

FINANCING R&D COSTS IN COMMERCIAL BANKS

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ANNOTATION

Research and development (R&D) plays a key role in the development of technology and the competitiveness of companies in the modern world. However, R&D requires significant financial resources, and commercial banks can become an important source of financing for such work. In this thesis, we will consider what opportunities commercial banks provide to finance R&D expenses.

Key words: expenditures, banks, financial

The financing of R&D expenditures is intensively discussed in both economic policy and economic literature. Compared to other expense categories, R&D expenses have a number of characteristics that have a decisive impact on how companies finance them. On the one hand, R&D expenditures are mainly used to pay salaries to R&D employees and only to a relatively small extent for investments in new machines or laboratory equipment. [1] Thus, through R&D, a small material value is acquired or created, which can serve as a guarantee of financing.

On the other hand, the results of R&D processes are not a tangible product, but an expansion of the company's knowledge base. This newly created knowledge flows into the innovation process as an input and, if successful, leads to the creation of a new product (product innovation) or a new process for creating products and services (innovation process).

Innovation in products or processes is also the economic success of new products, but not all processes are safe. Due to lower internal capital costs, R&D projects in commercial banks are preferably financed from revenues from sales of services or the own funds of the owners of commercial banks. At the same time, however, this means that some R&D projects are not carried out if financial resources from sales or from the bank owner are insufficient and external financing is not possible because external capital costs are too high from the company's point of view. [2]

The importance of internal resources as the main source of R&D funding has been widely emphasized in the literature. [3] Numerous empirical works examine the impact of financial constraints on companies' R&D activities. For example, Antoun R., Coskun A., & Georgievski B. show that credit market restrictions have a greater impact on the level of R&D investment in small commercial banks than in large ones. [4] In addition, the authors show that insufficient funding is more of a deterrent to investment in R&D than to investment in physical capital. This is

consistent with theoretical considerations that investment in physical capital is associated with less uncertainty than R&D activities. Hottenrott and Peters emphasize that internal financing constraints are not in themselves a consequence of insufficient internal funds, but also depend on the ability of companies to generate innovative ideas and turn them into marketable products or new technologies. [5] For example, companies with high innovative potential and small financial resources most often suffer from funding restrictions. Despite all this, commercial banks actively finance R&D in the following ways:

Loans for R&D. Many commercial banks provide special loan programs to finance research and development. Companies can take out loans to purchase equipment, pay scientists and engineers, and purchase necessary materials.

Guarantees and guarantees. Banks can issue guarantees and guarantees that will help companies participate in state and international scientific programs and competitions to obtain funds for R&D.

Equipment leasing. Commercial banks offer leasing services, which can be useful for companies wishing to use modern equipment without significant capital investment.

Attracting investors. Banks can help companies attract investors to fund research by providing them with information about the project and its potential. Specialized programs and tools. Some banks are developing special programs and instruments for financing R&D, including preferential loans and subsidies. Research and risk assessment. Banks can provide research and risk assessment services for an R&D project, which will help companies more accurately determine the required amount of financing and consider possible risks.

R&D spending in commercial banks may face a number of obstacles and restrictions. Some of them are listed below:

High interest rates. Commercial banks often provide loans at interest rates that can be significantly higher than the rates offered by government or international organizations for R&D financing. This can make debt less available and expensive for companies.

Lack of confidence in the success of the project. Banks are keen to minimize risk, and they may be reluctant to provide R&D funding unless the company can provide convincing evidence that the project will be successful. This can be difficult, especially for innovative research projects.

Lack of collateral. Commercial banks often require collateral to issue loans, and in the case of R&D, such collateral may be absent or insufficient.

Long payback period. Research and development can take a long time to complete and pay off. Banks may be reluctant to provide financing for projects with a long-term payback period, especially if they expect a quick return on funds.

Risk of changing priorities. Banks may be concerned that R&D priorities and focus may change during the course of a project, which could affect its success. This may create additional risks for the bank.

Difficulties with public funds. In some countries and regions, access to government or international funds for R&D funding may be a more attractive and affordable option as they may provide preferential terms or grants. Like any economic activity, the results of R&D processes are subject to uncertainty. However, the degree of uncertainty about the success of R&D is higher than for other projects. If, for example, a product is brought to market as a result of an R&D project that consists of new technologies specifically developed for that product, the uncertainty regarding acceptance of that product is higher than for known products or known technologies. Another factor that contributes to the uncertainty of R&D is that the development of a new product can sometimes take several years, while the eventual return, for example from expansion investments, occurs sooner.

Entrepreneurs and business managers, as potential financiers, usually have more complete information about the R&D project and its expected success. This problem of asymmetric information distribution between the entrepreneur and potential financiers, coupled with the generally high level of uncertainty about the success of the R&D project, means that the external capital cost (i.e. the rate of return required by the external financier for the project) exceeds the internal cost of capital (i.e. the minimum rate of profit at which an entrepreneur is ready to implement an R&D project at his own expense).

Financing R&D costs from commercial banks provides companies with important tools for development and innovation. The choice of the optimal financing strategy should depend on the specific needs of the company and the characteristics of the project. However, cooperation with banks can greatly facilitate the financing process and contribute to the successful implementation of research and development.

Literature

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