

PART II

KEY POLICY ISSUES IN ENTREPRENEURSHIP AND SME DEVELOPMENT

Part II of this report is structured in six thematic chapters. Each chapter starts with a summary of main findings from the local case study areas by the OECD. In the following paper, both theoretical and practical aspects of policy action are discussed in light of new policy approaches and options. References are made to good practice initiatives in East Germany and other regions in OECD member countries. A chapter concludes with the OECD policy recommendations presented as a 'Checklist'. Along with a selection of international learning models and good practice examples in East Germany, this final section of each thematic chapter aims to inspire policy innovation and the development of local approaches to strengthen entrepreneurship.

CHAPTER 3

FINANCING ENTREPRENEURSHIP

POLICY ISSUES IN FINANCING ENTREPRENEURSHIP

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Introduction

More than 15 years after the German re-unification, economic development in most regions of eastern Germany is still lagging behind other OECD countries, as reflected in poor figures for important economic indicators like high unemployment rates, increasing migration of human capital, and minor purchase power (e.g. Federal Statistical Office, 2006). Recent research studies have shown that entrepreneurship is a critical component of local economic development with regard to the harmonisation of living standards in Germany (OECD, 2003). Hence, fostering entrepreneurship via promotional schemes for small and medium-sized enterprises (SMEs) and start-ups is now an important objective for policy makers and governments around the world. A major impediment that affects the foundation, growth and survival of a business is the problem of acquiring sufficient financial resources, which may arise due to supply-side and/or demand-side behaviour. Consequently, reasonable policy recommendations ensuring and advancing the availability of external finance for entrepreneurs as well as influencing SME financial behaviour are a topic of great importance for policy makers. Given the definition of entrepreneurship as the pursuit of opportunity beyond the resources you currently control (Stevenson, 1999), the central role of obtaining financial resources becomes evident also from a theoretical and empirical research perspective.¹ Unlike the assumptions of standard neoclassical market models, capital markets are usually not perfect. Capital rationing as an outcome of capital markets is influenced by the actions of capital suppliers, e.g. banks, venture capitalists, government, and the companies demanding funds. Thus, the underlying theoretical framework is based on different demand-driven and supply-side theories. It is widely accepted that the existence of informational asymmetries, agency costs and associated risk between SMEs and providers of finance is a key issue for the occurrence of market imperfections and policy interventions. Therefore, this chapter mainly utilises microeconomic models of financial behaviour concerning asymmetric information and risk.

The chapter is structured as follows: Chapter 2 reflects the relevant theoretical models of financial market behaviour and their empirical relevance. Since capital constraints can result from demand-side and supply-side behaviour, both sides are taken into account. Chapter 3 analyses the existing financial market inefficiencies in Eastern Germany for entrepreneurial firms by investigating the financial behaviour of entrepreneurs as well as financial sources in terms of promoting programmes, equity and debt financing. Concurrently, initial policy recommendations which could mitigate the analysed market inefficiencies are identified. Chapter 4 concludes with deeper insights into the policy recommendations by reflecting recent OECD policies and international learning models with regard to the Eastern German context shown in chapter 3.

¹ Within this paper the terms 'entrepreneurship' and 'entrepreneur' are equally applied to start-up firms and self-employed as well as traditional and high-tech SMEs.

Models of SME financial behaviour

Pecking order model of capital structure choice

The financing choices of a company are reflected in its capital structure. Since Modigliani and Miller's (1958) seminal work, a vast amount of theoretical and empirical literature in the field of capital structure research has emerged. Nonetheless, recent research found indications for the superiority of the pecking order model (e.g. Shyam-Sunders and Myers, 1999; Fama and French, 2002). The existence of a pecking order among the available financial sources was observed first by Donaldson (1961) and later re-introduced as a theoretical framework by Myers (1984) and Myers and Majluf (1984). According to this model, due to information asymmetry between insiders (management or entrepreneurs) and outside financiers, firms use financial sources in the following order: initially internal funds (retained earnings or equity supply by insiders), afterwards long-term and short-term debt, and finally, if all other sources are exhausted, outside equity. The extent of asymmetric information between a company and possible capital suppliers directly affects the inherent cost of capital that increases in line with the pecking order (Pettit and Singer, 1985) due to monitoring cost and investment risk for outside capital suppliers. In addition, entrepreneurs tend to be especially reluctant to increase business transparency, as that is often accompanied by a loss of control of the business (Hamilton and Fox, 1998).

Although the pecking order model was not been developed with SMEs in mind (Ang, 1991), several empirical studies indicate financial behaviour consistent with pecking order predictions for mature SMEs (Jordan et al., 1998; Zoppa and McMahon, 2002; Börner and Grichnik, 2003; Sogorb-Mira and Lopez-Gracia, 2003). Since Eastern German SMEs are mainly small and smallest companies, which tend to be virtually opaque, the occurrence of a financial behaviour is consistent with the predictions of pecking order model. For start-ups and high-growth ventures, empirical findings imply a slightly different behaviour: According to Paul et al. (2007), start-up firms are likely to follow a bridged pecking order in financing behaviour: internal funds, equity, and debt. For high-growth ventures, recent research found indications for the same partly reversed pecking order (e.g. Grichnik et al., 2007). The particularities of Eastern German entrepreneurial activity also presumably lead to modified financial behaviour in the shape of a truncated pecking order (see also Börner et al., 2007). The high proportion of necessity entrepreneurs among the start-ups with its typically low financial demand is not of interest for venture capitalists. For such entrepreneurs, internal funding is usually insufficient due to a shortage of private savings. The available financial resources for high-tech ventures in Eastern Germany are often limited to the largely nonexistent informal investor capital, e.g. business angels, and/or governmental promotion schemes because of the previously discussed lack of personal savings and capital gains, as well as the existing informational asymmetries which hinder the debt supply.

Life-cycle model of financial sources

Life-cycle models subdivide a company's lifetime into a number of stages, usually representing inception, growth, and maturity. Since early discussions in financial theory (e.g. Walker, 1989), the traditional view of the financial life-cycle of a company has not changed significantly. The financial life-cycle model presents the movement of an outcome dimension (revenue or cash flow) subject to the firm's development, thereby investigating a company's financial demand and the financial sources being available to the company.

The traditional model of financial life-cycle predicts that young and small firms, in the early stage of their life-cycle (start-up firms), are facing a situation of having neither a track record nor collateral assets, cash flows/revenues which are usually negative, and sales markets which are sometimes not

established, especially for innovative high-tech start-ups. The company is mainly made up of the business idea; ideally exposed in a proper business plan. Asymmetric information and risk involved in the business are consequently higher than in mature SMEs. Due to a limited self-financing and debt capacity, start-up firms rely heavily on personal savings, loans from family and/or friends, subsidies like public credits and/or outside equity provided by business angels (e.g. Mueller, 1972; Hutchinson, 1995; Kimhi, 1997). Therefore, young SMEs in particular and start-ups in the early stage should be supported by business angels. Beside financial supply, business angels provide substantial managerial knowledge and access to their personal network. In addition, a business angel's investment promulgates a positive signal of the SMEs quality mitigating informational asymmetries. However, the available financial sources for start-ups are not homogeneous, due to differences in personal collateral of the entrepreneur, growth opportunities of the firm and investment risk (Berger and Udell, 1998).

In contrast, when a company grows and matures, it generally develops a reputation (Diamond, 1991) and hence, creditworthiness which facilitates access to (long-term) debt financing. The existence of a track record and collateral assets usually supports the reduction of investment risk. Beside debt financing, successful and growing companies are of interest for venture capitalists. Most Eastern German SMEs were founded after the accession of the GDR into the Federal Republic of Germany and are thus usually in the early stages of their life-cycles because they generally could not develop a reputation and establish creditworthiness. Therefore, business angel capital, governmental loan schemes, short-term credits (e.g. overdrafts or trade credits), micro loans, or internal funds are more suitable financial sources.

Models of supply-side behaviour

Market imperfections in capital markets also occur due to supply-side behaviour. Despite the variety of potential financial sources, this chapter only includes supply-side theories focused on explaining the behaviour of creditors, especially banks, since bank debt is of particular relevance for entrepreneurship in Eastern Germany. As will be later detailed, Eastern German entrepreneurs need to rely on external debt finance due to limited self-financing capacities and the absence of a widespread informal investor network. Moreover, a recent KfW study of SME financing behaviour indicates that Eastern German SMEs consider long-term and short-term debt as the most important external financial sources and external equity as relatively unimportant for their businesses. (KfW, 2006).

Model of credit rationing

The existing theoretical literature on credit rationing is based on the well-known model by Stiglitz and Weiss (1981). In contrast to the traditional macroeconomic model, Stiglitz and Weiss (1981) could demonstrate that credit rationing may appear even in a credit market equilibrium due to informational asymmetries. Hereby, credit rationing is defined as the situation in which lenders reject certain loan applicants even if they offer to pay higher interest rates; hence, demand exceeds supply of credit. The model assumes that banks seek to maximise the expected return of their credit portfolio, which is influenced by the interest rate and the risk of the issued loans. Taking into account the existence of asymmetric information between the creditor and SMEs, the limitation of credit availability instead of increasing interest rates or collateral requirements can be advisable for the lender in order to maximise his expected profit. Increased interest rates or collateral requirements can augment the loan portfolio's inherent risk due to (i) moral hazard (borrowers are induced to invest in riskier projects in order to meet their profit expectations), and/or (ii) adverse selection (borrowers with projects of good quality will leave the market).

SMEs in Eastern Germany are mainly small businesses with a relatively short market history. SME owners traditionally try to keep as much business information as possible inside the business,

e.g. by choosing a legal status with a low level of disclosure requirements. Thus, SMEs and in particular start-ups usually face higher informational asymmetries than large public corporations, and consequently these businesses are theoretically more likely to suffer from capital rationing. It is worth mentioning that the existence of personal or corporate collaterals can mitigate credit rationing (Bester and Hellwig, 1987). But most Eastern German entrepreneurs, especially within widely spread smaller and smallest or younger firms usually cannot provide sufficient collateral and therefore presumably experience more credit constraints. Credit constraints can produce a misallocation of financial resources (Evans and Jovanovic, 1989; Greenwald and Stiglitz, 1993) and moreover, might hinder the further development of a substantial SME sector by leading to underinvestment. To reduce these misallocations and imminent underinvestment in the long run, information asymmetries must be reduced, e.g. by providing knowledge about the credit rating process to entrepreneurs or by facilitating the *hausbank* principle. In the short run, offering substitute financing products, e.g. leasing or sale-and-lease-back, and collateral substitutes, e.g. credit guarantees, can bypass the existing information asymmetries.

Market power approach

The impact of financial institution structure on credit availability for entrepreneurs and its consequent impact on economic growth has been the subject of recent research interest (e.g. Berger and Udell, 2006; Boot and Thakor, 2000). The competitiveness of the banking industry seems to be an especially important dimension of a bank's behaviour in the credit markets.

The traditional market power hypothesis suggests that the competitiveness level in the banking market is positively correlated with credit availability and negatively correlated with credit interest rates for SMEs. High competitiveness usually results in higher investments in relationship lending technologies which are a main component of the German *hausbank principle*. In contrast to transactions lending technologies, e.g. financial statement lending or credit scoring (Berger and Udell, 2002), relationship lending does not solely rely on hard quantitative data like balance-sheet information or collaterals. Using relationship lending technology means that a bank's credit decision is mainly based on soft qualitative information about the company and its entrepreneur(s) which is accumulated through continual contact over time (Berger and Udell, 2002, 2006). This proprietary information has substantial value since it has the potential to transcend strong informational asymmetries between lender and borrower (Boot and Thakor, 2000). Empirical findings indicate that small, locally dominant financial institutions like savings banks and cooperative banks have comparative advantages in relationship lending to smaller and informational opaque SMEs (Berger et al., 2005). As indicated above, Eastern German SMEs are typically facing information asymmetries and/or a lack of credit collaterals. In addition, the banking sector in Eastern Germany is concentrated and hence less competitive, which makes credit unavailability more likely. Facilitating competitiveness within the banking sector in Eastern Germany and strengthening the *hausbank* principle might ease SME's access to debt.

Financial market inefficiencies in Eastern Germany

On the existence of a financing gap

The existence of a financing gap usually refers to an insufficient supply of capital particularly by banks and capital markets to meet the demand of certain companies, first and foremost SMEs (OECD, 2004; Cressy, 2002). Consequently, the financing gap is closely linked to the concepts of capital constraints. Since the seminal work of Stiglitz and Weiss (1981) on credit rationing and its advancement to equity markets (Hellmann, 1995; Hellmann and Stiglitz, 2000), the scientific discussion on the existence of a financing gap, especially for SMEs, is still going on with strikingly

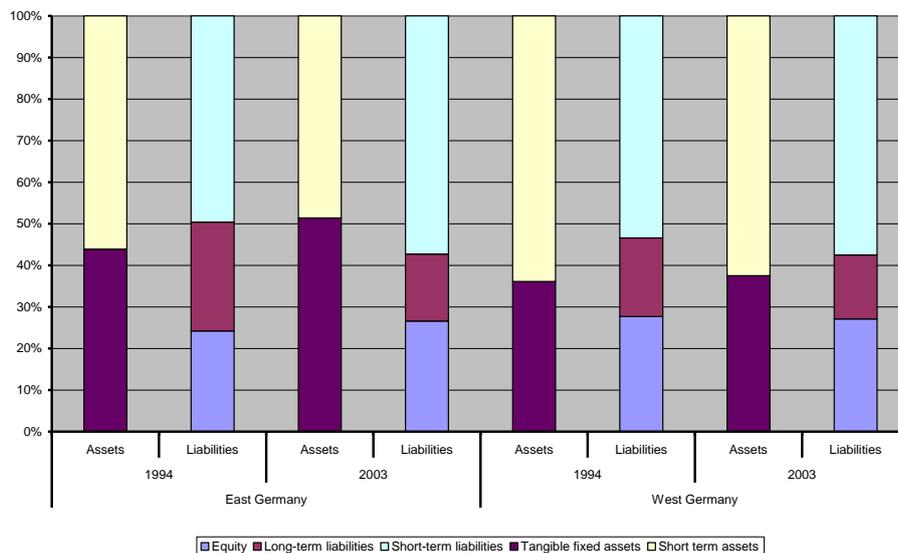
mixed results. From a theoretical point of view, considering informational asymmetries and agency problems, the rationing of small and medium-sized companies in the market of external finance can be easily testified (e.g. Berger and Udell, 1998). In contrast, direct empirical evidence on the existence of financial constraints is hard to obtain, due to data unavailability (Bonnet et al., 2005; Egelin et al., 1997). Nonetheless, there are various attempts to document the existence of an at least partial financing gap for SMEs by presenting empirical findings (e.g. Evans and Jovanovic, 1989; Audretsch and Elston, 1997) or anecdotal reports (e.g. Blanchflower et al., 2001; OECD, 2006a). In order to assess the existence of market inefficiencies leading to funding gaps, this chapter evaluates the financial behaviour of East German entrepreneurs as well as the financial sources currently available to them.

Financial behaviour of East German entrepreneurs

Traditional SME financing in Eastern Germany

A firm's financial behaviour is ex post reflected by its balance sheet structure that also signals the firm's risk ex nunc. According to figure 1, the financial behaviour of East German SMEs has recently led to a disadvantageous horizontal financial structure: Tangible fixed assets are partly financed by short-term liabilities, which means serious financial risks. Furthermore, the high proportion of tangible fixed assets causes high depreciation, cutting profits and thus, resulting in a lower return on equity. Regarding the debt-equity ratio, Eastern German SMEs caught up and there seems to be no significant differences compared to Western Germany (East 2.8 and West 2.7).

Figure 1. Financial structures of Eastern and Western German SMEs



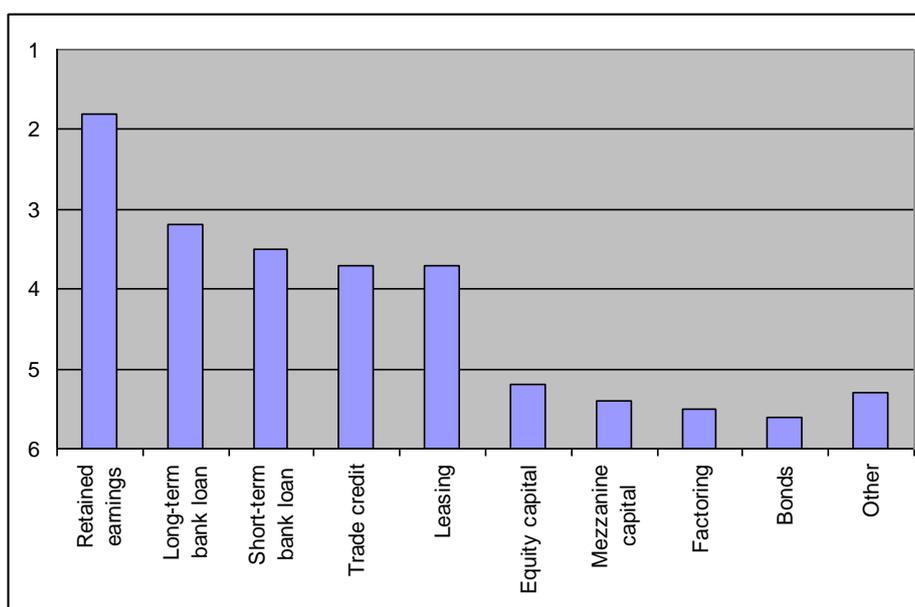
Source : KfW (2005)

However, most Eastern German SMEs do not correspond to the traditional Western German view of a medium-sized firm which leads to a specific structure of the SMEs sector in terms of company size and industry: An overwhelming fraction of regional dispersed small and smallest companies with very low equity rates (mainly operating in traditional industries) are opposed by only a few large SMEs, primarily clustered in lighthouse regions like Berlin, Leipzig or Dresden, with adequate or high equity ratios (KfW, 2005). Consequently, the horizontal financial structure (relation of long-term

assets and long-term capital) as well as vertical financial structure (relation of debt and equity) are presumably worse for most Eastern German SMEs than indicated by figure 1.

Recent financial behaviour facilitates the appearance of capital rationing for those SMEs, as stated by the model of Stiglitz and Weiss. Therefore, enhancing the existing financial structures of SMEs should be a mayor concern for policy makers. The asset side of the balance sheet could be optimised by reducing the amount of fixed assets using credit substitutes like leasing or sale-and-lease back. Smaller and smallest companies are especially hesitant to use those instruments (KfW, 2006). On the other hand, rational capital structure decision-making should be backed by policy recommendations directed to financiers and entrepreneurs. Figure 2 indicates that Eastern German SMEs obviously intend to follow the traditional German financing paradigm by eliding the existing variety of financial sources and preferring the use of retained earnings and debt over equity, which is rational in terms of minimising capital costs according to the pecking order model. But furthermore, a firm's financial behaviour is influenced by the financial environment.

Figure 2. Relevance of financial sources for Eastern Germany SMEs



Note: '1' means very important, '6' very unimportant.

Source : KfW (2006)

Eastern German SMEs often operate solely in local markets and therefore suffer from the negative economic situation in most local regions in Eastern Germany. Stagnating or declining revenues (OECD, 2006a, 2006b) are thus limiting SMEs' internal financing capacity. The majority of SMEs in Eastern Germany is therefore highly dependent on external finance. But the access to bank loans for established Eastern German SMEs is still more challenging than in Western Germany (KfW, 2006), particularly at the regional level (OECD, 2006a) and for smaller and smallest SMEs (Engel et al., 2006) since the range of banks' financial products is geared to the traditional characteristics of Western German SMEs. Within the existing structural environment of high unemployment, minor equity ratios, low rates of return, and insufficient or valueless collaterals (KfW, 2006), capital rationing is likely to occur. Credit applications – especially for capital and bridge loans – are therefore often refused (OECD, 2006a). Appropriate policy recommendations should promote the use of equity

financing. But entrepreneurs traditionally are reluctant to relinquish control (Kuratko et al., 1997), and equity capital is widely unavailable for small and smallest companies operating in less dynamic regions (Nolan, 2003; OECD, 2006a). In terms of minimising capital cost and informational asymmetries, policy recommendations to amend the availability and acceptance of mezzanine capital products can be used.²

Promotional programmes also play a well-established role in the financial behaviour of SMEs: nearly 40 % of Eastern German SMEs apply annually for a loan scheme (KfW, 2006). Most applicants belong to the group of larger SMEs which indicates informational deficiencies on side of small and smallest companies in Eastern Germany. Moreover, most SMEs in Eastern Germany use governmental benefits extensively, which do not contribute to equity creation (OECD, 2006a). Therefore, policy recommendation aiming at an advanced supply with appropriate information on the variety of promotional schemes to entrepreneurs can be used to support rational financial behaviour by SMEs.

Start-up financing in Eastern Germany

The availability of sufficient and appropriate financial resources is a major precondition for the foundation and long-term sustainability of new ventures (Brettel, 2003). Unfortunately, the Global Entrepreneurship Monitor (GEM) for Germany (Sternberg et al., 2007) recently reported a worsening of capital supply for German start-ups: the financial conditions for new ventures are rated by the interviewed experts with a substandard index value of 2.75 ('1' lowest and '5' highest possible index value). This means a decline of the index value by 0.36 in the last four years. Compared to other industrialised countries, the financial conditions are ranked on the 12th place out of 15, losing four places in the last four years.

According to the predications of the financial life-cycle model and the concept of a truncated pecking order (Howorth, 2001; Börner et al., 2007), start-up financing is typically limited to the private capital of founder, family and friends ('3 Fs'), business angel capital and/or governmental loans. But the particular structure of the Eastern German start-up sector is resulting in financial behaviour that is partly differing from theoretical predictions.

First, the GEM reports significantly lower entrepreneurial activity in Eastern Germany than in Western Germany (Sternberg et al., 2007): In the middle of 2006, 2.9% of the people between 18 and 64 years of age in Germany tried to start a business. The percentage for Eastern Germany was 1.7%, which is only slightly more than half as much as in Western Germany. Furthermore, the reasons for starting a business seem to be different: more than half of all business foundations in Eastern Germany (54 % in 2006) are induced by unemployment compared to 24 % in Western Germany (KfW, 2007d). These necessity entrepreneurs are most likely less qualified and their business ideas are usually imitative and non-innovative (Sternberg et al., 2007). Therefore, their financial needs are presumably low; most founders' financial needs are less than EUR 10 000 (KfW, 2007d). Nonetheless, the '3 Fs' are not suitable sources of capital due to the lack of financial savings in Eastern Germany, whereby founders are largely dependent on external finance. But debt financing is usually not available simply because low credit amounts are inefficient for most banks due to high fixed costs, especially for monitoring and handling. In addition, business angels are not interested in investing in these generally low growth start-ups (Brettel, 2003). Consequently Eastern German business founders often need to rely on governmental support programmes. The institutional and regulatory infrastructure of start-up supporting programmes in Germany is world-leading, and in particular, the broad variety and quality

² Mezzanine capital is a collective term for hybrid financial instruments that combine certain characteristics of debt and equity products (Sinnenberg, 2005), which implies a wide latitude of financial structuring opportunities like silent partnership, subordinated loans, profit-sharing rights or convertible bonds.

of the public programmes is unique (Sternberg et al., 2007). However, the existing programmes are seen as non-transparent, especially for less qualified founders, and even less effective compared to other industrialised countries, as reflected in the fact that Eastern German founders mainly apply for benefits provided by the Federal Employment Office, e.g. the former *Überbrückungsgeld* or *Ich-AG Zuschüsse*, which provide only limited financial margin. Therefore, the existing promotional schemes have to be reorganised in terms of transparency, and appropriate information supply guidelines need to be established (e.g. the newly established *Gründungszuschuss* [founding subsidies]). In addition, existing credit constraints need to be addressed by implementing micro lending³ supporting schemes area-wide in Eastern Germany.

Start-up firms which require higher levels of capital tend to finance their growth with outside equity and governmental grant schemes (KfW, 2007d). The appropriate source of capital for these highly return volatile companies seems to be equity capital provided by business angels or venture capitalists (Brettel, 2003). Although the GEM 2006 Financing Report (Bygrave, 2007) notes the sufficient availability of informal investment capital in Germany, contrary recent case studies by OECD (OECD, 2006a, 2007b) report that private informal equity capital is nonexistent in several regions in Eastern Germany. Most equity supply is granted by governmental programmes (OECD, 2007b), that are usually only temporary available. Therefore, promotional programmes should focus on developing private informal investor networks.

Besides supply-side constraints, studies also indicate possible sources of market imperfections in entrepreneurs' behavior. Several capital suppliers recently complained about the poor quality of business plans, which are seen as insufficient for the purpose of a project's due diligence (OECD, 2006a, 2007b). In addition, the GEM 2006 Financing Report (Bygrave, 2007) indicates that most nascent entrepreneurs expect their start-up to be funded primarily by bank loans. This kind of overestimation can cause severe danger for a successful business foundation, since debt is often not suitable for start-ups as explained above. Therefore and due to cost efficiency, regional government schemes on Land level are needed, with regard to business-knowledge training for potential entrepreneurs.

High-tech SME financing in Eastern Germany

Although innovative entrepreneurial firms only account for a small share of all SMEs, they are the cornerstone of the economic growth and structural change which lead to an improvement of a country's macroeconomic situation (Czarnitzki and Hussinger, 2004). At the same time, small high-tech start-ups as well as existing entities are most likely to suffer from capital market imperfections due to their risk-fortifying characteristics (Colombo and Grilli, 2007).

The founders of innovative high-tech ventures are often engineers and scientists, who tend to lack relevant business skills (Gottschalk et al., 2007). Furthermore, there usually exists no prior market history of comparable cases and the products or services of high-tech firms are normally new to the market and technically complex (Backes-Gellner and Werner, 2007); hence, market success and the creation of adequate revenues are highly uncertain. In addition, their assets are usually knowledge-based and thus intangible. Those characteristics imply the existence of high informational asymmetries between the firms and capital suppliers which, according to the model of Stiglitz and Weiss (1981), leads to capital constraints, especially on credit markets. Although literature on entrepreneurial finance (e.g. Denis, 2004) argues that debt is an unsuitable source of high-tech financing due to limited interest-payment capacities, recent studies indicate that high-tech ventures in Germany are very likely

³ Microlending describes the extension of small (micro) loans to entrepreneurs with minor external financial needs which are usually not fundable by traditional banks.

using debt as financial source, if available (e.g. Gottschalk et al., 2007). Referring to this, OECD (2007b) reports banks reducing finance schemes and more restrictive conditions for the access to promotional schemes in parts of Eastern Germany. Since most high-tech firms in Eastern Germany are not able to show a past success record of their R&D activities in the form of patents (Czarnitzki and Hussinger, 2004; Czarnitzki and Licht, 2004), creditors need other instruments, e.g. educational history of the founder (Beckes-Gellner and Werner, 2006), to bypass informational asymmetries.

Nevertheless, most innovative firms rely or have to rely on sources other than senior debt as predicted by the financial life-cycle model (Gottschalk et al., 2007). Since personal savings are relatively low in Eastern Germany, financing through private resources ('3 F') is largely impossible. The founder's financing decisions are thus limited to equity financing and/or governmental promotion schemes. Informal equity sources, particularly business angels, are assumed to play a key role for bridging the financial gap of high-tech firms (OECD, 2006c; Nolan, 2003) because they usually provide essential 'knowledge capital' beside risk capital (de Bettignies and Brander, 2007). But despite recent SME capital market developments (e.g. launch of stock market segments for SMEs), private business angels and venture capitalists networks are non-existent in several regions of Eastern Germany (OECD, 2007b; BAND, 2007a). In order to overcome the information and search costs barriers existing on both market sides, policy recommendation facilitating a further development of business angel networks (Mason and Harrison, 1997) can be used.

Most innovative firms in Eastern Germany are consequently using governmental schemes providing loans and/or equity (Czarnitzki and Licht, 2004; OECD, 2007b), especially with EU financial support. This financial behaviour causes concern, as public subsidisation is temporary and limited in amount. In addition, several authors question the appropriateness of the widely dispersed governmental financing (e.g. Legler et al., 2004), since the innovation efficiency of Eastern German firms is significantly lower than in other OECD countries (Aschhoff et al., 2006; KfW, 2005). Consequently, the dependence of high-tech SME's on governmental financing need to be reduced, ideally by facilitating access to equity capital. Therefore, policy recommendations aimed at a build-up and support of regional venture capital and business angel networks in Eastern Germany are recommended.

Financial sources for Eastern German entrepreneurs

Financial promotion programmes

There are more than 300 promotional programmes for each Land in Eastern Germany including federal, regional and supranational programmes. The majority of all promotion programmes is offered by the KfW *Bankengruppe* which is owned by the federal German government (80 %) and the *Länder* (20 %). Therefore, the KfW *Mittelstandsbank* (KfW SME bank) offers loans, mezzanine financing and equity capital accompanied with consulting services as important indirect help to SMEs, start-ups and self-employed. Specifically long-term loans such as classic financing modules play a central role. Mezzanine financing and other innovative instruments pursue the goal of eliminating financing barriers and strengthening the financing structures of entrepreneurial firms. The existing programmes can be divided into (i) programmes addressing start-ups in early stage, (ii) programmes for specific industries and (iii) promoting programmes of the respective Land.

One of the most important programmes addressing start-ups and supporting entrepreneurship is the KfW micro loan programme offering loans up to EUR 25 000 to enter into self-employment (figure A-1 provides a brief overview of existing KfW programmes). A larger financial demand can be satisfied with start-up funds enabling business founders to finance projects up to EUR 50 000. Concerning start-up funds, the accommodating conditions (e.g. 80 % release from liability; fixed

commission for regular bank, enabling it to finance smaller projects) should be mentioned. These programmes with a total sum of EUR 107,6 million in 2006 and an increasing tendency (KfW, 2007b) are well applied to support low-cost start-ups in Eastern Germany due to a smaller amount of savings and could consequently support necessity entrepreneurs (see figure A-2 for an overview of KfW's business figures). In addition, several public banks of the *Länder* offer, beside the procurement of KfW programmes, their own promotion programmes focusing on start-ups, e.g. start-up and growth financing in Saxony (figure A-3 offers an overview of the most important and most common regional programmes provided by the public banks of the respective Land). Facing the intensity of firm-founding in Eastern Germany and the associated demand on financial resources, the summation of start-up financing programmes tends to be insufficient and consequently implies a recommendable increasing supply.

Supporting special industries is another important aim of promotional programmes. Start-ups in the high-tech sector are especially important economically. Therefore, KfW offers the *High-Tech Gründerfonds*, a combination of loans and equity capital, as a consortium of the federal German government, the KfW itself, and some industrial enterprises. The support of high-tech start-ups began with a total amount of EUR 262 million and has actually promoted about 300 technology-based companies. This support contains (i) management coaching as expedient addition, e.g. at preparing the obligatory business plan, and (ii) the mentioned risk capital. In a subsequent financing round, this sum can be enlarged by additionally EUR 500 000. Therefore, *High-Tech Gründerfonds* cooperates with diverse investors, e.g. venture capital companies, seed funds, business angels and corporate venture capital companies. Concerning Eastern Germany, the founder requires only 10 % equity capital (in contrast to 20 % in Western Germany). Half this sum can be represented through seed investors (High-Tech Gründerfonds, 2007). In addition, the ERP innovation programme⁴ by the KfW offers low-interest loan financing for innovative enterprises; the public bank of Brandenburg, as another example, provides special loans for film production, agriculture and technology oriented SMEs. The introduced programmes illustrate excellent possibilities to support specific industries. Nonetheless, the effectiveness and efficiency of those programmes has not been evaluated due to data unavailability. Consequently, the implementation of continuous evaluation systems for each programme seems to be useful and is recommended.

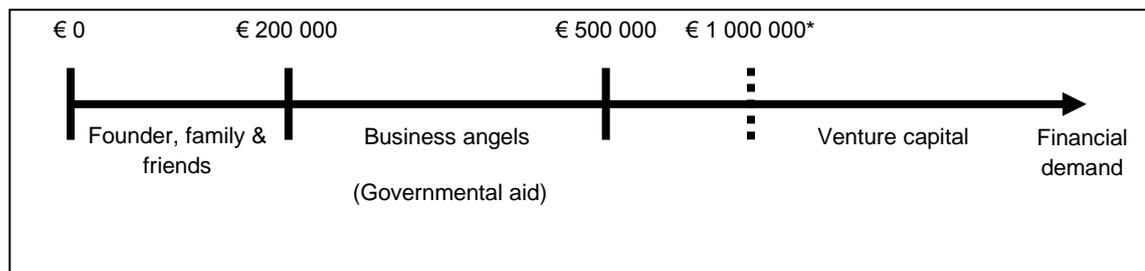
Already the regional programmes with a specific focus, either on start-ups or industries, provided by the federal bank of the respective Land have shown the need for regional structural promotional programmes as well as a corresponding demand. In addition, KfW's ERP regional promotion programme offers favourable and long-term financing for investments to SMEs in structurally weak areas (especially in Eastern Germany). Consequently, (i) all programmes need to be evaluated continuously, (ii) in particular the efficiency of each programme must be ensured, and facing the amount of promotional programmes (iii) a guidance agency overcoming information inefficiencies and (iv) an optimisation of the amount by an expedient merging of allied programmes seems to be recommendable. The required implementation of a today's missing benchmark institution to control the programmes' efficiency should be on the respective responsible level: Federal programmes need to be evaluated on federal level, regional ones on Land level. Due to efficiency the guidance agency could be installed on federal level. As an example, the supply of entrepreneurial information by the Federal Ministry of Economics and Technology could be enlarged and concentrated. For an optimal amount of promotional programmes, all institutions should cooperate to create a plain and clear system of these programmes, helping potential entrepreneurs to identify all fitting financial opportunities.

⁴ ERP stands for European Recovery Programme.

Private equity financing

Focussing the financial demand of SMEs in general and of (high-tech) start-ups in particular, the need for business angels' activities is apparent. Figure 3 illustrates SME's financial demand by providing evidence of the financial sources.

Figure 3. Private capital sources to cover SME's financial demand



The '3 Fs' are, in general, able and willing to spend up to approx. EUR 200 000. Due to the wealth situation in Eastern Germany, this amount seems to be over-assessed. Venture capital is available for investments starting with approx. EUR 500 000, or in case of high-tech start-ups starting with approx. EUR 1 million. The resulting financing gap should be closed in particular by business angel investments and by government aid in terms of promoting programmes or subsidies (Ehrhart and Müller, 2007). BAND (German organisation for business angels) calculates that a maximum of 5,000 to 10,000 active business angels altogether invest between EUR 250 and EUR 1 000 million (BAND, 2007b). A single business angel's investment ranges between EUR 10 000 and EUR 500 000; hence entrepreneurial firms often need more than one business angel to satisfy their financial needs. Consequently, the number of business angels' investments needs to be higher than the amount of start-ups needing the business angel's capital. The potential East German market volume for business-angel financing could be appraised approximately with EUR 2 300 million⁵. Comparing this estimate with the existing total amount of at most EUR 1 000 million for Eastern and Western Germany implies an urgent need for action to strengthen and encourage business angels in (Eastern) Germany. In addition, recent studies (Niefert et al., 2006) show that business angels are the second most important funding source, especially for the important high-tech start-ups in Germany with a percentage of 21 % surrounded by promotional programmes (31 %) and venture capital funding (5,5 %). Subsequently the encouragement of (i) promotional programmes as seen in 3.3.1, (ii) business angels' activities, and (iii) venture capitalists is recommended in order to amplify Eastern Germany's start-ups' capital sources.

Debt and mezzanine financing in Eastern Germany

The financial system in Eastern and Western Germany can be described as traditionally bank-oriented (e.g. Audretsch and Elston, 1997): the majority of external SMEs' finance in terms of debt and mezzanine capital is supplied by banks. At the end of 2005, the 2 344 different banks in Germany lent a total amount of EUR 792 000 million to German companies (Bundesbank, 2007) with the locally operating saving banks as the most important financiers for German SMEs (DSGV, 2006). According to the market power approach of credit availability, the given structure of the German banking sector should lead to sufficient credit availability, due to the competitive market environment. But the banking sectors in Eastern and Western Germany are still not equal. First, banking markets in

⁵ BAND estimates a potential sum of EUR 5 000 million for the whole of Germany. Considering the start-up intensity in Eastern and Western Germany – 43.9 to 49.6 (Mittelstandsmonitor, 2007) – leads to an estimated market volume of EUR 2 300 million for Eastern Germany.

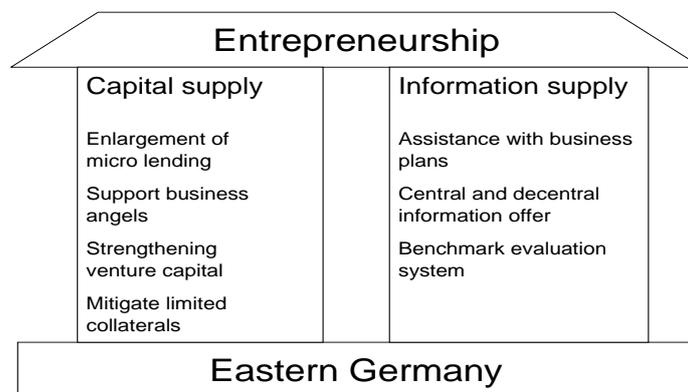
Eastern Germany are significantly more concentrated (Fischer, 2005), which is presumably the result of a thinning out of the branch network, especially of commercial banks, in minor efficient areas. With a lower level of regional competition, banks will invest less in relationship lending with disadvantageous effects for smaller and smallest firms seeking credit. Second, the banking sector has not yet adjusted their portfolio of financial products to the specific (size and industry) structure of Eastern German SMEs (OECD, 2006a). Both circumstances are facilitating an East-West-gap in lending towards SMEs in Germany: Eastern German SMEs pay higher interest rates, pledge more collateral and suffer more from credit unavailability (Lehmann et al., 2004). Therefore, policies are needed which, in the short run, provide assistance for SMEs to get loans from the banking sector, e.g. strengthening relationship lending and the *hausbank principle*, or providing guarantees, including long-term policies that strengthen the development of financial products that are well-adapted to the characteristics of SMEs (e.g. mezzanine capital, angel investments).

Since mezzanine capital products combine the characteristics of debt and equity products, a wide range of financial structuring opportunities (e.g. especially silent partnership, subordinated loans, profit-sharing rights or convertible bonds) is available. Nonetheless, there are some common features of mezzanine capital products: they are usually subordinated high-yield liabilities requiring less or no collateral with longer terms (5 to 15 years) than traditional senior debt and minimal amortisation during the first years. Thus, mezzanine products are appropriate instruments to remedy the financial problems of Eastern German traditional and high-tech SMEs stated above. Since mezzanine capital is economically treated as equity and legally treated as debt in general (Plankensteiner and Rehbock, 2005), funding with mezzanine should enhance Eastern German SMEs' capital structures and ease the access to traditional financial sources. But the German market of mezzanine products is currently marginal compared to the debt market. In 2006, the total volume of the mezzanine market in Germany has been approximately EUR 7 000 million, which is about 1% of the volume of the debt market (Plankensteiner and Rehbock, 2005). Hence, encouraging financial institutions to advance or to issue mezzanine programmes seems to be an important task for policy makers.

Areas for policy intervention

The preceding chapters have shown the prevalent demand for a subsequent improvement of existing policies. Figure 4 recapitulates and summarises these proposals which will be interpreted and enlarged during the following paragraphs.

Figure 4. Policy recommendations to strengthen Eastern German entrepreneurs



Source: Author

Enlargement of micro lending

As indicated in chapter 3.2, the financial demands of SMEs and start-ups in Eastern Germany tend to be lower than those in Western Germany. Hence, micro lending is a useful instrument to support the '3 Fs' by allocating loans – in case of KfW up to EUR 25 000. Because more than 90 % of all German start-ups need less than EUR 50 000 (KfW, 2007d), an extension of the total sum of these micro lending programmes is recommended. In fact, KfW reported merging their micro loan programmes and increasing their total amount starting with EUR 22 million in 2006 (KfW, 2007c; figure A-2; see also Kuhle, 2007). This can be seen as a positive signal to entrepreneurs and as an indication of increasing demand for small and smallest loans. As an example, the support of micro enterprise by ADIE (Association Pour le Droit à l'Initiative Economic, the association for the right for economic initiative) in France can be highlighted. ADIE, probably the biggest and most experienced supplier of micro lending in Europe, offers micro loans up to EUR 5 000, and a full spectrum of services. The fact that the costs of subsidising an entrepreneur are extremely low (between EUR 1 800 and EUR 3 000 compared to around EUR 18 000 costs for one unemployed person) combined with a repayment rate of 93 % and an average survival rate of 75 % after two years, underscores the specific amicability for necessity entrepreneurs. The high repayment rate in particular, can be traced back to the included mentoring services of ADIE's 'district loans agents'. These agents are familiar with the local context and the traditional structures which enable potential entrepreneurs to stay in the neighbourhoods they are accustomed to. Because of the region it covers, ADIE seems to be a useful example for Eastern Germany in general, and Brandenburg in particular, to support (necessity) entrepreneurs with a lower financial demand (OECD, 2006a).

Support business angels

As illustrated above, higher financial demands can be satisfied by business angels with a special focus on Eastern Germany. The integration of business angels, in the form of silent partnerships, increases the SME's mezzanine capital leading to a reduction of the dependence on debt. In addition, business angels enhance financial independence from federal promoting programmes (OECD, 2007b). To encourage their involvement, a change in the German taxation system could be a key factor. BAND proposes that the exemption of capital gains tax should be re-introduced, linked with specific key data to strengthen business angels in Germany (BAND, 2007). Additionally, the role of business angels can be strengthened by supporting a business angels' network. Due to the lack of financial power in Eastern Germany, the integration of Western German business angels in regional subnetworks should be increased. Western German business angels offer (i) larger experience in supporting start-ups and (ii) larger amounts of capital: Western German inhabitants, potential business angels, owned EUR 141 000 in comparison to Eastern German inhabitants with only EUR 104 000 (BMW, 2007). In addition, generally business angels have a high household income (Brettel, 2002) which suggests the conclusion of dominant Western German business angels. OECD expects a highly positive return on this investment because of a relatively small amount of money required and proposes widespread marketing campaigns to increase the awareness of and interest in business angels' activities (OECD, 2007a). These marketing campaigns should focus on potential business angels that are in general male, age of 45 to 65, wealthy (2/3 of German business angels have an income higher than EUR 250 000 and more than EUR 2.5 million fortune), and successful entrepreneurs with management experience (Ehrhart and Müller, 2007). From a theoretical point of view, local business angel networks are especially recommended for firms in early stages. In addition, an evaluation system that continuously registers effectiveness and efficiency of these activities must be implemented.

Strengthening venture capital

In the later stages of SMEs' life-cycle, venture capital starts to play an increasing role. Therefore, OECD proposes reviewing existing venture capital schemes and proving their relevance and effectiveness. Furthermore, the access to equity capital markets needs to be enhanced, e.g. by setting up a network for venture capitalists and capital searching high-tech firms (OECD, 2007a). As mentioned above, only a small percentage of Eastern German SMEs are using venture capital financing because of their lower sum of investment. Consequently, (i) evaluating venture capital schemes and, in addition, (ii) strengthening venture capital as source of entrepreneurial finance seems to be recommendable. Therefore, corporate venture capitalists in particular could benefit from modified incentive structures like tax advantages for venture capital investments. But this venture capital could also be acquired in Western Germany since venture capital's mobility is unlimited.

Mitigate limited collaterals

In addition, the problem of limited collaterals (especially in Eastern Germany) must be solved (OECD, 2007a). As another example, the Estonian Credit and Export Guarantee Fund (Kredex) shows that especially higher risk start-ups (such as high-tech start-ups) and established SMEs in general need the capability to safeguard their loans with guarantees for successful loan application. Due to insufficient collaterals, limited equity, and limited solvency, it is often nearly impossible for these firms to obtain credit. As illustrated above, Eastern German start-ups and SMEs suffer from comparable factors. Therefore, Kredex offers equity loans, which are considered as equity leading to an increasing willingness to lend a loan, and loan guarantees. In progress, Kredex encouraged about 2 000 jobs (OECD, 2006a); again implying the necessity for an evaluation system for Eastern Germany guarantees offering programmes. In addition, employee involvement for smaller established companies could cause increasing equity. As a positive secondary effect, employees are more connected to their firm, which could result in increasing productivity. In general, the support of equity development, as well as simplification of capital market access for SMEs, and encouraging the use of credit substitutes, leasing and factoring, is recommendable.

Assistance with business plans and 'point of entrepreneurial interest'

A convincing business plan is one of the most indispensable elements of a successful application for loans and/or promotional programmes. Consequently, the entrepreneur's knowledge of managerial skills regarding business planning, management systems and innovation management are important: Conquering existing weaknesses in business plan preparation and business development is required. Specifically, in some regions of Eastern Germany, OECD discovered that up to 90 % of business plans presented to banks are not fundable (e.g. OECD, 2006b). This implies that there is a specific necessity for education in this field (see also Grichnik and Hisrich, 2005). Therefore, innovation centres, as in Kentucky in the US, are a good possibility for entrepreneurship education, training and mentoring. Furthermore, an up-to-here implicit assumed fact could be verified: There are (potential) entrepreneurs in rural regions, which are comparable to some regions of Eastern Germany. Moreover, Enterprise Estonia, another OECD learning model, showed that support of entrepreneurial education (e.g. grants for consultancy advice, trainings, planning and implementing export projects) can be very effective. The concept of 'One-Stop-Shops' and 'First-Stop-Shops' is one example: One single agency integrates, co-ordinates and tailors entrepreneurship policies. (OECD, 2006a) For Eastern Germany with its small population density in some regions, central information and schooling centres like those in Estonia, in addition to decentralised points of reference (e.g. as 'entrepreneurial information buses') are recommended. These central information agencies need to be located in highly frequented places. Focussing on necessity entrepreneurs, they could be stationed at the *Arbeitsagentur* (employment centre). Thinking of established (high-tech) SMEs, another location (e.g. universities) should be

preferable for psychological reasons. But due to cost efficiency, creating one single 'point of entrepreneurial interest' for both types of entrepreneurs is recommended. Mobile information centres could complement this offer and provide introduction to educational and promoting programmes. In particular, figures A-1 and A-3 illustrate that the spectrum of promotion programmes for start-ups and SMEs is nearly unmanageable. Therefore, it is recommended to examine how existing administrative procedures might be simplified and streamlined which is supported by OECD (OECD, 2007a). Considering the amount of promotion programmes, easier access to these programmes is needed. Entrepreneurs currently face a latent hazard of information overload from all these programmes.

The database of the Federal Ministry of Economics and Technology (containing all federal, regional and supranational promotional programmes) represents a good first step but it must be continuously extended. In addition, offline databases should complete online ones for two reasons: First, the percentage of Internet users in Eastern Germany is still below Western Germany. Second, people with lower incomes, who can be interpreted as necessity entrepreneurs, also use the Internet at lower rates (IW, 2007). Due to economies of scale, these offline databases should be implemented within other services to create one single 'point of entrepreneurial interest'. In addition, the *hausbanks* play an important role for (potential) entrepreneurs and SMEs in Eastern Germany. In contrast, OECD proposes the independence of SMEs relating to their *hausbanks* (OECD, 2007a). As stated above, the *hausbank*, as a personalised consulting agency, needs to be strengthened to mitigate information asymmetries. The *hausbank* principle with its relationship lending helps Eastern German SMEs to take out a loan by focussing on qualitative data. Naturally, all these activities must be continuously evaluated.

Benchmark evaluation system

The financial instruments offered by private institutions are largely not co-ordinated with Eastern German SMEs' financial behaviour, resulting in partial funding gaps. In order to sustain the positive development of economic figures, promotional programmes solving these gaps are recommendable. In addition, all programmes and all presented recommendations need to be continuously evaluated and proofed for their effectiveness and efficiency, especially in the case of a missing evaluation today. Therefore, a continual benchmark programme is needed to avoid erroneous allocations of (federal) financing subsidies. These benchmarks should evaluate as well as ex post as ex interim, and additionally ex ante in the case of new established programmes. It is obviously that the respective responsible institutions need to acquire and appraise all corresponding data to create the possibility to rearrange a programme's issues in the event of missing effectiveness and/or economic inefficiency. Therefore, reliable data for (i) each promoting programme, (ii) all activities to support business angels, (iii) the strengthening of venture capital, (iv) programmes offering dept guarantees, and (v) all information offers are needed. All of this data could not be researched within this chapter, leading to the conclusion that there are no existing evaluation systems implemented today. In the case of cooperating institutions, the implementation of a system that guarantees an operating data exchange is recommended. As a positive example the integrated programme "Regional Growth" (see Box 2.3) has shown that within 2006 by subsidising EUR 8 000 for each stabilised or newly-set-up workplace, 214 new jobs had been created and 650 ones secured. In conclusion, these data enable a comparison of the in- and outputs and admit an integral benchmark of this programme.

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ANNEX

Table A-1: Overview of existing KfW programmes for start-ups and SMEs (composed of KfW, 2007a)

	Loans	Equity finance
Target group	Self-employed professionals, established businesses	Start-ups, tech companies and established SMEs
Financial aim	Cover operating expenses	Strengthen the equity base
Programmes	<p>Micro Loan Programme (micro loans for up to EUR 25 000 to enter into self-employment)</p> <p>Start-up Funds (loans for business founders, small entrepreneurs and self-employed professionals whose project does not cost more than EUR 50 000; 80 % release from liability; fixed commission for regular bank, enabling it to finance smaller projects)</p> <p>Entrepreneur Capital (products for business start-ups, young and also established enterprises)</p> <p>Entrepreneur Loan (provides universal loans for investments and working capital; established SMEs (>2 years) are 50 % release from liability)</p> <p>Entrepreneur Loan – Outside Germany (financing for investments in other countries)</p> <p>ERP Regional Promotion Programme (ERP funds at favourable terms and conditions for investments in structurally weak areas)</p> <p>ERP Innovation Programme (low-interest loan financing for innovative enterprises)</p>	<p><u>Early Stage:</u></p> <p>ERP Start Fund (provides equity finance for the start-up phase of young technological companies)</p> <p><u>Later Stage:</u></p> <p>ERP Participation Programme (supplies 'smaller' SMEs up to EUR 1 million)</p> <p>Equity for the SME sector at large (provides between EUR 1 to 5 millions for participations)</p> <p>ERP Innovation Programme (equity for young SMEs)</p> <p>KfW Venture Capital Programme (guarantees investments by equity investment firms on a pro-rata basis)</p>
Conditions (depends on specific programme)	<p>Repayment-free start-up period</p> <p>Fixed interest rates offer a secure basis for calculation</p> <p>Up to 100 % disbursement</p> <p>Possible combination with other promotional funds</p>	<p>Application necessary</p> <p>Special conditions for Eastern Germany</p>

Table A-2: Detailed business figures of KfW SME bank concerning financing programmes

	2005	2006	2006 (31 March)	2007 (31 March)
	EUR billion			
KfW SME bank	15.5	22.8	5.5	2.8
of which: loans	11.6	13.4	3.0	2.8
of which: securitisations	4.0	9.5	2.6	-
Loan financing	10.7	10.2	2.4	2.3
of which	EUR million			
Entrepreneur Loan	4 769.4	6 096.2	1 563.3	2 029.1
Start-up Fund	100.0	85.6	23.8	28.3
Micro Loan Programme	24.0	22.0	6.9	9.8
ERPInnovation Programme*	127.3	6.9	1.9	-
Global loans	5 353.1	3 643.1	737.9	154.8
Mezzanine financing	0.6	2.1	0.5	0.3
of which	EUR million			
Entrepreneur Capital	511.6	506.2	119.4	117.9
ERP Innovation Programme*	71.5	1 633.5	386.3	197.9

* The ERP Innovation Programme was modified as of 1 December 2005 and has since been offered as a mezzanine programme.

Table A-3: Overview of regional programmes

Public bank of	Saxony	Brandenburg	Thuringia (incl. Hesse)	Saxony-Anhalt and Mecklenburg -Western Pomerania (incl. Lower Saxony)
Programmes	<p><u>Start-up and growth financing Saxony</u></p> <p><u>Investment incentive</u> (Joint Agreement for the Improvement of Regional Economic Structures)</p> <p><u>Investment incentive</u> (regional growth)</p> <p>Investment bonus (Investitionszulagengesetz)</p> <p><u>SAB liquidity loans programme</u></p>	<p><u>Loans</u>: focuses on SMEs, film production, start-ups and 2nd stage, agriculture, technology-oriented SMEs</p> <p><u>Partial payment</u>: consulting, agriculture, technology-oriented SMEs, 2nd stage financing, networking, innovations</p> <p><u>Equity financing</u>: Capital Venture financing (2nd stage financing, technology-oriented SMEs, innovation)</p>	<p><u>Thüringer Aufbaubank</u>: debt guarantees, loans and subventions for all branches and all stages</p> <p><u>Bürgschaftsbank Thüringen</u>: debt guarantees for start-ups and SMEs</p>	<p><u>Loans</u> for start-ups, agriculture, SMEs</p> <p><u>Consulting</u></p> <p><u>Mezzanine financing</u> for SMEs</p> <p><u>Investitionsbank Sachsen-Anhalt</u>: consulting, Mezzanine financing, loans, agriculture financing</p>

FINDINGS AND POLICY RECOMMENDATIONS FROM LOCAL CASE STUDIES

OECD

In East Germany, there is an abundant supply of public financing, which is used by a large number of companies. There is a policy change towards the financing of innovation, away from investment allowances. If the latter are still granted, then they are assessed against the number of jobs created and secured. Across all local case study areas, a wide range of public financing programmes for start-ups and existing companies and high-tech firms can be found. The availability of financing from private sources varies between age, size and type of company. Start-up firms that have limited capacities for self-financing and debts, rely especially heavily on personal savings, loans from family and/or friends, or public financing. Ideally, over time a company should gain increased creditworthiness based on its track record and collateral assets that help to overcome eventually existing information asymmetries between demand and offer. In East Germany, where the majority of companies have been established 18 years ago, for most of these companies this was not sufficient to become creditworthy. Hence, even by mature companies, governmental loan schemes, micro loans, or internal funds are considered more suitable to meet financial needs.

It has been reported that existing SMEs suffer from limited private equity and relatively high levels of dependency on external credit and finance under interest rates on loans taken on in the early 1990s. The lack of equity capital and collaterals is considered by firms an insurmountable barrier in terms of accessing favourable credit schemes. The availability of external financing is constrained by credit rationing by private lending institutions and dependence on fixed-asset collaterals. Furthermore, in most of the local case study areas property is not always considered by banks as sufficient collateral because of the lack of demand, low prices in the property market and the burden of mortgages. Interviews held revealed that business plans are often not viable, too naïve and lacking security. There is a gap in providing feasibility of the project concept and in undertaking market research on the product/service prospects. As the majority of government financing schemes is delivered through local branches of private banks (*Hausbanken*), access to these schemes is partly restricted. Existing information asymmetries between banking institutions and borrowers make it hard for banks to determine the real value of a project, which leads to credit rationing. These framework conditions might impair the survival chances of new, young and existing SMEs, and might also negatively impact the growth tendencies of companies.

All banks and especially savings banks have a clear fiduciary duty to protect the savings and assets of their clients, but they are equally a vital part of the local 'enterprise infrastructure' in a region and they have the potential for influencing, or not influencing, strategic change. In the local case study areas, banks, mainly savings banks and co-operative banks, are often amongst founding members of technology centres and business incubation facilities. They are members of *Land*-wide entrepreneurship and SME support partnerships and support SME innovation and technology oriented business start-up competitions and awards. While local banks are active in funding established SMEs and in combining with regional banks on venture capital initiatives, their role in directly advising and funding start-ups and early-stage SMEs is relatively limited.

The majority of new start-ups are mainly micro or small-scale activities with relatively strong dependence on finance from public support programmes. These programmes seem, however, to be limited in their adaptability to the needs of supported companies, in particular with respect to the tendency of

small-sized companies for a step-by-step build up with low investment but high operating resources needs. Financing gaps exist in the financing of operating costs, in supplementary financing in difficult liquidity situations, and in the start-up financing of particular target groups (founders of micro enterprises, side-line enterprises, mini start-ups, part-time start-ups, phased start-ups). Considerable efforts have been undertaken by the Chambers of Commerce, Chambers of Crafts and the *Länder* to increase opportunities for advice and financial support for start-ups and existing companies. However, there is still a significant unmet need for financial consulting covering all forms and phases of entrepreneurship, including advice on project and business plans and counselling on creditworthiness. In particular, the high numbers of micro enterprises that have been established with the support of public programmes, like "*Ich-AG*", have little access to additional capital that would allow them to consider opportunities for business expansion. The local case studies gave the impression that financing for start-ups by unemployed people through the local branches of the Public Employment Service lacks the flexibility required to fully support the prior financing of projects and exploitation of their growth potential. Some *Land* offer a supplementary micro lending programme, which adds to the start-up support programmes provided by the Public Employment Service, covering bridging financing [*Fehlbedarfsfinanzierung*]. This initiative can be seen as a good practice example for other regions.

The following financial problems affecting high-growth SMEs were signalled by some local stakeholders: larger banks have cut back their programmes to help small firms, conditions attached to state-based small firm funding (e.g. procurement requirements) are too onerous, and there is a gap in funding in the pre-trading phase of company development. High-tech firms face particular problems associated with very high risks in the early stages, but there is also a real prospect of very high returns for the few successful projects. Investors backing a successful venture, however, may have difficulty in securing their returns when large investment is needed later on. The East German *Länder* appear to be successfully addressing this issue with a two-phase system differentiating between pre-seed and seed financing. As *Hausbanken* often lack the necessary technical understanding for fully judging the creditworthiness of a high-technology-oriented business idea, the support of certain university professors, as reported for one local case study area, has assisted a number of small firms to obtain funding from financial institutions. However, this practice operates on the basis of individual goodwill and has not yet been institutionalised.

High-tech firms, in particular, need external financing over an extended period (typically 3-5 years) and commercial banks alone can not fill this role. In contrast to other countries and other regions, the level of real venture capital available in some of local case study areas seems to be low or nearly non-existent. Some commentators suggested that legal restrictions prevent banks from entering this area. Even where venture capital has been invested it is through 'silent participation' (*Stille Beteiligung*) and does not bring therefore the active involvement of the funding institution in the business strategy and business development of the company, which is a common feature of venture capital in many other OECD countries. On the one hand, entrepreneurs seem to be reluctant to access formal sources of outside equity capital as they fear a dilution of their control over the firm. On the other hand, these schemes are focused on technology-oriented companies, which are considered to have greater market potential and potential for profit increases than SMEs from other sectors. Thus, the latter suffer from a lack of development oriented venture capital. Some of the venture capital and the activities of business angels seem to be heavily subsidised. Whilst the commitment of public funding to address market failures in economic development is always going to be required, its scale, however, will not be sustainable in the medium term as European funding finds other priorities. Venture capital schemes with public funding appear to be well-managed and to be performing well, especially in terms of the scale of private financing being attracted into investee companies alongside its own cash. However, in order to become commercial viable, the company will have to attract investment funds from commercial sources and it will have to finance its overhead from fees paid by investors. This will mean a reduction in the level of funds raised and some pressure on overhead.

Overcoming the financing gap by creating a sufficiently robust business environment and interacting with confidence on an "arm's length" basis is what a recent OECD report describes as a way of overcoming and avoiding a financing gap for SMEs (OECD 2006). In OECD countries, governments have sought to increase the availability of financing for SMEs by encouraging private financing resources to undertake investments and loans they otherwise would not make. The issue of equity financing is an important one, especially for growth and high-tech enterprises. For all kinds of companies, but especially for young firms, traditional small and medium-sized companies credit guaranty programmes are relevant for company survival and growth. In these cases, government programmes aim to increase the potential return or reduce the risk of loss to private investors and lending institutions which, in turn, will invest and finance in sectors of the economy that government aims to develop and support.

The particular structure of the East Germany SME business sector shows that credit constraints can produce a misallocation of financial resources. Existing and upcoming information asymmetries need to be reduced in order to minimise misallocations and imminent underinvestment in the long run. The policy approach to be taken should address both the demand and the offer side. Regarding the latter, the provision of information and the development of profound knowledge about credit-rating processes and investment readiness programmes proved successful in other OECD countries. For the demand side, the obvious concentration in the East German banking sector reduces competition, which increases the likelihood for credit restrictions. Hence, a facilitation of the competitiveness and a revisiting of the *Hausbank* principle should be considered by policy in order to ease SMEs access to financing from private sources. One of the characteristics of the East German SME sector is that a great share of it has a low financial demand; especially start-ups in traditional sectors need less than EUR 50 000 (KfW, 2007). This suggests that existing micro lending schemes should be expanded and introduced where hitherto nonexistent. For businesses with higher financial demands, business angels and venture capital schemes could offer potential ways of financing. To make greater use of business angels, the integration of their financing, in form of silent partnerships, should be thought of. This would increase mezzanine capital leading for SMEs and would, in turn, reduce their debt dependence. At the local level, only a small number of SMEs is using venture capital financing. An evaluation of existing venture capital schemes should be considered in light of an advisable potential strengthening of demand for venture capital as a source of entrepreneurial finance. Here, tax incentives, which would however, not be for East Germany only, should raise the interest for venture capital investments.

A number of policy recommendations resulted from the local case studies. These can be taken up by national and local governments, public and private financing institutions and business support organisations, operating locally and across different levels of government. Despite their local provenance, the policy recommendations have some relevance for other localities in East Germany and elsewhere. However, the following list of recommendations is not meant to be exhaustive, but should be considered and consulted as checklist when reviewing the local framework conditions for financing entrepreneurship, taking into consideration offer and demand sides.

Policy recommendations to improve access and usage of public and private financing for entrepreneurship

- Simplify and streamline regulations and procedures in existing support programmes.* Regulations and conditions for existing and new enterprise support programmes need to be more transparent and procedures simplified. Bureaucracy should be reduced, decision making accelerated and information made more accessible with respect to enterprise access to funding. An evaluation of the impact of regulations and procedures should be conducted on an annual basis based on feedback from client companies.
- Instigate discussion on the role of banks for local entrepreneurship development.* Local agencies should instigate discussion with regional and local management of all banks and financial institutions on how these bodies can play a stronger and more active role in promoting and providing funding to start-ups and existing SMEs.

- Address weaknesses in business plan preparation and business development.* As a contribution to resolving the problem, the banks might consider producing a guide to business applicants or undertaking some work on establishing 'mentor' panels and 'patron' panels that will guide entrepreneurs while making formal application to banks.
- Help firms to assess their own investment readiness.* Programmes should be designed to address a perceived lack of investment readiness in certain sectors by improving the level of knowledge in firms about their own growth and return potentials and methods of financing. Key features would include intensive working with each company; highly interactive workshops based on role play exercises, and delivered by experienced industry experts like accountants, lawyers, business angels, clearing banks, venture capital firms and corporate finance firms and a free diagnostic investment readiness tool. Such programmes enable firms to assess their own investment readiness, obtain feedback on their strengths and weaknesses, their ability to access equity finance, and increase investor interfaces with underinvested sectors.
- Increase investment readiness and firm access to finance.* Programmes that assist small and medium firms in increasing their investment readiness and facilitate access to finance should be primarily concerned to help firms to better access existing sources of funding, rather than creating new funds.
- Review existing venture capital schemes.* The existing schemes of venture capital provision should be reviewed as to their relevance and effectiveness in generating and supporting new companies and growing SMEs. Local agencies should examine, in co-operation with financial institutions, how joint funding initiatives might enable more venture capital to be introduced.
- Increase development-oriented financing.* Development-oriented financing initiatives should be extended from venture capital to other financial instruments, e.g. guarantees, and should be offered to all kinds of entrepreneurs, rather than just technology businesses. Extending existing institutions and instruments should be preferred to developing new ones.
- Extend micro lending.* Develop micro lending facilities and instruments at a level which is attractive to private banks. Accompanying this should be appropriate coaching and skills development.
- Seek the involvement and advice of business angels.* A developed venture capital system needs individual investors as well as venture capital funds. 'Angels', that is people who are prepared to invest in individual companies and frequently bring knowledge of the sector or other strategic advice to companies, are common in most OECD countries. They may be people who successfully started a company in the past and may have a series of companies in which they have invested. Often this type of investment is accompanied by mentoring where the individual investor or another nominated person acts as a counsellor to the entrepreneur and business. This is particularly important to businesses that are seeking to penetrate international markets or to firms that have ambitious growth plans.
- Develop programmes to boost the numbers of business angels.* The objective of such programmes is to increase the pool of business angel investors and thus boost the supply of equity to small firms. This means recruiting high net worth individuals with relevant business experience and an interest in helping to build, support, mentor and invest in early stage companies with growth potential. Often potential angels are reluctant to get involved partly due to a lack of knowledge about what is entailed and a lack of relationships with existing angel investors. The attraction of "knowledge angels" to pass on relevant professional and business experience to investee companies, without necessarily investing themselves has proved a successful ingredient of such programmes elsewhere. Widespread marketing campaigns can be helpful in increasing a general awareness of and interest for business angels activities.
- Continue the financing of business angel networks overhead costs on a minimal level.* It is important to ensure that angel networks receive only just the level of subsidy needed to maintain their operation. For the relatively small amount of money required to run an angel network, the public sector can expect to achieve a very high level of leverage on the investment finance raised. The development of incentives to seek commercial sponsorship from firms engaged in the investment process should be discussed. This could include banks, accountants and lawyers, whose involvement will also strengthen the network, helping to introduce deals and new angel investors.

Box 1. Being inspired from good practice in financing entrepreneurship

[Business Angel Development/Ready2Invest Programme in London – United Kingdom](#): Recruiting high net worth individuals with relevant business experience and an interest in helping to build, support, mentor and invest in early stage companies with growth potential.

[Venture Capital schemes for SMEs at local level: FILTRAN – France](#): Offering access to development-oriented financing in form of guarantee funding.

[Estonian Credit and Export Guarantee Fund \(Kredex\) – Estonia](#): Addressing the gap in the financial market for higher risk start-ups and SMEs through a self-financed mechanism.

[A mutual guarantee scheme: Artigianfidi Ferrara – Italy](#): Developing and delivering local guarantee schemes that makes accessing capital easier and helps local companies to lobby their needs towards banking institutions.

[Support for micro enterprises: A.D.I.E. – France](#): Financing the start and development of micro businesses through the delivery and monitoring of micro credits.

[Small-scale financing for SMEs in Mecklenburg Western Pomerania – Germany](#): Micro-lending facilities and accompanying instruments that include appropriate coaching and skills development.