B 3 CONDITIONS FOR GROWTH AND CONSTRAINTS ON GROWTH FOR START-UP BUSINESSES

Business start-ups significantly contribute to increasing a country's productivity and economic growth. New enterprises often develop and implement innovative products, processes and business models, and this is particularly the case with newly established enterprises in the field of high technology and knowledge-intensive services.[204] Thus business start-ups secure the creation of jobs in Germany through value added that is locally bound. In addition, they also significantly contribute to the process of structural change.[205] Existing companies are forced to increase their productivity and to further develop their products in order to be able to assert themselves against up-and-coming competitors.[206] Against this background, it should be a priority goal for policy-makers to create framework conditions that are business-friendly. In the following, the current situation of entrepreneurs and young businesses shall be presented, while existing difficulties will be highlighted and recommendations for action will be derived from these.

B 3–1 BUSINESS START-UPS – MOTIVES AND PROSPECTS FOR SUCCESS

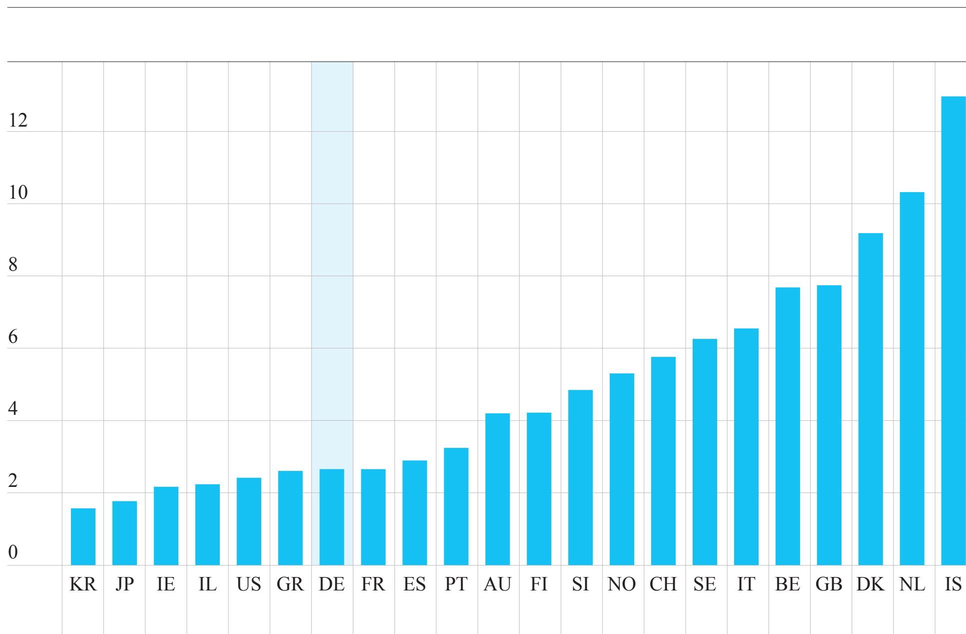
Motives for starting up a business; scarcity of entrepreneurs in the knowledge economy

There are several different motives for starting up a new enterprise. One of the typical motives is the prospect of exploiting a market opportunity. But also the lack of alternative employment options can be the decisive factor for venturing into self-employment. Compared with other countries, Germany displays a relatively low number of business start-ups that are directed at exploiting a market opportunity. Thus, for each new enterprise that has been established for a lack of alternative employment options there are only 2.6 new enterprises that aim to exploit a market opportunity (cf. Figure 11). Measured on an international scale, this is a relatively low value. This is a cause for concern because Germany's overall start-up rate (in proportion to the number of companies) is 4.2[207] and thus very low in international comparison.[208] Great Britain does not only have a higher start-up rate (6.5 percent)[209]; for each new enterprise that has been established for a lack of alternative income sources, Great Britain records 7.8 new enterprises that seek to exploit a market opportunity. Denmark records 9.2 new enterprises that seek to exploit a market opportunity, the Netherlands 10.3, and Iceland 13.0. Some of the countries that have a lower start-up rate than Germany still display a much more balanced proportion of start-ups that seek to exploit a market opportunity and start-ups that are pursued due to a lack of alternative income sources (e.g. Italy, Belgium, and Denmark).

What is more, only a small proportion of business start-ups in Germany are to be found in the field of the knowledge economy.[210] Out of seven new enterprises established in 2010 only one was established in a knowledge-driven business sector.[211] More than half of new enterprises are established in consumer-oriented services and in the trade sector; a further third is to be found in other business-oriented services, as well as construction, transport, postal services, mining, other manufacturing industries, and the energy sector.[212] The number of new enterprises within Germany's knowledge economy decreased significantly in the course of the first half of the last decade (cf. Figure 12). In 2000, a total of 38,300 new enterprises were recorded, while the lowest value was reached in 2007, with 23,500 new enterprises. Since 2008, the number of business start-ups in the knowledge economy has increased, reaching 28,800 start-ups in 2010 – a value that is still far behind that of the figures recorded in 2000.

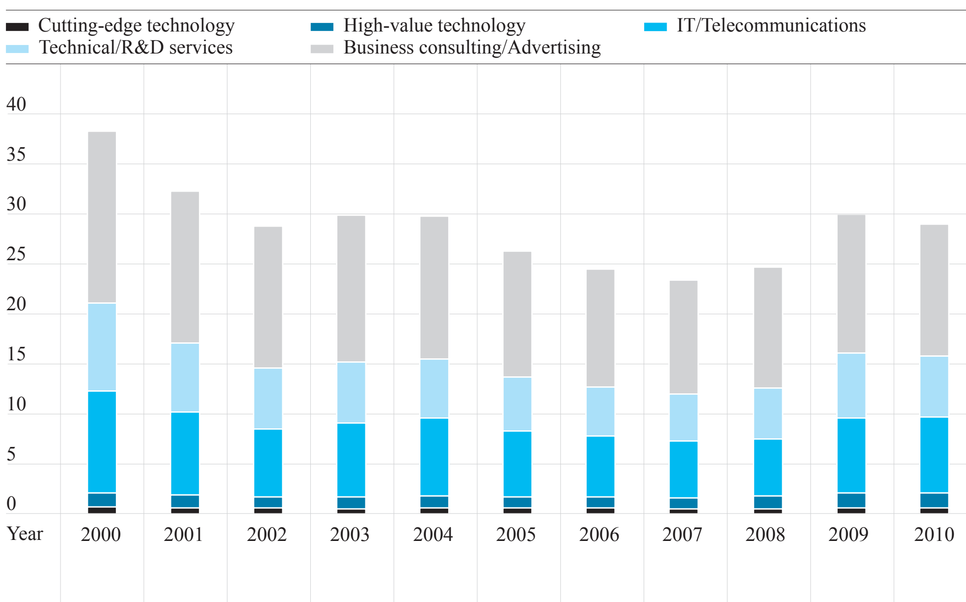
Compared with selected European countries, Germany's start-up rate in the knowledge economy (in proportion to the number of companies) occupies only an average position. Compared with leading economies, Germany is in fact lagging behind considerably. With a mere 5 percent in the field of high technology, Germany's start-up rate in high technology amounts to barely half the value of that of the Netherlands (10.2 percent). Also in the area of knowledge-intensive services, Germany would have to almost double its start-up rate of 9.7 percent if it were to reach the value recorded in the Netherlands (17.9 percent) (cf. Figure 13).

FIG 11 **Number of start-ups established to exploit a market opportunity per start-ups established for lack of alternative employment options**



Source: Global Entrepreneurship Monitor, Brixy et al. 2011.

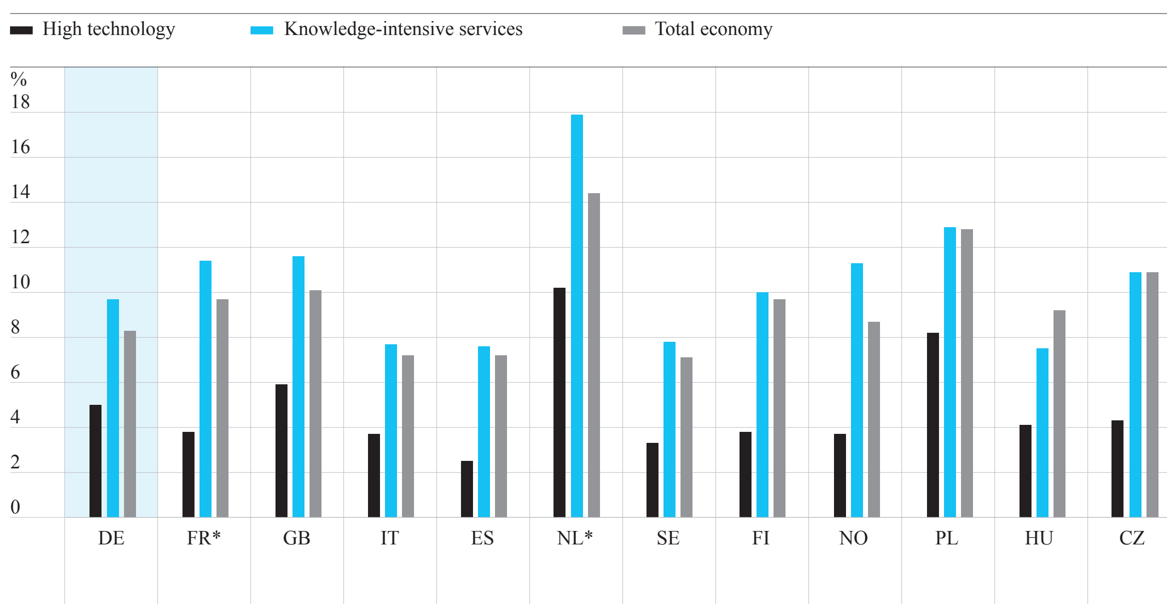
FIG 12 **Development in the number of business start-ups in the knowledge economy in Germany** (number of business start-ups in 1,000)



Source: Müller et al. 2012.

FIG 13

Start-up rates in 2009 in selected countries
(figures in percent)



Source: *Unternehmensdemographiestatistik,* Müller et al. 2012.
Number of business start-ups in percentage of total number of businesses, * 2008.

Public funding of business start-ups

The Federal Government offers three funding programmes for technology-oriented business start-ups: the *ERP-Startfonds*, EXIST, and the *High-Tech Gründerfonds* (cf. Box 11). These funding programmes are designed to close the funding gap that often occurs in the starting phase of new enterprises, which is a major issue for technology-oriented start-ups in particular. In addition to this, there are numerous funding programmes to be found in the individual federal states.

Start-ups that have been launched from a position of unemployment are supported via the *Gründungszuschuss*, a start-up grant that is financed by the Federal Employment Agency. The *Gründungszuschuss* was launched on 1 August 2006 as a replacement for the earlier funding instruments of *Überbrückungsgeld* and *Ich-AG*. Several surveys conducted on the *Gründungszuschuss* have reached a positive conclusion regarding the design and the impact of this start-up grant. The fact of legal entitlement, and the self-employment retention rates of 75 to 84 percent have been assessed positively. Moreover, it appears that abuse and undesirable windfall gains only play a marginal role in the *Gründungszuschuss* programme.[213]

On 23 September 2011, the German *Bundestag* adopted its legislative proposal on improving integration opportunities within the labour market.[214] On 24 November 2011, the Federal Council *(Bundesrat)* gave their consent.[215] The new law also affects the design of the *Gründungszuschuss*, which shall be transformed from a mandatory allowance into a discretionary allowance. This planned amendment is met with skepticism among many labour market economists. It is feared that in the future it will not be factual considerations but rather budgetary considerations that will decide on the granting of allowances. Furthermore, it is feared that the time required for the assessment of an application is going to increase significantly, and that the transformation of the *Gründungszuschuss* into a discretionary allowance could result in increased windfall gains. This would be the case if funding were allocated to start-ups that are destined for success and would have been launched with or without public funding.[216]

The Expert Commission shares the above concerns and would like to stress that the revision of the law would have a negative impact on Germany's start-up culture and that it might decrease the motivation of unemployed persons to show entrepreneurial initiative. If it becomes more difficult to obtain support for a start-up venture, fewer start-ups will

BOX 11

Federal funding programmes for technology-oriented start-ups

ERP-Startfonds[217]
The *ERP-Startfonds* is designed for companies in the field of research and innovation that are no older than ten years at the time the application is submitted. Within the framework of the ERP funding programme, the KfW banking group takes a share in small innovative technology start-ups from the business sector. This is done under the condition that a lead investor co-finances the company with at least an equal amount. A financial holding company, a natural or a legal person may serve as the lead investor. The investment ceiling is EUR 5 million per company, with a maximum amount of EUR 2.5 million per twelve-month period. The programme allows for several funding rounds.

EXIST
The EXIST programme is part of the Federal Government's "High-Tech Strategy for Germany" and is co-financed by the European Social Fund (ESF). EXIST aims to improve the entrepreneurial environment at universities and non-university research institutions and to increase the number of technology-oriented and knowledge-based business start-ups. To achieve this, EXIST supports higher education institutions in developing and implementing strategies for the promotion of an entrepreneurial culture and entrepreneurial thinking. In addition to this, the EXIST start-up grants support innovative technology-oriented and knowledge-based start-up projects. EXIST also promotes development activities that are necessary for proving the technical feasibility of research-based start-up ideas.

High-Tech Gründerfonds
The *High-Tech Gründerfonds* (HTGF) provides technology-oriented business start-ups with grants of up to EUR 500,000 in the first funding round. The grant takes the form of a subordinated shareholder loan, and the HTGF may also participate in additional funding rounds. The HTGF further offers coaching and support with regard to raising venture capital for follow-up financing. The first of the funds, HTGF I, had a fund volume of EUR 272 million. Investors are the Federal Ministry of Economics and Technology (BMWi), the KfW banking group, as well as six industrial groups (BASF GmbH, Deutsche Telekom AG, Siemens AG, Robert Bosch GmbH, Daimler AG, and Carl Zeiss AG). Since 2005, about 250 businesses from the high technology sector have been supported by the programme. In October 2011, HTGF II was launched with a fund volume of EUR 288.5 million. In addition to BMWi and KfW, twelve industrial groups are participating in this fund (Altana AG, B. Braun Melsungen AG, BASF SE, Cewe Color AG & Co OHG, Daimler AG, Deutsche Post AG, Deutsche Telekom AG, Qiagen GmbH, Robert Bosch GmbH, Tengelmann Ventures GmbH, Vorwerk & Co. KG, and Carl Zeiss AG).[218]

be realised, which, in turn, will lead to a decrease in the number of role models to inspire potential entrepreneurs.

Determinants of entrepreneurial success

The affinity and probability of launching a business is influenced not only by existing institutional framework conditions, but also by the potential entrepreneur's characteristics. In the view of start-up experts from business, science and politics, Germany as a location can offer a whole range of advantages. These include e.g. the country's geographical infrastructure, effective public-sector funding programmes, as well as highly developed organisations for the protection of intellectual property. The availability of advisory services and suppliers is another factor that makes Germany an attractive location for entrepreneurs. What is more, German businesses and German consumers are generally open to innovative new products and services.[219]

In the view of start-up experts, one of the disadvantages for entrepreneurs is the lack of entrepreneurial education in secondary schools and in extracurricular activities of school-going children, and the fact that Germany's entrepreneurial culture is somewhat underdeveloped. One potential means of addressing these weaknesses could be to systematically promote entrepreneurship education in schools. This would improve entrepreneurial skills in the long run and would be likely to sustainably foster an entrepreneurial spirit among the larger public. Another

BOX 12

European limited liability company

More than 99 percent of businesses in the European Union are small and medium-sized enterprises (SMEs). From these, only 8 percent engage in cross-border trade, and only 5 percent have subsidiaries or joint ventures in other countries. Many SMEs would have the potential to expand their business activities on the European market; yet the translation of this potential into actual business is hindered by legal and administrative obstacles. Generally speaking, these obstacles also exist for larger companies, and yet to SMEs they are more of a threat due to their relatively low level of human and financial resources. These obstacles primarily consist in additional efforts and expenses associated with the launch of a business in those countries that a company wants to commence business in. Expenses are incurred e.g. due to a mandatory minimum capital requirement, charges for registries and notaries, charges for legal advice and compliance with the rules and regulations for operating a business.[220]

Against this background, the EU Commission presented an initiative for introducing a European limited liability company, i.e. a European private company, in 2008. This new European legal form is thought to increase the competiveness of SMEs by making it easier to establish new branches and new business operations within the internal European market. The Commission's proposal would allow companies to operate in all EU member states according to the same rules and regulations for launching and operating a business venture. This would result in a considerable decrease in efforts and expenses incurred in international business and trade.[221]

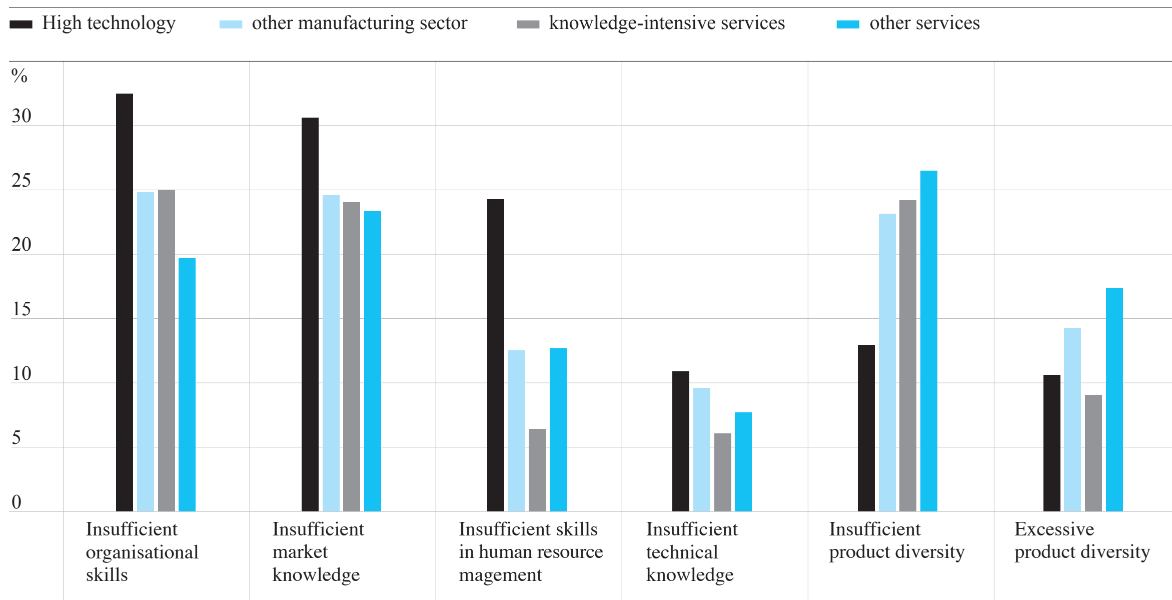
In June 2008, the EU Commission presented a proposal for the layout of the European limited liability company, which was approved by the European Parliament in March 2009. Yet, the introduction of the new legal form failed in December 2009 in front of the European Council, where Germany in particular expressed reservations concerning the transfer of a registered office, the minimum amount of capital, modes of share transfer, and employee participation. In the spring of 2011, negotiations were taken up again, but at the meeting of the Competitive Council that was held in May 2011, no agreement could be reached on the conditions for introducing a European limited liability company.[222]

point that has been criticised by start-up experts is that, compared with established companies, new enterprises benefit to a lesser extent from knowledge transfer from universities and non-university research institutions. Other factors that have been criticised include market entry barriers, considerable bureaucratic obstacles, and insufficient transparency of the German tax system.[223] [224]

German companies that seek to establish a subsidiary in another European country are faced with another substantial barrier: the lack of a common legal form for small enterprises that is valid throughout Europe. While the European company (SE) has already been introduced, no agreement could be reached over the launch of a European private limited liability company. This means that a company seeking to expand its business throughout Europe will have to establish an individual company in each individual country; an activity that incurs considerable organisational and financial efforts (cf. Box 12). The Expert Commission therefore stresses the importance of swiftly reaching an agreement in the negotiations regarding the launch of a European private limited liability company.

Personal characteristics of a potential entrepreneur play an important role for the success of a business start-up. Generally speaking, the probability of starting up a new enterprise increases with the potential entrepreneur's level of net household income. The influence of the entrepreneur's age follows a reverse U-shaped curve. This means that the probability of starting up a new business increases up to a certain age – in Germany, typically up to the age of 35 to 45 – and then decreases again.[225] Individuals with a migration background venture into self-employment more often than individuals who do not have a migration background.[226] Examples from other countries demonstrate indeed the major role that immigrants can play in starting up new businesses. In the Silicon Valley for instance, half of all new enterprises are founded or co-founded by (mostly highly-qualified) immigrants.[227]

FIG 14 **Management problems as causes for business closures: frequency according to industry** (figures in percent)



Source: *ZEW-Marktaustrittsbefragung 2009,* Egeln et al. 2012.

The human capital of (potential) entrepreneurs plays a major role not only for the probability of launching a business, but also in terms of the growth and survival of the new enterprise. The higher the level of the entrepreneur's education, the more likely it is that the business will be successful. Moreover, qualifications from the field of hard sciences have a positive impact both on the probability of starting up a new enterprise and on the business' prospects for success. Since academic qualifications particularly in the field of hard sciences are relatively scarce, and are expected to remain scarce, there will be increasing competition for qualified individuals in this field.[228]

Another important success factor for the growth and survival of young businesses is industry experience and management experience on the part of the entrepreneur. These are skills that cannot be taught through academic and vocational training; they have to be obtained through respective activities in the course of a person's career.[229] Because of this, it seems particularly important to provide young entrepreneurs with support and advice from more experienced partners.

CLOSURE OF YOUNG BUSINESSES

B 3–2

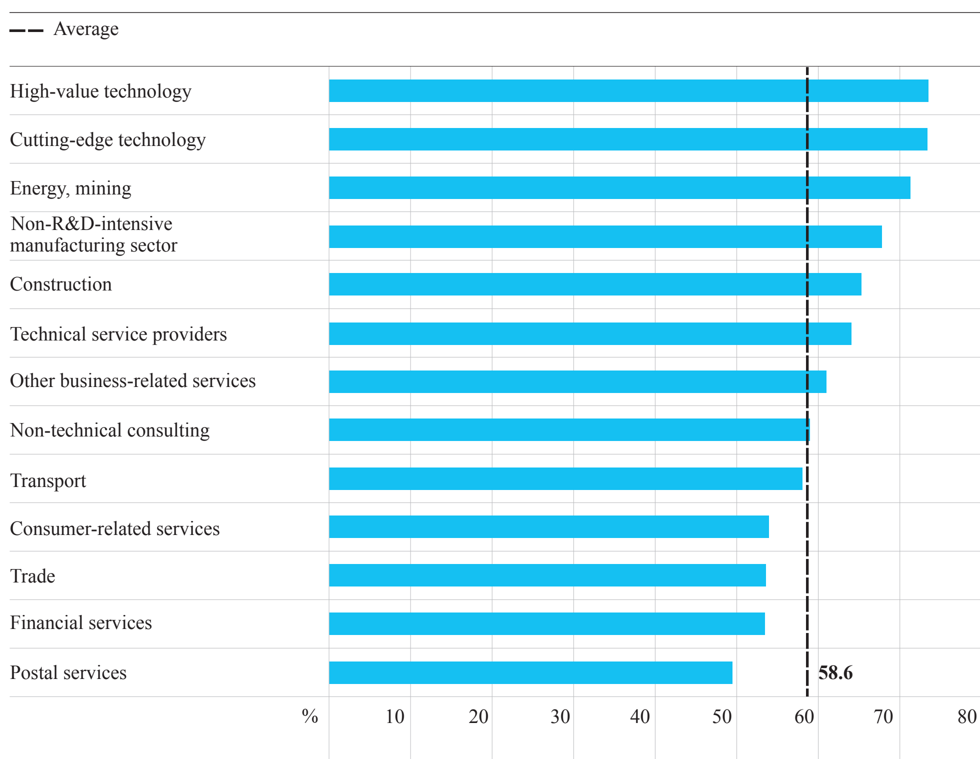
Not every newly established business turns out to be successful. The question of how well a company can deal with difficulties that may occur depends on internal factors such as the entrepreneur's personality and his or her strategic management of the company. Yet, the company environment can also be a decisive factor; especially conditions in the sales and factor markets are relevant here[230]

Internal factors

Strategic, target-oriented decision-making can be regarded as a key success factor for the survival of any business venture. Administrators in insolvency and business consultants experienced in liquidation issues often point to the poor quality of business planning and controlling among entrepreneurs. Moreover, they find fault in terms of suitable risk management, especially when it comes to securing liquidity.[231] In companies from the industrial sector's high technology branches, and in companies from knowledge-intensive services, the entrepreneur's lack in organisational skills is significantly more often

Survival rates of young businesses according to industry
(percentage of business start-ups that are still active in the market after five years)

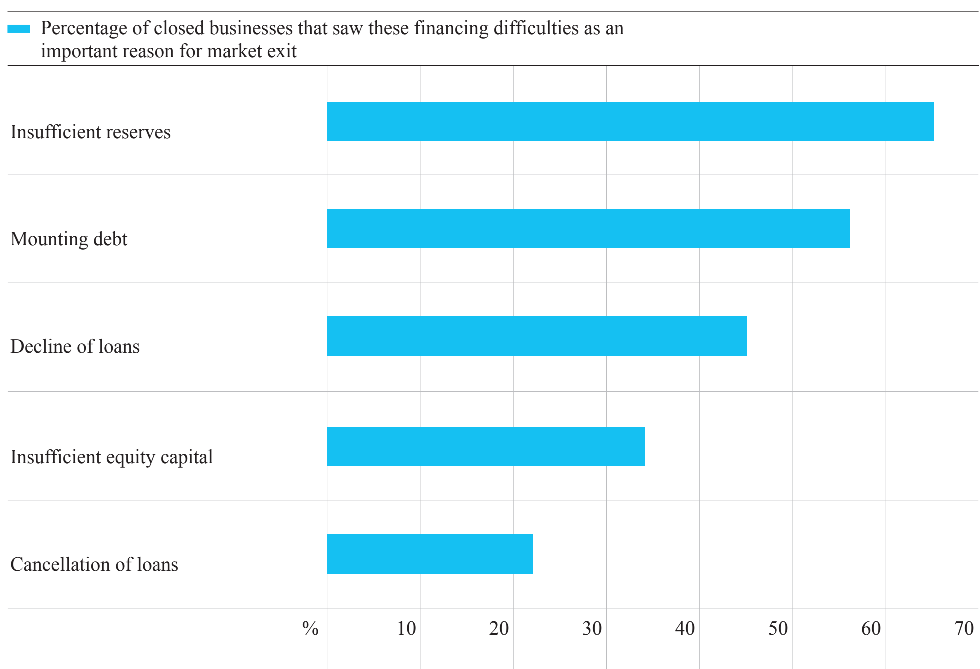
FIG 15



Source: *ZEW Mannheimer Unternehmenspanel* (businesses from start-up cohorts 2004 and 2005 only); Egeln et al. 2012.

Relevance of financial difficulties as a reason for market exit
(in the view of businesses affected)

FIG 16



Source: *ZEW-Marktaustrittsbefragung 2009,* Egeln et al. 2010.

among the main reasons for closing a business than is the case in other sectors (cf. Figure 14).

Another important factor for the success or failure of a new enterprise is the entrepreneur's industry experience. The more experienced the entrepreneur, the less likely he or she is to exit the market, and the longer the company's survival period.[232]

Contrary to common expectations, businesses from the high technology sector and the manufacturing sector survive longer than businesses from other sectors (cf. Figure 15). Selection effects are a possible reason for this: in these economic sectors, market entry barriers are high due to the sector's high capital requirements. Thus it can be argued that only the best business models can convince capital providers and be implemented eventually. These findings also correspond with evidence from other European countries, which confirm that closure rates for businesses from high technology and knowledge-intensive services are relatively lower than those of the total economy.[233]

Company environment and factor markets

Entrepreneurs frequently mention financing problems as a cause for closing down their businesses. Financial issues are not necessarily caused by internal difficulties; they can also result from external difficulties. These include e.g. default on receivables from clients, a lack in self-financing capacity, cost increases resulting from price increases on the procurement markets, or the necessity to buy out one of the partners. These external factors can lead to an insufficient accumulation of reserves, the refusal of subsequent borrowing, payment difficulties, and even insolvency. Figure 16 shows the proportion of businesses that mentioned diverse financial problems as the main reason for their market exit. Thus in 65 percent of business closures, insufficient reserves significantly contributed to the company's market exit.[234]

Excessive debt or the lack of reserves as a closure reason are less frequently mentioned by high technology companies in the industrial sector (cutting-edge and high-value technology) and knowledge-intensive services when compared with companies from other sectors. Still, in 20 to 50 percent of cases, financial difficulties were one of the main reasons for market exit.[235]

More than 80 percent of companies that filed for insolvency had previously been able to generate profits; 73 percent of companies that closed for personal reasons had reached the profit zone; and 61 percent of companies that closed due to economic or financial reasons without filing for insolvency had surpassed the break-even point in the course of the company's lifespan. These observations suggest that many companies that filed for insolvency, or retired from the market without filing for insolvency, at least temporarily operated on the market successfully but encountered payment difficulties due to sudden incidents of liquidity shortages.[236]

As a matter of fact, between 33 and 45 percent of companies that had retired from the market stated that the loss of receivables had been a major reason for closure. When analysing the relevance of financial problems according to sector in more detail, it appears that high technology companies from the industrial sector and knowledge-intensive services are less affected by financial difficulties caused by external factors as is the case with companies from other sectors. Default on receivables can turn into a threat especially for young businesses with a non-diversified client base. Thus unfavourable market conditions in combination with frequently found thin capitalisation can have a serious effect on new enterprises. Thin capitalisation from the start will make it difficult to compensate for financial setbacks, which can result in failure for otherwise promising business ventures.[237]

To sum up, these empirical findings lead to the conclusion that many business start-ups in Germany either enter the market with too little initial capital, or fail to create sufficient reserves in the course of their business operations to be able to cope with financial setbacks such as the loss of receivables.

Insolvency procedures in need of reform

Between 2000 and 2008, an annual average of approximately 30,000 young businesses (i.e. companies no older than 5 years) exited the German market.[238] From these, about one quarter retired from the market by means of insolvency procedures. Within

the same period of time, about 45,000 jobs were lost in the course of insolvency procedures. Company closures without insolvency procedures, which typically affect smaller businesses, resulted in the loss of approximately 55,000 jobs per year between 2000 and 2008.

Starting up a business is an inherently risky activity; hence it is inevitable that a certain proportion of start-ups fail because the initial business idea does not prove to be sustainable. From a macroeconomic perspective, company closures are a cause for concern if they happen due to temporary liquidity shortages, and not due to a business model that is non-viable in the long term.

In the event of an actual insolvency, insolvency procedures should focus on financially restructuring the business and strive to avoid closures that are inefficient from a macroeconomic viewpoint. Germany's insolvency act from 1999 states that insolvency proceedings "shall serve the purpose of collective satisfaction of a debtor's creditors by liquidation of the debtor's assets and by distribution of the proceeds, or by reaching an arrangement in an insolvency plan, particularly in order to maintain the enterprise."[239] Yet, the insolvency plan stipulated in the insolvency act failed to live up to its standards. As a rule, insolvency leads to closure, and this is particularly true for young businesses.

This is problematic, especially since it has been demonstrated, as described above, that companies often suffered closure although they could have been successful players on the market but did not manage to cope with a temporary crisis. It is these very companies however that should be provided with the opportunity to restructure financially.[240]

Current German legislation throws numerous obstacles in the way of financially reorganising companies that are threatened by insolvency. Insolvency procedures are characterised by a high degree of uncertainty for both the debtor and his or her creditors: stakeholders have hardly any influence on the selection of the insolvency administrator. Furthermore, the duration of the procedures is barely predictable, since individual creditors can delay the process via legal means. What is more, German courts only reluctantly employ the right to self-administration, which allows the debtor to maintain his or her power of administration and disposal after the onset of the procedures. Due to this, a timely insolvency filing that strives to financially restructure a company still remains a major exception to the rule. Against this background, the Federal Government's recent legislative proposal on further facilitating the financial reorganisation of companies[241] aims to increase opportunities for restructuring businesses. This entails the integration of debtors and creditors into the selection of key stakeholders, and the improvement of planning security during the course of insolvency procedures.[242]

The Expert Commission welcomes these endeavours. In order to facilitate the restructuring of small enterprises in particular, several organisational and thematic issues will have to be addressed when revising the current insolvency law. Interviews with insolvency administrators suggest that it would be desirable to increase the relevant economic expertise of judges and judicial officers who are involved in insolvency procedures. This could be achieved by creating specialised courts or special chambers that deal with insolvency issues. In addition to this, remuneration law for insolvency administrators should be revised in a way that it would set monetary incentives for maintaining young businesses. Another promising measure would be to provide companies with consultants who possess advanced economic expertise and who would advise them during insolvency procedures. Another desirable reform approach would be to provide for out-of-court restructuring procedures.[243] Germany's insolvency law and insolvency practice should focus much more on restructuring and maintaining businesses. In the view of the Expert Commission, this would have a positive impact especially on Germany's technological performance.

B 3–3 FINANCING AS A MAIN OBSTACLE FOR THE ESTABLISHMENT AND GROWTH OF ENTERPRISES

Financing represents a key challenge for enterprises; not only in the start-up phase, but also in the growth phase. For young innovative enterprises, it is particularly difficult to secure sufficient funding. In many cases, internal funding is rarely an option as most companies generate little or no revenue in the beginning and are thus unable to use their revenue

to make investments and to cover current expenditure. Thus in the planning and start-up phase, young businesses often make use of their own private resources or receive support from friends and family. However, highly innovative companies often require funds amounting to several million euro, which is beyond the scope of what can be accumulated from these sources.

That is why external financing is often indispensable during the start-up phase of a young business. One way of external funding is the borrowing of capital in the form of bank loans. Yet, this also may cause major problems for young enterprises as it is difficult for banks to assess a company's prospects for success, especially when it comes to innovative business start-ups. In addition to this, major information asymmetries regarding the entrepreneur's skills and risk preferences can also be observed. These are issues that could generally be reduced by providing collaterals. Since young companies are often unable to present collaterals at an early stage, banks are often very reluctant to grant loans to young entrepreneurs.

Another means of external funding is equity capital. Equity investors provide entrepreneurs and young businesses with equity, thereby obtaining a share in the capital growth and the profits of a company in the event that the business succeeds. Equity capital is especially suitable for innovative business start-ups that have a venturous business idea that promises large profits in the event of success. In the earlier stages of a start-up, business angels are often a suitable source of financing; these are often experienced entrepreneurs themselves. In terms of its organisational make-up, this type of financing can be located somewhere between informal funding options (i.e. friends and family) and formal funding options such as equity funds. Yet, during the start-up phase this type of financing is only available to a limited extent, which typically results in a financing gap. One option for filling this gap is funding via state contributions.

In the growth phase of a young business, it is often venture capital providers who provide funding. Venture capital is formal equity capital raised via funds and managed by fund managers.[244]

Not all companies are equally successful when it comes to acquiring equity capital. A recent study has shown that the probability of obtaining equity capital increases if a company has been established by a team, or if the entrepreneurs have a graduate or postgraduate degree in a natural sciences subject.[245] According to the study, approximately 2 percent of German businesses make use of equity capital.[246]

Whether or not equity investors will invest in a business largely depends on the entrepreneur's human capital. Here, informal human capital is much more crucial than formal human capital: the decisive factors that were most frequently mentioned by surveyed capital providers are industry expertise, a convincing entrepreneurial personality, and the combination of commercial and technical management skills. Another vital factor is a young company's innovation-related activities and its competitive environment. It is also considered positive if the product or service is a novelty at least on the German market, or if the number of competitors is very limited. Furthermore, equity investors are inclined to provide funding for enterprises that have their own R&D, as well as enterprises that possess a patent or an alternative protection right. The equity investors' estimations confirm what has been said earlier regarding the positive effects of human capital on the success of a business. Investment requests will primarily be rejected if a competitive advantage cannot be detected or appears to be unsustainable, if financial planning appears to be unrealistic, or if the business idea does not match the portfolio of the fund.[247]

In the following, different types of financing that become relevant in different phases of business development shall be analysed with a view to potential issues that may arise.

Early-stage investment by the public sector

The *High-Tech Gründerfonds* (HTGF) was established in 2005 in order to support financing of business start-ups in the high technology sector (cf. Box 11). To date, approximately 250 businesses have received funding from the HTGF. In addition to financial assistance, the HTGF also offers coaching, as well as support in acquiring additional venture capital for follow-up financing. In October 2011, HTGF II was launched with a fund volume of EUR 288.5 million. The Federal Ministry of Economics and Technology

(BMWi), the KfW banking group, as well as twelve industrial groups are involved in this fund.[248]

The HTGF I funding programme was assessed positively overall. Over the last decade, German private venture capital providers have been focussing on the less risky growth phase, while relatively risky early-stage financing has been stagnating[249]; a trend that could also be observed in other European countries. HTGF I could partially fill the financing gap resulting from this, thereby contributing to the (re)vitalisation of the German market for early-stage investments. Today, HTGF is in fact Germany's major investor in early-stage financing. The evaluation of the programme did not provide any indications suggesting that the HTGF has caused a crowding out of private venture capital investments. Rather, private venture capital investors perceive the HTGF as an instrument that will open doors to promising investment opportunities in later financing phases.[250]

Several studies on public-sector venture capital funds indicate that these funds achieve particularly successful results if entrepreneurs are supplied with specialist advice by experienced stakeholders, if public funds concentrate on the seed and start-up phase, and if the funded business is co-financed by private funds.[251] In view of these findings, it is therefore pleasing that public-sector venture capital in Germany largely meets these criteria. As discussed earlier, public funding plays a vital role in Germany's market for early-stage financing, and links between private and public funds are also strong. Thus, between 2007 and 2009, more than one third of private venture capital providers made use of a public funding programme in the context of their investment activities.[252]

Business angels

Business angels have become an important source of equity in the early-stage financing period. Especially in recent years, the relevance of business angels has increased as venture capital companies have increasingly retired from the risk-intensive field of early-stage financing and have started focussing on investment in later phases of growth. In Europe, investments by business angels have increased from approximately USD 150 million in 2006 to more than USD 250 million in 2009. At the same time it can be observed that the sector is becoming more and more formalised and organised through the establishment of business angels associations and networks. In 2006, a little more than 800 networks for business angels existed in Europe. In 2009, this number had already gone up to more than 1,400.[253] Investments by business angels usually have a strong regional focus, which means that the number, development degree and dynamics of business angels' activities may vary considerably between regions. Due to this, support measures for business angels' networks in the United States and Canada are often implemented regionally and not nationally.[254]

Considering the gap in supply of equity capital in the early phase caused by many venture capital providers' shifting towards the less risky growth phase, and given the positive external effects of start-ups on the overall economy, it seems generally desirable to promote the market for business angels. However, there are no reliable data yet for assessing the market for business angels and political measures relating to business angels, since business angels do not usually publish their investments. Besides, we are still lacking a uniform definition of the term "business angel", which would be needed for the sake of statistical documentation. Thus it is sometimes the case that informal venture capital (e.g. money from friends or family) is subsumed under business angel investments. Therefore efforts should be made to seek a common definition on a European level. Based on this, activities of business angels should be documented more clearly, which would allow for an improved evaluation of funding measures and facilitate the identification of effective funding measures.[255]

Tax incentives are one way of promoting activities of business angels. These have been identified as the main criterion considered by business angels when deciding on potential investments.[256] With its law on the modernisation of framework conditions for capital investment companies, the Federal Government has taken a step in the right direction (cf. Annual Report 2009). While this legislative proposal failed in the European Commission's verification procedure, the Commission did not raise any objections against the introduction of tax credits for business angels.[257]

In the view of the Expert Commission, it would make sense to introduce a promotional system similar

to the Enterprise Investment Scheme (EIS, cf. Box 13), a tax relief scheme that was launched in Great Britain in 1994. This would serve as an efficient instrument for implementing support for business angels in Germany. One of the main advantages of the EIS is the fact that its compatibility with the EU provisions on state aids has already been assessed by the European Commission. The Expert Commission therefore strongly recommends that the Federal Government introduce a promotional measure that is equivalent to the EIS.

Co-investment funds are another means of supporting the activities of business angels. The idea is to combine private investments of business angels with corresponding investments from public funds, with the aim of supporting the development and professionalisation of the business angels market via well-designed innovation processes. Co-financing of business angel activities already takes place within the framework of the *ERP-Startfonds*[258], where investments by the fund are made under the same conditions and to the same amount as those of the private investor.[259] Yet, co-investment of this type can only be successful provided that business angels' networks are pre-existent.

Business angels' networks are public or private associations of business angels that systematically organise the selection and promotion of young businesses that are seeking growth capital. In 2009, the number of business angels' networks amounted to 38; the average number of members was 51, and, on average, each network received around 290 applications for funding.[260] On average, five participations per year were secured via business angels' networks, albeit the procurement rate varies significantly between the individual networks. The existence of professional structures (such as a fund vehicle within the business angels' network) and the network's profit orientation are statistically relevant determinants for the number of participations secured. A regional focus of a business angels' network however has a negative impact on the number of participations secured.

BOX 13

Great Britain's Enterprise Investment Scheme (EIS)[261]

The EIS was introduced as early as 1994 and has been adapted several times since then. By providing tax incentives, the scheme encourages private investors to obtain shares in small enterprises. Among other things, the provisions of the EIS allow for an income tax reduction of up to 30 percent (until September 2011: 20 percent) of the amount invested (with a ceiling of GBP 500,000), a deferral on taxation on investment income, and an exemption from capital gains tax on gains on disposal. Tax benefits are only granted for investments in enterprises that have less than 50 employees and gross assets of less than GBP 7 million.

The enterprises in which shares are acquired may not be quoted on the stock market or be controlled by other companies. Shares are centrally recorded at the Small Company Enterprise Centre. Certain companies are excluded from the scheme, among them businesses that are primarily active in financial services, property trading, shipbuilding, as well as legal and tax advisory services. The investors, too, have to meet certain conditions. Thus the scheme does not provide for shares in affiliated companies, and the investor may not be employed by the enterprise. Moreover, a minimum holding period of three years applies.

In 2010/2011, the EIS programme incurred costs amounting to GBP 170 million. In the previous year, approximately 1,900 enterprises had received equity capital in the region of approximately GBP 610 million. Since the EIS was established as early as 1994, numerous evaluations have been conducted to date, and most of these surveys present a very positive picture.

Venture capital

Germany's venture capital market is substantially smaller than that of other countries. In 2010, venture capital investments in Germany amounted to EUR 708 million; within the same period, venture capital providers in the United States invested a total of USD 13.3 billion.[262] But also in European comparison, Germany is situated merely in the middle

range: with a proportion of venture capital investments of 0.028 percent of GDP, Germany is positioned only slightly above the European average of 0.027 percent (cf. Figure 17). In the leading group that comprises Sweden, Norway and Finland, this ratio is between 0.055 and 0.068 percent. If Germany wants to catch up with these countries, it would have to at least double its venture capital investments.

One of the main reasons for the comparatively weak development of Germany's venture capital market is the small size of funds. Institutional investors have an interest in investing a certain minimum volume per fund. When investing in small funds, investors will raise a large proportion of the entire capital of the fund, which results in a low degree of diversification and a higher risk for the investor. Because of this, institutional investors are reluctant to invest in German venture capital funds. The critical fund size that would attract institutional investors would be EUR 100 million. Yet, only rarely is this fund size achieved by German venture capital funds.[263]

Moreover, Germany is lacking one particular type of institutional investor that is very relevant in other European countries: pension funds. In countries with funded pension provisions, pension funds often function as anchor investors, which gives a strong signal to international investors. Since Germany has a pay-as-you-go pension system, it is lacking these anchor investors. Therefore it is even more important that other institutional investors from the public sector are active in this field. In light of this, it is particularly alarming that KfW, the Federal development bank, recently retired from investments in new German venture capital funds.

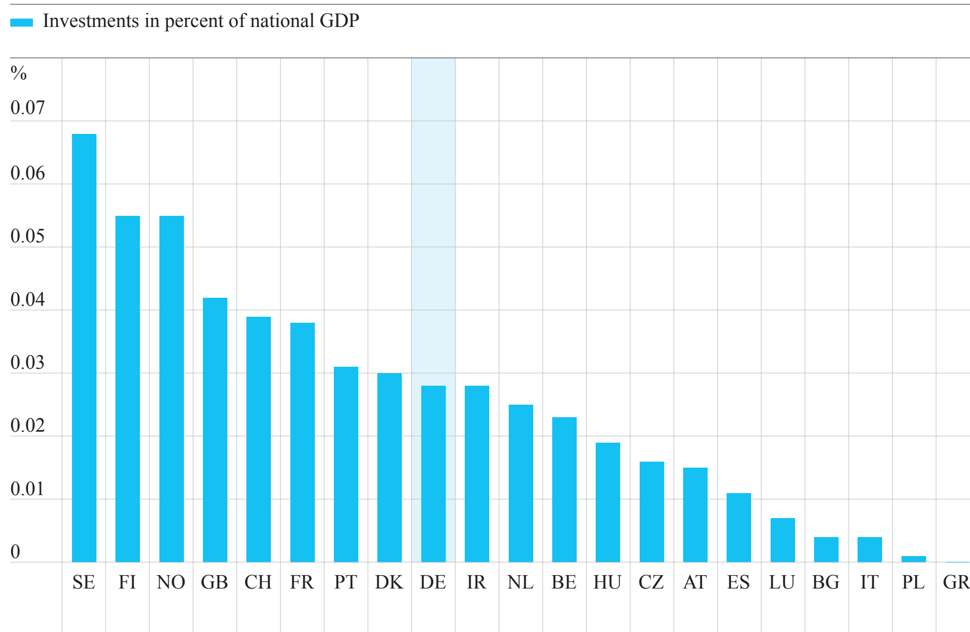
The venture capital market is subject to pronounced cycles[264] reminiscent of classical pork cycles. By the late 1990s, the German venture capital market had undergone a very positive development, with large amounts of funding going into Internet enterprises. With the bursting of the dot-com bubble, this process came to an abrupt end. Now only few options remained for investing the capital that had already been raised. The subsequent poor performance of this capital prompted investors to retire from the venture capital market. This was followed by an economic upturn during which attractive investment opportunities emerged, but capital was now scarce. The relatively small amount of venture capital that was available during this period performed well, which resulted in more capital flowing to the venture capital market. With the onset of the financial crisis in 2008, the venture capital market suffered another major setback. The development of the venture capital market's business climate is recorded by the "German Private Equity Barometer". Figure 18 shows that Germany's venture capital market – similar to other countries' venture capital markets – is highly volatile and strongly influenced by cyclical fluctuations.[265]

This pork cycle is largely caused by the fact that venture capital funds are set to run and be closed within a period of 8 to 10 years. In order to break these cycles, it would require liquid secondary markets, which means there would have to be a market for investors to trade their shares in venture capital funds. The existence of flexible exit options would increase incentives for investors to invest in venture capital funds. This is even more so because it has been shown that exit conditions are regarded as one of the major factors for assessing the commercial situation in early stage financing.[266]

A further difficulty lies in the fact that potential investors investing in a German venture capital fund have to take into account that the fund might be classified as a trade conducting activity. Although in practice the Federal Ministry of Finance (BMF) has ordered to treat venture capital funds as asset management companies,[267] this has not been anchored in law, which creates a source of legal uncertainty for potential investors (cf. Annual Report 2008).[268] Thus a pension fund that is based in the United States would lose its tax advantages in the event that the German fund it invests in is classified as conducting trade. Paradoxically, this has led to the fact that German capital investors go abroad to set up funds – which results in tax revenue losses for Germany's fiscal authorities.

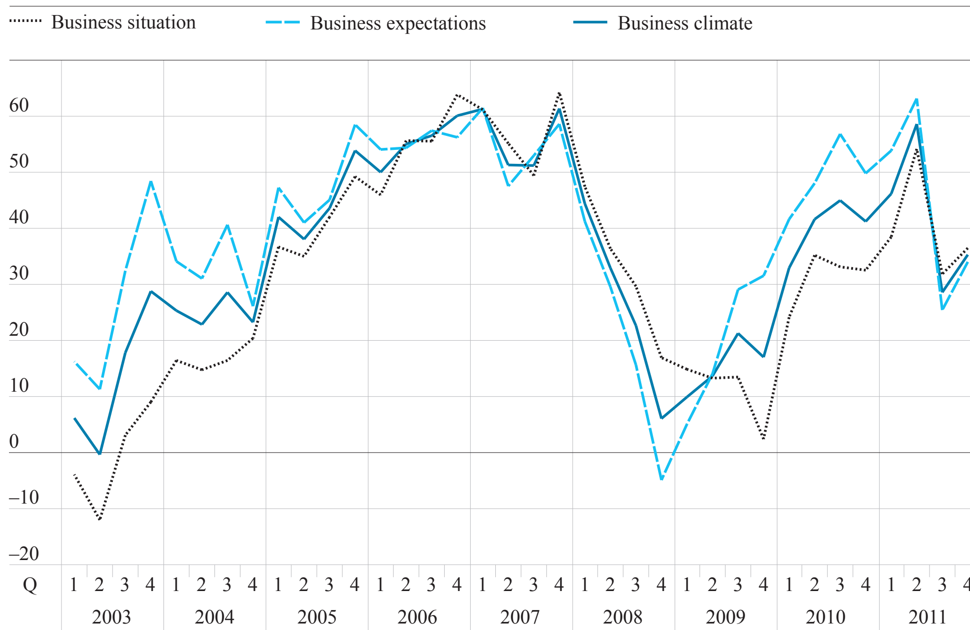
In short, the main reasons for the weak development of the German venture capital market are not a lack of investment options. Instead it can be stated that funds encounter difficulties in raising capital, which ultimately limits their scope of investment activities.

FIG 17 **Proportion of venture capital investments of national GDP based on the portfolio company's registered office** (data in percent)



Source: BVK 2011.

FIG 18 **German Private Equity Barometer**



Source: KfW/BVK survey.

EU initiative for facilitating access to finance for small and medium-sized enterprises

Small and medium-sized enterprises (SMEs) play a key role in economic growth and employment within the EU. Since financial difficulties are the major barrier to growth for small or medium-sized enterprises, the EU's Europe 2020 strategy has established as one of its main objectives easier access to financial capital for SMEs. To complement these efforts, a recently published action plan of the European Commission[269] provides for additional regulatory measures, and funds from the EU budget shall also be made available. Furthermore, the European Commission is planning to take on a co-ordinating role, with the aim of exploiting the synergy potential of EU member states' measures and EU measures (cf. Box 14).

The Expert Commission welcomes these initiatives, especially those that are directed at supplying information and facilitating access to loans and venture capital. In this context, attention should be attached to ensuring that the implementation of measures does not create additional obstacles for SMEs; the development of costly parallel structures should be avoided by all means.[270]

BOX 14

Measures proposed by the European Commission within the framework of the action plan for facilitating access to finance for small and medium-sized enterprises

The new framework conditions shall enable venture capital funds to conduct their activities on the European single market. This shall be achieved by removing regulatory and tax-related obstacles for cross-border activities. The European Commission has already amended its state aids provisions by increasing the threshold for public equity investments in the start-up phase from EUR 1.5 million to EUR 2.5 million. To improve access to finance for SMEs, the European Commission suggests integrating a section relating to "SME growth markets" into the EU's capital market legislation. The European Commission further suggests improving EU-wide availability of mandatory information on listed SMEs. This would lower the access threshold for investors and commercial providers of information on SMEs. Moreover, the rules for rendering and auditing of accounts should be simplified for SMEs.

The European Commission is further planning to investigate the impact that the capital requirements framework for banks and investment firms – CRD III, and the proposed CRD IV and CRR[271] – has on small and medium-sized companies. Depending on the outcome, the European Commission might suggest reducing the risk weight for SMEs. The European Commission also draws attention to the issue of delayed payment of invoices, which is a problem for SMEs in particular, and calls EU member states to introduce the Late Payments Directive[272] even before the expiry of the implementation time-limit in March 2013. The implementation of this Directive could result in a substantial decrease in demand for external financing. In the course of allocating funds from the EU budget, the European Commission has suggested the launch of an enhanced, extended EU debt investment instrument to facilitate the lending of credit to SMEs. The proposal further provides for implementing a sub-programme within the EU Programme for Social Change and Innovation, which aims at supporting microfinancing for microenterprises. As regards venture capital, the European Commission argues for an extended equity financing instrument for supplying SMEs with easier access to venture capital. Finally, the European Commission also suggests establishing an umbrella fund, which would allocate capital to venture capital funds that invest in several EU member states.

In the context of the planned co-ordinative measures for improving framework conditions for SMEs, the European Commission is also going to expand financial resources for advisory services of the Enterprise Europe Network.[273] In addition, information on different EU financing programmes for SMEs shall be made available on an online portal. Furthermore, the European Commission calls on the banking sector and the SME associations to advance the introduction of qualitative ratings that will complement the standard quantitative assessment of creditworthiness. Alongside these efforts, the European Commission encourages member states and interest groups to establish national "SME financial fora", a measure that has already been introduced in several member states.[274]

Facilitating private follow-up financing

The commitment of public funds has managed to at least partially fill the financing gap in early-stage financing. The focus now has to be on follow-up financing from the private sector. In this area, the supply is clearly too scarce in Germany.[275] What is more, a clear legal framework for private equity funds is not in place. The shortage of venture capital in Germany cannot be compensated by investments of foreign enterprises alone. For assessing the potential success of a business idea or an innovation, a solid knowledge of the target market is required. Foreign investors are often lacking this knowledge, which is the reason why domestic investors are needed to fully exploit Germany's innovation and entrepreneurial potential. Furthermore, foreign venture capital providers sometimes demand that the portfolio business moves to their country of origin. This however results in the loss of value added in Germany, and a technology drain from Germany. Due to this, it is vital that international venture capital is raised by German funds with the aim of investing in Germany. If this is to succeed, Germany must be transformed into an attractive location for venture capital providers.

In a European comparison of regulatory and fiscal framework conditions for venture capital, France was deemed as the country with the most favourable conditions in Europe.[276] This positive conclusion was based on the structures for venture capital funds, which offer tax transparency for national and international funds. Another factor that was assessed positively was the granting of tax incentives for venture capital: individuals who invest in venture capital funds in France can save up to EUR 50,000 in taxes per year.

Due to various institutional framework conditions, Germany is perceived as largely unattractive as a location for venture capital providers when compared with other countries.

One of the reasons for this is the current uncertainty regarding the treatment of venture capital companies' activities as either being asset management or trade conducting activities. If they are treated as asset management companies, this means that taxation applies only to investors in holding companies, but not to the holding company itself. It is therefore high time that the German legislator finally establishes a binding legal framework for the venture capital market and private equity investments.

Another feature that Germany is lacking when compared with France is tax incentives to promote private investment in venture capital funds.[277] Such promotional measures will have to be given thought.

In addition to this, Germany's restrictive treatment of carried-over losses has a negative impact on the venture capital providers' willingness to invest in German technology-based start-up businesses. Accumulated loss carryforwards will be partially or fully lost if shares in a company are transferred (§ 8c of the Law on Corporation Tax, KStG). As opposed to that, France and Great Britain treat carried-over losses less restrictively, which creates a location disadvantage for Germany.[278] Innovative start-ups in particular have high R&D expenditures in the early years and, on top of that, it takes several years before they reach the breakeven point. If costs for R&D work done are not taken into account after the business has been taken over, the business will be less attractive for potential buyers. Thus poor resale options will also make initial investment less attractive (cf. Annual Report 2008).

When compared on an international scale, another disadvantage for German equity funds is the VAT that applies to management fees. It is common practice that managing partners of equity capital companies receive an annual compensation of 2 percent of the funds volume to cover the costs of their investment and consulting services. In Germany, these management fees are subjected to VAT, which is not the case in other countries. Since deduction of input tax does not apply, this results in a definitive tax burden on the fund level.[279]

Utilising new opportunities for a venture capital act

European efforts to facilitate equity financing for SMEs and business start-ups are in progress, thereby unleashing new opportunities for the Federal Government to establish a sound, globally competitive legal framework for venture capital. After many years of misguided policies in this area, this is an excellent opportunity for Germany to achieve progress in this policy field.

The Directive 2011/61/EU on Alternative Investment Fund Managers[280], also known as the AIFM Directive, has to be incorporated into national legislation before 22 July 2013. In its Annual Report 2011, the Expert Commission commented in depth on the impact of the AIFM Directive while also providing recommendations for action. Like other observers, the Expert Commission also pointed out that, with regard to venture capital funds, a strict application of the measures stipulated in the Directive would not be advisable. The proposed legal framework as laid out by the AIFM Directive primarily aimed at regulating hedge funds and private investment companies; the provisions were not quite suitable for managers of typical venture capital funds.

In the meantime, improved framework conditions have been developed to specifically meet the requirements of this type of investor. Thus, in December 2011, the European Commission presented its proposal for a regulation[281], which provides for uniform European provisions for managing venture capital funds. Funds that subject themselves to this optional set of rules shall be enabled to operate under the title of European Venture Capital Fund (EVCF). According to the proposal, EVCF do not have to meet the often complex requirements of the individual member states but are now operating under a harmonised European regulation. This shall make it easier for young businesses to raise capital internationally. Box 15 explains the requirements that the funds, organisations and investors have to meet.

BOX 15

Requirements for European venture capital funds according to the European Commission's proposed Directive 2011/0417

A European Venture Capital Fund (EVCF) dedicates at least 70 percent of the capital paid in by shareholders to investments in SMEs. The EVCF shall provide equity or quasi-equity[282] for these SMEs. The EVCF refrains from any financial leverage (e.g. by means of borrowing), which means that the amount invested by the fund may not exceed the amount paid in by the shareholders.[283] The assets managed by an EVCF manager may not exceed the threshold of EUR 500 million.

Funds that use the title of EVCF have to comply with the uniform requirements and quality standards stipulated in the regulation. These include provisions on the disclosure of investment strategies, investment objects, costs and fees, risk and return profiles, as well as the calculation of the remuneration of the venture capital fund's manager, and, finally, operational requirements for shareholders. Managers of EVCF shall be provided with the option of using a European venture capital passport that will guarantee uniform framework conditions for their activities within the EU. In the AIFM Directive, such a passport was stipulated only for fund managers with a managed fund capital of more than EUR 500 million.

The regulation also specifies the organisational structure of a European Venture Capital Fund, and shareholders, too, are subjected to uniform requirements. Thus professional shareholders are only eligible if they meet the requirements of the MiFID Directive (Markets in Financial Instruments Directive). Furthermore, the regulation shall also allow for investment opportunities for business angels.[284]

The Expert Commission welcomes the European Commission's initiative to further improve SMEs' access to capital and facilitate the launch of new businesses. Especially the introduction of a European venture capital passport passport for managers and venture capital funds could prove to be a useful measure. Furthermore, when implementing the proposed framework conditions in Germany, the Federal Government could attach tax regulations to the status of EVCF to keep Germany's fiscal costs low.[285] Yet, the regulation will have to be more specific in certain respects. Thus it is still unclear how e.g. the requirement of "sufficient own funds" or "adequate human and technical resources" shall be fulfilled in practice.

General appeals addressed to different Federal Governments over the years to introduce a reliable, internationally competitive framework for venture capital investments have not led to any results yet. In the view of the Expert Commission, the Modernisation of the Provisions for Capital Holdings Act (MoRaKG, cf. Annual Report 2008), which was introduced in 2008, did not lead to the desired results either. Furthermore, it has proven to be incompatible with the European Commission's aid frameworks.

With its current framework conditions for venture capital, Germany is thus situated only in the (lower) middle range when compared with other European countries. This deficit remains to be an obstacle for innovative progress in Germany. Should the political stakeholders keep up their reluctance, recent positive trends in the area of start-ups – which could be observed in several German regions (and most notably in Berlin) – could suffer in the long term. After more than ten years of hesitation and failures in this policy area, it is now the time for consistent action.