



Follow the money?

The failures of the US healthcare market are exacerbated by a lack of proper scrutiny of how VCs and other investors in the sector evaluate IP

Capital is that part of wealth which is devoted to obtaining further wealth.

Alfred Marshall

St Louis, Missouri, 10th July 2007:

When in doubt, follow the money. This is an old axiom generally used to good effect to make better business decisions, all things being equal. In the criminal justice system it is also applied to find criminals. So when we follow the money via the IP investment banking route, is it good business or criminal neglect?

Not surprisingly, valuing intellectual property realistically as a function of time and marketplace is critical not just to following the money, but also to keeping investments in the money. One such market with a need for accurate IP valuation is the US pharmaceutical industry and the related efforts in biotechnology and medical devices. Healthcare is nearly one-sixth of the US economy and pharmaceuticals are 12% – or more than US\$200 billion – of that amount. Americans spend twice as much per capita as their counterparts in the OECD for drugs.

When we look at venture capital statistics like the PwC *Money Tree* report, we find that investments in biotechnology, which focus mainly on human health opportunities such as drug replacements, accounted for 21% of first-quarter 2007 investment capital. Medical devices which also provide innovative healthcare solutions through diagnostics, imaging and surgical enhancements took another 15% of venture capital. So on a combined basis, healthcare is attracting around one-third of the seed corn stocks of investment capital.

Given the size and growth of the American healthcare industry, this is clearly a case of investors following the money. Because it takes around 14 years to bring a new drug to market and somewhat less time for new medical devices, this choice is a lock-in for long-term capital asset management. And since early-stage drug and medical device investments focus predominantly on

producing patent-protected innovations, these decisions are really IP investment banking.

How do we know if these investments in IP that follow the money are also in the money? IP investment is based on expenditure activities like R&D or commercial development, so it is costs, not assets, that IP creation stimulates. Current practice is to project economic returns from profits on future sales, assuming an investment continues to meet its technical and commercial benchmarks. Using high discount rates that are typical of venture capital investing, we compute a net present value that combines current and future expenses and revenues. We have become more sophisticated in our methodologies, so now we deploy real option pricing, EVA, Monte Carlo and other mathematical techniques to refine and more accurately compute the value of these investment scenarios.

Clearly, in recent years, the venture capital community has come to perceive an IP goldmine in biotechnology and medical devices. It has effectively doubled its bets on healthcare by placing a third of venture capital into enterprises that will serve a sixth of the US economy. The pattern has been ongoing in the VC community for the last five years, so one might assume that there is some evidence in the healthcare macro-economy to evaluate the judiciousness of micro-investments in healthcare IP.

Accounting for Healthcare in the United States, which was released in January 2007 by the McKinsey Global Institute, is a landmark work in its concise and quantitative comparisons of national healthcare economies. It is also, and unfortunately, a serious indictment of the failings of US healthcare. Simply put, US healthcare spends more and delivers less in spite of its heavy investment in innovation and infrastructure. It is nearly twice the GDP cost of the OECD average (16% US v 8.5% OECD), while US life expectancy is 3% below the OECD average (77.5 years US).

According to McKinsey Global, Americans now spend more on healthcare than they do on food. It is interesting to note that, when R&D costs are capitalised, the food industry provides capital returns that are over 10% higher than capital investment in pharmaceuticals. Furthermore, the US healthcare industry suffers from a number of

self-reinforcing defects that virtually guarantee that an ever-larger fraction of the GDP will be consumed by healthcare. Notwithstanding current expenditures, an estimated 45 million Americans have no health insurance. For any other industry, statistics like these would send investors running for the hills. So why are IP investors acting in so contrarian a way?

I propose that it is the sheer lack of valuation that propels otherwise rational and savvy professional investors to make patently bad choices about IP investment (pun intended). By valuation, I mean the immediate and transferable price by which IP assets are purchased, sold or leveraged. Companies and investors attempt to do this internally, but the truest test of value is market price.

Other asset classes are continuously market tested with asset securitisations and sale leaseback transactions. The result is third-party validation of internal capital strategies. Companies with weak asset allocation suffer with stock price declines; smart companies appreciate. It is time to take this practice into the IP arena.

If a financial investor can't justify an IP purchase price at least equal to the cost of IP in creation, then it begs the question of why a company bothers to invest in the IP in the first place. How many of us would put up US\$100 for IP that could only guarantee a US\$70 return? Yet that is the prospects facing certain markets and many healthcare innovations are near the top of this list.

We suffer from a peculiar hubris when we believe that the best innovations can only derive from businesses reliant on an ever-increasing complexity of technologies layered upon historical innovations. Such technical dependencies by definition serve the unmet needs of an ever-diminishing market, with solution more complex and expensive than before. But to prove this we need to be asset-savvy IP financiers. Don't just follow the money – makes sure it adds up first.

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