innovation are engaged in R&D. While the percentage of firms producing innovations were fairly consistent between these studies (36% process innovation and 27% product innovation for the INDINOVA project, and 25.2 percent process innovation and 20.7% product innovation for the SOTIP project) the number of companies engaged in internal R&D activities is 3.1 percent according to the SOTIP survey (p.305). Models of Innovation Valuation Innovation is a localized phenomenon, defined within very specific contextual boundaries in an organization. Innovation valuation models do not necessarily transfer outside of the context in which they are found. This makes it difficult to establish a generalizable framework that can be abstracted and applied to other environments. An interesting statistic reported by Hipp and Grupp (2005) from the 1999 Mannheim Innovation Panel of German firms, reflects the localized nature of much innovation. Of the 1405 firms reporting an innovation in the past three years, 34 percent of manufacturing firms launched innovations that were new to the market and 57 percent produced innovations that were only new to the firm. This disparity in the level of novelty was even more pronounced in the services sectors. From the 1080

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services sector firms with an innovation in the past three years, 16 percent created an innovation new to the firm, while 77 percent produced an innovation new to the industry. Pavitt’s (1984) work studying the sources of 2006 British technological innovations during the time period 1945–1980 revealed that an organization’s industrial sector was a significant determinant in the type of innovations that a firm pursued. Firms in industries that were strongly customer-centric realized more new product or service based innovation, while firms in more production intensive sectors increased cost cutting process related technological innovation. While this reinforces the idea that there is no single set of innovation measurement metrics that can be applied to all firms, it may be related to an underlying flaw in managing the application of the metrics. The sectoral variance in capturing different classes of innovation may be caused by only applying those metrics that have direct relevance to a current operational strategy.

The results developed by Pavitt (1984) may be caused by the decisions made on which innovation measurement metrics to use, rather than the overall potential value to the firm. It’s like the joke about the man looking for his lost keys under a streetlight one night. When a passerby offers to help in his search, he asks, “Where do you think you dropped them?” The man responds “About 100 meters down the street.” “Then why are we looking here?” the passerby asks. The man responds, “Because the light is better here.” As managers, we seek out innovation where the light is better.

**Innovation and the Value of Failure**

The concept of failure has several connotations in the context of innovation value measurement. Failures in adequately capturing the value of the innovation by due to inadequate or incomplete application of the valuation metrics abound. Chesbrough (2004) discussed the need to measure and manage "false negatives" in the innovation process. He discusses "false negatives" as innovation efforts that have been terminated or abandoned by an organization which later showed renewed value. The termination may be because the innovation relates to markets outside of those that the organization currently pursues. It may be because the innovation relates to a market that is currently undeveloped. In both cases, the organization finds renewed value in the "false negative" at a later point in time. Chesbrough highlights the need to regularly revisit the knowledge base created by terminated innovation to reevaluate the internal and external value of these ideas and to develop strategies to capitalize upon them.

Another implication to innovation measurement can be drawn from this work. By discussing the nature of error in valuation metrics for innovation and the need to revisit these evaluations, Chesbrough highlights the fact that almost all valuation metrics for innovation are static measures. The value of an innovation is made based upon an assessment at a specific point in time. This point in time assumes that an organization’s markets, structure and strategies are parametric. The possibility, even probability that these circumstances will change over time is obvious. Labeling an innovation as a failure and discarding it from our organizational knowledge base precludes any possibility of reaping value from its application in another day.

Another type of failure in innovation valuation is the failure to use appropriate measures that capture all aspects of value to the firm. The literature on the social shaping of technology advances and the innovation from a sociological standpoint as being generated and shaped by competing interest groups. These interest groups each have a vision of the potential of a technology and vie for the resources and acknowledgment of their point of view. Pinch & Bijker (1984) or MacKenzie & Wajcman (1999) are examples of a literature that accords these dynamics in the selection and implementation of innovations. The significance of this theory is twofold. First, that it identifies that users appropriate technology and use it in way unforeseen by the inventor and second, allowing conversion of ordinary income into capital gains.

On the basis of these two legal cases, typical life settlements, such as the example, would have the following tax result. The $1,000,000 proceeds less the basis, or cost, of the policy of $500,000 is ordinary income of $500,000 to the investor (see Figure 3). The $500,000 could represent interest from the investment in the policy; hence, there would be ordinary income tax treatment.

**Figure 3**

Comparison of After-tax Returns to Life Settlement Investor For Survival Periods from One to Seven Years

<table>
<thead>
<tr>
<th>Face Amount of Policy</th>
<th>$1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing Costs</td>
<td>$75,000</td>
</tr>
<tr>
<td>Price Paid in Life Settlement</td>
<td>$500,000</td>
</tr>
<tr>
<td>Annual Premium</td>
<td>$7,000</td>
</tr>
<tr>
<td>Life Expectancy (“Max”)</td>
<td>5 years</td>
</tr>
<tr>
<td>Ordinary Tax Rate to Investor</td>
<td>33%</td>
</tr>
<tr>
<td>Capital Gains Tax Rate to Investor</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Survival Period</th>
<th>3%</th>
<th>5%</th>
<th>7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year</td>
<td>18.00%</td>
<td>17.00%</td>
<td>16.00%</td>
</tr>
<tr>
<td>2 Years</td>
<td>17.00%</td>
<td>16.00%</td>
<td>15.00%</td>
</tr>
<tr>
<td>3 Years</td>
<td>16.00%</td>
<td>15.00%</td>
<td>14.00%</td>
</tr>
<tr>
<td>4 Years</td>
<td>15.00%</td>
<td>14.00%</td>
<td>13.00%</td>
</tr>
<tr>
<td>5 Years</td>
<td>14.00%</td>
<td>13.00%</td>
<td>12.00%</td>
</tr>
<tr>
<td>6 Years</td>
<td>13.00%</td>
<td>12.00%</td>
<td>11.00%</td>
</tr>
<tr>
<td>7 Years</td>
<td>12.00%</td>
<td>11.00%</td>
<td>10.00%</td>
</tr>
</tbody>
</table>

Capital Gains Tax Rate to Investor 15%

**Or Is It?**

First, Section 101(a) (2) defines the “transfer for valuable consideration” as merely giving rise to income, whether not it is ordinary income, capital gain or non-taxable income. In an article by Magner and Leimberg (2006), some life settlement companies specifically market their products with the statement “…amounts received in excess of cash surrender value are generally taxable as capital gain…” along with the words following that.
Return from Life Insurance

$500,000 is realized gain of investor's proceeds of dies, the investor receives the elderly woman then costs and profit of the life and payment for closing escrow for future premiums, insured's receipts include of America's

How Should this Realized
16 Summer 2009

Comparison of Return to Insured/Heirs from Life Insurance vs. Life Settlement for Survival Periods of One to Seven Years

Assumptions:
- Face Amount of Policy: $1,000,000
- Price Paid in Life Settlement: $500,000
- Closing Costs: $75,000
- Annual Premium on Life Insurance: $7,000
- Total Premiums Previously Paid at Time 0: $175,000
- Years of Premiums Previously Paid at Time 0: 25 years

Price Paid in Life Settlement: $500,000

Face Amount of Policy: $1,000,000

Closing Costs: $75,000

Annual Premium on Life Insurance: $7,000

Total Premiums Previously Paid at Time 0: $175,000

Years of Premiums Previously Paid at Time 0: 25 years

Return from Life Settlement: $500,000

Return from Life Insurance: $500,000

Figure 2

Southern Business Review

Summer 2009

Southern Business Review

Summer 2009

25

More disruptive innovation that does not. Unfortunately, this comparison is usually couched in the rubric of “valuation” when there is little actual value comparison being made. The true value of a disruptive innovation that does not fall within current plans and strategies is rarely assessed.

One of the examples where metrics missed important value has become part of our popular culture. In 1968, 3M researchers developing adhesives produced a substance that due to its molecular structure would cling to objects but was too weak for a permanent bond. Due to its poor adhesive properties, the innovation languished. In the mid-1970s Arthur Fry, another researcher at 3M, found that if the adhesive was applied to paper, it would allow him to bookmark the pages of his church hymnal without staining the page. This new use allowed for the application of a different set of valuation metrics.

This leads to an increased willingness to participate. Valacich et al. (1994) found that anonymous submission may increase the willingness to participate by reducing the perceived risk of offering ideas that might be seen negatively, anonymity increases their willingness to participate.

Anecdotal evidence supports the impact of fault tolerant environments on the production of innovation. In a Forum on Innovation, conducted by the U.S. Department of Commerce (2006), William Zollars, the Chairman of YRC Worldwide discussed his firm’s innovation management policy. YRC Worldwide, formerly Yellow Freight, combines a fault tolerant environment with strong decentralized decision making. This innovation provides for a more direct hypothesis-testing context at the point closest to where the innovation is generated. This leads to effective exploration of the idea and responsibility for its evaluation. Not only does
YRC Worldwide not punish failures, but celebrates them. Zollars elaborates on an occasion when it was clear that an innovation implementation was failing;

...but we did it anyway, even though I knew it was going to be a mess, because it was more important for us to say, "Look we're really trying stuff even though we're not sure its going to be successful," than it was to say, "No, that's a stupid idea, we're not going to do it." (DOC, 2008: 11-12).

Creating a failure-tolerant environment for innovation hypothesis testing and experimentation does not mean much to guide the behavior of an employee with an insight as it does remind us that all ideas have value. This approach informs us on how processes that capture value should be structured. When we create an internal climate that encourages individual creativity and openness, we are really talking to? The greatest affect of such an organizational change may not be our employees, but the organization’s culture and value system. McAdam and Keogh (2004) find additional empirical support for the role of the systems of innovation measurement into more fault tolerant processes. One of the benefits they find is in overcoming past disillusionment from rejected ideas. When such approaches are successful is it because more innovative ideas are developed and presented by employees, or is it because we are sensitizing ourselves toward hearing the stream of ideas already flowing there? Increases in the innovation output may be caused more by changes to the organizational receiver rather than the sender.

Failure of the processes and techniques used within an organization to resolve problems may serve as a significant source of innovation. Thomas Kuhn (1962) describes that the pressure for change in the prevailing assumptions and conceptual framework in a discipline comes from an increasing accumulation of anomalies that are inconsistent with them over time. Many times the pressure for change that generates or brings innovations to the surface are generated from a Kuhnian dysfunctionality in how the current technology and processes meet the needs of the specific circumstances in the organizations. The organization finds that the attempt to solve, problems with existing processes and approaches is less and less functional. The developing realization that the current systems are increasingly dysfunctional, opens the organization up to the possibility of alternative solutions. It is the energy behind this increasing level of discomfort that motivates the search for new and innovative solutions. This pressure also focuses the attention of value measure-

ment upon the “goodness of fit” criteria as a solution to a specific set of problems. The results found in the academic literature of the 1980’s and 1990’s with organizational prescriptions for generating innovation through the construction of nurturing and participative environments to elicit and develop ideas has been tepid, at best. On the other hand, the somewhat disturbing data from organizational creativity studies has found that many times innovations from the shop floor find their birth in anger, frustration and desperation. Canner & Mass” (2005) contend that innovation is motivated by desperate acts needed to keep operations running rather than by a creative environment. In this case, desperation reduces the risk of having an idea be perceived negatively. This motivates the innovator and makes them more willing to share their insights. More significantly, desperation may change the perspective of managers making them more receptive and attentive to innovative solutions being presented to them.

Evaluating the Secondary Effects of Innovation

The secondary effects of innovations upon an organization may be greater and more profound than those related to their immediate application. By secondary effects, we mean those impacts that innovation has upon the firm that are not directly related to the immediate reflection of value in a

The taxability of the $500,000 gain realized by the investor when he collects the $1,000,000 face value upon the death of the insured is the subject of the subsequent analyses. To focus on the primary issue of this article, the alternatives all assume that the transaction would be tax-free to the insured if she participates in a life settlement and to the heirs if they receive the face value at the insured’s death.

Federal Tax Ramifications of a Viatical/ Life Settlement Payment

The tax ramifications of the sale of a life insurance policy to a life settlement company and subsequent sale by the company to an investor, in most cases, are more clearly defined, specifically the tax treatment for the terminally-ill seller. However, current ordinary income tax treatment for the investor is predicated upon legal precedent in which a capital gain argument has substantial support.

Continuing the previous example, the return to the insured seller and her heirs from the life settlement represents an immediate tax-free 6.29 percent compounded annual return on premiums paid reflected in Figure 2. Should the insured continue the policy until her death, the return to her estate, or heirs, is a function of her survival and declines from 11.03 percent with a single year of survival to 7.93 percent with seven years of survival. Thus, the insured has the classic investment decision of immediate certain proceeds versus a variable future return. In the absence of life settlements, the only alternative that also provides immediate liquidity is ending the policy and receiving the cash surrender value, as reflected in Panel C. In this example, life settlements provide 128 percent more cash ($425,000 versus $191,750) than the cash surrender value alternative.

On the other hand, suppose the woman sells the $1,000,000 policy to a life settlement company for $425,000 net cash, which is tax-free to her. The life settlement company then sells it to an investor(s) for $500,000, and the investor can expect to receive proceeds of $1,000,000 at the policyholder’s death. The difference between the investor’s payment and the

Note: Tax is ordinary income tax on the difference between the premiums paid and the cash surrender value ($820,000-$175,000) .
Panel A
Terminal- or Chronically-Ill Insured Policy Seller Distribution of Investor’s $500,000 Payoff

Note: Tax is the sum of (a) tax paid by the broker on fee income \[($75,000-$35,000)*.50*.25\] and (b) tax paid by the life settlement company on its profits \[($75,000-$35,000)*.50*.10*.35\]. The assumed tax rate is the maximum marginal tax rate by tax entity, consistent with other studies and shown to be reasonable by Jensen, Kaplan and Stiglin, 1989.

Panel B
Senior Citizen Insured Policy Seller Distribution of Investor’s $500,000 Payoff

Note: Tax is the sum of (a) tax paid by the broker on fee income \[($75,000-$35,000)*.50*.25\] and (b) tax paid by the life settlement company on its profits \[($75,000-$35,000)*.50*.10*.35\]. The assumed tax rate is the maximum marginal tax rate by tax entity, consistent with other studies and shown to be reasonable by Jensen, Kaplan and Stiglin, 1989.
The measurement tools that we utilize determine the innovations that we select and implement. Given the focus on cost reduction, exclusively, the only innovations you will identify are those incremental and process innovations that reduce cost. Care should be given to the evaluative techniques implemented because they will, in large part, determine the character of the results.

2. Innovation valuation metrics must be selected that take into account the secondary impacts of an innovative idea. The implications of not pursuing an idea or of the longer-term value of an idea must be measured. These impacts on value to the firm may be much greater in scale than a static evaluation.

3. Innovation ideas that the organization decides not to pursue, for whatever reason, should not be abandoned. Additions to the firm’s knowledge base may lead to other synergistic developments. As circumstances, markets and strategies change over time, the value of an innovation to a firm may change dramatically. For this reason, the knowledge base of unimplemented innovations should be periodically and systematically revisited.

References
longer the transferor lives after the transfer. As these life settlements have grown over the past dozen years, the market has shifted from institutional investors to individual investors as well. This form of secondary market for life insurance policies has risen from $13 billion in face amount of policies transferred in 1995 to $160 billion in 2004 (Simon and Schmitt 2006).

The current life settlement market is divided into the segment for the terminally-ill insured/policyholder and the segment for any life insurance policy sale by someone else. While institutions can participate directly with an insured, individual investors typically use an intermediary to match potential sellers and potential investors. The Life Settlement Association (2007), a trade association for companies involved in viatical and life settlements, has members from 58 brokers who negotiate sales on behalf of sellers spread across 48 states plus the District of Columbia. On average there are 11 licensed brokers who are members of the Life Settlement Association in each state.

Life settlement companies provide the services that coordinate the sale and investment. The due diligence and the paperwork in the public offering of life settlements are substantial. The life settlement company verifies information about life expectancy of the insured and obtains authorization from beneficiaries. Several individual investors may participate in ownership of a single life insurance policy, and each individual investor may purchase an interest in several life insurance policies. The life settlement company manages the payment of subsequent premiums through an escrow account, tracks notification of deaths, and receives and distributes the life insurance proceeds. They have a dual marketing role in both establishing contacts with those interested in receiving accelerated death benefits and identifying appropriate investors. The closing costs, including the due diligence, prepayment of premiums for a projected period and commissions to brokers, usually amount to ten to fifteen percent of the investment/purchase price of the insurance policy. These closing costs are typically paid by the insured from his or her proceeds and do not affect the return to investors. All parties to the sale are considered to benefit. The original policyholder is able to sell his policy for an amount substantially greater than the cash surrender value typically found in whole life policies, and the investor is able to achieve a corresponding return on this life settlement contract while avoiding most of the risks associated with the equity markets and far exceeding the current market rate of a low risk bond. The investor retains the uncertainties of when the policy will mature since it depends on when the insured dies, and the possible payment of additional premiums if the insured lives beyond the projected period. Within these investment parameters, the risks for the investor are generally diversified by the investor purchasing an ownership interest in several policies of various insured persons.

Prior to the emergence of the life settlement industry, taxation of life insurance proceeds was well defined. When an individual dies, Section 101 of the Internal Revenue Code classifies the life insurance proceeds as generally free of federal income taxation to the beneficiary. Terminally-ill individuals frequently sold their policies in the 1980’s and 1990’s, precipitated principally by a rise in terminally-ill AIDS patients. Section 101(g)(1)(A) and 7702B of the Internal Revenue Code were added by the Health Insurance Portability and Account- ability Act of 1996 and clarified that proceeds from the sale of a life insurance policy to a life settlement company are a tax-free death benefit to the terminally-ill patient (Raby and Raby 2000).

The taxation of the eventual proceeds of life policies to investors has not been directly addressed in the tax code. The current tax treatment is based upon precedent from court cases for ordinary income tax treatment of the life settlement proceeds to the investor. The following example assumes the tax-free treatment of proceeds to the insured seller and ordinary income tax treatment for the proceeds to the investor.


