

## Demand for financing innovation

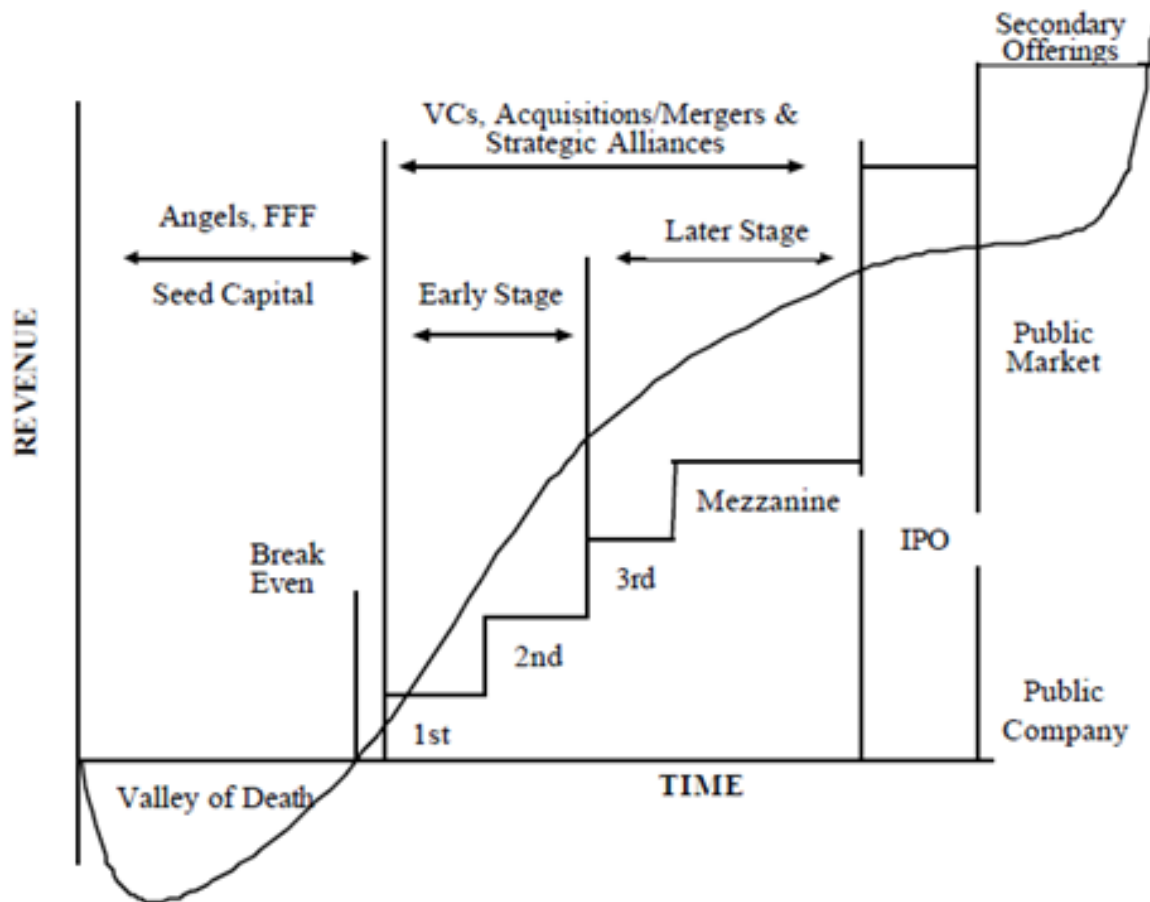
### What is the nature of demand for financing innovation?

Access to finance is a key driver in the creation, survival and growth of innovative firms. Lack of finance may prevent firms from investing in innovative projects, improving their productivity, financing their growth, covering working capital requirement and meeting market demand (see [Actors and contribution mechanisms for financing innovation](#) [1]).

Demand for financing innovation comes from a variety of actors, including:

- Firms engaged in innovation (see [Firms' access to finance for innovation](#) [2]). Innovative firms face several barriers for accessing finance. Finance mismatch may occur when supply of finance does not meet demand. Potentially profitable projects might not be financed. One of the main reasons for this capital market imperfection is the risk arising from information asymmetries between lenders/investors and borrowers.
- Innovative entrepreneurs (see [Access to finance for innovative entrepreneurship](#) [3]). Innovative entrepreneurs suffer from a lack of financing for innovation, in particular in the seed and early stages of business development. They face specific financial constraints due to their inherent riskiness, insufficient collaterals and lack of track record.
- Universities and public research institutes (see [Finance for public R&D](#) [4]). Financing requirements arise for public R&D aimed at increasing the stock of knowledge so as to provide the basis for the development of new products, processes and technologies. Additional financing needs arise when it comes to technology transfer and commercialisation efforts (see [Finance for technology transfer and commercialisation](#) [5]). These organizations may include firms as well as universities and public research institutes that transfer academic inventions via the sale, transfer or licensing of intellectual property to existing firms or to new ventures (e.g. through TTOs and academic spin-offs).

Even if the innovation process may involve the same stages in small start-up and a large multinational, the sources of finance that they have available vary significantly. Large firms can more easily finance their R&D activities, whether using internal resources, getting a loan from a bank (using their tangible assets as collateral if required), issuing bonds, or raising equity finance in the stock markets. Start-ups do not have as many assets to use as collateral and their innovation investment is less diversified, and may also represent a much larger share of their activities for really innovative firms. As a result, their funding options are much more limited, and often need to rely on friends and family before being able to access other sources of capital. The “funding escalator” metaphor is often used to describe how the sources of funding available evolve as the firm develops:



Source: Cardullo (1999)

### What are the policy questions regarding demand for financing innovation?

Common policy challenges include:

- How can governments help innovative firms finance their activities in a context of public budget constraints? (see [Firms' access to finance for innovation](#) [2])
- How can government help innovative entrepreneurs overcome the challenges of financing their activities, in particular at the seed and early stages of business development? (see [Access to finance for innovative entrepreneurship](#) [3]).
- How can policy support finance for technology transfer and commercialisation (link to 165. Finance for technology transfer and commercialisation)?
- What is the best approach to allocating funding for public R&D (see [Finance for public R&D](#) [4])?

### What are main policy approaches to address demand for financing innovation?

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The main policy approaches to address challenges associated to demand for financing innovation include the following:

- Finance for public R&D (see [Finance for public R&D](#) [4]) :

- Scrutinizing investments according to sources of funding, types of R&D (basic research, applied research or experimental development), priority areas, expenditures on deployment and commercialization, and expenditures on facilities and research infrastructures
- Aligning funding to public R&D centres to strategies set by industrial and innovation policies
- Including a structural budget framework, in which investments in national research priorities and thematic fields are complemented by closer scrutiny of how these priorities should be met
- Regularly assessing the overall efficiency of investments in public R&D

- Firms' access finance for innovation (see [Firms' access to finance for innovation](#) [2]):

- Subsidising loans (e.g. through the intermediation of a national development bank) or supporting alternative types of debt finance, such as convertible loans and subordinated loans
- Providing direct support to innovative firms (e.g. through grants and subsidies) as well as indirect support (e.g. through R&D tax incentives)

- Access to finance for innovative entrepreneurship (see [Access to finance for innovative entrepreneurship](#) [3]):

- Stimulating the venture capital industry (e.g. creating public funds that directly invest in start-up firms, establishing public "fund-of-funds")
- Supporting business angels (e.g. providing tax incentives to private individuals investing in specified types of investments and businesses)
- Setting the framework conditions for new sources of private funding, such as crowd funding

- Finance for technology transfer and commercialisation (see [Finance for technology transfer and commercialisation](#) [5]) by:

- Encouraging R&D collaboration of universities and PRIs with firms (e.g. through grants), and innovation networks and clusters
- Supporting spin-off firm creation by universities and PRIs (e.g. creating proper incentives programs to stimulate researchers transfer knowledge and technologies to business entities, supporting incubators and S&T parks)
- Encouraging the development of special intermediary organizations such as technology transfer offices to facilitate science-industry links
- Promoting consulting and extension services by universities and PRIs (e.g. improving legal and regulatory frameworks that allow for more open collaboration between firms and

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universities on the consultancy projects and beyond, promoting institutional development to enable effective science-industry consultancy links and other forms of collaboration)

## References

- OECD (2012), OECD Science, Technology and Industry Outlook 2012, OECD Publishing, Paris. [http://dx.doi.org/10.1787/sti\\_outlook-2012-en](http://dx.doi.org/10.1787/sti_outlook-2012-en) [6]
- OECD (2011), Business Innovation Policies: Selected Country Comparisons, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264115668-en> [7]

**Files:**  [The challenges to finance innovation.docx](#) [8]

**Related Link:** Universities and Public Research Institutes  
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## Links

- [1] <https://www.innovationpolicyplatform.org/content/actors-and-contribution-mechanisms-financing-innovation?topic-filters=11992>
- [2] <https://www.innovationpolicyplatform.org/content/firms-access-finance-innovation?topic-filters=12088>
- [3] <https://www.innovationpolicyplatform.org/content/access-finance-innovative-entrepreneurship?topic-filters=12087>
- [4] <https://www.innovationpolicyplatform.org/content/finance-public-rd?topic-filters=12124>
- [5] <https://www.innovationpolicyplatform.org/content/finance-technology-transfer-and-commercialization?topic-filters=11979>
- [6] [http://dx.doi.org/10.1787/sti\\_outlook-2012-en](http://dx.doi.org/10.1787/sti_outlook-2012-en)
- [7] <http://dx.doi.org/10.1787/9789264115668-en>
- [8] <https://www.innovationpolicyplatform.org/sites/default/files/The%20challenges%20to%20finance%20innovation.docx>