

A is for Innovation *And ...*

The 4Q11 Allocation of Early-Stage Risk Capital

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Abstract

2011 observed an increase in Series A financings relative to recent years (2008 to present). A dramatic acceleration of these early-stage financings occurred in the final quarter of the year, where of the 93 total first time institutional financings tracked, 40 announced closings transpired in 4Q11. Here we examine the 150% quarter-over-quarter growth (40, 4Q11 v. 16, 4Q10) in Series A financings and analyze the types of companies who were recipients of this sharp increase in risk capital. Our findings indicate that the financing of early-stage ‘innovation’, defined as preclinical therapeutic products, is robust and on par relative to more mature therapeutic product candidates. Additionally, de-risked or those more clinically advanced therapeutic, device, diagnostic and health-IT products likewise increased their capture of Series A venture dollars.

Total Deals By Sector

Of the 40 4Q11 by-sector deals, 21 or 53% were biopharma (small molecule, biologic or vaccine products), representing a 110% increase relative to 4Q10 biopharma deals (10 out of 16); 8 or 20% were medical devices (for non-diagnostic use), representing a 100% increase relative to 4Q10 (4 out of 16); 7 or 18% were health-IT (a software and/or web-based product), representing a 600% increase relative to 4Q10 (1 out of 16); and 4 or 10% were diagnostic, representing a 300% increase relative 4Q10 (1 out of 16). *Figure 1.*

Capital Raised by Sector

Of the 21 by-sector 4Q11 biopharma deals, a total of \$333.0M was raised, representing an increase of 270% relative to 4Q10 deals (\$90.1M out of \$138.0M); the 8 medical device deals raised \$46.9M, representing an increase of 534% relative to 4Q10 deals (\$7.4M out of \$138.0M); the 7 health-IT deals raised \$48.4M, representing an increase of 545% relative to 4Q10 deals (\$7.5M out of \$138.0M); and the 4 diagnostic deals raised \$77.3M, representing a 134% increase relative to 4Q10 deals (\$33.0M out of \$138.0M). *Figure 2.*

Therapeutic Deals by Product Type

Here we breakout the biopharma companies by product type. Of the 21 by-product-type 4Q11 deals, 16 or 76% are (small molecule) biopharma’s representing an increase of 100% relative to 4Q10 (small molecule) biopharma’s (8 out of 10); 3 or 21% are biopharma (biologics), representing an increase of 50% (2 out of 10); and, the remaining 2 or 10% are biopharma (vaccines) (versus 0 out of 10). *Figure 3.*

Capital Raised by Product Type

Of the 21 by-product-type 4Q11 deals, 16 biopharma (small molecule) deals, raised a total of \$264.3M representing an increase of 257% relative to 4Q10 deals (\$74.1M out of \$138.0); the 3 biopharma (biologics) deals raised \$39.0M representing an increase of 144% relative to 4Q10 deals (\$16.0M out of \$138.0M); and the 2 biopharma (vaccine) deals raised \$29.7M (\$0 out of \$138M). *Figure 4.*

Total Deals by Product Stage

We breakout deals by product stage, according to the entities most advanced product, across two parameters; first, medical device, diagnostic and health-IT companies are assigned the classification of lead product as either development-stage, clinical-stage or commercialized, and second, biopharma companies are assigned as preclinical, phase I, phase II, phase III or commercial. If a company has more than one product in its pipeline the most advanced (nearest FDA approval or commercialization) stage is assigned.

Of the 19 by-product-stage 4Q11 medical device, diagnostic and health-IT deals, 8 are development-stage, representing an increase of 167% relative to 4Q10 deals (3 out of 6); 1 is clinical-stage (versus 0 out of 6); and, 10 are commercial-stage entities, representing an increase of 267% relative to 4Q10 deals (3 out of 6). *Figure 5*

Of the 21 by-product-stage 4Q11 biopharma deals, 10 are preclinical-stage, representing an increase of 11% relative to 4Q10 deals (9 out of 10); 2 are phase I (versus 0 out of 10); 8 are phase II, representing an increase of 700% (1 out of 10); and, 1 is commercial-stage (versus 0 out of 10). *Figure 5*.

Capital Raised by Product Stage

Of the 19 by-product-stage 4Q11 medical device, diagnostic and health-IT companies, a total of \$53.3M was raised by 8 development-stage companies, representing an increase of 43% relative to 4Q10 deals (\$37.4M out of \$47.9M); 1 clinical-stage company raised \$10.4M (versus 0 out of \$47.9M); and, 10 commercial-stage entities raised \$108.9M representing an increase of 937% (\$10.5M out of \$47.9M).

Of the 21 by-product-stage 4Q11 biopharma companies, 10 preclinical-stage companies

raised \$182.3M, representing an increase of 233% relative to 4Q10 deals (\$54.7M out of \$91.0M); 2 phase I companies raised \$18.4M (versus 0 out of \$91.0M); 8 phase II companies raised \$117.3M, representing an increase of 231% (\$35.4M out of \$91.0M); and, 1 commercial-stage company raised \$15.0M (versus 0 out of \$91.0M). *Figure 6*.

Conclusion

4Q11 witnessed Series A financings total north of \$400M for the first time in thirteen quarters, 3Q08 (*Figure 7*). This quarterly increase was driven, in large part, by a more than doubling of biopharma company deals; within this sector was also a doubling of small molecule products, and a near 300% rise in dollars allocated to these early-stage assets.

Like George Rathmann, founding CEO of Amgen, so famously stated when asked about how the Company knew to place their chips on Epogen®, his reply was that their success was firmly rooted in the application of the “and not or” approach to discovery and development. Dr. Rathmann detailed that fifteen additional candidates were in concurrent development, it just so happened that *Epo* was the one aspirant that “worked”. And work it did, making Amgen the first biotech company in the world to successfully transition from an R&D to commercial company. Such is the common risk mitigation and diversification approach to invoke when managing a portfolio, this schema may be applied no matter the portfolio contents, be they a basket of stocks and bonds, a wardrobe for all seasons, an R&D center, or a life science venture fund, etc.

By extrapolating the merits of diversification and portfolio management theory metaphor to 4Q11 Series A financings we not surprisingly find that the material increase in deals and dollars was not allocated to a single particular sector or product type or company stage. Diversity was clearly the name of the game for this twelve week stretch.

Here we have helped illuminate the answer to the burning question du jour of whether or not these recent (4Q11) first institutional financings are fueling innovation ‘or’ simply reconstituting otherwise familiar products. On the contrary, the answer is unambiguously ‘And’. Yes there is evidence of such a jump in preclinical therapeutic financings, but likewise we observe increases in diagnostics, devices and in particular health-IT companies, such as software and browser-based products that power engines such as electronic healthcare records platforms. These particular non-therapeutic sector specific business models not surprisingly are able to compress both time to market and capital requirements relative to their therapeutic counterparts.

And yes, there was also a material quarter-over-quarter increase in Series A companies with products in phase II, *i.e.* so called non-innovatives, thereby indicating a high likelihood that these assets who are deep into their clinical development may very likely had been previously advanced through preclinical and phase I studies by some other entity – and thus this cohort speaks directly to the product reconstitution thesis or the claim by some that capital share has been taken away from ‘innovation’ by these refashioned products and companies. Data indicates that the Rathmann process was thriving in the final quarter of 2011, as investment increases are demonstrated that support both “innovation” (see definition above) and more clinically or commercially mature products. These results are in direct conflict to any such belief in the theory of a herd-mentality to investing; granted

4Q11 is an n=1 and perhaps a subsequent sufficiently powered analysis may more accurately support or refute this claim.

The answer then to today’s debated question is oddly enough ‘and’; yes, risk capital is flowing into innovative, preclinical, biopharmaceutical companies who are focused on novel approaches to disease; ‘and’ risk capital is flowing into clinical-stage biopharma companies whose risk profile is slightly reduced on a relative basis; ‘and’ yes, risk capital is flowing into less capital intensive products such as device, diagnostics and health-IT products which have an opportunity to reach the market in much shorter order.

Innovation in the biosciences is alive and well and being financed and so too are other de-risked assets. From a portfolio management perspective this diverse representation of staged products and sectors should come as no surprise, nor should an allocation to later-stage products be of surprise, as the quicker an investment can achieve liquidity the better the chances are for at some point to have resultant fresh capital be recycled back into innovative early-stage bioscience enterprises, as well as a portion allocated to later-stage opportunities – thus the virtuous cycle of risk capital and the life sciences shall continue on their march towards placing bets on innovative approaches to disease management and disease eradication – and in the process let us all hope that these investments in early- ‘and’ later-stage innovations yield material results and correlated outsized investment gains; for the rising tide of returns lifts all life science ships.

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