# 4 Contract Design Approach to Cash Flow Incentive Mechanisms

## 4.1 Introduction

This chapter offers a new explanation for the use of straight equity as the prevalent form of financing in German venture capital. Starting point of the analysis is the observation by Cumming and Walz (2004) that "[t]here is no single optimal form of venture finance"[109] despite the fact that theory claims that only convertible securities always optimally and endogenously allocate cash flow rights to the contracting parties and thereby induce them to exert ex-ante efficient efforts.[110] As already formulated in the literature review in Chapter 3, the present work aims at investigating whether the incentive-compatible allocation of cash flow rights obtained with convertible securities can effectively be replicated by straight equity financing in combination with at least one cash flow-related covenant. The chosen contract design approach enables the author to analyze augmented venture capital contracting with a focus on the allocation of cash flow rights to the contracting parties. Augmented contracting considers the interaction of financing instruments and cash flow-related covenants as they are combined in venture capital contracts, and has so far rarely been examined. Control rights are not at the center of the analysis because their allocation can be carried out separately from the allocation of cash flow rights in venture capital.[111]

Related models such as Schmidt (2003) and Hirsch (2005) consider a sequential double moral hazard problem and narrow their analyses to whether contracts attain first-best efficient effort levels. This model, however, focuses on the incentive properties of venture capital contracts. In a second-best world

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109 Cumming and Walz (2004), p. 32.

110 See Schmidt (2003), p. 1139. On the optimality of convertible securities contracting in venture capital, see also Bascha and Walz (2001), Bergemann and Hege (1998), Berglöf (1994), Casamatta (2003), Cornelli and Yosha (2002), D'Souza (2000), Hellmann (2002a), Houben (2002), Marx (1998), Repullo and Suarez (2004), Schmidt (2003), Trester (1998).

111 See Kaplan and Strömberg (2003), pp. 286, 294.

resulting from a simultaneous double moral hazard model, three contract properties are identified, based on which augmented contracting patterns are compared. These properties include the level of the parties' utilities realized and special incentives directed specifically towards the entrepreneur.

The model is built around important real-world phenomena in venture capital that have been identified by the existing literature because, as Schmidt (2003) puts it, "[i]n the specific context of venture capital finance, there are several stylized facts that can be used to impose more structure on the model."[112] The stylized facts take a form similar to that of assumptions underlying the model. They include the importance of the *venture capitalist support* for the profitable joint realization of the project, *project continuation* as the super-ordinate goal of the entrepreneur, *private benefits of control* accruing to the entrepreneur in situations where she is the sole owner of the project, the legal *structure of liquidation provisions*, and a classification of portfolio companies into "high flyers", "living dead", and "write-offs" corresponding to high, medium, and low *states of the world.*[113]

The so-called *living dead phenomenon* has so far been empirically investigated by Ruhnka et al. (1992) but has not attracted much attention in the theoretical literature. "Living dead" investments are economically self-sustaining businesses which nevertheless do not promise to yield the expected rates of return to the venture capital company at the end of the holding period. For this reason, the venture capital investor attempts to liquidate the business immediately upon recognition of this fact in order to minimize actual and potential losses. Exit options for the venture capitalist, which influence the allocation of cash flow rights, are therefore of outstanding importance in this state. With poor exit opportunities, the venture capitalist is locked into an illiquid investment and thus minimizes his effort and financial support. As a result, the majority of "living dead" businesses do not remain self-sustaining for a longer period of time despite the fact that, without venture capital financing, the

[112] Schmidt (2003), p. 1148.
[113] For an explanation of "high flyers", "living dead", and "write-offs", see Stylized Fact 1 and the underlying empirical evidence.