Principle of increasing risk*

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Principle of increasing risk—is a macroeconomic concept developed by a Polish economist *Michal Kalecki* in reference to a capitalist firm's ability to and the rate of financing its operations. The principle of increasing risk (PIR) relates directly to the potential destabilizing threats of overleveraging that resurfaced in the 2008 Global Financial Crisis (GFC) (e.g. Kalecki 1937, 1970; Mott, 2009). The PIR also connects with Minsky's (1975) 'borrower's risk' (and his three financing schemes, see *financial fragility* and *Stabilizing an Unstable Economy* entries) as the borrower faces risks of rising costs of debt servicing or bankruptcy, at each subsequent loop of tapping into capital markets. Therefore, there are strong implications for the debate on the interlink between decisions on firm financing, economic activity, and broader cyclical and structural macroeconomic effects.

"The most important prerequisite for becoming an entrepreneur is the *ownership* of capital," says Michal Kalecki in the conclusion to his *Entrepreneurial Capital and Investment* (Kalecki, 1971, p.109). Similarly, the amount of capital owned by a firm defines the entrepreneurial capital. In turn, the size of the firm is limited by the availability of entrepreneurial capital. The amount of this capital will condition firm's borrowing activity in the capital markets. To comprehensively explain impediments in firm's growth, Kalecki suggests to 'drop' the assumption that "the rate of risk is independent of the amount invested" (Kalecki, 1937, p.442). In fact, Kalecki states that "a firm considering expansion must face the fact that, given the amount of the entrepreneurial capital, the risk increases with the amount invested [*read*: borrowed from outside – AVG]. The greater the investment in relation to the entrepreneurial capital, the greater is the reduction of the entrepreneur's income in the event of an unsuccessful business venture" (Kalecki, 2003, p. 92).

Mott (2009) clarifies the above by stating that the willingness to tie up liquidity into a long-term project (i.e. fixed capital) is inversely related to the firms' ownership of own invested funds. That in turn then also determines the rate of investment and a required return on investment to account for costs of capital and generate profit. There is an implicit connection with Keynes's effective demand. A capitalist firm runs the increasing risk of loss or of going out of business if it continuously borrows over its internal capital capacity and suffers a downturn (loss of demand for its output for whatever reason) in its operations.

It is the current profits (or the rate at which they are earned, if put in relative terms) that determine accumulation of capital, which in turn predetermines firm's growth. As the firm grows (with increasing internal capital) it can avoid the imperfections of capital markets and most importantly the increasing risk. In this situation savings out of profits raise the internal capital level and allow borrowing larger amounts in the capital market. It follows that the differences in the size of the entrepreneurial capital (and size of a firm) helps explain a variety of large and small companies in the same industry at any given time period. Those with lager capital usually claim a greater market share and can afford to borrow more to finance expansionary activity.

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Kalecki argues that this dependence of the firm size on its internal capital "goes to the very heart of the capitalist system" (Kalecki, 1970, p.109). And even though this situation is doubtful to arise in case of perfect foresight under perfectly competitive markets, it is realistic to suggest that imperfections exist in the real world for one reason or another.

Linking PIR with asymmetric information, Fazzari and Variato (1994) address the costs associated with bankruptcy, suggesting that same assets might have different values depending on the how informed about them are entities operating those assets. A firm trying to procure additional (financial or not) investment externally would be better off and, in fact, may reduce the risk if it possesses superior or insider information on the investment project under consideration. Thus, the limitation on investment "is not technological" as would have been suggested under the perfect competition model, "but inherently financial" (Fazzari and Variato, 1994, p.6).

As an initial twist in a business cycle, the concept of principle of increasing risk may be intuitive. Yet, with every new bust following a boom period, the question remains "Why would not the firms learn?" There is certainly some degree of prudence in borrowing; however, in the boom times investment demand is also affected by competition forces. If corporations do not seek extra funds to grow, they run a risk to be outdone by competitors. Individual firm's financing structure matters in defining the scope of its operation and productive capacity investment. Such condition then requires firm's management to balance decisions on the use of firm's own vs. borrowed funds, ultimately affecting planning and production in the medium term, which transforms the structure of individual firm, industry, and the economy (e.g. Nell, 1992).

Hence, a firm puts itself at a correspondingly higher level of increasing risk of default with every additional loan. As such behavior prevails across a multitude of firms, overall economic system becomes overleveraged as the required rate of return (i.e. also cost of borrowing) exceeds the actual generated return (return on profits). Subsequent financial collapse, a systemic breakdown, is costly spilling outside of the group of initial investors, as they attempt to recover by relying on ever more increased borrowing with damaging claims on the real economy sector. This was the scenario that played itself out in 2008. After a period of adjustment, the cycle repeats, albeit possibly under modified institutional framework and on a different monetary scale. All that makes Kalecki's contributions on the capitalist economy timelessly critical for analytical understanding of the cyclical patterns in firm's finance and adequate policy interpretation in the post-GFC global economy context.

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