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## Access to finance and venture capital for industrial SMEs

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**No. 97**

**Access to Finance and Venture  
Capital for Industrial SMEs**

by Thomas Heimer, Luise Hölscher and Matthias Ralf Werner

May 2008



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## Abstract

SMEs play a crucial role for European economies. The numbers show the high importance of SMEs for national economies. Accordingly, it is no surprise that the regulatory framework SMEs are imbedded in is the subject of an important political discussion. In the discussion it is frequently mentioned by representatives of SMEs as well as associations of SMEs, that the access to finance for SMEs is still inferior. Based on the importance of SMEs for national economies and the discussion on the accessibility of financial resources for SMEs, it is the main objective of this study to provide solid data on the access of SMEs to financial resources. To provide the data, the study is focusing on four main issues. First of all, the importance of SMEs for national economies will be shown. After that the financing of SMEs in selected countries will be analysed. Then the availability of venture capital for SMEs will be discussed. Finally the tax regimes and the influence of the tax system on the access to finance for SMEs will be analysed. Since there is still a large variety among the tax systems of the European Union member states, the study has focused on Austria, France, Germany, Poland and the United Kingdom.

Key words: SME, financial structure, venture capital, tax framework, accounting standards

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## 1 Executive Summary

This study was conducted for the European Parliament in 2005<sup>1</sup>.

(1) SMEs play a **crucial role for European economies**. In all European Union member states, the largest number of existing enterprises belongs to the category of small and medium-sized enterprises. More than two thirds of all employed citizens of European Union member states are employed by SMEs. Up to 50% of the total GNP in most European Union member states are generated by SMEs. Last but not least, young technology based SMEs also are an important factor for economic growth. They have the potential to become big players in the future.

The numbers show the great importance of SMEs for national economies. Accordingly, it is no surprise that the regulatory framework SMEs are imbedded in is the subject of an important political discussion. In the discussion it is frequently mentioned by representatives of SMEs as well as associations of SMEs, that the access to finance for SMEs is still inferior. It is the perception of most entrepreneurs as well as of many economists, that there is a need to enhance the availability and access of SMEs to financial resources accordingly. Furthermore, with the introduction of the Basel II Accord the rumour of a credit crunch entered the field. The main hypothesis was that SMEs, due to the regulations of the Basel II Accord now have even less chances to gain access to financial resources.

(2) Based on the importance of SMEs for national economies and the discussion on the **accessibility of financial resources for SMEs**, it is the main objective of this study to provide solid data on the access of SMEs to financial resources. To provide the data, the study is focusing on four main issues. First of all, the importance of SMEs for national economies will be shown. After that, the financing of SMEs in selected countries will be analysed. Then the availability of venture capital for SMEs will be discussed. Finally the tax regimes and the influence of the tax system on the access to finance for SMEs will be analysed. Since there is still a large discrepancy among the tax systems of the European Union member states, the study has focused on Austria, France, Germany, Poland and the United Kingdom. The composition of these selected countries provides a certain assurance that the differences among European Union member states will be covered by the study.

(3) Analysing the **importance of SMEs** for the selected economies, it has been shown that they are the backbone of the economies in those countries. Based on the definition of SMEs by the European Commission, the number of companies as well as the provided employment and the contribution to GDP in all selected countries verifies the hypothesis of a major importance of SMEs. Improving their situation and in particular the access to finance, thus is, from an economic point of view, a step in the right direction.

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<sup>1</sup> The authors would like to thank Parliamentarian Mr. Riebig for his support. The responsibility for the study lies completely with the authors.

(4) The **analysis of the financial structure of SMEs** illustrates a large variety in the main indicator - the debt to equity ratio. There are countries like Austria and Germany that show only small debt to equity ratios. The equity share in these countries is below 20%. Other countries, like for instance France and the United Kingdom, are much more equity driven. Two reasons are usually seen as factors for the low debt to equity ratio in these countries: On the one hand, there is a disadvantage of equity financing by the tax systems. On the other hand, in some cultural contexts the influence given to an equity investor on the management of a company is seen as negative. Both reasons are of great importance. In the study particularly the tax system point had been analysed in depth.

(5) On the **debt financing side**, in most countries bank loans are the most common instrument. Financing resources like factoring, leasing etc. are partly used. In particular, in the continental European states of Austria and Germany bank loans are most important, whilst in the United Kingdom for instance, overdrafts play an equivalent role.

(6) The **analysis of the situation on the venture capital market** shows, that even in recent years the decline of venture capital has not been detained. It is a general result, that from the year 2001 onwards the availability of venture capital for SMEs is declining. Venture capitalists concentrate in all selected countries on investments in the expansion phase or any later phase. The availability of venture capital for seed or early-stage phases is still very limited. The hope of the late 90's to substitute substantial parts of debt financing by private equity and venture capital for early-stage investments has not been realised as the data shows.

The **weakness of equity financing** in continental European SMEs is a result of four effects, which are (A) the financing of retirements, (B) cultural aspects, (C) the national accounting standards to the equity share, and (D) the opportunity cost of capital.

For effect (A), the **financing of retirements**, economic circumstances will lead to a solution without political corrective: As the continental European retirement system, which is based on the pay as you go pension system, will not be able to finance retirement cost in reduced populations of the future, a more capital market oriented system will develop. Pension funds as seen in the UK will get more relevance in the continental EU countries, leading more capital to the investment market. A policy should provide a sufficient legal framework for this development.

Effect (B), the **cultural aspect**, may be influenced by a EU and/or national promotion: Suggesting to SMEs that allowing external equity investments in their business can lead to a change of perspective in family-owned companies. This effect will be enhanced by a generational shift in post-war companies to the younger, more open-minded "Erbengeneration".

Effect (C), the differing **national accounting standards**, has started to decrease with the introduction of IAS/IFRS for capital market oriented corporations from 1 January 2005. The process should be accelerated by enforcing international standards for smaller and non-capital

market oriented companies, too. The moment this development reaches SMEs, negative aspects will decrease.

(7) The **variety in tax systems** between the UK and continental Europe leads to differences in debt-financing cost (effect (D)). The tax scheme in the UK promotes debt-financing compared to equity less than the continental European tax schemes do.

The **analysis of the tax system** influence on the access to finance has to be done very carefully. Three different aspects have to be distinguished.

1. the influence of the tax system on equity financing,
2. the influence of the tax system on debt financing and
3. the influence of the tax system on venture capitalists.

Furthermore, different types of SMEs have to be distinguished. In the study we differentiated between corporations and partnerships/sole proprietorships.

(8) The main issue on **equity financing** is linked to the discussion on the treatment of equity endowments by the tax system. Here it is clear, that there is a discrimination of equity financing in most countries. Accordingly, the study proposes changes for equity financing in corporate SMEs. First of all, equity financing should be treated similar to the interest treatment of debt financing. The idea is that a certain equity interest rate should be used to reduce the profit of a company as seen in Austria. The interest rate as well as the amount of interest deductible from the tax base should be in accordance to the regulations for debt financing. Furthermore, we propose specific tax rates for young SMEs. Here a lower tax rate than the regular corporate tax rate should be used. The third recommendation aims at the treatment of losses. We support the transfer of losses on future tax years for SMEs. That transfer should be unlimited. To enhance liquidity and financial resources of young SMEs for start-ups, even a backward transfer of losses on entrepreneur's income in previous periods should be considered.

For partnerships and sole proprietorships, we propose a possibility to change the tax scheme within a certain period. The change from individual income tax to corporate income tax should be possible once in the life-time of a SME.

(9) The **debt financing** of SMEs is privileged in all countries except Austria. Accordingly, these countries have established thin capitalisation rules. We propose that these thin capitalisation rules are either abolished or at least only used for offshore financed businesses with European Union and non EU countries. Thin capitalisation rules should not be applicable to any business within the European Union.

(10) The **tax burden on venture capital**, in general, is very much in accordance to the tax regulation for any corporation. The main point of discussion, however, is the issue on the value change of the shares kept by a venture capitalist. We propose three changes. First of all, extraordinary depreciation makes only sense, if, and only if, it is in accordance to the tax systems. That means, only if gains from value changes are subject to tax, the losses should be subject, too. Secondly, we propose that in the case that gains and losses of the value of the share owned by venture capitalists are subject to taxes, losses should be treated as any other investment, too. Thus, a transfer and a retransfer to previous or later periods should be possible. Finally we propose that realised capital gains by value changes of the shares should be treated according to a special tax scheme. Here the United Kingdom is a good example. Furthermore, a roll over relief should be provided.

Based on these recommendations, substantial changes in the access of SMEs to financial resources might take place. Under these conditions the incentive for SMEs to enhance their equity share as well as the incentive for further investments can be expected.

## 2 Introduction

(1) The study “access to finance and venture capital for industrial SMEs” analyses the accessibility of financial resources for European SMEs. In the Lisbon goals an improvement of the access of SMEs to financial resources has been explicitly stated as a political target. Accordingly, it is the main objective of the study to provide information on five issues.

1. The relevance of SMEs for the European economies will be analysed.
2. Based on the importance of SMEs for various European economies, the financial structure of these SMEs is subject of the study. The main focus here will be laid on the kinds of financial resources used by SMEs in selected countries.
3. The availability of venture capital will be researched. Here, on one hand, the availability of venture capital in Europe, is subject of the study. On the other hand, an in depth analysis of the availability of venture capital in selected countries will be conducted.
4. The study explores the tax situation for heterogeneous financing schemes. The main idea behind that part is to identify differences in the treatment of debt and equity financing by national tax laws.
5. Last but not least, recommendations for an improvement of the access of SMEs to financial resources are developed.

(2) The five topics will be analysed in-depth for five selected countries. The following countries are selected for the analysis: Austria, France, Germany, Poland and the United Kingdom. A number of considerations has lead to the selection of those countries. On the one hand, France, Germany and the United Kingdom are the large economies of the European Union. On the other hand, Austria represents a small but strong economy of the EU, and last but not least, Poland is a representative of the new member states, who are still in a transition from their former economic system to a market economy. Accordingly, the five countries represent the variety of European economies and can thus be seen as a good benchmark for all the other countries of the European Union.

(3) The study is based on the analysis of existing material. In addition, interviews with experts have been conducted.

### 3 The Lisbon Strategy – Impact on Financing Innovative SMEs

(1) In the *Lisbon Agenda of Economic and Social Renewal* by the European Council, the overall political aims were fixed in the year 2000 as

- “to establish an inclusive, dynamic and knowledge based economy,
- to produce accelerated and sustained economic growth,
- to restore full employment as the key objective of economic and social policy, and reduce unemployment to the levels already achieved by the best performing countries, and
- to modernise our social protection systems”.<sup>2</sup>

The European Commission stated that one priority for economic reforms was to develop European entrepreneurship: Europe shall become more entrepreneurial and innovative. Jobs in the new economy – as it was seen in 2000 – should primarily be created by vibrant **small and medium sized firms**, with a small number of them growing rapidly to become leading global companies.

(2) In 2000, the European Commission called for a twin strategy: First, Europe should build up a **dynamic business environment** in which companies can be created, grow, and innovate within competitive markets. It has to be an attractive and simple environment that really **helps small businesses**, and it **has to be supported by risk capital finance and by an effective innovation policy**.

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<sup>2</sup> *The Lisbon European Council – An Agenda of Economic and Social Renewal for Europe*, Contribution of the European Commission to the special European Council in Lisbon, 23 – 24<sup>th</sup> March 2000, DOC/00/7.

Research was seen as the second factor for future economic growth. As **research and technology** account for between 25% and 50% of economic growth, they are the principle driving forces for competitiveness and employment. The European Commission agreed that, in the global economy, technology and research lead to tomorrow's jobs. The **use of tax and risk capital incentives to stimulate research** was seen as one of the key elements. Setting common objectives for improving the environment for private investment in research, and for creating technological "start-ups" in Europe was defined as a target for 2002.

(3) On 19-20 June 2000, the *European Charter for Small Enterprises* was approved by EU leaders at the Feira European Council. The Charter called upon Member States and the Commission to take action to support and encourage small enterprises in ten key areas, one of them being "Taxation and financial matters". The aim was to achieve a regulatory, fiscal and administrative framework conducive to entrepreneurial activity and to improve access to finance throughout the entire life-cycle of an enterprise. By endorsing the Charter, EU leaders committed themselves to **adapt tax systems to reward success, encourage start-ups, favour small business expansions and job creations, and facilitate the creation and the succession in small enterprises**. In order to improve small enterprises' access to financial services, the following activities are mentioned:

- Identification and removal of barriers to the creation of a pan-European capital market and to the implementation of the Financial Services Action Plan and the Risk Capital Action Plan;
- Improvement of the relationship between the banking system and small enterprises by creating appropriate access conditions to credit and to venture capital; and
- Improvement of the access and the structural funds and welcoming initiatives by the European Investment Bank in order to increase funding available to start-ups and high-technology enterprises, including equity instruments.

(4) Five years later, the *Lisbon action plan* of 3 February 2005<sup>3</sup> states an "innovation gap" that reflects – beyond others – **weaknesses in the availability of early stage finance**. E.g., ICTs contribute 40% of total productivity growth – but European investments in ICT represent about 20% of total R&D spent, as compared to 30% in the United States. On EU level a solution is expected by **better access to financing for innovative enterprises** by

- lifting intra-EU barriers for cross-border activity for venture capital firms,
- giving young, innovative companies better access to EU research funds, and

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<sup>3</sup> See *Lisbon Action Plan incorporating EU Lisbon Programme and recommendations for actions to Member States for inclusion in their national Lisbon Programmes*, Brussels, 4 February 2005, SEC(2005)192.

- revising EU state aid for innovative and risk capital (i.e. a revision of the legal framework for State Aid for innovation and risk capital plus an examination of new financial instruments in support of innovative enterprises).

(5) On the member state level, financial support from the Community should be used for joint participation. Member states are invited to **share best practice to support innovative enterprises** and to open national and regional support schemes.

Additionally, it is stated that innovation is closely related to the willingness to take risks and test new ideas on the market, and that the availability of venture capital is crucial. Both factors are directly linked to the financing of innovative SMEs.

(6) In Central Policy Area No. 6: *Facilitate Innovation, the uptake of ICT and the sustainability use of resources* policy measures at Community level are defined. One of them is to facilitate access to finance for innovative enterprises. The legal framework for State Aid has to be revised, including **State Aid and innovation, risk capital, and Regional State Aid guidelines**. Additionally, the communication on Venture Capital should be enforced, including the **lifting of legal, administrative and tax barriers to cross-border activity of venture-capital funds**, and the **improvement of exit mechanisms to encourage investment**. Expenses should be raised for the adoption of High Growth and Innovative SME Facility (GIF) within CIP. It is supposed that these measures will enhance the creation and growth of innovative enterprises, ease the development of new knowledge based industries, and improve competitiveness by leading to an increase in innovation and resource efficiency.

## 4 Analysis of SMEs and Their Financial Structure in Selected Countries

(1) For our study the relevance of SME in general as well as information on the financial structure of SMEs is of high importance. Thus the two issues will be discussed in the following. The chapter starts with a brief introduction to the structure and economic importance of SMEs in Europe in general and the selected countries in particular.

(2) The chapter is followed by a discussion of the financial structure of the SME. Here a special emphasis will be put on equity ratios as well as kinds and shares of credits forming the financial makeup of SMEs.

### 4.1 Analysis of the Economic Importance of SMEs in Europe and in Particular in the Selected Countries

(1) SME play an important role in the economy of all countries selected for this report. They are an important factor regarding employment, number of companies, contribution to GDP as well as innovation.

The definition of companies perceived as SMEs varies among the European Union member states. So Germany, for instance, defines SMEs as companies with up to 499 employees, a turnover of up to €50 Million and up to 25% shares held by a non-SME.

(2) For a European comparison of SMEs, the definition given by the European Commission is the most suitable. That definition is compulsory for all project funding. Most statistics on SME are based on that particular definition.

The European Commission's definition of SMEs is based on three criteria. These are number of employees, turnover per year and balance sheet size per year. In addition, the Commission allows a maximum share by an LSE of 25% or below.

The number of employees is counted by annual work units (AWU) that represent annual full-time headcounts. AWU are still the most important criterion used for the definition of SMEs. The balance sheet total as well as the turnover is measured annually. The independency is defined in capital and voting rights. A company is called independent if the influence of a shareholder is limited. In the last recommendation released by the European Commission, the following factors define three distinct company categories:

Table 1: Definition of SMEs by the European Commission

Category	Employees (AWU)	Turnover (Threshold)	Balance Sheet Total (Threshold)	Independence
Micro	<10	€ 2 million	€ 2 million	Given by < 25% capital shares by third party
Small	<50	€ 10 million	€ 10 million	
Medium-Sized	<250	€ 50 million	€ 43 million	

Source: European Commission 2003, Commission Recommendation of 06/05/2003 concerning the definition of micro, small and medium-sized enterprises, Brussels

All numbers represent maximum limits. Member states, EIB and EIF are entitled to lower their definition of the categories.

(3) Based on that definition the importance of SMEs in the selected countries as well as in Europe generally can be calculated. The European Observatory (2003) has just recently presented the last results in their study "SMEs in Europe 2003".



Table 2: Share of SME on all enterprises

		SME			Total	LSE	Total
		Micro	Small	Medium-sized			
Number of enterprises	1 000	17 820	1 260	180	19 270	40	19 310
Employment	1 000	55 040	24 280	18 100	97 420	42 300	139 710
Occupied persons per enterprise		3	19	98	5	1 052	7
Turnover per enterprise	1 000 Euro	440	3 610	25 680	890	319 020	1 550
Value added per enterprise	1 000 Euro	120	1 180	8 860	280	126 030	540
Share of exports in turnover	%	9	13	17	12	23	17
Value added per occupied person	1 000 Euro	40	60	90	55	120	75
Share of labour costs in value added	%	57	57	55	56	47	52

Note: Micro enterprises: less than 10 occupied persons; small enterprises: between 10 and 50 occupied persons; medium-sized enterprises: between 50 and 250 occupied persons; LSE: 250 or more occupied persons.

Source: Estimated by EIM Business & Policy Research; estimates based on Eurostat's Structural Business Statistics and Eurostat's SME Database; also based on European Economy, Supplement A, May 2003, and OECD: Economic Outlook, No. 71, June 2003; due to rounding, totals may differ slightly from constituent parts.

Source: European Commission, European Observatory 2003, SMEs in Europe 2003, p. 27

The data shows clearly that about 2/3 of the total employment in Europe is at SMEs. In addition SMEs provide more than 99% of all enterprises. Amongst SMEs, micro enterprises provide the largest number of firms as well of employment. However their share in the total turnover of all SMEs is fairly small as is their value generation.

(4) For the study, however, the European data is only of limited interest. For the focus of the study the structure in the selected countries is of higher importance. Here we see that there is a fairly large variety among those countries (e. g. Germany, UK) that feature rather large enterprises compared to Austria and France in which micro enterprises are the dominant company size.

Table 3: Dominant company structure in the selected countries

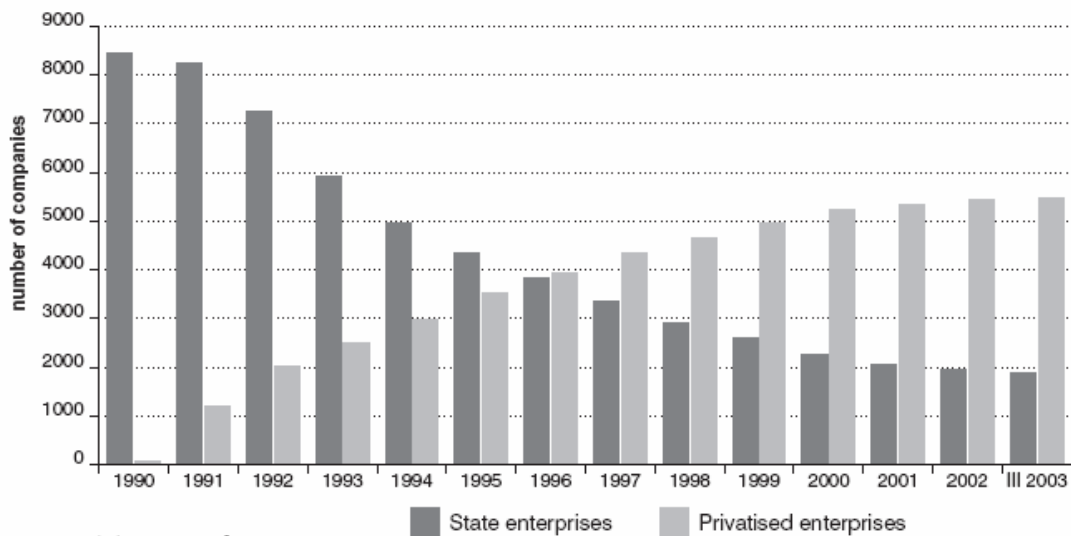
Country	No. of enterprises in 1000	Occupied persons per enterprise	Size-class dominance
Austria	270	11	Micro
France	2,500	8	Micro
Germany	3,020	10	LSE
United Kingdom	2,230	11	LSE

Source: European Commission, European Observatory 2003, SMEs in Europe 2003, p. 27

The contribution to the GDP of SMEs in the selected countries is fairly high. The European Observatory shows that the contribution of SMEs in Europe 19 to GDP is about 50%. It is however also stated that labour productivity and profitability of SMEs in all 19 European countries is below average. That shows the ambivalence of SMEs. On the one hand, they provide most of the enterprises and stand for a large proportion of the employment. On the other, their economic outcome in average is below the outcome of all other enterprises (European Observatory, 2003, p. 28).

(5) Poland still faces a strong influence from its transition to a market economy. An average unemployment rate of 20% in 2003, combined with a GNP growth rate of about 4% is not sufficient to gain economic momentum (cf. Polish Agency for Enterprise Development, 2004, Report on the Condition of Small and Medium Sized Enterprise Sector in Poland 2002 – 2003, chap. 1). The transition stage of the Polish economy is also visible in the distribution between public and private enterprises. The number of new private companies is still increasing and the amount of state owned enterprises is decreasing. The development is shown in the following figure:

Fig. 1: Privatisation Process in Poland 1990 – 1. Quarter 2003

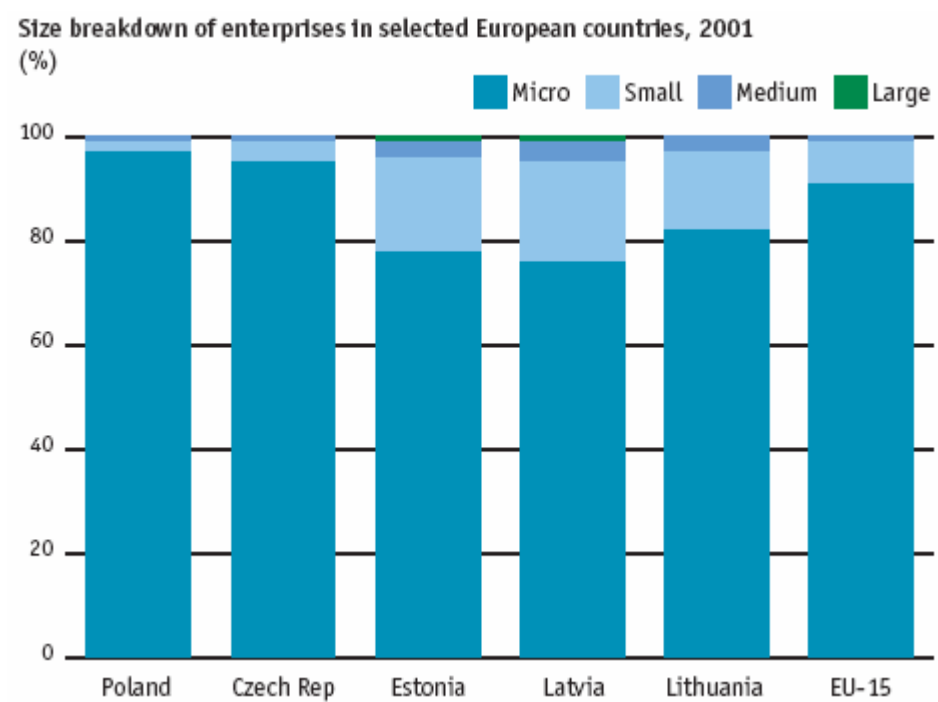


Source: Polish Ministry of Treasury

Source: Copernicus Finance (ed.), 09/2003, Poland in the EU – Business and Investment Opportunities, Warsaw.

The situation of privatised SMEs in Poland is quite similar to those in Austria and France with a dominance of micro enterprises. In a recent report published by The Economist Intelligence Unit<sup>4</sup> the data on the structure of Polish SMEs has been shown.

Fig. 2: Size classes of Central European SMEs

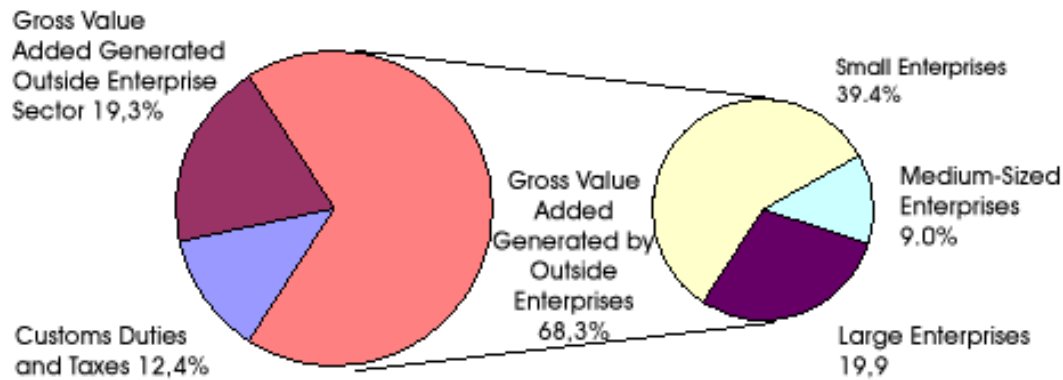


Source: The Economist Intelligence Unit, 2004, The challenges of enlargement: SME growth strategies in Central Europe, p. 4.

The graph illustrates the high number of micro size SMEs in Poland. In total there were more than 1.73 million SMEs registered in 2002 (Polish Agency for Enterprise Development, 2004, p. 28). They represent more than 48% of the total GDP of Poland. The contribution of the various company size-classes is shown in the following graph.

<sup>4</sup> See The Economist Intelligence Unit, 2004, The challenges of enlargement: SME growth strategies in Central Europe

Fig. 3: Contribution of SMEs to the Polish GDP



Source: International Small Business Congress, 2004, Small and Medium-Sized Enterprises on the Integrating World Market, [http://www.isbc2004.pl/isbc/index.php?k=msp\\_w\\_polsce&l=en](http://www.isbc2004.pl/isbc/index.php?k=msp_w_polsce&l=en)

The SMEs in Poland employ over 67% of all employees. Accordingly the impact of SMEs on the Polish economy is fairly strong. Again, Micro enterprises are of major importance here.

## 4.2 Financial Structure of SMEs in Selected Countries

(1) The variety amongst financial markets in Europe is still strong. Countries like Germany, for instance, show a highly segmented financial market, whilst the one in the UK is fairly concentrated. Accordingly, the financial environment for SMEs is quite heterogeneous. Furthermore, the kinds of financing used by SMEs are quite heterogeneous among the European countries. In the UK capital market based financing is of larger importance than in Germany. By contrast, bank loans in Germany are still the dominant financial resource for SMEs (see Ade *et al.* 2004; PwC 2004a, p. 89).

(2) There seems to be a clear segmentation in bank based systems and capital market based systems in Europe (Canepa, A., P. Stoneman, 2004, Financial constraints to Innovation in Europe – Evidence and Policy). That is also seen in the debt to equity ratio. That ratio informs about the equity share of SMEs. In retrospect, a sharp reduction of the equity ratio can be identified in several European countries. German SMEs, for instance, had an average equity ratio of above 30% in the 60s. Today the average equity ratio has decreased to less than 20%

in average. In some countries we find that SMEs strongly depend on credit financing. The following figure shows the context for 15 selected EU countries in 2000.

Table 4: Capital and reserves (equity), by sector, enterprise size and country in 2000, in percentage of total capital

	Manufacturing		Retail Trade		Transportation, Communication	
	Small	Medium	Small	Medium	Small	Medium
Austria	19.69*	33.08	5.34*	31.48	8.14*	41.95
Belgium	38.40	36.41	29.33	27.13	32.80	34.62
Denmark	29.61	35.93	26.21	34.15	26.80	24.45
France	36.90	36.88	35.81	31.05	28.99	27.04
Finland	38.75	43.61	31.64	39.59	31.47	40.19
Germany*	20.57	27.95	11.00	13.13	n.a.	n.a.
Italy	27.92	26.83	24.95	20.77	39.68	26.93
Netherlands	34.45	34.94	35.95	30.11	30.44	26.67
Portugal	34.28	38.45	31.99	30.91	20.98	27.94
Spain	42.68	45.26	40.34	43.21	44.66	68.04
Sweden	32.33	31.35	28.35	23.79	21.98	14.21

\* Data refers to 1999.

n. a. = no data available.

Manufacturing refers to the following sectors of NACE Rev. 1: 13-22 and 24-36.

Retail Trade refers to the following sectors of NACE Rev. 1: 52.1-52.6 and 50.5.

Transportation and Communication refers to the following sectors of NACE Rev. 1: 60-64.

Small enterprises are those with an annual turnover of less than € 7 million.

Medium-sized enterprises are those with an annual turnover between € 7 million and € 40 million.

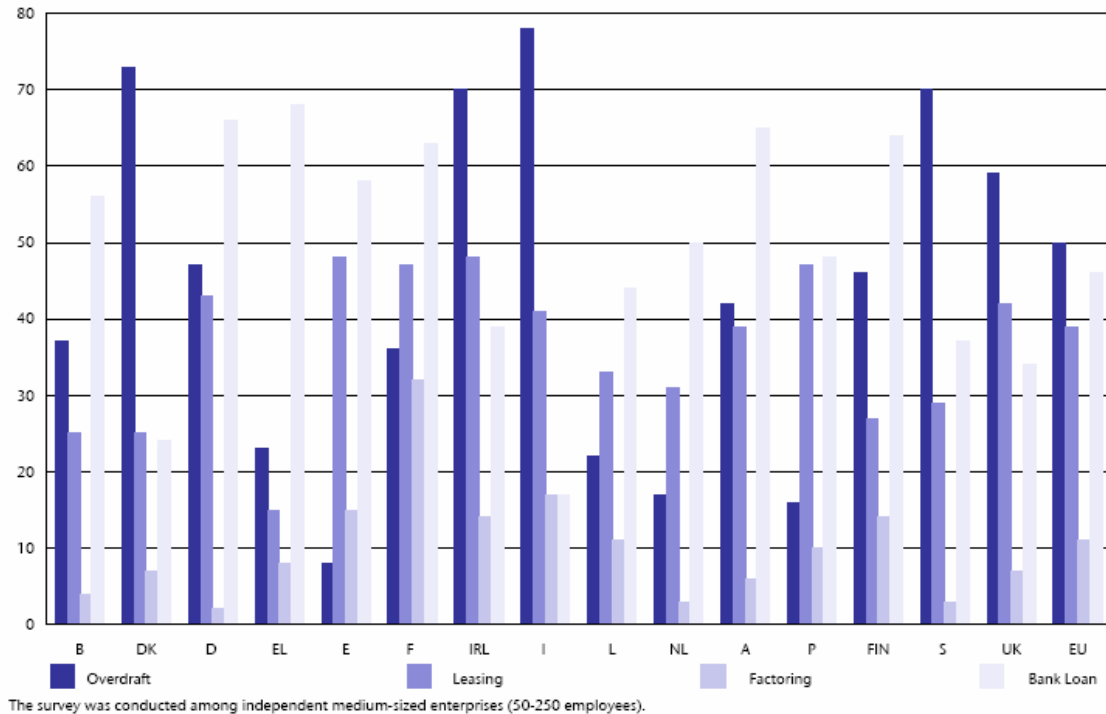
Source: BACH Database: August 2003.

Source: European Commission, 2003, SMEs and access to finance, p 21

As the numbers show in countries like Austria and Germany the average equity ratios are in the range of about 5% to 42% for all SMEs in the sectors considered. The variety among several size classes, however, is fairly large. In Germany, for instance, micro-enterprises have almost an average equity ratio of about 0% (Deutsche Bundesbank, Monthly Report (Monatsbericht) October 2003, p. 43).

(3) There is not only a large variety in the composition of credit and equity financing. Even the debt financing itself is subject to large variations. The following figure shows the composition of kinds of debt financing among European countries.

Fig. 4: Percentage of SMEs using debt financing in 15 EU countries



Source: Grant Thornton, The European Business Survey, London, 2001.

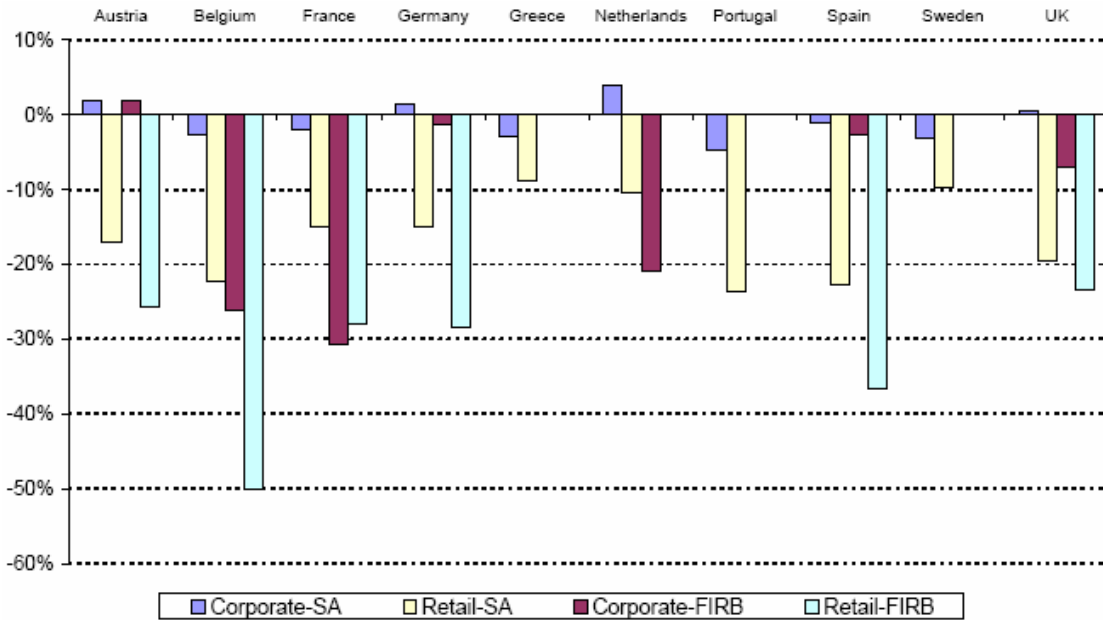
Source: European Commission, 2003, SMEs and access to finance, p 20

As is illustrated in the graph for medium enterprises, bank loans play a crucial role in financing SMEs especially in Austria, France and Germany. In the UK bank loans are of less importance. It is quite interesting to see, that modern financing tools like factoring not play a crucial role in most countries does. It is quite obvious that there is room for improvement in many European countries.

(4) It has been claimed frequently that SMEs in Europe suffer from a credit crunch. It is stated that the credit crunch is initiated by the economic downturn and the establishment of the Basel II Accord. However, many studies show that statistics refute the assumption of a credit crunch. It can be shown that bank lending on average has not turned downwards but SMEs even got an increasing share of the loan portfolio during the last years (see Wagenvoort, R., 2003, Bank survey evidence on “bank lending to SME in the European Union”, in EIB (ed.), Economic and Financial Report 2003/01, p. 37).

Furthermore, all studies show that the Basel II Accord will not increase financing costs for SMEs. In particular, a study conducted by PwC (2004a) shows that in most European countries SMEs will face decreasing credit cost on average.

Fig. 5: Change in risk-weighted assets for SME exposures (corporate vs. retail)



Source: PwC, 2004a, Study on the financial and macroeconomic consequences of the draft that proposed new capital requirements for banks and investment firms in the EU, p. 48.

The average view may however not lead to the assumption that all SMEs will be subject to lower credit cost. In particular those SMEs, which suffered from poor economic results in the past as well as those SMEs in the early stage, will probably face higher cost. On the other hand, those SMEs with a solid financial and economic track will be subject to reduced capital cost.<sup>5</sup>

The general results will now be transferred to the national context of the selected countries.

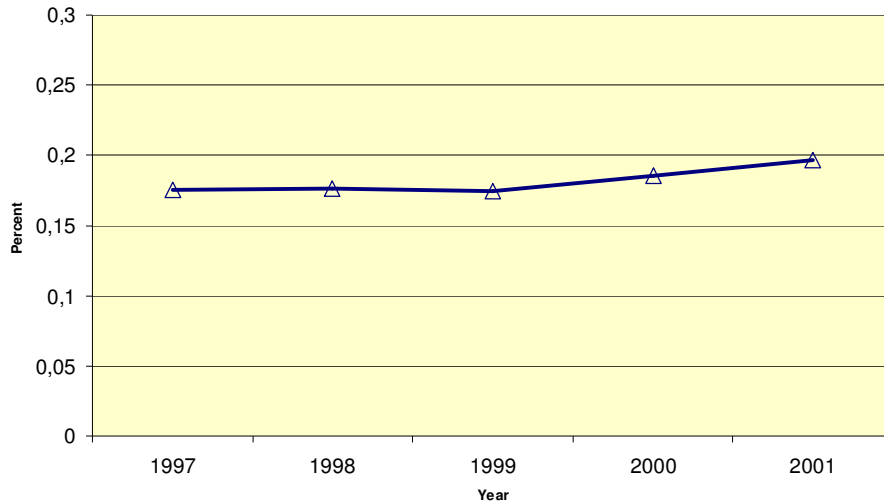
#### 4.2.1 Financing of SMEs in Austria

(1) Austrian SMEs show quite a small average equity ratio compared to other European countries (cf. Heimer, T., Köhler, T. 2004). Austrian SMEs are pretty much financed by debt and bank loans in particular. The spread of the average equity ratio among various class sizes of SMEs as well as of various sectors is large compared to other European countries. In particular the hotel and restaurant sector, which is of high economic relevance for the Austrian Economy, exhibit tremendously low equity ratios. The average equity ratio of Austrian SMEs in

<sup>5</sup> An in depth analysis of the impact of the Basel II Accord on SME is also available in Ade *et al.*, 2004 for European SMEs and for Austrian SMEs in particular in Heimer, T., T. Köhler 2004.

the hotel and restaurant sector (NACE 55) is even negative for the last years. Accordingly, Austrian SMEs are strongly depending on banks.

Fig. 6: Average equity ratio of Austrian SME



Source: Own calculations.

(2) Based on the numbers shown it is not surprising that Austrian SMEs frequently notice that their access to finance is fairly difficult (see Heimer, T., Köhler, T. 2004).

#### 4.2.2 Financing of SMEs in France

(1) France shows a higher equity to debt ratio than Austria and Germany. In average the equity ratio of French SMEs in the manufacturing sector is about 33%. Thus there is a significant difference to Austria and Germany.



Table 5: Indicators of capital structure in manufacturing by firm size in 2000 (in %)

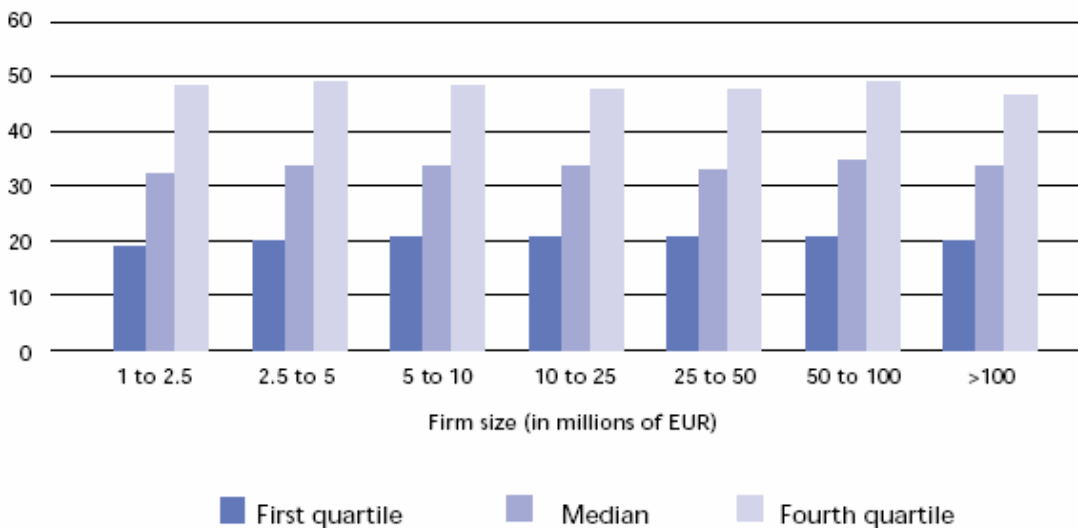
Firm size (turnover in EUR million)	Equity/ liabilities	Trade credit/liabilities	Financial debt/liabilities	Bank debt/ financial debt
1 - 2.5	32	25	13	81
2.5 - 5	33	28	14	85
5 - 10	33	28	14	85
10 - 25	33	26	15	83
25 - 50	33	25	15	81
50 - 100	35	25	14	74
> 100	33	25	13	59

Notes: For each indicator, the table shows the value for the median firm in each size class.

Source: Dietsch, M., 2003, Financing Small Business in France, EIB Papers, Vol 8, No. 2, p. 96.

It is quite interesting to see, that the equity of debt ratio spread among various size classes in France is fairly small. In opposite to other countries, for example Germany, even micro enterprises show a relatively high equity ratio.

Fig. 7: Distribution of firms' equity ratio by firm size, in 2000 (in %)



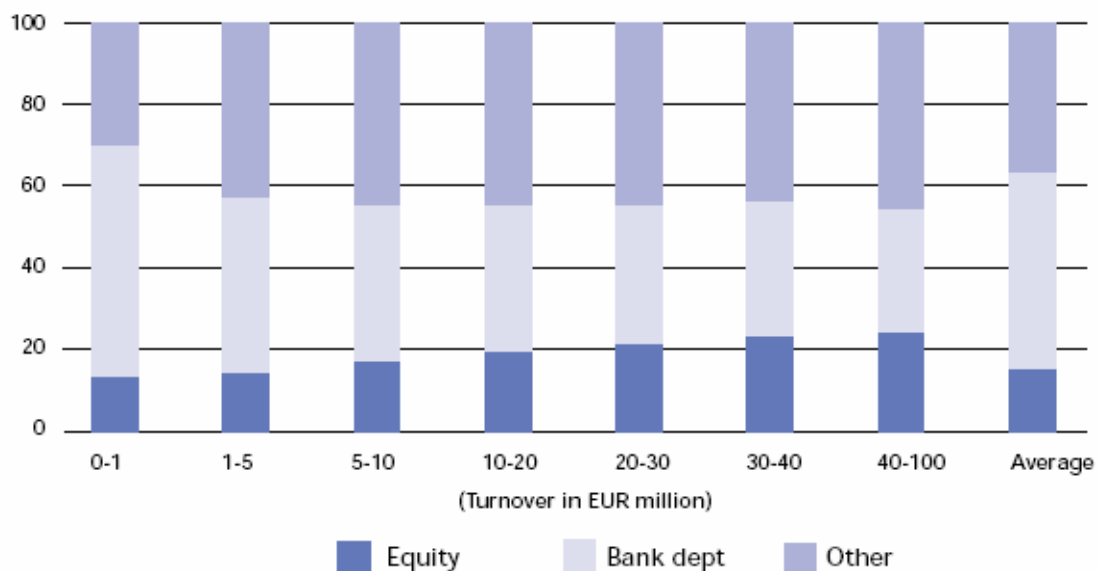
Source: Dietsch, M., 2003, p. 97.

(2) On the debt side, bank debts play a major role in France. In 1999 French SMEs got about 40% of total company loans. That is about the share of investments taken by SMEs. It seems therefore, that SMEs in France have improved their share of total company loans to a fair level compared to large enterprises.

### 4.2.3 Financing of SMEs in Germany

(1) Germany has developed a severe equity weakness within the last decades. Primarily due to tax reasons, the average equity share of German SMEs has declined from 31% in 1967 to 17% in 1994 (see Hommel, U., H. Schneider, 2003, Financing the German Mittelstand, EIB Papers, Vol 8, No. 2, p. 60). As is illustrated by the following figure, the capital structure of the German *Mittelstand* is dominated by debt financing.

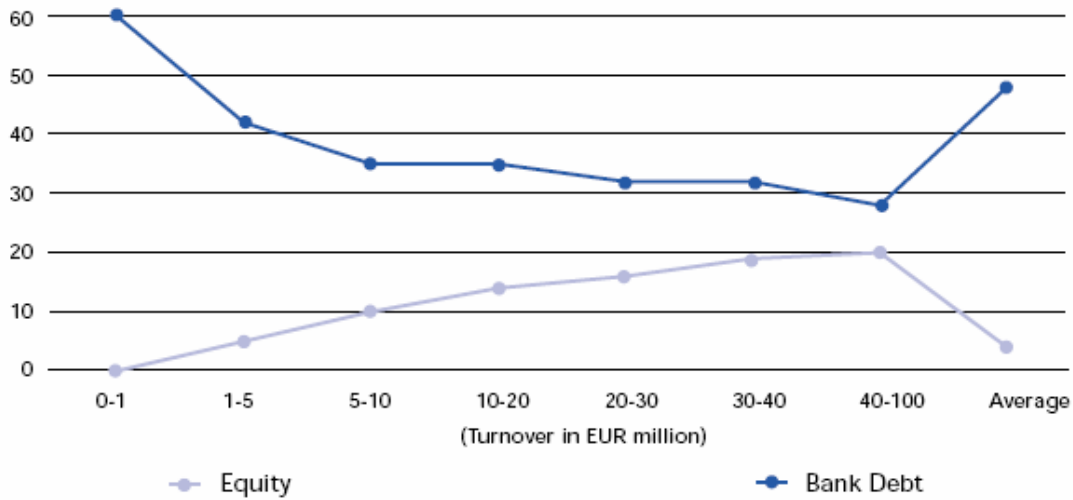
Fig. 8: Capital structure of the German *Mittelstand* by size class in 2000 (in %)



Source: Hommel, U., H. Schneider, 2003, p. 59

(2) The low equity ratio is partly based on tax reasons; partly it is a direct outcome of a strong resistance by German SMEs to equity contributions by private equity companies or business angels. That is in particular true for micro-enterprises, as can be seen in the following graph.

Fig. 9: Median capital structure of German *Mittelstand* firms by size class in 2000 in % of balance sheet total



Source: Hommel, U., H. Schneider, 2003, p.62

(3) This low prevalence of equity in German SMEs is also visible when analysing the financing instruments used by SMEs. Here private equity plays a minor role compared to financing with earnings and debt financing. It is quite interesting that that results is fairly stable over all SME size classes.

Table 6: Relevance of alternative financing instruments for the *Mittelstand* firms by size class

	Turnover (in million of EUR)				
	< 1	1-10	10-20	20-40	40-100
Internal financing with earnings	4.2	4.3	4.3	4.7	4.5
	4.0	4.2	4.3	4.5	4.3
Internal financing with pension reserves <sup>+</sup> (*)	1.4	1.5	2.1	1.6	1.6
	1.4	1.6	2.0	2.3	1.8
Conglomerate financing <sup>°°°/+++ (°°°/†)</sup>	1.2	1.2	1.3	1.6	3.0
	1.2	1.2	1.4	1.5	2.7
Public support programmes	2.4	1.7	1.6	1.9	1.6
	3.3	2.4	1.9	3.1	2.0
Loans from shareholders	3.6	3.4	3.3	2.8	3.5
	3.5	3.2	3.2	2.5	3.8
Silent partnerships <sup>++</sup>	1.4	1.5	1.3	1.3	1.1
	1.6	1.5	1.3	1.5	1.2
Supplier loans	2.5	3.0	2.6	2.9	3.3
	1.7	1.6	1.7	1.6	2.3
Employee ownership plans	1.2	1.1	1.2	1.2	1.1
	1.4	1.2	1.1	1.2	1.5
Leasing	2.5	2.6	2.1	2.9	3.0
	2.5	2.4	2.8	2.4	3.2
Factoring (°)	1.2	1.2	1.2	1.2	1.6
	1.3	1.3	1.1	1.1	1.6
Private equity <sup>+</sup>	1.3	1.2	1.1	1.2	1.1
	1.4	1.3	1.2	1.2	1.3

Notes: The first entry for each financing alternative and size class refers to short-term financing, the second to long-term financing; the relevance of alternative financing instruments has been rated from 1 (unimportant) to 5 (very important); absolute scores represent the median for each size class; results of significance tests for short-term (long-term) financing are given without (in) brackets. For an explanation of the significance levels and statistical tests see Notes to Table 4.

Source: Hommel, U., H. Schneider, 2003, p.72

#### 4.2.4 Financing of SMEs in Poland

(1) The situation in Poland in regard to financing is less favourable as in the western European countries. Since the Polish companies still struggle with the transition from the former economic system there is hardly any reliable data for Poland. However, some numbers indicate that the access of Polish SMEs to finance is fairly difficult. From the following table it can be seen that a large amount of investments taken by Polish SMEs have been self-financed. The share is even growing from 2001 to 2002. Obviously, the general access to finance is still a major problem of Polish SMEs.

Table 7: Structure of investment expenditures by enterprises with more than 9 employees in 2001–2002, by source of finance (in %)

Source of finance	As % of capital expenditure by enterprises	
	2001	2002
Internal resources	65.1	70.0
State budget funds	2.1	1.8
Credit facilities and loans	18.4	12.6
Direct foreign financing	6.8	7.3
All other sources	1.3	1.9
Unfinanced expenditures	6.3	6.4

Source: Polish Agency for Enterprise Development, 2004, p. 53

(2) The prices for debt financing in Poland is the highest compared to all countries under consideration. Accordingly, the leverage effect that exists in all other selected countries is small in Poland. However, Polish companies primarily struggle with the general transition of their economy.

#### 4.2.5 Financing of SMEs in the UK

(1) British SMEs show comparatively high equity ratios. The financing of British SMEs by external equity is also at the upper scale of all European countries.

(2) Debt financing in the United Kingdom is done with all kinds of external financing. British SMEs show a rather high appreciation of overdrafts and leasing financing. It has been analysed that British enterprises, and in particular SMEs, do not complain about financing cost (see von Kalckreuth, U., E. Murphy, 2005, p. 16). In particular overdrafts seem to be quite expensive compared to other financing tools. The following table and figure gives the numbers.

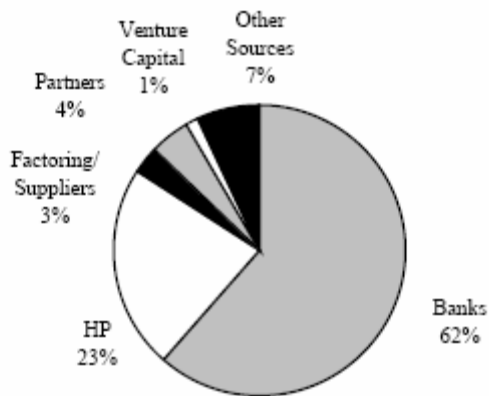
Table 8: Sources of external funding in % by 2001

	Overdraft	Leasing/ HP	Factoring or similar	External Equity	Loans	Grants or awards
UK	59	42	7	11	34	10
EU Average	50	39	11	9	46	9
Survey Average	49	38	10	11	44	8

Source: Bank of England, 2002, Quarterly Report on Small Business Statistics, p. 41

Furthermore, the Small Business Service (SBS) within the scope of the Small Firms Loan Guarantee Scheme guarantees are dedicated to SMEs which have insufficient securities for commercial bank lending to receive loans from banks that take part in the project. Additionally, the Corporate Venturing Scheme was established by the government in 2002 to encourage Corporate Venture Capitalists to invest in unquoted trading SMEs through the instrument of tax reduction for equity investments.

Fig. 10: Sources of external finance for SMEs 1997-99



Source: Bank of England, 2002, Quarterly Report on Small Business Statistics, p. 37

Although it is always emphasised that UK SMEs have a higher equity ratio than continental European SMEs the British government still tries to improve the access of early stage SMEs to finance. DTI with the “Government Action Plan for Small Business” has started initiatives to make the access to finance easier for early stage SMEs. The British government still tries to enhance the access of SMEs to equity.

## 5 Analysis of the Venture Capital Market in Selected Countries

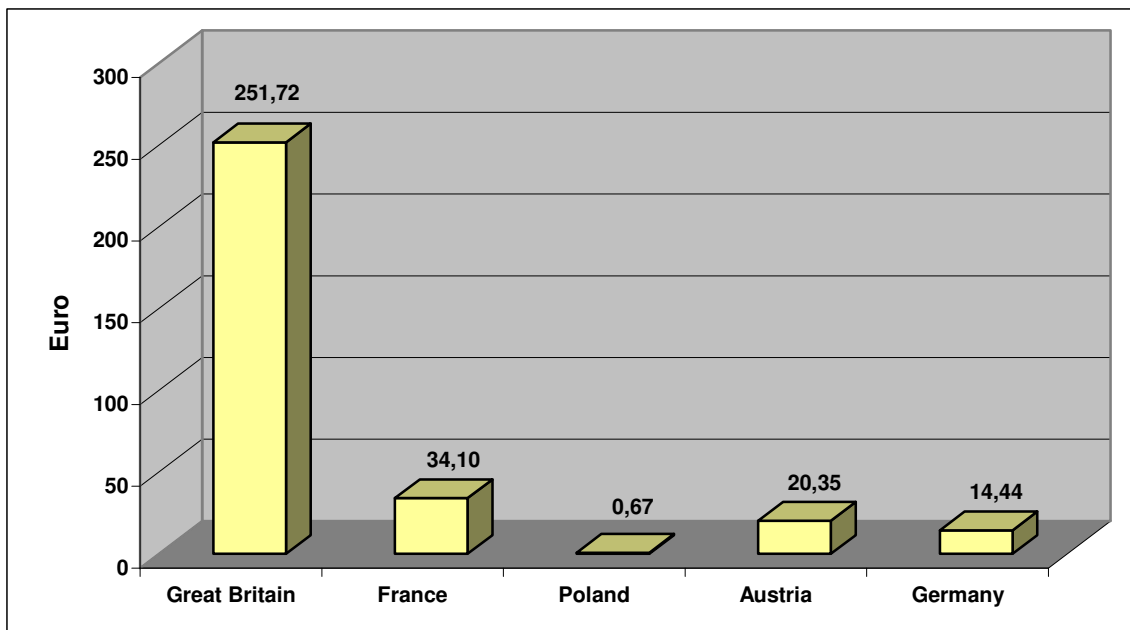
The following chapter discusses the availability of venture capital in Europe and in the selected countries. A special focus is also laid on young technology enterprises.

### 5.1 Introduction to the European Venture Capital Market

(1) The following paragraphs are dealing with the situation of the Venture Capital sector in France, United Kingdom, Germany, Austria, and Poland. Furthermore, a special focus in this survey is on Small and Medium Enterprises (SMEs) in the early stage, in combination with a general overview of Venture Capital in the European Union (EU).

(2) Looking at the funds raised in Europe in the year 2003, a total amount of €27 billion was brought up, which is down from €27.53 billion in the year 2002. The indicator “funds raised per capita in 2003” shows how many funds per capita were collected in the selected countries (Fig. 11).

Fig. 11: Funds raised per capita 2003 in review (in Euro)

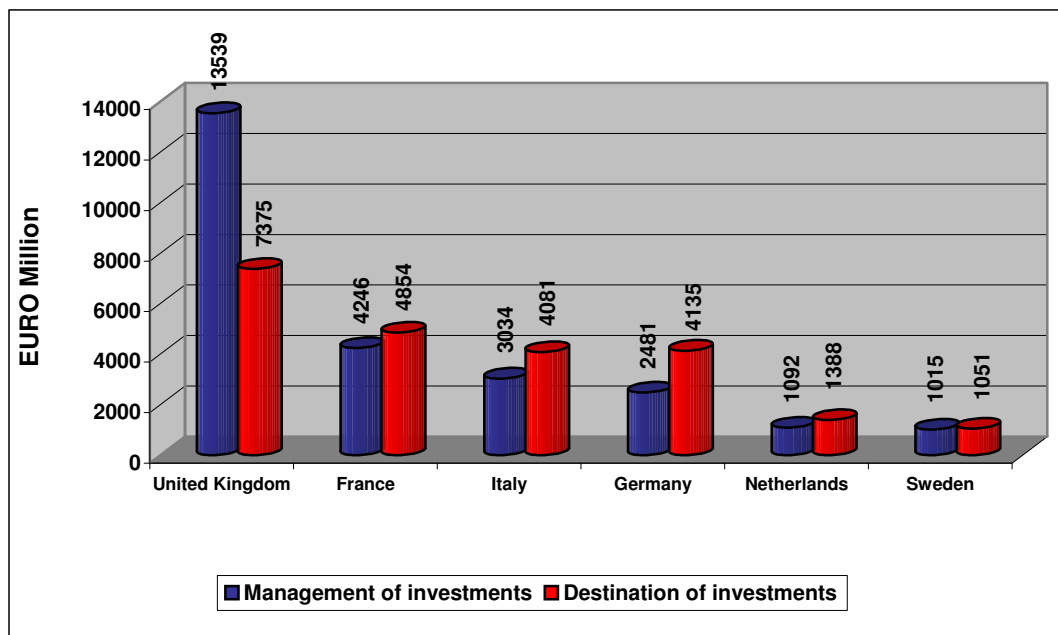


Source: EVCA 2004, OECD 2004

(3) In terms of investments taken place in the European Union including countries like Switzerland, Poland, Czech Republic, Hungary and Slovakia, the year 2003 was quite successful. With an amount of €29.1 billion, which was the second best year after 2000 with €34.9 billion for European private equity investments, the investments in 2003 increased by 5.2% com-

pared to the amount of €27.6 billion invested in 2002. With an amount of €13.5 billion which is 46.5% of the total investment amount in the year 2003, the biggest absolute contributor regarding country of investment management is the United Kingdom. Second in that category was France (14.6%, €4.2 billion) followed by Italy (10.4%, €3 billion) (Fig. 12). Even though the United Kingdom is managing an amount of €13.5 billion, the targets of the investments are not entirely national companies as Fig. 2 shows. About 54% of the country's investment contribution is being invested in foreign countries.

Fig. 12: Geographical destination and country of management of investments in 2003

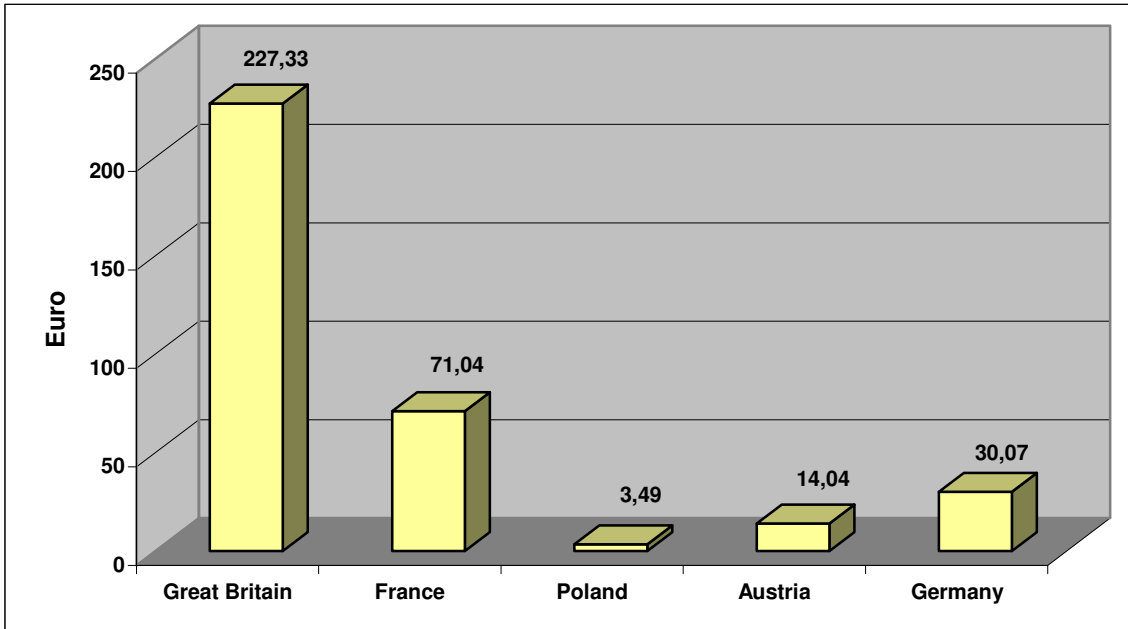


Source: EVCA 2004

(4) Beyond the mentioned absolute amounts of investment the indicator “investments per capita” provides an additional comparison among the countries (Fig. 13).



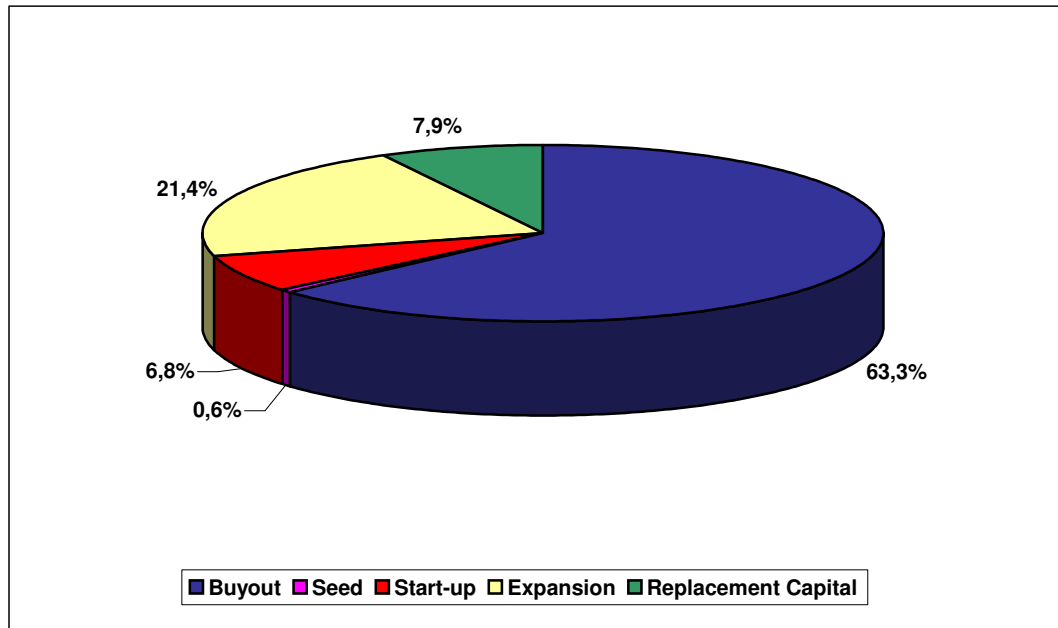
Fig. 13: Investments per capita in review



Source: EVCA 2004, OECD 2004

With regard to investments in the early stage, which implies seed as well as start-up investments, the total investments in that area decreased in 2003 in comparison to 2002. Seed investments dropped from 1.1% of total investments and €305 million in 2002, down to 0.6% of total investments and €165 million in 2003. A downswing took place in start-up investments as well. Still at 9.5% (€2.6 billion) of total investments in 2002 the contribution decreased in 2003 to just 6.8% (€2 billion) (Fig. 14).

Fig. 14: Stage distribution by percentage of amount invested in 2003

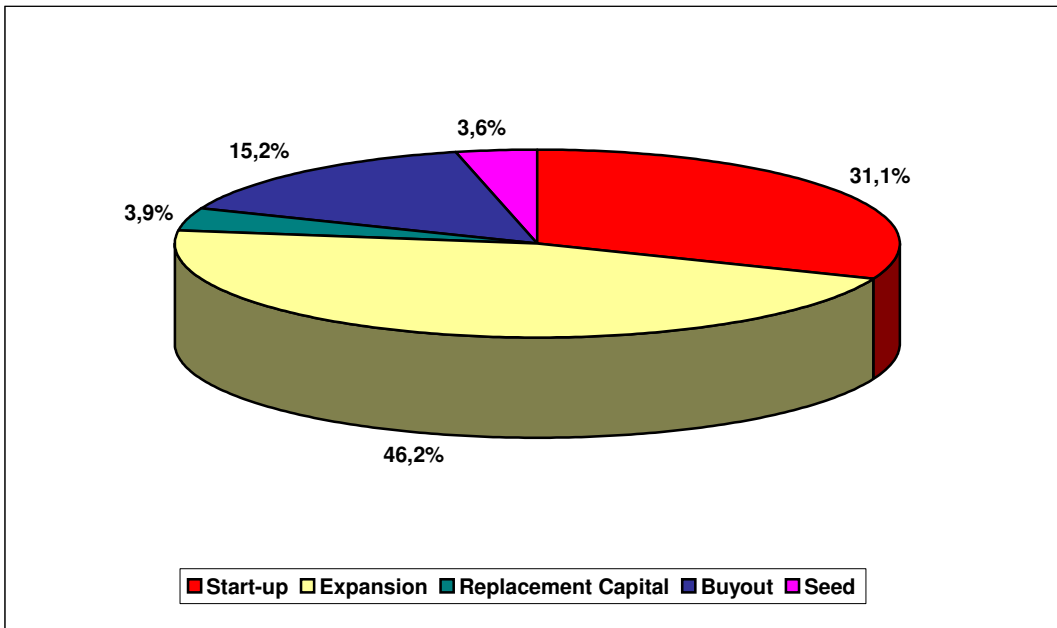


Source: EVCA 2004

(5) Contrary to the shares and amounts of total investments in the seed and start-up phase, the investments by number look quite favourable for 2003. 3.6% of all investments with 377 investments in the seed phase and 3229 investments in the start-up phase (31.1% total number of investments) were made. However, even these numbers are low compared to the results in 2002 (seed phase 5.8% total number of investments, start-up phase: 33.6% total number of investments) (Fig. 15).

The share of the total amount for early stage investments shrinks every year (Deloitte 2004). Countries which show the highest seed investment amounts are France, Denmark and Poland. For start-up investments Portugal (48% of their total national investments), Greece (44.6% of their total national investments) and Switzerland (37.4% of their total national investments) show the highest contribution.

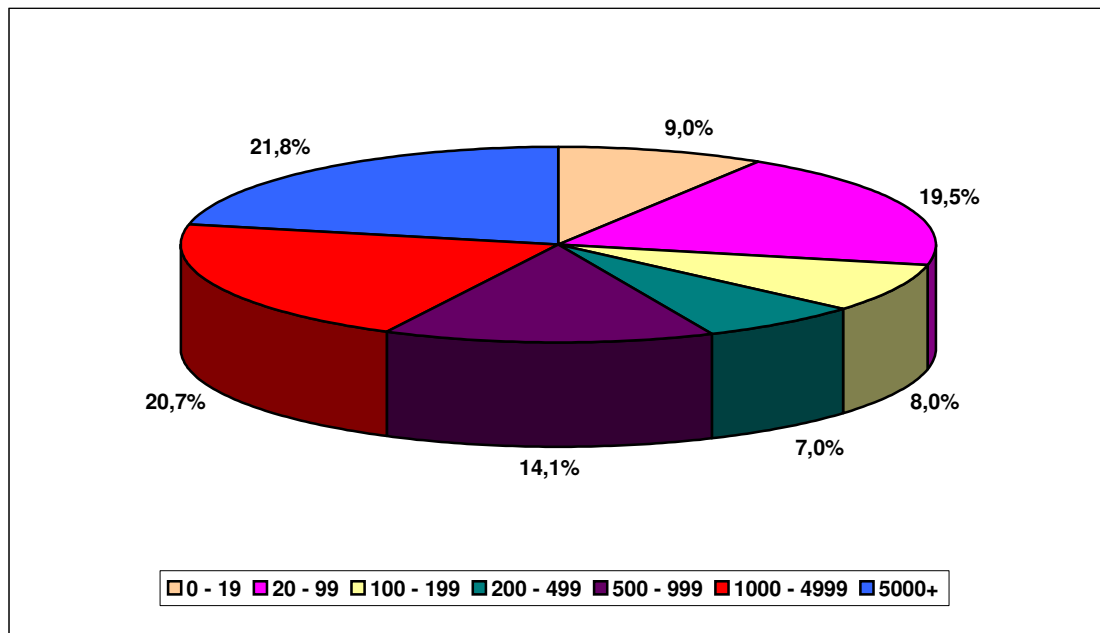
Fig. 15: Stage distribution by percentage of number of investments in 2003



Source: EVCA 2004

(6) Concerning the average investment size the seed investments dropped on average from €515,000 in 2002 to €438,000 in 2003. In that category the average investments in start-ups decreased from €761,000 (2002) to €611,000 (2003) as well.

Fig. 16: Percentage of amount invested by number of employees in 2003



Source: EVCA 2004

The largest share of investments (77%), as well as the largest total investment (28.5%), were placed into small and medium companies which employ less than 100 people. Companies with 100 to 1,000 employees received 29.1% (€6.1 billion) of the total investment amount and represented 19.1% of the total. Companies employing 19 people or less represented 46.5% of the total number of investments. With €8.9 billion (42.5% of the total investment amount) a considerable amount was invested into companies employing more than 1,000 people (Fig. 16). In comparison, the share in 2002 was still 50.3%.

Table 9: Investments 2002/2003 by number of employees

in € x 1,000	2002			2003						
	Amount of Investment	%	Number of Investments	Average Size of Investment	Amount of Investment	%	Number of Investments	Average Size of Investment		
0 - 19	2023030	8,7	2346	38,7	862	1883077	9	2857	46,5	659
20 - 99	3475082	14,9	2372	39,2	1465	4065290	19,5	1850	30,1	2198
100 - 199	1365026	5,9	501	8,3	2725	1668413	8	528	8,6	3157
200 - 499	2825990	12,1	381	6,3	7417	1457260	7	449	7,3	3248
500 - 999	1887982	8,1	212	3,5	8906	2941008	14,1	197	3,2	14948
1000 - 4999	6653185	28,6	189	3,1	35202	4312891	20,7	202	3,3	21306
5000+	5045672	21,7	57	0,9	88521	4556974	21,8	62	1	73744
<b>Sub - total</b>	<b>23275967</b>	<b>100</b>	<b>6058</b>	<b>100</b>		<b>20884912</b>	<b>100</b>	<b>6144</b>	<b>100</b>	
Unknown	4372414		4171			4601333		4231		
<b>TOTAL</b>	<b>27648381</b>		<b>10229</b>			<b>29095918</b>		<b>10375</b>		

Source: EVCA 2004

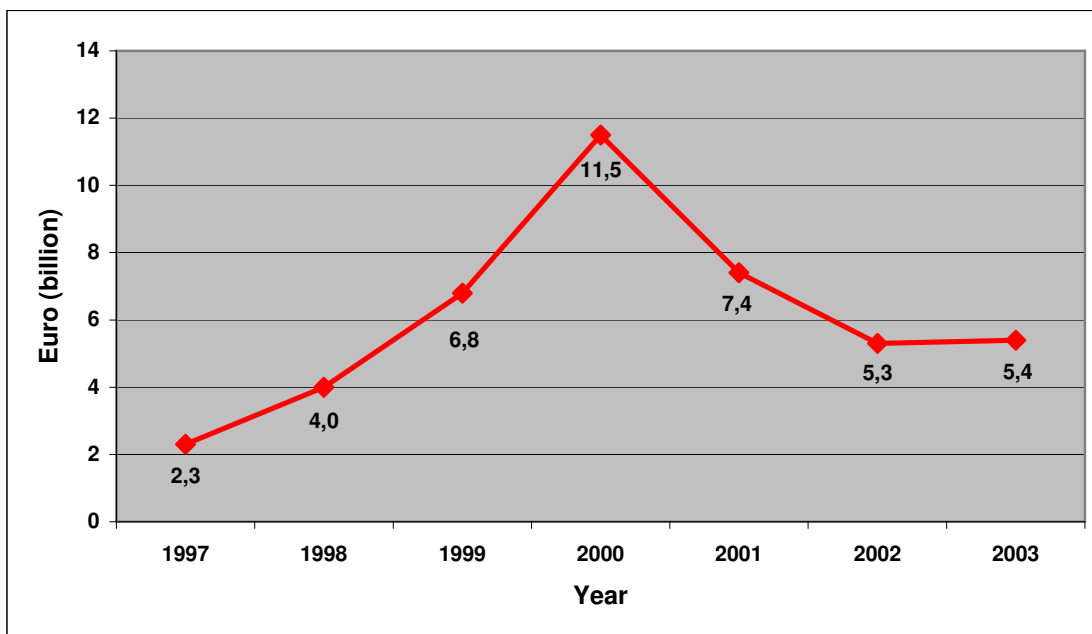
The average investment size differs strongly depending on the company size with regard to the number of employees. Companies employing less than 20 people received an average investment of €659,000, companies with less than 100 people received €2.2 million and companies with more than 1,000 employees received €33.6 million on average (Tab. 9).

Different amounts of funds raised and amounts of investment in one year are not directly comparable. The funds raised will not necessarily be invested in the same year.

## 5.2 The European Private Equity Technology Market

Technologies are one important driver for future business in developed countries. Therefore, investments in technologies play a crucial role for a further development and sustainable growth. In total, 46% of all private equity investments in Europe by number, when compared with 47% in 2002, have been made in technologies. Technology investments in Europe increased by 2% to €5.4 billion in 2003. Technology investments in 2002 were €5.3 billion as shown in Fig. 17. This modest recovery stopped the consecutive sharp declines in the previous two years, which saw technology investment collapse by some 29% in 2002 and 35% in 2001.

Fig. 17: Total technology investments 1997 - 2003 (€ billion)



Source: PricewaterhouseCoopers 2004

According to the definition used in the PricewaterhouseCoopers report (Money for Growth, The European Technology Investment Report 2004, PWC, 2004), technologies cover the ar-

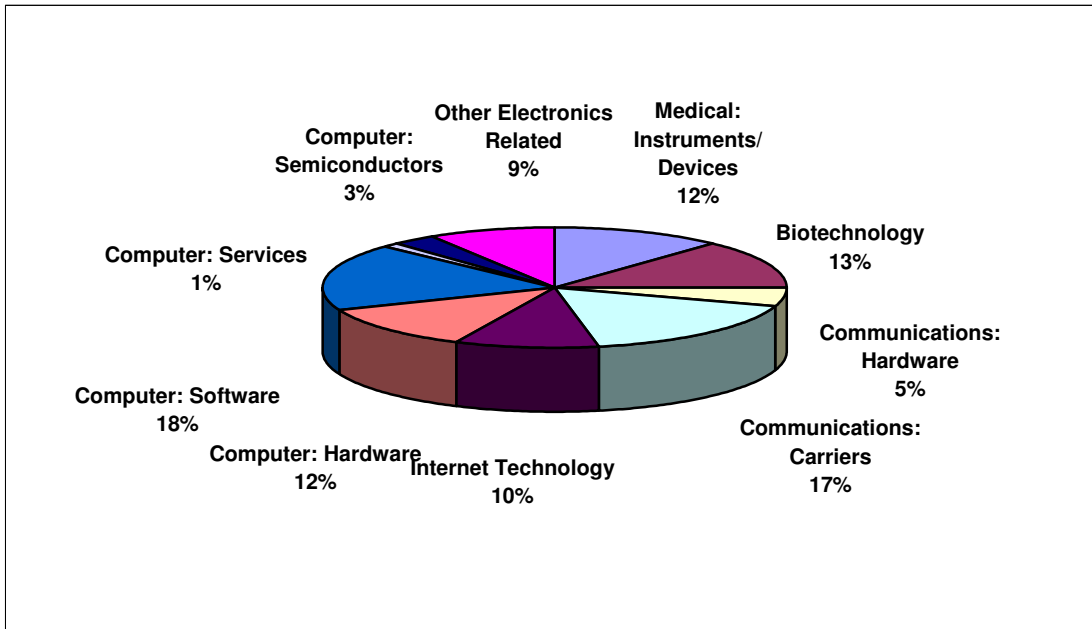
as: Communications, Computer Related, Other Electronics Related, Biotechnology and Medical: Instruments/Devices. The sub sectors included within the technology cluster were refined in 1999. For example Internet Technology was included as a separate category for the first time in 1999.

“Technology” from 1999 onwards now excludes:

- Communications (other) – TV and radio broadcasting, media houses, publishing
- Medical : Healthcare – health institutions, hospital management, handicap aids & basic healthcare supplies
- Medical: Pharmaceuticals – drug development, manufacture & supply.

Computer Related – which includes Computer Hardware, Computer Software, Computer Services and Semiconductors – remained the largest single category within technology investment overall in 2003, accounting for 34% of the total amount invested at €1.8 billion. If Medical/Health Related is included with Biotechnology, then the overall Life Sciences industry claims a clear second place with €1.4 billion. The next largest categories in terms of amount invested were Communications, which rose by 8% to €1.2 billion, and Biotechnology, which fell by 38% to €0.7 billion, its lowest level since 1999. Two other sub sectors bounced back following sharp declines in 2002 – Internet Technology and Other Electronics Related. The Technology private equity investments amount by sector is shown in Fig. 18.

Fig. 18: 2003 Technology private equity investments amount by sector



Source: PwC 2004

The investment behaviour in the Technology sector was markedly different from country to country. The UK regained its first position from France in terms of private equity investment in technology. The technology investments rose by 93% to €2 billion, accounting for 38% of the European total. France slipped to second place with its investments during 2003 falling by 23% to €1 billion, or 18% of total European technology investment. Italy increased its investment by 87% to €0.5 billion and claiming third place ahead of Germany, whose level of investments fell by 36% to €0.4 billion, having already fallen by 59% in 2002. Sweden fell from third to fifth, with investment down 60% at €0.34 billion, but Ireland performed strongly to take sixth place, with investment up 175% at €0.25 billion.

In terms of the number of deals, the UK stayed at the fore with 1,148 deals, putting it well clear of France in second place with 987 deals. Germany was third with 516 deals, down from 676 the previous year. Among the biggest private equity markets, Sweden's 33%, France's 22% and Germany's 17% high-tech share were all ahead of the UK's 15%.

Marked differences emerged in the proportion of technology investments known as venture capital. Taking Europe as a whole, €3.1 billion of venture capital was invested via 4,354 investments which between them financed 2,785 companies. This represented 57% of the total technology investment amount, and 91% in terms of the number of deals. In Germany, venture capital accounted only for 57% of private equity investment in 2003, which is a remarkable decline, given that venture capital accounted for 100% of investment in Germany in 2002. This is a clear reflection of the rise of the buyout market in Germany in 2003. In the

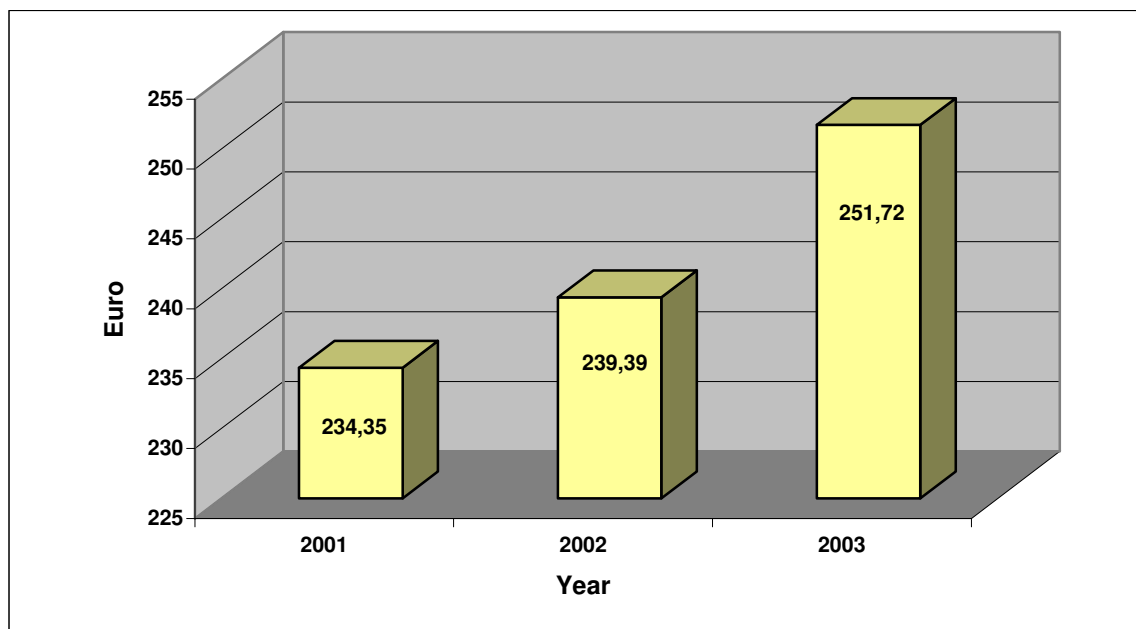
UK, Europe's leading private equity market, 42% of investments went into venture capital, accounting for 88% of the total number of deals. In France, venture capital investments made up €0.6 billion out of a total of €1 billion in private equity investments, equating to 67% by value and 91% by number of deals. In Italy, venture capital at €0.3 billion accounted for 57% of total investment and 90% of the number of deals.

Austria, the Czech Republic and Switzerland had the highest proportions invested in technology seed, start-up and other early-stage investments, at 61%, 56% and 55%, respectively. Excluding the smaller countries, the UK, the Netherlands and Poland had the lowest shares at this stage with 21%, 18% and 1%, respectively. The biggest market, the UK, invested 21% at the expansion stage, the same as at the seed/start-up stage. Ireland had the highest proportion going into technology buyouts relative to other stages at 71%, followed by the UK with 55%, Portugal with 42% and then three countries on 39% – Germany, Italy and Spain.

### 5.2.1 United Kingdom

(1) The funds raised in the United Kingdom in the years 2001 (about €13.9 billion), 2002 (€14.2 billion) and 2003 (about €15 billion) increased constantly on a very high level. A big amount of funds raised resulted from activities outside of the United Kingdom (in particular) from the US and Asia. The business ratio “funds raised per capita” also shows the strongly increasing development (Fig. 19).

Fig. 19: Funds raised per capita - GB

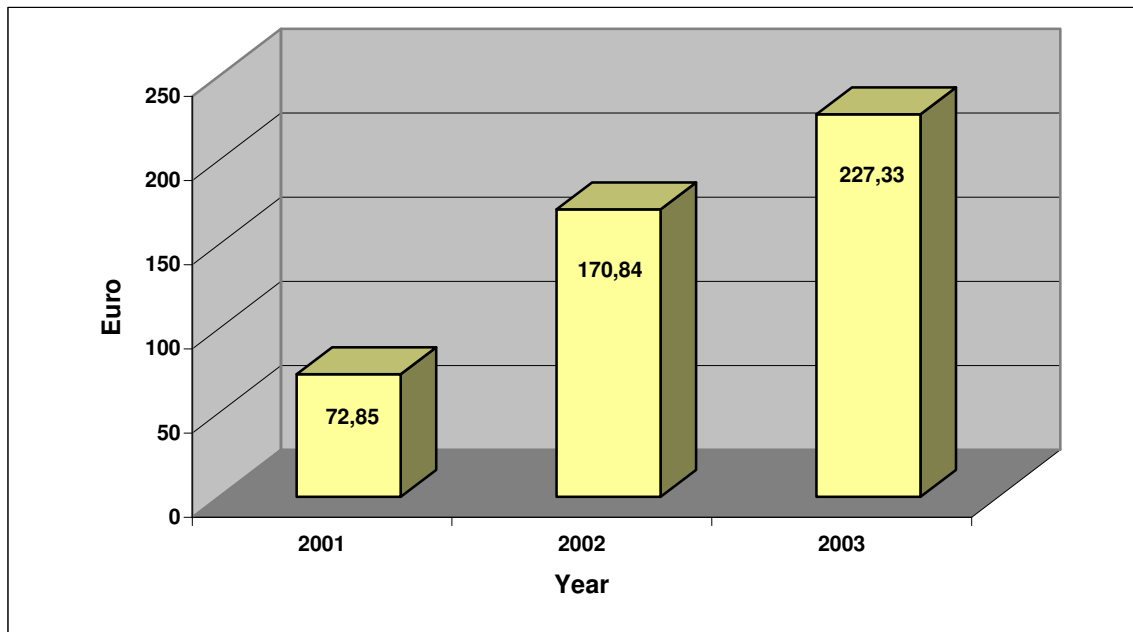


Source: EVCA 2003, EVCA 2004, OECD 2004



Private equity companies in the United Kingdom invested a total amount of €13.5 billion in 2003 compared to €10.1 billion in 2002. As already mentioned, the amount invested in the United Kingdom represents 46.5% of the total investments in the European Union (including Switzerland). In the year 2002, this amount was already at a remarkable share of 38%. Considering the indicator “investments per capita” a strong boost can be noted from the years 2001 to 2003 (Fig. 20).

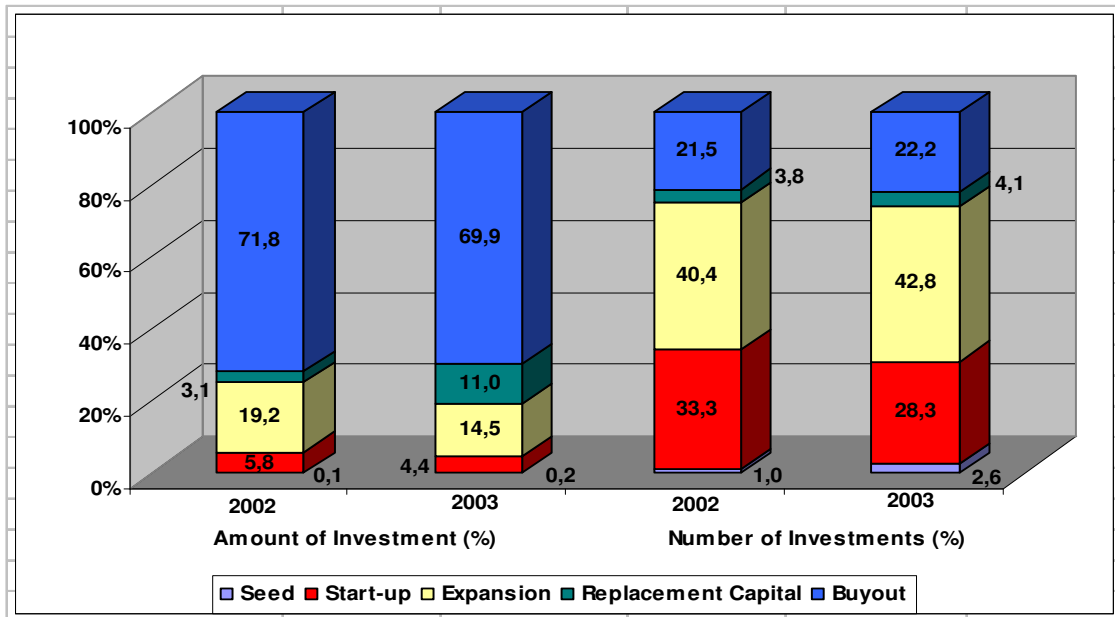
Fig. 20: Investments per capita - GB



Source: EVCA 2003, EVCA 2004, OECD 2004

This increase can be reasoned by the level of investment at the buyout stage. The investments in the buyout stage alone account for €9.5 billion in the year 2003 (2002: €7.3 billion) or 70% (2002: 71.8%) of the total investment amount. The amount of investments in the early stage increased from €8,162 million in 2002, which is 0.1% of the total investment amount of this year, up to €28,646 million and 0.2% of the total investment amount of 2003. The amount of investment in the start-up stage, in contrast, dropped from 5.8% in 2002 down to 4.4% of the total amount of investment in 2003, although the absolute amount of investment rose from €590,305 million in 2002 up to €593,013 million in the United Kingdom in 2003. A decrease of the total amount of investment was registered in the expansion stage. The share dropped from 19.2% in 2002 down to 14.5% in 2003, even if the absolute amount of investment was higher in 2003 (€1.94 billion) compared to 2002 (€1.97 billion) (Fig. 21).

Fig. 21: Stage distribution of investments in the United Kingdom in 2002 and 2003



Source: EVCA 2004, Amount of Investment (in %)

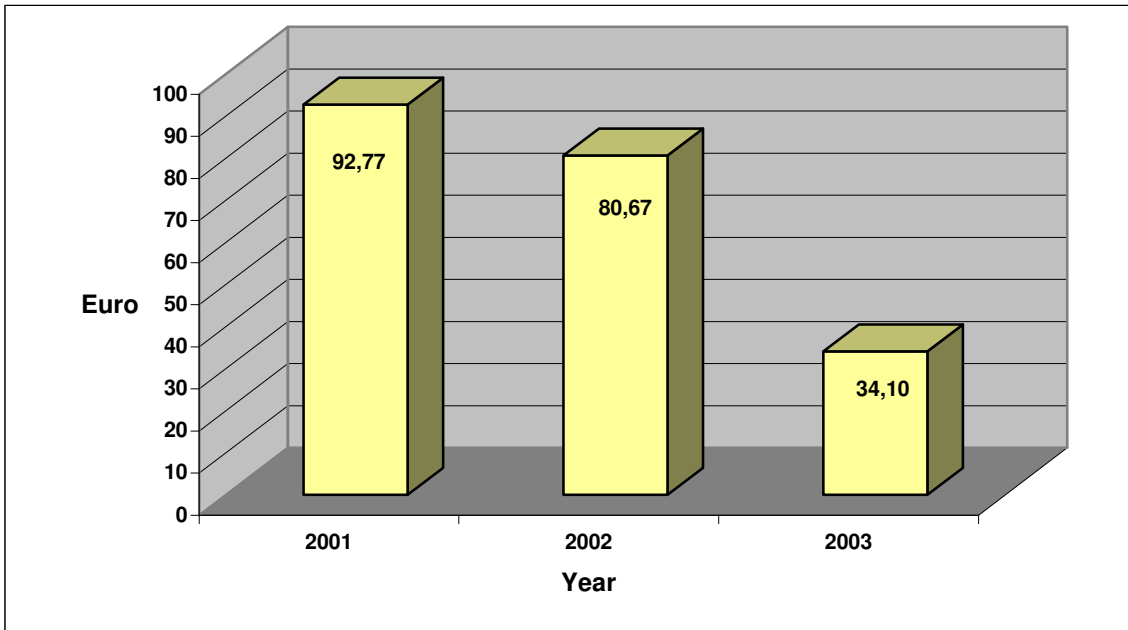
(2) It is quite astonishing, that the number of investments of British equity firms in companies in the seed stage amounted to just 65 in 2003 although the number of investments increased by 170% compared to 2002 (24 investments). The number of investments in the seed stage represents 2.6% of the total number of investments in 2003. In 2002, 1% of the total number of investments was done in the early stage. A decrease of number of investments in 2003 compared to 2002 was registered in the start-up stage where 710 investments (28.3% of total number of investments) were made. These are 124 investments less than the year before (2002: 33.3% of total number of investments). The largest number of investments was made in the expansion stage. In the year 2002 with 1009 investments and 40.4% of total numbers of investments, as well as in 2003 with 1074 investments and 42.8% of total numbers of investments, were the leading investment aims in that category (Fig. 21).

(3) The British Government undertook several improvements in the legal and fiscal environment concerning the financing of SMEs. The Venture Capital Trusts (VCTs) for example, which are open to private investors only, provide individual tax incentives for investing in SMEs, even those SMEs which are noted on the stock exchange. Yet another scheme of the British Government to support venture capital investments in early stage companies and companies in the technology sector, is to establish the Enterprise Capital Funds (ECFs) which will embrace private and government sources to raise capital. The intention is to close the “equity gap” between business angel financing and private equity financing for venture investments. Governmental changes in VCTs will undertake changes in terms of income tax reliefs for investors to support investments in the venture capital sector.

## 5.2.2 France

(1) The total amount of raised funds dropped from €4.8 billion in 2002 to €2 billion in 2003. This massive downswing is shown in Fig. 22.

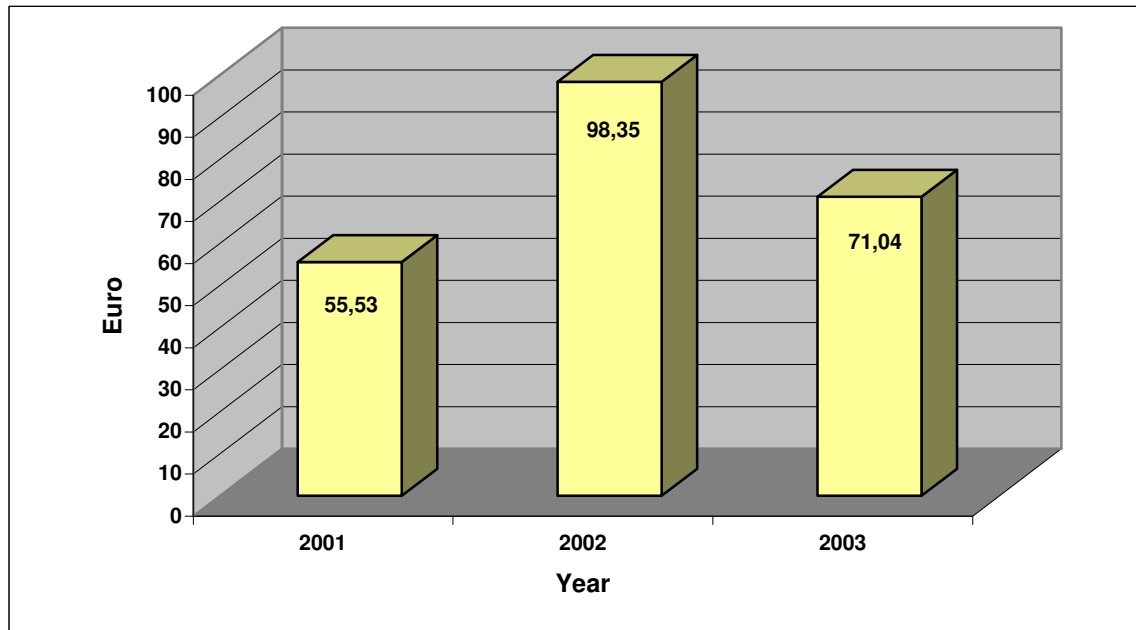
Fig. 22: Funds raised per capita - France



Source: EVCA 2003, EVCA 2004, OECD 2004

The total investment of private equity dropped in France to €4.2 billion in 2003 compared to €5.9 billion in 2002. The main reason is the transaction of a few large buy-outs in 2002 which did not occur in 2003. The indicator “investments per capita - France” illustrates the decrease (Fig. 23).

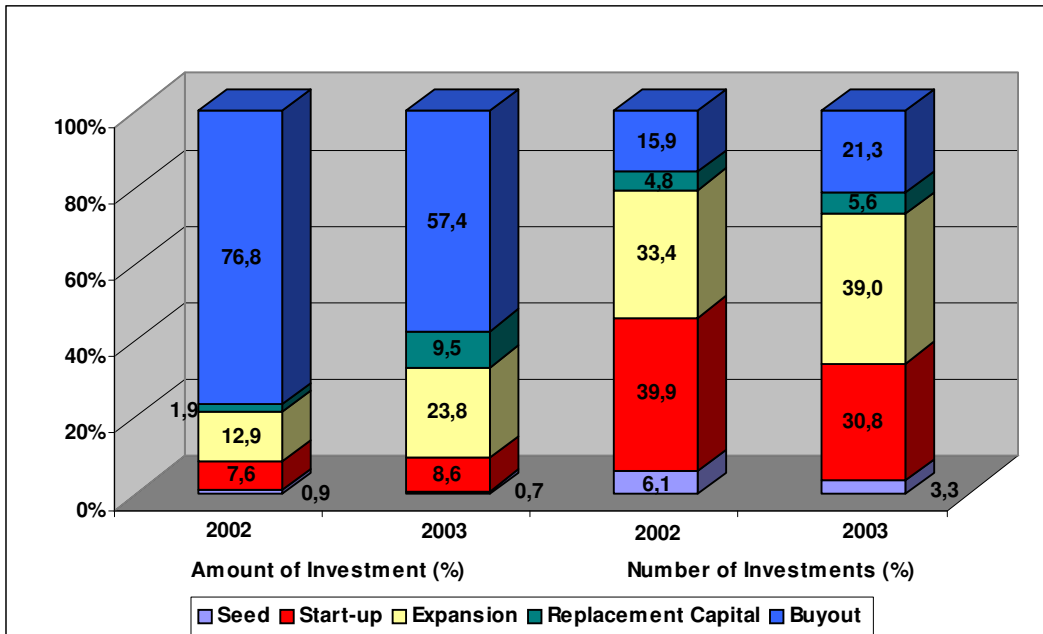
Fig. 23: Investments per capita - France



Source: EVCA 2003, EVCA 2004, OECD 2004

(2) Concerning the amount of investment, the investments in seed stage companies decreased to €31.3 million (0.7% of total amount of investment) in 2003 compared to €50 million (0.9% of total amount of investment) in 2002. Firms in the start-up stage received less investments in 2003 with €363.7 million when compared with the year 2002 with €443.4 million, even though the share of amount of investment increased in 2003 (8.6% of total amount of investment in France) compared to 2002 (7.6% of total amount of investment). A big increase can be noted in the amount of investment in the expansion stage. €1009.3 million went into that stage in 2003 (2002: €755.4 million). The share of 23.8% of the total amount of investment in 2003 compared to 12.9% in 2002 underlines this development (Fig. 24).

Fig. 24: Stage distribution of investments in France in 2002 and 2003



Source: EVCA 2004

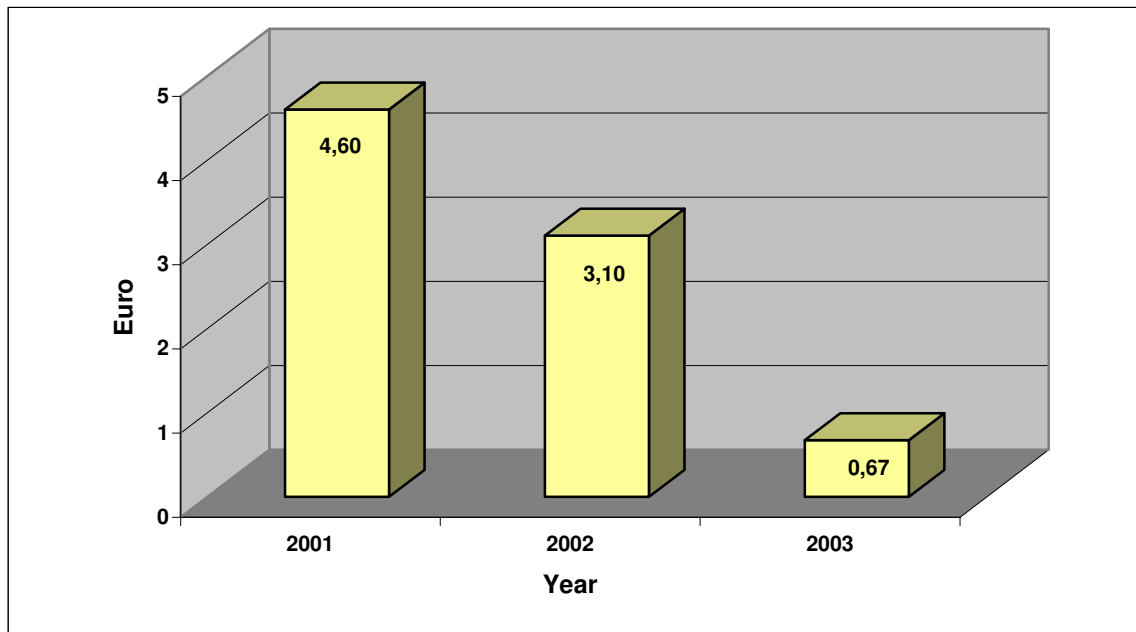
(3) The number of investments in France decreased in the seed stage from 108 (6.1% of total number of investments) in 2002 to 70 (3.3% of total number of investments) in 2003. A drop can be noted as well in the number of investments in the start-up stage, where 645 (30.8% of total number of investments) investments were made compared to 709 (39.9% of total number of investments) in 2002. An increase took place in the expansion stage where 815 investments in 2003 were made when compared to the year 2002 with 594 investments. The share of 39% of the total number of investments in 2003 compared to 33.4% in 2002 shows that a main focus in investments in France is on the expansion stage (Fig. 24).

(4) A new law concerning the increase of the economic spirit of enterprise passed in France in August of 2003 called the Dutreil Law, named after Renaud Dutreil, the former minister for small and medium business and now the minister for civil service and administrative reform. One of the improvements is the Fonds d'Investissement de Proximité (FIP), which is a fond to increase the growth of regional firms with less than 500 employees. Furthermore, the new law includes tax reductions for investors and private firms which is an appeal for hi-tech companies to invest more intensely in research and development through the instruments of tax decreases as well as social charges. A second law for economic initiative is currently in progress and will contain a programme to support small and medium enterprises to look for expansion capital.

### 5.2.3 Poland

(1) Fund raising activity declined in 2003 (€25.7 million) compared to 2002 (€118.6 million). A possible reason for the decrease is the collection of essential funds in the years before, making it unnecessary for the private equity companies to look for more capital. Fig. 25 demonstrates the weakening of the funds raised.

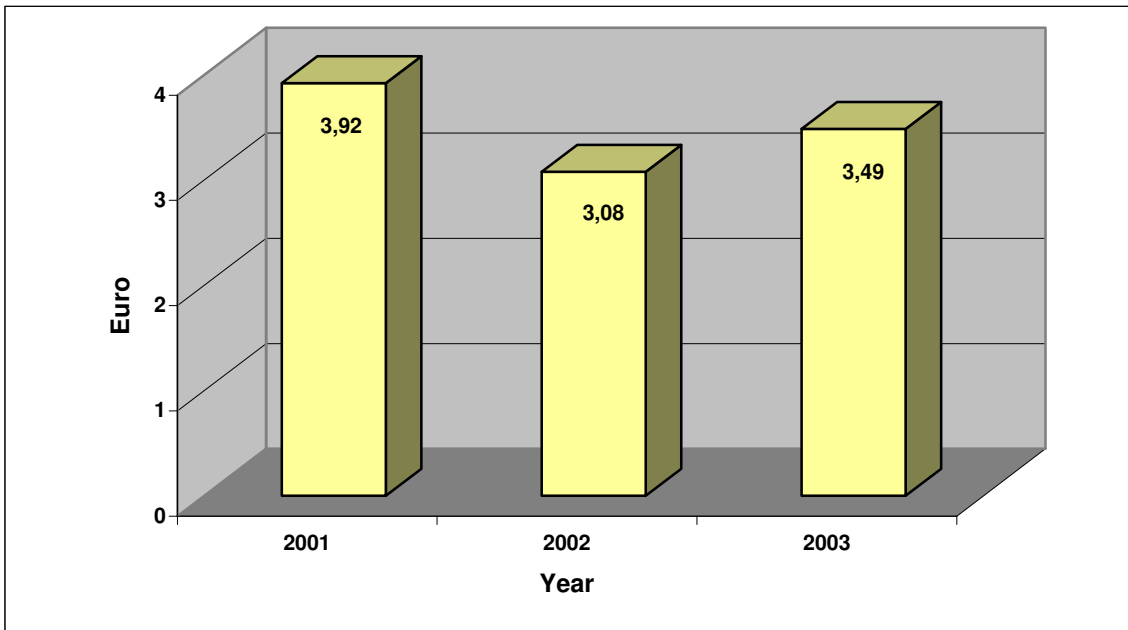
Fig. 25: Funds raised per capita - Poland



Source: EVCA 2003, EVCA 2004, OECD 2004

About 35 companies, mostly from foreign countries, manage private equity funds in Poland at the present time. A small rise can be seen in the size per investment. The indicator “investments per capita - Poland” shows increases for 2003 (Fig. 26).

Fig. 26: Investments per capita - Poland

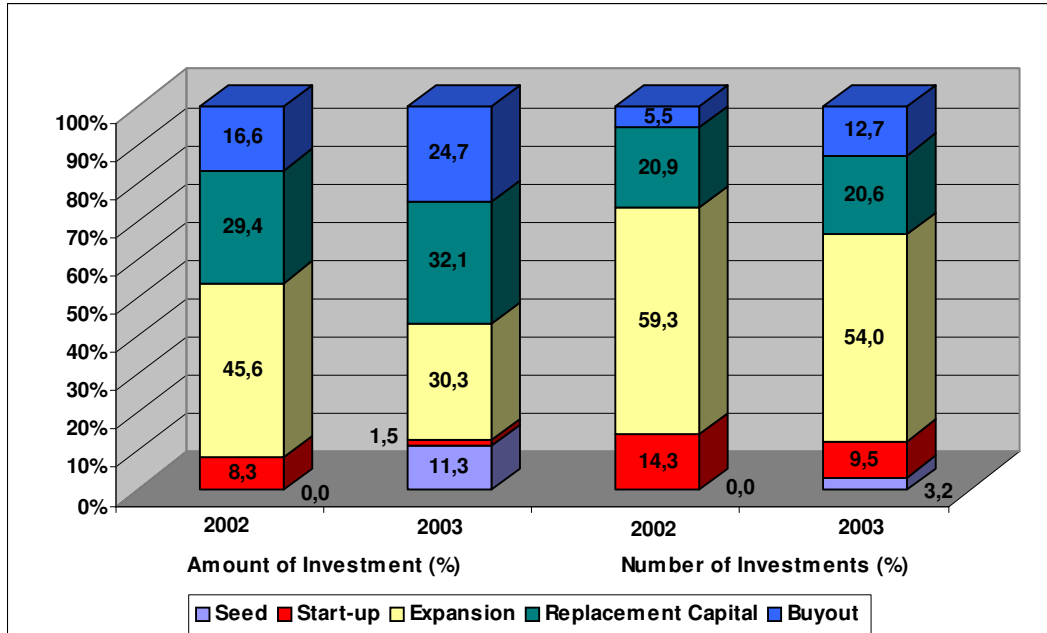


Source: EVCA 2003, EVCA 2004, OECD 2004

(2) In the year 2002, there was no amount of investment registered for the seed stage, but in the year 2003, the amount for seed stage was at €15.1 million which represents a share of 11.3% of the total amount invested in Poland. As opposed to the development in the seed stage, the start-up stage as well as the expansion stage decreased in terms of amount of investment in 2003 compared to 2002. Start-up investments fell from €9.8 million in 2002 (8.3% of total amount of investment) to about €2 million (1.5% of total amount of investment) in 2003. Thus, early stage investments are representing 12.8% in share of the total amount of investment in 2003; even this is an improvement compared to 2002. Expansion stage investments dropped from €53.7 million (45.6% of total amount of investment) in 2002 down to €40.4 million (30.3% of total amount of investment) in 2003 (Fig. 27).

(3) Concerning the number of investments, 2 investments (3.2% of total number of investments) were completed in 2003 compared to none in 2002. This indicates, referring to the amount of investment of €15.1 million in 2003, that the transactions were of a high value. The number of investments in the start-up stage decreased from 15 (4.3% of total number of investments) in 2002 to 6 (9.5% of total number of investments) in 2003. Therefore, the number of early stage investments dropped from 14.7% of the total number of investments in 2002 to 12.7% in 2003. The number of investments in expansion stage fell from 60 (59.3% of total number of investments) in 2002 by 76.5% to 34 (54% of total number of investments) in 2003 (Fig. 27).

Fig. 27: Stage distribution of investments in Poland in 2002 and 2003



Source: EVCA 2004

(4) Poland adopted a new policy for the capital market of the country called “Agenda Warsaw City 2010”. Its aim is to build the strongest capital market in Central and Eastern Europe by the year 2010. The policy implies to raise the capitalisation of the country’s equity market to at least 50% (2003: 21%) of the GDP. Furthermore, the policy aims to increase the share of the venture capital market from 0.06% of the GDP up to 0.25% of the GDP in 2010. For the Polish government the development of the venture capital market plays an important role for the economic growth and the innovation of the country’s economy.

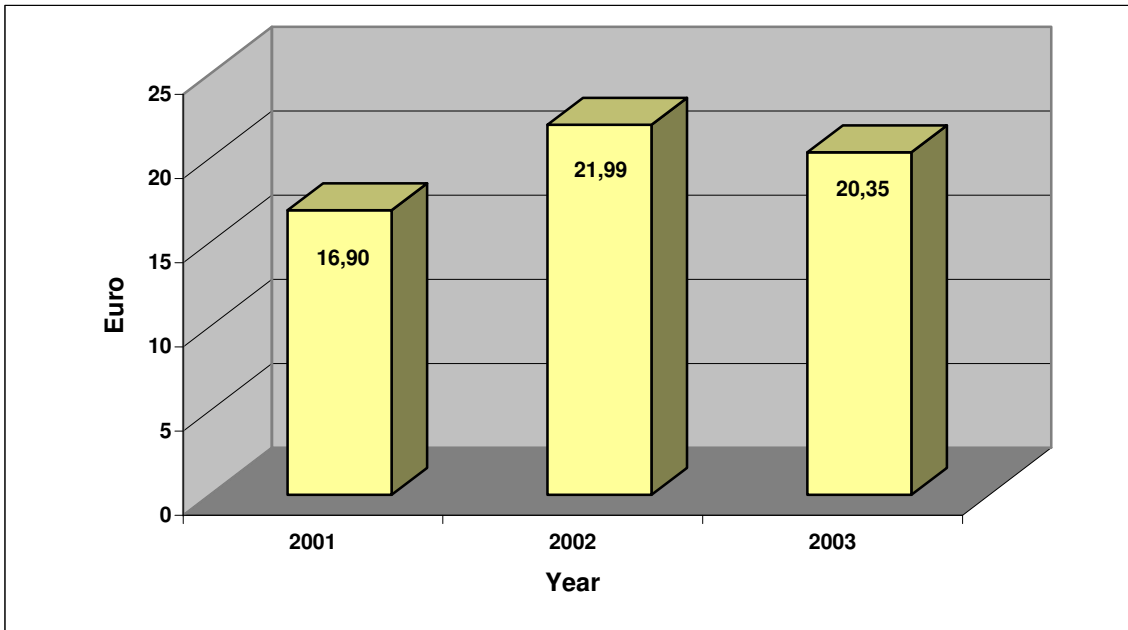
Other measures for the growth of the country’s economy are the capital absorption of the government for funds from national financial institutions, like pension funds and insurance firms, to invest in private equity.



## 5.2.4 Austria

(1) With €164 million in 2003 compared with €177 million in 2002, a slight downturn in raised funds can be noted. The indicator “funds raised per capita” shows only little changes (Fig. 28).

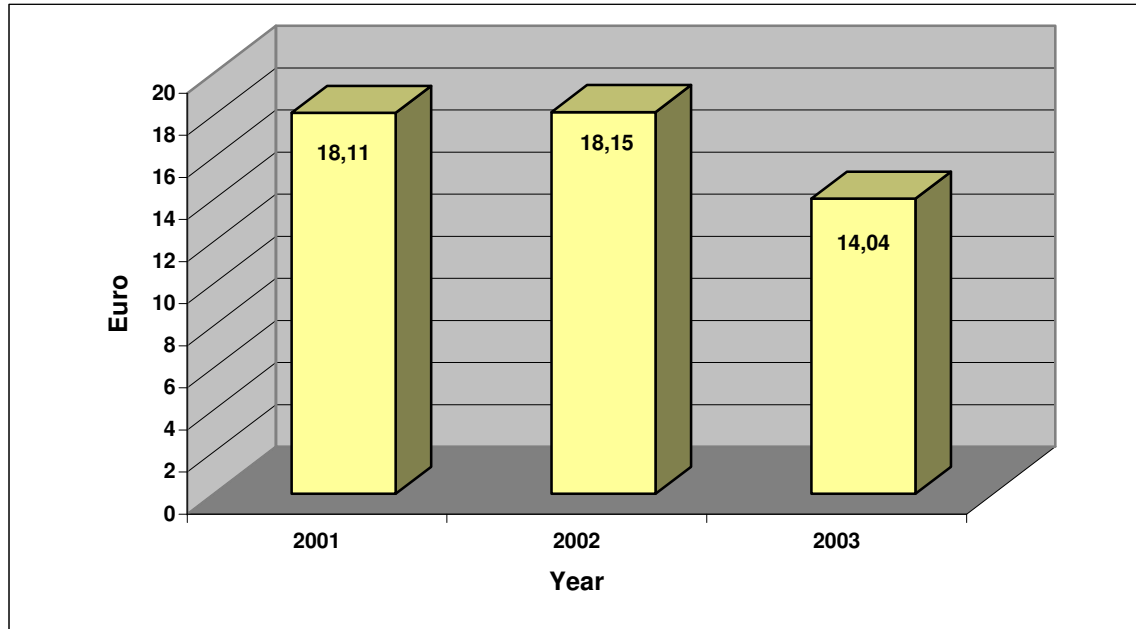
Fig. 28: Funds raised per capita - Austria



Source: EVCA 2003, EVCA 2004, OECD 2004

(2) The Austrian private equity market as well as the venture capital market are relatively small compared to other European countries. The total amount of investment in private equity decreased from €146 million in 2002 to €113 million in 2003. This essential downswing is quite noticeable in the indicator “investments per capita - Austria” (Fig. 29).

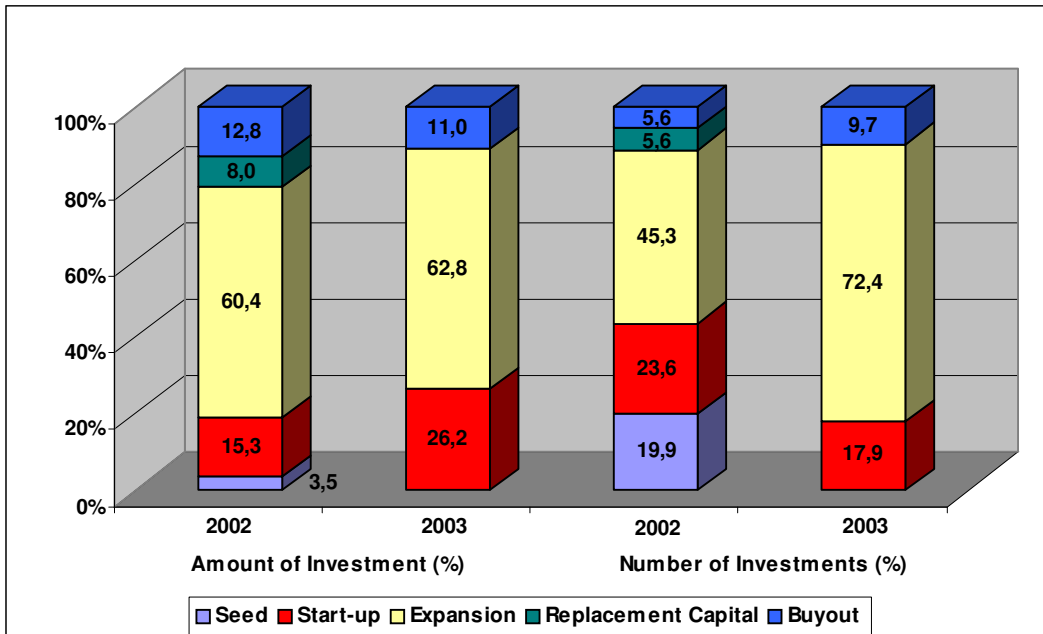
Fig. 29: Investments per capita - Austria



Source: EVCA 2003, EVCA 2004, OECD 2004

(3) The amount of investment for seed stage capital was at €5.2 million or a share of 3.5% of its annual total amount of investment in 2002. In 2003, the seed stage completely failed to attract funds, there was not one investment in that phase. The start-up stage attracted more funds than the year before (2002: €22.3 million) and received €30 million in 2003, which is with its 26.2% of the total amount of investment in start-ups a big rise in share as well. In 2003, the expansion stage noted with 62.8% of the total amount of investment in 2003, compared with 60.4% in 2002, an increase in investment. However, the absolute amount of investment of €71 million in 2003 dropped from €88.2 million in 2002 (Fig. 30).

Fig. 30: Stage distribution of investments in Austria in 2002 and 2003



Source: EVCA 2004

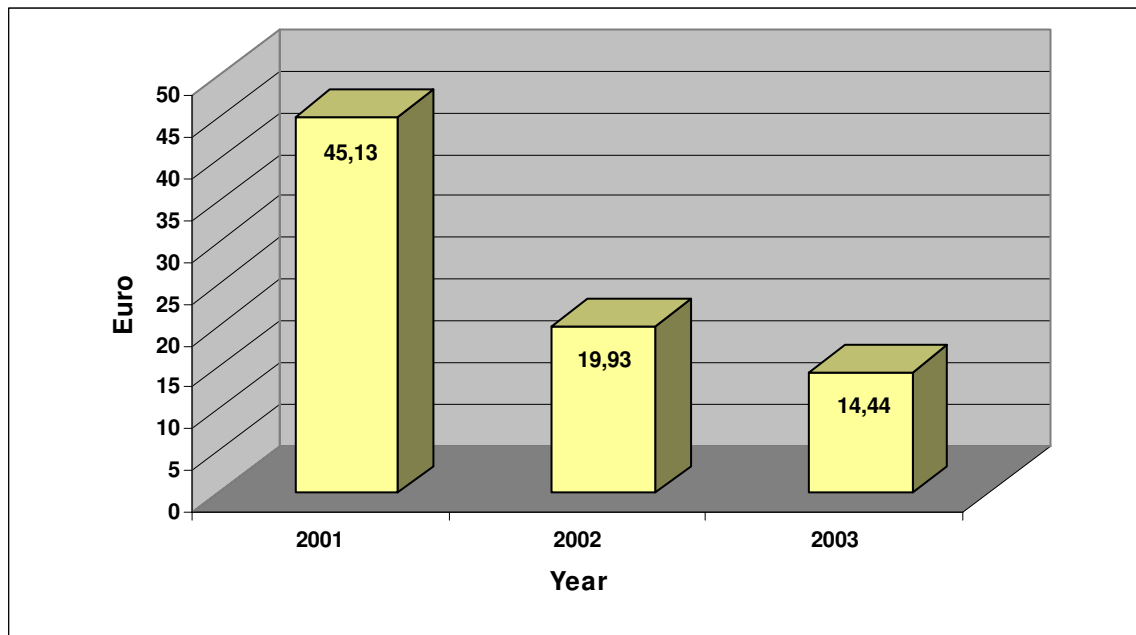
(4) The number of investments in the seed stage phase dropped from 34 in 2002 (3.5% total number of investments) to none in 2003. Start-up investments fell, despite an increase in the amount of investments, from 40 (23.6% total number of investments) in 2002 down to 26 (17.9% total number of investments) in 2003. This means that early stage investments in terms of share of the total number decreased from 18.8% in 2002 to 17.9% in 2003, which is an overall trend in the countries in this survey. The number of expansion stage investments jumped from 77 in 2002 up to 105 in 2003. They represent almost three quarters of the entire number of investments in the year 2003 (Fig. 30).

Austria has implemented changes in the legal and fiscal environment. Changes in tax rules should support the economic growth of the country's economy. Tax incentives are examples which include premiums for new investments in fixed assets and qualifying research and development activities. Proposals for the tax reform in the year 2005 are, for instance, the reduction of corporate income tax to 25% and a group taxation model including a foreign loss-relief system that is more attractive (see Heimer, T., T. Köhler 2004).

## 5.2.5 Germany

(1) Capital raised by private equity and venture capital companies decreased from €1.6 billion in 2002 to €1.2 billion in 2003 which can be clearly seen in the indicator “funds raised per capita - Germany” (Fig. 31).

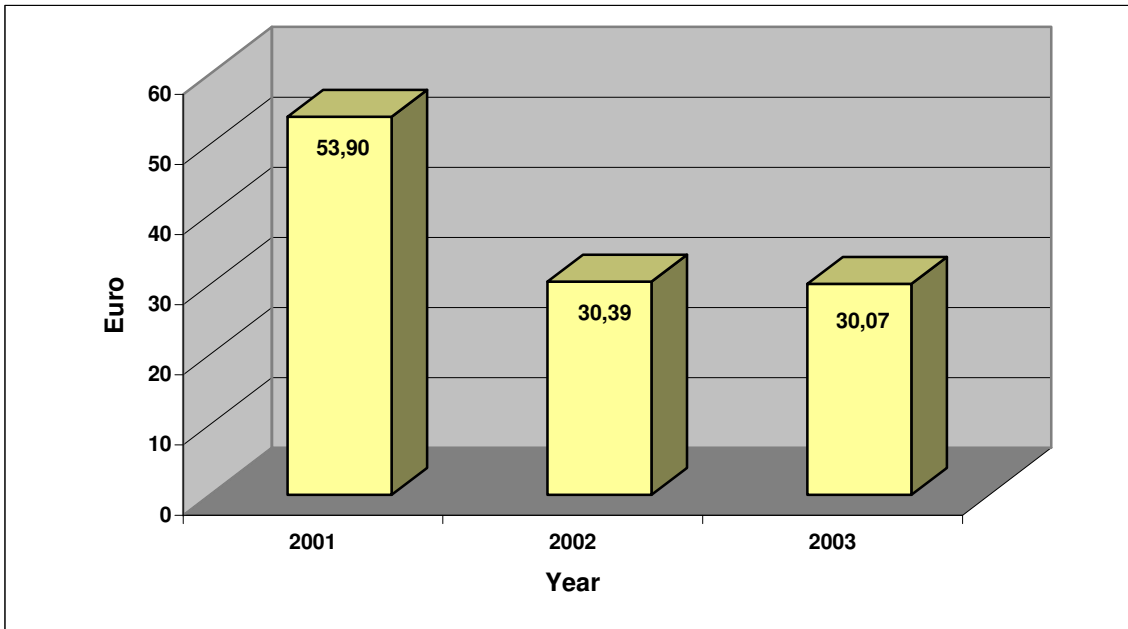
Fig. 31: Funds raised per capita - Germany



Source: EVCA 2003, EVCA 2004, OECD 2004

The German, alongside the European, private equity and venture capital market consolidated in the year 2003 (GoingPublic Magazin 2004). The total amount of investment decreased slightly from €2.5 billion in 2002 to €2.48 billion in 2003 which is however not very noticeable as can be seen in the indicator “investments per capita - Germany” (Fig. 32).

Fig. 32: Investments per Capita - Germany

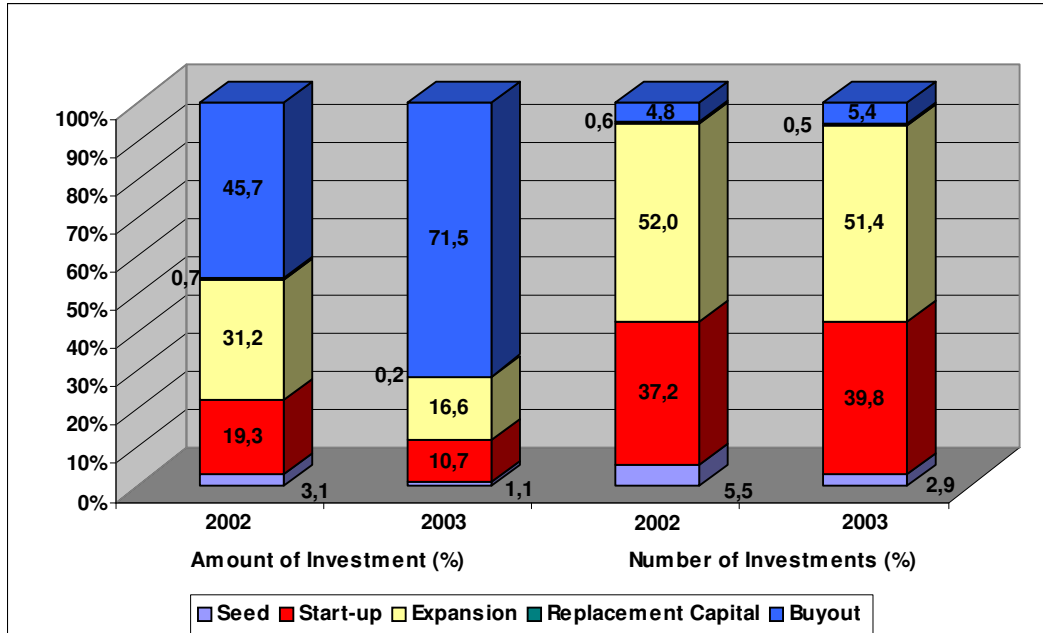


Source: EVCA 2003, EVCA 2004, OECD 2004

(2) Early stage investments dropped extremely from €560 million and a 22.4% share of the total amount invested in 2002 to €292 million and a 11.8% in share in 2003. Seed stage investments of €77 million (3.1% of total amount of investment) in 2002 fell to a third with €27 million (1.1% of total amount of investment) in 2003 (BVK 2003, BVK 2004). Start-up stage investments of €484 million (19.3% of total amount of investment) in 2002 fell to €265 million (10.7% of total amount of investment) in 2003. Expansion stage investments also tumbled from €783 million (31.2% of total amount of investment) in 2002 down to €411 million (16.6% of total amount of investment) in 2003. However, buyout investments increased from €1,1 billion (45.7% of total amount of investment) in 2002 up to €1.8 billion (71.5% of total amount of investment) in 2003.

(3) Concerning the number of investments a downswing can be noted as well. From 1720 investments in 2002, the number of investments decreased down to 1214 in 2003. Early stage investments in absolute number fell from 734 in 2002 to 518 in 2003 (BVK 2003, BVK 2004). At the same time, share of the total number of investments stayed the same with 42.7%. Within the early stage, seed stage investments dropped from 95 (5.5% of the total number of investments) in 2002 to 35 (2.9% of the total number of investments) in 2003; start-up stage investments decreased from 639 in 2002 down to 483 in 2003. Expansion stage investment dropped as well compared with the year before (2002: 894 investments, 2003: 624 investments). Comparing investments in the buyout stage there was a decrease from 82 investments in 2002 to 66 investments in 2003 (Fig. 33).

Fig. 33: Stage distribution of investments in Germany in 2002 and 2003



Source: EVCA 2004

The total number of investments as well as the total amount of investments slightly decreased in 2003 compared to the 2002 statistics. Only the buyout investment sector increased whereas early stage investments decreased by number and amount. One reason for acting cautious on the side of institutional investors was the uncertain tax environment in Germany. The uncertainty ended in December 2003, when the Ministry of Finance published a decree concerning the taxation of private equity funds and past carried interests. Unfortunately, the decree, the Tax Reduction Benefit Act, brought disadvantages for private equity companies and portfolio companies. These disadvantages were mainly thin-capitalisation rules, silent partnerships and the restriction of loss carry forwards (GoingPublic Magazin 2004).

(4) The German Government, together with the European Investment Fund, decided to launch a venture capital fund at the end of 2003, starting operations in the middle of 2004 with a focus on early stage investments. Private investors shall be encouraged by this fund to invest themselves into early stage companies as well.

### 5.3 Equity Financing of the Future

(1) The year 2003, which from an economic point of view was quite successful in terms of the amount of investment for many countries in the European Union, was not successful for all countries discussed in this survey. While the United Kingdom is outstanding regarding the amount of private equity investment and Poland shows an increase in private equity investments, decreasing amounts of investment for the other countries considered are to be noted for 2003.

(2) Concerning the investment behaviour of the analysed countries, big differences are to be noticed in terms of funds raised per capita and investments per capita. While these indicators are rising remarkably in the United Kingdom, they remain static or decrease in these categories in other countries. Furthermore, it has been shown in chapter 3 and 4 that particularly the UK has a different financial system in regard to private equity than most continental European states. The reason for the differences can be divided into four factors.

**First** of all, the UK **retirement system** (A) is based on capital markets in contrast to the continental European pay as you go pension system. Pension funds in the UK are main drivers to raise private equity. The following table shows the various schemes for Germany and the UK.

Table 10: Key figures of national Private Equity markets

	Germany			UK		
	1999	2001	2003	1999	2001	2003
Portfolio at cost (€bn)	7.9	15.8	16.2	28.0	39.8	51.9
New funds raised (€bn)	3.8	3.7	1.2	9.9	20.5	15.0
Stage distribution of investments (in %)*						
early stage						
expansion	32	26	18	2	13	4,6
Replace-	50	35	33	20	25	14,5
ment/buyout	15	37	36	76	56	81
* Remaining % = others						

Sources: EVCA Yearbooks 2000, 2002 and 2004

Capital market based retirement systems may invest solely in risk-reduced asset. It is, therefore, quite plausible that a large share of the investments is in company buyouts. Buyouts

usually take place in mature companies where the risk of the investment can more easily be calculated.

(3) **Second**, the **financing culture** (B) in the UK has always been different from continental Europe. SMEs in the UK have always shown a higher acceptance of the influence on management by private equity providers. Furthermore, as has been shown in chapter 3.2., the heterogeneity of financial instrument used by SMEs has always been larger.

(4) As a **third factor**, the variety in **accounting standards** (C) provide for differences in the calculation of equity. UK-GAAP leads to a higher equity share than the national accounting standards in continental Europe. As has been show by BDI (2003), the differences among the accounting standards are at least partly responsible for the equity gap. However, in contrast to the factors A and B, differences in the accounting standards do not influence the availability and the cost of private equity.

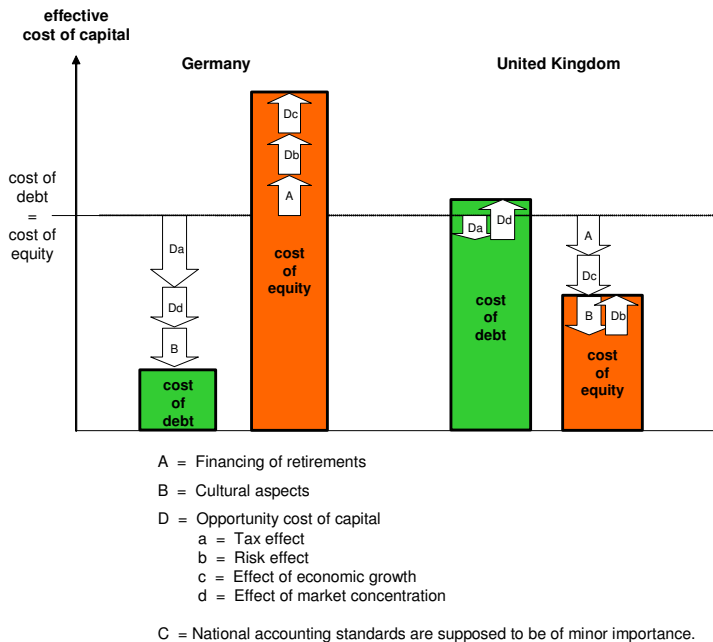
(5) **Finally**, the **opportunity cost** for equity (D) in the UK seems to be lower than in continental Europe. From economic theory we know that under a perfect competition equilibrium returns on equity investments are the same as the cost of debt-financing. In reality various effects change the prices for equity and debt-financing. The effects are:

- (a) tax influences,
- (b) risk allocated to equity and debt financing,
- (c) business cycles, and
- (d) market structure of the financial market.

By the reduction of the **tax base**, debt-financing is always tax-privileged compared to equity-financing (for details see chapter 5.2.5). Furthermore, the **risk associated** with equity financing, from an investor's perspective, is always higher than debt-financing. This goes along with the third effect that results from **business cycles**: The higher the growth rate of an economy, the less risky capital investments are in general. Accordingly, low or negative growth rates lead to higher capital cost than high growth rates. Finally, the cost of capital also depends on the **structure of the finance market**. The higher the market is concentrated, the easier it is for debt-financing investors to realise higher interest rates. The effects are shown in the following graph.



Fig. 34: Effects influencing the price for equity and debt financing



Source: Own production

(6) Effect (b) risk allocation leads to higher cost of equity compared to debt-financing. From the investor's point of view, investing in a not risk-limited corporation (e.g. partnership) may result – in the case of company default – in a total loss of the invested capital plus additional private capital. Investing in a risk-limited corporation (e.g. Ltd.) can lead to a maximum loss of the investment sum. Giving the capital as debt to the SME, allows the possibility of achieving at least the dividend in bankruptcy in case of a company default. Accordingly, the equity capital cost increase with the risk allocated to the business. Costs of debt-financing are less influenced by this effect. That effect will be enhanced by the regulations initiated under the Basel II agreement. Here capital investors have to provide a higher risk margin for equity investments.

(7) Effect (c) is closely related to the various growth rates of economies. In the last ten years, the UK has shown higher rates than continental European economies. Accordingly, the expected risk of default associated with an investment is lower in the UK. This results in reduced expected equity cost in the UK compared to the other countries considered, where the low or negative growth rates lead to higher equity cost.

(8) The more concentrated the market for debt-financing is (d), the easier banks can set higher interest rates. Since 88 % of all debt-financing to UK SMEs is provided by only five British banks, their market power is considerably higher than the equivalent in countries like Austria

and Germany (Competition Commission, 2002). We thus can state that debt-financing cost is cheaper for SMEs in continental Europe than it is in the UK. That is also proven by various banking reports (cf. e.g. Cruickshank, 2000).

(9) The tax effect (a) needs further analysis and will be the focus of the following chapter.

## 6 Impact Analysis of the Tax Framework and the Accounting Standards on Financing Innovations

### 6.1 Tax rules Relevant for SMEs' Access to Finance

(1) The importance of the tax environment for SMEs' access to finance is quite obvious as e.g. 73% of Europe's private equity houses estimate tax as a key value driver on private equity (see Fig. 35).

Fig. 35: Importance of tax for private equity transactions

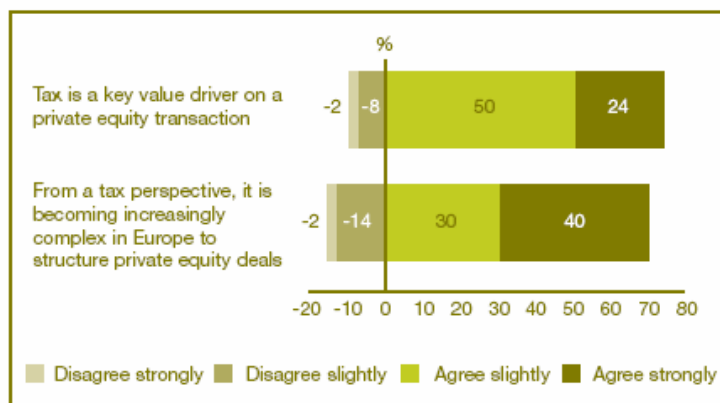


Figure 1.

To what extent do you agree or disagree with each of the following statements?

Source: PwC 2004b

(2) SMEs' access to finance is influenced by two levels of taxation: First, SMEs' capability of self-financing by equity and debt-financing is affected by the tax system. Second, venture capital companies – the possible capital providers of new SMEs – are impeded or supported by tax regulations. There are strong differences among the tax system in Europe concerning both levels. Therefore, the following analysis of the tax framework and the accounting standards on financing innovations is divided into two parts, answering two different questions:

**Question 1:** How do tax systems affect innovative SMEs' capability to finance themselves by accumulating profits or by debt-financing?

**Question 2:** How can venture capital companies be supported by tax incentives?

Question 1 will be discussed in Chapter 6.2.: *Tax Situation of SMEs*. Accordingly, chapter 6.3.: *Taxation of Venture Capital Companies* contains the discussion of Question 2.

## 6.2 Tax Situation of SMEs

### 6.2.1 Financing SMEs

(1) As a general and well-known effect, from the company's point of view, debt-financing is less tax-intensive as self-financing by accumulating profits. This is due to two reasons, which are the so-called leverage effect and the tax shield.

(2) In all tax systems, interest paid by a company on loans or other debts is generally deductible from the tax base. Accordingly, the interest payment to a bank or other credit institute reduces the company's tax burden. If the corporation's profitability on the debt capital exceeds the contracted interest rate, a profit remains at the company's level (leverage effect). This profit is taxed at the company's level – but after deduction of interest paid (tax shield). As the creditor has to pay tax on the interest he received, the total amount of tax is split up between creditor and debtor. From the point of view of a debt-financed company, debt capital is therefore “cheaper” than equity.

*Example:* A company needs additional capital of €100,000 for a new project. The rate of return will be 12%, so that a profit of €12,000 before interest and tax (PBIT) will be achieved. If the needed capital is provided as equity (by a shareholder or a venture capital company), the company has to pay taxes on the profit. With an assumed tax rate of 25%, €3,000 have to be paid to the fiscal authorities. So far, the cost of equity capital is  $€3,000 / €100,000 = 3\%$ . Alternatively, if the needed capital is granted as a loan on 10% interest rate, the profit is reduced to €2,000 ( $= €100,000 * (12\% - 10\%)$ ). Accordingly, tax is reduced to  $25\% * €2,000 = €500$ . For this alternative, the total cost of debt capital is  $(€10,000 + €500) / €100,000 = 10.5\%$ . But, calculated in relation to the PBIT of €12,000, the company has to pay €3,000 taxes (25%) in the equity-financing case compared to €500 (4.17%) tax in the debt-financing case. Caused by this skewed view, debt-financing seems to be “tax privileged” and so far cheaper for the company. The fiscal authorities are generally indifferent to both cases, if – and only if – the creditor is subject to the same tax rate as the debtor: As the creditor achieves investment income of €10,000 taxed with 25%, the “missing” €2,500 will be paid by him.

(3) Structuring the growth-process of new companies, the taxation of profit will not be a problem of their first years. As innovation needs research and development, the first period of a young company's life will be characterised by **high R&D expenditure** leading to losses over

several years. One possibility to give such companies a tax advantage can be to allow the **recognition of self-developed intangible assets**. But, as there usually is no market price for self-developed innovations, it is almost impossible to define a fair value for tax purposes. For the purpose of tax safety and for avoiding tax planning by recognition and valuation of intangibles, most countries have decided to exclude the amortisation of R&D expenditures for self-developed intangible assets (e.g. German Income Tax Law).

(4) Another possibility to improve the tax situation of SMEs with high R&D expenditure affects the **treatment of losses**: If the young company generates losses in its starting period, at least a non-limited loss carry-forward should be granted. Another possibility can be the loss carry-back, which is positive only for older companies that produced gains in previous periods. Undisputedly, the loss carry-back leads to immediate financial and liquidity effects for the mentioned companies. But for new companies, other ideas are needed.

## 6.2.2 Treatment of Losses

In the following, the general considerations will be discussed for the selected countries. To give the following discussion an informational basis, first the loss-treatment regulations of Austria, France, Germany, Poland, and the United Kingdom are described. That will be followed by a discussion about self financing by profit accumulation. Finally debt financing regulations are analysed.

### *Austria*

#### **Corporations**

Losses incurred in Austria may be carried forward indefinitely. A carry-back of losses **is not** permitted. Only the taxpayer who incurs a loss may claim it as a deduction. There are some exceptions in the case of mergers, divisions, etc. Losses incurred in the current or a previous tax year can only be set off against 75% of the income of the current year. Excess losses may be carried forward to the following tax year.

#### **Individuals**

In general, the carry-forward of losses is the same for individuals as for companies. As a rule, losses must first be set off against income from the same category and then against all other categories of income. In principle, only taxpayers who determine their profits according to the net-worth comparison method qualify for a loss carry-forward. However, taxpayers who determine their business income according to the net-income method (SMEs) may also carry forward start-up losses arising in the first three assessment periods.

**Note:** Losses incurred by an individual from a business, consisting mainly of the management of intangible assets or leasing activities, may not be set off against income from any other source. Such losses may be set off against future profits of the same business.

## *France*

### **Corporations**

From 1 January 2004, losses may be carried forward indefinitely (previously a five-year limitation existed). Corporate taxpayers have the option, with certain limitations, to carry losses back for three years. In that case they are entitled to a tax credit, not a refund. The tax credit may be used during the following five years and will be refundable in the sixth year.

**Note:** Start-up costs may either be deducted as operating expenses or depreciated over a five-year period. Additionally it should be mentioned that from 1 January 2004, a tax credit for research and development expenditure is available. The credit is calculated by two components:

- a first component, which takes into account the volume of expenditure, amounts to 5% of all the expenses related to operations of research and development; and
- a second component, which takes into account the annual increase in the expenditure, equals 45% of the difference between (a) R&D expenditure during the year and (b) the average of R&D expenditure during the preceding two years as adjusted by a coefficient based on the consumer index.

The total tax credit may not exceed €8 million. Negative tax credits in one year may be carried forward for a maximum of five years.

### **Individuals**

A loss in one category may normally be set off against income of another category. Excess loss which cannot be set off against the income of a given year may be carried forward for six years. The carry-forward of losses attributed to income from immovable property and capital losses from the disposal of immovable property is restricted.

## *Germany*

### **Corporations**

In general, losses up to €511,500 may be carried back to the preceding year. From tax year 2004 onwards, any excess losses may only be carried forward to be set off against the first €1 million of net income in a given year without restriction. Any remaining loss may be set off against up to 60% of the net income exceeding this limit. Upon request, the company may carry losses forward without having carried them back.

## **Individuals**

In general, the same rules apply for individuals as for companies. Losses may generally be fully set off against income arising in the same tax year. The set-off of certain losses may either be allowed or limited.

### *Poland*

Losses may be carried forward for five years; up to 50% of the loss may be set off in each year. Loss carry-back is not allowed. The same regulations apply for companies and individuals.

### *United Kingdom*

## **Corporations**

Trading losses may be carried back for one year and forward indefinitely in the same and continuing trade, provided that the company remains within the charge to corporation tax. Any loss carried forward is set off against the earliest available trading profits. Alternatively, a trading loss may be set off against other income of the same or preceding accounting year and against capital gains of the same year. Any other non-trading income losses cannot be set off against trading profits. Such losses can only be carried forward and set off against the same class of income or capital gains.

**Notice:** For research and development, an immediate write-off of the expenditure is allowed. For SMEs, there is a special regime, increasing the relief on R&D expenditure up to 150%, subject to certain limitations, most importantly a required minimum spending of GBP 10,000. If the additional deduction creates a loss, this may be carried forward, surrendered by way of group relief or surrendered in exchange for a cash repayment at 16% of the surrendered loss.

## **Individuals**

Trade losses may be set off against other income of the current or preceding year, or carried forward indefinitely in the same and continuing trade; they may also be set off against capital gains of the current year only. Pre-trading expenditure incurred in the seven years before commencement of trading is deductible on the commencement of trading. Losses of the first four assessment years of trading can be set off against income of the three assessment years preceding trading, taking the earlier year first.

## General conclusion

Table 11: Summary of loss treatment

	Austria	France	Germany	Poland	UK
<b>Corporations</b>					
<b>Loss carry-back</b>	--	3 years	1 year, € 511,500	--	1 year
<b>Loss carry-forward</b>	Indefinitely; Minimum taxation	Indefinitely	Indefinitely; Minimum taxation	5 years; Minimum taxation	Indefinitely
<b>Individuals</b>					
<b>Loss carry-back</b>	--	--	1 year, € 511,500	--	1 year
<b>Loss carry-forward</b>	Indefinitely; Minimum taxation	6 years	Indefinitely; Minimum taxation	5 years; Minimum taxation	Indefinitely

Source: Own production

As has been shown, the carry-back of losses is not as important as the carry-forward, because young companies often have no preceding years with profits. A tax system should thus not limit the **loss carry-forward** in any way, at least not for amounts typical for SMEs (see France (only for corporations) and the United Kingdom, where losses can be carried forward indefinitely).

A **minimum taxation** (see Austria, Germany and Poland) is negative for all business sizes, as it leads to companies paying taxes without having generated an over-all profit: A company just getting out of losses has to pay taxes on profit derived in the first positive years, not regarding that there may be no positive total output yet (e.g. Austria, where losses incurred in the current or a previous tax year can only be set off against 75% of the income of the current year). If a country needs a minimum tax for fiscal purposes, it at least should introduce a regulation for SMEs (e.g. Germany, where losses can be set off against the first €1 million of net income in a given year without restriction. Thus, SMEs usually will not be subject to the restriction of setting off remaining losses against up to 60% of the net income exceeding €1,000,000.).

The two British regulations for pre-trading expenditure and losses are very useful instruments for start-ups: (1) **Pre-trading expenditure** incurred in the seven years before commencement of trading is deductible on the commencement of trading. So expenditures for business purposes will not get lost for tax purposes. (2) **Losses of the first four assessment years of trading** can be set off against income of the three assessment years preceding trading. By carrying back losses to periods with income generated by other sources, e.g. employment income, the start-up partnership gets additional equity out of taxes paid by the partners in previous years.

### 6.2.3 Treatment of Self-financing by Profit Accumulation

As SMEs grow, they may achieve profits and will have an increasing need for new financial resources. In general, they have three possibilities: (1) Self-financing by accumulating profits; (2) New equity capital – either from shareholders or from third parties, e.g. venture capital companies; and (3) Debt-financing – again either from shareholders or from banks or other credit institutes.

To compare these three alternatives, an overview about national tax systems is needed. The total amount of tax burden is determined by three aspects: To describe the taxation of business activities information is needed about

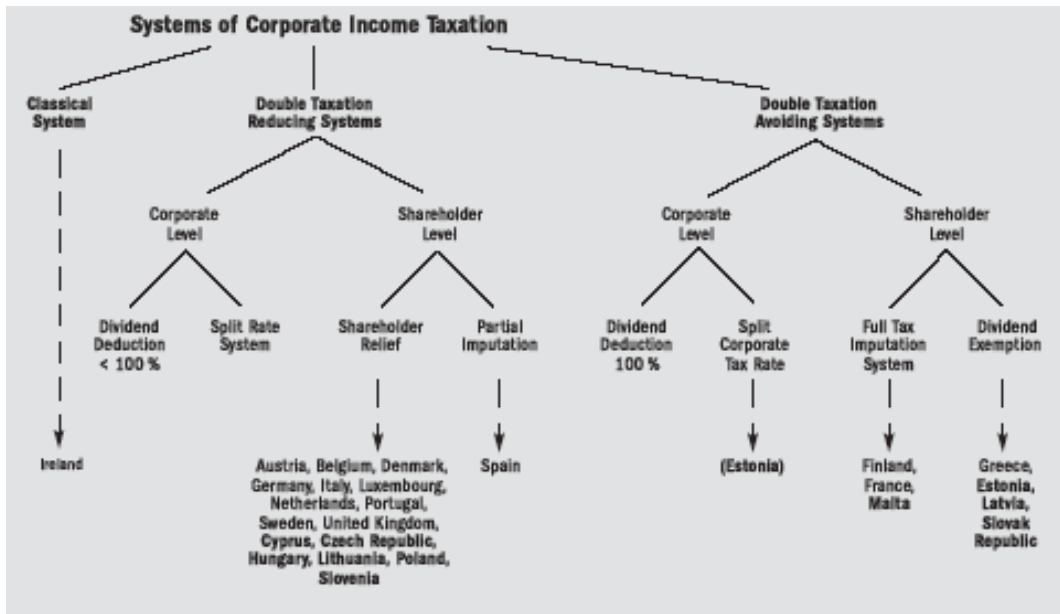
- the tax system,
- the tax rates, and
- the taxable income.

The **tax system** is defined by the relation between corporate income tax and personal income tax. To mitigate double taxation on dividends at the company's and at the shareholder's level, the corporate income tax is more or less integrated into the personal income tax of the individual shareholder.

There are various types of tax systems in Europe. Three main categories can be distinguished: The classical system results in the double taxation of dividends by imposing both corporate and personal income tax. By contrast, double taxation avoiding systems make sure that profits are taxed only once, which can be at the corporate level or at the shareholder level. For fiscal and economic-political reasons, most countries implement double taxation reducing systems: In shareholder relief systems the shareholders receive – compared to other sources of personal income – preferential treatments for their dividend income. As an alternative, the corporate income tax can partly be imputed on the personal income tax (see Fig. 36).



Fig. 36: Corporate income tax systems in the EU 25



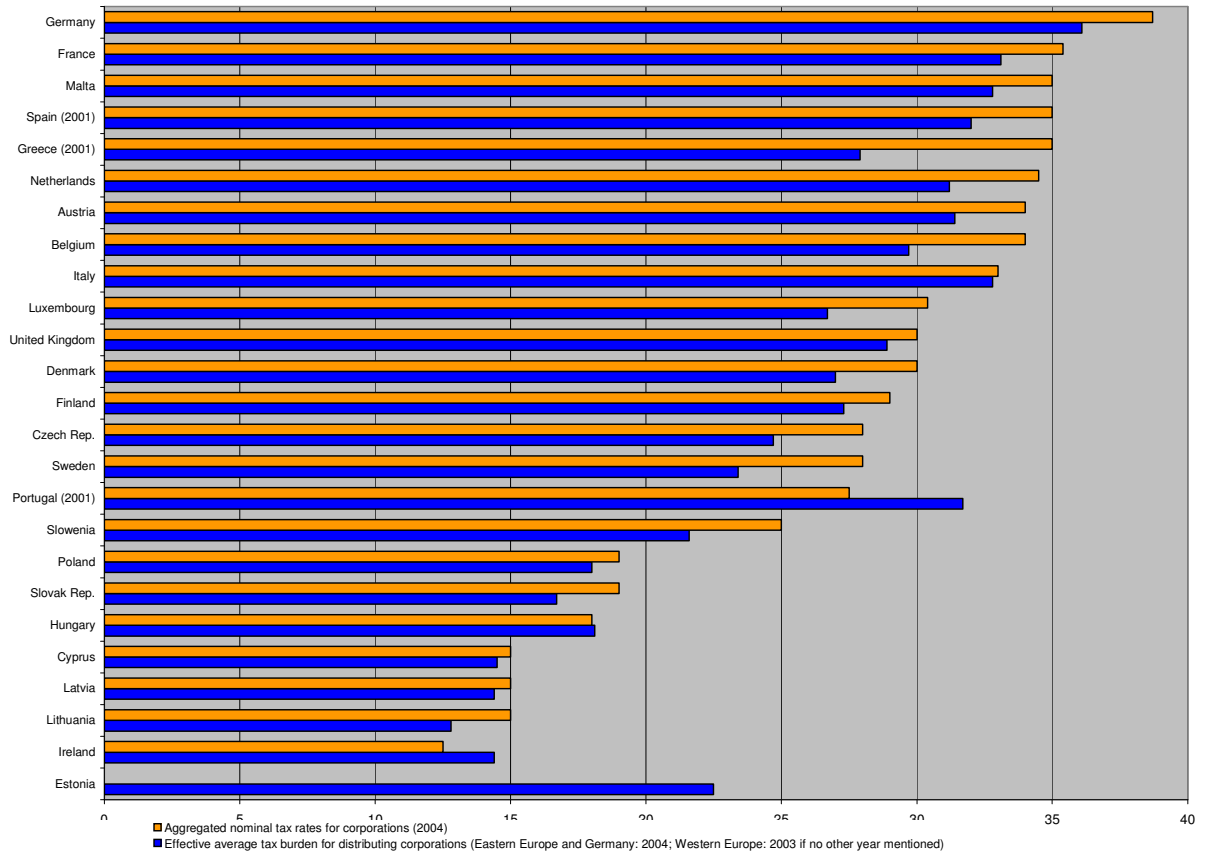
Source: Ernst & Young/ZEW 2004

**Note:** As from 2005, Finland and France switched to shareholder relief systems.

**Tax rates** contain information about the nominal (statutory) tax burden for individuals and companies. Dependent upon the number of taxes a country levies on business activity and upon possible connections between those taxes, a first overview can be given on tax charges companies have to cope with. Additionally, the complexity of the tax system can be estimated, which plays at least a psychological role in SMEs' planning procedures.

But, as Fig. 37 shows, nominal tax rates give a biased view of companies' tax burden. Including the differences between the countries in defining the tax base may increase or decrease the effective tax burden; but in all countries nominal and effective rates differ.

Fig. 37: Nominal (statutory) versus effective tax burden



Source: Bundesministerium für Finanzen 2004, ZEW 2002, 2004

Taxation is the product of the tax rate multiplied by the tax base. So the definition of taxable income is needed to calculate the **effective tax burden**. Effective tax burdens take into account the most important taxes on corporate income that are relevant for profitable investments, considering the statutory rates of these taxes as well as the most important rules for the definition of the tax base, e.g. differences in depreciation allowances. Additionally, they include taxes on capital or payroll, so the effective tax burden can cover all payments to fiscal authorities in the described country.

The aim of a study about **SMEs' access to capital** is not to describe all parts of taxation in the considered countries.<sup>6</sup> The following chapter will concentrate on those aspects of taxation that appear to be obstacles for SMEs' access to equity as well as debt capital. It will be differentiated between the possible legal forms of SMEs that are held by individual shareholders.

<sup>6</sup> The descriptive parts of the following analysis are written with regard to the *European Tax Handbook 2004*, published by the International Bureau of Fiscal Documentation, Amsterdam.

*Relevant cases for SMEs*

Before describing the tax systems of the five countries under scrutiny, further specifications have to be made: In most countries the taxation of business profits depends on the legal form the business is conducted in. Companies can be legal entities (corporations, e.g. stock companies, limited liability companies), partnerships (limited or general) or sole proprietorships. Accordingly, they can be held by different shareholders (corporations, partnerships or individuals). Out of this 3x3-matrix three cases seem to be more relevant for SMEs (venture capital companies as shareholders of SMEs will be analysed separately):

Table 12: Company-shareholder-structure of SMEs

Shareholder	Corporation	Partnership	Individual
<b>Company</b>			
<b>Corporation</b>			<b>Case (1)</b>
<b>Partnership</b>			<b>Case (2)</b>
<b>Sole Proprietorship</b>			<b>Case (3)</b>

black: non-existing  
green: less relevant for SMEs  
yellow: relevant for SMEs

Source: Own production

The following discussion focuses on **corporations, partnerships and sole proprietorships held by individuals** only. Group taxation including group relief will not be dealt with. According to the historical development and the company law of each country, certain company types may be more important for a country's SMEs than others.<sup>7</sup>

The kind of capital a company is financed with, directly determines the amount to be paid for income taxes and related business taxes. Non-income taxes, such as payroll taxes (including social security contributions, which may be constructed as "social taxes") and real estate taxes, are not directly linked to a company's debt-equity ratio. But as those taxes, on the one hand, increase the total tax burden of that company, they are on the other usually deductible for income and business tax purposes. To pinpoint this effect, the following descriptions of

<sup>7</sup> In Germany, e.g., almost 71 % of all companies with a revenue of EUR 50,000,000 or take the legal form of sole proprietorship. 15.17 % are corporations, and only 12.20 % are partnerships (Source: destatis). Similar relations are given in Austria and Poland. Structures in France and the United Kingdom differ, where a higher share of SMEs are conducted as corporations.

countries' tax systems contain **income and non-income related taxes** and calculate after-income-tax burdens of non-income related taxes, too.

### *Austria*

#### Case (1): Corporations held by individuals

Corporate profits are subject to **corporate income tax**. From 1 January 2005, the tax rate amounts to 25% (previously 34%). An annual minimum tax of € 3,500 for stock companies and € 1,750 for limited liability companies is levied. Adjustments are provided for banks and insurance companies. The minimum tax is due in advance and can be set off against the final corporate income tax. There are no other taxes on income.

The Austrian taxation follows the **shareholder relief system**. Dividends and other profit distributions to resident individual shareholders are subject to a final withholding tax of 25%. This also applies if the income is derived in the course of a trade or a business. The taxpayer has the choice of taxation with one half of the effective tax rate on his total income if this is more favourable. This regime applies if requested by the taxpayer within five years of its prevalence. Dividends derived by individuals owning newly issued shares in resident private-owned companies that are engaged in production activities, are subject neither to withholding tax nor to individual income tax to the extent that the dividends are attributable to those shares.

Additionally, taxpayers may elect to deduct **fictitious interest** in the increase of their equity capital. The increase in equity capital is determined by comparing the average equity capital of the tax year to the highest average equity capital of the seven previous tax years.<sup>8</sup> The interest rate to be used is the average rate on the secondary market, increased by 0.8 percentage points (2004: 5.5%). Fictitious interest payments are subject to tax at 25% as "special profit" at the business level. At the level of the investor they are not treated as investment income. The ordinary profit after deduction of the fictitious interest is subject to tax at the standard rate.

There are no other taxes on income. Municipalities receive a **payroll tax** of 3% on the aggregate salaries paid to the employees. A person is considered to be an employee if he derives his income either from dependent work or certain forms of independent work. Small enterprises with an assessment base of € 1,460 per month or less and a single permanent establishment may claim an allowance of € 1,095 per year. The municipal tax is deductible for corporate income tax purposes. Additionally, every employer must make contributions to the **Family Burden Equalization Fund** at a rate of 4.5% on the aggregate amount of the salaries.

Employers must also pay **social security contributions** for all employees whose place of work is Austria. Contributions of 21.65% (white-collar workers) or 21.85% (blue-collar workers, each 2004) are levied on an employee's annual remuneration up to € 41,400. A sepa-

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<sup>8</sup> Tax years ending before 1 January 1998 are not taken into account.

rate ceiling of € 6,900 applies for special remuneration such as the 13<sup>th</sup> or 14<sup>th</sup> month's salary. The employer's contribution to the employee pension and severance payments fund is currently 1.83%. For certain blue-collar workers, employers must make an additional night shift/heavy work contribution of 2% and a bad weather contribution of 0.7%. Social security contributions paid by employers are deductible for corporate income tax purposes.

In Austria, there is no general net worth tax, but immovable property situated in Austria is subject to **real estate tax**. The tax is levied in the assessed standard rateable value of immovable property, whether developed or not. In general, the assessed value is substantially lower than the market value. The real estate tax is levied at a basic federal rate of usually 0.2%, multiplied by a municipal coefficient that ranges up to 500%. Real estate tax paid is deductible for corporate income tax purposes.

The **total tax burden** consists of the taxation of corporate income, of additional taxes on salaries and real estate and of social security contributions. As the last positions lower the tax base for income tax purposes, their effective rate is lower than the nominal percentages. Yet it has to be mentioned that payroll taxes, real estate taxes and social security contributions even have to be paid in periods of corporate losses.

In the case of profit accumulation the **income tax burden** equals 25%. In the case of distribution to an individual shareholder the profit is normally charged with a total nominal tax of  $25\% + 0.75 * 25\% = 43.75\%$ . If the taxpayer chooses the alternative treatment, the total can vary between  $25\% + 0.75 * 0\% * \frac{1}{2} = 25\%$  and  $25\% + 0.75 * 50\% * \frac{1}{2} = 43.75\%$ . For taxpayers electing to deduct profits as fictitious interest or deriving dividends out of newly issued shares the total tax burden equals 25%.

The tax burden is enlarged by the above mentioned payroll taxes of 7.5% and the social security contributions varying between 23.48% and 26.38%. As both are deductible from the income tax base, the sum is reduced by the income tax effect. According to the distribution policy of the corporation the **total burden of payroll taxes and social security contributions** can vary between  $(7.5\% + 23.48\%) * (1 - 0.4375) = 17.43\%$ <sup>9</sup> and  $(7.5\% + 26.38\%) * (1 - 0.25) = 25.41\%$ <sup>10</sup> of salaries paid in one period.

The maximum nominal real estate burden equals  $0.2\% * 500\% = 0.01\%$ . Including the income tax effect, the **effective real estate tax burden** can reach  $0.01\% * (1 - 0.25) = 0.0075\%$  per annum on the assessed standard rateable value of the company's immovable property.

#### Case (2): Partnerships held by individuals

Both general and limited partnerships are treated as transparent entities for tax purposes, i.e. the partners are taxed individually on their share of the profits. Resident individuals are sub-

<sup>9</sup> For salaries paid to white-collar employees, reducing the tax paid on distributed profits.

<sup>10</sup> Relevant for salaries paid to blue-collar employees for night shift or heavy work and bad weather compensation, reducing the tax paid on accumulated profits or on profits deducted as fictitious interest.

ject to national **income tax** with their worldwide income, whether received in money or money's worth. Income tax is computed on the aggregate net income of all categories of income. The rates for 2005 are as follows:

Table 13: Income tax rates in Austria

Taxable income (€)	Tax
up to 10,000	0%
10,000 – 25,000	23% on excess over 10,000 €
25,000 – 51,000	5,750 € + 33,5% on excess over 25,000 €
over 51,000	17,085 € + 50% on excess over 51,000 €

Source: Sec. 33 par. 1 Austrian Income Tax Law

For individuals deriving business income, reinvested profits up to € 100,000 are subject to a **reduced income tax rate** that equals one half of the average income tax calculated on annual income. Profits withdrawn in subsequent tax years are recaptured and taxed at the normal progressive rates. Municipalities receive a share of the national individual income tax.

The above-mentioned regulations concerning payroll taxes and social security contributions affect partnerships accordingly. As for income tax on business income the use of the company's profits is generally of no importance. There does not exist a differentiation between profit accumulation and distribution. Caused by the income tax effect the **total burden of payroll taxes and social security contributions** varies between  $(7.5\% + 23.48\%) * (1 - 0.5) = 15.49\%$ <sup>11</sup> and  $(7.5\% + 26.38\%) * (1 - 0) = 33.88\%$ <sup>12</sup> of salaries paid in one period.

Regulations for real estate tax are the same as those mentioned for corporations. Subject to the taxation of the partnerships, the **effective tax burden on real estate** can have a maximum of  $0.01\% * (1 - 0) = 0.01\%$ .

#### Case (3): Sole proprietorships

Business income is taxed under the **category "trade and business"** and is generally defined as the difference between the value of the enterprise's assets at the end of a financial year and

<sup>11</sup> For salaries paid to white-collar employees, reducing income taxed at a rate of 50 %.

<sup>12</sup> Relevant for salaries paid to blue-collar employees for night shift or heavy work and bad weather compensation, reducing income taxed at a rate of 0 %.

the value of those assets at the end of the preceding financial year, plus withdrawals and minus contributions to the capital of a business during the course of the year. Usually, it must be computed on the basis of a **profit and loss account**. Small enterprises, however, are exempt from the obligation to keep books. They may compute profits as the **surplus of business income over business expenses**. Taxpayers calculating their income on a cash basis may opt for a **lump-sum deduction of expenses** instead of deducting actual expenses. For business activities, the deduction in general is calculated as 6% of gross income, so that the remaining 94% have to be taxed.

The above-mentioned general and reduced income tax rates apply accordingly to the business income of individuals doing their business in the legal form of a sole proprietorship. There are no special rules concerning payroll tax, social security contributions and real estate tax.

### *France*

#### Case (1): Corporations held by individuals

Corporate taxpayers are subject to **corporate income tax** on their French-source business income and on their worldwide passive investment income. Liability to corporate tax may be either mandatory or optional: Corporations, simplified stock companies, limited liability companies and partnerships limited by shares are subject to mandatory corporate tax liability. Moreover, corporate tax has to be paid on profits of limited partners in partnerships. General partnerships, limited partnerships (for the general partners' part of the profit), single member limited liability companies, civil companies and joint ventures may opt for the corporate tax liability. Otherwise they are treated as transparent entities for tax purposes. The standard corporate income tax rate is 33.3%. It is increased by a 3% surcharge, resulting in an effective rate of 34.3%.

**Small and medium sized enterprises** are subject to corporate income tax at a reduced rate of 15% on the first €38,120 of profits and at the standard rate on any excess. The reduced rate is increased by the 3% surcharge to 15.45%. In contrast to the definition by the European Commission, SMEs in France are defined as owned with at least 75% by individuals and with a turnover of €7,630,000 or less.

**Large companies** are subject to an additional social surcharge of 3.3% levied on that part of aggregate corporate tax, calculated at the standard rate and at the reduced rate on long-term capital gains, which exceeds €763,000. The resulting effective rate on that part is 35.43%. Large companies are assumed to be companies whose turnover exceeds €7,630,000.

A **reduced rate** of 19% applies to long-term capital gains and royalties. It is increased by the 3% surcharge, resulting in an effective rate of 19.57%. For large companies, the 19% rate is subject to the 3.3% social surcharge (effective rate: 20.20%). Long-term capital gains are e.g. gains on units and shares held for at least five years in qualifying venture capital funds or companies.

There are several tax rate incentives for **newly created companies** and/or innovative companies: Full and partial exemptions are granted to companies created prior to 31 December 2009. A full corporate income tax exemption is granted for the initial 24 months. It is reduced to 75%, 50% and 25% for each of the following 12-month periods, respectively. This 36-month reduction is limited to the part of profits that does not exceed €225,000. To qualify for the relief, certain conditions concerning the type and location of the activity must be satisfied. Eligibility can be determined by an advance ruling.

A special regime for **innovative new companies** applies to SMEs, at least 50% of which are owned by individuals. This regime grants a complete corporate income tax exemption in the initial three years of the innovative activity, reduced to 50% in the following two years. Additionally, exemptions from various other taxes, e.g. business tax and social security contributions, are granted. To qualify for the regime, a company must have existed for less than eight years and must carry out innovative activities with at least 15% of its total expenditure.

The French tax system has been **substantially modified** by the Finance Law 2004, which abolished the imputation system, the connected imputation credit (“avoir fiscal”) and the equalization tax (“précompte mobilier”) with effect from 1 January 2005. As a transitional measure, a one-off tax on distributions made in 2005 out of untaxed profits, applies. One third of this tax is creditable against the corporate income tax of the distributing company for each of the three following years. The one-off tax is not payable by SMEs on the part of their low-taxed profits.

From 1 January 2005, a **shareholder relief system** applies, i.e. only 50% of the dividends received will be subject to tax (a so-called “half-income system”). In addition, resident individuals benefit from a tax-free allowance (€1,220; double for couples) and a modest tax credit (€115; double for couples) regarding the dividends. In France, current income tax rates are usually given on a year-by-year basis, each retroactive for the previous year. For 2004’s assessment of 2003 income, the progressive income tax rates are:



Table 14: Income tax rates in France

Taxable income (€)		Tax on total taxable income
up to	4,262	0%
	4,262 – 8,382	6.83%
	8,382 – 14,753	19.14%
	14,753 – 23,888	28.26%
	23,888 – 38,686	37.38%
	38,686 – 47,932	42.62%
over	47,932	48.09%

Source: IBFD 2004

It should be mentioned that income tax in France is levied on the families' level with a coefficient system mitigating the progression of the income tax structure for taxpayers in the most common family situations. There are no local income taxes.

In addition to income tax, dividends are subject to **social taxes**. There are currently three social taxes, the impact of which is substantial. They are the generalized social contribution, the social security deficit contribution and the social levy.

- The generalized social contribution (CSG) is payable by all residents on virtually all types of income, unless expressly exempt. The rate is generally 7.5%; out of this, 5.1 percentage points are deductible for income tax purposes, if the relevant income is taxed at the progressive rates.
- The social security deficit contribution (CRDS) of 0.5% is levied, in general, on basically the same taxable base as the CSG. It is not deductible at all for income tax purposes.
- The social levy of 2% applies to income from immovable property and investment income including dividends. It is not deductible for income tax purposes.

Combining individual income tax and social taxes, the effective tax burden on the shareholder's level is between  $(0\% + 7.5\% + 0.5\% + 2\% =) 10\%$  and  $(48.09\% * (1 - 0.051) + 7.5\% + 0.5\% + 2\% =) 55.64\%$ . Accordingly, the **total tax burden** on profits distributed by corporations is between 5% (for newly created companies or innovative new companies distributing their profits to a shareholder paying only social security taxes) and 53.64% (for large companies distributing their profits to a shareholder who is in the top slice of the income tax rate). If a corporation accumulates its profits, the total tax can vary between 0% (for newly created companies or innovative new companies) and 35.43% (for large companies).

In addition, a number of other taxes is levied on companies, including a minimum tax, a local business tax and several payroll taxes. The **annual minimum lump-sum tax** based on turnover is payable as shown in Table 13. It is relevant only for corporations and business entities having opted for corporation tax. The minimum tax is creditable against the corporate income tax of the current and the following two years. Companies whose turnover is less than €76,000 are exempt from this tax.

Table 15: Minimum tax in France

Turnover (in €)		Minimum Tax (in €)
up to	150,000	750
	150,000 – 300,000	1,125
	300,000 – 750,000	1,575
	750,000 – 1,500,000	2,175
	1,500,000 – 7,500,000	3,750
	7,500,000 – 15,000,000	15,000
	15,000,000 – 75,000,000	18,750
over	75,000,000	30,000

Source: IBFD 2004

Companies engaged in business activities on France in a habitual basis are subject to a local **business tax**, regardless of their residence. The taxable base is the annual rental value of commercial and industrial buildings and equipment, reduced by 16%. The rates vary from municipality to municipality but may not exceed the following percentages of value added (mentioned in brackets are the rates including the tax effect, first on accumulated, second on distributed profits):

- 3.5% (2.26% – 3.5%; 1.62% – 3.33%) if the turnover is below €21,350,000;
- 3.8% (2.45% – 3.8%; 1.76% – 3.61%) if the turnover is between €21,350 and €76,225,000; and
- 4.0% (2.58% – 4.0%; 1.85% – 3.8%) if the turnover is above €76,225,000.

A minimum business tax of 1.5% (0.97% – 1.5%; 0.7% – 1.43%) of the value added is payable by companies with a turnover of €7,600,000 or more. “Value added” is defined as sales minus purchases and the value of inventory at the opening of the accounting year. Business tax is deductible for corporate income tax purposes. It should be mentioned that business tax brings more money to the state than corporation tax.<sup>13</sup>

The **social solidarity tax** is levied at a rate of 0.13% of the turnover of companies, excluding VAT. It is deductible for corporate income tax purposes. As it is deductible, the **effective rates** are 0.084% – 0.13% for an accumulating company and 0.06% – 0.123% for a company distributing its profits.

A number of **taxes on payroll** is levied on resident as well as on non-resident companies conducting business in France. All taxes described below are deductible for corporate income tax purposes (again, mentioned in brackets are the rates including the tax effect, first on accumulated, second on distributed profits):

- Payroll tax is imposed on resident companies that are not subject to VAT, or at least 90% of whose turnover was exempt from VAT in the preceding year. Taxable base is the total amount of remuneration; the rates for 2004 are
  - 4.25% (2.74% – 4.25%; 1.97% – 4.04%) on the portion of the annual individual salary up to €6,789;
  - 8.50% (5.49% – 8.5%; 3.94% – 8.08%) on the portion of the annual individual salary between €6,789 and €13,563; and
  - 13.6% (8.78% – 13.6%; 6.30% – 12.92%) on the portion of the annual individual salary exceeding €13,563.

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<sup>13</sup> Compare D’Hont, P., France: “Sweeping Tax Changes Affecting In/Outbound Investments”, in: *TPI Review*, October 2004.

- Apprenticeship tax is levied on the total payroll at a rate of 0.5% (0.32% – 0.5%; 0.23% – 0.48%). A reduced rate applies in some French departments.
- Vocational training tax applies to employers who employ ten employees or more. Such employers must invest 1.5% (0.97% – 1.5%; 0.70% – 1.43%) of payroll in vocational training programmes. For enterprises employing fewer than ten employees, the tax is reduced to 0.15%. Enterprises that become liable to this tax are exempt for the first three years and benefit from a reduced rate for the following three years.
- Construction tax applies to employers who employ ten employees or more. They have to invest 0.45% (0.29% – 0.45%; 0.21% – 0.43%) of the payroll of the preceding year in the construction of residential housing. Again, enterprises that become liable to this tax are exempt for the first three years and benefit from a reduced rate for the following three years.

There are **social security contributions** due by employers on total wages and salaries or on maximum amounts known as social security ceilings. For 2004, employers generally have to pay contributions between 49.6% and 53.656% (including contribution for supplementary pension). Certain types of business have to pay additional contributions, in particular for accident insurance. All social security contributions are deductible for corporate income tax purposes, so the **effective rates** are between 32.03% and 53.656% for accumulating corporations and between 22.99% and 50.97% for the profit distribution case.

In France, net worth tax is not levied at the companies' level, but companies are subject to **real estate taxes**. The most important one for companies is the property tax, which is a local tax due annually on all properties owned on 1 January of the relevant year. The tax is due by the owner and applies both to developed and undeveloped property located in France. The tax on developed property applies to buildings located in France. The tax is computed by applying certain coefficients determined annually by the local tax authorities to half the notional rental value of the property, as determined by the local land registry. The tax on undeveloped property (mainly privately owned land) is calculated by multiplying 80% of the notional rental value of the property by coefficients determined by local authorities.

Resident individuals are subject to an annual **net wealth tax** on the fair market value of assets owned on 1 January of the tax year, minus liabilities, if the net value of these assets exceeds €720,000. Various assets are exempt, including business assets and substantial shareholding (more than 25%) held by managing directors. So for the shareholder, net wealth tax applies only if he holds 25% or less of the company's shares and if his total wealth has a net value of more than the mentioned €720,000. These conditions may not often be true for owners of SMEs. The rates are as follows:

Table 16: Net wealth tax in France

Taxable value (in €)	Rate
up to 720,000	0.00 %
720,000 – 1,160,000	0.55 %
1,160,000 – 2,300,000	0.75 %
2,300,000 – 3,600,000	1.00 %
3,600,000 – 6,900,000	1.30 %
6,900,000 – 15,000,000	1.65 %
over 15,000,000	1.80 %

Source: IBFD 2004

For individual shareholders, there is no possibility of deducting the net wealth tax from the tax base for income tax purposes.

#### Case (2): Partnerships held by individuals<sup>14</sup>

Resident individuals are subject to **income tax** on their worldwide income. The tax is generally imposed on the aggregate amount of all items of income, but there is no definition of taxable income. Generally speaking, taxable income is the total of the net results of each of the taxpayer's income categories. The category "business income" includes profits from industrial, commercial and handicraft activities; so profits realized by partnerships that do not opt to be taxed as companies, are taxed in the hands of the partners as business income. Business income is subject to the above-mentioned ordinary progressive income tax rates. A number of tax reductions is available, e.g. for investment in certain sectors and for the establishment of new enterprises.

As all other income categories, business income is subject to two of the three **social taxes** mentioned above, i.e. the generalized social contribution (CSG) at 7.5% and the social security deficit contribution (CRDS) at 0.5%. As business income is taxed with income tax at the normal rate, 5.1 percentage points of the CSG are deductible from income tax base. Unlike the CSG and the CRDS, the social levy of 2% does not apply to business income.

<sup>14</sup> As corporate tax liability applies mandatorily on the profits of limited partners in limited partnerships, the following discussion concentrates on general partners' profits. Additionally, it is assumed that the partnership has not opted for corporate tax liability.

Combining individual income tax and social taxes, the **effective tax burden** on business income is between  $(0\% + 7.5\% + 0.5\% =) 8\%$  and  $(48.09\% * (1 - 0.051) + 7.5\% + 0.5\% =) 53.64\%$ .

The above-mentioned local **business tax** applies not only to corporations, but to all business income. The maximum rates may not exceed the following percentages of value added (mentioned in brackets are the rates including the tax effect):

- 3.5% (1.62% – 3.22%) if the turnover is below €21,350,000;
- 3.8% (1.76% – 3.5%) if the turnover is between €21,350 and €76,225,000; and
- 4.0% (1.85% – 3.68%) if the turnover is above €76,225,000.

A minimum business tax of 1.5% (0.7% – 1.38%) of the value added is payable by companies with a turnover of €7,600,000 or more.

**Taxes on payroll** are levied on partnerships and sole proprietorships, too. The tax rates are the same as mentioned for corporations, but including the income tax effect, the effective rates are as stated in brackets:

- for payroll tax:
  - 4.25% (1.97% – 3.91%) on the portion of the annual individual salary up to €6,789;
  - 8.50% (3.94% – 7.82%) on the portion of the annual individual salary between €6,789 and €13,563; and
  - 13.6% (6.30% – 12.51%) on the portion of the annual individual salary exceeding €13,563.
- for apprenticeship tax: 0.5% (0.23% – 0.46%).
- for vocational training tax: 1.5% (0.7% – 1.38%).
- for construction tax: 0.45% (0.21% – 0.41%).

The **social security contributions** are due from all employers. For 2004, they generally have to pay contributions between 49.6% (22.99% – 45.63%) and 53.656% (24.87% – 49.36%).

The **annual minimum lump-sum tax** based on turnover is relevant only for corporations and business entities having opted for corporation tax. **Real estate taxes** apply to partnerships, too. As partnerships are not subject to and business assets are exempt from **net wealth tax**, normally no net wealth tax applies.

Case (3): Sole proprietorships

There are no differences in France between the taxation of a partner's share of his partnership's profit and the taxation of business income derived from a sole proprietorship.

*Germany*

Case (1): Corporations held by individuals

The **corporate income tax** is levied on the various types of entities listed in the Corporate Income Tax Law. These include stock companies and limited liability companies, as well as limited partnerships with shares. All other partnerships are not taxed as separate entities. The rate of corporate income tax is 25%, increased to 26.38% by the **solidarity surcharge** of 5.5%.

Companies distributing profits must generally withhold **dividend withholding tax** at a rate of 20%, i.e. 21.1% including the 5.5% solidarity surcharge. The tax withheld is fully creditable for resident shareholders against their individual income tax liability and will not be regarded in the following calculations.

Since 1 January 2001, Germany has a **shareholder relief system**. Dividends are taxed in the hands of individual shareholders by the "half-income system", under which only one half of the dividends received is included in the individual's taxable income. A transitional regime provides for a partial refund of corporate income tax to companies distributing profits they had derived under the former full imputation system.

The individual shareholder is subject to **income tax** on half the dividends received by the corporation. It is imposed at progressive rates under a complex formula; for 2005, the marginal rates vary between 0% and 42%. As the 5.5% solidarity surcharge is levied on the amount of tax computed according to the formula, the **aggregated rates** may vary between 0% and 44.31%. Church members who are subject to unlimited tax liability are required to pay a church rate of 8% or 9% of their income tax payable. This tax is not regarded further.

In general, every company that conducts business in Germany is subject to **business tax**. Corporations are always presumed to conduct business. The taxable income for business tax is generally determined in the same manner as for income tax purposes, but is subject to certain

adjustments. These adjustments refer to certain items that reduce the tax base for corporate income tax purposes but not for business tax purposes and vice versa. The effective rate of business tax depends on a federal rate and a municipal multiplier. First, the basic federal rate of 5% is applied to the taxable business income, resulting in a basic tax amount. Second, the multiplier is applied to the basic tax amount to determine the actual tax burden. The multiplier is fixed by the municipalities and varies according to their financial needs between 200% and 490%. In 2004, the multiplier was 410% for Berlin and 490% for Frankfurt am Main. As small municipalities usually fix a lower multiplier, and as SMEs in most cases will have no need to be located in big cities, a below-average multiplier of 400% is taken for the following calculations. The solidarity surcharge is not levied on business tax.

Business tax is deductible both for corporate income tax purposes and from its own base. Using a municipal multiplier of 400%, the **aggregated income and business tax burden** for German corporations is 38.65% and can be calculated as follows:

$$\text{aggregated tax burden on corporate level} = r_{\text{cit}} * (b_{\text{cit}} - \text{bt}) * (1 + r_{\text{ss}}) + \text{bt}$$

with  $r_{\text{cit}}$  = corporate income tax rate;

$b_{\text{cit}}$  = corporate income tax base;

$r_{\text{ss}}$  = rate of solidarity surcharge; and

$\text{bt}$  = business tax

$$= r_f * m_m * (b_{\text{cit}} - \text{bt})$$

with  $r_f$  = federal rate; and

$m_m$  = municipal multiplier.

Including the shareholder's income tax on dividends received from the corporation as private income, the **total tax burden** equals

$$\begin{aligned} & \text{total tax burden} \\ &= r_{\text{cit}} * (b_{\text{cit}} - \text{bt}) * (1 + r_{\text{ss}}) + \text{bt} \\ &+ [1 - r_{\text{cit}} * (b_{\text{cit}} - \text{bt}) * (1 + r_{\text{ss}}) - \text{bt}] * 0.5 * r_{\text{it}} * (1 + r_{\text{ss}}) \end{aligned}$$

with  $r_{\text{it}}$  = income tax rate.

According to the income tax rate varying between 0% and 42%, the total tax burden in the distribution case can vary between 38.65% and 52.24%. In the case of profit accumulation, the total tax amount equals 38.65% of the corporate profit.

In Germany, there are neither payroll taxes nor a net worth tax. The following **social security contributions** – average given, as the actual rates depend on the insurer – are payable by the employers (2004, for the five new federal states lower rates apply):



- pension insurance at 9.75% (5.98%; 4.66% – 5.98%) on a monthly salary up to €5,150;
- health insurance at 7.15% (4.39%; 3.41% – 4.39%) on a monthly salary up to €3,487.50;
- unemployment insurance at 3.25% (1.99%; 1.55% – 1.99%) on a monthly salary up to €5,150; and
- insurance for disability and old age at 0.85% (0.52%; 0.41% – 0.52%) on a monthly salary up to €3,487.50.

As social security contributions are deductible for corporate income tax and business tax purposes, values in brackets show the rates after imputing the tax effect; first value for profit accumulation, second and third for the distribution case.

**Real estate tax** is levied annually on immovable property by the municipalities. It is imposed on the fiscal value at a basic federal rate of 0.35%. The result is multiplied by a municipal coefficient that ranges from 280% to 600% and raises the nominal rate to between 0.98% and 2.1% of the fiscal value. The average rate is around 1.5%. Real estate tax is deductible for corporate income tax and business tax purposes; therefore the effective average rate may be 0.92% for the profit accumulation case and between 0.72% and 0.92% for profit distribution.

#### Case (2): Partnerships held by individuals

In general, partnerships are transparent for tax purposes. Only the **business tax** applies directly at the company's level. It is generally levied the same way as described above for corporations; the only difference is the federal rate varying between 0% and 5% and leading to an effective business tax rate of 0% – 16.67%. Additionally, individual sole proprietors and partners are entitled to a lump-sum credit for business tax against their income tax. At least for partnerships located in a municipality with a low business tax multiplier, the income tax reduction may equal the business tax paid by the partnership; so the effective business tax may be around zero. A business tax of zero will be assumed for the following calculations.

Each partner is taxed with income tax and solidarity surplus on his part of the partnership's profits. The above-mentioned tax rates apply, leading to a **total tax burden** of 0% – 44.31%.

Partnerships have to pay **social security contributions** at the same rates as corporations have to. As the income tax effects differ, the effective rates are

- for pension insurance: 5.43% – 9.75%;
- for health insurance: 3.98% – 7.15%;

- for unemployment insurance: 1.81% – 3.25%; and
- for insurance for disability and old age: 0.47% – 0.85%.

As **real estate tax** is deductible for income tax and business tax purposes, the effective average rate may be between 0.84% and 1.5%.

#### Case (3): Sole proprietorships

There is **no difference** between taxation of partnerships and of sole proprietorships in Germany. No reduced tax rates for SMEs apply. For social securitization, self-employed may be voluntarily insured at the statutory regimes or may opt for private insurance. In both cases the rates are fixed by the insurance companies.

#### *Poland*

##### Case (1): Corporations held by individuals

**Corporate income tax** is levied on legal entities, most notably joint-stock companies and limited liability companies. Partnerships are not taxable entities and, as such, partners are taxed individually on their share of the profits. Investment funds and pension funds are exempt from corporate income tax. From 1 January 2004, the corporate income tax rate is 19% (previously 27%). There are neither other taxes on corporate income nor payroll taxes in Poland. Tax incentives are given for investments and job creation in special enterprise zones.

Poland applies a **shareholder relief system** of taxation. After full taxation of profits at the company level, dividends are subject to a withholding tax of 19%.<sup>15</sup> Independent of whether the individual shareholder holds the shares in his private or in his business property, the 19% withholding tax is final. At the shareholder's level dividends are thus not included in the total income.

In Poland there are no other income taxes. No payroll tax and no net worth tax are levied. Nevertheless, there is a **social security system** that includes old-age pensions, disability insurance, health and maternity insurance and injury insurance. The assessment base for the social security contributions is the employees' gross income as defined for income tax purposes. In the case of contributions to the old-age pension and disability insurances, the maximum base is the annual equivalent of 30 projected average monthly salaries in the calendar year (2004: PLN 68,700). There is no ceiling for the injury insurance.

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<sup>15</sup> Nevertheless, if the shareholder is a corporation, too, the withholding tax is creditable against the corporate income tax on the shareholder's total income. Excess credits may be carried forward indefinitely.

The contributions are payable by the employers at a nominal 9.76% for old-age pension, 6.50% for disability insurance and 0.97% – 3.86% for injury insurance. Additionally, employers have to contribute 0.15% of the employees' wages to the warranted employees' claim funds. All contributions are deductible for corporate income tax purposes.

**Real estate tax** is an annual local tax. The taxable base for all buildings is the floor area of the building in m<sup>2</sup>. For land, it is the size in m<sup>2</sup>. For fixed installations, the depreciation value is taken into account. The tax rates are fixed by the municipal councils, but may not exceed PLN 0.63 per m<sup>2</sup> for land used in businesses, PLN 17.42 per m<sup>2</sup> for buildings used in businesses and 2% of the value of fixed installations.

The **total tax burden on profits** subject to corporate income tax is 19% in the case of profit accumulation. In the case of distribution to an individual shareholder the profit is charged with a total nominal tax of  $19\% + 0,81 * 19\% = 34,39\%$ .

The **effective social security burden** after including the tax reduction effect lies between 11.40% and 16.27% of the employees' gross income. The **effective real estate tax** may not exceed PLN  $[0.63 * (1 - 0.19) =]$  0.51 per m<sup>2</sup> for land used in businesses, PLN  $[17.42 * (1 - 0.19) =]$  14.11 per m<sup>2</sup> for buildings used in businesses and  $[2\% * (1 - 0.19) =]$  1.62% of the value of fixed installations.

#### Case (2): Partnerships held by individuals

The taxable income of individuals is subject to **income tax**. As partnerships are transparent for income tax purposes, partners are taxed individually on their share of the profits. In general, business income is aggregated with income from other categories. The aggregate net income is subject to progressive tax rates according to the following table:

Table 17: Income tax rates in Poland

Taxable income (PLN)	Tax
up to 37,024	19% – 530.08 PLN
37,024 – 74,048	6,504.48 + 30% on excess over 37,024
over 74,048	17,611.68 + 40% on excess over 74,048

Source: IBFD 2004

Taxpayers can opt for a 19% **flat-rate taxation of business income**. If so, they are not entitled to any personal deductions and credits, except credits for the obligatory health insurance contributions. By using this option, they achieve being taxed like a corporation accumulating its profits.

Additionally, the Polish tax system offers a special tax regime for private individuals conducting **small-scale business activities**. The following requirements apply:

- The activity was started by individuals independently or in the form of a civil partnership during the relevant tax year. Or:
- In the year preceding the relevant tax year, the amount of turnover received by an individual or by all partners of a partnership did not exceed PLN 250,000.

For such small-scale businesses the turnover is the taxable base. **Flat-rates** apply according to the business activity:

- 20% for independent activities of individuals,
- 17% for some services,
- 8.5% for services in general and on agents commissions,
- 5.5% for production, construction and transport services, and
- 3.0% for commercial activities, catering businesses and sea fishing.

Depending on the tax regime chosen, the **effective social security burden** after including the tax reduction effect is between 10.43% and 20.27% of the employees' gross income. If the partner opts for flat-rate taxation, the effective burden equals that for corporations (11.40% – 16.27%). The **effective real estate tax** may not exceed PLN 0.63 (flat-tax option: PLN 0.51) per m<sup>2</sup> for land used in businesses, PLN 17.42 (flat-tax option: PLN 14.11) per m<sup>2</sup> for buildings used in businesses and 2% (flat-tax option: 1.62%) of the value of fixed installations.

#### Case (3): Sole proprietorships

Generally, the same tax regulations apply for sole proprietorships as for partnerships. It should also be mentioned that self-employed people are required to pay the same social security contributions for themselves as for their employees. The assessment base is the amount declared by the taxpayer.

*United Kingdom*

Case (1): Corporations held by individuals

Corporations are subject to **corporation tax** (corporate income tax), which is levied on corporate profits and other forms on income, as well as on chargeable gains of companies. The general rate of corporation tax is 30%. This rate applies to all closely owned investment holding companies and to other companies with taxable profits above GBP 1.5 million. As there are a starting rate of 0% and a small companies rate of 19%, combined with two areas of marginal tax correction, the effective tax rates on profits in each income bracket are as follows:

Table 18: Effective corporate tax rates in the United Kingdom

<b>Taxable profits (brackets in GBP)</b>	<b>Tax rate for bracket (%)</b>
up to 10,000	0%
10,001 – 50,000	23.75 %
50,001 – 300,000	19%
300,001 – 1,500,000	32.75 %
over 1,500,000	30%

Source: IBFD 2004

The UK tax system combines elements of partial imputation and shareholder relief and contains no withholding taxes on dividends distributed to resident shareholders. First, each dividend carries a tax credit of one ninth of the dividend amount which is included in the dividend income, so that dividend income = 10/9 \* dividend. The tax credit can be set off against the individual's income tax liability on the dividend plus the credit and is not refundable. This is the **partial imputation** part of the tax system.

Second, dividends are taxed with a reduced tax rate of 10% (respectively 32.5%) instead of up to 40% for savings and other income, which forms the **shareholder relief** part. As the shareholder's taxable income is sorted in the three mentioned groups with dividend forming the top slice, savings the middle and other income parts the bottom, dividends will often be taxed with the higher rate of 32.5%. The income tax rates for the fiscal year from 6 April 2003 to 5 April 2004 are:

Table 19: Income tax rates in the United Kingdom

Bracket (GBP)	Dividend	Tax (%)	
		Savings	Other Income
up to 1,960	10 %	10 %	10 % (lower rate)
1,961 – 30,500	10 %	20 %	22 % (basic rate)
over 30,500	32.5 %	40 %	40 % (higher rate)

Source: IBFD 2004

Combining the tax rates for dividends with the elements of partial imputation, the following equation emerges:

$$\begin{aligned} \text{effective income tax on dividend} &= \text{dividend} * (10/9 * \text{tax rate}) - \text{dividend} * 1/9 \\ &= \text{dividend} * (10/9 * \text{tax rate} - 1/9) \end{aligned}$$

Following:    tax rate = 10%        =>    effective income tax rate = 0%  
                   tax rate = 32.5%      =>    effective income tax rate = 25%

There are two investment incentive reliefs applying to investors in companies: The **enterprise investment scheme** (EIS) is applicable for investments in the form of a 3-year commitment made by an unconnected investor in eligible shares of a company, neither quoted at the time of the issue of shares under the scheme nor planned to become quoted. Participation is limited to companies with gross assets of less than GBP 10 million before and no more than GBP 11 million after the investment is made. At least 80% of the money invested must be employed by the company for the purposes of its qualifying business activity within twelve months. The residual 20% have to be equally employed within the following twelve months. If these conditions match, the investor is granted a relief at the lower rate of income tax (10%) on investments up to GBP 150,000 per year. The relief is granted against the investor's income tax if no significant value is returned to him within a period of at least twelve months. The relief may be withdrawn if the investor disposes of the shares in the company within the first three years or if he receives value from the company.

The **venture capital trust** (VCT) is a collective investment scheme of which the main features are

- that the VCT is an investment company quoted on the stock exchange, having 70% of its investments in unquoted qualifying companies and distributing 85% of its income; and

- that at least 80% of the money invested must be employed by the company for the purposes of its qualifying business activity within twelve months. The residual amount must be so employed within the following twelve months.

Given these features, relief is provided at the lower rate of income tax (10%) on investments up to GBP 100,000 per year; additionally distributions of the VCT's income are exempt from tax. The relief may be withdrawn if the VCT shares are disposed of within three years.

There is no **payroll tax** in the United Kingdom. In the field of **social security contributions**, National Insurance Contributions (NIC) paid by employers are fixed by reference to the employees' weekly earnings. Depending on the contribution scheme they may vary from 0% to 12.8% of the wages paid. They are deductible for corporation tax purposes.

A net worth tax does not exist, but there is a **real estate tax** levied on market rents. Rateable values are reassessed every five years; the next revaluation, based on 2003 values, comes into force on 1 April 2005. Transitional relief applies to phase in significant increases or decreases in rateable value over a period of time. The uniform business rate (UBR) is set annually by the government. For the tax year ending 31 March 2004, the rate for England is 4.44%; similar rates apply in Scotland and Wales. Real estate tax is deductible for corporation tax purposes.

The **total income tax burden** on both the corporation's and the shareholder's level depends on amount and treatment of profit: The corporation tax may be between 0% and 30% with marginal tax correction up to 32.75%. In the case of profit accumulation this tax is the effective burden. If the remaining 70%<sup>16</sup> to 100% are distributed, the dividend will be subject to effective income tax with 0% or 25%, using the partial imputation system. Accordingly, the sum of both tax levels in the distribution case lies between (0% + 0% =) 0% and (30% + 25% on remaining 70%) = 47.5%. There are no local income taxes for companies; neither are there any business taxes on corporate income.<sup>17</sup> There are no other taxes on individuals' income.

Using the calculated total income tax burden, the **effective burden of social security contributions** varies from 0% to 12.8%. The **effective real estate tax burden** in England has its maximum between 2.33% and 4.44% of the rateable value; Scotland and Wales are calculated accordingly.

Case (2): Partnerships held by individuals

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<sup>16</sup> The marginal tax correction is used for equalising marginal and average tax rate and will not be discussed further.

<sup>17</sup> Corporation tax is levied only on income from oil and gas production. Petroleum revenue tax (PRT) applies only to income from oil fields.

In the United Kingdom, a resident individual is taxable on his worldwide income. **Income tax** is assessed according to a scheduler system, where business income is subsumed under “trading and professional income”. As partnerships are transparent for tax purposes, partners are taxed individually on their share of the profits. In general, income of all schedules is aggregated and subject to progressive tax rates according to the table given in Fig. 17: “Income tax rates in the United Kingdom”. Trading and professional income is typically “other income” and is taxed with 10%, 22% and 40%.

Additionally, individuals are subject to **capital gains tax (CGT)** on their worldwide capital gains. Capital gains tax is levied at the same above-mentioned income tax rates of 10%, 20% and 40%.

There are neither other taxes on income nor any payroll taxes. But, as a part of **social security contributions, payments by the self-employed** do not give any entitlement to social security benefits; it is *de facto* an additional income tax. The so-called Class 4-contributions to National Insurance are payable at 8% of annual earnings between GBP 4,615 and the upper earnings limit of GBP 30,940, and at 1% on the excess over GBP 30,940. No payment is due from taxpayers who have reached pensionable age (65 for men and 60 for women) by the beginning of the year of assessment. Social security contributions are not deductible for income tax purposes, so the Class 4-contributions are just added to the income tax rate. Effectively, taxation can reach 40% income tax plus 1% insurance contribution, i.e. 41% total.<sup>18</sup>

In Class 2 of National Insurance, the self-employed have to pay an additional flat rate of GBP 2 per week. A small earnings exemption limit of GBP 4,095 per annum is applicable. For **social security contributions paid for employees**, the same regulations as described for corporations are relevant.

Combining income tax with social security rates, the **effective burden of social security contributions** paid by partnerships to their employees lies between 0% and 12.8%. The maximum **effective real estate tax burden** in England for partnerships varies between 2.62% and 4.44% of the rateable value; Scotland and Wales are calculated accordingly.

#### Case (3): Sole proprietorships

There are no special tax or social security regulations for sole proprietorships in the United Kingdom, so the same rules apply as for partnerships.

## 6.2.4 Comparison of the Taxation in the Selected Countries and Conclusions for the Improvement of the Taxation of Innovative SMEs

The following table gives an overview on the taxation of corporations as discussed.

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<sup>18</sup> There is a peak between GBP 30,500 and GBP 30,940, where 40 % income tax and 8 % insurance contribution apply.



Summary: Accumulation versus distribution of profits

Table 20: Taxation of corporations

	Austria	France	Germany	Poland	UK
<b>Corporation held by individual</b>					
<b>➔ Aggregated income tax burden</b>					
<b>Profit accumulation</b>	25%	0% – 35.43%	38.65%	19%	0% – 30%
<b>Profit distribution</b>	25% – 43.75%	5% – 53.64%	38.65% – 52.24%	34.39%	0% – 47.5%
<b>Special regulations</b>	Option to deduct fictitious interest on increased equity (taxed at 25%)	Reduced tax rates for new or innovative companies	.-	.-	Investment incentive reliefs (EIS, VCT)
<b>Minimum tax</b>	€1,750 – €3,500; on loss-carryforward above 75% of current income	€750 – €30,000	On loss-carryforward above € 1,000,000	.-	.-
<b>➔ Effective total burden of payroll taxes and social security contributions</b>					
	17.43% – 25.41%	25.41% – 69.03%	10.03% – 12.88%	11.40% – 16.27%	0% – 12.8%
<b>➔ Effective real estate tax burden</b>					
	0.0075% – 0.01%	According to municipality	Average: 0.72% – 0.92%	Max. PLN 14.11 per m <sup>2</sup>	2.33% – 4.44%

Source: Own production

**Note:** Areas with yellow background show main legal form for SMEs in the respective country.

All countries under scrutiny have a so-called **lock-in effect**, i.e. the total tax burden on profits increases when corporations distribute their profits. In general, this is economically accepted and not seen as a critical part of the tax system. But for SMEs, which often have to distribute at least a part of their profits (supposing their shareholders need them for a living), this tax increase is a problem. Accordingly, SMEs' shareholders try to decrease the total tax burden by making contracts with their own companies. Credit contracts are only one possibility to avoid "double taxation" on both the company's and the shareholder's level.

In general, the tax liability on accumulated profits should be **as low as possible** in a states fiscal system. By reducing this rate, corporations are enabled to re-invest an increasing part of their profits. This would be a very useful instrument of enforcing corporations to an easier self-financing. But, as the shareholder-value discussion in the 1990s has shown, the lock-in effect may have negative implications for large corporations: In those companies management may be misguided by the lock-in effect and try to accumulate as much profit as possible. Therefore, capital stays in the corporations, obtaining a lower return on capital as would be possible by the shareholders themselves.

This downside of the lock-in effect is no problem for SMEs, though. Their most urgent need is to build up equity. It should therefore be rendered possible to accumulate as much profit as possible for SMEs. The corporation taxes in France and the United Kingdom show that this differentiation between SMEs and large corporations can easily be made by introducing **reduced tax rates for small- and medium-sized companies**. Starting rates of 0% (in France: only for newly created companies in the initial two years) are followed by a modest taxation (15% for SMEs in France, 19% in the United Kingdom). These tax concessions are granted to corporations until reaching certain profit- or turnover levels, so these corporations are able to amass the equity they need for the next years' growth.

Special emphasis should be put on the above-mentioned tax rate incentives for **newly created companies** and/or **innovative new companies** in France: Full and partial exemptions are granted to companies created prior to 31 December 2009. SMEs at least 50% of whose capital is owned by individuals are granted a complete corporate income tax exemption in the initial three years of the innovative activity, reduced to 50% in the following two years. Additionally, exemptions from various other taxes, e.g. business tax and social security contributions, are granted.

If a corporate income tax rate reduction seems impossible, a reduced total tax burden can be reached by abolishing additional taxes for SMEs, e.g. the social surcharge in Germany.

Reduced starting rates for corporate income taxation have a second positive effect: As has been shown, SMEs' shareholders may need profit distributions to finance their cost of living. If their corporations are taxed at a low rate, and they themselves pay a low individual income tax rate on the dividend received, the total tax burden stays so a low that it should be acceptable even for start-ups. For example the calculations for France and the United Kingdom

show that total tax rates of 0% or near 0% (France: 5% upwards) can be reached even in the distribution case.

Regarding payroll taxes, real estate taxes and social security contributions, it has been shown that increasing income tax rates reduce the effective burden. But, these taxes have to be paid even in years without profits. So only when the corporation pays no income taxes, there is no tax effect to lower the **burden of non-income taxes**. For SMEs with their often quite weak financial position, paying taxes in periods with losses can be difficult. Accordingly, **minimum taxes** –no matter if they have to be paid in general or only in periods after losses – should generally be avoided.

Table 21: Taxation of partnerships and sole proprietorships

	Austria	France	Germany	Poland	UK
<b>Partnership held by individual / Sole proprietorship</b>					
<b>➔ Aggregated income tax burden</b>					
<b>Tax on profits</b>	0% – 50%	8% – 53.64%	0% – 44.31%	19% – 40%	10% – 40%
<b>Special regulations</b>	Reduced tax rate on reinvested profits up to € 100,000; Lump-sum deduction of expenses for small enterprises	Partnerships can opt for corporate tax liability	.-	All taxpayers can opt for 19% flat-rate on business income; Small-scale businesses can opt for 3% – 17% (20%) flat-rate	.-
<b>Minimum tax</b>	On loss-carryforward above 75% of current income	.-	On loss-carryforward above € 1,000,000	.-	.-
<b>➔ Effective total burden of payroll taxes and social security contributions</b>					
	15.49% – 33.88%	36.34% – 75.85%	11.69% – 21%	10.43% – 20.27%; 11.40% – 16.27% (for flat-rate of 19%)	0% – 12.8%
<b>➔ Effective real estate tax burden</b>					
	Max. 0.01%	According to municipality	Average: 0.84% – 1.5%	Max. PLN 17.42 per m <sup>2</sup>	2.62% – 4.44%

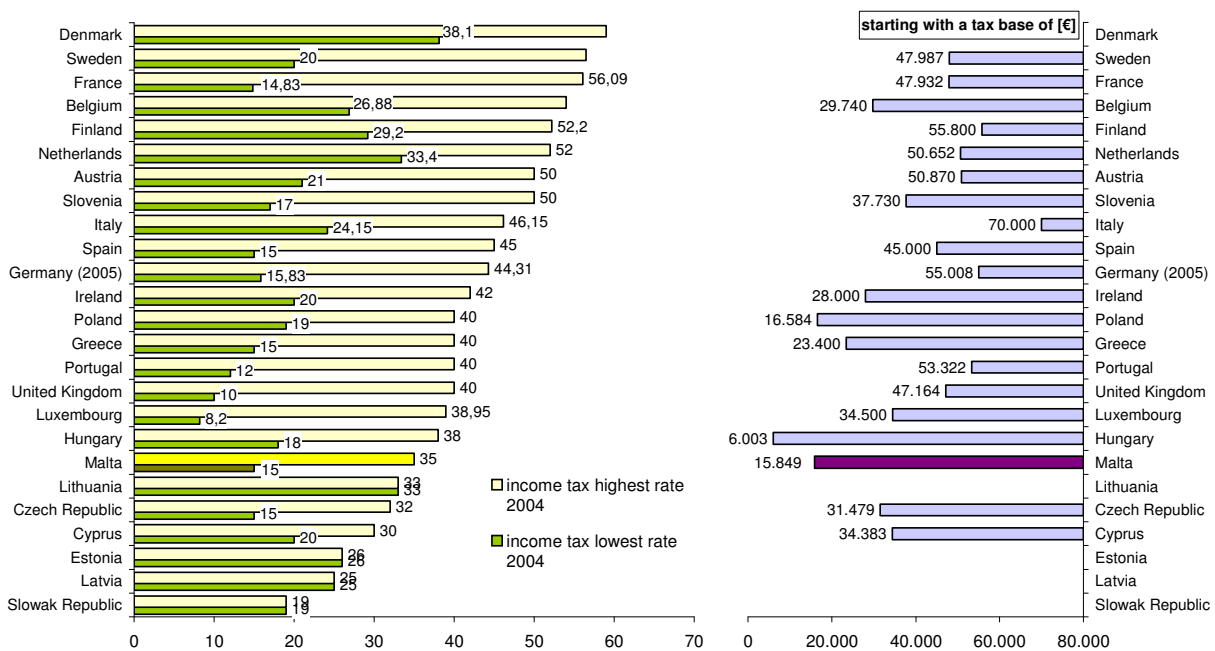
Source: Own production

**Note:** Areas with yellow background show main legal form for SMEs in the respective country.

As Fig. 38 shows, taxation of partnerships' profits regularly covers a broader range of effective tax rates. As taxation of individuals usually starts at or near 0%, SME-partnerships with comparably low profits per partner may have an effective tax burden much smaller than corporations of the same size. It is striking that just in those countries with a progressive corporate income tax rate (France, United Kingdom) partnerships are less important legal forms, whereas companies in countries with a flat-rate for corporate taxation mostly choose partnerships as the legal form of their corporation. As founding innovative SMEs is a risk-intensive undertaking, the creation of new companies may be simplified by a **more favourable taxation of risk-reducing SME-corporations**.

For comparing different countries' tax burden on partnerships, it is necessary to show at which rates income taxation starts and at which tax base it reaches the highest tax rate. For an overview over the EU-countries compare Fig. 38.

Fig. 38: Taxation of individuals



Source: Bundesfinanzministerium 2004

In order to decide which profit- or turnover-limits are adequate for the **definition of an SME corporation**, the country's income tax rates should be studied. Fig. 38 shows that a "high" income (or profit) for tax purposes can only be defined according to the environment of the taxpayer. In the same way, the definition of a small or medium sized corporation should be differentiated from country to country.

As the total burden of payroll taxes, social security contributions and real-estate taxes increases with decreasing income tax rates, the effective burden of those payments is heavier for

SMEs as for large partnerships, where partners pay maximum tax rates. A proposal could be the instalment of “**introductory rates**” for these taxes and contributions, so that employees are not less expensive for large companies than for smaller ones.

## 6.2.5 Treatment of Debt-financing

If equity-financing is not sufficient for covering an SME’s financial needs, debt-financing will be considered as the second instrument. As has been shown, two alternatives exist for debt-financing. Alternative 1: The shareholder has no private capital he could give to his company. In this case the loan has to be granted by a bank or any other credit institute. Alternative 2: The shareholder has private capital. In this case he will consider if financing his company by debt is less tax-expensive than applying new equity. In this chapter, the tax effects of both alternatives will be discussed. Again, we start with a view on the general system of taxing debts in Austria, France, Germany, Poland, and the United Kingdom.

As **sole proprietorships** have no legal identity, they cannot close contracts with credit institutes; this has to be done by the owner. Accordingly, there is no legal possibility for individuals to close a contract with their own sole proprietorship. Thus this legal form will not be discussed in this chapter.

### *Austria*

#### Case (1): Corporations held by individuals

In general, interest on loans and other debts paid by a corporation and economically connected with any type of taxable income at the receiver is deductible. Thus the **interest payment to a bank or other credit institute** reduces the corporate income tax of the corporation (25%).

**Interest payments to shareholders or parties related to shareholders** are subject to arm’s length standards. The test consists of two questions, one referring to the suitability of the debt-equity ratio (so called “thin capitalization”), and the other concerning the reasonability of the interest rate.

Although there are no specific **thin-capitalization rules** in Austria, the Administrative Court has established certain broad and rather liberal guidelines that are used to determine whether the equity for commercial tax purposes is adequate for the purpose of taxation. If the equity is inadequate, a portion of the indebtedness to shareholders may be regarded as the equivalent of shareholders’ equity. Interest paid on loans that are regarded as “disguised capital” will therefore be treated as hidden profit distribution. Usually, this rule applies only to foreign investors.

Interest charged at **excessively high rates** on loans granted by shareholders or affiliates may be deemed a “hidden profit distribution”. Such interest is then not deductible and is taxed as

distributed profit on both the level of the corporation and of the shareholder. As the Austrian tax system offers the possibility to deduct fictitious interest, there is no tax reason for individual shareholders to finance their corporations by debt. If an interest rate above the mentioned average rate on the secondary market, increased by 0.8 percentage points, is stipulated, the problem of discussing the justification of this rate with the tax authorities will occur. Usually, no advantage is gained by this procedure.

If the loan is contracted **according to the arm's length standards**, interest paid to the shareholder reduces the total tax burden from 25% to 43.75%. At the shareholder's level it is taxed with a withholding tax of 25%. For resident shareholders, the withholding tax constitutes only a prepayment of the individual income tax<sup>19</sup> and is credited against the final tax liability of 0% to 50%. Taking both levels together, there is a total tax burden of -43.75% to +25%. It has to be mentioned that expenses incurring at the shareholders level are not deductible for tax purposes.

#### Case (2): Partnerships held by individuals

As for corporations, interest on loans and other debts paid by a partnership **to a bank or other credit institute** reduces the tax basis calculated at the partnership level and accordingly the income tax of the shareholding individual. The tax reduction is related to the partner's income tax burden that may be between 0% and 50%.

**Interest payments to partners** are included in the tax base for income tax purposes. As in Austria, there is no difference in taxation of business income and investment income derived from a general or limited partnership, the total tax burden lies between 0% and 50%.

#### *France*

##### Case (1): Corporations held by individuals

In France, duly substantiated expenses incurred for the purpose of acquiring and preserving taxable income are deductible. Accordingly, **financial charges** are generally deductible. Certain limitations apply for interest paid to shareholders.

In order to **avoid thin capitalization**, the deduction of interest paid to shareholders, who manage a company "in law or in fact" or own more than 50% of its share capital or voting rights, is limited to interest on that amount of debt not exceeding 150% of equity. No deduction is allowed unless the capital is fully paid. The amount of debt to be taken into considera-

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<sup>19</sup> Types of interest that are subject to a final withholding tax include interest on deposits and other debt claims with certain banks, interest on certain securities, including convertible and profit-sharing bonds, income from participations in investment funds, and similar participations and interest on securities issued by international institutions after 30 September 1992.

tion is that collectively owned by all such shareholders. It has to mention that the French tax administration is actively considering tightening France's thin capitalization legislation.<sup>20</sup>

French-source interest is generally subject to income tax at the above-mentioned progressive rates. However, a **final levy** (prélèvement libératoire) at flat rates may apply. For residents, it is generally optional, except with respect to a few types of interest for which it is compulsory. Where the final levy applies, the deduction of incurred expenses is generally not allowed. The rates of the final levy vary considerably; however, 16% on interest on corporate bonds and loans normally apply. Residents must add social taxes, which are not deductible for shareholders charged with a reduced flat income tax rate. So the tax burden on the shareholders level in this case is  $16\% + 7.5\% + 0.5\% + 2\% = 26\%$ .

If interest received by the shareholder is taxed with **progressive income tax rates**, 7.5% CSG is deductible for income tax purposes by the amount of 5.1 percentage points. CRDS of 0.5% and the social levy of 2% are not deductible. Combining individual income tax and social taxes, the effective tax burden on the shareholder-creditor's level is between  $(0\% + 7.5\% + 0.5\% + 2\%) = 10\%$  and  $(48.09\% * (1 - 0.051) + 7.5\% + 0.5\% + 2\%) = 55.64\%$ . As compared to equity-financing, where taxes are due between 0% and 35.43% in the accumulation case and between 5% and 53.64% in the distribution case, debt-financing a corporation can generally have a tax-reducing effect only when opting for the 16% flat rate. It has to be mentioned that taxpayers opting for flat-rate taxation are not allowed to deduct expenses incurred.

#### Case (2): Partnerships held by individuals<sup>21</sup>

As it is not possible to opt for the final levy of 16% on interest received by a transparent partnership, the financing partner can choose between 8% – 53.64% income tax on business income or 10% – 55.64% income tax on investment income. As social levy of 2% applies to investment income only, equity-financing a partnership is generally better than debt-financing. For tax planning purposes, partners have the possibility to opt for corporate income tax liability (see discussion above).

### Germany

#### Case (1): Corporations held by individuals

Interest paid **to a bank or other credit institute** is generally deductible as business expense for corporate income tax and business tax purposes. But, corrections of the corporate income tax base for business tax purposes are strongly influenced by the financial structure of the company. For instance, only 50% of interest payments on loans exceeding 12 months ("long-term loans") are deductible from the business tax base. This corrects all types of interest, even interest paid to a bank or other credit institute. Accordingly, interest payments are taxes with a

<sup>20</sup> See D'Hont, P., France: "Sweeping Tax Changes Affecting In/Outbound Investments", in: *TPI Review*, October 2004.

<sup>21</sup> The following discussion concentrates on general partnerships that have not opted for corporate tax liability.



business tax of 8.33% and accordingly do not reduce the corporation's total tax burden by the above-calculated 38.65% on accumulated profits or 38.65% – 52.24% on distributed profits. The calculation has to be

$$\begin{aligned} & \text{total tax burden avoided by interest payment} \\ & = r_{\text{cit}} * (b_{\text{cit}} - \text{bt}/2) * (1 + r_{\text{ss}}) + \text{bt}/2 \\ & + [1 - r_{\text{cit}} * (b_{\text{cit}} - \text{bt}/2) * (1 + r_{\text{ss}}) - \text{bt}/2] * 0.5 * r_{\text{it}} * (1 + r_{\text{ss}}). \end{aligned}$$

The total tax burden avoided by €1 interest payment is €0.3251 (32.51%) on accumulated profits and €0.3251 – €0.4746 (32.51% – 47.46%) on distributed profits.

In Germany, an **interest withholding tax** is imposed only on interest from convertible bonds, profit-sharing bonds, participation loans and participation of silent partners, as well as on interest paid by banks and on certain bonds to residents. So neither on interest paid by a corporation to a bank or other credit institute, nor on interest paid to shareholders a withholding tax is levied.

Interest paid on long-term loans by corporations to their shareholders holding a substantial interest is treated as a hidden profit distribution if the interest is paid on **excessive debt financing**. A substantial interest exists if a shareholder directly or indirectly owns more than 25% of the nominal capital of the company. However, the interest is generally treated as a hidden profit distribution only if the interest payments to the same shareholder exceed €250,000 per year. Small companies may not pay interest above this amount, but medium-sized companies in the hand of only a few shareholders may have problems with the anti-avoidance regulations.

Debts are deemed to be excessive if they exceed the prescribed debt-equity ratios (**thin capitalization**). The debt-equity ratios depend on the nature of the debt financing. A distinction is made between two kinds of debt:

- For debt on which fixed interest is paid, a debt-equity ratio (safe haven) of 1.5 : 1 is accepted. Interest on excessive debt is not deductible and is treated as a hidden profit distribution, unless the third-party test is met. For this test, the taxpayer must demonstrate that an unrelated person would also have granted the loan. Fixed interest is interest calculated as a percentage of the principal, which is not dependent on the debtor's profit or turnover; and
- Variable interest is not deductible. This type of interest includes payments on profit-participating loans, participations or contributions by silent partners and other liabilities, the interest of which is not calculated exclusively as a percentage of the principal. The tax authorities include fixed interest-bearing liabilities in the

variable interest category if the loan contract stipulates that interest need not be paid in a loss situation.

From tax year 2004, interest treated as non-deductible for corporate income tax under the thin-capitalization rules is no longer deductible for business tax purposes. So interest treated as a **hidden profit distribution** carries a **total tax burden** of 38.65% – 52.24%, which is equal in the case of equity-financing and profit distribution.

If interest is paid to a shareholder on the arm's length principle, the individual holding the shares as private assets has to pay income tax plus solidarity surcharge between 0% and 44.31%. The corporation additionally has to pay 8.33% business tax, leading to a **total tax burden** of 8.33% to 52.64%. Thus a shareholder in the top proportional part of the income tax rate is – **according to the safe haven** – not able to lower the total tax burden by financing the corporation by debt. Assuming that SMEs' shareholders are levied with a lower income tax rate, there might be a tax reducing effect, at least if the profits would have been accumulated otherwise.

#### Case (2): Partnerships held by individuals

In Germany, interest paid by a partnership **to its partner** is treated as business income at the partner's level for income tax and for business tax purposes. So there is no tax effect in debt-financing the own partnership. Partnerships paying interest **to a bank or other credit institute** are taxed with a business tax on half the interest paid. So €1 interest paid leads to a business tax burden of 0% – 8.33% at the company's level. As the partner is granted an income tax credit, the aggregated effective tax burden for both levels is near or equal to zero.

#### *Poland*

#### Case (1): Corporations held by individuals

Expenses incurred for the purpose of obtaining taxable income are deductible, unless otherwise provided by law. **Interest payments to a bank or other credit institute** thus reduce the corporate income tax of the corporation. Receipts and expenses are also generally treated as income once they become due and payable; a cash accounting method applies to interest.

**Interest paid on a loan granted by a resident shareholder** is deductible, provided that the shareholder does not benefit from income tax incentives or exemptions.<sup>22</sup> Interest paid to a non-resident shareholder owning at least 25% of the share capital or by a group of non-resident shareholders owning in aggregate at least 25% of the share capital, is not deductible

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<sup>22</sup> A final withholding tax of 19 % is levied only on those interests derived from bank accounts, on securities issued by the state and on bonds issued by local authorities, as well as income from participations in investment funds and from withdrawal of such funds.

if a debt-equity ratio of 3:1 is exceeded. For resident shareholders, there are no specific **thin-capitalization rules** or penalties for excessively high interest rates.

Interest paid to resident individual shareholders reduces the total tax burden from 19% (for accumulated profits on the corporation's level) to 34.39% (for distributed profits on both the corporation's and the shareholder's level). At the shareholder's level the interest is taxed with the normal marginal income tax rate of 19% to 40%. In so far as the taxation of corporate profits is lower than the income tax on individuals' interest income, there is no tax advantage for debt-financing in Poland. So at least for shareholders that reach the marginal income tax rate of 40%, equity-financing is the favourable alternative.

#### Case (2): Partnerships held by individuals

Only receipts derived as a result of business operations are treated as business income. Although the receipts are generally treated as income on the date they become due and payable, in the case of interest a cash basis is applied. As income tax is levied on the aggregate net income from all categories, there are usually no differences in taxation of business or investment income. But if the taxpayer opts for the 19% flat-rate taxation of business income or for the taxation of small-scale businesses mentioned above, this makes equity-financing of partnerships more favourable than debt-financing.

#### *United Kingdom*

#### Case (1): Corporations held by individuals

In order to arrive at the taxable trading profits, expenses are deductible, provided that they are revenue in nature and that they are wholly and exclusively laid out or expended for the purposes of the trade. In general, interest is treated as trading expenditure where it is paid in respect of a loan taken up for trading purposes. Otherwise, a net deficit of interest receipts and payments is deductible as a non-trading item from the total profits of the company. The corporation has to withhold a 20% tax on the annual payment of interest. This tax is offset against the amount of tax owed at the creditor's level.

**Excess interest payments from thinly capitalized resident companies** may be treated as dividend payments. Only the excess of what would have been paid between unconnected parties dealing at arm's length, making allowances for the debt-equity ratio, rate of interest and other terms that would have been agreed between unconnected parties is treated as dividend. There is no fixed debt-equity ratio, but a ratio of 1:1 is normally accepted. It has to be mentioned that this rule applies only to corporations held by a shareholder with at least 75% of the total shares or to loans between "sister companies" that are owned by the same person with at least 75%.

As far as the loan is contracted **according to arm's length standards**, each € interest paid reduces the corporation tax in the case of profit accumulation between zero and 30 Cent. In

the case of profit distribution, interest reduces the effective tax of 0% to 47.5%. As the individual shareholder pays 10%, 22% or 40% income tax on the interest received,<sup>23</sup> in the majority of cases financing the corporation by equity and accumulating the profits will be the tax optimal solution, followed by debt-financing it. The largest amount of tax will be paid if profits are distributed as dividend.

#### Case (2): Partnerships held by individuals

The general condition for the deduction of expenses is that they have been incurred wholly and exclusively for the purposes of the business or profession. There are restrictions on the deductibility of certain types of expenses. These include expenses of a capital nature. As there is no general difference in the taxation of interest or business income, specifying payments of partnerships is not as important in the United Kingdom as it may be in other countries.

### **6.2.6 Summary: Treatment of Debt-financing in the Selected Countries**

In the following figure, the tax consequences of financing a corporation by debt are aggregated. As has been shown, debt-financing usually leads to a decrease in corporate income tax, but to an increase in tax at the creditor's level. If the creditor equals the shareholder, the shareholder's level has to be included in the aggregation. The tax effect of interest payments to credit institutes is thus calculated as the avoided tax on accumulated profits. The tax effect on interest payments to shareholders is the sum of (negative) avoided tax on distributed profits and (positive) tax on the interest received at the shareholder's level.

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<sup>23</sup> The reduced basis rate of 20 % applies only to capital gains and to income from savings sources, i.e. bank and building society interest, government securities, National Savings first option bonds, authorized unit trust and personal equity plan loans and deposits, and to the income of a purchased life annuity.

Table 22: Debt-financing corporations

	Austria	France	Germany	Poland	UK
<b>Corporation held by individual</b>					
<b>➔ Tax effect of interest payment according to arm's length standard</b>					
<b>To credit institute*</b>	(25%)	(35.43%) – 0%	(32.51%)	(19%)	(30%) – 0%
<b>To shareholder**</b>	(43.75%) – 25%	(35.43%) – 26%; flat rate: (27.65%) – 21%	(39.31%) – 20.13%	(15.39%) – 5.61%	(37.5%) – 40%
<b>➔ Thin capitalization rules</b>					
	Re-qualification in case of inadequate equity or excessively high rates	Debt : equity = 1,5 : 1;	Debt : equity = 1,5 : 1; No re-qualification, if interest does not exceed € 250,000	No thin capitalization rules, provided shareholder does not benefit from tax incentives	Debt-equity ratio of 1 : 1 usually accepted

Source: Own production

**Note:** Red values in brackets are negative.  
Areas with yellow background show main legal form for SMEs in the respective country.  
\* = Compared with profit accumulation.  
\*\* = Compared with profit distribution.

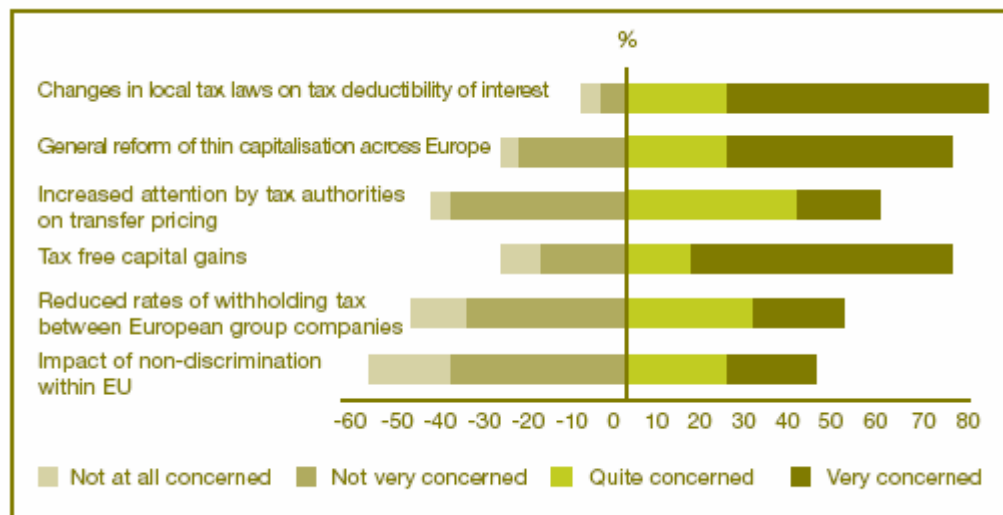
It is shown that debt-financing a company can generally reduce the total tax burden. For **loans granted by credit institutes**, the combination of leverage effect and tax shield makes debt-financing an easy way for reducing taxation at corporate level.

If shareholders can grant the company loan themselves, the possibility to **finance their corporation by own credit** can be tax reducing, depending on the tax rate the shareholder has to

pay on interest received. Especially for SMEs with shareholders not reaching the top rates of progressive income taxation, debt-financing can be an instrument for reducing the tax burden.

Extra attention has to be paid to **thin-capitalisation rules** in the surveyed countries, as the key factor of local tax systems impacting on private equity investment is the deductibility of interest including thin capitalisation rules (see Fig. 39). When tax authorities tighten the thin capitalisation measure for entities, they are challenging the company's ability to deduct interest which is deemed to be above an arm's length rate or above an amount that would be lent by a third party. The company's tax charge is increased as it is no longer able to benefit from leverage effect and tax shield. This effect is the stronger the wider the spread between the tax effects of equity-financing and debt-financing is.

Fig. 39: Key tax factors impacting on private equity investment



Source: PwC 2004b

Accordingly, thin-capitalisation rules should be totally abolished, at least as far as the interest is not subject to a tax reduction or exemption at the creditor's level. The shareholder's **freedom of financing** his own corporation should be more important than the country's fiscal dignity. An often mentioned reason for thin-cap-rules is the need of states to avoid tax base spill-over to foreign countries. As the European Court of Justice has judged in 2002 ("Lankhorst-Hohorst" verdict), European Member States are **not allowed to discriminate shareholders** (or creditors) from other Member States, compared to taxation of domestic shareholders (or creditors). Therefore, all thin-cap-rules in European Member States, whether of national or general, should be abolished and – if needed – substituted by an adequate regulation for offshore-transactions.

Table 23: Debt-financing partnerships

	Austria	France	Germany	Poland	UK
<b>Partnership held by individual</b>					
<b>➔ Tax effect of interest payment</b>					
<b>To credit institute</b>	(50%) – 0%	(53.64%) – (8%)	(44.31%) – 0%	(40%) – (19%)	(40%) – (10%)
<b>To partner</b>	0%	2%	ca. 0%	0%; (21%) (for flat-rate of 19%)	0%

Source: Own production

**Note:** Red values in brackets are negative.  
Areas with yellow background show main legal form for SMEs in the respective country.

As partnerships in the considered countries are transparent for tax purposes, in most cases no tax reduction can be achieved by their partners financing them by loans. Only **debt-financing by credit institutes** reduces the total tax burden (via leverage effect and tax shield). Other than Austria, France, Germany, and the United Kingdom, only Poland provides the possibility of tax-reduction as it offers a 19% flat-rate on all business income independent of the legal form. For Germany it has to be said, that the 50% interest correction of the business tax base is an additional charge for those companies and shareholders that are not able to finance the business themselves. Instead of correcting part of the above-mentioned business tax, German fiscal authorities should think about abolishing this tax.

### 6.3 Taxation of Venture Capital Companies

For venture capital companies, each investment in SMEs is a decision driven by risk and return. The two most important tax questions for venture capital companies thus are

- How are losses treated for tax purposes? and
- What tax effects occur on profits?

In general, a venture capital company will invest in risk-limited partnerships (as the German “GmbH & Co. KG”) or in corporations (where liability is limited to the corporation’s assets). Losses occurring at the transparent partnership’s level may be used for tax reduction at the venture capital company’s level, if the national tax system allows this. Losses incurred by a corporation the venture capital company has invested in, usually cannot be used for the venture capital company’s tax purposes, as corporations are mainly intransparent. But, some tax systems allow an **extraordinary depreciation** on shares with a reduced going-concern value.

#### *Extraordinary depreciation on value-reduced shares*

##### **Austria**

Financial assets (i.e. participations) may be written down to a lower going-concern value (extraordinary depreciation) even if the reduction of value is not expected to be permanent. The value of financial assets that were written down in a previous year have to be adjusted if the reason for the depreciation no longer exists.

##### **France**

Provisions may be made to cover the decrease in value of assets which may not be depreciated (e.g. portfolio shares) on the condition that such a decrease in value is reversible.

##### **Germany**

Extraordinary depreciation on shares is corrected for tax purposes.

##### **Poland**

No extraordinary depreciation on shares exists.

##### **Recommendation**

A general advice on how far to allow extraordinary depreciation on shares held by venture capital companies cannot be given. Generally, it should fit into the tax system applied in the country, e.g. Germany, where losses can not be deducted and losses and value are treated equally. It is more important how losses realised by the disposal of shares are treated at the venture capital company’s level.

#### *Capital losses*

If the venture capital company sells its shares of the loss-producing corporation, a loss may occur as the historical cost may exceed the selling price. This is a typical risk for venture capital companies, that keep a balance between the high return and high risk of innovative SMEs.



## **Austria**

Capital losses are treated in the same way as ordinary losses.

## **France**

Capital losses are generally deemed to be and treated as ordinary losses.

## **Germany**

Capital losses from the alienation of shares in other resident or non-resident companies or from the liquidation or capital reduction of such companies may not be offset.

## **Poland:**

Capital losses in fixed business assets are deductible from ordinary business income.

## **United Kingdom**

There are no extra regulations for the tax treatment of capital losses from investment in shares.

## **Recommendation**

Generally, venture capital companies favour the possibility to deduct the realised risks (capital losses) from their ordinary income (profit). But, according to the tax system, in some countries capital losses are not deductible – e.g. in Germany, where the equivalent capital gains are basically tax-exempt. For venture capital purposes, allowing an election between capital losses being treated as ordinary losses and accordingly capital gains being taxed, or capital losses and capital gains being irrelevant for tax purposes could be considered. Special attention has to be given to fit such an extra regulation into the national tax system.

### *Capital gains*

## **Austria**

In general, gains derived from the sale or other disposition of business property are taxed as business income of a company at normal rates.

## **France**

Capital gains are generally deemed to be ordinary income and are, therefore, taxed at the standard corporate tax rate (plus surcharges). However, a reduced rate (19% + 3% surcharge = 19.57%) applies to gains on participation shares, i.e. shares qualifying for the participation

exemption. A participation exemption is available for parent companies regarding dividends received from their subsidiaries. These gains are referred to as long-term capital gains. When the reduced rate applies, the after-tax gain must be booked to a long-term capital gains reserve. Distribution of the reserve results in the imposition of corporate tax at the normal rate but a credit is given for tax already paid at a reduced rate.

## Germany

Capital gains are generally included in taxable income. But capital gains from the sale of shares are, in principle, fully exempt from corporate income tax and business tax. However, a lump sum of 5% of the gains is then added to taxable income representing non-deductible business expenses. The exemption is not granted to the extent that the holding has previously been written down to its lower going-concern value and has not subsequently been revalued upwards.

## Poland

There is no separate capital gains tax, but gains derived in a tax year are added to the taxpayer's total ordinary income.

## United Kingdom

There are no extra regulations for the tax treatment of capital gains out of investment in shares.

## Recommendation

Venture capital experts emphasise the importance of a reduced or zero-taxation of capital gains. Some tax systems include this feature, e.g. the German one. If the national tax system provides taxation of capital gains, it should accordingly provide tax deductibility for capital losses (e.g. Austria, Poland, the United Kingdom). A tax incentive for venture capital companies is common practice in France: Capital losses are generally treated as ordinary losses, but capital gains are subject to a reduced corporate tax rate. As the after-tax gain must be booked to a long-term capital gains reserve, distribution of which results in the imposition of corporate tax at the normal rate, a misuse seems generally avoided. As venture capital companies usually re-invest their capital gains, the French regulation could be made a European standard. Regulations as in Germany obstruct venture capital companies' activity, as 5% of capital gains have to be taxed at normal rates, but 0% of capital losses are deductible for tax purposes.

An additional regulation for venture capital companies might be the introduction of a general **rollover relief**. As the considered countries do not have special regulations for rollover relief in venture capital companies, no recommendations can be deducted. But the above-mentioned

French system of reduced taxation of capital gains combined with booking a capital gains reserve, equals the effect of a partial rollover relief for the capital gains.

Last but not least it should be stated that naturally any possibility of reduced taxation, as mentioned for SMEs, can be transferred on venture capital companies. Therefore, the British reliefs known as the enterprise investment scheme (EIS) and the venture capital trust (VCT) as described above, may be steps in that direction.

## 7 Considerations to Enhance the Access of SMEs to Financial Resources

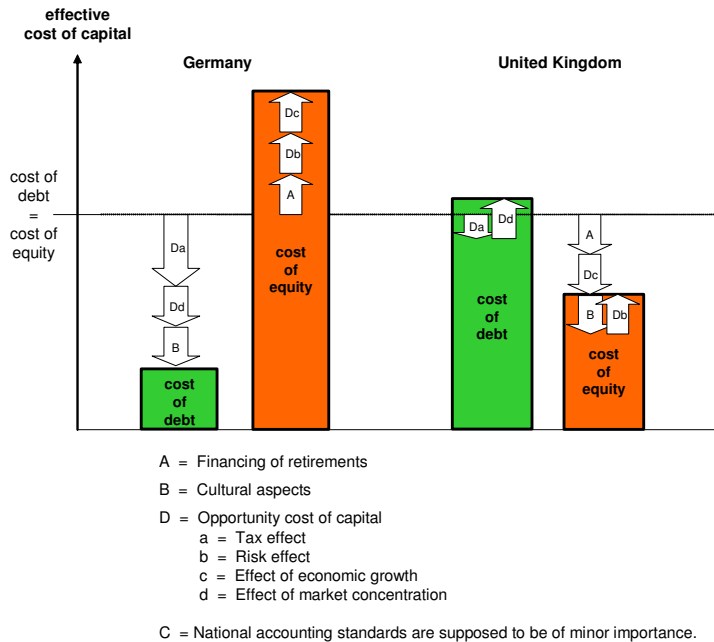
(1) The study has shown that the **access to financial resources** for SMEs in all countries selected is still perceived as a problem. Two main reasons for that have been identified. First, the capital structure of SMEs in the selected countries (with a certain difference in the UK) shows a weak share of equity.

The **weakness of the equity share** in continental European SMEs is a result of the four effects described in chapter 4.4. The effects are (A) the financing of retirements, (B) cultural aspects, (C) the national accounting standards to the equity share, and (D) the opportunity cost of capital.

The differences among the **accounting standards** (C) only have a minor impact on the comparison of the true equity shares and prices in the various countries. That is different for the influence of **retirement financing** (A) and **cultural effects** (B). In particular, in bank system driven countries like Austria and Germany, the cultural effect leads to low acceptance of private equity. SMEs in bank system driven countries are quite reluctant to allow private equity companies access to managerial decisions. This psychological aspect is an additional barrier for equity providers. Both effects promote, as shown in chapter 4.4., debt-financing in continental Europe and equity financing in the UK.

Finally, the **opportunity cost of capital** (D) has a strong influence on financing decisions of SMEs. The following chart shows the impact of all effects on the difference between cost of equity and debt financing.

Fig. 40: Effects influencing the price for equity and debt financing



Source: Own production

As has been shown in chapter 5, the variety in tax systems between the UK and continental Europe leads to differences in debt-financing cost (D). The **tax scheme** in the UK little promotes debt-financing compared to equity in contrast to continental European tax schemes. Detailed recommendations concerning the tax systems are given in paragraphs (2) to (8).

For effect (A), the **financing of retirements**, economic circumstances will lead to a solution without political corrective: As the continental European retirement system, which is based on the pay as you go pension system, will not be able to finance retirement cost in reduced populations of the future, a more capital market oriented system will emerge. Pension funds as seen in the UK will get more relevance in the continental EU countries, leading more capital to the investment market. Politics should provide a sufficient legal framework for this development.

Effect (B), the **cultural aspect**, may be influenced by a EU and/or national promotion: Suggesting to SMEs that allowing external equity investments in their business can lead to a change of perspective in family-owned companies. This effect will be enhanced by the change of generations in post-war companies to the younger, more open-minded “Erbengeneration”.

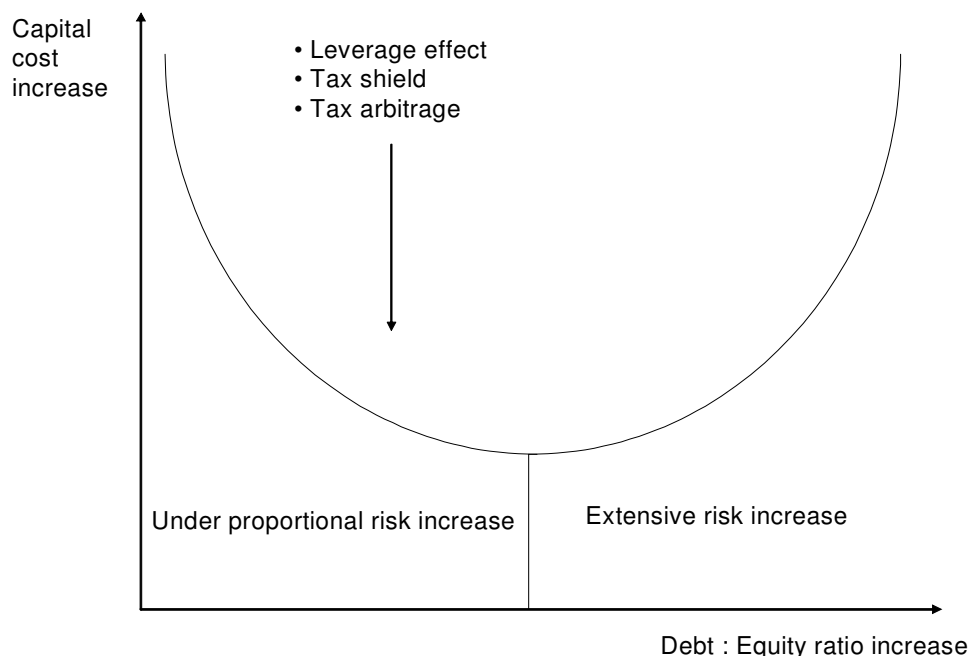
Effect (C), **differing national accounting standards**, has started to decline with the introduction of IAS/IFRS for capital market oriented corporations from 1 January 2005. The process

should be accelerated by enforcing international standards for smaller and non-capital market oriented companies, too. The moment this development reaches SMEs, the negative aspects of taxation will decline.

One additional aspect has to be mentioned: The low equity ratios for continental European countries (only partly for France) are still a burden for the **economic growth** of SMEs. To keep the financial system in Europe stable, all banks have to reduce the share of credits in their total portfolio. The banking crisis in Germany initiated by the collapse of the market in 2001, shows that a large credit portfolio in a recession is a factor to destabilise the financial system.

(2) The second main hindrance to SMEs' access to financial resources, esp. to private equity, is the **tax system** (Da). As has been shown in our study, tax schemes in the selected countries show a certain variety. Most countries allow tax reductions only for debt financing of companies. Accordingly there is a tax discrimination of equity financing schemes. As an increase in companies' debt-equity-ratio can be observed, most of the selected countries tighten their thin capitalisation rules. Only Austria treats equity financing differently to the other countries as discussed above. This privilege of debt financing, resulting in low debt to equity ratios, can be seen in the following figure.

Fig. 41: Impact of various debt to equity ratios on cost of capital



Source: Own production

Increasing debt-equity-ratios for a company with very low rates results in decreasing cost of capital, as leverage and tax effects can be made use of. Simultaneously, the cost of capital increases, as increasing loans have to be guaranteed and creditors accept higher risk only on higher interest rates. At a certain point, the cost-increasing effect of rising risk exceed cost-decreasing effects of leverage and tax, and total capital cost increase.

(3) The **tax recommendations** have to be made separately for the different subjects to tax. In general three different kinds of subjects can be differentiated:

1. Taxation of equity financed SMEs;
2. Taxation of debt financed SMEs;
3. Taxation of venture capital firms.

(4) For the taxation of **equity financed SMEs** the following recommendation for corporate SMEs and partnerships/sole proprietorships should be considered.

- In general, the **total tax burden should be decreased** as much as possible. Not paying tax on small start-up profits enables newly created companies to build up urgently needed capital on their own.
- Accordingly, tax rates should be reduced for corporations with small profits and/or low turnovers, as given e.g. in the French and United Kingdom's corporate income tax. By – additionally or alternatively – introducing an age limit, the focus can be set on young companies. The **starting tax rate for SMEs** should be half of the standard rate or lower, so that the tax difference to partnerships decreases. Alternatively, an electoral law could be introduced, giving the shareholders the possibility to be taxed like partners of a partnership for a fixed period of time.
- As has been shown, equity-financed corporations suffer higher taxes as they are not allowed to **reduce their profits by a fictive interest rate** as “return on equity”. So, from their point of view, debt-financing is regularly “tax-reducing” when compared to equity financing, so that corporations are misled to obtain as much of their capital as possible in the way of debt. This behaviour is avoided by allowing taxpayers in Austria to elect the deduction of fictitious interest for additional equity capital. A similar but more complicated regulation was applicable in Italy some years ago.

- **Loss carry-forward** should be allowed indefinitely, as it is in the United Kingdom. Restrictions make a corporations future business difficult, because it may have to pay taxes on profits without being in the black overall. By the same token, **minimum taxation** (Austria, Germany, and Poland) should be abolished or at least restricted to large companies.
- Additionally, tax systems should include at least one or two years of **loss carry-back**. Getting back taxes that have been paid in previous years when losses incur will function as additional liquidity and equity and will help companies get out of the red faster.
- Promising incentives for young entrepreneurs are given by British regulations: They are allowed to set off **losses of the first four assessment years** of trading against income of the three assessment years preceding trading. Additionally, **pre-trading expenditure** incurred in the seven years before commencement of trading is deductible on the commencement of trading.
- When partnerships' and sole proprietorships' profits increase, progressive income tax rate increase, too. Above a certain profit per partner the tax is higher than the corporate income tax would be. To avoid this effect and the ensuing need to change the legal form of the organisation, an **electoral law for taxation as a (fictive) corporation** could be introduced. So partnerships can get the tax incentives of profit accumulating corporations (lock-in effect) without carrying additional cost for the change of legal form (see e.g. France).
- If companies are given the possibility to contribute profits to a **provision for future investments**, they are stimulated to re-invest the money they earned. Given at least for the first periods of new SMEs, this possibility will enable them to build up equity faster.

(5) As has been mentioned, a positive tax effect for debt-financed companies is the deduction of interest paid. This imbalance should be avoided by allowing companies to deduct fictive interest on their equity. Any **thin-capitalisation rules should be abolished** or replaced by offshore-rules, not affecting company structures in EU Member States. If abolishment seems not possible, they should at least be supplemented by SME rules (like e.g. in Germany, but with higher amounts).

(6) Taxation of venture capital companies may be revised for capital market purposes:

- If the tax system does not disagree, extraordinary depreciation and the **deduction of capital losses** should be allowed for venture capital companies' tax purposes. This applies at least to tax rules in countries that impute taxes on capital gains, e.g. Austria and Poland.
- Capital gains of venture capital companies should be treated under a **special tax scheme** with reduced rates, as it is imputed in the United Kingdom. Additionally, a **rollover relief** for those companies' capital gains should be provided.

(7) It should be clear from the facts presented above, that it is absolutely paramount to enhance the equity share of SMEs. The stability of the SME itself as well as the stability of the financial system will be enhanced by higher equity shares of SMEs. It therefore justifies a requirement for political decision makers to enhance the incentives for SMEs in order to increase their equity financing. This can be provided by the tools discussed above. However, we see a particular urgency in the changes in the tax regulations. Here political decision makers can have a strong impact on the effectiveness of the tax system. Furthermore, changes in the tax system have a strong impact on short-term decisions made by SMEs. An adjustment of the tax system is therefore the most promising approach to realise a change in the financing of SMEs.

(8) However, it should also be clear from the argument above, that even the UK does not provide any solution to early stage equity investments. Equity for early stage companies is not available through market mechanisms. We accordingly recommend thinking about state governed tools to enhance the availability of equity capital to early stage SMEs. Attempts as started by the Austrian Wirtschaftsservicegesellschaft (AWS), the Kreditanstalt für Wiederaufbau (KfW) and the British DTI are sustainable blue prints for activities provided by other governmental organisations. We imagine that even on a European level the introduction of funds focusing on equity investments in early stage SMEs could make sense. Furthermore, the idea to combine technology funding with the access to equity capital seems to be promising. The obligation of a stronger focus on exploitability of project results by the European Commission is quite successful. A similar obligation linked to the projects by requesting certain financial structures might be promising too. We however warn to believe in one perfect way of enhancing the access of early stage SMEs to financing. A mix of various European and national approaches is definitely most promising.



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