

# WORKING PAPER

# 9-00

## The financing of innovation with venture capital

An update of the EU benchmarking  
pilot project from a Belgian perspective



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November 2000



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A stylized graphic in shades of gray depicting a hand holding a globe. The hand is formed by several curved, overlapping lines that sweep from the bottom left towards the top right, cradling a circular shape representing the globe. The lines are of varying thickness and opacity, creating a sense of depth and movement.

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## Table of Contents

I	Introduction	1
II	Benchmarking	3
III	The Pilot Project – Financing Innovation	5
IV	Why is the Pilot Project Update necessary and Venture Capital so crucial	7
	A. Investigations leading to positive effects:	8
	B. More qualified investigation results:	8
V	The adopted policy issues and their indicators	9
	A. Business birth and creation of TBFS (technology based firms)	10
	1. The situation in Belgium	11
	2. Comparison with other Member States	11
	B. Investments by business angels and BA networks	12
	1. Business Angels (BAS)	12
	2. Business Angels Networks (BANs)	13
	C. The total of venture capital companies (VCCs)	14
	1. Future prospects	16
	2. State intervention	16
	3. Sectorial preferences	18
	4. Regional Spreading	18
	5. Maximum investment amount	18
	D. VCCs investing volume	19
	1. Funds collected and invested capital	19
	2. Investment stages	21
	3. Investing in high-tech	23
	E. Rate of return and technology risk assessment	25
	F. Exit via stock exchange	26
	1. Second-tier stock exchanges	27
	2. Several regulations related to Stock Markets	29
	3. Corporate governance	30

G.	VC-investments by institutional investors and pension funds	32
1.	Assets and venture capital of institutional investors and pension funds	33
2.	Funds raised from institutional investors by VCCs	35
3.	Prudential rules	36
H.	Tax system	38
1.	Capital gain (bottom-end regime)	39
2.	Fiscal incentives for venture capital investments (front-end regime)	39
3.	PRIVAK/PRICAF (Private Equity Sicav/Bevek) (front-end regime)	40
4.	Intangible investments (front-end regime)	40
5.	Stock options (front-end regime)	41
I.	Government guarantee schemes for risk capital	42
VI	Conclusion	43
VII	Annexe 1: List of Belgian Venture Capital Companies	47
VIII	Annex 2	53
A.	Evca – data	53
B.	Internet Specific (Venture economics)	53
C.	Sectors (EVCA)	53
IX	References	55

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## Introduction

The present report mainly deals with some of the determining factors which govern innovation financing, such as **venture capital** (please refer to attached frame 1), **second-tier stock markets**, **institutional investors'** participation (more precisely pension funds) and last but not least the **fiscal** influence. It is based on the results of the European benchmarking pilot project regarding the financing of innovation. Those results already published by the EU in 1998 had unfortunately insufficient impact in Belgium.

In the meanwhile the situation on the venture capital market has changed, and additional data are now to be taken into account. In the wake of the pilot project, Flanders IWT<sup>1</sup> carried out and released two studies related to venture capital. Within the framework of the so called "Prometheus project", the Walloon Region has also strived to initiate similar policies on this particular matter.

The EU Commission too went onto the offensive and developed a Risk Capital Action Plan likely to be operational by 2003 as well as a Financial Service Action Plan to be implemented in 2005 as agreed by the Lisbon Council. After having submitted the Risk Capital Action Plan at the end of 1999, the ECOFIN Council urged the Commission to launch a Risk Capital Benchmarking Process. In this perspective the Commission is currently working on defining several key indicators such as venture capital/GDP ratio, the number of companies receiving seed money, the number of new stock market quotations, etc. The Commission also expects the early stage financing level to have trebled by 2003<sup>2</sup>.

Meanwhile, in May 2000, the Commission released a second progress report on the Financial Services Action Plan<sup>3</sup> and published last October a second progress report about the risk-capital action plan<sup>4</sup>. All these reports propose sets of measures aiming at improving the overall functioning of the capital markets. The Commission clearly shows its intention to speed up the process.

This report endeavours, from a Belgian perspective, to integrate all these fresh data and advancements. It gives Belgium the opportunity to distinguish itself throughout Europe and gives a general picture of the lately planned and achieved regulation's amendments.

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1. Flemish Institute for the development of industrial scientific and technological research.
  2. Commission of the EU: "Progress on financial Services; second report" COM(2000)336 final;p.9.
  3. European Commission: "Progress on financial services; Second report" COM(2000)336, 30.5.2000
  4. European Commission: "Communication of the Commission to the Council and the Parliament. progress report on the "Risk Capital Action Plan" COM(2000)658, 18.10.2000

## FRAME 1 - The financing of Venture Capital

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**Venture Capital** : the financing of companies with equity investments throughout their development stages, (see frame 2 below). Risk capital includes "Private Equity" and Capital raised from "secondary securities markets".

**1. Private equity:** venture capital directed towards unquoted companies.

Although venture capital is only a subset of private equity, the term private equity is used to refer to venture capital.

**Venture capital:** capital needed for the launch, early development and expansion of mostly high-tech companies with profit expectations. Since these companies are often associated with intangible investments, an unsecure market and a negative cash-flow, they don't generally benefit from debt financing schemes. Besides money these companies are also granted managerial support which is specific to venture capital investments.

There are several forms of venture capital:

**a) Formal venture capital :** capital raised by **venture capital funds**. These are funds set up to invest capital during a set period of time and to generate profit in doing so, they are called **close-end funds**. There are also investment firms, the **open- end funds**, which are set up for an undertermined period. Sometimes financial institutions have their own venture capital funds : **captives**. Aside from these funds there are also **venture capital companies (VCCs) i.e.** companies which are responsible for managing capital investments.

**b) Informal venture capital:** applies to capital invested by wealthy informal private investors called **business angels**.

**c) Corporate venturing:** big companies which acquire a minority participation in small unquoted businesses.

**d) MBO/MBI:** In the US venture capital does not include management buy-outs ( management takes over) or buy-ins ( new management buys in), in Europa it does because it is moslty associated with VCC's financial support.

**2. Second-tier stock exchanges:** stock exchanges specialized in high growth SMEs and high-tech companies (for instance: Nasdaq, Easdaq, AIM, Euro-NM...).

(1) European Commission: " The competitiveness of European industry. 1998 report" / OCDE: " Venture Capital: supply vs. demand issues" DSTI/IND 10.12.2000 and " Venture Capital and Innovation" GD(96)168 / EVCA yearbook and guidelines.

(2) Including convertible loans and warranted loans.



## Benchmarking

Europe had actually been lagging behind the US and Japan in productivity, job creation, and structural reforms regarding new markets opportunities and technologies. That's why the European Commission proposed in 1996 the implementation of the "Benchmarking System" so as to boost the European industrial competitiveness<sup>1</sup>.

Benchmarking (BM) originated in the US in the second half of the 70s as a sustainable and systematic process to assess and compare productivity of organizations and processes with the best performances achieved in the field. The ultimate goal of benchmarking is to learn and make the most of the comparison with the so-called "good or best practices" in order to harmonize one's own policies and subsequently to raise up performances.

Towards the end of 1996 both the EU Commission and the Industry Council urged the Member States to initiate some BM pilot projects. Four of those projects were launched and Belgium collaborated to only one of them, namely: "The Financing of Innovation".

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1. For further information on benchmarking; see: Van Sebroeck, H., Working Paper 7/99: *Benchmarking in a nutshell*, Brussels, Federal Planning Bureau, 1999 (Dutch and French versions).





## The Pilot Project – Financing Innovation

All Member States except for Luxembourg took part in the experiment. The pilot project's procedures make provision for that one of the Member States should take on the overall supervision, assisted in this task by an independent advisory committee. The coordination of the plan "Financing of innovation" was handed down to the Danish Ministry of Business and Industry, with the helping hand of the Irish Bannock Consulting.

The 4 projects shared a common approach: firstly, the crucial issues which proved open to improvement had to be selected. Secondly, the key indicators which were the most liable to illustrate those topics had to be described. On the basis of reciprocal comparison of those indicators and their respective underlying regulations, policy measures resting on the already noted "good practices" had eventually to be elaborated.

Through a study group composed by the concerned departments, the National Bank of Belgium, the Enterprise Central Council and the Regions, the project was coordinated at the Belgian level by the "Federal Planning Bureau", the appointed Belgian representative within the European Steering Committee.

This pilot project was set up in one year time, submitted to the European Industry Council in November 1998 and finally released. It can be consulted on the web at: <http://www.benchmarking-in-europ.com>

The present paper is based on the pilot project but was as fully as possible updated with the latest developments, data and sets of policy measures.





## Why is the Pilot Project Update necessary and Venture Capital so crucial

The very purpose of the pilot project was to analyse some key indicators and blueprint prerequisites as regards business creation and financing of innovation and to determine their efficiency level which differ from one indicator to the other. The different results should be compared to those obtained by countries which do better in that field, notably the US, Israel, Japan and Taiwan. However the last two nations were ultimately excluded.

The pilot project essentially focused on start-ups and the so-called TBFs (Technology based firms). But SMEs had to be given particular attention as well because they in particular are likely to encounter more difficulties in raising the required capital.

The search was directed towards equity financing of innovation, or in other words towards risk capital or venture capital. This is mainly due to the fact that in order to finance their setting up, SMEs must often recourse to bank loans. This particular financing option however is not always possible notably in the context of innovative projects and start-ups because of the required collateral. As far as high-techs are concerned, such as biotechnological firms and ICT (Information and Communication Technology), huge investments in R&D need to be made long before generating any kind of profit can even be considered. However the recourse to bank loans is still widely used, anyway more than venture capital. In march 2000, bank loans granted to Belgian companies represented no less than 2895.5 billion BEF compared to a 72.4 billion venture capital portfolio in December 1999, that is to say a forty times less volume.<sup>1</sup>

The importance of venture capital to growth and job creation is not that obvious. On the one hand, some factors observed reveal a positive trend due to the fact that young high-tech companies, often originating from university spin-offs, seem, compared to classical businesses, to generate more job opportunities, and to experience a productivity increase thanks to venture capital. On the other hand, recently carried out studies give rise to more mitigated prospects.

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1. Source: for bank loans: press release [www.abb-bvb.be](http://www.abb-bvb.be) and for venture capital: evca

## A. Investigations leading to positive effects:

1. According to a study carried out by Coopers & Lybrand over the period going from 1991 to 1995, 500 venture backed companies in the EU, which responded to the survey, experienced a higher economic growth rate than the one achieved by the 500 European leading firms. Their average sales figures increased by 35% annually: which is equivalent to the double of top-ranking companies' turnover. Their average employment rate grew by a yearly 15% against barely (versus) 2% for the 500 major companies<sup>1</sup>.
2. In England, over the period 93/97, the employment rate of venture backed companies has increased by an annual 24% versus the national yearly average of 1.3%.
3. The companies listed on the Neuer Markt and the Nouveau Marché by the end of 1998 experienced an employment growth of respectively 40 and 47% per year<sup>2</sup>.

## B. More qualified investigation results:

1. A joint investigation conducted by both the Babson College and the London Business School on the "Global Entrepreneurship Monitor" (GEM)<sup>3</sup> indicates that growth and employment and the percentage of start-ups are closely related.
2. Manigart and Van Hyfte (Gent) as for them give a more variegated overview through their inquiry targeting 187 Belgian companies into which VCCs have invested between 1988 and 1995.<sup>4</sup> It emerges from this survey that VC-backed businesses on an average do not generate more employment than other businesses, except for the start-ups subgroup whose job creation expansion rate noticeably increased after the 3<sup>d</sup> and 4<sup>th</sup> years. Furthermore venture capital seems to act as an efficient "remedy" against failures, thanks to the raising of financial resources. But this "antidote", once the capital is invested, proves to be effective for 2 years only. The authors admit indeed that their investigation is to a certain extent restrictive: a larger sampling and an inquiry period beyond 5 years could have entailed more eloquent figures.

Since the publication of the pilot project, the situation on the VC-Market has sensibly changed. The VC- supply is rising, the Stock Markets gained momentum on a global scale, starting high-tech companies apply for stock exchange quotation. The number of spin-offs has also increased. Institutional investors and pension funds in particular play a more and more significant part on the VC-Market and last but not least authorities set about amending their national regulations. In view of all this, an update of the pilot project seemed relevant.

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1. EVCA: "The economic impact of venture capital in Europe" (without date ref.)  
2. European Commission: "Risk Capital: Implementation of the Action Plan."; European Economy, suppl. A, no 12-1999, p7.  
3. A. Zacharakis, P. D. Reynolds, W. D. Bygrave: "Global entrepreneurship Monitor. 1999 Executive report", Babson college; Kauffman Center's Web via Babson [www.babson.edu/globalstudy.htm](http://www.babson.edu/globalstudy.htm)  
4. S. Manigart, W. Van Hyfte: "Post-investment evolution of Belgian venture capital backed companies: an empirical study" Babson College 1999; [www.babson.edu/entrep/fer/papers99](http://www.babson.edu/entrep/fer/papers99)



## The adopted policy issues and their indicators

The project steering committee selected 12 policy issues and their indicators on the basis of their relevancy to the matter. Each issue was associated with one or several listed indicators likely to give concrete expression to benchmarking. The purpose was to define and thereafter correlate international comparable data with the 20 indicators which were eventually adopted<sup>1</sup>.

Table 1 includes a listing of all issues and indicators which have initially been integrated in the project. The indicators can be further divided into three groups: the venture capital market, the exit potentialities for the investors and the framework conditions.

**TABLE 1 - Policy issues and indicators**

Policy issues	Indicators
I. Market conditions and performance	
TBF formations	1. Business birth rate
Informal investment	2. Investment by business angels as percentage of VCC investment
Banking activity	3. Total volume of advances to SME
Venture capital activity	4. Number of VCFs
	5. Volume of VCC investment by investment stage and proportion of cross-border investments and funds raised
	6. Rates of return
II. Exit conditions for investors	
Effectiveness of stock markets	7. Extent of second tier markets
	8. Entry conditions and prospectus rules
	9. IPO Costs
	10. Number of IPOs, technical & non-technical, number of cross border issues
	11. Number of VCC exits by IPO and trade sale
III. Other framework conditions	
Institutional investment	12. Volume of investment in equities
	13. Prudential rules / legal constraints
	14. Investment by pension funds and insurance companies in VCFs
Taxation	15. Treatment of expenses on intangibles
	16. Capital gains treatment of options
Government support for innovation finance	17. Number and average capital of public funds
	18. Market share of public loans and guarantees
Technology risk assessment capacity	19. Description of capacity
Industry-university relations	20. Description

1. Initially 55 indicators were selected. This figure was later reduced to 13 and eventually widened to 20.

This update carried out from the Belgian view point does consider the most meaningful indicators with an emphasis on the so-called “better and less better practices”. Taking benchmarking as a starting point it tends to outline as far as possible the potential policy action to be taken in the field. Fresher data published in the meantime elsewhere have been incorporated by way of supplement.

## **A. Business birth and creation of TBFS (technology based firms)**

The pilot project defines TBFS as “enterprises founded to develop and produce goods and services which embody a significant element of recent science. TBFS cover enterprises in information technology, biotechnology/life science, medical equipment, scientific instruments and other science based industries with a high research and development (R&D) content “. Here’s a more general definition by Rickne<sup>1</sup> : “Firms having technological competence as a dominant variable affecting their competitive advantage”.

Some scientific studies clearly showed that though representing only 5 to 10% of all start-ups, high-tech starters turn out to have a faster growth rate. In the US, over the period 1991 to 1995, only 3% of those firms called “gazelles” for their drive and size, accounted for 80% of job creation. The 5500 companies quoting on the NASDAQ generated 16% of the employment volume in the early 90s. A recent study by the OECD quote Geroski and Baldwin respectively claiming that 30% of productivity growth for the UK and the US is due to business birth<sup>2</sup>.

The same report by the OECD<sup>3</sup> indicates that the creation of new firms is hindered by excessive, tedious and expensive administrative formalities. Those procedures appear to be by far more flexible and milder in the US and in the UK than in the EU. (Belgian figures are not available).

Data related to the creation of TBFS are scarce and unreliable (in the US too) as well as for the setting-up of companies in general. It is due to the fact that statistic methods differ from country to country. To fill in the gap the EU Commission has developed together with the Member States a large scale scheme aiming at the institution of a coherent and consistent database. The first figures should be available by early 2002. The pilot project data below are to be taken as rough un-exhaustive indications.

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1. A. Rickne: “New technology-based firms in the evolution of a technological field. The case of biomaterials” Babson College 1999; [www.babson.edu/entrep/index.html](http://www.babson.edu/entrep/index.html)
  2. OECD: “Venture capital: supply versus demand issues”; DSTI/ind(2000)1, p.8.
  3. Idem p.11

## 1. The situation in Belgium

In Belgium some 20 600 firms which have handed in a balance sheet were created in 1996. That is to say 6.9% of the 297 000 operational companies<sup>1</sup>. As for Belgium a rough assessment based on a classification of technology related sectors<sup>2</sup> operated by the OECD reveals a birth ratio comparable to the global pivot. Both the global creation and technology percentages had been remaining quite stable between 1994 and 1997. However since 1998 when the rate was 15.6%, a constant downward trend was observed.

Through the impetus of the BEST-practise implementation (business environment simplification task) a number of indicators were gathered. Indeed the EU (DG ENTR), aiming at the corporate climate improvement and upturn in competitiveness, has prescribed the enforcement of this very practise in all Member States in 1999. One of these indicators was the so-called 'business birth rate' which applies to all companies without distinction (even those without a balance sheet). In Belgium 60 716 new companies were created in 1996 bringing the total to 685 194 units and inducing a creation rate of 8.86%. Considering the ceasing of trading, we get a net rate of only 0.32%. These data take into account all VAT- liabilities, such as cafés and part time artists for instance. As a result some differences in the figures appear. The pilot project strived to make a comparison on the basis of more or less comparable data.

## 2. Comparison with other Member States

In view of the previously stated 6.9% creation rate, low levelled Belgium, France, Sweden and the Netherlands are doomed to wear the same dunce's cap. The UK produces the best results with ratios nearing the 17.8% in 1986. However those figures don't really lend themselves to liable comparison.

The question is whether mergers for instance are registered in the same way. In Sweden, unlike in Belgium, figures don't include the changes in legal statuses. There are in all likelihood not so big differences between the EU countries and the US. That's what emerges from the carefull projects' conclusions which runs counter to the general opinion.

The already above mentioned GEM's study by the Babson College and the London Business School respectively states the following birth- and liquidation rates for enterprises with employees in the US: 14 to 16% and 12 to 14%, meaning a net creation of 2%.

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1. We are referring to companies' data taken from the balance sheet administration. Among the new firms there are also firms that change their statutes.  
 2. OECD: "Revision of the high-technology sector and product classification" STI working papers 1997/2; OCDE/GD(97)216

On the same way as other SMEs, TBFs can call on bank funding. However this type of funding is not so easy to get for TBFs which on an early stage are mainly and only relying on intangible investments and have therefore a restricted room to manoeuvre. Firstly this requires huge capital and the risk of failure is not to be underestimated. Secondly they often lack the indispensable expertise to be able to assess the investments in question. Consequently venture capital availability proves essential for TBFs. Be that as it may, bank funding remains quite significant in all respects.

## B. Investments by business angels and BA networks

According to the EVCA and the BVA<sup>1</sup>, private individuals<sup>2</sup> invested a global 871 million BEF in 1987 in Belgium, i.e. 11.3% of the total venture capital volume raised the same year. The table below shows a comparison over several years between Europe and the US: Belgium doesn't at all lag behind Europe as a whole. In 1999 Belgium rings up a strong upward trend compared to Europe but partly due to more exhaustive and better statistical basis.

### 1. Business Angels (BAs)

Business angels are informal private backers, affluent entrepreneurs who mostly put up for sale businesses set up by themselves and subsequently invest a part of their capital in modest not yet quoted, early stage or innovative companies.

**TABLE 2 - Percentage of VC invested by private individuals**

	Europe	Belgium	USA
1993	3.1	0	7.3
1994	2.7	3.6	11.8
1995	3.4	6.7	16.2
1996	7.4	0	6.5
1997	4.0	11.3	12.0
1998	7.6	1.8	na
1999	6.2	13.7	na

(Source: BVA, EVCA and OECD(DSTI/IND)2000/1)

In this regard, BAs put their expertise and experience at disposal so as to achieve short-term capital gain on exit especially through direct selling or to a minor extent via stock markets. Hence the contrast between on the one hand BAS experience based investments and on the other hand VCCs expertise based funding<sup>3</sup>. Several reports show that most BAs invest an average 15% of their capital in unquoted businesses<sup>4</sup> and get involved in maximum three investing operations

1. EVCA: European Venture Capital Association / BVA: Belgian Venturing Association.
2. Besides all other groups "Corporate Investors, Government Agencies, Banks, Pensionfunds, Insurance Companies, Funds of Funds, Academic Institutions, Capital Markets and Capital Gains".
3. K. Debackere, H. Vermeulen, B. Van Looy, E. Zimmerman: "Financing of innovation in Flanders"; VTO (IWT) nr. 15, p.16.
4. C. M. Mason, R. T. Harrison: "The rates of return from informal venture capital investments: some UK evidence" Babson College 1999; [www.babson.edu/entrep/fer/papers99](http://www.babson.edu/entrep/fer/papers99)

at once. In this context, their risk taking margin remains limited which makes room for the preventive detection of fruitless investments<sup>1</sup>. The direct impact on their profit and loss is dealt with ahead in the paper under the heading “internal rate of return”. At the moment of BAS exit, sponsored companies set to be prized by VCCs, then willing to finance their growth.

The importance of BAS undoubtedly lies in the investing volume on the US and British markets. By way of comparison with VCCs, BAS invest a respectively 5 and 4 times greater volume in those countries<sup>2</sup>. According to the EU, BAS main sphere of activity lies in the UK, the Netherlands and Finland and to a lesser degree in the other Member States, relegated to a position of secondary importance<sup>3</sup>.

In the US it has been recently noticed that numerous service supplying companies, probably under the impetus of the stock market growth, started to play a significant part as BAS. Indeed instead of demanding compensation for the service provided, they ask their running costs to be paid in cash and their profits in shares. Through share ownership they aspire to take advantage of potential capital gains in the long run<sup>4</sup>.

The number of BAS is unknown by definition. The “Centre de Recherche PME et d’entrepreneuriat de l’Université de Liège” counts some 30 BAS established in the French speaking part of Belgium. The amounts invested vary from 500 000 to 5 million BEF<sup>5</sup>.

## 2. Business Angels Networks (BANS)

For SMES, business angels are not so easily accessible since often investing as private persons. To go into reverse, business schools and institutions have been setting up BA-networks, i.e. bodies likely to preserve confidentiality in trade talks between on the hand entrepreneurs looking for VC and private investors on the other hand.

So far the UK above all got positive results with networking and there should be some 45 operational networks of this kind. However they find it difficult to make both ends meet and must therefore seek financial support<sup>6</sup>. Since 1998 the EC supports half of the BAN creation process through the financing of their feasibility studies and the network set-up. Most European Member States responded the action plan. In 1999 and 2000 the number of BANS increased considerably. There are currently about 110 operational BANS in Europe. But the majority (80%) are exclusively based in only three Member States<sup>7</sup>.

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1. This is Benjamin and Margulis’ point of view (New York 1996) quoted in Mason and Harrison (UK) o.c.
  2. OECD: “Venture capital and innovation.”; GD(96) 168, p.8.
  3. EC-Commission: “Risk capital: a key to job creation, implementation of the action plan”; European Economy; 12-1999, p 3.
  4. The Economist; 6.5.2000; p 75.
  5. B. Surlémont, H. Wacquier, F. Nlemvo: “Logiques des réseaux de business angels” Ulg, Centre de recherche PME et d’entrepreneuriat, mai 2000
  6. OECD: “Venture capital and innovation” GD(96) 168, p.12.
  7. Europese Commissie: Progress report risk capital action plan; COM(2000)658, 18.10.2000

In Belgium, on both Brabant-GOM and the NCNV initiative, the Commission subsidized a feasibility study related to the creation of a sector-based BA-project. In Flanders, Europe funded a feasibility study and a network while in the Belgian French speaking area, the BAMS counterpart was backed.

The European BAN puts forward on its website ([www.eban.org](http://www.eban.org)) that government should support and supervise such networks. Indeed, too high management costs in a trade circuit ought to be avoided. An autonomy should be guaranteed. Flanders decided to subsidize a maximum of 5 networks with a 8.5 million BEF quota per BAN and without state interference in management<sup>1</sup>. In April 2000, the Walloon Region set up WABAN.

In Belgium we count some 7 operational networks: Socran (Liège), Vlerick Ban (Gent), BA-Connect (Ulb + Eebic), BA-Limburg (Gom-Limburg), Bams (Business Angels Matching Services), Bizzbees and Waban. They are grouped together in a BEBAN platform linked to the other European networks via EBAN.

In Belgium, the proper functioning of BANS is hindered by several legal barriers. The spreading of information on new projects (via the internet aswell) is restricted to 50 members. Beyond this figure a prospectus in being imposed (Royal Decree 7.7.99).

A recent Belgian study on the ICTsector states the following: *“Present observation of the capital market reveals a strong increase in the volume of liquid assets, and an increased intervention at the seed stage by private companies and Business Angels. This new context of an abundance of liquid assets puts into question the positioning of the public authorities in this field.”*<sup>2</sup>. A response to this can be found ahead in this paper.

### C. The total of venture capital companies (VCCs)

Next to self financing, bank debt financing constitutes the most important financial source for companies. The companies' debt financing rate amounts to 50% in the Netherlands, 70% in France, Germany and Italy and 80% in Spain vs 20% in the US<sup>3</sup>. For young high-tech companies and especially starters, debt financing proves delicate because they often still have negative cash flow and are not in a position to offer sufficient business guarantee. Venture capital is vital for such companies and there should be as a result a sufficient high VCCs supply.

For 1997 the pilot project lists the number of VCCs, with a ratio in proportion to the GDP. Belgium turns out to be proportionally not badly positioned at all. We are listed above the European average and even above the UK, which in absolute terms does better than the 14 Member States with the exception of Luxembourg.

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1. Policy note 2000-2004 Flemish Economy Minister
  2. Grid Electronic Publishing Consultancy, Lentic, Univ. de Liège: “The Electronic Information Services Industry in Belgium 1997-1999; a survey and report for the European Commission and the Belgian Federal Office for Scientific and Cultural Affairs”, Dec. 1999, p.113.
  3. EC-Commission: “Financial services: building a framework for action” COM(1998)625 final p1.

However one should note that the quoted 26 VCCs for Belgium were at the time affiliated to the BVA. Since then many more VCCs have been registered. BVA and EVCA are the two most important authorities in the field but not all VCCs are part of them. Furthermore it happens sometimes that the parent company only is affiliated while, in some other cases, a specialized subsidiary joins. Here are two examples illustrating this situation:

1. Registered parent company: GIMB  
unregistered subsidiaries: BRUSTART and BRUFICOM
2. Unregistered parent company: SRIW  
Registered subsidiary: TECHNICOM

**TABLE 3 - The total of vccs according to the pilot project**

	total	GDP 1997 (USD)	Ratio
AUT	40	206.2	19.4
BEL	26	242.5	10.7
DNK	15	163	9.2
FIN	29	117.5	24.7
FRA	111	1393.8	8.0
DEU	115	2115.4	5.4
GRC	4	119.1	3.4
IRL	17	72.7	23.4
ITA	56	1146.2	4.9
NDL	49	362.9	13.5
PRT	14	97.5	14.4
ESP	46	533.4	8.6
SWE	41	229.5	17.9
GBR	130	1278.4	10.2
EU14	693	8078.1	8.6
USA	1800	7819.3	23.0
Israel	70	100	70.0

(Source: EU Benchmarking-pilot project Financing of Innovation)

It was attempted in the appendice to assess the number of VCCs based in Belgium. The list is without doubt not exhaustive. There is still uncertainty as to the accurate number of so called "invests" interfering with VC (according to the central balance sheet there are in Belgium 185 companies which use the denomination "invest"). The same stock listing problem applies to the number of corporate ventures (companies with a VCC as subsidiary, such Telfin depending on Tractebel). Moreover some insurance companies (such as Mercator-Noordstar and De Vaderlandsche) invest in venture capital without having a distinct company. It is obvious that our country counts many more than the 26 listed VCCs. The table below gives an overview of this list in appendice.

**TABLE 4 - Number of companies currently located in Belgium and granting venture capital**

Source	Number
1. Member Companies of EVCA and BVA	41
2. Other various sources	21
3. Unregistered parent companies or subsidiaries	9
4. University VCCs	9 (sopartec-Ucl comes in 1)
5. Regional Invests	22 (Sambrinvest comes in 1)
Total	102

Proportionally to the 1999 GDP, those 102 VCCs should generate a 44.0 ratio instead of 10.7 as mentioned in the pilot study. Those figures should allow us to take a strong leading position in Europe and even to rival with the US. Moreover one should keep in sight that several foreign VCCs are based in Belgium such as the English 3i, the Scandinavian Industri Kapital, the Swiss UBS, Bainlab and Evolution of Bain Capital, etc.

### 1. Future prospects

Innovation means giving further incentive to economic growth<sup>1</sup>. In this regard it is vital that an increasing number of VCCs are willing to take more risks when investing in high-tech start-ups: in other words VCCs willing to make early stage investments. Information about the investment stage is known for 66 out of the 102 VCCs and out of these 66 remaining, 25 (i.e. 38%) effectively invest in early stages. Should we integrate the VCCs which have no marked preference and from which we can expect early stage investments, we would get a total of 56 VCCs prepared to finance a firm in its early stage. i.e. more than the half of all VCCs.

Sometimes it can be read or heard that the Belgian MBO/MBI market is underdeveloped while at the same time this investing stage arouses more and more interests. At any rate, 14 VCCs out of 41 registered by EVCA or BVA (i.e. one third again) are disposed to invest in MBO/MBI.

### 2. State intervention

Out of the 102 VCCs based in Belgium, 41 (i.e. 40%) are controlled by the government. This fairly high percentage is to be ascribed to the local Walloons "Invests". Disregarding this, the government still plays even if provisionally a major part in the VC-sector with the stock quoted GIMV, SRIW, GIMB, GIMVINDUS, LRM and VMH. Manigart and Van Hyfte point out in their study<sup>2</sup> that government accounts for more than half of the invested VC in the 80s: the highest percentage of the considered countries.

The study also reveals that low VC-investments in starters were inversely proportional to the significant direct state investments and this eventhough the whole VC sector had grown strongly.

1. B. Van den Cruysse: "De impact van innovatie op de groei van toegevoegde waarde en tewerkstelling"; Federaal Planbureau; working paper 9-1998; 61 pag.
2. S. Manigart, W. Van Hyfte: "Financiering van innovatie in Vlaanderen; de venture capital-sector in internationaal perspectief"; IWT studies nr 24; april 1999; p.12.

Though contradictory it may seem, public funds could be invested in a sector that owes its very expansion to private funded operations. However, the regressions put forward by both authors show that Government committed itself and firmly intended to remedy and compensate the paucity of investments in seed and start phase (refer to frame 2). That was clearly the case in Belgium. Two factors can justify this earlier financiers' disinterest in seed money: the lack of exit opportunities and the several years needed to achieve it (10 years on average in Europe compared to 6 to 7 years in the US)<sup>1</sup>.

Belgian VCCs with state participation have grown from a historical viewpoint and have undoubtedly been playing a stimulating role in the granting of high risk-bearing capital. In this context, Belgium has proportionally reached a leading position in early stage financing (this point will be dealt with again further).

Flanders has already decided to reduce its interest in the GIMV. Besides it should be outlined that a VCC willing to be something else than a local pawn is duty bound to get involved in brainstorming regarding technologies and developments in other countries. Otherwise, in the present global economy, VC-seeking companies will turn to larger international VCCs. *"Belgium and the Netherlands together still constitute a minor market. In the field of life sciences for instance 10 deals a year on a average are generated. In this sector the GIMV strikes a maximum of 2 to 3 deals. Should the 3 experts, currently working in the field of life sciences, exclusively deal with Belgium and the Netherlands, their activities should prove counter-productive."*<sup>2</sup> Specialization and large scale activities are therefore essential, even for historical VCCs benefiting from state participation.

Through state intervention, the English stock quoted 3i developed into a VCC and now employs some 800 persons, having 30 subsidiaries based in 9 countries (in the meanwhile the state contribution is no longer in force)<sup>3</sup>.

In its recommendations of June 2000 regarding "Broad Guidelines of the Economic Policies"<sup>4</sup>, the European Council asserts that Belgium *"should give high priority to make further efforts to encourage private, as opposed to public, venture capital"*. This stand meets the conclusions of a study by Leleux, Surlemont and Wacquier<sup>5</sup> about private versus public VC within the European Member States. They claim that *"countries with strong public-sector involvement in the VC-industry will tend to develop over time smaller VC-industries and countries with large public VC-firms (expressed as a percentage of total VC-funds invested over the years 1990-1996 accounted for by public investors) tend to be associated with smaller amounts of cumulative funds raised... Public venture capitalists tend to be associated with later stage deals in general"*. This last observation perhaps applies to Europe as a whole but certainly not to Belgium, on the contrary. Moreover the numerous small VCCs don't seem to hamper VC-investments since, as we will see ahead, Belgium is fourth on the

1. VEV-snelbericht: "Ronde tafel venture capital"; 26.2.1998; p. 30.

2. Flemish Parliament: "Gedachtenwisseling met een delegatie van de GIMV en eventuele andere deskundigen over de ontwikkeling van de Europese markt voor risicodragend kapitaal en een toelichting bij de positie van de belangrijkste spelers" Session 1999-2000 / 10 may 2000/paper 289 nr 1, page 11

3. idem

4. Council of the EC: "Council recommendations of 19 June 2000 on the broad guidelines of the economic policies of the member states and the community" 9223/00 Ecofin 154,p23.

5. B. Leleux, B. Surlemont, H. Wacquier: "State vs. private venture capital: cross-spawning or crowding out? A pan-European analysis"; Babson College, Ulg;1999

European list of invested VCC. Besides Belgium counts far enough operational private and foreign VCCs specialized in sector-based activities and investment stages. A reliable comparison on the subject between the Member States entails considering the state intervention together with the public guarantee system to which VCCs are entitled. (Cf. Point 9 supra)

### 3. Sectorial preferences

For 52 out of the total 102 VCCs the sector investment preference is known. 30 VCCs have a marked preference and the remaining 21 claim to be unbiased. 12 VCCs are exclusively specialized in ICT, but should the VCCs be added for which high-tech investments deserve priority, than we come to a total of 21. As a result (in absolute terms and disregarding the maximum invested amounts), there are enough VCCs in our country which are likely to take risks investing in the “New Economy”.

### 4. Regional Spreading

The respective head offices of 97 out of the 102 listed VCCs are officially known. The regional spreading occurs as follows:

Fl	35
Wall	38 (including the 22 invests and their VC-subidiaries).
Bru	24

### 5. Maximum investment amount

We know about the maximum investing capacity of some 59 VCCs: most of them invest in fairly minor participations (only 5 out of the whole Walloons backers invest more than 40 million BEF).

For 8 VCCs (Wallonia-based invests excluded), the maximum investing amount per project adds up to only 20 million BEF. Only 3 VCCs happen to benefit from big deals, i.e.: GIMV, Belgacom Multimedia Ventures and Pantheon Ventures Ltd.

40 VCCs quote a maximum amount dedicated to investments	< 202 million BEF (<5million euro)
16	" of 202-807 million BEF (5-20million euro)
3	" > 807 million BEF (>20million euro)

When claiming the available VC-volume is too limited in Belgium, venture capitalists infer large amounts passing the 500 million BEF. Belgium is in a position to contribute to the birth and growth of SMES through VC. Yet as soon as significant assets are needed in view of setting up overseas expansion for instance, several backers should rally to raise the funds. But this demands both time and energy. The possible anchoring of major firms implies large VCCs as well as cohesion between Belgian and European VCCs. As regards anchoring, our own reference-

shareholding system plays a significant role. Many Belgium firms' growth is actually being hampered by the control position enjoyed by the majority shareholders. Contrary to Belgium, the Netherlands have opted for "structural companies" within which the shareholder plays a less important part than the management, a system making anchoring easier. (Euronext, the Belgian-French-Dutch Stock Market has decided upon this very company type). This topic is dealt with again further in the chapter dedicated to Stock Markets.

## D. vccs investing volume

### 1. Funds collected and invested capital

#### a. Comparison between the EU and the US

The first comparison point between Europe and the US lies in the volume of annually raised VC. The contrast is so to speak distorted by the fact that the US definition of VC is more restrictive than in Europe. To this must be added that the European EVCA data are based on a survey in which we are not sure all VCCs have been listed<sup>1</sup>.

The table below shows that the VC volume is still 4 times as big in the US than in the EU.

**TABLE 5 - Yearly collected and locally invested vc-funds (billion USD)<sup>2</sup>**

	US		Europe (excl. Lux.)		Ratio: US/EU	
	collected	invested	collected	invested	collected	invested
1995	35.50	5.93	5.56	4.11	6.4	1.4
1996	40.32	9.88	9.64	5.15	4.2	1.9
1997	64.39	13.06	22.44	8.31	2.9	1.6
1998	89.14	16.67	22.06	12.55	4.0	1.3
1999	91.18	na	26.26	20.29	3.5	

(Sources: Venture economics (VC+Buyout+Mezz.) / EU: EVCA / Invested VC: OESO / own calculation)

From the table has to be inferred that the ratio "raised/invested capital" is larger in the US than in the EU: Europe does not, domestically seeing, invest less than the US (for Europe only 5% was invested outside Europe in 1999). The differences lie in the fact that not all the available capital is invested at once and, more important, VCCs often invest their capital abroad. Hence the gap between the raised and invested capital in the US and the EU.

1. In their study "State vs private VC" (o.c.), Leleux, Surlemont and Wacquier mention that 3i, which is the most important VCC in England, does not report to the EVCA
2. The invested amounts for the EU are extracted from the OESO study "demand vs supply" (o.c.), and coincide with the EVCA-data on domestic investments, reason why the 1999 EVCA figures have been used.

## b. Reciprocal comparison between the EU Member States

Compared to the other Member States, Belgium comes 8<sup>th</sup> a regards invested VC, but 4<sup>th</sup> if in proportion to the GDP in 1999. All Member States have been ringing up a sharp growth of the invested VC over the period 1996/1999. This rise, as can be seen in the table below, had a direct impact on the ratio Investments/GDP. Especially in 1999, most countries, Belgium included, noted a big rise of about 60% of their VC-investments volume. (With sharper peaks for Sweden, Greece, Denmark, Portugal and Spain). Considering the GDP/VC proportion, the UK as well remains unassailably top-listed, directly followed by Sweden and the Netherlands. While most countries roughly keep the same position, Belgium together with Finland and Germany gain ground: we come from the 7<sup>th</sup> to the 4<sup>th</sup> place.

**TABLE 6 - Total annual invested vc (ECU 1000)**

	1996	1999	Ratio: VC/GDP				%domestic investments	
			1996	rank	1999	rank	1996	1999
GBR	2 972 641	11 500 859	320.6	1	853.2	1	84	75
DEU	715 492	3 158 817	38.1	11	159.4	8	91	85
FRA	848 664	2 816 735	69.3	4	209.1	5	95	80
ITA	509 777	1 778 934	52.5	6	161.9	7	79	95
NLD	593 458	1 710 361	182.9	3	462.3	3	75	67
SWE	419 995	1 276 925	203.6	2	570.8	2	74	65
ESP	192 912	722 796	40.2	8	129.2	9	99	92
BEL	108 759	673 441	51.5	7	289.0	4	85	65
FIN	40 351	248 527	40.2	9	205.9	6	91	86
PRT	34 154	118 591	39.1	10	113.9	11	98	92
DNK	34 008	116 004	23.6	13	71.1	12	95	97
IRL	37 746	104 976	66.2	5	123.6	10	89	91
AUT	844	89 289	-	14	45.5	14	69	87
GRC	32 168	71 208	32.8	12	60.7	13	44	60

(Source: EVCA and own calculation)

On the same way as Greece, Sweden and the Netherlands, Belgium jumped on the bandwagon of the group that invests the most abroad. In view of the globalisation context, it can be inferred that the proportion of local investments is decreasing on the European scale.

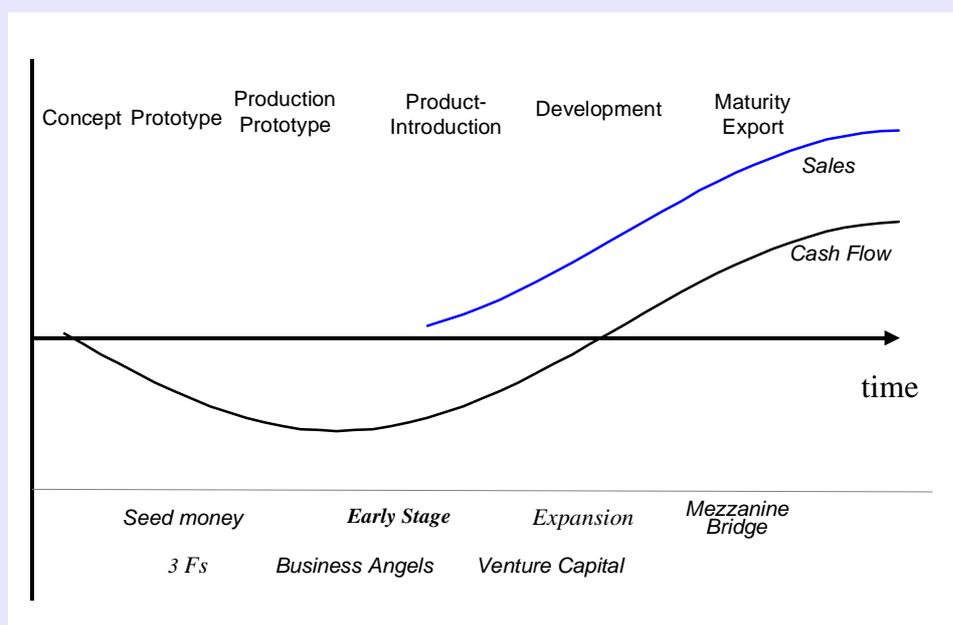
## 2. Investment stages

Venture capital can be granted at different stages of a company's life cycle. We have successively:

- "Seed money", allocated to research and the achievement of prototype;
- "Starters", the product is not on the market yet;
- "Other early stage", for companies needing money to start trading, production and sale;
- "Expansion";
- "Bridge or mezzanine financing", for transition towards quotation;
- "Buy-out or buy-in", take-over by the current or newly appointed management.

The chart below gives a general picture of the different possible investing stages during the life cycle of a company.

FRAME 2 - Life cycle



Entrepreneurs need seed money to finance their product conception and prototype. This venture capital is mostly brought in by what is called the 3 F's (friends, family and fools) and sometimes by a business angel. At the moment of product introduction, bearing still a great risk of failure, the financing is called early-stage financing. This capital is brought in by business angels and venture capital companies or funds. Development funds are given for expansion and finally bridge- or mezzanine financing for growth before an IPO.

Bron: M. C. Adam, A. Farber: "Le finacement de l'innovation technologique" Presses univ de France, 1994, 195p.

Regarding “Great economic guidelines” the European Council says about Belgium in its recommendations of June 2000: *“The shortage of private venture capital, and bridge financing in particular, may in the longer run restrict the growth of the venture capital market”*<sup>1</sup>. The issue of private vs public VC has already been dealt with previously in the debate centered round state intervention. The table below nevertheless questions the so called shortage of bridge financing. It turns out from this observation that our country, besides early stage and buy-out related VC gets the third place in the field of expansion and bridge financing, expressed in terms of GDP. The table below has been expressed in ratios since investment-percentages compared to GDP prove to be insignificant. In 1999 for instance, the Belgian ratio between GDP and the global VC-investments was amounting to 3% so that we shared the first rank in Europe together with The Netherlands, England and Sweden. Results similar to the American figures just one year before.

A more outstanding, meaningful example lies in the fact that, proportionally to the GDP, Belgium got the top place between 98 and 99 as far as seed money and early stage financing are concerned. Innovative and young growth-orientated start-ups are therefore more than in other countries likely to collect the needed VC. Moreover, our investments in seed money are constantly increasing. In 1996, those investments came to only 1% of the whole VC- investments, to afterwards reach 2% in 97, 3% in 98 and finally 8% in 1999. Over 1998 and 1999, Belgium emerged as a leader in the field of participation through seed money, with an average of 6.6 %. Should start-up investments be taken into account, Belgium would also be first-ranked. We only lag behind in the matter of buy-outs and make no secret of it. That's why GMIV and other VCCs are getting down to bridge the gap because it is part of the most profitable area of the VC-market. In England, buy-outs account for 2/3 of the VC-investments.

**TABLE 7 - Investment stages: investments /GDP (ratios, no percentages) (averages 1998 / 1999)**

	Seed		Early stages (Seed+Start-up)		Buy-out		Rest	
	Ratio	Rank	Ratio	Rank	Ratio	Rank	Ratio	Rank
GBR	2.5	<b>6</b>	16.6	<b>8</b>	528.5	<b>1</b>	170.4	<b>2</b>
DEU	8.0	<b>3</b>	37.6	6	26.4	10	66.8	6
FRA	2.1	<b>8</b>	29.4	7	71.4	4	72.9	4
ITA	1.7	9	13.6	10	68.0	5	43.7	<b>9</b>
NLD	1.6	10	71.1	2	103.2	3	210.4	1
SWE	3.8	<b>4</b>	61.0	3	207.8	2	70.7	5
ESP	3.2	<b>5</b>	13.0	11	27.5	9	60.1	8
BEL	13.5	<b>1</b>	76.8	<b>1</b>	15.5	11	111.8	<b>3</b>
FIN	9.3	<b>2</b>	55.0	4	66.0	6	64.6	7
PRT	-	-	10.6	13	33.4	<b>7</b>	39.3	10
DNK	1.6	11	13.7	9	9.9	12	25.4	13
IRL	2.4	<b>7</b>	38.1	5	31.7	8	35.2	11
AUT	-	-	6.9	14	7.3	<b>13</b>	22.1	14
GRC	-	-	10.7	10	1.9	<b>14</b>	27.5	12

(Source: EVCA, own calculation)

1. Council of the EC: 9223/00 ecofin 154; o.c.

### 3. Investing in high-tech

#### a. Comparison of Belgium versus the EU and the US

The United States are ahead as far as investing venture capital in high-tech companies is concerned. Those companies as already mentioned above, do not often benefit from debt financing and must thus turn to venture capital: in 1995 these investments were three times as important as in Europe and in 1999 even five times important. Venture capital helps creating and growing new high-tech companies, this is why we are speaking of a lead. In 1999, 85% of the American venture capital investments were oriented towards the high-tech sector compared to only 30 % in Europe. With 61 % Belgium sits in a relatively good position compared to the other Member States because in 1999 our country invested much more venture capital in computers and biotechnology.

It is outstanding to note that today's venture capital investments in the United States are first oriented towards the Internet sector (for the detailed description of this sector refer to annex 2). These investments absorb 39 % of the total investments in 1999 compared to only 17 % in 1998 (an increase of 471 %). It concerns companies which need large investments to achieve fast acquisitions in reaching a leading position. The majority of investments within this sector benefited the Internet economy. Nevertheless their level seems to be declining: the B2B seems to be the trend setter in the first quarter of 2000 in comparison with the same quarter the year before. In second position comes the B2C. The comparison with Europe falls somewhat short because, as shown in table 8, no figures are available regarding the Internet sector.

**TABLE 8 - vc-investments in high-tech (1999 millions USD)**

Sector	US		EU (excl. LUX)		BEL	
		%		%		%
Communication	8 366	17	2 922	11	183	25
(Computer hardw.)	(1 309)					
(Computer softw.& serv.)	(7 500)					
Computer Total	8 809	18	2 734	11	171	24
Medical/Health	2 457	5.1	1 022	3.9	19	2.6
Electronics	1 740	3.6	536	2.1	10	1.4
Biotech	1 182	2.4	645	2.4	53	7.4
Internet	18 757	39	na		na	
Total high-tech <sup>a</sup>	41 311	85	7 859	30	436	61
Rest	7025		18 162		283	
Total	48 336	100	26 021	100	719	100

a. growth 98-99: US 181 % / EU 134 % en BEL 191 %

(Source: US: venture economics / EU and Belgium: EVCA)

Belgium stands the comparison with the EU rather well. In 1999 the percentage of VC- investments in high-tech was twice as high, proportion however which still remains significantly lower than in the US. The percentage of Belgian investments in telecommunications reached 25% compared to 11% for the EU.

The evolution is even more significant when the comparison is made for 1998: we invested 4% then (for 25% today) while EU were of 8% to reach 11% today. We score relatively better than the US for our investments in the computer related sectors and more importantly in biotechnology where our results are definitively better than in the US. Let's underline that these statements are based on 1999 figures. Hereafter an average was drawn based on 1998 and 1999 results for each Member States in order to level off potential peak quotations.

### b. Comparison of the EU Member States among themselves

Two things emerge from table 9. Belgium comes second after Ireland for VC-investments in the high-tech sector. More than half of these investments are oriented towards the five selected sectors referred to below, this proportion is not reached in the other Member States. The UK which is so to speak the land of venture capital invests only 23% in high-tech. In Ireland as well as in Belgium more than half of high-tech investments go to the computer related sector. Another observation is that the Member States show a different pattern. Comparatively Italy and Portugal invest the most in the telecommunication sector; Denmark and Germany in biotechnology; Sweden in the medical and healthcare sectors and Ireland, Finland and again Sweden and Italy in electronics.

**TABLE 9 - Percentage of the total high-tech sector per country in the total VC- investments and percentages of high-tech sectors in the total per country. (Percentages based on averages from 1998 and 1999)**

	percentage of total high-tech in total VC-investments		Comm.	Computer	Biotech.	Medical	Electr..
	%	rank	%	%	%	%	%
GBR	23	12	36	32	7	16	9
DEU	40	3	22	44	20	10	4
FRA	38	4	48	23	4	17	8
ITA	18	11	73	10	3	3	11
NLD	31	9	25	49	8	9	9
SWE	37	5	24	22	3	40	11
ESP	24	10	52	30	2	10	6
BEL	62	2	31	52	10	3	4
FIN	34	8	17	37	12	23	11
PRT	35	6	66	31	0	3	0
DNK	35	7	19	41	26	7	7
IRL	64	1	26	57	2	2	13

(Source: EVCA, own calculations. Austria and Greece were not mentioned because of the small amounts invested.)

## E. Rate of return and technology risk assessment

Generally, in terms of return the sole difference between a banker, a business angel and a VCC lies in the fact that a banker wants to be refunded, that the BA expects to generate a capital gain and the VCC longs for the maximum profitability on exit.

Since BA and VCC's invest in risk-bearing projects which stand great chances to fail and imply long investment terms, their profit margin must be greater than in safer classical capital expenditure.

Table 10 gives a general picture of the ratios achieved, but one should notice that, in case of huge investments and in the highest quartiles, we get higher ratios than the previously stated ones.

**TABLE 10 - Internal rate of return (IRR) <sup>a</sup>**

	VS	EU	
	1996	1996	1999
Overall	16.5	18.6	14.5 <sup>b</sup>
Early stages	14.2	5.7	10.8

- a. IRR: "rate of discount which equates the present value of the outflows with the present value of the inflows and the present value of the valuation of the unrealized portfolio. It is a pooled rate by taking cash flows and residual valuations from inception to a stated date for each fund and aggregating them into a pool as if they were a single fund."(EVCA).
- b. By comparison: in 1999 Belgian pension funds who invested 53% of their assets in shares, had an average return of 15% (source: Belgian Association of Pension funds)

(Source: Pilot project o.c. and EVCA: European Private Eq.Update no 15/June 2000)

A recent survey<sup>1</sup> gives a clearer insight for England's profit and loss percentages of BAs and VC-funds.

**TABLE 11 - IRR of BAS and VCCs (England)**

IRR (%)	VC-Fund (%)	BA (%)
Negative	64.2	39.8
0 – 24	7.1	23.8
25 – 49	7.1	12.7
50 – 99	9.5	13.3
>100	12.0	10.2

(Source: Murray, Mason, Harrison)

It clearly appears from the table above that the investing percentage generating profits superior to 50% is almost similar for both. However one is forced to recognize that the loss-making investment ratio is also fairly high and that the BAS got by far better results than venture capital funds. This could be explained by the fact that BAS are not like VCFs liable to their investors and furthermore they usually get more heavily involved in their investments.

1. C. M. Mason, R. T. Harrison: "The rates of return from informal venture capital investments: some UK evidence" Babson College (o.c.) with data from Murray;1999.

It is widely admitted that before Europe invested little in early-stage because of the low return rate, which goes against the statement according to which 'the greater the risk, the greater the margin'. The rather limited exit opportunities accounted largely for this tendency. If we refer to table 9, it is obvious that Europe is catching up. This is mainly due to the fact that more experienced assessment is gradually made available to European investment managers. After all for early stage investments in high-tech, not only does the VCC needs to estimate the commercial risk (Is there a reliable business plan? Will the business be profitable and how much money will it bring in?) but also the technological risk (Is the project totally new? Is it technically achievable? Is it competitive?). The VCC must either be of big enough size or operate in a determined sector in order to be able to rely on an specialized investment manager. Resulting from this, Belgium must often have subcontractors carry out the study. The European Commission acknowledges the problem and states<sup>1</sup>: *"Too few backers have the technological skills to assess the investment possibilities in the advanced technologies and the charges to buy information and the necessary know-how are high"*. Therefore the European Commission gives financial support to VCCs which commit themselves to dedicate within the three years following their creation 25 % of their funds to support early stage projects of innovative technological SMEs. Amongst the currently 28 businesses concerned, two are Belgian: Capricorn-VP and ITP-Management.<sup>2</sup>

The Belgian authorities can also play a stimulating role here through research institutions which can be referred to (such as the VITO in Flanders) or through guarantee schemes which reduce the large risks. We will come back on this later.

## F. Exit via stock exchange

The goal pursued by the VCCs when investing is not to build a portfolio or a financial holding, but to sell their shares after a given period to raise surplus value. There are two ways for the VCCs to exit their investments. The most commonly used is to sell its shares to a group or to the very founder of the venture backed company. For young high-tech companies which need funds to complete acquisitions and growth, applications for a stock exchange quotation (IPO i.e. Initial Public Offering) is often the best way for VCCs to exit. The side advantage for such companies is that by getting listed on the stock exchange, they can also grant their personnel with effective valued shares and this might constitute a decisive hiring criteria to attract more skilled and reliable employees. The exit issue and consequently the VC-financing also, is closely related to the control perception of the company owner. While VCCs are only giving a helping hand at early stage, an exit often implies that the leaders of a company must give up control. (This can be prevented to a certain extent. Lernhout & Hauspie for instance had still some control though holding only 10% of the company's shares.)

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1. Transfert & Innovation Technologiques, Vol 1 /98, p9.

2. The I-TEC project started in 1997. Website: [www.cordis.lu/finance](http://www.cordis.lu/finance).

## 1. Second-tier stock exchanges

For IPOs of young high-tech companies and thus implicitly for VCCs, which do not always have exit opportunities even though these are the most profitable to them, is the existence of second-tier stock exchanges essential because they turn out to be cheaper and to ease things.

Besides, It has been noticed that the growth of venture capital is closely linked to the IPO activity<sup>1</sup> development, in other words to the existence of a thriving secondary market.

Some time ago, European stock exchanges were mainly directed towards well established capital-intensive companies, but owing to the success of the NASDAQ (National Association of Security Dealers Automated Quotation), set up in 71, Europe strived on its turn to create special departments, for small and medium-sized companies as to reduce the volume of administrative burden and cut down running costs. In most cases, they proved unable to compete with the Nasdaq-model, on the first hand, because the difference with the primary Stock Exchange was not clear enough and, on the second hand, because the minor obligations were felt as less reliable. All this resulted in a lower liquidity which on its turn keeps back potential institutional investors. In August 2000 some 4800 concerns, amongst which only 3 Belgian companies were quoted on the Nasdaq share price index (Icos Vision, Lernout & Hauspie, Xeikon).

All European Member States (apart from Finland) have secondary stock markets, the most famous are:

- EASDAQ (European Association of Security Dealers Automated Quotation): a Pan-European Stock Market set up in 1996 and located in Belgium: in August 2000 some 84 companies amongst which 14 Belgian ones had been quoted.
- EURONM (European New Markets): the very first European trade association (1996) of secondary Stock Markets for high-tech companies based in Paris. Followed in the wake: Amsterdam, Brussels and Frankfurt in 1997 and Milano in 1999. At the end of July 2000, 438 concerns had been quoted, amongst which 16 Belgian companies. This Stock Market was finally wound up to make room for Euronext. The quoted securities should each be integrated on their respective domestic stock markets.
- AIM (Alternative Investment Market): a London-based stock market set up in 1995. In June 2000, 429 companies were quoted.

Those 3 secondary stock markets together represent only a minor proportion in comparison to the Nasdaq.

Let's mention in passing that the Brussels MIM (Interprofessionnal Market) was instituted in 1997 to the benefit of new SMEs not ready to be quoted at the time. The capital had to be raised by banks as opposed to private individuals. This stock market did not come up to expectations.

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1. D. Boogmans: "Venture Capital een analyse van het verschijnsel"; GIMV, 1988, p15 and OECD: "Venture Capital supply vs demand"; o.c., p6.

The European stock market sector's efforts rapidly bore fruit by force of circumstances and owing to several decisive factors. Globalisation with cross-border activities and a more free competition; the population ageing implying henceforth a larger volume of liquid assets to be invested by pension funds. The major institutional investors (i.e. pension funds, banks and insurance companies), eager for secure investing, ask for large-scale and capital-intensive markets involving big multinationals. This change is of great benefit to stock markets. Those requirements had a negative impact in our country with its comparatively small stock exchange<sup>1</sup> and, considering the lack of volume and liquidity, resulted in a too low quotation for basically major stock listed companies. They became therefore potential "takeover preys" and were incapable to redeem on their turn. Europe with its by far smaller markets was not in a position to offer the required volume and liquidity and threatened to regress. Hence the great efforts being made to achieve a more integrated Europe (In 1997 the EU had still 33 markets; compared to 10 in the US, amongst which 3 large ones).

Due to the decrease of the national debt and the low interest rates, shares started taking precedence over Government bonds. The risk culture, implemented long before in the US compared to Europe, saw to it that starting companies as well could be prized by potential backers.

The Brussels Stock Market had grasped the scope of this globalisation trend and hence merged at the national level into BSX and thereafter with the Amsterdam's and Paris' Stock Markets into EURONEXT. In August 2000, EURONEXT totalled 1861 listed companies.

The Stock Market scene is now facing an ultra-fast development. Schemes are being worked out in view of the creation of a NASDAQ-EUROP, a virtual Stock Market for the setting up of various types of mergers and associations. Due to practical problems such as opening hours, clearing (a central middleman stands between buyer and seller) and settlement (liquidation and payment), this evolution does not operate that easily. In 1999 Europe still had 31 CSDs (central securities depositories, where clearing and settlement are carried out).<sup>2</sup>

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1. A rough size order: the stock capitalization capacity on the Brussels' first and secondary stock markets amounts to 1/4th compared to Amsterdam. The Amsterdam capacity accounts itself for 1/2 compared to Frankfurt while the Frankfurt global capitalization volume represents 1/2 compared to London (itself representing 1/5 in proportion to the global New York volume).
  2. European economy; "Risk capital, a key to job creation"; o.c. p 6.

## 2. Several regulations related to Stock Markets

In a global economy with more and more multinationals and an enlarged European Market stimulated by both a single currency unit and a greater activity of institutional investors, overseas transactions intensify and this all has a certain global impact on markets, as a whole. Companies willing to be quoted abroad or institutional backers and private persons aiming at foreign markets have to cope with various constraints and costs.

Those investments can indeed be stimulated on certain sine qua non conditions: transparency, uniformity and more flexible overall regulations. High-tech companies eager for quotation on at least one of the largest secondary markets claim unified regulations in the fields of accountancy, corporate governance and IPO's-related prospectuses. The potential quotation of a Belgian company on EASDAQ or EURO-NM for instance, implies accounting adjustments of the national standards to the IAS or US GAAP<sup>1</sup>. Regarding practical membership's prerequisites, there is still a long way to go towards standardization on the different markets i.e. shareholder value, public distribution, free-float ratio (stocks that can be acquired freely without possible interference by majority shareholders), lock-up period (period during which the current shareholders or the management are not entitled to sell), balance periodicity, content of issue prospectuses and the authority empowered to ratify, etc.

At the Lisbon Summit, it has been agreed upon to implement the "Financial Services Action Plan" by 2005. The plan embodies a Commission's proposal aiming, for all European listed companies, at the drawing up of a consolidated balance sheet, in compliance with the IAS. In such a system, European stocks could be traded on the basis of the same accounts. This alignment can already be allowed by the Belgian Finance Minister as regards the consolidated balance even though the Belgian standard is still in force. A double bookkeeping implies more expenses. From 2005 on, the Member States will be free to impose or not the IAS<sup>2</sup> to the other companies. But by 2007, all companies preparing an IPO will be compelled to adopt IAS.

According to the plan, the EU as well will make use of the mutual recognition of prospectuses and common rules for corporate governance<sup>3</sup>. By the end of 2000 the Commission intend to amend through a draft directive the European text currently governing the prospectus, so as to make foreign markets more accessible. Indeed mutual recognition is a quite controversial matter. This accessibility will be eased thanks to a "single passport for issuers"<sup>4</sup> based on shelf registration. The system is divided in two stages: a restricted prospectus linked to the

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1. Belgian accounting rules are also used for the tax return but gives no clear insight due to the diverse assessment and writing off possibilities The IAS is more rigorous and less favourable in terms of taxation. (A. Van Opstal: licenciate's thesis: Twee balansen voor Belgische ondernemingen; FET 25.8.99)
  2. Europe is opting for IAS because "it has the distinct advantage of being drawn up with an international perspective, rather than being tailored to the US environment. US GAAP, on the other hand is voluminous and is based on very detailed rules and interpretations. Considerable education and training is necessary in order to use its standards." EU-Commission communication to the Council: "EU financial reporting strategy: the way forward"; COM(2000) 359 final; p6
  3. EC-Commission: COM(1998)625 final; o.c. p 6-7
  4. EC-Commission: COM(2000)336 final; o.c. p 10

yearly report with information followed by an issue note at the very moment of issuing (aside from securities related information). This note is supposed to detail the supply and to list securities. Belgium, Spain, France, England and Italy already implemented this method.<sup>1</sup>

### 3. Corporate governance

Corporate governance is nothing else than companies' management par excellence. The reason why this topic is linked to the financing of innovation lies in the fact that the European and foreign institutional investors take more and more interest in euroinvestments for quoted companies. Those backers of course first look into the firms' results but are mainly motivated by the future profit prospects. Those prospects heavily depend on the management ability and reliability within the company. In England for instance (where management abuses were fairly common occurrence: i.e. the granting of royal compensations in the outline of privatisation) a commission has been set up to put right the situation. This resulted in the so-called "Cadbury Code" for model management named after the commission chairman. France followed in the wake with the code Viénot and the Netherlands with the code Peters<sup>2</sup>. Those codes are all recommendations but sometimes aimed at totally opposite purposes. In England the purpose was to protect the shareholder against the management whereas in the Netherlands, with its "structure-companies", one wanted to protect the management from the shareholders.

In Belgium the need for corporate governance emerged much later and was approached from a different way. Our country adopted long ago the so-called reference shareholders system within which the shareholding was chiefly held by holdings (as opposed to the United States, where stocks are mostly being allotted to private persons). It ensues from this that the reference shareholders are especially empowered to appoint the members of the Board. Since the shareholding's interests do not always coincide with those of the company in itself – i.e. the allocation of dividend can take precedence over a long-term strategy or one can decide so sell instead of going on – directors do not always act along the same lines as the minority shareholders, investors or institutional backers, etc...The fact that the reference shareholders system proves not always profitable to location-anchoring is to be taken as a side effect, Belgium is know used to.

This all, through the impetus of the Stock Exchange, resulted in an attempt by the 3 involved bodies (The Stock Exchange and the Belgian Commission for Corporate Governance-the so-called Commission Cardon-, the Banking and Finance Commission as well as the Federation of Belgian Companies) to establish a Cardbury-compatible code. Each authority was assigned a particular market segment. However this tripartite cooperation implied a concerted coordination. The Commission Cardon had to deal with quoted companies, the BFC with yearly reports and the FBC with all types of companies. The recommendations taken were not binding and possible violations could as a result not be punished. In spite of this, more and more companies take them into consideration. In

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1. European economy: "Risk capital a key to job creation"; o.c.; p 26
  2. Several member States now have a code and since 1996 there is even a "European corporate governance network' at the ULB in Brussels. The website can be visited at: [www.ecgn.ulb.ac.be](http://www.ecgn.ulb.ac.be)

December 1999, the Finance Minister announced that he was setting up a working group so as to determine whether Parliament should take measures on the subject. In March 2000, this working group presented a report with suggestions about legislative action. On this basis, the government has drawn up a bill that should be promoted in Parliament by the end 2000. By the end of 2001, the European Commission intends opening an inquiry related to the current codes so as to detect potential legal and administrative barriers.

An interesting benchmark study on corporate governance has been carried out by DEMINOR, an independant consulting office set up in 1999 and standing up for minority shareholders' interests. In 1999, at the request of some major pension funds (and this is a determining factor in the framework of this study), DEMINOR, on the basis of some corporate governance standards, conducted a survey on 160 big stock quoted concerns. The number of companies is divided as follows: Belgium:18, France: 38, Germany: 30, the Netherlands: 25, England: 29, Sweden: 13. The corporate governance characteristics are further divided into 4 subgroups: right to vote, absence of takeover protection, information on the management and eventually on the Board of Directors. DEMINOR makes a classification with a marking and coefficient system from 1 to 5 of bad and good practices. But one should keep in mind that we are dealing here with a sampling of leading companies which are linked to share price indexes.

**TABLE 12 - Corporate Governance rating (1999)**

	Right to vote	No takeover protection	Management	Board of Directors	Total out of 20
GBR	4	4	4	5	17
DEU	4	3	2	1	10
FRA	3	3	3	3	12
NDL	1	1	2	2	6
BEL	3	1	3	4	11

(Source: Deminor website: [www.deminor.be](http://www.deminor.be))

Our country gets outstanding marks as regards the Boards of Directors composition. But a most significant factor lies in the number of independant directors, a modest board (max.12 according to Cardon), the presence of an audit-, compensation- and appointing committee. The UK is top of the list and Belgium manages as well because among the 18 considered companies, all linked to the Bel 20 Share price index, 23% of the directors are independant and 67% have an audit- and compensation committee. Our country only proves badly positioned in the column "Absence of takeover defence system", which seems quite strange in the context of all the recent takeovers. However the DEMINOR - rating integrates the monitoring possibilities and the possibility to increase capital. So in Belgium, due to our holding system (56 % of the 18 considered companies control up to 50% of the capital) and in view of the possibility of an authorized capital system, there is a positive effect upon our rating.

## G. VC-investments by institutional investors and pension funds

As pointed out formerly on several occasions, institutional backers own huge potential liquidity. Although the differences are becoming vaguer and vaguer owing to the breaking down into smaller groups, we have three big groups of institutional investors: pension funds, insurance and investment companies (the third group includes all companies raising funds from the public through equity participations for the purpose of acquiring financial assets). Those companies have become more and more influential on the VC-market for three particular reasons<sup>1</sup>:

1. the population ageing and its direct corollary: the need for pensions,
2. the investment products achieved by ICT,
3. the deregulation of capital markets.

The benchmarking's pilot project puts forward<sup>2</sup> that the volume of pension funds investments, clearly dependant on the population ageing rate, could on the short run become the most significant factor in the financing of innovation's upturn. Indeed, if we work on the assumption that pension funds within the 15 Member States could achieve an assets volume adding up to 70% of the GDP (this figure does not seem unworkable in view of the fact that the Netherlands get 93.3 %, the UK 77.5 % and Switzerland 75.1 %) and that 60% of this ratio could be invested in shares, than we would get a stock capitalization almost 3 times as big as the current one on the primary and secondary European stock markets of the 15 Member States<sup>3</sup>.

Even if the capitalization was to double instead of trebling, it would induce an enormous boost, not only for the European stock exchanges but also for all the service related companies. This would moreover increase the transaction volume and the rising competitiveness would induce a reduction in costs. And soon the global climate improvement would benefit risk capital financing and stimulate initial public offerings.

The impact of pension funds on the stock market can be illustrated by the following anecdote. In the course of 1998, the exchange rate of "Alcatel" once dropped by 38% and saw its stock capital almost divided in half because the big American fund "Fidelity" sold out shares massively because the French company had not in a timely manner notified a decrease of profit<sup>4</sup>.

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1. European Economy: "risk capital, a key to job creation" o.c., p.7.

2. Pilot project: o.c., p 29.

3. Source European stock capitalization: Federation of European Stock Exchanges: [www.fese.be](http://www.fese.be)

4. Deutsche Bank: Making money; July 1999, p 30.

## 1. Assets and venture capital of institutional investors and pension funds

Institutional investors in the US seem to have twice as much assets as in Europe, but Europe seems determined to slowly fill the gap (at least till 1996 because no later figures are made available).

**TABLE 13 - Financial assets from institutional investors 1996** (in billion USD)

US	13382	(growth 93-96: + 39 %)
EU (excl. IRL)	7202	(" + 52 %)

(Source: OECD Institutional Investors, Statistical Yearbook 1998)

As shown in table 13, the differences within Europe are strong as these assets are expressed in percent of the GDP and as the percentage invested in shares is also mentioned. Belgium is in the average for both indicators. The UK is the absolute leader (trend-setter) in the area, together with the Netherlands. Let's point out that the Netherlands invest slightly more in shares in comparison with our country. (28 % for 23 % in Belgium). Out of all the European countries, only Sweden invests as much as the US in shares and only the UK does significantly better than the US with 67 %.

The reserves of the Belgian pension funds (second pillar) and of the pension **sav-**  
**ing** funds (third pillar) amounted in 1997 respectively 1121 and 1070 billion BEF, i.e. 12.9% and 12.3% of GDP<sup>1</sup>, what is said to be low compared to the other member countries.

*“Major efforts still need to be made in Belgium. On the basis of some simplified hypotheses, we can assume that the reserves of the second pillar (company pensions) and the third pillar (individual pension generation) will have to grow by 8 to 10 % per year during the next 25 years in order to be able to guarantee today's active population an income 20 years after retirement (which fills the legal requirements and thus represents 60 % of the last netto salary). This means that a structural increasing portion of the savings of private individuals will shift towards pension funds, investment funds or life insurance funds in the coming years<sup>2</sup>“.*

According to the European Commission, the assets of the European pension funds could rise from around 2000 billion euros (which represents half of the bank deposits) to 3000 billion euros by the end of 2005<sup>3</sup>.

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1. Belgian Pension Fund Association
  2. KBC: “De opkomst van geïntegreerde financiële groepen”; Economisch financiële Berichten; nr 9; 7/5/1999;p7
  3. Commission of the EC: “Second report on progress on financial services”; COM(2000)336final; 30.5.2000; p.5.

**TABLE 14 - Financial assets of Institutional Investors in % of GDP (1996)**

	Institutional Investors (incl. Pension funds and pension saving funds)	
	In % GDP	% shares
USA	181	40
GBR	193	67
NLD	169	28
SWE	120	40
FRA	83	26
DNK	67	31
<b>BEL</b>	<b>63</b>	<b>23</b>
FIN	57	23
DEU	50	14
ESP	45	6
ITA	40	12
AUT	39	8
PRT	34	9
GRC	29	6

(Source: OECD: Institutional Investors, Statistical Yearbook 1998)

The recent takeover of the Dutch venture capital fund “Alpinvest” by the Dutch pension funds ABP and PGGM to become the capital holding APCH, acknowledges the growing influence of pension funds on the venture capital market. Therefore both pension funds invest from now on their capital in their proper risk fund in order to reap all the profit. But given the fact that these investments must serve as collateral to pay off future pensions, the investment policies will have to be rather cautious and probably to a more limited extent directed towards more riskfull early stage.

The Belgian pension funds invest more and more assets in venture capital (their margins are stated in table 15); already in 1999 half of their assets were invested in shares. (In 1990: 27.6 %; in 1997: 47.3 % and in 1999: 53 %). On the contrary, insurers only invested 26.9 % in shares in 1998 (but in 1997 and 1998 they doubled their cross-border shares to reach 10.6 % in 1998). The above mentioned 53 % represent an amount of 5116.2 million euros, which corresponds to more or less 3 % of the stock capitalization on the Brussels’ primary and unlisted securities market. But these 53 % are of course not fully invested on that stock exchange. It is said that pension funds investments in Belgian and Luxembourg shares, (which till 1997 had constantly risen from 15.7 % in 1994 to 19.8 % in 1997) only reach 10.2 % in 1999, which demonstrates that the funds redirect their assets towards foreign investments. *“Since the introduction of the euro institutional investors tend to ignore small stock exchanges like the ones of Brussels and Lisbon. They’d rather diversify through investments in large shares on the most important European financial markets”*.<sup>1</sup>

This trend is also observed in the US. The more the pension funds grow, the more they tend to invest in high growth companies in order to reduce their costs and yet benefit from a predictable return.<sup>2</sup>

1. Budget Week; nr 937; 18/10/99.

2. European Economy: “Risk capital, a key to job creation”; o.c.; p.7.

The Belgian pension saving funds (third pillar; individual pension generation) are by means of a tax regulation, bound to invest 30% of their investments in Belgian shares since individual savers are otherwise denied the right of tax allowance.

## 2. Funds raised from institutional investors by VCCs

For most European countries more than 50 % of the resources of the VCCs come from institutional investors, with a prevalence of bank institutions. It is striking to note that although the Dutch pension funds have large assets they invest little in VCCs on the contrary to Sweden, the UK, Ireland, and Finland. In Belgium, pension funds do not invest in VCCs (also in 1998) and even the other institutional investors invest little. We remain significantly behind with only 20 % of the total funds raised dedicated to specialized VCCs. This can partially be explained by the fact that no less than 36 % of the resources of our VCCs come from achieved capital gain which is reinvested. This is less observed in the other countries: 0 % in England, 0 % in Germany, 2 % in Finland and only 15 % in the Netherlands. Some insurance companies (such as Mercator & Noordstar and De Vaderlandsche) do invest in venture capital and are even considering founding their own VCC. This is only to show that a positive trend is beginning to emerge.

American pension funds invest 0.3 % of their assets in venture capital. However this low percentage represents 47 % of the American venture capital<sup>1</sup>. The table hereunder shows that only Sweden, the UK, and Ireland as well as Finland are close to that percentage. In this regard it is also worth mentioning that the UK's VCCs are mainly financed by American pension funds<sup>2</sup>. Consequently if in the future a greater integration of the European stock market, the accounting regulations, of the corporate governance, etc. can be established it is likely that American institutional investors will invest more here.

**TABLE 15 - Funds raised by VCCs from institutional investors (1999) (in % of the total of raised resources)**

	Banks	Pension funds	Insurance companies	Total institutionals
GBR	26	31	14	71
DEU	40	9	11	60
FRA	25	9	15	49
ITA	41	6	6	53
NLD	60	2	15	77
SWE	7	35	22	64
ESP	46	13	3	62
BEL	15	0	5	20
FIN	13	26	36	75
PRT	35	0	0	35
IRL	25	27	7	59
AUT	56	0	9	65
GRC	42	0	0	42

(Source: EVCA)

1. EC-Commission: COM(2000)336 final; o.c. p11 footnote.
2. idem

### 3. Prudential rules

In Europe institutional investors are not free to do what they want with their investments. On the one hand, they are submitted<sup>1</sup> to some restrictions aimed at protecting savers and, on the other hand, they are also bound to direct a portion of their provisions towards financing the government debt. These restrictions mainly concern investments in companies not listed on the stock exchange, thus in majority young companies and SMEs, because this type of investment is more hazardous. The European Commission favours a more relaxed regulation based on the “prudent man principle” comparable to the prudential rules in the US. It states:

*“What is required is sensible, prudential rules that allow pension funds to optimise their portfolio structures with appropriate allocations for pan-European equity, international equity, real estate and fixed income assets. The Commission, in the follow-up of its Green Paper on supplementary pensions in the single market is exploring ways of alleviating the burden of restrictions in this field without threatening the prudential soundness of the funds. This can be done, for example, by ensuring that there is appropriate diversification of assets, transparency for pension plan-holders, and emphasis on rigorous supervision. This could ultimately contribute to job-creation and employment, while improving security of savings for old-age retirement provision.”*<sup>2</sup> In the early 80s, American pension funds were allowed under the amended “Employment Retirement Income Security Act” (ERISA) to make more risky investments on the condition that the manager would take decisions as a “prudent man”. This meant that they were allowed to invest in new companies and in VCCs and that the manager of the pension fund was not accountable for the investment decisions taken by the venture capital fund towards which the investments were directed. This has boosted the American venture capital market.

The European Commission has approved a guideline regarding the regulations and administrative constraints of pension funds<sup>3</sup>. Among other things, this directive deals in its common rules with accounts, the publication of the investments, cross-border activities, etc. As far as the investment rules are concerned the general prudential principle was adopted (article 13) and article 13.4 holds that no restraints should be imposed to force investment in a specific category of shares.

Only four Member States (i.e. Finland, Ireland, the Netherlands and England) have no legal restraints and only rely on the prudential rules like in the US. Other Member States have recently relaxed their investment restrictions. Since 1998 French insurers are fiscally encouraged to invest 50 % of their portfolio in shares. In Spain and Italy restrictions for specific funds were also relaxed. In Sweden the new regulation has even led institutional investors to become the most important providers of venture capital<sup>4</sup>.

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1. As of 1934, due to the crash in 1930, banks were no longer allowed to invest their interests in non financial companies and this restraint was only relaxed in 1993 and 1996.
  2. Commission of the European Communities: “Financial services: building a framework for action”; COM(1998) 625 final; p. 8.
  3. European Commission: “Proposal for a directive of the European Parliament and of the Council on the coordination of laws, regulations and administrative provisions relating to institutions for occupational retirement provision” COM(2000) 507; 11.10.2000
  4. European Commission: “Progress report on the venture capital action plan ” 18.10.2000; o.c.:p.14.

Since the 1st of January 1999, Belgian regulations for pension funds and insurance companies were also relaxed and meet the new European regulation standards.

In the light of what precedes, we will henceforth essentially focus on pension funds and pension saving funds. Since January 1999<sup>1</sup> the investment rules for pension funds and insurance companies were relaxed. The obligation to invest 15% in government bonds has ceased to apply whilst futures and options are from now on permitted. Of crucial importance is the fact that with this new regulation applying to pension funds and insurance companies a rule was introduced which is at odds with making increasing investments in unquoted companies. The previously in force legislation allowed pension funds to invest up to 30% of their assets in unquoted companies, this percentage being now of only 10%. In addition, let's stress that in practise for 1998 and 1999 these funds only invested 0.5% in these companies by way of precaution and due to the lack of experienced appraisal regarding that matter. If the above mentioned 10% were to be reached, it would give a real boost to the market.

The pension **saving** funds are bound, as stated before, to invest 30% of their investments in Belgian shares. This threshold restriction is not consistent with a European free market but the discrimination also exists in France and Italy. The moment the draft directive will come into effect the threshold must disappear. There is uncertainty about the consequences of this change for the stock exchange. If the pension saving funds should sell out their shares and shift their investments cross-border this would be pernicious for Belgian stock values. The pension saving funds however have no interest in decreasing quotes and therefore one is inclined to assume that the shift – if any - will occur gradually through new participations. However, even in this hypothesis, an extra boost for Belgian stock values will disappear.

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1. Royal Decree 12.1.99 published in the Law Gazette 20.3.99.

**TABLE 16 - Prudential rules for institutional investors in Belgium**

1. Pension funds	
- debentures issued by governments, or companies, governments outside area A <sup>a</sup>	max. 10 % of the tot. reserve
- unquoted securities	max. 10 %
- stakes in collective investment institutions not bound by the regulations of a Member State agreed guideline 85/611/EEG	max. 10 %
- options, futures and other derived products which are not used as securities	max. 5 %
- shares of one issuer and obligations of one borrower	max. 5 % per issuer
- not guaranteed loans	max. 5 % of total and max. 1 % per issuer
- real estate certificates	max. 5 % per issuer
- direct investments in real estate	max. 10 % per issuer
2. Insurance companies	
Generally for the insurance companies the same rules apply as for the pension funds.	
3. Banks	
- shares in the commercial portfolio of the bank	<i>no limit</i>
- shares in financial or insurance companies	<i>no limit</i>
- shares above 10 % in one company	- max. 15 % of the banks' shareholder value per investment - max. 45 % of the banks' shareholder value for the total of investments
- shares below 10% in one company	- no limit but total shares and loans must not exceed 25 % of the banks shareholder value
a. Area A: EU-countries, Hungary, Iceland, Norway, Poland, the Czech Republic, Turkey, Sweden, the us, Canada, Mexico, Japan, Australia, N-Zealand, Korea, S. Arabia.	

The second Cardiff-report draws the following conclusion: “*Unnecessary regulatory restrictions for institutional investors should be lifted in order to support the accelerating rate of capital market integration. At the same time, transparency, supervisory and prudential regulations should be adopted to the new market realities along the lines proposed in the Action Plan for Financial Services.*”<sup>1</sup>

## H. Tax system

It goes without saying that tax system is a crucial factor on the investment scene which influences the development of venture capital.

In all Member States except for Finland and Italy, the tax systems favour the debt financing rather than the risk financing<sup>2</sup> because there's a possibility to deduct interests but not dividends.

Fiscal incentives for venture capital can be offered to the investor either when the investment is made (front-end), or when the capital gain is achieved (bottom-end). The first scenario suits everyone while the second one only favours the winners<sup>3</sup>. It appears as shown below that Belgium enforces both systems.

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1. Commission of the European Communities: “Economic reform: Report on the functioning of Community product and capital markets”; COM(2000)26 final; p11.
  2. European Commission: “Progress report on the venture capital action plan” 18.10.2000;o.c.;p.16.
  3. OECD: “Venture capital: supply vs demand”; o.c.; p.26.

## 1. Capital gain (bottom-end regime)

Given that VCCs get the return on their investments via exit (see above), the tax rate on an eventual capital gain is crucial to them. Belgium and the Netherlands have the most favourable systems being that capital gain is almost unlimitedly exempted from taxation. England and France have a more restrictive system, but on the other hand losses on capital investments can there be fully deducted. It is also the case in the Netherlands but to a smaller extent. In Belgium this is only possible in case of a liquidation.

The first system (tax exemption on capital gain) is pretty interesting for our VCCs, but the fact that in our country the VCCs can not deduct their capital losses (second system) represents a barrier to investments because the risks of failure are really high in early stages.<sup>1</sup> Let's point out that in Belgium the deduction of capital losses are well allowed when the company from which the VCC is a shareholder is liquidated<sup>2</sup>. For a VCC, which invests in riskfull projects, this exception to the non deduction rule is of crucial importance.

A huge fiscal reform took place in Germany in mid 2000. Among other things, this reform holds that as of 2002 capital gain will be fully exempted from taxation (due to a 40% to 50% tax rate on capital gain, shares in Germany were not liquid assets. This also hindered among other things mergers and acquisitions). Since 1999 a gradual decrease of taxation on capital gain is also allowed in England for asset holdings of at least 5 years.

## 2. Fiscal incentives for venture capital investments (front-end regime)

The UK, Ireland, Austria, France, Italy and Sweden grant tax benefits to start up and expand a business<sup>3</sup>. In the UK, persons who invest in early-stage companies either directly or through a venture capital investment fund (for instance via Pricaf/Privak in Belgium, see below) are offered on certain conditions, tax benefits. In Ireland private individuals who invest in new equity benefit from tax reductions and those who wish to launch a business get an income tax rebate.

As far as Belgium is concerned the pilot project mentions the law "Cooreman-De Clercq", which is considered to have given venture capital investments an enormous boost in the 80s. This law pursued two goals: on one hand it stimulated investments by making possible for private investors to deduct the invested amounts from their income and on the other hand companies which increased their capital got a reduction of their corporate tax for paid-out dividends. Resulting from that the number of households investing in equity trebled between 1982 and 1985. And in 1982, 1983 no less than 25 768 businesses showed a capital increase. This system is no longer in force but people who invest in life insurances and pension saving funds can still deduct part of their investments from

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1. This paragraph is mainly borrowed from: "Réformes économiques des marchés des produits, des services et des capitaux Rapport belge destiné à l'UE" (Cardiff-Report); dec 1999; p 35.
  2. When the company from which the VCC or an other institution is a shareholder is liquidated the losses on paid capital (difference between paid-up capital and capital received after distribution) can be deducted as professional costs. Since recently the losses which were before written off through capital decrease can also be considered as paid-up capital.
  3. European Economy: "Risk capital..." o.c.; p 16 and 31.

their income. The sectors in which these funds invest on their turn have already been described above. A similar but somewhat more rigorous system has been existing in France since 1998, where tax reductions are granted for new life insurance contracts on the express condition that the company invests 50% of their assets in equity.

### 3. PRIVAK/PRICAF (Private Equity Sicav/Bevek) (front-end regime)

In the Netherlands private individuals who invest in start-ups are granted tax benefits. In our country, these investments can be indirectly made via a Privak/Pricaf (a system comparable to the British Venture Capital Trust). The Belgian Government implemented in 1997 this special type of investment funds to promote venture capital. These funds are quoted on the stock exchange and they raise funds from private investors for whom this is a way to invest in venture capital. At least 50% of the resources must be invested in equity. The paid-out dividends originating from achieved capital gain are exempted from withholding tax payment. Up to now there's only one such business listed on the stock exchange: "Quest for Growth" which holds shares in 40 quoted and 11 unquoted companies.

### 4. Intangible investments (front-end regime)

For start-ups and certainly for high-tech companies, tax reductions on intangible investments are crucial. According to the pilot project, expenditure intended for intangible investments are fully deductible in all Member States, with this observation that the write-off percentage and terms differ from one country to the other. Only Belgium, Ireland, the Netherlands and Portugal grant special tax benefits for R&D. In Belgium there are two possibilities. On one hand a simple 13.5% investment reduction on profit for patents and assets aimed at promoting R&D. And on the other hand an exemption granted per additional full time employee hired for scientific research purposes or to improve the technological potential of the company. In addition if this additional employee holds a doctorate, the company is entitled to an extra fiscal relief.

The European Commission generally finds that the Member States give insufficient fiscal concessions for R&D expenditure. It states in the 1998 competitiveness report: *"Many European tax systems have been deemed not to be conducive to company creation. For instance, a more favorable tax treatment of R&D expenditure is likely to favour high-tech start-ups and thus, demand of risk capital"*<sup>1</sup>. Given the information provided above this comment doesn't apply for Belgium.

Some Member States do have favourable tax schemes for new set up companies. In England, a 150% R&D tax credit was introduced to help newly established companies and SMEs. In Belgium several tax benefits schemes were implemented between 1984 and 1990 but have since then been resumed.

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1. European Commission: "The competitiveness of European industry; 1998 report"; p. 35.

## 5. Stock options (front-end regime)

A stock option is the right for the employees of a company to purchase a set amount of shares at a fixed price for a specified period of time and to sell them afterwards. This represents for companies an additional means to attract highly qualified personnel. Especially for young high-tech start-ups, which can not afford to pay high salaries, this is often the most appropriate way to still attract the most talented staff. Their commitment to the company will indeed contribute to its development and the stock options are somehow a recognition of their efforts. (In the US numerous stock option holders became wealthy and turned into business angels). Nevertheless the recent fall back of technological shares on the stock market has made stock options schemes granted by new high growth companies less attractive.

Since the pilot project, the stock option legislation in our country has changed. <sup>1</sup>The problem lies in the fact that such options were previously considered as being part of the salary and therefore mandatorily subject to social deductions. As of January 1<sup>st</sup> 1999 stock options are considered as salary only when their purchase price is inferior to the share value at granting. Tax is then levied on the difference. Furthermore tax is now levied at granting and no longer when the capital gain is achieved which implies that employees are now liable for tax on a purchase right and thus before they generate a revenue. In the US, Denmark, Finland, Germany, Sweden, Ireland and England tax is levied on stock options at realization. The EU describes the change in the Belgian system as “rather controversial” <sup>2</sup> but the tax authority considers that once the employee has been granted the stock option, he is free to do whatever he wants with it: either sell it as soon as possible or hold it and speculate to try and get a surplus value. Due to the recent depreciation of quotations, this system is no longer a determining tool for companies to attract personnel, as employees are now aware that these share values can drop drastically.

The tax scale represents maximum a 60% gradual withholding tax on the share value. This value amounts to: (when not listed on the stock market) 15% (increased by 1% for each time the option reaches 5 years granting) of the share value or 7.5% provided that certain requirements are met. The capital gain doesn't incur a capital gain tax which is an additional bottom-end advantage for the employee who makes investments as well as for the fast growing companies which can this way attract the most talented technicians.

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1. Law of 26.3.99 (Law gazette of 1.4.99)

2. European Economy: “Risk Capital, a key to job creation”; o.c.; p.18.

## I. Government guarantee schemes for risk capital

All the Member States have guarantee schemes; they all have guarantee schemes for loans but only a few of them have such schemes for risk capital and some of them even grant government guarantee schemes for the risks of VCCs. Government guarantee schemes for risk capital are reinforced to encourage investors to finance young companies which involves greater risk.

In the Netherlands, a 50% compensation system was implemented in 1981 to cover for capital lost by VCCs in making their investments. This measure led to such a strong increase in venture capital that the system could be resumed in 1995. Inspired by it, Denmark introduced a similar scheme in 1994. And so did Finland and Austria. The question remains unanswered as to whether these guarantee schemes which imply administrative restraints and costs and puts a part of the risk on the government's shoulders is better than simply having the government control a number of VCCs in order to stimulate early-stage investments.

In Belgium both possibilities are available since we also offer guarantee via our regional governments. The Federal government does not grant guarantees for venture capital financing but the three regional governments do.

In Flanders a guarantee fund was implemented in 1999 to protect investors, who finance growing SMEs, by covering up to 50% of their capital loss for a total amount of 20 million BEF (and a minimum amount of 3 million BEF)<sup>1</sup>. The guarantee fund established in 1999 in the Walloon Provinces provides a guarantee for venture capital which is used for "transmission d'entreprises".

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1. Sometimes this minimum amount of 3 million BEF is found to be too high because in case of spin-offs, early investments often remain below it, reaching a 1.5 to 2 million BEF.



## Conclusion

There are evidently many more indicators which have a direct or indirect influence on innovation investments and their financing and also on the setting-up of new high-tech companies. Let us quote for instance the European relief measures, the regulations regarding patents, university spin-offs<sup>1</sup> and innovation clusters essential to the creation of technology-based firms (TBFs), the administrative formalities and excessive costs necessary for setting up a company, the facilities of innovation and enterprise-centres and, last but not least, the insolvency and bankruptcy legislation to which the Commission wants to give a clear priority in order to give entrepreneurs a second chance, etc. All these indicators fall outside the scope of this contribution<sup>2</sup>.

It emerges from this update that quite different situations and regulations are connected to the financing of innovation with venture capital in Europe, partly because so many factors and rules interfere in this area, from VCCs, stock exchanges and pension funds to accounting and taxation regulations.

The European Council and the European Commission are launching action plans in several fields which are aimed at making up the arrears in comparison to the US and also promoting VC-investments in general but more especially in SMEs, start-ups and high-tech companies. Deadlines have even been settled in some cases. The second Commission report (of May 2000) on the improvement of financial services gives in appendix an overview on what still needs to be done in this specific domain. The enumeration is rather impressive.<sup>3</sup>

Due to the diversity of the issues tackled in this paper, no general conclusion can be drawn from this update. We can only summarize the positive and negative points of Belgium in comparison with the other Member States and point towards the areas which still call for improvement.

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1. As regards the spin-offs, it can be stressed that pursuant to the pilot project, the EU launched a benchmarking project on the "industry-science relation" involving the participation of the three regions. The Belgian coordination rests with the Belgian Federal Office for Scientific, Technical and Cultural Affairs.
  2. It emerges from the Belgian contribution to the first BEST report that Belgium and mainly Flanders with its Company Prevention Policy Commission has a rather efficient insolvency and bankruptcy legislation.
  3. Commission of the European Communities: "Report on Financial Services" COM(2000)336 final.

### Positive marks or developments

- We have enough business angels and business angels-networks.
- We have amply sufficient Venture Capital Companies (VCCs).
- A great number of these VCCs are willing to invest in early stage. 40% of these VCCs are government controlled, which has certainly favourably influenced early stage financing.
- For 1998 and 1999, we are the leader in Europe in terms of seed money and early stage investments.
- We have enough VCCs which specialize in high-tech and ICT investments. Our 1999 high-tech investments are twice as high as the European average (we come in second position after Ireland).
- Most Belgian VCCs prefer to invest restricted amounts and thus focus on SMEs financing.
- For the total venture capital invested in 1999 in relation to the GDP, we come in fourth position within the top European countries. By making more cross-border venture capital investments than the other Member States we proved more determined to join the world economy.
- Belgian pension funds invest more and more in equity (53% of their assets in 1999 already).
- Belgium ranks among the few countries which do not levy tax on capital gain.
- Private investors are granted tax deductions when investing in pension saving funds.
- Thanks to the Belgian so-called Privak/Pricaf system, private investors who are willing to invest in venture capital benefit from tax deductions.
- R&D investments are granted with special tax benefits which is not the case in many countries.
- Our legislation is favourable to stock option schemes.
- Our regional governments have implemented guarantee schemes for venture capital.

### Less positive factors or developments

- The optimal functioning of business angels networks (BANS) is hindered by the fact that the gathered information cannot be spread to over 50 members otherwise a prospectus is required.
- Our results in management buy-out investments for 1998 and 1999 are not so conclusive compared to the ones of the other Member States.
- Although many VCCs are willing to invest in early stage, only two make use of the EC financial support, on the prerequisite that they commit to investing on their turn 25% of their assets in early stage within the three years.
- The Belgian accounting rules are oriented towards tax return and offer insufficient insight to attract institutional investors.
- The made-up rules for corporate governance are not binding and are insufficiently applied. The Minister of Finance will nevertheless set up a study group to determine whether or not the legislator ought to take initiatives in that matter.
- Our institutional investors invest very little in VCCs compared to other Member States. The pension funds not at all.
- The new investment regulation for pension funds limited the possibilities to invest in unquoted equity from 30% to 10%, but little use is made of these potential 10% as 0.5% only are in fact invested in unquoted shares.
- No tax deductions are granted on capital loss.
- If we refer to the new legislation, tax on stock options is now levied at granting and no longer at realization as it was previously the case. The European Commission describes this change as 'rather controversial'.

Even though the cutting back by Europe of the threshold by which pension saving funds are obliged to invest 30% in Belgian shares is a positive step towards free competition, there remains uncertainty as to the consequences for Belgian stock values. If the pension saving funds should sell out their shares and shift investment cross-border this would be pernicious for Belgian stock values. The pension saving funds however have no interest in decreasing quotes and therefore one is inclined to assume that the shift will occur gradually through new participations. However, even in this hypothesis, an extra boost for Belgian stock values will disappear.

At the beginning of 1999, Belgium responded in all fairness to the European Commission: "...that there is no specific plan for Belgium as regards risk capital"<sup>1</sup>. But the Ministry of Finance is currently working on implementing such a plan in the country under the impetus of the EU.

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1. European Economy: "Risk capital, a key to job creation"; o.c. p 41 "Belgian reply".





## **Annexe 1: List of Belgian Venture Capital Companies**

**TABEL 17 - VCCs mentioned in EVCA or BVA**

	Location	Misc.	Insurance	Control		Preferences		Max. investment amount (in 1000 E)
				Bank	Governm.	Stages	Sectors	
1. ABN Amro België	Brussel			x		no, MBO	no	5 000
2. Advent - Management	Zaventem			x		no	no	5 000
3. Bank Degroof	Brussel			x		MBO	-	5 000
4. BMI/SBI	Brussel				x	pre-ipo	no	5 000
5. Capricorn Venture Partners	Leuven	private				no	high-tech	2 500
6. CD Technicom	Liège				x	no	ICT	1 250
7. CVC-Capital Partners	Brussel	private				MBO		-
8. Creafund	Roeselare	Businesss. Angel				no	no	400
9. E-capital	Brussel	private	x	x		growth	high-tech	1 500
10. Euroventures	Zaventem	private				no	no	3 500
11. Folio-investments Ltd	Brussel					no	various	5 000
12. FLV-Fund	leper	quoted				early stage, MBO	Speech, IT	7 000
13. GIMB/SRIB	Brussel				x	no, MBO	high-tech	2 500
14. GIMV	Antwerpen	quoted			x	no	no	125 000
15. GIMVINDUS	Niel				x	expansion, MBO	industry	-
16. Guidant Europe	Zaventem					early	medical/health	-
PM: Halder Invest	Berchem	now in GIMV				no	no	12 000
17. IBEL	Gent	Cobepa						-
18. Intec management	Brussel	private				no	high-tech	700
19. ISEP	Mechelen			x		no	no	5 000
20. IT-Partners	Zaventem	(Imec, GIMV, e.o.)				no	IT	4 000
21. ITP-Management	Zaventem	private				no	CT, comput rel, electr	4 000
22. LEMCO BVBA	Affligem	x	x	x				-
23. LESSIUS	Brussel	Alpinvest		x		no	no	7 450
24. LRM	Hasselt				x	no, MBO	no	10 000
25. MOSANE	Brussel			x		no, MBO	no	7 000

TABEL 17 - vccs mentioned in EVCA or BVA

	Location	Misc.	Insurance	Control		Preferences		Max. investment amount (in 1000 E)
				Bank	Governm.	Stages	Sectors	
26. MERFIN Cap. Group	Brussel	private				no, MBO	no	3 000
27. ORESA Ventures	Waterloo	quoted (East-block mainly)				no	consum./medical.	10 000
28. Pantheon Ventures Ltd	Waterloo	private fund				no	no	60 000
29. PARNIB Belgium	Antwerpen			x		no, MBO	no	-
30. PUILAETCO	Brussel			x				-
31. Pythagoras	Antwerpen	private				no	computer related	3 000
32. QUADRA Invest	Brussel	Gemeentekrediet/Dexia	t	x		start-up	no	250
33. Quest For Growth	Leuven	quoted (Capricorn, Quarts)				pre-ipo	high-tech	5 000
34. Sambrinvest	Gosselies				x	no, MBO	bio, comp, environ, automation	1 250
35. Sofinim	Brussel	Ack. V. Haaren				no, early, MBO	various	-
36. Sopartec	Louvain la Neuve	UCL-fund				early	high-tech	1 000
37. Start-it	Liège			x	x	starters	high-tech	619
38. Synerfi	Brussel			Fortis		no early, MBO	no	2 500
39. Trust Cap. Partners	Kortrijk						no	-
40. Pro-Seed capital		Trust Cap en Dexia Ventures				seed		500
41. VIV	Gent			Fortis		no, MBO	no	8 000
42. VMH	Antwerpen				x	no	no	-

TABEL 18 - Other sources

	location	Control				Preferences		Max investment-amount (in 1 000 E)
		Misc.	Bank	Insu.	Gov	Stages	Sectors	
1. ARKOS Invest								
2. AXE Investments	Antwerpen	Anacom group					E-logistiek en E-training	2 500
3. BENEVENT MANAGEMENT								
4. BELUGA								
5. Belgacom Multimedia Ventures	Brussel	Belgacom group			x	no	ICT	24 800
6. BBL Invest	Brussel		x			pre-ipo	high-tech	3 700
7. Capital Venture Invest	Verviers							
8. F.CLOET								
9. Donck Heureux Partners (DHP)	Brussel						ICT	-
10. DEXIA VENTURES						early stage	high-tech	100
11. Emerge	Brussel					seed	E-commerce, grafische	250
12. INVESTCO	Brussel					no	no	7500
13. MITISKA								
14. Net Fund Europe CVA	Ternat	Mitiska/Sofina				no	ICT	250
15. Nesbic Buy Out			Fortis			buy out		
16. Nesbic Investment Fund			Fortis					
17. Privast Capital Partners	Brussel			x		early stage	ICT	1 000
18. PROFINPAR	Brussel							
19. Rendex	Merksem			x				
20. Servi Fund								
21. Software Holding & finance								

**TABEL 19 - Parent vcc companies or specialized subsidiaries not registered in EVCA or BVA that are controlled by Government**

		Stages	Preferences	Sectors
1. Bruficom	GIMB/SRIB	early stage		Telecom en multimedia
2. Brustart	GIMB/SRIB	early stage	no	
3. Ecotech Finance	SRIW	no		environment
4. GIMV Czech Ventures	GIMV			
5. GIMV Czech and Slovak SME Fund	GIMV			
6. SRIW				
7. Technowal	SRIW	no		high-tech( other than CD-Technicom)
8. Wallonie Telecommunications	SRIW	no		ICT
9. SOWECSOM	SRIW	-		social

**TABEL 20 - University vccs**

1. Baekeland - Fonds	UG
2. Eebic	ULB
3. Gemma Frisius	KUL
4. Spinventure	UL + Meuseinvest
5. Wendelen - Fonds	LUC
6. Antwerps innovatiecentrum	UA
7. IME	KUL
8. LMS (Leuven Measurement Systems)	KUL
9. LRD (Leuven R&D)	KUL
PM (already in EVCA): SOPARTEC	UCL

**TABEL 21 - State “invests” and specialized subsidiaries**

	specialized in starters	max. investment amount (1000 Euro)
1. Eurefi		744
2. Hocc invest		620
3. (Socaris)	x	620
4. (SDT/Soc. Hennuyère de dév. transfrontalier)		620
5. (FAIT / Fonds transfront.) also subsidiary of Sambreinvest and IBC		620
6. Invest Borinage et Centre (IBC)		1239
7. (IMBC)	x	620
8. Invest sud		2000
9. Meusinvest		
10. (FAIR)	x	186
11. Nivelinvest		1239
12. (SDO/Soc. dév. de l'Ouest du Brabant Wallon)		1239
13. (Start-up)	x	248
14. Ostbelgieninvest		372
PM: Sambreinvest (already mentioned inEVCA)		
15. (Fonds de Cap. à risque)		620
16. (Fonds de Cap. d'amorçage)	x	124
17. SIBL (Soc. d'Inv. Bassin Liégeois)		1983
18. SIBS/Soc. d'inv. de la province de Namur		620
19. (Namur Invest)		620
20. (NADIR/Namur diversification et reconversion)		620
21. INVESTSUD		
22. Société d'investissement du Hainaut/CIDH		

The companies between brackets are subsidiaries of the above mentioned company

**TABEL 22 - Business Angels Networks**

1. BA Connect (ULB + Eebic)
2. BA Club Limburg (GOM- Limburg)
3. BAMS (BA Matching Services)
4. BIZZBEES
5. SOCRAN
6. Vlerick BAN
7. WABAN (Wallonia BAN)



## Annex 2

Data clarification

### A. Evca – data

EVCA-data are originating from an investigation carried out among the “leaders in private equity and VCCs”, regardless of them being or not member of the EVCA or of any national venture capital grouping. No cross selection was drawn as all VCCs were taken into consideration. In Belgium all operating VCCs seem to have responded to the enquiry.

As of 1998 the results are no longer fully comparable because henceforth Price Waterhouse has gathered the data and used a different methodology.

### B. Internet Specific (Venture economics)

“Internet Specific is a very narrow definition of companies that would not exist without the Internet and that would not fit in any other industry sector category. Internet-related describes companies that provide content, e-commerce, hardware or services to the Internet economy. Internet-related companies are found in all industry sectors.”

### C. Sectors (EVCA)

#### ***Communications***

Commercial communications (e.g. TV broadcasting)  
Telephone related  
Facsimile transmission  
Data communications  
Satellite microwave communications  
Mobile communications, papers and cellular radio  
Media houses

***Computer related***

Computer systems  
Computer graphics related  
Specialized computer turnkey systems  
Optical scanning and other scanning related  
Peripherals  
Computer services (e.g. data processing)  
Software  
Voice synthesis/recognition

***Other electronic related***

Electronic components (e.g. semiconductors)  
Batteries  
Power supplies  
Electronic related equipment (e.g. semiconductor fabrication equipment)  
Laser related  
Fibre optics  
Analytical and scientific instrumentation

***Biotechnology***

Human medical diagnosis and therapeutics (e.g. DNA probes)  
Agricultural / animal biotechnology (e.g. plant diagnosis)  
Industrial biotechnology (e.g. biotechnologically derived chemicals)  
Biosensors  
Biotechnology related research and production equipment

***Medical / health related***

Diagnostic products and services  
Therapeutic products and services  
Handicap aids  
Hospital management  
Health institutions

Traduction du texte qui se trouve sur le deuxième chart (page 19 du texte en néerlandais) avec les courbes. On a pas su le modifier.

**FRAME 2 - Life Cycle**

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Comments: As far as product design and prototype phases are concerned, the capital raised at this very moment is called “seed money” and can be invested by the entrepreneur, his relatives or friends (3 F’s concept: Family, Friends and Fools) or even by a business angel.

As regards the product launching stage, implying even more risks, the appropriate term is then: “early stage financing”. The capital can be pumped into by business angels and venture capital funds.

For growth, we speak about the so-called “Expansion Financing” and for conversion towards quotation: “Bridge or Mezzanine financing”.



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