

Commentary: John Rountree

Cheap capital gives rise to integrated pharma R&D

Since the financial crash of 2008 the world has got used to a new era of cheap capital and sustainably low interest rates. This has created a new funding environment for pharmaceutical research and development (R&D), which is the quintessential capital-hungry, long-term and high-risk business endeavour. The new funding environment has in turn had a profound effect on the way pharmaceutical R&D has been prosecuted, mostly for the better.

The most visible consequence of the new funding environment has been a fragmentation in the industry's approach to R&D. New types of companies and funds are being formed and expanded to meet the needs of investors that are seeking higher returns than are available from bonds and low interest rate investments. Similarly companies and funds are evolving to meet the needs of investors looking for safer returns that are more bond-like in character, but with higher yields. Though the fragmentation has created some inefficiencies in R&D, one of the positive consequences has been the emergence of a new and highly focused breed of integrators that are driving innovation to benefit both investors and patients.

In the 1970s to 1990s when capital was relatively expensive compared with today, a diverse group of integrated pharmaceutical companies essentially funded the bulk of the industry's R&D themselves from the significant profits they reaped from their successful products. The result was a tremendous wave of new drugs and innovations with huge benefits to healthcare systems and patients.

Yet having essentially satisfied their investors with the significant profitability that came from previous success, sadly many pharmaceutical companies became somewhat complacent. After the market crash of 2008, there was a wave of downsizing, cost-cutting and R&D site closures as companies faced a new level of scrutiny from their investors.

In parallel with the financial uncertainty created by the market crash in 2008, the huge diaspora of ex-Big Pharma R&D scientists and executives needed to find new homes. The result is today's industry structure: a fragmented and highly connected ecosystem of four types of company: first the surviving massive, integrated, profitable and relatively stable *Big Pharma* companies covering a broad range of technologies and therapy areas; second a multitude of small pre-revenue *Biotechs* that typically focus on R&D in a specific technology (small molecule or biologics), therapy area, and/or element of the value chain; third an increasing number of integrated *MidPharma* companies that are both profitable and focused in some way; and fourth a plethora of *Contract Research Organisations* (CROs) that operate on a service basis to the Big Pharma, Biotech and MidPharma companies, and do not take on the risk of R&D.

The new ecosystem has increased the transparency of pharmaceutical R&D to investors. No longer is R&D investment hidden in the big campuses and profit and loss accounts of Big Pharma. The industry ecosystem has evolved in concert with the evolution of an expansion in the scale and

reach of financial intermediaries between pension funds and the companies that are engaged in pharmaceutical R&D. The most notable has been the resurgence in pharmaceutical venture capital funds, both independent and within corporates, but other private equity funds that have invested in profitable and growing service companies and specialist marketing companies have been similarly influential.

The fragmented ecosystem of pharmaceutical R&D has led some companies to suggest that it is best to leave the small biotechs to do the early stages of R&D and the more well funded Big Pharma to do the later stages of R&D and commercialisation. Today's most notable exponent of this approach is Allergan, which actively promotes its 'Open Science' approach comprising its "best-in-class product development and commercialisation platform" as a "magnet for game-changing ideas and innovation". The consequence of this line of thought is that the very small biotechs that are providing the fuel for the larger companies to develop and commercialise are becoming extremely expensive to purchase. Allergan's acquisition of Tobira for an up-front of nearly 500% of the previous day's closing share price is but one admittedly extreme example.

As the price of external innovation and small biotechs has increased, so has the size of venture capital fund raises that are betting on creating the clinically proven science that will attract a high price from Big Pharma when acquired. This self-reinforcing dynamic can only continue to work while investors in Big Pharma tolerate the prices paid for such science, which indeed when externally acquired have less effect on their quarterly earnings (EBITDAs) than the hard work of internal R&D. This feels eerily like the old days when the relatively cheap capital from inside highly profitable pharma companies went into often inefficient, internally-focused R&D and M&A.

The good news this time is that another consequence of the industry's fragmentation is a new breed of focused and integrated MidPharmas that are breaking the rules of the 'Big Pharma acquires Small Biotech' dogma. These entrepreneurial R&D integrators recognise that R&D is a long-term endeavour that requires a deep integration of commercial, medical, science and partnership skills in a chosen focus area. These companies typically command a higher market rating than their Big Pharma peers because of their deep and integrated focus on a platform and/or specialty area. In Europe, such companies include Genmab, Cosmo Pharma, Galápagos, MorphoSys, Sobi, Actelion and Bavarian Nordic. Such companies are the paradoxically integrated consequence of the industry's fragmentation, and are the ones to watch in terms of creating value for investors and patients alike.

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