

Centre for Entrepreneurship, SMEs and Local Development  
Statistics Directorate

## Working Party on SMEs and Entrepreneurship

### FINANCING HIGH GROWTH AND INNOVATIVE START-UPS AND SMEs: DATA AND MEASUREMENT ISSUES

#### FINAL REPORT

*This Report presents an overview of data and measurement issues concerning the financing of entrepreneurship and innovative and high-growth SMEs. It proposes a terminology of business financing, potential indicators on financing based on existing data and possible initiatives for improving data on financing for high-growth and innovative firms.*

*The work undertaken implements recommendations by:*

- The Ministerial Declaration at the 2nd OECD Ministerial Conference on SMEs (Istanbul, 2004), which urged the OECD to establish a robust and comparable statistical base on which SME and entrepreneurship policy can be developed.*
- The Brasilia Action Statement issued at the OECD Global Conference on Better Financing for Entrepreneurship and SMEs (Brasilia, 2006), which recommended that the OECD considered the development of definitions, indicators, and methodologies for gathering data on the supply of financing available to SMEs and the demand for financing by SMEs.*

*The Working Party on SMEs and Entrepreneurship together with the Statistics Directorate will continue work to improve availability and international comparability of data on SME and entrepreneurship financing in the framework of its 2009-2010 programme of work.*

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### NOTE BY THE SECRETARIAT

This report was prepared by the Statistics Directorate in collaboration with the SME and Entrepreneurship Division of the Centre for Entrepreneurship, SMEs and Local Development. It presents work undertaken for the financing module of the study on *High-Growth SMEs, Innovation, Intellectual Assets and Value Creation* carried out by the Working Party on SMEs and Entrepreneurship in 2007-2008.

This project module was launched as a follow-up to the work carried out in preparation for the OECD Global Conference on “Better Financing for Entrepreneurship and SME Growth” hosted by the Brazilian Government (Brasilia, 27-30 March 2006).

The Conference issued *the following Recommendations* for further work by the OECD: (*excerpts*) “In order to improve the availability of data and statistics, as well as the understanding of outstanding issues in financing of SMEs and entrepreneurship, the OECD should:

- Prepare a Handbook of definitions, indicators and methodology for gathering data on the supply of financing available to SMEs and the demand for financing by SMEs.
- Encourage use of this handbook to survey SMEs and suppliers of finance on a regular basis to provide policy-makers and market actors with more accurate and detailed information, help them determine if and where a financing gap exists, better understand the functioning of the national, regional and global financial markets as they pertain to SMEs, and to identify deficiencies or impediments in their operations.
- Take the lead in developing better data and statistical information, thereby allowing the establishment of international benchmarks to facilitate comparisons of the relative performance of markets in providing financing to SMEs and entrepreneurs

This report contributes to the responses to the above recommendations. Much of the material presented in this report will serve as Guidelines on Measuring Access to Finance. The Guidelines will form a section of the OECD Entrepreneurship Measurement Manual to be published in 2010.

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## **FINANCING HIGH-GROWTH AND INNOVATIVE START-UPS AND SMEs: OVERVIEW OF DATA AND MEASUREMENT ISSUES**

### **1. INTRODUCTION**

1. Many countries feel they have addressed some of the key framework conditions for fostering entrepreneurship and the development of SMEs by instituting policies to permit greater labour market flexibility and reduce administrative and tax burdens. Yet they are unable to generate the kind of firm growth and development that has occurred in places like the Silicon Valley of the USA. There is a strong belief that financing is a key determinant of high-growth SMEs and entrepreneurship, and numerous studies by academics and policy analysts in many countries have provided at least partial support for this belief. Nevertheless, there are still many questions outstanding.

2. Most attempts to analyse the role that financing plays in fostering or inhibiting the creation and development of innovative, growth-oriented SMEs begin with a discussion of a possible “financing gap”. There is little support in the OECD or in most member countries for interventions in free markets simply to support SMEs or young firms. Thus, it is necessary to determine whether some market imperfection exists that creates underinvestment in firms relative to some theoretical preferred level. Thus the need to determine whether there is a financing gap. Does it exist? How is it defined? Can it be addressed? When researchers set out to answer these questions, they are confronted with a common problem, namely, the lack of consistent and comparable data.

3. Indeed, the first conclusion of the study prepared for the OECD Brasilia Conference<sup>1</sup> was that “a lack of data impedes a complete analysis of the financial situation of SMEs in OECD countries”. This finding was in line with that of a major Canadian government review of the financial services sector undertaken in the late 1990s. Part of the mandate of that study was to determine whether banks and other financial institutions unfairly and inappropriately discriminated against SMEs and young knowledge based businesses. That study identified a number of potential financing problems but highlighted above all that the available data needed to be improved in order to analyse the financing issues faced by particular types or sizes of firms. One of the key recommendations was that the Canadian government should establish a program to develop better data and analytical studies so that the financing situation could be assessed. The resulting programme, entitled the SME Financing Data Initiative (SME FDI) is reviewed in greater detail below.

4. As was the case in Canada, several other OECD countries reported similar experiences in their attempts to analyse the situation facing firms seeking financing. So, has the situation now improved? Do countries now have the data required to develop and assess policies to improve access to financing for potential high growth firms? As noted above, the OECD Brasilia Conference in 2006 still identified information on financing as a problem. In recent years several OECD countries have carried out surveys on the demands for financing, and whether those demands are being met. The development of statistics on financing is still a relatively young field though and while there have been numerous initiatives undertaken by different actors within and outside government, such initiatives have not been coordinated and they often have not attempted to address the same questions.

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<sup>1</sup> *The SME Financing Gap. Theory and Evidence*, Volume I, OECD, 2006.

5. With one exception (i.e. a similar survey launched in Canada and New Zealand), there has been virtually no coordination of the surveys across countries and hence little data is available for cross-country comparisons. Even where countries have been able to develop extensive data on the demand for capital by firms of a particular size or stage of development, it has proven harder to obtain data on the supply of capital available to those same firms. Finally, it has been noted that there is some confusion in the use of terms across countries that can make it difficult to compare the situations in different countries.

## **2. MEASURING DEMAND FOR AND SUPPLY OF FINANCING FOR HIGH-GROWTH AND INNOVATIVE FIRMS**

6. This Section reviews the current state of data on financing. The material is organised in two parts. The first presents an overview of the relevant terms used in collecting and presenting data on financing. The second part provides an overview and assessment of some of the main sources of data on both (i) the supply of data and (ii) the demand for data, on financing of SMEs.<sup>2</sup>

### **2.1. Terminology on Business Financing**

7. One of the basic impediments to development of comparable data on a topic is inconsistent use of terminology. The area of business finance is a complex one and a variety of specialised terms have been developed to describe detailed elements of the business. Unfortunately, these terms are not always used in the same way to describe the same event or activity. The potential confusion due to inconsistent use of terms is particularly true with respect to private equity<sup>3</sup> investing. Hence, OECD organised a Special Workshop to address this issue of terminology at the Global Conference on Better Financing for Entrepreneurship and SMEs in Brasilia in 2006. The Workshop brought together both industry experts and government officials and while they all agreed on the importance of definitions, standards and measurement, there were clearly many differences in where emphasis should be placed.

8. Members of the investment industry stressed the need for consistent and transparent evaluation and presentation of the valuation and performance of investment funds. This is critical for maintenance of credibility and confidence and for informed examination of the private equity sector by domestic and international investors. It was noted that industry officials had done considerable work within national and international organisations to develop Guidelines for valuation and disclosure of private equity funds that would provide consistent, comparable data on funds, including performance measures.

9. Government officials expressed different or additional needs. They supported the industry's efforts to establish valuation standards but also noted a desire to have a consistent set of terms and, in particular, to define the different stages of equity capital investment in order to permit measurement of the amount of funding being made available by sector and by stage of firm development. This would allow them to determine where policy intervention might be required and to design, explain and assess any interventions that they determine are warranted.

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<sup>2</sup> Much of the material contained in this Section was developed for a study that the OECD Statistics Directorate has undertaken in association with the International Consortium on Entrepreneurship (ICE). The Consortium is a Group of OECD countries that have been supporting improvements to international data on entrepreneurship and its determinants. ICE has provided financial support and valuable input for the development of a terminology.

<sup>3</sup> See Annex. Glossary of Terms for definitions of underlined terms.

10. Some representatives of the Private Equity industry have argued that establishing precise definitions of types or stages of private equity investment would be difficult and possibly even misleading. Nevertheless, industry associations have set out various definitions of terms and they all categorise data by stage of investment. Despite their efforts to cooperate and harmonise the use of terms and data compilation methods, differences still exist and they make it difficult to compare the financing situation across countries. OECD staff have undertaken a review of the terminology used by the various national and international organisations and this Paper proposes a common set of definitions for all relevant terms including investment stages. These definitions and other relevant material on measuring access to finance for SMEs and Entrepreneurship will form a section on “Measuring Access to Finance” in an OECD Entrepreneurship Measurement Manual to be published in 2010. Publication of these guidelines will constitute part of the response to the recommendations from the OECD Brasilia Conference.

### 2.1.1. *Basic Definitions*

#### *Debt vs. Equity Finance*

11. In very simple terms, all financing can be divided into two categories, debt and equity.

- **Debt financing** is acquiring capital with an obligation to pay it back. It includes a wide variety of financing schemes such as loans from individuals, banks, or other financial institutions; selling bonds, notes or other debt instruments; and other forms of credit such as leasing or credit cards. The lender gains no equity position in the firm and the borrower’s obligation is to repay the debt, usually with interest.
- **Equity finance** refers to all financial resources that are provided to firms in return for an ownership interest. Equity investors have no guarantee that any specific amount of money will be returned. Rather, their return on investment will be determined by the success of the firm. They may sell their shares in the firm, if a market exists or they may get a share of the proceeds if the firm is sold. The large category of equity finance can be sub-divided into Public Equity and Private Equity.
- **Public equity** finance refers to investments made in companies whose shares are quoted in some form of stock exchange. Normally, public equity investors make hands-off purchases of shares in these listed companies. The investors are not involved in providing advice or otherwise assisting the owners or managers in the development of the firm.

#### *Defining Private Equity*

12. The definition of private equity would seem to be straightforward, but there is considerable confusion in the use of this term particularly when one compares US practices to those of Europe and other countries. In most countries, private equity is the term applied to investment in firms where the shares are not freely tradable in any public stock market. Many of the existing definitions of private equity go on to clarify that this term applies to capital invested over all stages of a firm’s life, including early and expansion stages as well as later stages and buyouts.

13. Thus, the EVCA in Europe specifies that “Private equity can be used to develop new products and technologies, to expand working capital, to make acquisitions, or to strengthen a company’s balance sheet. It can also resolve ownership and management issues. A succession in family-owned companies, or the buyout and buy-in of a business by experienced managers may be achieved using private equity funding. Venture capital is, strictly speaking, a subset of private equity and refers to equity investments made for the

launch, early development, or expansion of a business.” Moreover, the CVCA<sup>4</sup> in Canada states that Private Equity is “The generic term for the private market reflecting all forms of equity or quasi-equity investment. In a mature private equity universe, there are generally three distinct market segments: Buyout Capital, Mezzanine Capital and Venture Capital.”

14. Such definitions of private equity are straightforward and accord with terminology used by academics, venture capital associations and financial data providers in many other countries of the world as well. Admittedly, not all these groups use identical terms to describe the various investments stages but there is widespread agreement that private equity extends across the entire range.

15. Confusion arises, however, since the term “private equity” is sometimes used in two senses; both to describe a broad category of equity and to describe a specific investment stage. In the US, the NVCA makes explicit reference to this confusion noting that the term private equity is often used to refer only to buyout fund investing. Thus, in US terminology and data, early-stage and expansion capital, or venture investing, is often considered to be an entirely separate category of financing, not a subset of private equity. A similar dual-use of the term private equity has appeared in European association writings as well.

16. In the OECD Entrepreneurship Measurement Manual, private equity will be considered to cover all stages, as described by EVCA or CVCA.

17. **Private equity** is equity capital provided to *private* companies, whose shares are not freely tradable in any public stock market. The term applies to provision of equity capital across the entire cycle from seed financing to buyouts.

#### *Risk Capital*

18. Despite the confusion about what stages of investment are included in Private Equity, there is general agreement on the need to distinguish financing for buyouts and other investments in very mature firms from the private equity investment in young, growing firms at the seed, early or expansion stages. These private equity investments that are not buyouts are sometimes referred to as risk capital. It should be recognised, though, that most venture capital or private equity associations avoid the use of the term risk capital, perhaps feeling it has a negative connotation. None of the glossaries of terminology prepared by major associations such as BVCA, EVCA, NVCA or CVCA includes the term “risk capital”. In the context of OECD work on financing, however, it is a useful generic term to distinguish buyouts from other private equity investments and, indeed, to describe those stages of private equity investing that do indeed involve a certain amount of risk. The higher risk is because firms in the relevant stages often have negative cash flows, untested business models and they lack a track record. Risk capital does not include any source of debt financing.

19. **Risk Capital** is private equity capital provided by investors to firms in pre-seed, seed, start-up and expansion stages. It includes investments by both formal and informal investors.

20. This definition requires further clarification of investment stages and the types of investors in the formal and informal groups. Clarification of these terms is provided below.

#### **2.1.2. Investment Stages**

21. The precise descriptions of the stages that make up the risk capital, or the broader private equity, investment cycle are not common across countries or associations. Private equity usually invests in

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<sup>4</sup> The CVCA terminology is based on a Glossary of Terms produced by Thomson Financial

companies at all stages of their development, including late stages when they may be declining or restructuring. This late-stage, mature-firm investing is not of direct interest to the entrepreneurship policy community or for “Financing High Growth and Innovative SMEs” (which is the subject of this Paper). However, entrepreneurship and SME analysts and policymakers want to be able to identify the types and amounts of financing available to, and used by, young firms when they are starting up and developing. In order to do so they must be able to clearly distinguish financing during these early and developing stages from what are often very large financial deals involving the mature firms. Thus, this Paper defines all the individual investment stages so that they can be understood, distinguished and compared. But data producers have adopted myriad terms for detailed sub-stages of development, making it difficult to compare across countries. This Report defines all the detailed stages, based on terminology used by the associations and other data providers, but, in order to facilitate data display and comparison, adopts a classification that groups firms into three main stages of development (as described further below).

22. The principal stages that have been identified in reports from various data sources are:

- **Pre-seed stage:** This represents the earliest stage in the development of a business, when a business plan may be in development but no formal or concrete steps have been taken to set up the business. This stage is also referred to as *nascent entrepreneurship* in some writings, but the OECD-Eurostat Entrepreneurship Indicators Programme (EIP)<sup>5</sup> does not consider this as entrepreneurial activity at this stage.
- **Seed Stage:** A development phase when founders conduct research, develop products and explore market potential. This is prior to *start-up* and also prior to entry into entrepreneurship. The future business entity is beginning to take shape but founders have not yet established commercial operations. In the definitions of the *EIP*, this stage is prior to the *Employer Enterprise Birth*, which is a key indicator of entrepreneurship. The developing entity may or may not require financing at this time.
- **Start-up stage:** This is the stage at which a firm has established operations and has launched or is about to launch delivery of products or services. At this stage, capital is required since revenues are not yet able to cover operational and development costs. In the EIP, enterprise birth, or start-up, is clearly defined.
- **Expansion stage:** In this stage capital is provided to an established firm that needs financing to support growth. In the EIP context, categories of investment for growth include new product, new process or new markets. Within each of those categories, investments may be made in different specific components or activities including R&D or production capacity.
- **Turnaround stage:** This stage describes a situation where an established firm requires capital to address a temporary situation of financial or operational distress. The intervention of turnaround financing aims to overcome difficulties and re-establish prosperity. Turnaround is considered to be beyond the expansion stage.
- **Buyout stage:** This is a transaction in which private equity capital is used to acquire a private or public company from the current shareholders. After buyout, the purchased firm usually becomes

<sup>5</sup> The OECD-Eurostat Entrepreneurship Indicators Programme has established common terminology and measurement specifications for numerous entrepreneurship terms and indicators. Some definitions have already been published in the *Eurostat-OECD Manual on Business Demography Statistics (2007)*. Others will be contained in the *OECD Entrepreneurship Measurement Manual*, forthcoming. This Programme will simply be referred to as EIP throughout the Paper.



a private company. Buyouts include a number of specific types of investments, including management buyout (MBO), management buy-in (MBI), institutional buyout (IBO) and leveraged buyout (LBO).

23. In order to facilitate understanding of data and maximise the potential for comparison across countries, this Report proposes that, ideally, data be aggregated to distinguish three major firm development stages: (i) seed/start-up; (ii) development and expansion; and, (iii) later stage and buyout. However, the currently-available data from some sources do not permit a harmonised presentation of these three stages across countries. Thus, the present Paper has further aggregated data into two stages: (i) seed/start-up and early development and expansion; and, (ii) buyout and late stage.

24. It is intended that the aggregation of data into two stages will be an interim measure. Certain Venture Capital data sources have indicated that greater detail will be provided in future data reports and that should permit comparable data to be produced for the three recommended stages of firm development.

25. In the interim, Table 7 summarises the two proposed major stages of firm development and indicates a correspondence between the OECD framework and the terms used by key data providers. If the more-detailed data is indeed produced by the Venture Capital associations, the three stages of development described in paragraph 23 above will be reflected in the OECD Entrepreneurship Measurement Manual and a suitable correspondence table will also be produced. Furthermore, this Report recommends that all data providers attempt to respect the dividing lines between these stages in presentation of data.

### **2.1.3. *Types of Formal and Informal Investors***

#### *Venture Capital*

26. While the stated definitions of Venture Capital provided by various industry organisations such as NVCA and EVCA are similar, confusion sometimes arises in their use. Most definitions indicate that venture capital covers investments in firms at all stages up to, but not including, the buyout stage. Some of the activity data produced by EVCA includes buyout investments along with Venture Capital investments in pre-buyout stages. The proposed definition considers Venture Capital and buyout to be two distinct sub-categories of Private Equity. Venture Capital invests in all the stages included in the definition of Risk Capital though, in practice, venture capital funds tend to invest at later stages of the firm's development when the deal size, and possible return, are large. In recent years, it has become rare for venture capital funds to invest at seed or pre-seed stages.

27. The proposed definition of venture capital derives from terminology used by various national or international associations and data providers.

28. Venture Capital is private equity provided, in co-investment with the entrepreneur, to young, unquoted firms with high growth potential. Venture Capital invests in all stages of firm's development, from seed through expansion stages. Given the high-risk involved Venture Capital funds always have a hands-on approach in the management and governance of financed firms. The firm receiving the capital is called the Portfolio Firm.

29. Under the proposed categorisation, venture capital funds are considered to be "formal" investors within the Risk Capital component of Private Equity. This reflects their organisation management and professional activities. In terms of legal structure, Venture Capital firms are usually in the form of limited partnerships. These partnerships are normally fixed-life legal entities that operate according to a

partnership agreement that spells out management rules as well as terms to govern the relationship between general and limited partners.

30. Typically the limited partners in a venture capital fund are major investors such as banks, corporate investors, pension funds, government agencies, and collective investment schemes.

31. The objective of venture capital funds is to achieve the maximum return on investment over the medium term, which is usually between three and seven years. The return on investment is gained when the portfolio firm is sold. This is known as an Exit and can occur through a trade sale, where the portfolio company is purchased by an industrial investor, an Initial Public Offering (IPO) or some other exit-vehicle such as replacement capital.

*FFF (Founders, Family, Friends)*

32. Many studies of financing for young, entrepreneurial firms show that equity investment by friends and family of the founder, as well as by founders themselves, play a significant role particularly at the earliest stages of firm development. This category of risk capital is often underrated in part because consistent measurement of both investment activity and performance is lacking.

33. This category of investor clearly falls within the informal investor component of risk capital. The arrangements governing the investment and the relationships between the investors and the portfolio firm are informal or non-existent. It has long been argued that investors in this category are driven purely by a desire to help the entrepreneur, rather than by a desire for or expectation of a return on investment. In many studies these investors are referred to in a derogatory way as “family, friends and fools”. Their intervention, however, is essential for many young, entrepreneurial firms that have limited access to traditional fund providers, particularly at pre-seed and seed stages.

34. Since FFF capital often represents the first potential source of equity finance for a small firm, it is recommended to be included in the OECD Guidelines on measuring Access to Finance, to be published in the Entrepreneurship Measurement Manual, even though the lack of information about this investment category limits the possibility of analysis in this area.

35. Family, Friends and Founder capital is private equity capital provided to firms at any stage of their development.

*Business Angels*

36. The term Business Angel refers to an investor type that falls somewhere between the formal venture capital funds and the informal FFF investors. Like the FFF investors there is evidence from various financing studies that business angels play an important role in early stage financing of entrepreneurial firms though the lack of data makes it difficult to evaluate activity and performance.

37. According to the European Business Angels Network, a Business Angel is a wealthy private individual who invests part of his personal assets in a start-up and also shares his personal management experience with the entrepreneur. Precise definitions from other sources vary, but they are not in conflict. Most agree that Angel investors provide both capital and expertise. This is due in large part to the fact that many Angel investors are successful *cash-out* entrepreneurs who are willing and eager to invest their financial and intellectual assets in emerging companies.

38. Business Angels' investment patterns are different from those of the formal Venture Capital investors. They generally back deals of smaller size occurring at earlier stages of firm development.

Because they invest their own money, Business Angels tend to maintain close (spatial) contacts with the target company, often asking for a seat on the board.

39. The increasing importance of Business Angels raises questions about whether they should be considered as part of the informal or formal risk capital market. Some Business angels are forming syndicates in order to take on larger deals and to spread the risk. Furthermore, the creation of business angels' networks also represents a step towards the development of a more mature market.

40. In the present categorisation, Business Angels are still considered to be part of the informal investor component of risk capital though it is recognised that in many countries Angels are migrating towards the formal group as they develop larger, more sophisticated networks and pool resources in order to make larger investments.

41. A Business Angel is a private investor who provides both finance and business expertise to an investee company in return for an equity share in the firm.

42. Unlike venture capitalists, angels typically do not manage the pooled money of others in a fund. However, angel investors often organize themselves into angel networks or angel groups to share research and pool their own investment capital.

## **2.2. Descriptions of Existing Data Sources, Characteristics and Issues**

43. How does the demand for and supply of financing differ across countries and do those differences matter? There is considerable debate across OECD countries about whether the amount of financing used by firms is at the optimum level to support a desirable level of firm development and growth, especially in certain key sectors or, more generally, for firms with high growth potential. Government policy documents frequently refer to the dilemma faced by entrepreneurs who want to create and grow firms in knowledge-based industries where financing is required to develop ideas. Such firms have difficulty obtaining debt financing since there is little in the way of concrete assets to serve as collateral for traditional loans. It is felt that equity financing, or risk capital, would be particularly helpful for these potential growth firms at this stage. In many cases, countries feel that not enough use is made of such risk capital and various theories have been proposed to explain this situation. However, little empirical data exists to test the theories and to compare practices and outcomes across countries.

44. Indeed, analysts and policymakers would like to study how the types and amounts of capital used by firms at key stages of their life cycles vary across countries and whether these variations can be linked to differences in firm performance. Furthermore, if the level of capital used by firms is considered to be too low in a particular sector in a country, policy analysts want to determine whether supply or demand factors are primarily responsible.

45. Thus, researchers are seeking comparable information on supply and demand of capital across countries to support the type of studies mentioned above. Ideally, information on supply and demand for capital would be linked to other characteristics of firms and entrepreneurs so that rigorous analysis of cause and effects could be carried out. Unfortunately, there is limited availability of such detailed, firm level, data. Thus, researchers are initially seeking even more basic, comparable, cross-country data at national or regional levels.

46. This Section will identify a number of existing sources of information on both debt and equity financing for OECD countries and describe the characteristics of the sources and the data. The review will highlight issues pertaining to the presentation and use of these data sources, particularly for international comparison purposes. In reviewing sources of information on both debt and equity, an effort was made particular to identify data on equity since many studies suggest that is the type of financing that supports

the development of innovative and high growth firms (See Section 5). Although the review does not cover all sources from all OECD countries, it is felt that the surveys and other data sources that have been reviewed are representative of the situation across the OECD.

### **2.2.1. Overview of Data on the Supply of Financing**

47. This Paper attempts to identify examples sources of data that pertain to the various sources of capital in OECD countries and review them using a common set of criteria. The objective was to develop an understanding of what data are available and whether these data can be compared across countries. Ultimately, the knowledge of what exists, where there are data gaps and where there are examples of “best practices” will help the OECD to make recommendations to improve data on financing.

48. The types of capital available can be subdivided into debt and equity. On the equity side it can be further subdivided into formal (Venture Capital) and informal (Business Angels and other individuals) risk capital. Of course “debt”, too is a broad category with many different types of instruments and sources of funds. Furthermore, the information sources for these different categories of capital differ greatly. For purposes of this review, “debt” is considered to be a single category and information on equity is broken into three categories. Thus, the assessment sets out to cover data sources for four categories of capital, namely Debt, Venture Capital, Business Angel financing and Other Informal Capital. However, as will be seen from the comments below, there is very little structured information available for the latter two categories.

49. While the purpose of the review was primarily to assess what was available, the opportunity was taken to gather data into an informal OECD Entrepreneurship Finance Database (EFD). At present, given the sources available, the majority of the data pertain only to Venture Capital, or more broadly to Private Equity, when the Venture Capital and Private Equity components have not been separated by the data supplier. It focuses on capital for early stage firms or SMEs in OECD and key non-member countries, but the actual coverage varies across sources. The EFD is a temporary database that will be used to produce various multi-country indicators for the Entrepreneurship Indicators Programme and for other studies on firm financing. If it is found to be a useful tool, it will be necessary to explore how it could be maintained or even enhanced in the future.

#### *Supply of Debt: Data Sources*

50. The research revealed virtually no structured sources of information on the supply of debt for firms by size, age or growth characteristics. In recent years numerous countries and international bodies have expended considerable resources and effort to develop better data on the financing demands and experience of SMEs. However, with the exception of a few cases discussed below, no countries have been able to develop good data on the supply of financing available to SMEs. New Zealand is a case in point. In response to demands from the Ministry of Economic Development, the National Statistics Office has developed an excellent, ongoing program that tracks SMEs financing demands and their success in fulfilling those demands. Yet information on the supply of debt financing to SMEs is limited to what can be inferred from the responses of the SMEs themselves.

### **Canada – SME Financing Data Initiative (SME FDI)**

51. The SME Financing Data Initiative is a Canadian Government program designed to improve the information base concerning SME financing in Canada. The program collects information and conducts research on many aspects of SME financing including the demand for financing by SMEs (see 2.2.2, below) and informal sources of capital (see 2.2.1, below). The SME FDI collects information on the supply of capital, through an annual Survey of Suppliers of Business Financing (SSBF) addressed to all major

suppliers of business financing including domestic and other banks, credit unions and *caisse populaires*, finance companies (including some Government Business Enterprises), portfolio managers, venture capital companies, financial funds, insurance companies, and leasing companies. The types of financing covered include debt, factoring and leasing, but not equity. Business clients are classified by four variables: authorization level, type of instrument used, province or territory, and industry (including a subset for knowledge-based industries).

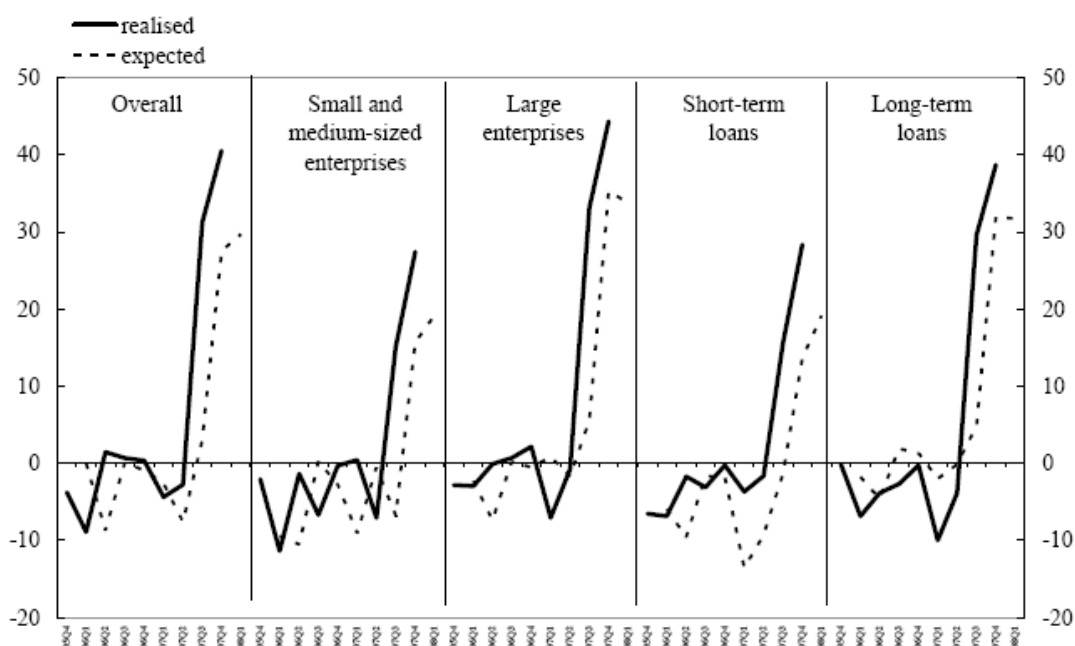
52. In principle, the survey is intended to provide information about the supply of financing for SMEs, but none of the sources of financing maintain records that categories borrowers by the size of the firm. Instead, the SSBF categorises supply of capital by the size of the loan authorization of a firm since it is assumed that small firms have smaller loan authorization sizes.

### Europe – European Central Bank

53. Since 2003, the European central Bank has conducted a quarterly *Euro Area Bank Lending Survey*, survey to assess the “tightness” of credit. Results are displayed separately for SMEs and large enterprises.

54. The survey presents the “net percentage” difference between the share of banks reporting that credit standards have been tightened and the share of those reporting that they have been eased. A positive net percentage indicates that a larger proportion of banks have tightened credit standards (“net tightening”), whereas a negative net percentage indicates that a larger proportion of banks have eased credit standards (“net easing”). Likewise, the term “net demand” refers to the difference between the share of banks reporting an increase in loan demand and the share of those reporting a decline. Net demand will therefore be positive if a larger proportion of banks have reported an increase in loan demand, whereas negative net demand indicates that a larger proportion of banks have reported a decline in loan demand. The resulting graphs are illustrated below for the time period 2005Q4 – 2008Q1.

**Figure 1: Tightness of Credit Applied by European Banks for Enterprises Loan Requests**  
(Net percentages of banks contributing to tightening standards)



### USA – Small Business Administration (SBA)

55. The U.S. Small Business Administration presents data on the supply of Small Business Financing in its annual Report *The Small Business Economy*. As is the case in other countries, banks do not maintain records by firm size so the SBA has defined small business lending by commercial banks as loans under \$1 million. Table 1, from the 2004 Report, illustrates the type of information available from this source.

**Table 1: USA: Dollar Amount and Number of Small Business Loans Outstanding**

June 2000 to June 2004 (Loan amounts in Billions of Dollars)

Loan Size	2000	2001	2002	2003	2004	Percent change 2004 over 2003
Under \$100,000	\$121.4 B	\$126.8 B	\$128.9 B	\$125.7 B	\$125.3 B	-0.31
Number (millions of loans)	9.80	10.79	15.65	14.09	13.58	-3.64
Under \$250,000	\$209.4 B	\$218.4 B	\$225.0 B	\$224.0 B	\$228.4 B	1.96
Number (millions of loans)	10.54	11.57	16.5	14.92	14.45	-3.16
Under \$1 million	\$437 B	\$460.4 B	\$484 B	\$495.1 B	\$522.3 B	2.3
Number (millions of loans)	11.17	12.25	17.24	15.67	15.26	-9.1
Total business loans	\$1,300.3 B	\$1,324.5 B	\$1,307.0 B	\$1,318.1 B	\$1,373.3 B	0.85

Source: U.S. Small Business Administration, Office of Advocacy.

### *Supply of Venture Capital: Data Sources*

#### Australia – Australian Bureau of Statistics - Venture Capital and Later Stage Private Equity Survey

56. Since 1999/2000, the Australian Bureau of Statistics (ABS) has published annual venture capital and later stage private equity statistics. The ABS has done extensive work to build a register of all relevant firms and fund managers operating in the Venture Capital and Private Equity field and the survey is a Census of all such investment vehicles. As recommended in this Report, the ABS survey considers Venture Capital as a sub-set of overall Private Equity and information is collected on all investments of resident (Australia-based) Private Equity vehicles. The survey distinguishes Venture Capital, defined as high risk private equity capital for typically new, innovative or fast growing unlisted companies from Later Stage Private Equity, which was defined as investment in companies in later stages of development, as well as investment in underperforming companies. The survey excludes investments by Business Angels or other private individuals.

57. The ABS survey provides a variety of statistics on funds raised, investments and performance that have been included in the Entrepreneurship Financing Database. The definitions of specific stages are consistent with definitions proposed by this OECD Report. Data on the Australian Private Equity industry are also available from private sources including the Australian Venture Capital Association (AVCAL), Venture Economics and the Australian Venture Capital Journal.

#### Canada – Canadian Venture Capital and Private Equity Association (CVCA)

58. The CVCA represents the vast majority of Canadian Private Equity companies with over 1200 members. The CVCA does not itself collect and publish data on the industry but rather commissions Thomson Financial to undertake these tasks. Thomson conducts a quarterly survey of both resident and non-resident companies to capture all Venture Capital and other Private Equity activity in Canada. Data are also collected on the foreign investments of Canadian Private Equity firms and these are reported separately.

59. Since Thomson is responsible for data collection the methodology and terminology used in the Canadian survey are largely consistent with those of the EVCA and NVCA surveys. The types of indicators available, and the breakdowns by sector and stage, are comparable to what is produced by NVCA and its partners. The Canadian data are publicly available through the Thomson website, entitled VCReporter, for fee-paying subscribers.

60. In addition to the statistical material provide by CVCA and Thomson, Industry Canada prepares quarterly reports on the Venture Capital industry in Canada. These reports are based on data from the VCReporter, supplemented with information from other sources including the Business Development Bank of Canada. Aggregate data for Canada for 2006, from various Press Releases and other published Reports, have been added to the OECD Entrepreneurship Financing Database and could contribute to the development of a number of basic cross-country indicators that are discussed in Chapter 3. For access to the more detailed data on the VCReporter database, a paid subscription would be required. Furthermore, re-publication agreements with the CVCA and Thomson would have to be discussed.

### **Europe – European Private Equity and Venture Capital Association (EVCA)**

61. EVCA is a well-established trade association with some 1150 members throughout Europe representing the majority of European Venture Capital activity. EVCA conducts regular research on European Venture Capital activity, through an annual survey and other investigations. The results of the research are published in an annual yearbook and through an internet site. The database covers some twenty European countries with some additional data for groups of Baltic and Central and Eastern European countries. The EVCA data are the most widely used source of information on Private Equity in Europe and the aggregate, published data are relatively easily accessible. The Yearbook itself is a priced publication.

62. While EVCA conducts some enquiries of its members on its own, it also conducts parts of the annual survey in association with Thomson Financial (TF) and PricewaterhouseCoopers (PwC), two large international firms<sup>6</sup>. The use of TF and PwC helps to ensure the comparability of EVCA data with that from other sources, such as Canada and the US. EVCA has also worked cooperatively with other national associations, such as those in the UK and the US, to develop a consistent glossary of terms that improve comparability across countries. Nevertheless, as earlier Sections of this Report have noted, there are still differences in some basic terminology between associations and, in practice, terms such as Private Equity continue to be defined rather loosely. Furthermore, differences in approaches to information collection, including the respondent population coverage and data breakdowns, between EVCA and other Venture Capital data sources also serve to limit data comparability. Where available, charts comparing data from EVCA and the relevant national VC association have been included under the national sub-sections.

63. As is the case for other VC surveys, the EVCA survey is not a sample survey. The results published represent the accumulation of the responses actually received. No attempt is made to weigh responses and develop an estimate for the entire industry. Surveys are sent to all known VC firms whether they are members of EVCA or not, and the response rate, at almost 80%, is quite high.

64. The EVCA publications provide a wide variety of indicators on the size and source of available funds as well as on investment activity. Further indicators on the performance and economic impact of Venture Capital also permit interesting cross-country comparisons.

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<sup>6</sup> Since this Report was prepared, EVCA has changed its data collection practices and more of the work is now done in-house, beginning with the 2008 Yearbook. Any EVCA data cited in this Report is based on the 2007 Yearbook or earlier publications.

65. In order to ensure valid, cross-country comparisons, EVCA allocates fund and investment activity to a single country and avoids double counting. This may not be the case when individual national figures are produced. In some cases, there will be vagueness about the location of investments or the source of the funds and it is possible that two countries will include the same source funds or investments in their national statistics.

66. One of the main limitations of EVCA data is that in some cases figures are only presented for the entire Private Equity industry; it is impossible to separate investments by stage of firm development. Data from EVCA on investments by sector are unable to distinguish later stage investments, notably Buyouts, from earlier stages of Venture Capital investment. Apparently this data gap is due to the fact that EVCA data are collected at the level of the investor firm and not at the level of the investee or portfolio firm. Comparability would be enhanced if EVCA data on exits and investments by sector were available just for the Venture Capital component of the Private Equity industry.

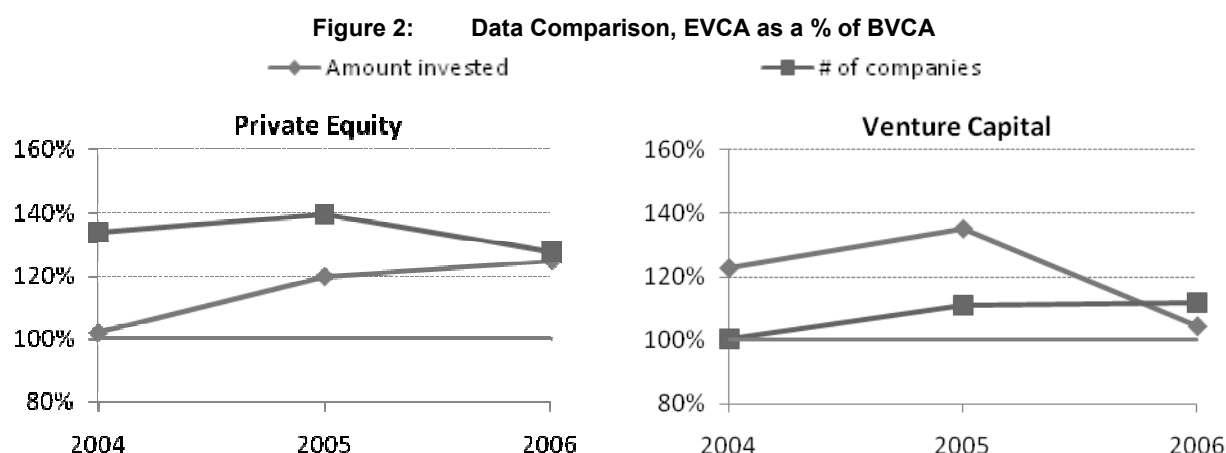
#### **UK – British Venture Capital Association (BVCA)**

67. Two comprehensive sources of data on Venture Capital are available for the UK since both EVCA and BVCA produce reports. Both sources are reviewed herein as they provide several examples of the kind of differences that can be introduced by altering measurement methods.

68. The BVCA database provides good coverage of the activities of BVCA members, who are responsible for the vast majority of VC industry activities in the UK. The BVCA and EVCA have worked together since 2002 to improve data comparability and the indicators produced by BVCA are very similar to those of EVCA. Nevertheless, there are still significant differences between the two datasets, particularly for the Venture Capital sub-component of Private Equity. These differences are primarily due to differences in coverage. The BVCA does not include fund raised by captive funds or capital accumulated through realised capital gains, while EVCA includes these amounts. The BVCA treats funds raised from foreign sources all together, as a separate source item while EVCA includes these foreign-raised amounts along with funds raised within a country and then distributes all funds by type of source,. Finally, there are some minor differences in the grouping of investors by category between BVCA and EVCA.

69. Figure 2 illustrates the importance of using harmonised data sources when comparing Venture Capital information across countries. The figure shows the extent of the differences between EVCA and BVCA data by presenting EVCA data as a percentage of the corresponding BVCA amount. Indices over 100% indicate that EVCA values are higher than the corresponding BVCA values. Data on worldwide investment by UK-based private equity firms are compared for Venture Capital and overall Private Equity for three recent years.





Source: OECD calculation based on EVCA and BVCA data

70. At both levels, EVCA data show greater investment amounts and a higher number of investee companies than do BVCA data. There are numerous factors that may explain these differences, including:

- BVCA collects the data from their full members, while EVCA also gathers data from UK players that are not BVCA members;
- In the Private Equity amounts, EVCA data includes mezzanine financing;
- EVCA and BVCA follow different methodologies in the aggregation of their statistics. Since EVCA must avoid double counting among national statistics in the European totals, this can lead to reallocation of investment from one country to another; and,
- Some differences may be due to exchange rate differences used for translation into a common currency.

71. Since EVCA uses a standard methodology across all countries for which it produces data, international indicators developed from the Entrepreneurship Finance Database are predominantly based on EVCA. Over time, there have been a number of changes to the reporting methods that affect the comparability of BVCA data. In 2006, the inclusion of data for some significant, new members of BVCA as well as new methods that better capture foreign investments by BVCA members, were partially responsible for the increased level of VC investing reported by BVCA.

#### USA – The National Venture Capital Association (NVCA)

72. The NVCA is the largest association of Venture Capital and other Private Equity firms in the USA with almost 500 members. In cooperation with other organisations, the NVCA collects and publishes extensive data on the Venture Capital industry in the United States. NVCA sponsors the data collection and analysis. PricewaterhouseCoopers and NVCA prepare the Reports and Thomson Financial collects the data. The quarterly survey and resulting reports are entitled The MoneyTree™; VentureXpert™ is maintained by Thomson Financial and endorsed by the NVCA as the official US venture activity database. (In the notes below, the NVCA name is sometimes used loosely to refer to analysis and Reports from any of the three collaborators).

73. The NVCA Yearbook, which contains detailed Venture Capital industry statistics, is publicly available, for a fee. The MoneyTree™ and VentureXpert™ databases are freely available over the internet.

74. The NVCA also commissions occasional special studies by Global Insight on the economic impact of Venture Capital backed companies in the United States. Global Insight has its own proprietary database and while the studies are freely available through the internet, detailed data are not.

75. The MoneyTree<sup>TM</sup> survey has broad coverage, including Venture Capital firms with or without a US office as well as banks, Business Angels and Government agencies if they are engaged in qualified and verified Venture Capital financing. Investments included are limited to those in newly created, or newly spun-out, companies domiciled in the United States.

76. The NVCA, PricewaterhouseCoopers and Thomson Financial Reports provide an extensive array of detailed indicators that are comparable to those from EVCA. Furthermore, there appear to be only minor differences in coverage and data collection between NVCA and EVCA. (For example, NVCA does not include Corporate Captive Venture Capital funds, while EVCA does.) Otherwise, the data there are collected are comparable. However, there are some differences in published breakdowns, by sector and by investment stage, that make comparisons less than perfect. In addition, NVCA distinguishes Venture Capital from other Private Equity investments in all its detailed data breakdowns, which unfortunately, EVCA does not do. Chapter 3 describes the efforts to build comparable indicators using the EVCA and NVCA data and includes a correspondence table (Table 5) that shows the relationship between sector classifications used by various data providers.

77. Detailed NVCA data for 2002 were added to the OECD Entrepreneurship Finance Database in order to test and illustrate the possibility of developing cross-country indicators. Other aggregate data for 2006 has been drawn from published reports and also included in the EFD. In order to access more recent, detailed data it would be necessary to purchase the 2007 NVCA Yearbook. It should also be noted that no republication arrangements have been agreed to with the NVCA.

#### *Supply of Business Angel Financing: Data Sources*

##### **Europe – European Business Angel Network (EBAN)**

78. The European Business Angel Network is an association of national and regional Angel Networks primarily within Europe but also including some non-European members. Its purpose is to serve as a think tank or lobby group to shape European Commission policy on informal angel investing. In addition to its role in lobbying and in facilitating the exchange of experience and information amongst members, EBAN collects and publishes statistics on angel network activities.

79. The EBAN statistics indicate trends in Angel investment activity but they do not provide estimates of total activity. As the EBAN documentation states, much angel investing is done outside formal angel networks. Furthermore, only a portion of the EBAN member networks respond to their annual survey (50% in 2007) and the survey results are not weighted or adjusted to provide an estimate for the entire population of angel investors.

80. Despite these limitations, some statistics from EBAN have been added to the OECD Entrepreneurship Financing Database and some comparisons could potentially be made with information on seed stage investing from EVCA as well as with angel investment trends from the Angel Capital Association of the US and Canada.

##### **North America – Angel Capital Association (ACA)**

81. The Angel Capital Association is a professional alliance of Angel Groups in the USA and Canada that has a mandate to provide advice and guidance to members and to develop data and research. Beginning in 2007, the ACA has now conducted two annual surveys of its members to track investment

activity in the previous year and intentions and opinions regarding investment activity and the state of the industry for the remainder of the current year. Indicators cover investment by stage, sector and geographic proximity as well as deal flow and amounts invested.

82. The ACA considers that its membership comprises over half the Angel Groups operating in Canada and the US and a majority of members responded to the latest survey. Nevertheless, results represent only the activity and intentions of the respondents themselves and no weighting is possible to produce totals for either the ACA or the industry as a whole. The ACA data provide general indications of trends rather than comprehensive statistics on the Angel Capital industry.

83. Despite these limitations, ACA data are included in the Entrepreneurship Financing Database and some comparisons of Angel Capital trends between North America and Europe (EBAN) should be possible.

#### **North America – Angel Capital Education Foundation (ACEF)**

84. The Angel Capital Education Foundation (ACEF) is an organisation founded by the Ewing Marion Kauffman Foundation and Angel Group leaders in the US and Canada that is devoted to research and education in the field of angel investing. While the organisation's principle focus is on the preparation of "Best Practices" and other education materials that help people better understand, and improve, angel investing, it has also commissioned research work that has produced some significant statistical information. In particular, a year-long study of returns to angel investors has provided valuable insights into the rates of return achieved by angels and some of the factors that help determine differing returns. The study was an analytical piece and not intended to produce indicators as such. A number of statistics can be culled from the study, particularly with respect to performance and investment preferences. Due to the somewhat specialised nature of this research report, there are relatively few indicators that can be directly compared with data from other countries or regions. The results, however, would be useful for developing an overall profile of the Angel industry.

#### **UK – British Business Angel Association (BBAA)**

85. The British Business Angels Association (BBAA) is the National Trade Association for UK Business Angel networks and the early stage investment market. The BBAA is supported by the Department for Business, Enterprise and Regulatory Reform (BERR). Only limited data is available and it pertains just to members' activities. Data are not strictly comparable over time as the number of Angels and Networks participating in the BBAA varies each year. It is not possible to estimate what share of Business Angel activity in the UK is accounted for by BBAA members, however, so the change in BBAA membership may simply reflect changes in total Business Angel activity in the UK.

86. The BBAA requests twice-yearly statistical reports on member activities and summary reports are occasionally produced on the total amount invested, the number of investee firms and the total number of Angels and Networks. Public dissemination of such reports is infrequent, however, and the latest data available on the BBAA website is for 2005.

87. Data from the 2005 Statistics Brief showed that Angels in 17 member Networks invested in a total of 184 businesses. This was lower than 2004 when 203 businesses gained angel funding but higher than 2003, when 156 businesses received investments from Angels in 10 Business Angel Networks. The total sum which was invested into SMEs by Business Angels from the 17 networks surveyed in 2005 was £29 million. This compares to £14.5 Million invested in 2003 and £23.3 million in 2004.

88. The BBAA data represent only the activities of the responding members and no methodology exists to estimate total Business Angel activity for the entire country. Changes in the level of Business

Activity may reflect, in part, changes in membership participation. Nevertheless, the data do provide some indication of trends and the available data will be maintained in the Entrepreneurship Financing Database.

#### **USA – Center for Venture Research (CVR)**

89. The Center for Venture Research (CVR) is a multidisciplinary research unit of the Whittemore School of Business and Economics at the University of New Hampshire. The Center's mission is to provide an understanding of Business Angels and their role in the early stage equity financing for high growth ventures. The Center maintains a database on Angel Investment activity in the US and produces semi-annual press releases on the Business Angels market. There is no public access to the underlying data and no information on coverage or methodology is provided.

90. The data published in the semi-annual Press Releases provides an overview of the US Angel Investor market and will be included in the Entrepreneurship Financing Database.

#### **Sweden – Swedish Business Angels Survey**

91. As part of academic research studies in Sweden, a survey on the activities of informal investors has been undertaken on two occasions (2004 and 2007). While relatively little statistical data has been issued, the reports do provide basic information on amounts invested by stage as well as other characteristics of the informal investment market in Sweden. Business Angels are defined within the studies as a sub-category of informal investors and their activities are distinguished. Some of the indicators can be compared with data on Sweden available through EBAN.

#### *Supply of Other Informal Financing: Data Sources*

#### **Canada – SME Financing Data Initiative (SME FDI)**

92. The SME Financing Data Initiative is a Canadian Government program designed to improve the information base concerning SME financing in Canada. The program collects information and conducts research on many aspects of SME financing including the demand for financing by SMEs (see 4.1, above) and various formal sources of capital (see 4.2.1, above). In 2005, the SME FDI program also released a special study entitled *Estimating Informal Investment in Canada*.

93. The Informal Investment study was based on responses to some specific questions on investment activities of SME owners that are included in the SME FDI demand-side questionnaire. The survey targets owners of SMEs and asks them numerous questions about their experience in obtaining financing for their firms, it also asks whether these SME owners have invested in other peoples firms and this information was used by researchers to develop an estimate of Informal Investment for Canada for the year 2001. These data help paint a partial picture of the informal risk capital available and invested in Canada. The survey population consists of only owners of SMEs. The use of an established Business Register and proper sampling techniques does allow estimation of national totals for investment by all SME business owners, but such investors are only a sub component of the overall informal investor population. Nevertheless, the survey shows that SME business owners operating as informal investors had a stock of almost \$13 billion to invest in 2001 and they actually invested \$11 billion in firms belonging to others. Obviously, the total amount of informal investment in Canada was even higher but the survey offers no information on amounts invested by individuals who were not SME owners.

94. These data underscore the importance of informal risk capital. The total amount invested by Venture Capital funds in Canada in 2001 was 4.9 billion, less than half the amount invested by SME owners alone.

### **International – Global Entrepreneurship Monitor (GEM)**

95. The Global Entrepreneurship Monitor (GEM) is a multi-national research program that primarily collects information on the amount of “entrepreneurial activity” (as defined by GEM) that takes place in countries. GEM is a proprietary data program and detailed data sets are not publicly available. The household survey used by GEM also asks questions of individuals regarding their investments in someone else’s new business, over the past three years. This provides a broad measure of informal risk capital investment since the GEM concept includes all financial support, including loans or gifts, though it excludes the purchase of publicly-traded shares. Current, published data from GEM indicate the informal investor prevalence in a country and the amount of investment as a percentage of GDP, but the data on the amount invested are not divulged. It is possible, however, that such information would be available to those with access privileges.

#### *Summary: Data on the Supply of Financing*

96. The review of supply-side sources has confirmed that while reasonable amounts of information are available on debt and on formal equity or risk capital, there is still very little information available on the supply of capital from informal sources. However, the situation is even less encouraging when the financing situation of SMEs or young, high growth firms is considered. The experience of countries such as Canada is that debt providers do not distinguish capital available to SMEs or young firms in their records. Even after the fact, they can't identify amounts loaned to firms by firm size or age as they don't maintain such information. The Private Equity industry tends to have information on financing by stage of development of firms, rather than by firm size or age, but the categories of “stage” used differ across countries and there are no rigorous criteria for assigning firms to a particular stage.

97. There are two major sources of supply of risk capital, namely, Venture Capital, and informal risk capital, including investments by Business Angels and other individuals. Indications are that, for many countries, the Informal category is by far the larger of the two. This is certainly true for early stage businesses but possibly true for expansion stages as well. However, while various research studies have attempted estimates of the informal category, there are no comprehensive data sources on informal risk capital even at a country level. In the USA, the Center for Venture Research (CVR) claims to have comprehensive information on investments by Business Angels in the US. However, it is a proprietary database and little information is published on definitions, methodologies or coverage. Thus, it is difficult to validate the Center’s claim of comprehensiveness. Furthermore, it is not known how much “other informal capital” is provided by individuals who fall outside the “Business Angel” definition.

98. The international data situation is even worse. If the CVR figures are accepted as a good estimate of the Business Angel component of informal risk capital for the USA, it is not possible to compare that amount with similarly-calculated numbers for other countries. The GEM organisation may come closest to a standardised measure of “informal investment” across countries, since they ask the same questions of households in some forty countries each year. But the GEM concept of informal investment is very broad and likely includes financing that would not be considered risk capital according to the definitions advanced in this Paper. Furthermore, GEM’s database is proprietary and they don’t release information on the actual amount of informal investment. In order to estimate informal investment levels for a country it is necessary to work backwards from their “investment as a percentage of GDP” figures.

99. In principle, the data situation for Venture Capital is much better both at national and international levels. There are Venture Capital Associations that represent those providing such capital in most OECD countries. In most cases, a national association is present, but there are also multi-national

associations that cover a broad grouping of countries, such as Europe. These associations exist, in part, to help their members clearly explain their investment activities and outcomes to a variety of stakeholders. As such, they have all done a significant amount of work to clarify and harmonise terminology and to develop statistical reports on activities and performance. A further element that mitigates in favour of international comparability of Venture Capital information is the fact that many of the associations use the same companies to help them collect and publish data.

100. Despite all these considerations that work in favour of international comparability of Venture Capital information, the situation is not yet perfect. Data from different associations are categorised and presented differently. One major issue pertains to the distinction of Venture Capital investments from those private equity investments made to buy out or rescue established firms. In some countries in a given year a single buyout deal might be as large as all early stage Venture Capital investing. If that buyout amount is improperly understood to be part of VC investment, the amount of early-stage investing in the country would be greatly exaggerated. Most policy makers and analysts not only want to distinguish VC from buyouts, they also want to be able to distinguish investments made at various stages of development of a firm. All of the VC associations actually represent broader Private Equity investment interests. The distinction of investment by stage of development and even the separation of Venture Capital from buyout activity are not always as important for the Venture Capital and Private Equity associations as they are for government analysts.

101. Another comparability issue for the Venture Capital data relates to the breakdown of investments by Sector. None of the existing international classification systems are used by Associations to classify investments by industrial sector. Each association seems to have made a loose breakdown that probably reflects the current priorities or investment preferences exhibited by their members. Even where the broad industrial sectors seem to be comparable, more detailed breakdowns are rarely identical across countries.

102. Finally, despite the work by the Venture Capital and Private Equity Associations, there is still confusion about numbers for a given country and the reasons for the differences are not always clear to users. Venture Capital amounts reported by associations in the UK, Sweden and Finland, for example, differ from the amounts reported by EVCA for those countries. Internet searches for data on other countries also yields different amounts from different sources for the same country. As yet, there is no single, established, credible source for Venture Capital data across many countries.

### **2.2.2. *Overview of Data on Demand for Financing***

103. Until recently, there was relatively little empirical information available on the demand for capital by the small, young and innovative firms that have the potential for high growth. This information gap applied to traditional debt financing as well as more specialised risk capital. However, in the last ten years, the desire to understand how financing affects the development of firms has led a number of countries to launch new surveys about the financing of SMEs. It must be noted that subject matter and target populations of these surveys do not completely match the scope of the WPSMEE study. These new surveys are generally related to all types of financing including both the various types of equity-based risk capital and diverse types of debt. However, in all cases, the surveys have produced much more information on demand for debt than for equity. Also, given the policy interests of the countries, the surveys have all focussed on a broad SME population rather than the subset of Innovative or HGSMEs.

104. Among OECD countries, specific surveys on firms' demands for financing have been identified in Canada, New Zealand, the UK, and the US. In addition, a Eurobarometer Survey on SME financing covered many of the European members of the OECD.

### Canada –SME Financing Data Initiative (SME FDI); Survey of SME Financing

105. The SME Financing Data Initiative is a Canadian Government program designed to improve the information base concerning SME financing in Canada. The program, which is a partnership of three Canadian Government Departments and Agencies, has numerous components and it collects information and conducts research on both the demand for and supply of financing for SMEs. (Other entries concerning the SME FDI are found in sections 4.2.1 and 4.2.3, below). The establishment of a data and research programme on SME financing responded to a recommendation of a Royal Commission enquiry that studied difficulties faced by SMEs. The Commission found it was unable to resolve the debate about financial discrimination against SMEs since no consistent, unbiased information was available.

106. On the demand side, the *Survey of SME Financing* is designed to improve the understanding of the financing sought and obtained by (or denied to) SMEs. The Financing Survey is designed to provide a comprehensive picture of the overall situation for firms in the SME size grouping. There are approximately 75 questions with about 55 of them devoted specifically to finance.

107. Since the target population is all SMEs, including non-employer firms, it is not surprising that many firms indicated they have not attempted to obtain financing. Of those firms that did seek financing, most sought some form of debt capital such as a bank loan, line of credit or lease arrangement, rather than risk capital or equity financing. This finding is common across many surveys of SME financing in different countries.

108. On the debt side, the Canadian survey collects a considerable amount of detailed information about the firm's demands for financing by specific type of financial instrument. Information is also obtained on difficulties faced and on reasons why a firm did not apply for financing.

109. Importantly, the Canadian survey collects a variety of data elements that are directly related to the scope of the WPSMEE Study. The survey distinguishes "innovative" firms, (those that spent more than 20% of investment expenditures on R&D) and compares their attitudes and experiences in seeking financing to those of other SMEs. It also questions firms on whether their financing was intended to support growth. The survey reveals that innovative firms were more likely to seek financing as 35% of innovative SMEs tried to obtain external financing, while only 24% of the general SME population did so. It is also noteworthy that while only 18.6% of SMEs seeking debt financing were "unsuccessful" at the time of the survey, the "unsuccessful" rate rose to 44% for innovative firms. (In this case, "unsuccessful" applications includes those turned down, those withdrawn and those that were still under review). Despite this higher rejection rate, innovative firms were not more inclined to approach alternative suppliers than their non-innovative counterparts. Roughly 23% of innovative and non-innovative SMEs that approached a debt finance supplier, also applied to another supplier as a parallel and alternative option.

110. The Survey provides other opportunities to gain an insight into the different financing behaviours of innovative and non-innovative SMEs. For example, a larger percentage of innovative firms requested new debt financing than other firms (30.8% vs. 18.0%). Also, proportionately less innovative firms requested new credit cards.

111. Another advantage of the Canadian survey is that it distinguishes non-employer firms. This permits tabulations that show the financing requirements of businesses with employees. This is a useful distinction since it is only a sub-set of these employee firms, namely those that have high-growth potential, that are usually candidates for risk capital investments, as is shown in Section 5. Nevertheless, the total number of such firms that are included in the Canadian survey is still extremely small. In the 2004 survey, for example, only 1.2% of all SMEs applied for any kind of equity financing. However, the use of equity financing was more prevalent among start-ups as 11% of this sub-group of SMEs reported using either Venture Capital or Angel Financing.

112. Overall though, since the Canadian survey did not include extensive questioning about firms' use of risk capital nor did it have a large sample of respondents who sought risk capital, relatively little information about demand for risk capital emerged from the survey. From these data, it is difficult to determine whether demand for risk capital outstrips, or falls short of, supply. The data show what sources of financing were used by firms at different stages of their life cycles, and what proportion of funds sought were obtained. However, it is not possible to determine whether one type of funding (say debt) was used when a favoured type of funding (say equity) proved to be unavailable or too expensive.

113. The Canadian Survey was designed to understand SME financing and not specifically to study the use of capital by innovative or high growth firms. In order to provide more information on risk capital or other financing that may be used to support a firm's innovation and growth performance, the target population would have to be narrowed to include a larger proportion of firms that are likely to use equity financing.

114. In terms of international comparisons, Canadian data on type of financing used can be compared to those from the US Federal Reserve Board Survey for a number of size classes across the whole range of SMEs. Sectoral comparisons can be made but here breakdowns are not identical. The Canadian survey does not allow direct size-class comparability to the UK survey. However, since the Canadian survey asks for the actual number of employees it is theoretically possible to construct custom size classes to match other surveys, such as that in the UK. While there are many differences between the Canadian and UK SME financing surveys, in terms of definitions, time periods covered and the way question were asked, it is still possible to make some general comparisons in the financing activities and behaviours of firms in the two countries. Unfortunately the lack of data comparability precludes any tabular comparisons though.

#### **UK – Survey of SME Financing**

115. Of all the surveys reviewed on demand for financing, the UK Survey provides the most detailed information. As in Canada and many other countries there has been considerable discussion in the UK about financing for SMEs. The key stakeholders agreed to sponsor and design what they hope will be an ongoing survey to produce relevant SME finance data that the various factions will accept as the basis for debate on the issues. A Consortium of private and public bodies, which includes Banks and Government bodies with responsibility for entrepreneurship policy, sponsors the Survey and the interests of these many "paying clients" have resulted in a long and detailed questionnaire that attempts to provide a very thorough understanding of SME financing. The first survey was conducted in 2004 and a second has already been conducted in 2007, though no data is yet available. As it develops, this programme promises good comparisons over time.

116. It covers key finance outcomes including the proportion of firms seeking finance, rejection and discouragement rates and interest rate margins on loans. The survey comprises over 200 questions with about 150 of them devoted specifically to finance. The UK survey posed questions on the types of debt and equity finance sought and why particular financing sources were favoured over others. Questions were also posed on amounts of financing sought and obtained, by stage of development of the firm.

117. The UK survey attempts to collect more detailed info on the role played by equity financing than any other survey reviewed. However, with respect specifically to equity finance, the survey has many of the same limitations cited for the Canadian survey. Since the target population is all SMEs, the proportion of respondents that make use of equity capital is relatively small and that limits the amount of detailed information one can actually publish from the survey. Thus, while a number of the UK Survey questions allowed many detailed response options, results had to be aggregated due to sample size problems. Nevertheless, even after such aggregations, the UK survey still produced more detailed information on equity finance than the other surveys studied.



118. The UK survey results are available by sector and also by growth performance of the firm. The latter makes some results more relevant to the WPSMEE study on Innovative and High Growth SMEs. In cases where firms have actually applied for financing, they are asked to provide information on amounts requested and obtained as well as any reasons for less-than fully successful applications. Interestingly, higher growth firms reported less success in obtaining all or part of the requested loans than others.

119. Some of the results of the UK survey can be compared with results from Canadian and US surveys but since the SME size threshold, size-class breakdowns and questions differ, the comparisons are always inexact.

120. The sources of finance employed by UK SMEs to establish their businesses are also revealed and results are more or less in line with those emerging from the Kauffman Firm Survey (KFS) in the US. Both surveys underscored the strong role played by personal savings (or internal equity) which, in the case of the UK, was used by almost 70 percent of start-ups. A major role is also played by debt financing from family and friends, which was used by 12.7 percent of UK start-ups, vs. 10.1% in the KFS. Equity financing from family and friends was only used by 1.3% of UK start-ups vs. 5.5% in the KFS. The categories are also defined differently as the KFS includes only parents and spouses.

121. A greater proportion of UK SMEs sought financing than did those in Canada. Results show that 44 % of SMEs have sought new finance in the reference period, with percentages ranging from 36 percent for 0 employees to 76 percent for biggest SMEs (50-249 employees). Only 26% of the Canadian SME population sought financing. Differences in thresholds probably accounts for this difference since there are a greater proportion of very small firms in the Canadian sample.

#### **New Zealand – Business Finance Survey and Business Operations Survey**

122. In 2004 Statistics New Zealand undertook a sample survey of almost 6,000 firms, with the main aim of providing information on the capital structure of businesses in New Zealand, the sources of finance they use and their recent financing experiences. The NZ Business Finance Survey (NZBFS) was sponsored by the Ministry of Economic Development (MED) and represented the first attempt to look at the demand perspective of firms' financing, after previous surveys had focused only on the supply side of the market. Subsequently, Statistics New Zealand has included three key questions on finance in an annual Business Operations Survey (BOS). Both the 2004 NZBFS and the finance component of the ongoing BOS are discussed below.

123. The target population for the 2004 NZBFS comprised active enterprises from the Statistics New Zealand's Business Frame that:

- had an annual turnover of at least NZ \$30,000;
- had between 1 and 500 employees;
- had been operating for six months or more;
- were private enterprises; and,
- were not subsidiaries of other firms.

124. In the 2004 NZBFS, firms were questioned on whether they had sought or received finance over the previous 12 months as well on the instruments, sources and uses of that finance. Much attention was also devoted to the collection of financial information, with reference to the last financial year for which records were available, in order to construct the relationship between a firm's current financial situation and its need for extra resources to fund investment strategies.

125. No specific analysis can be made of the role played by formal or organised equity finance providers, such as Venture Capital funds or Business Angels, in the firms' financing, since only the following breakdowns were available in the published material: i) Individuals in control of business; ii) Friends or Family and iii) All other sources (which includes trade creditors or suppliers, existing owners, friends and families of existing owners, other individuals, other businesses and other sources).

126. The 2004 NZBFS survey revealed that 34 percent of firms requested debt finance, while only 6 percent of them applied to equity finance providers. By firm size, the proportion seeking debt ranged from 29 percent for the 1-5 employees size class to 45 percent for the 101-500 class. Success rates for accessing both debt and equity were high, with 90% of firms receiving the debt financing they applied for and 83% meeting success in their quest for equity.

127. As for debt, it is interesting that young firms (less than 3-years-old) did not display significantly different behaviour than older ones. Even success rates were almost coincident. Younger firms did instead have a stronger inclination towards equity financing though (9% making equity requests vs. 5% for older firms) and, quite surprisingly, also displayed higher success rates than their older counterparts (88% to 76%).

128. Table 2 shows the composition of New Zealand firms' financing by type of vehicle. Own capital or financial resources linked to individuals in control of the business represented the main sources of finance, whereas long term bank loans and leases were the predominant sources of debt. Furthermore, this table doesn't show that 33% of firms declared that their last request for financing took the form of a bank overdraft. Family and friends were the main providers of external equity finance, which is consistent with the results of other surveys.

129. As concerns the reasons for not applying to external financing, the New Zealand survey confirmed results obtained in other surveys since 85% of firms not requesting debt, and 97% of firms not requesting equity, said that it wasn't required. The survey report noted that these figures confirmed that firms show little sign of being financially constrained due to lack of supply. Instead, the survey report suggested that further examination of factors affecting demand for financing may be warranted.

130. In that regard, it is interesting that the New Zealand survey collects some information on how firms intended to use the financing they were requesting. The results showed that the bulk of extra financing was devoted to increasing working capital, with the remainder being devoted to machinery and equipment, which represented a significant part of the investment strategies of medium size firms.

131. The survey also provides the possibility to study the chronological order of financing demands for those firms that requested both debt and equity. Debt represented the first financing option for 41% of firms, while only 22% of them start by requesting equity. Looking at size breakdowns, it is of some interest to observe that, among those firms that differentiate the time frame of their financing requests, firms in the 6-20 employees size class display a clear tendency to target their investing strategies primarily on equity finance, while smaller (1-5) and larger (101-500) ones seem to rely more on debt options, with the 21-100 size class somewhere in the middle.

**Table 2: New Zealand: Type of Debt Finance and the Sources of Equity Finance Requested from the 2004 NZBFS**

(in the 12 months to August 2004)

	Lease/hire purchase	Mortgage Loan	Long term loan	Individuals in control of business	Friends / Family	All other sources*
<b>Business size</b>	percent					
1-5 employees	24	17	25	88	13	16
6-20 employees	22	12	27	75	18	32
21-100 employees	31	14	33	81	7	31
101-500 employees	24	11	39	56	9	48
<b>Business age</b>	percent					
6 months - 3 years	23	15	24	87	17	25
Over 3 years	24	15	28	80	12	21
<b>Industry</b>	percent					
Services to agriculture, forestry and fishing	33	14	27	64	11	48
Manufacturing	23	9	28	89	23	29
Construction	26	10	25	75	-	32
Wholesale trade	20	38	25	99	2	31
Retail trade	11	14	34	78	20	6
Accommodation, cafes and Restaurants	17	23	24	68	21	17
Road Transport and Services to Transport	52	8	32	83	23	38
Communication Services	33	5	24	35	11	65
Property and Business Services	28	14	19	83	11	28
Education	12	26	21	78	10	16
Health and Community Services	12	14	25	84	1	28
Other	34	14	26	92	12	10
<b>Overall</b>	<b>24</b>	<b>15</b>	<b>27</b>	<b>82</b>	<b>14</b>	<b>23</b>

Source: Statistics New Zealand.

132. As in the Canadian survey, New Zealand also devoted some questions to look at how firms and owners were driven by debt finance providers to use business and personal assets as collateral, in order to counterbalance higher operational risks. Such information might indeed be essential to correctly understand the different appeal debt and equity have for firms. When compared to the survey of Canada, the NZBFS shows that New Zealand firms make a lower use of collateral than Canadian ones. Indeed, only 24% of sample firms used business assets as collateral, a proportion that rises to 28% in the case of personal assets (the corresponding shares in the Canadian survey were 35% and 44%, respectively).

133. Despite the inability to identify specific sources of equity financing, such as Venture Capital and Business Angel funds, the NZBFS provided an excellent picture of financing behaviour and experience of the countries SMEs. As noted earlier, after their experience with the 2004 survey, New Zealand decided to continue to collect core finance information on an ongoing basis, a part of the annual Business Operations Survey.

134. The purpose of the annual New Zealand Business Operations Survey (BOS), which is administered by Statistics New Zealand, is to collect information on the operations of New Zealand businesses in order to track business behaviour, capacity and performance. The BOS has been run annually since 2005 and comprises up to three 'modules', covering topics such as business operations, innovation and international engagement.

135. Data are collected from a broad sample of firms. The target population includes all firms with turnover greater than \$30,000 and six or more employees that have been operating for at least one year. The estimated population for the 2007 survey was 35,004 businesses. The survey had a response rate of 80.1 percent, and was completed by 5,728 firms.

136. The same three finance questions are included every year as part of the Business Operations module. They probe whether a firm sought debt or equity finance and the success of the demand for both equity and debt, identified separately.

137. Results from the 2007 BOS showed that the proportion of firms that sought debt in 2007 (29%) was two percentage points higher than in 2006 and 2005, but the proportion of firms able to access it on reasonable terms (93% of firms seeking debt) was two percentage points lower than in 2006 and one percentage point lower than in 2005. About the same proportion of firms as in previous years sought equity finance in 2007 (11% of all firms) and received it on reasonable terms (82% of firms seeking equity).

138. Disaggregating the data on debt finance by firm size indicates that about one-quarter of small firms (6-19 employees) sought debt in 2007 compared to around one-third of firms in the 20-49, 50-99 and 100-plus employee categories. The proportion of small firms able to access debt on acceptable terms (92%) was lower than for firms in the 20-49, (96%), 50-99 (94%) and 100-plus (96%) employee categories. These differentials are slightly larger than in previous years.

139. New Zealand officials have noted that although the survey results indicate that most businesses were able to access the finance being sought, it cannot be deduced from these data that firms that could not access finance on acceptable terms were 'rightly' denied because of excessive business risks or 'wrongly' denied because of financial market under-development or a lack of liquidity. Furthermore, officials noted that the data did not allow them to discern whether businesses at certain stages of development (e.g. internationalising firms and high-tech start-ups) were missing out on finance in particular, or whether funding gaps targeted by, for example, New Zealand Venture Investment Fund interventions, are diminishing over time.

140. As in the case of the NZBFS, the BOS represents an excellent example of a relatively simple survey module (three questions) that yields useful and interesting information about the financing behaviour of firms. As New Zealand officials themselves have noted, additional detail on specific types of equity finance would be useful for understanding the needs and experiences of targeted sub-sets of firms such as internationalising firms or innovative and growth oriented SMEs.

#### **USA – Federal Reserve Board Survey on Small Business Finances**

141. The Federal Reserve Board (FRB) survey has the longest history of any of the programmes reviewed, with the first iteration dating back to 1987. It is a lengthy survey with approximately 180 questions, some 140 of which address financing issues directly. While the survey focuses on financing it also collects considerable information on financial and other characteristics of the firms. This allows a more profound understanding of how the financing situation varies across firms with different characteristics.

142. As in the case of the previous surveys, the focus on SMEs means that the majority of the respondents have no experience with equity financing and, thus, a limited amount of data on this aspect of financing can be produced. Perhaps in recognition of the small sample of firms using risk capital, many questions relate exclusively to the firm's experience with debt financing.

143. As noted earlier, comparison of high-level information, such as the proportion of firms seeking equity finance, can be made with Canada, at the economy-wide level, since size-class breakdowns can be matched. Similar comparisons can be made with the UK, but just for firms of less than 50 employees. Few other comparisons are possible since data are not collected nor categorised in the same way.

### **USA – Kauffman Firm Survey**

144. This programme was designed as a panel survey to improve understanding of numerous factors related to the creation and development of firms. Questions on finance comprise an important portion of the survey (32 out of 103 questions) though understanding financing is not the sole purpose of the programme.

145. While some questions ask about equity financing from various sources, many more detailed enquires deal with the way that owners have financed their own ownership shares in the firm. The target population is all firms begun in 2004, not just SMEs. Also, since the survey oversamples firms in a high tech sector it is more likely that the survey population will include firms that have the potential to use equity financing.

146. Other positive features of this programme relate to purposes of investments and to its panel design. The survey seeks information on the categories of investment that should allow analysts to study how financing relates to growth and development of firms. By following a Panel of firms through a baseline survey and at least four follow-up surveys, the evolution of firms over time can be related to how they obtain and use financing.

147. The finance-related data from the KFS tends to be less comparable to data from other finance surveys that were reviewed due the very different nature of the survey. Indeed the KFS is really a survey about factors of success for new businesses and, in this regard, it has more similarity to the Eurostat survey on Factors of Business Success. Comparability with other finance surveys is also hampered by different definitions, size classes and sectoral breakdowns Nevertheless, the KFS has painted a very descriptive picture of how firms finance their creation and early stage development and it provides a model for development of similar statistics for other countries.

148. The Eurobarometer survey on access to finance was a one-time enquiry to SMEs firms concerning access to finance. The survey asked questions about debt and equity financing but since it targeted the whole universe of SMEs (excluding agriculture); only the questions on debt sources were relevant for the vast majority of respondents. Nevertheless, the survey did provide an estimate of the proportion of SMEs that use equity financing and since this information is available for 25 European countries it provides a useful benchmark.

149. Survey results are presented in terms of company size, age and sector. Firms were also asked to indicate whether there had been recent growth or decline in the number of employees over the last year. The latter categorisation should allow one to view results for growth firms, though not for high growth firms. Questions probe the relationship with the debt finance providers, the level of satisfaction of firms with their current financing arrangements and whether access to finance was becoming easier or more difficult. Data from Eurobarometer also indicates the type of financial institutions to which firms applied in

order to obtain financing and the firms' willingness to open-up or increase their capital to meet financing needs. Information on actual amounts of financing sought or approved was not the goal of the survey.

150. Many of the questions gather general opinions of business owners about the financial sector (mainly limited to the banking sphere), rather than experiences related to a specific financing transaction.

151. There is little data produced in the Eurobarometer survey that can be compared with the more detailed results of UK, US, New Zealand or Canadian surveys discussed herein. The adoption of different thresholds, size breakdowns and sector classifications limit comparability. Also, the terminology used in describing equity investments is somewhat unusual and additional discussion with those responsible for the survey would be required before results could be compared with those of other surveys.

*Summary: Demand-Side Sources of Data on Financing*

152. There is clearly considerable interest among EU and OECD countries in financing for small or young firms. In addition to a survey by the European Commission, several OECD countries have developed data and or research programs on SME financing. As noted in the summaries, there are occasional references to financing of innovative firms or growth-oriented firms but there is still relatively little comparable information available on demand for financing that addresses the specific activities of Innovative and High Growth SMEs, which are the target of this WPSMEE Study.

153. Comparability across the existing surveys on demand for financing is very limited. With the exception of the Canada-New Zealand example reported below, there has been little or no coordination among countries on definitions, data breakdowns or questionnaire design. As such, there are very few aspects of the surveys that are identical even when comparing just a single pair of studies. In some cases, officials responsible for surveys have indicated that some of their questions were inspired by queries on another survey. However, even when a topic may be addressed in a similar way, there are almost always other differences that render results less-than completely comparable. For example, some of the aggregate results about proportion of firms using equity financing from the UK survey can be compared with results from the Canadian and US Federal Reserve Board surveys but since different upper threshold limits are used to define an "SME" and since size class breakdowns also differ, the comparisons are always inexact. A precondition for better inter-country comparisons of data by size class would be an agreed, international standard on business size classes. To date, countries have exhibited little interest in such a fundamental step towards data comparability. In addition, since sectoral categories differ and there is virtually no uniformity in the way questions are posed, meaningful comparisons of details from the surveys are very limited. Agreement on an international standard for "Knowledge Based Industries" would be particularly useful in the context of innovative and high growth firm financing. Comparability issues are similar when information on specific sources of risk capital are compared. Some surveys ask whether firms have used particular sources such as Business Angels or Venture Capital while others ask more generally about equity financing from any source.

### **The Example of SME Finance Data Collection by Canada and New Zealand**

As noted in the summaries above, both Canada and New Zealand are using survey programs to better understand SME Financing. Since Canada launched its program several years before New Zealand, officials of the latter country based their approach in the 2004 NZBFS on the Canadian experience. A joint Paper<sup>7</sup>, delivered in 2006, described the respective programmes, provided some data highlights from each and indicated where results from the work have influenced policy. Based on their experience, the Canadian and New Zealand officials recommended that other countries carry out similar surveys using similar methods and that the OECD play a role in encouraging countries to undertake such work and in facilitating common approaches definitions and data outputs.

#### **2.2.3 Summary: The Current State of Data on Financing**

154. The myriad difficulties in finding and comparing data on the demand for and supply of risk capital have been described above. As noted, the data situation is far from perfect on either the demand or the supply side. However, a further, significant gap is the fact that very little effort has yet been made to bring the demand and supply sides together into a single framework. The various sources of demand and supply data are generally completely independent and no agreed-to classification schemes exist to ensure data are categorised in similar ways. For example, some of the demand side surveys identify the amount of equity financing sought by SMEs by industrial sector and by size class, but not by “stage of development” of the firm. On the supply side, there is some information on Venture Capital invested by stage of firm development and, sometimes, by industrial sector, but not by firm size class. Furthermore, the available measures cover only part of the supply of equity for firms since little data is available on the supply of Business Angel and other informal financing.

155. Even where efforts have been made to develop comprehensive measure of both demand for and supply of financing within a single program, such as is the case in the Canadian SME Financing Data Initiative, there is no way to match supply of and demand for financing by sector or stage of development. Ideally, analysts would like to go further still and work with firm-level data so that demand and supply characteristics could be mapped against a firm’s growth and performance record, as well as other characteristics of the firm and its owners, to truly understand the influence of financing on firm development.

156. While the current state of data on risk capital is far from ideal, the next Section will discuss some of the indicators that can be constructed using existing data.

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<sup>7</sup> Robertson, Blair and Belanger, Brad, “Building a Better Understanding of SME Financing: Lessons Learnt by Canada and New Zealand on SME Finance Data Collection”, in *The SME Financing Gap Volume II: Proceedings of the Brasilia Conference 2006*, OECD, 2007.

### 3. POTENTIAL INDICATORS ON FINANCING FROM EXISTING DATA

157. Can the existing data be used to construct indicators to inform policy-makers and analysts about the demand for and supply of risk capital. Are there enough similarities in definitions and data sets to allow us to make valid comparisons across countries? The review of data sources has painted a fairly sketchy picture of existing data and the situations are different on the demand and supply sides. This Report is not intended to provide a Compendium of Indicators on Risk Capital but an overview of what could be constructed on a cross-country basis.

#### 3.1 Indicators from Existing Data - Demand Side

158. It has been noted that several OECD countries have undertaken surveys on the demand for financing by SMEs and that the results have focussed primarily on use of debt, since that is the instrument used by the majority of SMEs. Thus, there is potential to develop a number of cross-national comparisons on the use of debt for business financing for those countries that have carried out surveys (notably Canada, the USA, New Zealand and the UK). However, as the summary descriptions of these data programs have revealed, many differences in definitions, coverage and classification of results limit detailed comparisons.

159. The focus of this current Paper, however, is on financing for Innovative and High Growth SMEs and for that sub-group of firms analysts are seeking more information on access to and use of equity financing. The summaries of the existing programs have repeatedly noted that broad surveys that are addressed to the entire SME population tend to obtain very little information on use of equity. Furthermore, there has been little or no international co-ordination on the design of data collection instruments used by different countries. As a result, comparability of specific data elements (questions), reference periods and data groupings or classifications, is very limited. Thus it is difficult to produce even basic indicators of the demand for equity financing across OECD countries with any degree of assurance that the figures are really comparable.

160. Table 3 presents a first effort to compare demand for equity financing across some OECD countries. By assembling data from similar questions about use of equity financing, the different tendencies of firms to seek equity financing in different countries are revealed. Perhaps the most striking revelation from the table is the fact that the different questions, reference periods, investor categories, definitions and target populations make comparisons virtually impossible. It would appear that Canada stands out as being the country where the least use is made of equity financing. Obviously, extreme caution must be exercised in making use of these data. A much more detailed examination of methodologies would be required before it could be determined whether any of the figures are truly comparable.

161. Some of the surveys allow us to drill down further to compare use of equity financing by sector. Table 4 shows that only a very limited amount of sectoral information is available and that industry groupings cannot easily be compared across countries. As was already noted with reference to Table 3, the time periods are not consistent and the type of equity or risk capital sources elicited by the questions likely differ as well. Finally, even the rough groupings of sectors that have been presented are not strictly comparable across any two surveys.



**Table 3: Demand for Risk Capital by Country: Review of Data from Demand-Side Surveys**

Country	Survey	Question	Type of Investor or Source	Reference Period	Population	%
UK	Survey of SME Financing	Which of the following forms of finance has the company used over the last 3 years for business purposes?	Equity Finance*	2001-2003	All SMEs	2.9%
NZ	Business Financing Survey	Did the business request any equity financing?	Equity Finance**	2003-2004 (12 months)	All Firms with < 500 employees	6.0%
Canada	Survey of SME Financing	Did the business request any equity financing?	Equity Finance	2003-2004	All SMEs	1.2%
USA	Federal Reserve Board Survey on Small Business Finances	What was the firm's primary source of financial services?	Family and individuals***	2003	All Firms with < 500 employees	6.6%
			Other non-depository financing****			5.5%
USA	Kauffman Firm Survey	During calendar year 2004, did the business obtain equity financing from any of the following sources?	External equity of any kind	2004	All firms starting operations in 2004	9.6%
Europe (EU 15)	Eurobarometer Survey on SME Financing	To which of the following institutions did the company go in order to obtain one or several types of financing?	Private Investors		All SMEs	7.4%
			Venture Capital Companies			1.9%

\* Does not include Friends and Family Financing. \*\* Includes equity financing from owners, family and friends. \*\*\* Not limited to Equity Financing; also includes loans from Family and Individuals. \*\*\*\* Includes business firms, suppliers and venture capital firms.

**Table 4: Access to Risk Capital by Sector**

Country	Sectors	Type of Investor or Source	Percentages
UK	Agriculture	Obtained Equity Finance*	2.0%
	Manufacturing		3.8%
	Construction		1.1%
	Wholesale/Retail		2.7%
Canada	Agriculture	Requests for Equity Finance	1.8%
	Manufacturing		1.9%
	Knowledge-based Industries		2.4%
	Wholesale/Retail		1.4%
Eurobarometer	Industry	Obtained Finance from Private Investors	5.9%
	Construction		8.1%
	Trade		7.5%
	Industry	Obtained Finance from Venture Capital Companies	1.3%
	Construction		1.6%
	Trade		1.4%

\* Does not include Friends and Family Financing.

162. The problem of comparing sectoral breakdowns across countries is further illustrated by Table 5. Comparisons with Canada are additionally complicated since that country placed particular emphasis on a specially-constructed Sector of Knowledge-Based Industries that included both firms in both manufacturing and services. Grey areas in the Table were out-of-scope for the survey in question.

**Table 5: A Comparison of Sectoral Breakdowns in Demand-Side Surveys**

<b>Eurobarometer</b>	<b>UK</b>	<b>Federal Reserve</b>	<b>Kauffman</b>	<b>Canada</b>
	<b>Agriculture, Hunting &amp; Forestry, Fishing</b>		No-tech & Medium-tech industries	Agriculture & Primary
Construction	<b>Construction</b>	Construction & Mining		
			Hi-tech industries	Manufacturing
<b>Industry</b>	<b>Manufacturing</b>	Manufacturing		Knowledge-based industries
<b>Services</b>	Hotels & Restaurant	Transportation	No-tech & Medium-tech industries	Tourism
	Transport, storage and Communication		Hi-tech industries	
		<b>Insurance &amp; real estate</b>	No-tech & Medium-tech industries	
	Real estate, Renting and Business activity	Business services	Hi-tech industries	Professional services
		Professional services		Knowledge-based industries
			No-tech & Medium-tech industries	Professional services
<b>Trade</b>	Wholesale/Retail	Wholesale trade	Hi-tech industries	Wholesale / Retail
		Retail trade		
	Health & Social work		Hi-tech industries	
	Other Community, Social & Personal Service Activities		No-tech & Medium-tech industries	
				All others

### 3.2. Indicators from Existing Data - Supply Side

163. As noted earlier, there is a greater amount of comparable data on the supply of risk capital than there is on demand. OECD staff have developed an Entrepreneurship Finance Database (EFD) and populated it with data from a variety of sources, most notably the Reports of the Venture Capital and Private Equity Associations. There are still many issues of comparability but by aggregating various sub-categories, and making some assumptions, it is possible to create a number of roughly-comparable indicators.

164. Tables 6 and 7 illustrate the comparability issues in two important areas, Sectoral breakdowns and Stage of Business Development.

165. Table 8 provides a list of indicators that could potentially be available from existing sources. Where Table Headings appear in black, it is possible to present some data at present, though some comparability issues remain. Those Table Headings in italic grey font indicate desirable indicators. Some of the desirable indicators may be possible with the cooperation of Private Equity associations, through custom data tabulations, but many are probably not possible without altering existing data collections. Furthermore, the inventory of potential indicators presented in Table 7 is not an exhaustive list of comparable information that policy analysts in OECD countries would like to have about risk capital. For example, under the heading of performance, analysts would like to be able to track returns at various stages of business development. In terms of sources of Venture Capital funds, countries would like to better understand the characteristics and backgrounds of venture capitalists and how syndication is used to facilitate the creation of funds.

Table 6: Sector Breakdown by Source, Supply-Side Data

	USA, Israel - PwCMoneyTree	Canada - CanadaVC	European countries - EVCA Published sectors	European countries - EVCA Sectors collected	UK - BVCA (*)
Communications	Media and Entertainment	Communications and Networking	Communications	TV and radio broadcasting Media houses Publishing Telecommunications: Hardware Telecommunications: Carriers Internet technology	Telecommunications (2 subsectors)
	Networking and Equipment				
	Telecommunications				
	Internet Focus				
Information technology	IT Services	Other services IT	Computer related	Computer: Services	Technology (2 subsectors)
	Software	Software		Computer: Software	
	Computers and Peripherals	Electronics and Computer Hardware		Computer: Hardware	
	Electronics/Instrumentation	Semiconductors	Other Electronic related	Electronics Computer: Semiconductors	
	Semiconductors				
Biotechnology	Biotechnology	Biotechnology	Biotechnology		
Health	Healthcare Services	Other sciences life	Medical/Health related	Medical: Healthcare Medical: Pharmaceuticals Medical: Instrument/Devices	Health care (2 subsectors)
	Medical Devices and Equipment				
Industry/Energy	Industrial/Energy	Other technologies	Energy	Energy	Oil & gas (2 subsectors)
			Chemicals and Materials	Chemicals and Materials	Basic materials (4 subsectors)
			Industrial products and services	Industrial products and services	
			Industrial Automation	Industrial Automation	Industrials (7 subsectors)
			Transportation	Transportation	
			Agriculture	Agriculture	
			Construction	Construction	
Other products and services	Consumer Products and Services	Traditional	Consumer related	Consumer: other	Consumer services (4 subsectors)
	Retailing/Distribution			Consumer: retail	Consumer goods (7 subsectors)
	Business Products and Services		Other services	Other services	Utilities (2 subsectors)
	Financial Services		Other Manufacturing	Other Manufacturing	
	Other		Financial Services	Financial Services	Financials (7 subsectors)
			Other	Other private equity funds	

Table 7: Stage of Business Development by Source, Supply-Side Data

		Canada Thomson Financial	USA, Israel PwC MoneyTree	United Kingdom BVCA	European countries EVCA
Private Equity	Venture Capital	Seed / Start-up stages	<b>Start-up/Seed</b> The initial stage. The company has a concept or product under development, but is probably not fully operational. Usually in existence less than 18 months.		<b>Seed</b> Financing provided to research, assess and develop an initial concept before a business has reached the start-up phase.
				<b>Start-up</b> Financing provided to companies for use in product development and initial marketing. Companies may be in the process of being set up or may have been in business for a short time, but have not yet sold their product commercially.	<b>Start-up</b> Financing provided to companies for product development and initial marketing. Companies may be in the process of being set up or may have been in business for a short time, but have not sold their product commercially.
		Early development and Expansion stages	<b>Early Stage</b> The company has a product or service in testing or pilot production. In some cases, the product may be commercially available. May or may not be generating revenues. Usually in business less than three years.	<b>Other Early Stage</b> Financing provided to companies that have completed the product development stage and require further funds to initiate commercial manufacturing and sales. They may not yet be generating profits	<b>Expansion</b> Also called development capital. Financing provided for the growth and expansion of a company, which may or may not break even or trade profitably. Capital may be used to: finance increased production capacity; market or product development; provide additional working capital.  Expansion stage reported in the EVCA Yearbook includes expansion, bridge financing, rescue/turnaround.
				<b>Expansion</b> Sometimes known as 'development' or 'growth' capital, provided for the growth and expansion of an established company. Funds may be used to finance increased production capacity, product development, provide additional working capital, and/or for marketing. Capital provided for rescue / turnaround is also included.	
Private Equity	Later stages	Late stage	<b>Later Stage</b> Product or service is widely available. Company is generating on-going revenue; probably positive cash flow. More likely to be, but not necessarily profitable. May include spin-outs of operating divisions of existing private companies and established private companies.	<b>Secondary purchase</b> Purchase of existing shares in a company from another private equity firm, or from another shareholder or shareholders.	<b>Replacement capital (secondary purchase)</b> Purchase of existing shares in a company from another private equity investment organisation or from another shareholder or shareholders.
				<b>Refinancing Bank debt</b> Funds provided to enable a company to repay existing bank debt.	

		Buyout	<p><b>Acquisition/Buyout</b> An established or near-established firm that needs financing to acquire all or a portion of another business entity for growth purposes, such as an Acquisition for Expansion Financing.</p>		<p><b>Buyout</b> A transaction in which a business, business unit or company is acquired from the current shareholders (the vendor). It covers management buyout management buy-in, institutional buyout, leveraged buyout.</p>	<p><b>Buyout</b> A transaction in which a business, business unit or company is acquired from the current shareholders (the vendor). It covers management buyout management buy-in, institutional buyout, leveraged buyout.</p>
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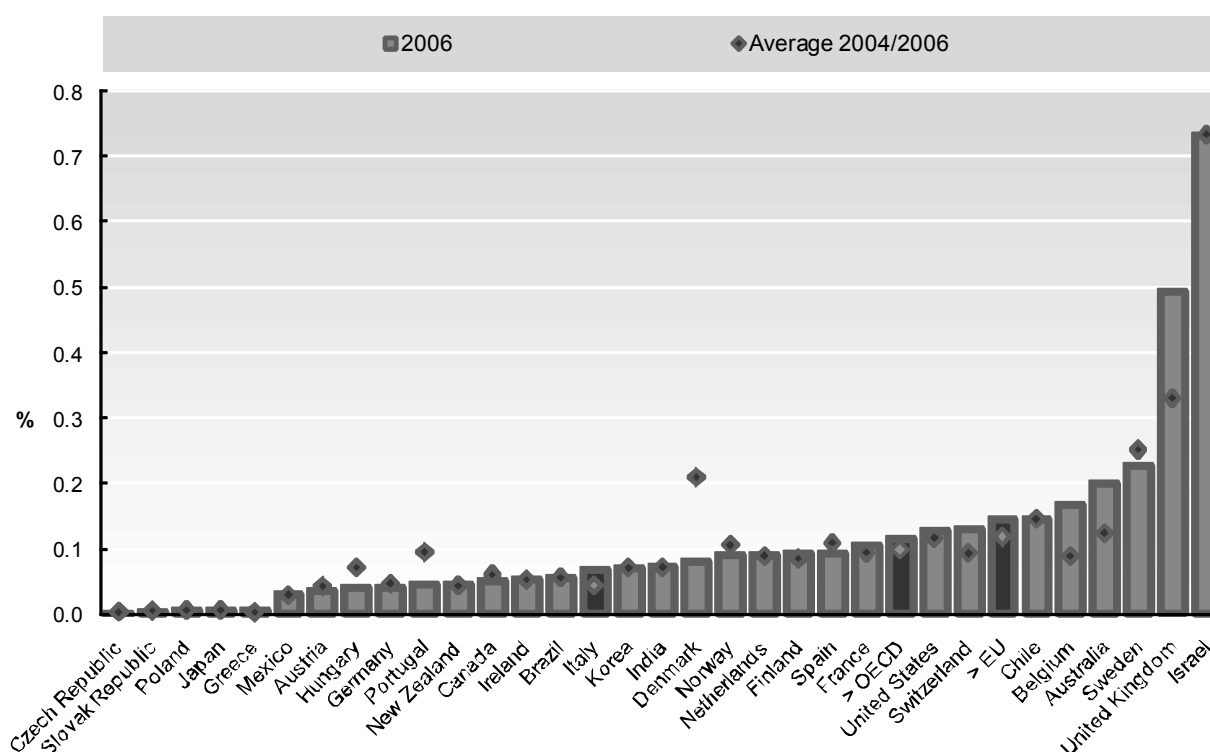
Table 8: Potential List of Supply-Side Indicators (Available and Desirable)

	Theme	Figure
FORMAL VENTURE CAPITAL	Investments	Venture Capital investments trends, in Billions USD and percentage of GDP, 1995-2006
		Venture Capital investment as a percentage of GDP, 2003-2006
		Venture Capital share in Total Private Equity investment, 2003-2006
		Venture Capital investment and GDP average annual growth, 2003-2006
		Venture Capital investment as a percentage of Domestic Market Capitalization, 2006
		Early stage and Expansion investments as a percentage of GDP, 2006
		Venture Capital average deal size trends, 1995-2006
		Venture Capital average deal size, 2003-2006
		Early Stage average deal size, 2003-2006
		Private Equity investment specialization in Europe by country, 2006
		Private Equity Investment specialization in Europe by sector, 2006
		Share of high-technology sectors in total Venture Capital investment, 2006
		<i>Regional concentration of Venture Capital investments</i>
		Venture Capital investments by destination (foreign / domestic)
		Venture Capital investments international flows as a percentage of GDP, 2006
	Funds raised	Venture Capital funds raised, 2006
		Funds raised by type of investors, 2006
		Funds raised by geographic origin (foreign / domestic)
	Divestments and performance	Divestments average value per deal, 2006: M&A and IPO
		European countries exits: Share of Trade sales and IPO in total 2006 Private Equity divestments
		<i>IRR</i>
	Stock of capital and investors	<i>Number of Funds and by size class</i>
		<i>Number of Venture Capital firms</i>
		<i>Number of projects submitted and invested by VCs</i>
		<i>Number of Private Equity managers</i>
		<i>Capital under management, VC firms</i>
		<i>Capital available, VC firms</i>
		<i>Portfolio at cost, VC firms</i>
	Economic impact	Share of new companies financed, 2006
		<i>Number of VC-backed companies financed, and by employee size class</i>
		Employer birth rates and Venture Capital investments as a percentage of GDP
		High Growth Firms and Venture Capital
		<i>Growth characteristics in VC-backed firms</i>
INFORMAL VENTURE CAPITAL	Informal investments	Business Angels activity, comparison Europe/ USA
		Venture Capital Seed investments and Business Angel activity
		Business Angels investments and GDP per Capita, 2006
		Number of Business Angels Networks
		<i>Number of projects submitted and invested by BAs</i>
		<i>Individual investors</i>
OTHER	Comparability issues	Sectoral breakdown compared between Venture Capital Associations
		Stage breakdown compared between Venture Capital Associations
	Macro-economic indicators	GDP
		Market Capitalization
		<i>Tax rates (for VC companies, private investors)</i>

166. The OECD is not currently producing regular outputs from the EFD and additional resources would have to be found to ensure the ongoing updating and extension of the database. Nevertheless a few selected Figures are included herein to illustrate some of the indicators that are possible. The following Figures and Tables present data for a large number of OECD countries (and in some cases, also for Israel, an OECD Accession country).

167. It must be emphasised that, given the difficulties of comparing different classifications of the “Stage of Development” used by different data providers (see Table 7, above), presentation of data by stage always requires some judgement. As the goal is to present data on Venture Capital rather than buyouts, the tendency is to exclude most “Later Stage” investment categories.

**Figure 3: Venture Capital Investment as a Percentage of GDP**



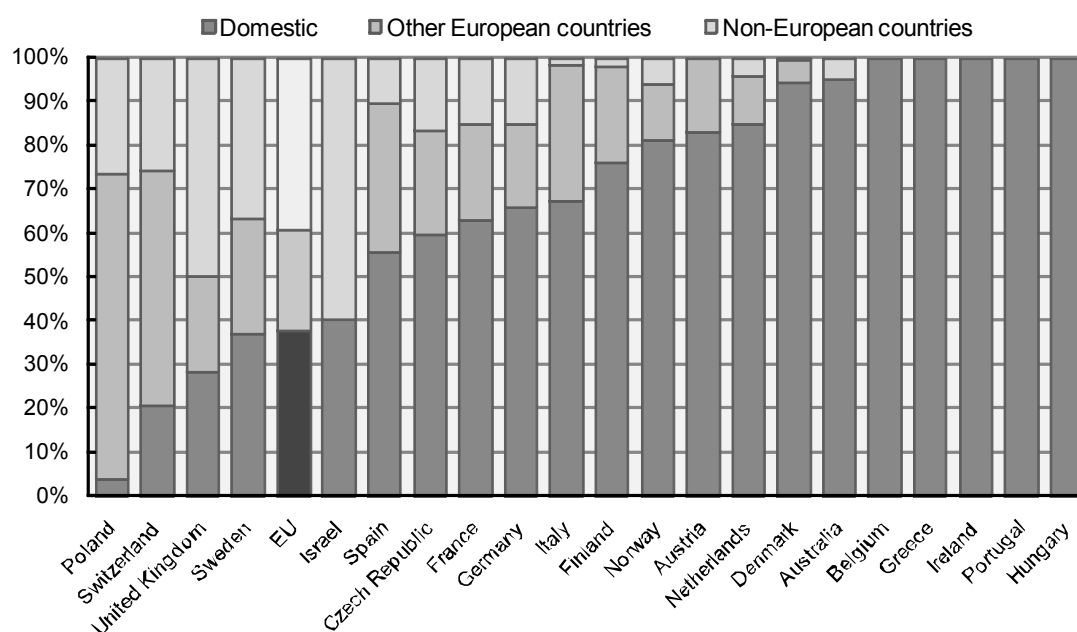
*Note: Venture Capital includes Seed, Startup, Early development and Expansion stages. Later stages and Buyouts are excluded, except for Mexico, Chile and Brazil. Total OECD excludes Luxembourg, Turkey and Iceland.*

*Source: OECD based on data from Thomson Financial, PwC, EVCA, LVCA and National Venture Capital Associations*

168. The intensity of Venture Capital investment (Figure 3) is the highest in Israel at 0.73% of GDP, followed by the United Kingdom at 0.49% of GDP and by Sweden and Australia with Venture Capital to GDP ratios above 0.2%. Comparing the evolution over the last three years, the United Kingdom, Belgium, Australia and Switzerland have significantly increased the ratio of Venture Capital investment to GDP while, Denmark, Portugal and Sweden show declining proportions.

169. One of the key determinants of the VC investment intensity for a country is the capacity of that country's Venture Capital market to attract foreign funds. Based on this indicator, Figure 3 shows that the markets in the United Kingdom, Sweden and Israel were strong as foreign sources accounted for more than the half of the funds raised.



**Figure 4: Private Equity Funds Raised by Geographic Origin, 2006**

Source : Thomson Financial, PwC, EVCA and OECD calculation

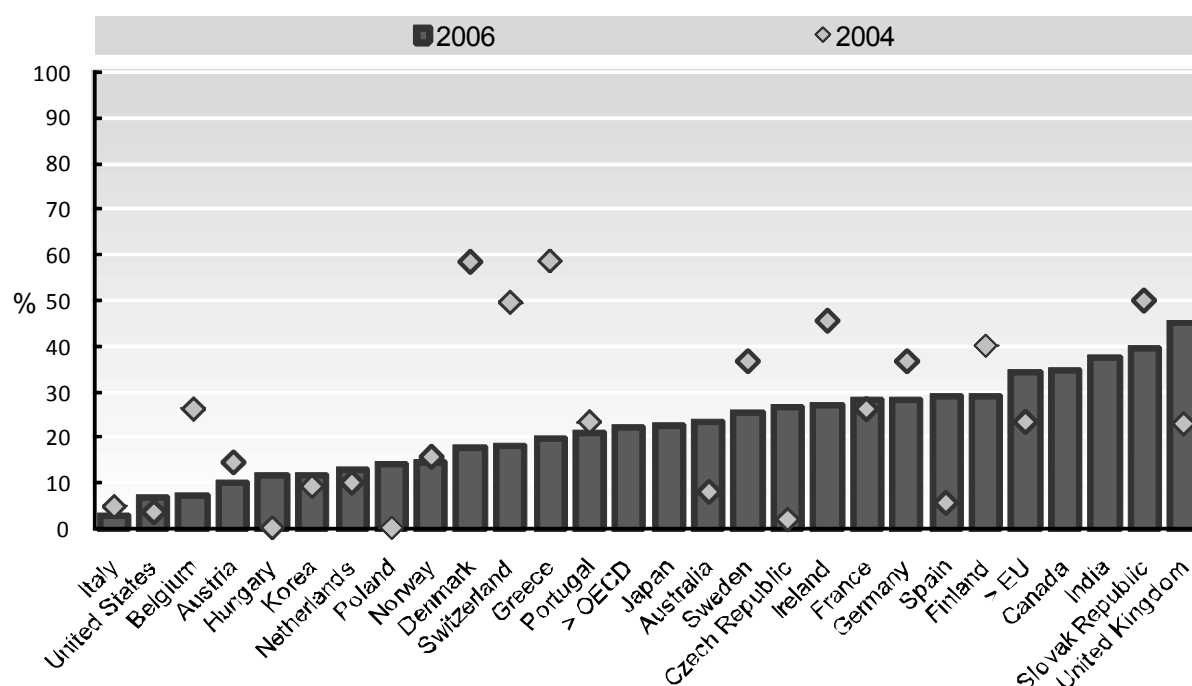
**Table 9: Percentage of Funds Raised by Type of Investor, 2006**

	Corporations	Individuals & retail	Government	Banks & Insurance	Pensions	Funds of Funds	Other
Australia	19	-	6	5	47	-	23
Austria	7	1	1	56	8	6	21
Belgium	3	1	10	67	0	4	15
Canada	9	58	7	2	10	3	11
Czech Republic	0	0	0	0	0	40	60
Denmark	0	0	27	7	28	0	37
EU	4	9	8	24	26	17	12
Finland	1	3	18	9	32	20	17
France	3	17	4	36	9	17	14
Germany	1	18	10	26	5	19	20
Greece	0	0	0	0	0	0	100
Hungary	0	0	71	18	0	7	3
Ireland	0	0	21	40	0	0	38
Italy	0	10	1	48	5	27	9
Japan	24	15	-	18	1	-	42
Netherlands	5	7	4	38	16	24	6
Norway	10	19	3	38	5	8	17
Poland	4	18	0	8	21	46	3
Portugal	0	0	24	67	0	0	8
Romania	0	0	0	0	0	0	100
Spain	4	15	8	30	10	22	10
Sweden	0	10	1	10	21	12	47
Switzerland	2	3	24	28	18	16	9
United Kingdom	4	7	10	22	33	18	8
United States (2003)	2	9	0	25	42	0	21

Source: OECD based on data from Thomson Financial, PwC, EVCA, LVCA and National Venture Capital Associations.

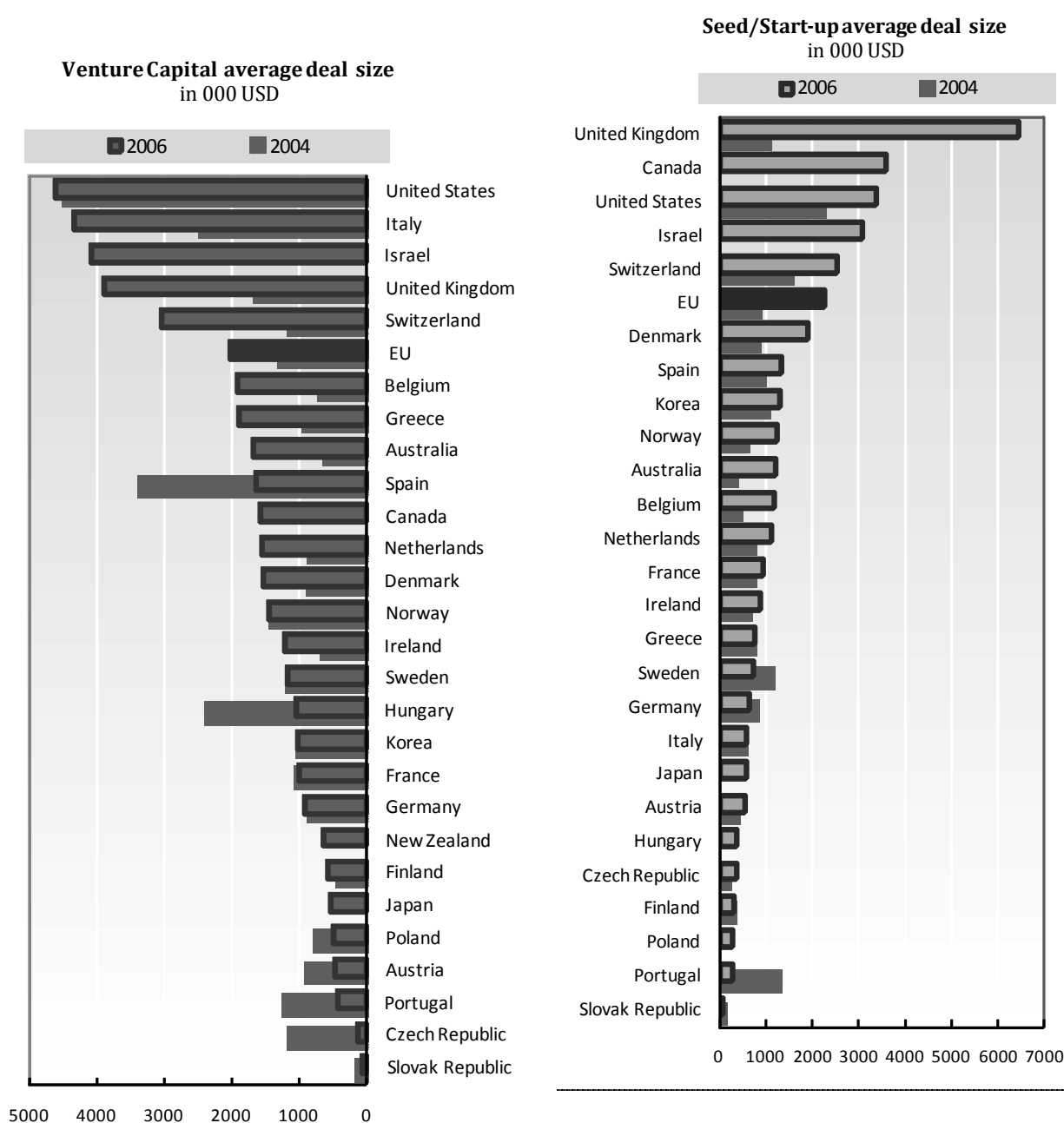
170. Table 9 illustrates that there are substantial differences across countries in the sources of capital for Venture Capital funds. In general, the venture capital investor community is dominated by large institutions such as pension funds and insurance companies that have the financial breadth to create a diversified venture capital portfolio and balance risk. In addition, many countries also create publicly funded institutions to foster development of the venture capital market as a driver of innovation and economic growth. Some notable differences among countries can be distinguished. Institutional investors are particularly important in Belgium and Portugal; corporations play a large role in Japan; and, pension funds dominate in the United Kingdom and the United States.

**Figure 5: Seed/Start-Up Stage as a Share of Venture Capital Investments**



171. Early Development and Expansion Stage investment (Figure 4) continued to dominate Venture Capital investing across OECD countries in 2006, with more than three quarters of total investments (two thirds at the EU level). The countries with the highest shares in Seed/Start-up stage investments were the United Kingdom, the Slovak Republic, India and Canada, all with more than a third of investments in this stage. However, the level of VC activity in the Slovak Republic is so low that ratios for that country are volatile. The countries with the highest share of Expansion stage investments are Italy, Belgium and Austria with shares above 90%.

172. Comparing the evolutions over the period 2004-2006 of the share of Venture Capital investment in the Seed/Start-up stages roughly half the countries have shown increases, while the other showed decreases. However, in total, the seed/start-up stage gained additional share during the period: for the EU countries as a total, the share increased from 23% up to 34%, the United Kingdom has been the driver - in volume - of this increase.

**Figure 6: Average Deal Size by Stages: Total Venture Capital and Seed/Start-Up Stages**

*Note: for Australia, Canada, Korea, Japan average amount by enterprise investee*

173. Average deal size is another interesting indicator for analysing and comparing the performance of Venture Capital investment among countries. The average Venture Capital deal size in Europe is still far behind that of the United States, at 2 M\$ for the EU against 4.6 M\$ for the United States in 2006. However, European countries have narrowed the gap with a growth in deal size of +159% over the 2004 to 2006 period. Interestingly, in the case of the United Kingdom in 2006, the average deal size at Seed/Start-up level is more than the total average for Venture Capital at 6.5 M\$ versus 3.9 M\$.

#### **4. POSSIBLE INITIATIVES FOR IMPROVING DATA ON FINANCING HIGH-GROWTH AND INNOVATIVE FIRMS**

174. Two broad approaches for improving data on financing have been identified. The first is to work with current producers of data to improve comparability of their statistics, through common definitions and classifications. The second is to embark on new surveys or data programs.

##### **4.1 Enhancing Comparability of Existing Data Sources**

175. Many OECD countries have put considerable resources into the development of data on business financing in recent years. NSOs have developed surveys on both the demand for and supply of financing, often with a specific orientation towards SMEs. These surveys or data programs have also generally been developed in association with the government departments responsible for small business or entrepreneurship policy. In many cases the individual data programs have similar objectives and target similar types of firms and/or financing sources. Yet there has been very little co-operative work across countries to harmonise methodologies, coverage, questions or the way survey results are tabulated. New Zealand did use the Canadian SME financing survey as a model before embarking on its own program, but this collaboration was an exception. Furthermore, there has also been little international discussion on the results of the various national data initiatives.

176. Given the efforts that are being made by OECD countries to improve financing data there is significant potential to improve international comparability through cooperative work. It is recommended that an international workshop on statistics and research pertaining to business financing be convened. Countries would benefit from shared knowledge of the results of data programs in other countries and steps could be taken to improve the comparability of the surveys. All OECD and EU countries would be invited to present Papers on their national initiatives and discuss approaches to foster greater international harmonisation. If funding and sponsorship for such an event could be arranged, a Secretariat could develop an overview paper drawing together all the details of the data programs to facilitate comparisons. This work would be preceded by a questionnaire to all NSOs and entrepreneurship policy people to ensure all sources were covered.

177. It is also suggested that the OECD pursue more cooperative arrangements with the organisations that provide data on the supply of equity financing or risk capital. The review of data sources noted that the Australian Bureau of Statistics has a comprehensive annual survey to measure Venture Capital and Private Equity, but that in the majority of OECD countries, most of the data currently available on supply of risk capital comes from private associations such as the various national Venture Capital and Private Equity Associations. Given this record, it is clear that analysts will continue to depend on private sources for information on supply of risk capital. What can be done to encourage these private data sources to harmonise definitions and classifications in the interest of comparability?

178. The Venture Capital and Private Equity associations collect data first and foremost to suit the needs of their primary stakeholders – the investors and investee companies. The OECD should initiate a dialogue with these groups and demonstrate to them how changes in the way data are maintained, as discussed in Chapter 5, could have significant impact on comparability.

## 4.2 New Data Collection Vehicles

179. There is relatively little empirical information available on the demand for risk capital by firms. In most countries, collection of demand-side information requires a survey of the businesses themselves and such surveys are increasingly avoided, particularly for young or small firms, due to issues surrounding response burden. Since only a small portion of firms actually access risk capital (as opposed to debt capital, for example) sample sizes must be large in order to ensure a sufficient number of relevant responses are obtained. Furthermore, in order to understand the true nature and use of risk capital in growing firms, surveys would ideally be designed to determine from what sources firms sought risk capital, for what purposes, in what amounts and with what success.

180. Both the OECD and Eurostat have decided to explore whether new survey questions could realistically be used to help to fill some of the information gaps. The two organisations are approaching the development of a questionnaire on financing in different, though coordinated ways and the current status of these two activities is discussed below.

### 4.2.1 *Eurostat Survey on Access to Finance*

181. In its discussions with policy analysts within the European Commission and in member states, Eurostat has noted a persistent interest in better information on access to finance by young and/or small firms. In order to respond to this expressed need, Eurostat organised discussions with a number of interested bodies in Europe including the European Central Bank, the European Investment Fund, the OECD and all of the European Commission DGs that were interested in the topic. Through its meetings with these various bodies Eurostat concluded that there was significant demand for comparable information on access to finance and they have proposed to develop a survey module using the established procedures and mechanisms of the European Statistical System.

182. The Eurostat proposal is designed not only to produce comparable data for EU member countries but also to enhance comparability with data that exists for the USA. Thus, many of the questions in the Eurostat proposal have been designed using elements of the Kauffman Firm Survey of the US as a model. The Eurostat proposal, however, must respect EU guidelines which strictly limit the amount of additional response burden that can be imposed on firms. Thus, the Eurostat survey, if approved, would contain far fewer detailed questions than are included in the Kauffman Firm Survey.

183. Despite the limitations on the length of the survey, the Eurostat proposal would obtain information on the firm's efforts to obtain equity or debt financing and the success of those efforts. A variety of other questions will provide additional information on characteristics of the firm and the founder, future financing needs and plans as well as on whether the firm is considered to be innovative. The questionnaire would be limited to twenty questions.

184. The Eurostat survey proposal has been endorsed by Member States and work is proceeding on a Commission Regulation to formally authorise the program.

### 4.2.2 *OECD Pilot Questions on Access to Finance for Innovation and Growth*

185. Through its review of information gaps, the OECD has noted particular interest in the impact of financing on the growth and development of firms, especially innovative firms. The research literature suggests that innovative, high growth firms need equity financing in order to prosper but there is little empirical evidence of the relationship between type of financing and firm growth.

186. During the preparation of this Report, the OECD developed and proposed a questionnaire that would collect information on the financing experience of firms and tie that experience to the growth and

innovation strategies pursued by the firm. In order to meet the various demands that have been expressed for information, the survey was designed to collect detailed information on financing and innovation and growth strategies, and as such, a fairly detailed questionnaire was required. Also, the OECD proposal included collection of information on debt or equity amounts sought and obtained, rather than simply on whether financing took place. Given the detailed nature of the potential enquiries, it was proposed that the survey questions be pilot tested through an online survey vehicle before developing a full survey proposal. The Statistics Directorate team that developed the survey questions sought the assistance of business groups in OECD member countries to help identify suitable respondents and to promote the value of the work. However, there was insufficient support for this work and the survey questions have not yet been tested. A detailed explanation of the rationale for the OECD Pilot Survey on Access to Finance, including a description of the nature and purpose of the proposed questions, is included in an Appendix to this document [COM/STD/CFE/CFE(2008)2/ANNEX].

## 5. CONCLUSIONS AND RECOMMENDATIONS

187. This Report has revealed that a very significant amount of work has been done by countries and organisations, in both the private and public sectors, to expand and improve the availability of data on financing for SMEs in general. However, it is also evident that there are few truly comparable data sets that exist across countries. Furthermore, while a variety of national measures track the experience of SMEs in obtaining financing, it is difficult, if not impossible, to distinguish the financing activities of the sub-population of High Growth and Innovative SMEs from those of the general SME population.

188. On the demand side, major government survey programs have been put in place in many countries but there has been little evidence of cooperation on the development of definitions or methodologies. Each country has developed a data program to suit its own needs without any consideration of international comparability. In a recent initiative, Eurostat has developed a survey on Access to Finance that will, of course, be harmonised across all the European countries that participate. None of the regular data programs provide information on the financing experience of High Growth and Innovative SMEs. Some of the surveys do ask separately for whether debt or equity financing was sought, and obtained.

189. On the supply side there is information on both debt and equity financing. As far as debt, or the availability of capital for loans, is concerned, however, banks and other financial institutions do not earmark separate amounts for firms in different size classes so it is impossible for them to identify the “supply of debt financing for SMEs”. Furthermore, the survey programs in most countries were unable to identify how much debt was outstanding to firms in different size classes. Banks have noted that their records are not maintained by size of firm. Rather, they categorise borrowers by their “authorisation size”, or borrowing limit. Those authorisation sizes are used as a proxy for firm size in several cases.

190. In terms of the supply of equity financing, most of the information available, and virtually all of the internationally-comparable information, is sourced from records of Venture Capital and Private Equity organisations. These data sets do not identify High Growth and Innovative SMEs but data are classified by stage of firm development and by industry sector. The national and international associations that represent these VC companies do consult one another on terminology and methodology for compiling statistics, but many differences in their published data remain. Despite these differences, a considerable amount of available information was gathered into a temporary database that has been labelled the Entrepreneurship Financing Database (EFD) and a variety of steps were taken to enhance comparability. A number of tables and charts were produced from the EFD to illustrate the potential utility of these information sources.

## ***Recommendations***

191. One of the principal recommendations from the Brasilia Conference was that the OECD should spearhead the development of a “Handbook of definitions, indicators and methodology for gathering data on the supply of financing available to SMEs and the demand for financing by SMEs”. The examination of the existing situation undertaken for the preparation of this Report has confirmed that preparation of a single Handbook as described in the Brasilia recommendation would be a very complex task. Indeed, each of the elements listed in the recommendation could be the subject of a separate, challenging Project. Despite industry and official efforts to reconcile definitions used regarding the measurement of financing, there are still many differences in practice, if not in the various terminology glossaries themselves. As far as data collection methodologies are concerned, both the information collection vehicles and the organisations that carry out data collection differ greatly for the supply and demand sides as well as for debt or equity.

192. Based on the work undertaken for this Study, a small number of recommendation are proposed for actions that could be taken in the near term to improve the availability of data on financing for entrepreneurship and SMEs, from existing data sources. In all cases, resources would have to be found from external sources, or reallocated from internal sources, to enable the work to proceed. These recommendations pertain only to the development of data and indicators.

### ***Recommendation 1: Definitions, terms and classification of data***

It is recommended that the OECD adopt the finance terminology and classifications proposed in this Report for maintenance of data sets on financing for entrepreneurship and SMEs. The terminology should be published in the forthcoming Entrepreneurship Measurement Manual of the Entrepreneurship Indicators Programme as well as in separate Handbooks as appropriate;

### ***Recommendation 2: Entrepreneurship Financing Database***

It is recommended that the Entrepreneurship Indicators Programme convert the temporary Entrepreneurship Financing Database into a formal, ongoing, funded Project. A budget and plan for the development and maintenance of the EFD, including arrangements to access the required data sources, should be prepared as a first step; and,

### ***Recommendation 3: Inventory of survey metadata***

It is recommended that the Statistics Directorate be asked to prepare a comprehensive inventory of questions, definitions, data classifications and data outputs from all surveys on access to finance undertaken by OECD countries in order to facilitate discussions on harmonisation of such surveys in future.

## ANNEX. GLOSSARY OF TERMS

This Annex covers terminology used in the presentation and discussion of information about financing of enterprises through risk capital. This effort attempts to be as comprehensive as possible and cover most terminology that a reader will encounter when researching data or analytical information on Some additional terms that apply to aspects of financing that fall outside the area of Risk Capital are also included since they are useful in providing a context for the area that is in scope.

The terminology is grouped under two headings: (i) Financial terms; and (ii) Entrepreneurship, SME and Business Demography terms. The second section includes descriptions of the various stages of firm development which are often, in turn, matched by a term relating to the financing that takes place at that stage. Thus, for example, the seed stage is defined in section (ii) and seed financing in section (i). Note: *Italicised and underlined terms are defined elsewhere in the Glossary.*

### **(i) Financial Terms**

Angel Sidecar Fund  
 Business Angel  
 Buyout  
 Buyout Fund  
 Capital Under Management  
 Corporate Venturing  
 Deal Flow  
 Debt Financing  
 Development Capital  
 Down Round  
 Early Stage Fund  
 Equity Financing  
 Expansion Financing  
 Family, Friends and Founders  
 Financing Round  
 First Round  
 Initial Public Offering (IPO)  
 Investee Company  
 J Curve  
 Long Term Debt Financing  
 Mezzanine finance  
 Personal credit (credit cards)  
 Portfolio at Cost  
 Portfolio Company  
 Private Equity  
 Public Equity  
 Risk Capital  
 Short Term Debt Financing  
 Up Round  
 Venture Capital  
 Venture Capital Fund

### **(ii) Entrepreneurship, SME and Business Demography terms**

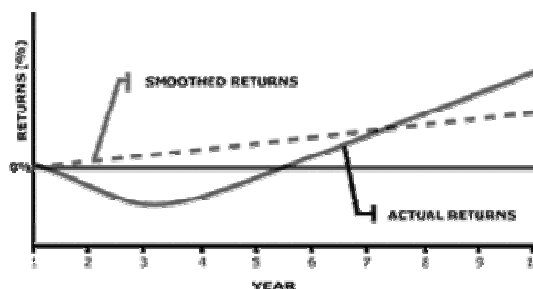
Business Demography  
 Early Stage  
 Employer Enterprise  
 Employer Enterprise Birth  
 Enterprise  
 Enterprise Birth  
 Entrepreneur  
 Entrepreneurial Activity  
 Entrepreneurship  
 Entrepreneurship Indicators Programme  
 Exit Stage  
 Expansion Stage  
 Gazelle  
 High Growth Enterprise  
 Innovative Firm  
 Later Stage  
 Nascent Stage  
 Pre-seed Stage  
 Replicative Firm  
 Seed Stage  
 SME  
 Start-up  
 Start-up Stage  
 Turnaround Stage



## A1. Financial Terms

- **Angel Sidecar Fund:** A sidecar fund is a committed source of capital that “rides” or invests alongside an angel group. Sidecar funds invest in deals that have been vetted by and are being invested in by an angel group. Angel sidecar funds are a way for governments or business development agencies to leverage the expertise of the angel community to support seed and early stage companies, at a lower cost than would be required to build in-house capacity.
- **Business Angel:** A private investor who provides both finance and business expertise to an *investee* company in exchange for ownership equity. Business Angels typically participate at an early stage of a firm’s life. Business Angels are considered to be informal investors who, unlike venture capitalists, typically do not manage the pooled money of others through a professionally-managed fund. However, angel investors are increasingly organising themselves into angel networks or angel groups to share research and pool their own investment capital.
- **Buyout:** This is a transaction in which private equity capital is used to acquire a private or public company from the current shareholders. After buyout, the purchased firm usually becomes a private company. For the OECD Guidelines, *Private Equity* is divided into two distinct and separate components, namely *Risk Capital* and *Buyout*.
- Buyouts include a number of specific types of investments, including *management buyout* (MBO), *management buy-in* (MBI), *institutional buyout* (IBO) and *leveraged buyout* (LBO). Since all forms of Buyout fall outside Risk Capital, they are of limited interest in the context of financing for SMEs and entrepreneurship. Hence, the specific types of Buyout are not further defined.
- **Buyout Fund:** A Private Equity fund whose strategy is to acquire other businesses.
- **Capital Under Management:** This is the total amount of funds available to the Venture Capital fund manager for future investments plus the amount of funds already invested (at cost) and not yet divested.
- **Corporate Venturing:** This term describes a situation in which a company invests in a manner similar to a Venture Capital fund, by buying an equity stake in a smaller, unquoted company. In some cases, companies participate in *Indirect Corporate Venturing* by investing in a VC fund in order to invest in an unquoted company.
- **Deal Flow:** The total number of investment opportunities available to a Venture Capital firm.
- **Debt Financing:** This is capital provided to a firm with an obligation that it be paid back. It includes a wide variety of financing such as loans from individuals, banks, or other financial institutions; selling bonds, notes or other debt instruments; and other forms of credit such as leasing or credit cards. The lender gains no equity position in the firm and the borrower’s obligation is to repay the debt, usually with interest.
- **Development Capital:** See *Expansion Capital*.
- **Down Round:** This is when an investee company receives an additional round of equity financing yet the firm’s value is set at an amount lower than in previous financing rounds.

- **Early-Stage Fund:** Venture capital funds focused on investing in companies in the early part of their lives, prior to the Expansion Stage.
- **Equity:** Ownership interest in a company, represented by the shares issued to investors.
- **Equity Financing:** This refers to all financial resources that are provided to firms in return for an ownership interest. Equity investors have no guarantee that any specific amount of money will be returned. Rather, their return on investment will be determined by the success of the firm. They may sell their shares in the firm, if a market exists or they may get a share of the proceeds if the firm is sold. The large category of equity finance is sub-divided into Public Equity and Private Equity.
- **Expansion Capital:** Financing provided for the growth and expansion of a company, which may or may not be operating profitably. The capital may be used to fund market or product development, finance increased production capacity or provide additional working capital. Also called Development Capital.
- **Family, Friends and Founders Equity Financing:** This is financing provided the founders' family and friends as well as by the founders themselves, in return for ownership equity. Thus is informal financing and it is generally provided at seed or early stages in the firm's life.
- **Financing Round:** An investee company may receive capital from Venture Capitalists or Business Angels in several stages or Rounds. The initial investment is known as the Initial Round or First Round; subsequent investment rounds are generally numbered as Second Round, Third Round, etc.
- **First Round:** The first Round of financing provided to an Investee Company. It is also known as the Initial Round.
- **IPO (Initial Public Offering):** The sale or distribution of a company's shares to the public for the first time. An IPO of the investee company's shares is one the ways in which a private equity fund can exit from an investment.
- **Investee Company:** The company or entity into which an equity investment is made, whether from a Venture Capital fund, a Business Angel or other informal capital. Also known as Portfolio Company.
- **J-curve:** The curve generated by plotting the returns generated by a private equity fund against time (from inception to termination). Since management fees and start-up costs are paid before the investment portfolio matures enough to build value and offset these costs, the returns are negative for several years.
- **Long Term Debt Financing:** Long Term Debt Financing usually applies to assets a business is purchasing, such as equipment, buildings, land, or machinery. With long term debt financing, the scheduled repayment of the loan and the estimated useful life of the assets extends over more than one year.
- **Mezzanine capital:** This is a form of capital that has characteristics of both equity and debt. It is a specialized form of private equity whose strategy is to acquire other businesses by providing unsecured and subordinated debt to facilitate a Buyout. Mezzanine capital represents a claim on



firm's assets that is senior to equity but below senior debt and is usually associated to a right to some equity.

- **Portfolio at Cost:** The sum of all venture capital investments that have been made until the end of the measurement period, but which have not yet been exited.
- **Portfolio Company:** See *Investee Company*.
- **Private Equity:** This is capital provided to private companies, whose shares are not freely tradable in any public stock market, in return for ownership equity. The term applies to provision of equity capital across the entire cycle from seed financing to buyouts. Thus, Private Equity is used both for early and expansion stage financing of young, developing firms and for *Buyout* of mature firms. For the OECD Guidelines on Measuring Access to Finance, the proposed classification breaks the full range of Private Equity investment into two major sub-components: *Risk Capital* and *Buyout*.
- **Public Equity:** This refers to equity investments made in companies whose shares are quoted in some form of stock exchange. Normally, public equity investors make hands-off purchases of shares in these listed companies. The investors are not involved in providing advice or otherwise assisting the owners or managers in the development of the firm.
- **Risk Capital:** is private equity capital provided by investors to firms in pre-seed, seed, start-up and expansion stages. It includes investments from both formal (Venture Capital) and informal (Business Angels or individuals) sources, but does not include any debt finance. While there is some inconsistency in the use of the term Private Equity between different organisations in different countries, for the OECD Guidelines on Measuring Access to Finance, *Risk Capital* and *Buyout* are considered to be two separate and distinct components of *Private Equity*.
- **Short Term Debt Financing:** Short Term Debt Financing applies to money needed for the day-to-day operations of the business, such as purchasing inventory, supplies, or paying the wages of employees. Short term financing is referred to as an operating loan or short term loan because scheduled repayment takes place in less than one year. A line of credit is an example of short term debt financing.
- **Up Round:** This is a *Financing Round*, after the *Initial Round*, where the firm's value is set at an amount higher than in previous financing rounds.
- **Venture Capital:** This is equity capital provided through formal, organised professionally-managed funds to co-finance, with the founder or entrepreneur, an *Early Stage* or *Expansion Stage* venture. Offsetting the high risk the investor takes is the expectation of higher than average return on the investment. The Venture Capitalists supply not only financing but also expertise in the form of domain knowledge, business contacts and strategic advice. Venture Capital is a subset of private equity.
- **Venture Capital Fund:** This is generally a private partnerships or closely-held corporation that pools money from private and public pension funds, endowment funds, foundations, corporations and wealthy individuals, to provide equity investment for young, rapidly growing companies that have the potential to develop into significant economic contributors.

## A2. Entrepreneurship and Business Demography Terms

- **Business Demography:** This term is borrowed from the study of human populations, (“demography”). Business Demography is the study of business populations and it comprises the various statistics that describe the basic events and characteristics throughout the life of a business, such as birth, death, survival, size and type, measured over time and by geographic location.
- **Early Stage:** This is a general term applied to all the stages prior to the *expansion stage*. Thus, it includes the pre-seed, seed and start-up stages of a business. While a firm may enter the expansion phase at an earlier date, the early stage is usually considered to be the first 3 to 5 years of the firm’s life. Firms with a growth objective normally require financing during this stage.
- **Employer Enterprise:** This is an enterprise that has at least one employee other than the founder(s).
- **Employer Enterprise Birth:** Entry into the population of an employer enterprise. This may be an enterprise that has at least one employee in its birth year or an enterprise that existed previously but was below the one employee threshold.
- **Employer Enterprise Death:** Exit from the population by death of an employer enterprise or by decline of an enterprise below the one employee threshold.
- **Enterprise:** This is the smallest combination of legal units that is an organisational unit producing goods and services that benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.
- **Enterprise Birth:** An enterprise birth occurs when there is a new combination of production factors that constitute an enterprise and the activity commences, with the stipulation that no other enterprise is involved in the event. Birth does not include entry into the population resulting only from a change in activity or due to a merger, break-up, split-off or restructuring of an enterprise or enterprises. Furthermore, the reactivation of an enterprise that has been dormant for less than 2 years is not considered to be a birth.
- **Enterprise Birth/Death:** An enterprise death is the dissolution of a combination of production factors that constituted an enterprise, with the stipulation that no other enterprises are involved in the event. Death does not include exit from the population due to merger, take-over, break-up or restructuring of an enterprise or enterprises. An enterprise that is reactivated within two years of death is no longer included in the count of deaths.
- **Entrepreneurs:** Those persons (business owners) who seek to generate value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.
- **Entrepreneurial Activity:** The enterprising human action in pursuit of the generation of value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.
- **Entrepreneurship:** The phenomenon associated with *entrepreneurial activity*.
- **Entrepreneurship Indicators Programme:** The OECD-Eurostat Entrepreneurship Indicators Programme (EIP) is a joint programme of the OECD and Eurostat that has established a framework,

methodologies and specific indicators to measure entrepreneurship and the determinants of entrepreneurship in a comparable way across countries.

- **Exit Stage:** This is the stage at which Venture Capital, Business Angel or other private equity investors liquidate their holdings in a *portfolio company*. Methods of exiting an investment include: *trade sale*, sale by *public offering* (including *IPO*), *write-offs*, sale to another equity investor or sale to a financial institution.
- **Expansion Stage:** During this stage, the firm is producing and selling products or services but it is seeking to expand output of products and/or services and to increase revenues. Usually, at this stage, operating revenues are not sufficient to fund the expansion and thus the firm seeks financing through formal and informal risk capital and/or debt. Normally a firm is in operation for 3 years before the expansion stage.
- **Gazelle:** All enterprises less than 5 years old with average annualised growth in employees greater than 20% per annum over a three year period and with 10 or more employees in the beginning of the observation period.
- **High Growth Enterprise:** All enterprises with average annualised growth in employees greater than 20% per annum over a three year period and with 10 or more employees in the beginning of the observation period.
- **Innovative firm:** A firm that has introduced a product, process, marketing or organisational innovation, according to definitions of the Oslo Manual.
- **Late Stage:** Late or Later Stage is a term used loosely by different organisations to refer to various types of investing in mature firms including spin-outs of operating divisions, expansion, turnaround, replacement capital and buyout. **Nascent Stage:** An individual who have taken steps to create a firm but has not yet done so is a Nascent Entrepreneur. This nascent activity is not considered to be *entrepreneurship* in the definitions of the *EIP*, where the timing of the **birth of an entrepreneur** is tied to a *firm birth*. This phase is also referred to as *pre-seed* and *seed* in other studies and reports.
- **Pre-Seed Stage:** The earliest stage *in the development* of a business idea. *At this stage*, an idea is born and a business plan may be in development *but no* concrete steps have been taken to *set up a business*. The term *pre-seed* is often associated with efforts to commercialise research. Australia, for example, has a pre-seed fund to assist commercialisation of R&D by universities and public research bodies. This stage is prior to a *firm birth* and hence prior to the commencement of *entrepreneurship* under the EIP definition.
- **Replicative Firm:** A newly-created firm that provides a good or service that is already provided by another firm in the same market.
- **Seed Stage:** A development phase when founders require financing to conduct research, develop products and explore market potential. This is prior to *start-up* and also prior to entry into entrepreneurship. The future business entity is beginning to take shape but founders have not yet established commercial operations. In *EIP* terms, this stage is part of a *nascent stage*, prior to the *firm birth*.
- **Start-Up:** This discrete event is synonymous with the *enterprise birth* described under *Business Demography*, (Section (iv)). This is the point at which the firm becomes an operating enterprise. Agreement on a convention for measuring the precise timing of the start-up event is important for

production of comparable business demography data but not critical for measures related to access to finance.

- **Start-up Stage:** while the start-up or birth of a firm takes place at a point in time or during a limited period of time, the start-up stage is considered to cover a period in the early-stage life of a firm. During this stage, the firm has begun operations and is paying salaries but product development work may still be under way and sales and revenues may be zero. In the start-up stage, a firm often requires capital for activities such as product development and initial marketing. The start-up stage begins with the enterprise birth and extends through to the start of the expansion stage. As such, there is no universally-accepted period of time associated with the start-up stage. Entrepreneurship indicators based on the first three or five years of the enterprise life are used in the EIP.
- **Turnaround Stage:** This stage describes a situation where an established firm requires capital to address a temporary situation of financial or operational distress. The intervention of turnaround financing aims to overcome difficulties and re-establish prosperity. Turnaround is considered to be beyond the expansion stage.