

Principal-agent conflict with three dimension analysis

[Business](#)



Risk-control priority Mitigating principal-agent conflicts in start-ups are vital for the company's future success. The conflict is so universal that it can be reflected from the technology choice, the team structure and financing decomposition of the start-ups. In our case, the entrepreneurs in Conor Medsystems, face multiple trade-offs (tech, team and financing), that each of them can be considered as the "tension" between technique priority (technocrats) and risk-control priority (financial-crats). The results of these trade-offs are ultimately depended on the balance of the tech-financial power struggle.

The principal-agent conflicts, according to corporate finance theory, usually happen when entrepreneur make decisions that is in their personal interests rather than in the interest of outsider investors. The self-serving decisions include: First, entrepreneur has intrinsic passion and personal gratification; Second, outside investors pursue the low-risk, low value path rather than high-risk, high-value path; Third, the entrepreneur may have strong personal incentives to continue the project even though it is a losing proposition (see Ogden, et al. 2003). In our case, Litvack and other entrepreneur of Conor Medsystems insist on completing all medical trails with the most cutting-edge technology, which may bring much higher value in the future and also indicate comparable risk. VCs, however, insist on staging finance, considering the possible failures since the investment is large.

The truth probably lies between the two extremes. On one hand, Litvack may have self-serving interests or intrinsic irrational passion, especially given his good record of past venture, which may make him overconfidence; on the other, Litvack and other entrepreneur may be more familiar with the industry

<https://assignbuster.com/principal-agent-conflict-with-three-dimension-analysis/>

and have better understanding of the technology nature, so that they may have better judgment on timing the maximum value point of the startups than others. The conflicts then can be divided to three dimensions, tech, team and financing, which are also the core issues of high-tech start-ups like Conor (See Table 1). If we look at them one by one, each single dimension provides the evidence of the conflicts. We can model the conflicts as a dynamic optimization problem.

The dimensions can be defined as “ Variables” for example. In addition, their dynamic relationship can be defined as “ Constraints”. Actually, given two of the three variables, the last one will be decided. For instance, if we choose one particular technology and team structure, there must be an optimal financing portfolio; or given the initial value of financing source and team profile, we will end up in choosing one particular technology. The dynamic start-up value optimization problem can be solved given variables and constraints.

However, if we only have one variable decided, the other two are free unknowns, then we can't reach a particular optimization solution, the conflicts or “ tension” will occur. For example, if we only have team decided, the tech-finance combination is unclear, there must be a trade-off.

Technology Technology is the fundamental power of venture developments. Understanding technology is tough, evaluating it is even tougher. On one hand, it has rather random results and unexpected effects, especially for medical industry which require highly security; on the other, it has to be evaluated in some ways by ambiguous data.

In our case, when J&J, the biggest competitor of Conor, showed its study results of 0% restenosis, most VCs were unwilling to believe that the Conor's technology could beat zero. Shanley cared about the technology implicating that data isn't everything, while VCs merely paid attention to how to control the risk. The conflict between the improvement of technology and VCs is serious, showing the increasing importance of financing. After series C financing, company executives decided to proceed with the trials in Europe leading to a delay of its U. S.

market. The cause lies in the fact that Litvack felt the technical advantages outweighed the additional time and resources required. Until this stage, financing issues are not dominant; since the "tech" and "financing" are free unknowns, a technocrat-governed team tend to choose technology priority. Team Team construction can directly reflect the relative power of tech-financing balance. Personal profiles of the executive members can strongly influence decisions on technology choice and financing strategy.

At the company's start-up stage, the management including only the specialists of medicine and engineering illustrating the fact that technology strategy is vital during early period entrepreneurship. As the company increases in size, huge financing constrains choke the continues growths, indicating people with business background should take more weight in the board. The Conor Medsystems Management includes various professionals who specified three fields: medicine, engineering and finance, which is due to the growth process and characteristics of high-tech companies. 60% of the management members are based on the medicine and engineering. The

rest 40% have more business background. Financing The relative concerns between technology and financing issues determine the financing structure shifting over time.

In the start-up phase, Conor faced the issue of establishing its ideas, by accurately choosing technologies to fit the market, expand space for surviving in serious competitions. As the time passes, high tech tends to consume more and more resources, the conflicts between technology investment and financing constraints become more sharpen and the burn rate goes up dramatically. Meanwhile, time limit is tight; missing the leading advantage can kill the start-ups. The financing issues are therefore dominant at this stage, or we can say the importance of technology concerns “depreciate” against financing concerns over time. Besides, among all the financing sources, Venture Capitals are the most applicable one at this stage, as it has experience on risk-control, professional supports, access to large companies and injecting discipline, more importantly, it can provide more money with higher efficiency than other sources. In our case, the technocrats-dominant-team has tensions with financing strategies given the technology had been chosen.

Based on Litvack’s PAS experiences, he was not optimistic about raising funds through venture capitalists as he was worried about “...(VC)bring superficial understanding of the business, tremendous illusion for management and founders”. However considering the large amount of money that Conor needed (\$30 million) to complete its European and US trails, the optimal funding solution seems to be diversifying different

financing sources such as hedge funds, wealthy individuals and venture capitalists. We believe that the VCs in medical equipment industry should be Conor's leading financial source. Although venture capitals may have more say in the board, the startup can be benefited from supervised under good risk-control and thus keep their concentration on the right track of maximizing profit. As burning rate grows rapidly, avoiding "overinvestment problem" of only insider management is more significant than losing some control of the board. The team has to be re-constructing.

That is, given the technology requirements, financing concerns are so important that it overweighed team concerns. Furthermore, to balance the VCs control, there are also some other ways to fund, even though they are not the leading investor and may be suboptimal. For example, corporate venture capitals give up too much information to a potential rival and the lack of funds to protect themselves in court in case of litigations. Also Medical Device Distributors extracted profits from future sales, i. e.

giving up loyalty for upfront payment. This leaves us with two more options of financing sources that should be considered by Litvack, Financial Investors and Business Angels. Both of the financing sources give Conor Medsystems the whole control of the firm, without interfering from the investors. Business angels contribute with more flexibility due to possibility of negotiations.

Conclusion This report is focus on tensions between technique priority and risk-control priority given three dimensions, namely, tech, team and financing. The final goal is an optimization problem of maximizing the value of the start-up before the exit.

At the beginning level, the management team is more techno-profile dominant, it tends to take bold tech strategy and financing constraints are not so urgent; when the start up goes to more maturity stage, financing constraints become relatively more important; the team has to absorb VC specialist into the board. A good financing strategy could be pick some professional VCs as leading investors to access the market, take financial investors and Business Angels as minority financing sources to lower the interfering, leave the others. As the trials finished, sell the start up immediately. Appendix Table 1 technique priority Tech More advanced. Higher risk. Ex: cobalt chromium stent Team Engineer or medical background.

Ex: Shanley Financing One-hit or continues financing(unconditional) Ex: “loyalty money”, financial investors Ex: Venture Capital risk-control priority Moderate and prudence. Less risk. Ex: stainless-steel Business background. Ex: Robert(VC specialist) Staging financing(conditional)