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CREDIT ENVIRONMENT: MODERN RISK MANAGEMENT TOOLS

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FINANCIAL SECTOR PROGRAM

CREDIT ENVIRONMENT: MODERN RISK MANAGEMENT TOOLS

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CONTENTS

ACRONYMS

AU$	Australian Dollar
BEE	Black Economic Empowerment
CLO	Collateralized Loan Obligation
CPP	Credit Policies and Procedures
CPPM	Credit Policies and Procedures Manual
EDM	Economic Development Manager
EDS	Economic Development Specialists
EAD	Exposure at Default
ECAI	External Credit Assessment Institution
FSB	Financial Services Board
FSP	Financial Sector Program
GDP	Gross Domestic Product
IRB	International Ratings – Based
IPR	Intellectual Property Right
LGD	Loss Given Default
LPM	Loan Processing Method
M	Remaining Maturity
MSE	Micro and very Small Enterprise
OECD	Organisation for Economic Co-operation and Development
PD	Probability of default
R&D	Research and Development
RHO	Diversification and correlation
SARB	South African Reserve Bank
SFA	Senior Financial Analysis
SME	Small and Medium Enterprise
SETA	Sector Education and Training Authority
U.S.G.	United States Government
ZAR	South African Rand

EXECUTIVE SUMMARY

> **“Banking sector needs to look at appropriate products, but regulators need to enable ‘developed world’ sector to address ‘developing country’ challenges.”**
>
> Cas Coovadia, Managing Director, The Banking Association South Africa September 2, 2010 at the Reserve Bank

The objective of the Financial Sector Program (FSP) is to expand access to financial services and lower financing cost for small and medium enterprises (SMEs) through reforming the legal and regulatory framework affecting the financial sector and business environment, and improving the commercial viability of lending to historically disadvantaged SMEs in South Africa, thereby expanding SME access to a range of high quality and affordable financial services. It has been recognised that to ensure long-term developmental impact in South Africa, financial services to SMEs need to become self-sustaining on private commercial terms.

The overall business environment sets the stage for the SME sector. Since the transition to democracy took place in 1994 the majority has taken control of government and progressively increased its’ participation in the economy assisted by programmes such as the “Black Economic Empowerment” (BEE). However, international experience shows that in the SME sector such policies will not succeed unless access to financial services at affordable cost is strongly encouraged as part of the overall business environment.

Public opinion in South Africa appears to be increasingly turning in favour of intervention and control of key financial institutions. However, international experience shows that successful monetary and financial policy must generally be independent from political pressure in its design, implementation and evaluation. In the long-run, an independent monetary and financial policy benefits all sectors in the economy. SMEs are especially vulnerable to deterioration of the business environment and mistakes in financial sector regulation would cost dearly in terms of long-run growth and scope for development of the SME sector.

The financial sector is an essential partner in a broad-based SME sector strategy that includes developing new products and services. FSP can support policy changes that improve the SME business environment working with the financial sector as a development partner. Laying the foundation for subsequent SME policy reform is the motivation behind this analytical document. Preparation of this Interim Report is based on interviews with a broad cross-section of stakeholders as well as review of existing literature on SMEs and the financial sector in South Africa (for a list of stakeholders interviewed please refer to Annex A). It is expected that this report will serve as the basis for discussion with stakeholders at a subsequent stage of activities sponsored by FSP.

South Africa has enjoyed economic stability for over a decade; however, there are still distortions in the policy framework which became evident as a result of the recent international economic downturn. In particular, the overall business environment in South Africa has many implicit biases against SMEs: infrastructure constraints, constraints on market competition, labour market constraints, financing constraints, concentration of ownership and control, macroeconomic and real exchange rate volatility, a protectionist trade policy, an inefficient trade logistics system, information externalities and coordination failures, and social and environmental regulations that work at cross-purposes.

There is awareness that SMEs are disadvantaged today in South Africa. Biases in the business environment drive smaller enterprises to the informal sector and even formal SMEs are tempted to take part of their operations to the informal sector. In general, formality, bank credit and an improved business environment go hand in hand, although the SME sector is thought to deserve special policy focus.[1] In South Africa lack of access to credit is perceived as the most binding constraint on SMEs. In fact, the World Bank's most recent Investment Climate Assessment states that "*access to finance topped the list of reported obstacles to growth by micro and small enterprises.*"

In light of the above, this Interim Report addresses only issues and policy concerns around the barriers that limit SME access to credit in South Africa. It is expected that at a follow up stage of FSP activities, a limited number of these issues will be discussed with South African stakeholders, creating local awareness and hopefully leading to reform in key areas of the business environment.

Unfortunately, there is no universally accepted definition of SME. The most widely used approach to the definition of SMEs in South Africa is in the National Small Business Act, which includes the following definitions:

(a) A small enterprise employs no more than 50 employees and
(b) A medium enterprise employs no more than 100 employees, or 200 for the mining, electricity, manufacturing and construction sectors.

Also, it should also be kept in mind that SME lending involves a variety of technologies. Each lending technology is distinguished by a combination of the primary source of information, screening and underwriting, structure of loan contracts, and monitoring strategies and mechanisms. Technologies include financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, leasing, relationship lending, and trade credit. Policy analysis and design should take into consideration the full spectrum of lending technologies that are available, since different ones are appropriate for SMEs under different circumstances. There is no "one size fits all" lending technology and this implies that there is no "silver bullet" in public policy to resolve at once the issue of access to credit by SMEs.

The structure of supply along product and geographic space matters to SMEs. Existing gaps in supply affect SMEs differently depending on their location or stage of development. Often, SMEs are evaluated by credit suppliers differently according to their stage of development but most often the problem is that relationships between banks and SMEs fail to emerge. Under the "transformation" objectives of the government of South Africa, there is special concern since black-owned SMEs find it especially difficult to secure bank credit. In fact, South Africa has sought to promote the emergence of bank-SME relationships under the provisions of Black Economic Empowerment (BEE) but the results have been disappointing to date and many substantive issues remain unresolved.

In reality, there are many factors causing gaps and distortions in the SME credit market. As mentioned above, the problem of "access to credit" by SMEs cannot be framed exclusively in terms of the availability of debt finance (a quantity dimension) but also needs to be addressed in other dimensions, such as the range of products available, the nature of institutions supplying credit and the geographic reach of supply, as well as the availability of

[1] This observation applies to many countries, but it is especially appropriate in the South African context as a result of the government's transformation objectives.

complementary capital (e.g. “angel finance” and venture capital funds). The reasons for the emergence of market gaps or distortions are multiple, including the intensity of market competition, barriers to the entry of new providers, and the need by SMEs for complementary services.

The structure of credit supply can also be adversely influenced by existing regulations which often work at cross-purposes. On the one hand, the official objectives of public policy include the promotion of SMEs as well as BEE; on the other hand, certain aspects of the legal and regulatory framework actually work against the achievement of their stated objectives. This is in part due to the existence of a legacy of instruments inherited from the past, the introduction of well-meaning measures that are overlapping and occasionally contradictory, as well as lack of inter-institutional communication and coordination.

One particular area of concern is financial sector regulation, especially the impact of the New Basel Capital Accord (Basel II). The largest banks in South Africa are using the more advanced approaches under Basel II for managing credit risk broadly in line with internationally accepted practices. There are important challenges in the successful implementation of the internal ratings-based (IRB) approach, but the key determinant of credit risk is the default probability. In fact, in the spirit of the Basel II framework, improvement of the measured default probability could be considered the central design paradigm for public policy toward the promotion of SME credit.

The IRB approach is sensitive to changes in risk profiles rewarding low default probabilities and does not necessarily lead to an overall reduction of credit supply. The advanced IRB approach facilitates screening of high and low-rated SMEs and the type of risk-sensitive pricing introduced by Basel II implies changes in capital adequacy requirements. It follows that under the advanced IRB approach highly rated SMEs could require banks to hold below average capital charges, whereas low-rated firms cause lenders to hold above average capital charges. Thus different lending procedures and varying risk management techniques lead to diverse outcomes from lender to lender. Banks opting for the advanced IRB approaches have a competitive advantage over banks using the foundation or standardised IRB approaches, in terms of capital charges, when lending to better quality SMEs. It follows that a medium- to poor quality SME borrower might be better off requesting a loan from a bank using a foundation or standardised approach.

It should be borne in mind that the higher risk-sensitivity introduced in the Basel II capital adequacy rules leads to increases in capital requirements in times of an economic downturn, as well as lower capital requirements during an economic upturn. As a result, in a downturn high capital requirements may slow down the flow of loans to lower –rated SMEs and others, which in turn could intensify the economic slowdown. In light of recent developments emerging from the Basel Committee concerning international standards for setting bank capital and liquidity requirements, known as “Basel III”, there is a growing expectation that banking and regulatory practices will become tighter and risk-sensitivity will increase steadily in the next few years.

It has been reported recently that Basel III will require banks to improve the quality of capital they hold, for example, by steadily raising Tier 1 capital requirements and demanding the creation of a capital conservation buffer. This increase in capital requirements is not expected to happen overnight, with the increase in Tier 1 capital being required by 2015 and the capital conservation buffer to be available in full by 2019. It is expected also that liquidity requirements will be tightened in an attempt to strengthen the stability of the global financial system.

These global trends should be welcomed and the stronger banks are well placed to undertake the type of adjustments proposed. However, three issues should be raised by discussion within South Africa:

(a) The pace at which national standards and practices are aligned with international benchmarks should take into consideration broad economic objectives, including the government's objective to promote lending to BEE-qualified SMEs.
(b) While stronger financial institutions are likely to adjust successfully, an assessment should be made of the impact of the new rules on smaller or weaker financial intermediaries, specifically those that do business with SMEs.
(c) In this connection, South Africa could consider the adoption of a multi-track process of convergence to Basel III standards, exercising regulatory forbearance on a temporary basis so that the dynamics of SME portfolios are not undermined by the new capital and liquidity rules.

In light of a preliminary diagnostic study of the conditions for accessing credit in South Africa at the level of SMES, together with international experience in this field, the following policy alternatives are proposed for consideration and discussion:

Short-Term

- Consider introduction fiscal incentives to overcome the SME debt and equity gap.

- Review and strengthen risk modelling strategies at the individual bank level to ensure that SMEs are being assessed fairly and improve bank disclosure on the nature of its credit decision-taking process at the level of SMEs.

- Review and if needed, reform the regulatory framework to promote the availability and improve the quality of collateral and guarantees at the level of individual SMEs.

- Encourage SMEs and financial institutions to consider using financial products other than term-loans in accordance with the purpose of funds, including options such as leasing, factoring and purchase order financing.

- Start a discussion with stakeholders concerning the impact of Basel III on SME lending, giving adequate consideration to policy options such as temporary regulatory forbearance and multi-track approaches, to avoid the risk of undermining the performance of the SME portfolio in the next few years.

It is expected that FSP will undertake follow up work to promote discussion among stakeholders concerning the issues mentioned immediately above. In this regard, FSP is proposing two workshops with a policy focus, with private and public sector participation. In addition, a high-level technical workshop concerning risk measurement techniques is being considered by FSP in light of Basel II and III rules.

Medium-Term

- Improve access to data information on individual SMEs as well as at the sector level by strengthening statistical systems.

- Assess the impact of social and environmental regulation on the flow of credit to SMEs (e.g. the Equator Principles and recent legislation on waste management).

- Promote market competition in the SME market segment.

Long-Term

- Promote the emergence of venture-capital market.

- Promote the emergence of large-scale securitised-asset markets.

- Promote the emergence of CLO-fund finance for SMEs.

FSP is expected to follow up this preliminary evaluation by undertaking several workshops. More specifically, there would be a 1-day workshop aimed mainly at financial sector regulators with a policy focus; this workshop would seek to identify key regulatory reforms needed in South Africa today. A second 1-day workshop would be aimed at practitioners responsible for the application of regulatory policy; this workshop would have a more practical slant than the first one. This Interim Report and additional background materials will be distributed in advance to participants in these workshops, to prepare the ground for discussion. Also, it is recommended that a 2-day technical workshop be planned, designed risk management professionals in the South African banking system, dealing with quantitative tools in the context of IRB-type credit risk methodologies applied to the SME and micro sectors. Finally, FSP will prepare an "Interpretive Summary" of the findings and conclusions emerging from these workshops, which would serve as the basis for promoting and advocating further policy reform by interested stakeholders.

SECTION 1: BACKGROUND AND INTRODUCTION

The Financial Sector Program focuses on the SME sector. The objective of the Financial Sector Program (FSP) is to expand access to financial services and lower financing cost for small and medium enterprises (SMEs) through reforming the legal and regulatory framework that influences the financial sector and business environment, and improving the commercial viability of lending to historically disadvantaged SMEs, thereby expanding SME access to high quality and affordable financial services. It has been recognised that to ensure long-term developmental impact in South Africa, financial services to SMEs need to become self-sustaining on private commercial terms.

The overall business environment sets the stage for the SME sector. Since the transition to democracy in 1994 the majority population has progressively taken control of government and, partially by benefitting from the "Black Economic Empowerment" programmes (BEE), plays an increasing role in economic management and as shareholders in all major sectors. However, further progress in this direction might be hindered for reasons not addressed in BEE-type programmes, as SME growth is still restricted by the overall business environment. In general, international experience shows that SME access to financial services at affordable cost is strongly conditioned by the overall business environment and frequently requires pro-active policy support to stimulate and sustain SME economic growth.

International experience warns against excessive intervention and control. A quick assessment of public opinion in South Africa appears to indicate that the public is increasingly turning in favour of intervention and control, with growing pressure toward government intervention, or even "nationalization" of key financial institutions, with major efforts under way to undermine the independence of economic policy. However, international experience shows that successful monetary and financial policy should be independent from political pressure in its design, implementation and evaluation. Once independence is lost, the temptation of using and abusing financial policy is too great to be resisted by politicians and there is no reason to believe that South Africa would be an exception in this regard. In the long-run, an independent monetary and financial policy benefits all sectors in the economy and sets the stage for sound money, a stable economy and self-sustaining financial sector policies.

SMEs are especially vulnerable to a deterioration of the business environment. Safeguarding and improving the business environment for SMEs requires independence of the monetary authorities as well as implementation of sound monetary and financial policies. Note that the soundness of financial sector policy is an especially important determinant of economic growth in South Africa since the sector is the largest in the economy and is responsible for around one fifth of the country's GDP. Mistakes in financial sector regulation would cost dearly in terms of long-run economic growth and, particularly, in terms of scope for development of the SME sector.

The financial sector is a necessary partner in a broad-based development strategy. The financial sector is an essential part of a broad-based development strategy and needs to be viewed as a partner, e.g., in developing new products and services for SMEs. Work carried out with SME loan officers and managers is valuable in itself, but a preliminary diagnosis of the South African business environment suggests that complementary work at the policy level is required to make sure that FSP yields significant results in the long-run.

This report provides the basis for future FSP activities meant to improve the business environment in South Africa. FSP can support policy changes that improve the SME business environment working with the financial sector as development partners and this, in fact, is the motivation behind this analytical document. Preparation of this interim report is based on interviews with a broad cross-section of stakeholders as well as review of existing literature on SMEs and the financial sector in South Africa (please refer to Annex A for a list of stakeholders interviewed). Furthermore, it is expected that this report will serve as the basis for discussion with stakeholders at a follow up stage of activities supported by FSP which would include workshops that would bring together stakeholders, to promote discussion and create awareness of the need for policy reforms.

South Africa enjoyed economic stability for over a decade. The transition to democracy in South Africa since 1994 has been associated with improved macroeconomic stability, greater trade openness and strengthened property rights. Inflation has been brought under control, trend economic growth has accelerated, and the country's rating in external credit markets improved significantly. Seen through the optic of international statistics such as the World Bank's Doing Business, OECD evaluations and others, South Africa is virtually a "developed country" with a per capita GDP of around $11K.

However, there are still important distortions in the policy framework. There remains lingering uncertainty about changing labour market rules and unemployment trends have worsened in the long-run. Furthermore, poverty and income inequality have remained high despite implementation by government of a comprehensive battery of policy interventions meant to address these issues. Despite per capita GDP approaching "developed country" levels, around half of South African citizens still live below the poverty line, according to the World Bank. This underlines the absolute need to aggressively promote economic growth policies and specifically focus some of these policies on "pro-poor" areas by promoting the establishment and sustainability of SMEs, especially those owned and operated by previously disadvantaged, BEE qualified individuals.

The South African economy did not escape contagion from the recent international downturn. The dynamism of aggregate demand has come under pressure and growth in the non-tradable sector has already undergone a sharp adjustment.[2] Moreover, there are important infrastructure bottlenecks in transportation, telecommunications and energy infrastructure, which have led to congestion as aggregate demand expands.[3] Although the country's financial sector was able to withstand the international economic upheaval while maintaining healthy liquidity levels and a sound capital base, there was a slowdown in aggregate credit growth as the sector became increasingly cautious.

There are doubts about the sustainability of current trends. In addition, it should be noted that before the international economic crisis, the acceleration of South African GDP growth had been driven mainly by domestic demand and was associated with wider current account deficits, thus suggesting that the savings gap was increasing.[4] Moreover, consumer

[2] For a discussion of the impact of the international crisis in the South African economy please refer to IMF (2009b): "The global crisis has seriously affected South Africa."

[3] See Hausmann (2008).

[4] The slowdown of GDP growth was sharp, from 5% in 2007 to 3% in 2008 and -2% in 2009. Adjustment of the current account of the balance of payments was, however, not as sharp as adjustment of GDP, since it went from -7.35 and -7.4% of GDP in 2007 and 2008 respectively, to -6% of GDP in 2009. The IMF is projecting annual GDP growth of around 4.5% in the medium to long-term, with external current account deficits in excess of 7% of GDP. See IMF (2009a).

durables and investment in the non-tradable sector (e.g. real estate and finance) led the growth of domestic demand. In addition, government investment in energy, transport and infrastructure associated with the 2010 World Cup caused increased pressures on the non-tradable sector of the economy. To achieve GDP growth rates that are consistent with sustained employment generation and poverty reduction, further efforts have to be made to remove the binding constraints on the expansion of key economic sectors capable of generating income and jobs at a large scale.[5]

Current trends are associated with economic underperformance and social imbalances. It is estimated that in South Africa only two fifths of the working age population have jobs.[6] People of working age without employment in South Africa are typically young black females with poor education.[7] This statement may be reinterpreted as implying that there is a substantial pool of human resources that is severely underutilized today; for example, holding average productivity constant and if employment levels could be brought in line with other emerging markets, per capita income in South Africa could be increased by as much as 50%, with much of the added income dividend likely to be shared by the most vulnerable segments of the population.[8]

The overall business environment in South Africa has many implicit biases against SMEs. Discussions held with stakeholders have confirmed our expectations that there are several factors in the business environment in South Africa that are likely to hurt SMEs to a greater extent than larger enterprises.[9] Some of these factors include:

- **Infrastructure constraints.** There is a perception that South Africa has invested relatively little in infrastructure in the last decades, so that today there are bottlenecks in roads, railways, ports, electricity and telecommunications. SMEs are disproportionately hurt by this type of bottlenecks as they often do not have the capacity to absorb the increased cost of the required mitigation strategies in terms of both capital investment and management.

[5] Historically, agriculture, mining and manufacturing have been the economic activities intensively use low and unskilled labour, and their long-term decline has hurt the employment opportunities of poorly educated workers. The economic sectors that outperformed the rest of the South African economy, such as finance and services, are relatively more skill-intensive; this is associated with a tightening market for skilled labour in the non-tradable sector and growing slack at the lower echelons of the labour market linked to the tradable sector. Also, the bottleneck in the labour market is mirrored in a growing imbalance in the external sector since, as the non-tradable sector grows, it uses foreign exchange generated at this time by a declining tradable sector. This means that a sustainable strategy to redress imbalances in the labour market is inextricably linked with a rebalancing of the tradable and non-tradable sectors of the economy. This diagnoses also points to the importance of fostering linkages between SMEs and the tradable sector of the economy.

[6] The proportion of working-age South Africans actually employed is low. In countries at similar levels of development the proportion is between half and three fifths of the working age population.

[7] The unemployment rate of white South Africans is in the single digits and at levels not dissimilar from those recorded in OECD countries. In contrast, the unemployment rate of blacks is four to six times higher than for whites of comparable age.

[8] It is important to recognise at this stage that the promotion of economic growth and the alleviation of poverty are not the only strategic priorities pursued by the South African government today. Black Economic Empowerment (BEE) is a separate priority. An analysis of the economic impact of BEE is beyond the scope of this report, but it should be noted that BEE invariably introduces trade-offs between the goals of rebalancing ownership and control, promoting economic growth on a sustained basis, and alleviating poverty in the long-term. For example, BEE as implemented today raises the cost of creating new firms, worsens bottlenecks in the supply of skills in certain sectors, increases regulatory burdens, introduces uncertainties, and often discourages investment and job creation. The SME sector is likely to be especially hurt, as international experience demonstrates that high transaction costs, skill shortages, regulatory burdens and uncertainty in the business environment, hurt SMEs proportionately more than large enterprises.

[9] These factors are mentioned to set a context for further discussion on access to credit by SMEs. A full discussion of each factor is beyond the scope of this report.

- **Constraints on market competition.** Anticompetitive practices such as discriminatory access to and pricing of services or essential facilities, as well as artificial barriers to entry to markets, tend to hurt SMEs to a much greater extent than large firms. Often, the result of anticompetitive practices is the disappearance, stalled growth or non-emergence of smaller competitors.

- **Labour market constraints.** There is a perception that distortions in labour markets hurt SMEs to a much greater extent than larger enterprises; particularly, SMEs active in the tradable sector tend to be hurt to an even greater extent than those in the non-tradable sector.[10]An additional issue concerning the labour market is that the current training system does not benefit SMEs to the same extent as large enterprises.[11]

- **Financing constraints.** There is widespread evidence at national and international level that SMEs, especially emerging ones, face greater difficulty than established corporations in gaining access to finance, be it equity or credit types. The causes behind these constraints are varied, ranging from lack of skill in the preparation of business plans, lack of detailed financial data, to lack of suitable collateral or an established credit record.

- **BEE, Ownership and Control.** BEE currently requires equity transfers to disadvantaged groups, which is equivalent to a tax on all capital. BEE also increases the complexity of creating new firms by placing requirements on the structure of equity stakes and management.[12] Undoubtedly, a substantial share of SMEs are likely to be owned and managed by black businessmen, but a perverse outcome of BEE is that many of the best qualified and motivated black businessmen will occupy senior positions in existing large enterprises, thus draining talent away from the emerging SME sector. Also, note that BEE tends to concentrate benefits in the hands of a few early beneficiaries. Being the equivalent of a tax on all capital, BEE works against further capital accumulation and therefore, it restricts future access to capital for emerging SMEs, thus undermining in the long-run the objective of economic growth, transformation and employment creation.

- **Macroeconomics and the real exchange rate.** Exchange rate overvaluation hurts the profitability of all exporting firms and exchange rate volatility causes instability of cash flows. This tends to hurt the tradable sector and, particularly, exporting SMEs, to a greater extent than large enterprises.

- **Protectionist trade policy.** Tariff protection in intermediate goods may be acting as a tax on SMEs that use these goods as inputs. Large enterprises enjoy greater buying power and may also have the benefit of backward vertical integration, which helps in mitigating the relatively high cost of inputs.

[10] Note also that manufacturing enterprises and labour-intensive export businesses are hurt disproportionately by an overly restrictive framework for the operation of labour markets. It is also the case that the impact of restrictions is proportionately greater at lower than higher wage levels.
[11] There is a perception that Sector Education and Training Authorities (SETAs) have a mixed performance. In concentrated sectors involving larger firms, SETAs perform somewhat better; in contrast, in fragmented sectors involving smaller firms collective action constraints emerge and therefore the performance of SETAs has been poorer.
[12]BEE has dramatically increased demand for qualified blacks at senior management positions, which is already imposing a very tight skills constraint at the senior management level.

- **Inefficient trade logistics system.** High cost and inefficiency in the logistic system may be acting as a tax on exports that disproportionately hurts SMEs in the tradable sector. Large enterprises enjoy the benefit of higher volumes, stronger distribution channels and sometimes, of downstream vertical integration, thus mitigating the relative high cost and inefficiency of export logistics. The trade logistics system may have a similar impact on the cost of imported inputs.

- **Information externalities and coordination failures.** SMEs are especially subject to these kinds of market failures. For example, should an individual SME discover a successful product or business model, it is not necessarily well-positioned to take full advantage of it before large firms begin replicating the innovation at a grand scale. Also, large firms can resolve coordination failures by undertaking large-scale organisation and mobilisation of resources to solve market failures, well beyond the ability of smaller market players.[13]

- **Cost of regulatory compliance.** An unintended but common effect of public policies and government regulations is to increase the cost of doing business in a country. An example of regulations that tend to increase the cost of compliance is environmental and social legislation, practices or standards (e.g. the Equator Principles adopted internationally in the financial sector). SMEs generally suffer to a disproportionate extent from high cost of regulatory compliance.

There is awareness that SMEs are disadvantaged today in South Africa. The promotion of SMEs is motivated by in part by concerns over the slow pace of industrialisation in emerging markets and the perceived relation between SMEs and social mobility. However, the approach in South Africa and elsewhere has generally taken for granted that there exists a sharp, natural segmentation between large and small-scale producers. In different countries at various periods of time, economic policy (e.g. industrial policy) initially aimed at promoting large enterprises able to compete in global markets—the so called national champions—thus ignoring the socio-economic contribution of SMEs as well as positive contributions that they potentially make in terms of international competitiveness. Today, there is awareness that SMEs play a substantial role in promoting broad social and economic objectives.

Biases in the business environment drive smaller enterprises to the informal sector. Another conceptual "dualism" that has been used for several decades is the distinction between "formal" and "informal" enterprises, although often there has been little understanding of the linkages, both positive and negative, between both sectors. Recent thinking with regard to the formal – informal divide points to a softer division between both sectors than was assumed initially, with the "degree of formality" of firms ranging in a continuum depending on circumstances. Generally, there is a direct relationship between the likelihood that an enterprise is operating formally and the size of its operations.

Formal SMEs are often tempted to take part of their operations to the informal sector. There is an emerging school of thought underlining that pinning down the degree of informality of an enterprise is nearly impossible, as the degree of exercise of formality by a particular enterprise varies greatly at the level of individual transactions and processes.[14]

[13] In some contexts, intellectual property rights (IPRs) are meant to mitigate this problem.
[14] For example, government purchases and acquisitions from SMEs through its standard procurement procedures could be used to promote greater formality and upgrade managerial skills among BEE-qualifying

Nevertheless, it is still helpful to refer to formal and informal SMEs, while recognising that large enterprises are more likely to exercise their formality than smaller companies. This occurs because the broad business environment introduces biases that put smaller enterprises at a disadvantage, thus making them less likely to consistently exercise "formality."

Formality, bank credit and an improved business environment go hand in hand. The exercise of informality by enterprises of any size may in itself constitute a barrier to the establishment of sound credit histories, impairing their ability to establish formal credit relationships with lenders in the formal sector. It follows that measures aimed at improving the business environment and promoting increased formality in the economy, are also likely to promote the flow of credit to enterprises of all sizes in all economic sectors.

The SME sector is often thought to deserve special policy focus. In broad terms, policy approaches to SME promotion rely on market forces to a varying extent from country to country. Sometimes market-based approaches are adopted (e.g. along the thinking that what is needed is to "level the playing field" by removing policy distortions) while at other times stronger intervention by government is preferred (e.g. in the provision of subsidies or targeted interventions of various types). More generally, countries have adopted hybrid policy approaches that on the one hand seek to remove distortions in the playing field that hurt SMEs disproportionately and, on the other hand, provide for targeted government interventions.

SMEs. This option provides greater long-term benefits than relaxation of procurement standards to accommodate SME informality.

In South Africa lack of access to credit is perceived as the most binding constraint on SMEs. The issue of access to credit by SMEs has been receiving attention in South Africa, with some justification. In fact, the World Bank's most recent Investment Climate Assessment states:

> *"Although it does not seem to be much of a problem for midsize and large formal sector firms, access to credit is rated as a serious obstacle to business growth by nearly a third of micro and small enterprise owners in the 2008 survey. This is similar to the picture the first assessment painted based on the 2003 survey. In both years, access to finance topped the list of reported obstacles to growth by micro and small enterprises. It also appears to affect black-owned and Asian-owned micro and small businesses more than white-owned ones, according to both Surveys."* **World Bank (2010).**

In light of the above, this paper addresses only issues and policy concerns around the barriers that limit SME access to credit in South Africa. It is expected that at a follow up stage of FSP activities, a limited number of these issues will be discussed with South African stakeholders, creating local awareness and hopefully leading to reforms in key areas of the business environment.

SECTION 2: WHAT IS SMALL AND MEDIUM ENTERPRISE?

There is no universally accepted definition of small and medium enterprise (SME). SME means different things to different people around the world. It is therefore necessary to define the precise meaning of the terms used. First, it needs to be clarified that SMEs are not akin to microenterprises enterprises, since they operate under different business models than microenterprises and have different types of financial needs at various stages of their growth cycle.[15] Also, SMEs are unlike large, well-established enterprises that have already overcome many of the constraints faced by SMEs and can better accommodate existing weaknesses and distortions of the business environment. Drawing the boundaries between SMEs and non-SMEs is necessary to adequately targeting public policy and, therefore, the boundaries drawn by policy-makers vary from country to country according to circumstance. This suggests also that one can be flexible in interpreting and drawing lessons from SME policies adopted in different countries.

The following are some of the definitions of SME adopted in various countries:

- The Organisation for Economic Co-operation and Development (OECD) defines SMEs as enterprises with fewer than 500 employees.

- Under Basel II SMEs are defined as companies with an annual turnover of less than €50 million, although allowance is made for the annual turnover criterion to be substituted by total assets at the discretion of national supervisors. Within the SME category, there is a distinction between corporate and retail SMEs:
  (a) SMEs are treated as corporates when the total annual sales are less than €50 million and total exposure to a bank exceeds €1 million; and
  (b) SME loan exposures below €1 million can be treated in the retail portfolio.

- The European Union uses the following definitions:
  (a) A small enterprise is one that employs between 11 and 50 employees and has annual turnover or balance sheet total under €10 million; and

- In the United States, when small business is defined by the number of employees it often refers to enterprises with fewer than 100 employees, while medium-sized business refers to those with fewer than 500 employees.

- Industry Canada defines a small business as one that employs fewer than 100 employees if the business is a goods-producing business or fewer than 50 employees if the business is service-based. A firm that has more employees than these thresholds but fewer than 500 employees is classified as a medium-sized business.

- In Australia, corporate SME includes small and medium enterprise commercial credit risk where annual revenues are less than AU$50 million and exposures are greater

[15] Given that the focus of this Report is mainly on financial issues, it is even more critical to distinguish clearly between the requirements of survivalist, micro and very small enterprises (called MSEs) and SMEs. The abbreviation MSE stands for 'micro and small enterprises' and reflects the view that there are structural differences between survivalist, micro and very small enterprises on the one hand, and small and medium enterprises on the other hand. Such differences include the level of formalisation (for example, whether a legal entity has been established), whether the enterprise has a bank account separate from that of its owner and whether it is an entity that is integrated into the household, or whether it is an entity that functions independently from the household of its owner(s).

than $1 million. In contrast, retail SME includes SME exposures up to AU$1 million that are not secured by residential mortgage property.

- The Standard Bank of South Africa defines SMEs as firms with a turnover of between R150.000 and R5 million per annum.

- The most widely used approach to the definition of SMEs in South Africa is the National Small Business Act which includes the following definitions:
  (a) A small enterprise employs no more than 50 employees and
  (b) A medium enterprise employs no more than 100 employees or 200 for the mining, electricity, manufacturing and construction sectors.

The heterogeneity in definitions is a reflection of economic structure and development. It is quite clear from the above sample of definitions of "SME" that there is a correlation between the implied understanding of "small" and "medium" size enterprises and the size and level of development of an economy. Mature and large economies tend to focus policy on the basis of an understanding of "SME" that covers relatively larger enterprises than would be the case in smaller, emerging economies. Enterprises that would be considered as "large" in small economies would, in contrast, be classed as SMEs in some of the more advanced economies in Asia, Europe or America. This suggests that analysis and policy design should focus on that segment of enterprises that is appropriate for a country's size and state of development.

SECTION 3: WHAT IS SME LENDING?

SME lending involves a variety of technologies. Discussions with stakeholders in South Africa revealed that often there is an unduly narrow focus on traditional collateralized term-lending when talking about SME credit. In fact, SME lending involves a variety of technologies. Each lending technology is distinguished by a combination of the primary source of information, screening and underwriting policies and procedures, structure of loan contracts, and monitoring strategies and mechanisms. Technologies may differ between each other in one or more dimensions. In many cases, a secondary information source, procedure, contract or monitoring mechanism may be used, but lending technologies will be distinguished on the basis of their primary features only. We may distinguish the following SME lending technologies:

- **Financial statement lending.** This is based primarily on the borrower's financial statements. There are two requirements for this technology. First, the borrower must have quality financial statements. Second, the borrower must have strong financial ratios. The loan contract may reflect a variety of contracting elements such as collateral and personal guarantees. However, under financial statement lending the lender views the future cash flow of the SME as the primary source of repayment. This technology is reserved primarily for transparent firms.

- **Small business credit scoring.** This is based on information about the SME's owner as well as the enterprise, obtained from consumer and commercial credit bureaus. The data are entered into a prediction model which yields a score. This technology may be applied to relatively opaque SMEs given that much of the information is based on the history of the owner rather than the enterprise.

- **Asset-based lending.** This technology focuses on a subset of the firm's assets which are pledged as collateral. This technology provides, for example, working capital financing secured by accounts receivable and inventory. Note that the use of collateral itself does not distinguish asset-based lending from other lending technologies but, under asset-based lending, the extension of credit is primarily based on the value of the collateral rather than the creditworthiness of the firm.

- **Factoring.** This technology is the purchase of accounts receivable by a factor (the "lender"). Factoring focuses on the value of an asset rather than the value of a firm, so it is similar to asset-based lending. However, there are some differences:
  (a) Asset-based lending may involve financing inventory, while factoring only involves accounts receivable;
  (b) Under factoring an asset is transferred to the factor; and
  (c) Factoring bundles together financing, credit and collections components. Factoring is based on information about the value of accounts receivable and addresses the enterprise opacity problem by focusing on the quality of the obligor.

- **Fixed-asset lending.** These technologies include lending against long-lived assets that are not sold in the normal course of business (e.g. machinery, vehicles or real estate). While asset-based lending involves accounts receivable and inventory, in fixed-asset lending assets are pledged as collateral and are uniquely identified. At the underwriting stage, the key is the market value of the asset, often determined by appraisal. The usual contract structure feeds back o the underwriting stage since financial analysis focuses on coverage ratios (i.e., debt service capacity).

- **Leasing.** This is the purchase of fixed assets by a less or and is a common method of financing machinery, vehicles and real estate. The less or purchases the assets and enters into a rental contract with the lessee. Such contract often contains a repurchase option at the end of the lease. Leasing is based on information about the value of an asset and so it can be used to finance opaque firms.

- **Relationship lending.** Under this technology a financial institution uses soft information collected through sustained contact with an enterprise, its owner, management, suppliers, customers and the community, frequently through a loan officer. Note that this type of soft information is proprietary to a loan officer since it is not easily confirmed or transmitted to third parties.

- **Trade credit.** This technology is not delivered by financial institutions and shares characteristics of transactions and relationship based technologies. For example, credit scoring and other quantitative techniques may be used, while in some cases financial statements are also analysed. However, soft information also plays a role in many cases as it does in relationship lending.

Policy analysis and design covers the full spectrum of lending technologies. Lending to SMEs is understood in this paper as covering the full range of technologies discussed above. There is no particular reason why discussion should be limited to any one particular technology, since the different lending technologies are appropriate for SMEs at different stages of development or even for the same SME under different circumstances. There is no "one size fits all" lending technology and this implies that there is no "silver bullet" in public policy that would resolve at once the issue of access to credit by SMEs.

SECTION 4: THE NEXUS BETWEEN SMES AND THE BANKING SECTOR

The structure of the credit market along the product space matters to SMEs. Aside from the general business environment, access to external funding by SMEs depends on the state of development of financial markets and the associated regulatory environment (e.g. with regard to the way financial institutions manage risks).It may be the case that it is not the availability of debt finance as such (the quantity dimension of a market) but gaps in the product range (the product dimension of the market) that are constraining lending to SMEs. A preliminary examination suggests that this might be the case in South Africa today.

The geographic structure of supply is also relevant to SMEs. The geographic distribution of service supply may be playing a role in constraining the supply of credit to SMEs, to the extent that there may be a geographic mismatch between the location of financial institutions that provide the range of products needed by SMES, and that of the most promising pool of emerging SMEs. Furthermore, limitations in the availability of complementary services from the point of view of product or geographic reach of credit supply could also play a role in constraining credit to SMEs. It is worth discussing to what extent this is the case in South Africa today.

Gaps emerge between the needs of the SME sector and the structure of credit supply. A firm needs different types of products at different stages of development of the business; in fact, long-term debt is unlikely to be the primary source of financing for SMEs during their start-up phase and it is expected that only at later stages would bank finance become more readily available (e.g. linked to the order book). In addition to these factors, the relative strength of different types of financial institutions may also play a role in setting credit constraints, to the extent that certain business models are better suited to the delivery of specific products. This issue is worth discussing in the current South African context.

Existing gaps in supply affect SMEs differently depending on their stage of development. During the life of individual SMEs various types of external financing are used: term debt, asset finance and equity, for example, but this means that these types of financing are not substitutes at a given state of development and they may well be complementary in the promotion of SME growth. In addition, it should be noted that there may not be substitution but in fact complementarity between various types of providers of finance; this may account for reliance on own funds or informal sources of start-up finance instead of commercial venture capital or angel finance. Stakeholders suggest that this may be a binding constraint in South Africa today.

SMEs are evaluated by credit suppliers differently according to their stage of development. At an early stage of development of a firm, financial institutions will be disproportionately interested in the skills and experience of the owner-entrepreneur, but historically disadvantaged individuals would often score poorly. Other aspects that seem to be playing a role include the lack of collateral and own capital. While businesses with some trading or credit history have greater access to bank credit, even then the range of types of credit providers and products available may be restricted. According to stakeholders, this is a pressing issue in South Africa.

SMEs may sometimes be held "captive" through the legacy of relationships. Businesses that already have relationships with banks directly or through and entrepreneur-owner (e.g. current accounts, personal loans or credit cards) stand a better chance at obtaining finance from bank, as the institution has a financial history to rely on when taking a decision to approve and assess credit. This tends to improve access to finance by start-up SMEs. Unfortunately, reliance on proprietary information by banks also allows them to exercise market power, to the extent that services and loans would effectively be sold in a bundle and switching costs are high. International experience shows that in practice SMEs tend to be relatively price-insensitive and behave like a captive market.[16]

Most often the problem is that relationships between banks and SMEs fail to emerge. Under the "transformation" objectives of the government of South Africa, there is special concern that black-owned SMEs find it difficult to obtain bank credit, for both financial and non-financial reasons. In fact, the Financial Sector Charter has committed the banks to increase black SME financing although there has been little clarity as to the exact details of the commitment. This issue seems to be especially worthy of discussion in South Africa today.

South Africa has sought to force the emergence of bank-SME relationships under BEE. The Charter states that financial institutions will:

(a) Support black-owned SMEs to benefit from targeted procurement programs.
(b) Promote early payment for services provided by SMEs.
(c) Encourage suppliers to address Black Economic Empowerment (BEE).
(d) Support the establishment of third tier community- based financial organisations or alternative financial institutions.
(e) Ensure the provision of retail financial services for small and micro enterprises.

Many substantive issues remain unresolved in the relationship between banks and SMEs. Many issues still impede access to bank credit by black-owned SMEs and a key element of this is the perceived quality of collateral offered by them. For example, assets located or held in black townships may be discounted heavily or even disregarded by banks because of the likelihood of damage to the assets or property, uncertain property rights and the lack of secondary markets for such property. In addition, the financial administration and management practices of black-owned SMEs may count against them from the point of view of the assessment of a firm's creditworthiness (e.g., poor recording and management practices in cashbook, accounts receivable or inventory).[17] These are only examples of the type substantive issues that need to be addressed explicitly to foster healthy relationships between banks and SMEs beyond the commitments stated in the Financial Sector Charter.

[16]Two types of barriers can be identified: information and costs of switching. The information barriers emerge from weak disclosure (e.g. consumers may not understand the products and costs involved). The costs of switching include not only direct expenditures but also time spent complying with switching procedures.

[17]The Financial Sector Charter has committed financial institutions to employing 0.2% of post-tax operating profits in consumer education. This may be useful in easing the financial constraints on existing black-owned SMEs.

SECTION 5: SUPPLY SIDE CONSTRAINTS TO SME CREDIT

There are many factors causing gaps and distortions in the SME credit market. As mentioned above, the problem of "access to credit" by SMEs cannot be framed exclusively in terms of the availability of debt finance (a quantity dimension) but also needs to be addressed through other dimensions, such as the range of products available, the nature of institutions supplying credit and the geographic reach of supply. The reasons for the emergence of market gaps or distortions are multiple, including the intensity of market competition, barriers to the entry of new providers, and the need by SMEs for complementary financial and non-financial services.

Lack of complementary goods or services explains some of the perceived market gaps. There is recognition that access to credit by SMEs cannot be tightly separated from the issue of access to complementary factors such as banking services. At the initial stages of SMEs, the issue of access to debt also needs to take into consideration services to individual customers (e.g. entrepreneur access to bank accounts, loans and credit cards). At later stages, the issue becomes access to services directly by SMEs. Since a large share of SME finance is internal then SME finance is closely linked with access to personal finance by owners, which in practice can be considered "complementary" with SME finance. Note also that the issue of access to "complementary" capital (e.g. provided by "angel finance" or venture capital funds) emerges at various stages of the SME development cycle. These issues are worth discussing in South Africa, as a preliminary examination suggests that they are especially relevant in setting the context for BEE-qualifying SME credit.

Gaps in the SME credit market can result from the relative weakness of non-banks. SME financing supplied by non-banks also cannot be separated tightly from various processes in the banking sector. For example, to the extent that banks are providing services to non-banks that provide a complementary range of products and services, SMEs may indirectly benefit from greater access and improved market terms offered to non-banks. In addition, the weakness of providers of risk capital such as "angel finance" or venture capital funds can also account by existing gaps in the SME credit market. This issue merits broad discussion in South Africa as many stakeholders have mentioned it as a lingering, unresolved concern.

Risk assessment methods may also influence the structure of credit supply. Another area that needs to be addressed is the adequacy of methods for risk assessment and credit decision by financial institutions active in the SME market. A preliminary analysis shows that institutions with an exposure to the SME segment rely heavily on collateral but also use a variety of means to assess risk.[18] The question emerges whether or not the type of risk measurement and management approaches that are being followed in South Africa today are distorting or causing gaps in the credit market. However, one striking fact about the configuration of the SME credit market is that, despite the heterogeneity of methods used to assess risk, the outcome is fairly uniform in that a large proportion of SMEs – especially those of interest under BEE objectives – are in fact denied credit.

[18]Banks would seek a Khula guarantee if there is a sound business plan and the requesting firm meets all other requirements. Thus the Khula guarantee is only sought to cover for a lack of collateral.

SECTION 6: ROLE OF REGULATIONS IN LIMITING ACCESS TO CREDIT BY SMES

Several entities are responsible for regulating the SME credit market. In South Africa, several government departments play a pivotal role in SME development, namely the Department of Trade and Industry (dti), the National Treasury and increasingly the new Ministry of Economic Development.[19] Other players are the supervisory bodies of financial institutions, i.e., the Financial Services Board (FSB), the South African Reserve Bank (SARB), and increasingly the National Credit Regulator (NCR).[20] Cooperation between these entities is critical to adequately guide and implement public policy in addressing market failures, without introducing further distortions or gaps.

The regulatory framework often works at cross-purposes. There is a clear perception that the existing legal and regulatory framework is working at cross-purposes. On the one hand, the official objectives of public policy include the promotion of SMEs as well as BEE; on the other hand, existing laws and regulations actually work against the achievement of the stated objectives of public policy in South Africa. This is in part due to the existence of a legacy of policy instruments inherited from the past, to the introduction of well-meaning measures that are actually counter-productive, or to lack of inter-institutional communication and coordination in the design and implementation of public policy.

A number of issues have been identified where action is required.

The following issues need to be looked at:

- **The Companies Act.** The new Companies Act 2008 introduces a new business rescue environment, where the law of contract is no longer enforceable, but subject to amendment or suspension at the discretion of a "business rescue practitioner" or cancellation by a court with "due regard to the circumstances."[21] Lenders are known to be risk-averse and the environment created by the Companies Act of 2008 is likely to reduce the flow of credit or increase its cost.

- **Access to information.** Lack of information constitutes a barrier to the assessment of the creditworthiness of SMEs and adds to the cost of finance when provided. Examples of this include:
  (a) When individual SME information is withheld by a credit bureau and credit providers thus making credit assessment by competitors more costly;
  (b) There is no centralised "registry of pledges" to facilitate verification of collateral offered by SMEs;[22] and,
  (c) Industry-level statistics are scarce, for example, on SME sales and profitability disaggregated by geographic area or economic sector.[23]

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[19] The Ministry of Economic Development has taken over most of the "promotion and direct lending" operations previously supervised by the dti including the credit guarantee agency—Khula-, and several other such agencies.
[20] The National Credit Regulator (NCR) plays a significant role over the regulation of credit to the smaller SME sector – especially if they are not "juristic persons". However, the NCR is proposing to extend its role also to larger SMEs.
[21] This provision is in the process of being amended in the Companies Amendment Bill.
[22] A registry of pledges is being proposed under the National Credit Act (NCA). FSP prepared a "business plan" for a registry of pledges last year and provided assistance in drafting the NCA. Provisions are pending action by government.

- **System for registering and enforcing security.** Some issues have been identified in the South African context:
  (a) There is no provision for non-possessor security interest i.e., one in which a debtor is continues possessing and using a pledged asset;
  (b) There is no uniform system of security interests; and
  (c) Perfection through recordation can be complex and expensive.[24] In countries that have broadened access to SME finance, the creation and perfection of collateral requires simple and cheap procedures.[25]

- **Promotion of market competition.** It may not be enough to assess the intensity of competition in product markets alone, since there are complementary markets whose performance is also related to SME credit. For example, the clearing and settlement systems in financial markets are subject to economies of scale and often have the characteristics of a natural monopoly, with high entry barriers and the possibility of discrimination prejudicing access to non-banks that provide credit to SMEs.[26]

- **Tax incentives.** This type of incentives could play a role in overcoming some market failures. Although debt incentives might be accommodated, international experience suggests that there should be increasing reliance on SME equity incentives (e.g. to promote "business angels" and the growth of venture capital). Also, there are limitations on the portfolio mix of institutional investors, as they are prohibited from investing in unlisted venture capital companies.

- **Role of the Financial Services Board.** There are some areas in which the FSB could play a role in promoting SME credit while assuring the capital adequacy of pension and insurance funds:
  (a) Promoting the venture-capital markets in an OTC context;
  (b) Assisting in the development of a local securitised asset market; and
  (c) Support the development of Collateralised Loan Obligation (CLO) funds aimed at catering for SMEs.

- **Role of the South African Reserve Bank.** The SARB can play a key role in several regulatory areas. Under the existing regulatory framework intermediation between entities with surplus funds and entities requiring finance is limited mainly to banks. Also, non-banks may be prevented from accessing capital for on-lending (e.g. in the case of "wholesale deposits" or raising capital for the purpose of on-lending). In

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[23] FSP has presented a Working Paper to dti to propose working with the dti and other stakeholders to establish an integrated statistical database, following the OECD framework.

[24] South Africa does not recognise "floating charges". The closest to that which has something like "perfection of security" is a mortgage over movables which does not give security, but a preference above concurrent claims payable from unencumbered assets. The "security" is perfected by taking possession of the movable assets subject to the bond. This can be done with the cooperation of the debtor or sanctioned by a court order and gives a secured claim by way of pledge.

[25] The linkage between information flows and lending infrastructure is well-established in the literature and among practitioners. For a discussion of the role of information and lending infrastructure in promoting SME lending, the reader may refer, for example, to Berger & Udell (2005).

[26] The South African Competition Act of 1998 was largely designed and implemented with the objective of overcoming the anti-competitive market structures which arose as an unforeseen consequence of the Apartheid era. The creation of a "level playing field" was widely discussed but little progress appears to have been made in practice.

addition, regulation in respect of *stokvels* need to reviewed.[27] Moreover, South Africa has no public-sector credit bureau and the South African Reserve Bank does not collect credit-scoring information on SMEs.[28] Note that although these issues are being raised from the perspective of promoting SME credit, they would in general increase the range of institutions that provide financial intermediation services, thus generating greater competition in an otherwise highly concentrated market.

- **Social and environmental regulation.** There is a number of issues in need of discussion. Some have recurrently emerged in discussion with South African stakeholders. For example, the widespread adoption of the Equator Principles by South African banks, in line with practices promoted by international banks, can potentially increase the cost or reduce access to credit by SMEs. Also, the Waste Management Act 2009 creates a register of "contaminated land" and imposes a duty on the land-owner to offer remedies, and on a lender under certain circumstances (e.g. if the bank forecloses on the mortgage). Another issue that emerges in discussions is the recent proposal to make "Estate agents" liable for patent and latent defect in properties offered for sale; this initiative is a shift away from the South African *voetstoots* (caveat emptor) principle and would expose such agents –mostly SMEs— to risks that would likely limit their access to credit.[29] The magnitude of these risks is unknown and adds to a general level of uncertainty concerning exposure to SME credit.

[27] *Stokvels* are clubs that serve as rotating credit unions in South Africa where. Members contribute fixed sums of money to a fund on a regular basis. Each month a member receives the money collected during a given period and can use funds for their own purposes.
[28] As credit bureau has been proposed by the National Credit Regulator (NCR) and FSP has been providing assistance in its design.
[29] FSP is currently supporting a Regulatory Impact Assessment (RIA) where an effort is made to address these issues.

SECTION 7: BASEL II AND SME ACCESS TO FINANCE

The New Basel Capital Accord introduced major changes in banking sector regulation. Since 1998 a revision process of the 1988 Capital Accord started and in June 2004 a new Basel Capital Accord (known as Basel II) was formally released. The new Basel Capital Accord introduced a more flexible approach to banking supervision that acknowledged the progress and sophistication of banking practices, providing incentives for banks to improve their internal risk-management capabilities and giving the tools to supervisors to react to emerging matters. Indeed, Basel II introduced new aspects to the regulation and supervision of banks structured around three pillars:

(a) Pillar 1: minimum capital requirements;
(b) Pillar 2: supervisory review;[30] and
(c) Pillar 3: market discipline.[31]

The Basel II framework is based on three pillars. The computation of the minimum supervisory capital under the first pillar is based on the sum of the capital requirements credit, market and operational risk. In the first pillar there are several approaches for estimating minimum capital, which include the standardised approach, the basic IRB approach and the advanced IRB approach. In the standardised approach, the risk weights are based on ratings provided by external institutions accepted by national supervisors. Under the IRB approaches the rating is produced internally by each bank.

Some banks are allowed to measure credit risk under the standardised approach. In the standardised approach, the amount of capital required on an unsecured loan to a private firm is based on the ratings issued by an external credit assessment institution (ECAI). Although a bank may use several ECAIs, they are not allowed to choose for each customer the rating that is most favourable. The risk categories will correspond to different risk weights ("mapping") with high ratings bringing about low weights in the computation of risk-weighted assets; as in Basel I, different categories of counterparties (e.g. non-financial firms, states or banks) receive different coefficient mappings.

The largest banks in South Africa are using the more advanced IRB approach. Under the IRB approach a bank is allowed to create its own rating system and the capital held to support risk against each credit exposure is a function of five risk parameters:

- **Probability of default (PD).** This is the default probability for a borrower over a one-year period. This requires the adoption of a definition of default starting with the non-payment of principal or interest. Usually, default occurs if payment is past due 90 days, at which point a loan is characterised as "non-performing".[32]

[30] The supervisory review process carried out by national authorities prompts banks to use sound risk management techniques along four lines of action: (a) the compliance of risk management systems with the standards set in the first pillar; (b) the evaluation of risks that may be imperfectly estimated such as correlations and concentration effects; (c) the assessment of risks not included explicitly under the first pillar; and (d) the evaluation of how the economic cycle affects capital adequacy.
[31] The third pillar seeks to provide market participants with information required to assess the risk-return profile of a bank, so that market discipline is exerted through the bank's capital endowment. Banks release a set of minimum data, both quantitative (e.g. capital adequacy) and qualitative (e.g. risk-assessment methods).
[32] Less than full compliance with the terms of a loan ought to be counted as default, unless a formal restructuring of the terms of the loan has been agreed in advance by the lender. To avoid a deterioration of credit quality and prevent abuse, financial sector supervisors usually apply tight rules in this regard. Otherwise, poor portfolio performance could be paraded by troubled lenders as a high-quality portfolio simply by recognising token repayments on a par with full compliance with loan terms.

- **Loss given default (LGD).** This is the expected amount of loss on an exposure to a borrower upon default. To determine LGD, a bank identifies borrowers who have defaulted in the past as well as the timing and amounts eventually recovered. The availability and quality of collateral is also used to develop LGD estimates.

- **Exposure at default (EAD).** This is the amount a borrower owes at the time of default.

- **Remaining maturity of the exposure (m).** This factor takes into consideration the possibility that the original PD needs to be revised.

- **Diversification and correlation (rho).** Degree of diversification and correlation (rho) of the credit portfolio to which the exposure belongs. This factor acknowledges that the risk to the bank of individual exposures depends on the structure of its portfolio as well as the incidence of systemic factors on portfolio risk.

The expected loss is calculated as the multiplication of (PD*LGD*EAD). Together with the maturity estimate of the exposure (m) and the diversification coefficient (rho), these parameters are used to measure both economic and regulatory capital under Basel II.[33]

There are key differences between the foundation and advanced IRB approaches. The difference is that the foundation approach requires the bank to measure each loan's PD and the supervisor provides the other risk parameters; in contrast, under the advanced approach the bank determines all the risk parameters on the basis of procedures validated by the supervisor. The calculation of PD is the same under both foundation and advanced approaches: the PD must be computed over a one-year risk horizon, accounting for deteriorations in creditworthiness in the medium to long term. The LGD is calculated following certain framework rules under the foundation approach,[34] while in the advanced IRB approach banks use their proprietary estimates of LGDs with the approval of bank regulators.[35] There are also some differences in the way that the EAD[36]and maturity[37] are computed. The treatment of correlation is the same under both the foundation and advanced approaches, with a focus on the size of firms.[38]

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[33] The details vary to some extent according to the type of exposure (i.e. sovereign, corporate or retail).

[34]In the foundation approach LGD is 45% for all senior, unsecured exposures. This value is raised to 75% for subordinated exposures and can be adjusted downwards when collateral is pledged; in fact, when collateral is an eligible financial instrument the LGD may even be reduced to 0%. Receivables; commercial and residential real estate, physical capital and other assets are accepted as collateral; non-financial collateral may drive the LGD down to 40%, or 35% for receivables and real estate.

[35] In the advanced approach, LGDs are assessed in an economic not accounting perspective. For example, when measuring recovery rates all relevant factors that reduce the economic value of recovery must be taken into account, including the discount associated with the lag between the time of default and recovery, as well as the direct and indirect costs associated with collecting.

[36]Under the foundation approach, EAD is computed at 100% of current exposure, plus 75% of undrawn irrevocable commitments; off-balance sheet exposures have to be converted into credit equivalents through credit conversion factors. In contrast, under the advanced IRB approach banks use their estimates of EAD on the basis of models and procedures approved by regulators.

[37]In the foundation IRB approach maturity is generally set at two and a half years. In contrast, following the advanced approach maturity is computed as zero-rate financial duration and is capped at five years, with maturities shorter than one year allowed in specific cases.

[38] A high correlation (24%) is used for loans to top-rated, large corporations as it is assumed that they fail because of systemic shocks; correlations are lowered from 24% to 12% as corporate ratings worsen as individual factors then drive default. The boundaries are scaled down to 20% and 8% for smaller firms with annual turnover under €50 million because they are affected mainly by individual shocks. Correlations are lowered to between 17% and 2% for loans to individuals and smaller firms that are treated as "retail" customers. In contrast, retail

What is considered a 'sound' internal credit risk model under the IRB approach? The model should accomplish two objectives:

(a) To assess and quantify credit risk in a portfolio through quantitative and qualitative measures that facilitate prudential portfolio risk-management; and

(b) To provide a mechanism to determine the capital requirement of a bank, through a capital allocation framework that can be used for risk-adjusted pricing and other strategic purposes. A preliminary assessment of the IRB approaches adopted by leading South African banks suggests that they are broadly in line with recognised international practices.

There are important challenges in the successful implementation of the IRB approach. The initial inputs are crucial and these are dependent on the existing system infrastructure and data warehousing within a bank. The next component of the model is meant to measure individual risk in terms of EL and UL, for example. In order to measure statistical confidence levels around capital requirements, methods such as the Monte Carlo simulation can be used. Credit-rating models have allowed banks to assess the risks in lending activities to SMEs. Rating models involve processing firm and owner level data using statistical models and the output is a set of summary statistics about expected future loan performance.

The key determinant of credit risk is the default probability. Note that the probability of default is by far the most important element credit risk and is the main determinant of capital requirements.[39]It follows that policy actions aimed at promoting access to credit by SMEs would have the greatest impact by targeting factors that determine the level of PDs of enterprises. Policy measures that focus on lowering LGDs can contribute to improving credit risk profiles of SMEs but their impact is small relative to improvement of PDs. Keeping in mind that there is some overlap, it is worth reflecting to what extent South African policy measures have focussed on PD-enhancing factors vis-à-vis LGD-enhancing factors.

What are the factors that are typically used in the measurement of default probability? International experience is that the factors most often used in estimating the probability of default of SMEs by means of quantitative models include:

Quantitative data

- Performance
- Leverage
- Debt coverage
- Liquidity
- Growth
- Productivity
- Size
- Market and macroeconomic conditions

exposures such as credit cards and overdrafts receive coefficients between 11 and 2%. A correlation of 15% is used in the case of residential mortgages.

[39]Remember that EL = PD * EAD * LGD. A PD can range from say 0.3% to30% in a given asset class (i.e. a range of variation by up to factor of 100); EAD may range from 50% and 100% of the value of the loan (i.e. a range of variation of 2), and LGD typically ranges from 20% to 100% (i.e. a range of variation up to 5). Clearly, the greatest variation in EL is caused by PD.

Qualitative data

- Industry prospects
- Quality of business plan
- Profile of the enterprise
- Capacity, experience, reputation and past credit history of the entrepreneur
- Governance structure of the firm
- Age of enterprise
- Management quality of accounts receivable
- Availability of collateral and guarantees[40]

In line with recognised international practices, this type of factors is currently taken into consideration by South African banks implementing the advanced IRB approach under the Basel II framework.

Adopt a new organising paradigm for the design and implementation of public policy? In practice, a rating system consists of a mathematical formula that assigns a score to individual SMEs;[41] and, a correspondence to a risk group, based on prior ratings and quality of the borrower, and finally the assignment of a PD. Moreover, rating is the key element for banks and other financial institutions to determine the return adjusted to risk. The greatest impact of public policy can be achieved by targeting those factors that improve the measured PDs of SMEs; in fact, in the spirit of the Basle II framework, improvement of the measured PD could be considered the central design paradigm for public policy toward the promotion of SME credit.

The IRB approach is sensitive to changes in risk profiles rewarding low default probabilities. Although the new Basel capital rules influence the credit conditions for SMEs as described above, they do not necessarily lead to an overall reduction of credit supply, certainly not in the case of high-rating SMEs. Another area where the Basel II rules have an influence is in the pricing of financial products. Basel II has an effect on:

- Administrative costs. This category of costs increase in accordance with the cost of carrying out a sophisticated evaluation of credit risk because the IRB approach to managing credit risk requires maintenance of databases and sophisticated quantitative modelling;

- Opportunity cost of capital. This is the cost of using the bank's own capital resources needed to support a certain level of risk, since different categories of borrowers consume capital at different rates; and,

- Risk premium. This is the premium charged by the bank in accordance with the quality of the borrower, i.e., highly rated SMEs face a lower premium than lower-rated SMEs.

[40]Most bankers around the world mention the importance of collateral and guarantees in the approval phase, especially in the approval of longer term credit. Collateral is a determinant of loan pricing as well (e.g. highly liquid collateral leads to better pricing since in the event of default the bank can recover losses quickly). Collateral is also a determinant of LGD—the higher the quality and liquidity of collateral, the lower the estimated LGD. Credit insurance tends to be of lower importance than quality for collateral, except if political risk is involved in cross-border lending.

[41] An example of a credit rating system is RISKCALCTm, a rating system produced by Moody's KMV to characterise the credit risk of companies. The ratios that are weighted in the RISKCALCTm rating system are the following: leverage ratios, liquidity ratios, performance ratio, debt coverage ratios, growth, and productivity.

The advanced IRB approach facilitates screening of high and low-rated SMEs. The type of risk-sensitive pricing introduced by the Basel II rules through the more advanced IRB approaches imply changes in capital adequacy requirements, although the particular impact on a given institution depends ultimately on the quality of the portfolio of borrowers. Remember that a poor quality SME client will force the bank to hold more capital compared with a more creditworthy client. It follows that under the IRB approach—especially the advanced approach—highly rated SMEs could require banks to hold below average capital charges, whereas low-rated firms cause lenders to hold above average capital charges.

Lower-rated SMEs could still access credit from banks applying alternative approaches. However, different lending procedures and varying risk management techniques lead to diverse outcomes from lender to lender. Banks opting for the advanced IRB approaches have a competitive advantage over banks using the foundation or standardised IRB approaches, in terms of capital charges, when lending to better quality SMEs. It follows that a medium- to poor quality SME borrower might be better off requesting a loan from a bank using a foundation or standardised approach. This factor could be taken into consideration in South Africa to improve the effectiveness of transformation objectives under the BEE policy framework.

There is also scope for introducing counter-cyclical policy measures. Finally, it should be borne in mind that the higher risk-sensitivity introduced in the Basel II capital adequacy rules is likely lead to increases in capital requirements in times of economic downturn, as well as lower capital requirements during an economic upturn. As a result, in a downturn higher capital requirements may slow down the flow of loans to lower-rated SMEs.[42] In light of recent developments emerging from the Basel Committee concerning international standards for setting bank capital and liquidity requirements, known as Basel III, there is a growing expectation that banking and regulatory practices will become tighter and risk-sensitivity will increase steadily in the next few years.

Functioning of the Basel II framework improves when information flows freely. Gaps in information about potential borrowers are among the most common causes of financing constraints for SMEs. In many cases, the establishment of long-term relationships that promote increased transparency is the key to reducing information asymmetries. For this process to work well, banks play a role by informing customers about changes in risk management and showing them how credit ratings impact the credit decision as well as the terms of a loan. In fact, communication should not necessarily start after the rejection of a loan application or the withdrawal of existing credit lines. It would be advisable in South Africa to discuss and define criteria on the level of transparency required from banks regarding these issues.

An information disclosure framework would be consistent with the spirit of Basel II. A framework that sets out principles on the disclosure of ratings and rating processes for banking and SME associations would ideally include:

(a) The data used to SETA rating;
(b) The factors affecting the credit approval decision;
(c) The principles of the credit rating system that will be applied; and

[42] It is likely that even the recommendations emerging as a result of the recent international financial crisis (referred to as the "Basel III" framework) will be adopted over a period of time, taking into consideration the needs and conditions of national banking systems. In this connection, the reader may refer to PWC (2010).

(d) Possible ways for an SME to improve its credit rating. After the credit rating process is complete, banks would communicate with the client and explain the credit decision (acceptance, rejection or change of conditions).

Basel III will cause many changes in the banking system. Although Basel II is not yet implemented universally, Basel III is already being discussed and there are already agreements among major international banks on its content. There will surely be additional discussion and whatever emerges as Basel III at this stage should be considered as work in progress. However, there is already enough information in the public arena to plans for the transition to the new standards. Many areas will be impacted and consequences are expected to be far-reaching, including, for example:[43]

(a) Changes in the level of capital requirements will change measured return on equity, the supply and pricing of credit and, ultimately, long-term business strategy of individual banks (e.g. in terms of products and markets).
(b) There will be changes in the funding and balance sheet structure and therefore, on lender and interbank relationships.
(c) Adjustments will have to be made in terms of controls, data and IT systems.
(d) Adjustments will be made in terms of resource usage by business lines, performance management and remuneration.

South Africa can prepare for the implementation of Basel III while protecting SME credit. It has been reported recently that Basel III will require banks to improve the quality of capital they hold, for example, by steadily raising Tier 1 capital requirements and demanding the creation of a capital conservation buffer. This increase in capital requirements is not expected to happen overnight, with the increase Tier 1 capital being required by 2015 and the capital conservation buffer to be available in full by 2019. It is expected also that liquidity requirements will be tightened in an attempt to strengthen the stability of the global financial system.[44] These global trends should be welcomed by South Africa and the stronger banks are already well placed to undertake the type of adjustments proposed. However, three issues should be raised by discussion within South Africa:

(a) The pace at which national standards and practices are aligned with the new international benchmarks should take into consideration broad economic objectives, including the government's objective to promote lending to BEE-qualified SMEs.
(b) While stronger financial institutions are likely to adjust successfully, an assessment should be made of the impact of the new rules on smaller or weaker financial intermediaries, specifically those that do business with SMEs.
(c) In this connection, South Africa could consider the adoption of a multi-track process of convergence to Basel III standards, exercising regulatory forbearance on a temporary basis, so that the dynamics and performance of SME portfolios are not undermined by the new capital and liquidity rules.

[43] This discussion builds on PWC (2010).
[44] See PWC (2010) for a preliminary discussion of the impact of Basel III on the international banking system.

SECTION 8: POLICY ALTERNATIVES FOR DISCUSSION

In light of a preliminary diagnostic of the conditions for accessing credit in South Africa at the level of SMEs, together with international experience in this field, the following policy alternatives are proposed for consideration and discussion:

Short-Term

- Introduce fiscal incentives to overcome the SME debt and equity gap.[45]
- Continue the promotion of non-bank lending and advisory services to SMEs (e.g. to improve the accounting, controlling and management methods within SMEs).[46]
- Review and strengthen risk modelling strategies at the individual bank level to ensure that SMEs are being assessed fairly and improve bank disclosure on the nature of its decision-taking process at the level of SMEs.[47]
- Reform the regulatory framework to promote the availability and improve the quality of collateral and guarantees at the level of individual SMEs.[48]
- Encourage SMEs and financial institutions to consider using financial products other than term-loans in accordance with the purpose of funds, including options such as leasing, factoring and purchase order financing.
- Start a discussion with stakeholders concerning the impact of Basel III on SME lending, giving adequate consideration to policy options such as temporary regulatory forbearance and multi-track approaches, to avoid the risk of undermining the dynamics of the SME portfolio in the next few years.

It is proposed that FSP will undertake follow up work to promote discussion among stakeholders concerning the issues mentioned immediately above. In this regard, FSP is proposing two workshops with a policy focus, with private and public sector participation. In addition, a high-level technical workshop concerning risk measurement techniques is being considered by FSP, in light of Basel II and III rules.

[45] Equity-oriented tax measures includes, for example, tax relief to the investor on equity investments in qualifying SMEs (“angel finance”); the promotion of “corporate venturing”, i.e., the relationship between large and small enterprises through tax incentives; incentives for the establishment and growth of national and regional Venture Capital Trusts (VCTs) that focus on small companies; and increase the flexibility of rules to facilitate institutional investors to invest in venture-capital and SMEs.

[46] For example, it may be possible to provide back-up lines to non-bank financial intermediaries. Consideration can be given to the reduction of the divide between banks and non-bank lenders to SMEs.

[47] Basel II points towards more scientific risk measurement and management and, since managing risks is the core business of financial institutions, they should be able to do it in the best possible way. For the banks that choose the IRB methods, credit decisions are increasingly based on individual risk quality of each borrower. For SMEs, this will mean that their rating and probability of default are the determinant components for credit decisions.

[48] In this regard, three categories of action can be prioritised. First, loan pricing policies are influenced by credit rating, term structure and collateral and it is advisable that SMEs increasingly look at these types of collateral; second, increased usage of accounts receivable as collateral may be promoted through the creation of an electronic registry of government accounts payable (e.g., the Mexican experience with the creation of an electronic registry through *NacionalFinanciera--NAFIN*).Finally, this objective can also be promoted by creating a uniform and effective system for registering and enforcing commercial security, which would require overcoming problems with perfection of collateral that exist today in South Africa.

Medium-Term

- Improve access to data information on individual SMEs as well as at the sector level by strengthening statistical systems.[49]

- Assess the impact of social and environmental regulation on the flow of credit to SMEs (e.g. the Equator Principles and recent legislation on waste management).

- Promote market competition in the SME market segment.

Long-Term

- Promote the emergence of venture-capital market.

- Promote the emergence of large-scale securitised-asset markets.

- Promote the emergence of CLO-fund finance for SMEs.

Proposed follow up activities by FSP. Stakeholders have confirmed their interest in participating in FSP-supported activities to promote a balanced vision and understanding of constraints on SME credit that emerge from the business environment in South Africa and also from the implementation of the Basel II and III rules. Up to three training sessions have been proposed to promote discussion and motivate action to address systemic constraints that hinder the flow of credit to SMEs. The focus of the proposed training sessions will be on the treatment of loans to SMEs under Basel II and the exercise of discretionary authority by South African Financial Sector Regulators and the resulting impact on the implementation of Government policy. Background information for training participants on a broad range of topics to be covered will be prepared and distributed, including this Interim Report, thus presenting a conceptual background for the program. We propose that all training session be jointly sponsored by FSP, the Banking Association and the NSBAC.

This Interim Report and other background materials selected by FSP will be presented and discussed in a 1-day session with financial sector regulators at the policy-making level, to make sure they are exposed to the issues, to receive their contributions, and to examine how such issues have been handled elsewhere in light of international experience. Suggestions on potential changes to the prudential regulatory and broader regulatory system flowing from the training and related discussions will be noted. Especially a more nuanced understanding and interpretation of Basel II and emerging Basel III rules, and how to facilitate the flow of credit to “disadvantaged” sectors, including SMEs will be discussed within a “best practice” context.

A second 1-day training session will deal with the same topics but with a different focus and audience. Participants will be those responsible for the application of policy, regulatory compliance, risk and credit assessment in South African banking and financial sectors. Full background information will be presented, including an outline of the issues discussed the previous day with regulators and Government representatives. Building on the discussions that set the background to this Interim Report, there will be further discussion on what seems

[49] This may include reviewing the framework for the operation of private credit bureaus to promote credibility and information sharing (e.g. on SME repayment profile and exposure) and improvement of the statistical information system on the SME sector.

to be the process of assessing SME portfolio risk in the country, against the background of international best practice. The second training session would have a fairly practical slant.

Finally, a third training session lasting 2 days will deal with IRB-type credit risk assessment models and specifically how these can be applied to the SME and micro sectors. The audience would be mainly risk assessment professionals working within South African banking institutions from the public and private sectors. This would be a fairly advanced applied course on risk measurement and management using advanced quantitative tools (e.g. econometrics and Monte Carlo simulation).

Based on the training sessions and discussions, a brief “Interpretative Summary” (white paper) will be prepared by FSP for subsequent distribution to participants, stakeholders and those interviewed during the preparation stage. This document will serve as a basis for the Bankers Association, the NSBAC and other stakeholders to continue to champion identified changes. FSP will continue to monitor progress and, where appropriate and possible, to provide such continued technical assistance as consistent with its mandate.

SECTION 9: ANNEXES

ANNEX A: INTERVIEWS AND MEETINGS HELD

Anderson, Gerry; Deputy Executive Officer, Market Conduct & Consumer Education; Riverwalk Office Park, Block B, 41 Matroosberg Road, Ashlea Gardens 0081

Brits, Mark; Banking Association of South Africa, 3rd Floor Building D, Sunnyside Office Park, 32 Princess of Wales Terrace, Parktown2193

Coetzee, Gerhard; Director and Professor, Centre for Microfinance, University of Pretoria; Graduate Center, Room 2-80, University of Pretoria, Pretoria 0002 and ABSA.

Combrink, Richard; Project Manager, Khula Direct; 1st Floor, Block G, The dti Group Campus, 77 Meintjies Street, Sunnyside 0002

Cuevas, Alfredo; International Monetary Fund, 467 Fehrsen Street, 1st Floor, Brooklyn, Pretoria

Davids, Olivia; Consumer Education, Financial Services Board; Riverwalk Office Park, Block B, 41 Matroosberg Road, Ashlea Gardens 0081

Davie, Eustace; Director, Free Market Foundation, 1st Floor, Norfolk House, Sandton Close 2, Cnr Norwich Close and 5th Street, Sandton

De Jager, Des; GM, Risk and Compliance; 1st Floor, Block G, The dti Group Campus, 77 Meintjies Street, Sunnyside 0002

de Klerk, Andre; Consultant, Change the Bank, Standard Bank, 5 Simmonds Street, Johannesburg 2001

De Wet, Albert; RMB (First Rand), 1 Merchant Place, Cnr Fredman Drive & Rivonia Road, Sandton 2196

Edwards, Henry; Director, Change the Bank, Standard Bank, 5 Simmonds Street, Johannesburg 2001

Engelbrecht, Carien; Aurik; 3rd floor, 132 Jans Smuts Avenue, Rosebank, Johannesburg

Ferreria, Jo-Ann; Head, Insurance Regulatory Framework Department; Riverwalk Office Park, Block B, 41 Matroosberg Road, Ashlea Gardens 0081

Fleischhauer, Konrad; Investec, Private Bank; CnrAteerbury and Klarinet Streets, Menlo Park, Pretoria 0081

Gold, Michael; Managing Director, Crimson Capital; Building 14, First Floor, Woodlands Office Park, 141 Western Service Road, Woodmead, 2148

Kennedy, Kirsten; SME husineess Services Specialist, Financial Sector Program; Building 14, First Floor, Woodlands Office Park, 141 Western Service Road, Woodmead, 2148

Kristalsky, Terri; Chief of Party, Financial Sector Program; Building 14, First Floor, Woodlands Office Park, 141 Western Service Road, Woodmead, 2148

Meyerman, Gerald; Policy Advisor, Financial Sector Program; Building 14, First Floor, Woodlands Office Park, 141 Western Service Road, Woodmead, 2148

Mitchell, Tocher; SME Finance Specialist, Financial Sector Program; Building 14, First Floor, Woodlands Office Park, 141 Western Service Road, Woodmead, 2148

Ncube, Mthuli; Chairman NSBAC/dti and Chief Economist, Vice President, Afican Development, Tunis, Tunesia.

Nemahagala, Tshilidzi; Chief Director, NASBC, the dti, 77 Meintjes Street, Sunnyside, 0002 Tshwane Mail: Private Bag X84, Pretoria, 0001

Postmus, John; True Group; The Ridge , 3 Berea Terrace, Berea

Smit, **Yolande;** Director, Sector and Regulatory Analysis, National Treasury, 240 Vermeulen Street, Pretoria, 0001.

Thaver, Berhnice K.; Khula Direct, 1st Floor, Block G, The dti Group Campus, 77 Meintjies Street, Sunnyside 0002

Tshazibana, Fundi; Chief Director, Sector and Regulatory Analysis, National Treasury, 240 Vermeulen Street, Pretoria, 0001.

Van Zyl, Franso; Chief Counsel, Legislation; Riverwalk Office Park, Block B, 41 Matroosberg Road, Ashlea Gardens 0081

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ANNEX C: PROMOTING BANK CREDIT TO SMES IN SOUTH AFRICA SLIDE PRESENTATION

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PROMOTING BANK CREDIT TO SMES IN SOUTH AFRICA

MARIO A. CUEVAS

AUGUST 2010

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About the investment climate

- South Africa has enjoyed economic stability for over a decade.
- There are still imbalances and distortions.
- In particular, the overall business environment has many implicit biases against SMEs… infrastructure, market competition, labour market, financing, concentration of ownership and control, macroeconomic and real exchange rate volatility, trade policy, trade logistics system, information externalities and coordination failures, and social and environmental regulations that work at cross-purposes.

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About the investment climate

- There is awareness that SMEs are disadvantaged today.
- Biases in the business environment drive smaller enterprises to the informal sector and even formal SMEs are tempted to take part of their operations to the informal sector.
- In general, formality, bank credit and an improved business environment go hand in hand
- The SME sector is thought to deserve special policy focus.
- In South Africa lack of access to credit is perceived as the most binding constraint on SMEs.
- The World Bank's most recent Investment Climate Assessment states that "*access to finance topped the list of reported obstacles to growth by micro and small enterprises."* In light of the above, this paper addresses only issues and policy concerns around the barriers that limit SME access to credit in South Africa.

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What is SME?

- Unfortunately, there is no universally accepted definition of SME.
- The most widely used approach to the definition of SMEs in South Africa is in the National Small Business Act, which includes the following definitions:

a) A small enterprise employs no more than 50 employees and

b) A medium enterprise employs no more than 100 employees, or 200 for the mining, electricity, manufacturing and construction sectors.

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What is lending to SMEs?

- SME lending involves a variety of technologies.
- Each is distinguished by a combination of the primary source of information, screening and underwriting, structure of loan contracts, and monitoring strategies and mechanisms.
- Technologies include financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, leasing, relationship lending, and trade credit.
- Policy analysis and design should take into consideration the full spectrum of lending technologies, since different ones are appropriate for SMEs under different circumstances.
- There is no "one size fits all" and no "silver bullet" in public policy toward SMEs.

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Market gaps in SME lending

- The structure of supply along product and geographic space matters to SMEs i.e., gaps affect SMEs differently depending on their location or stage of development.
- SMEs are evaluated by credit suppliers differently according to their stage of development, but often relationships fail to emerge.
- Under the "transformation" objectives of the government of South Africa, there is special concern since black-owned SMEs find it especially difficult to secure bank credit.
- South Africa has sought to promote the emergence of bank-SME relationships under the provisions of Black Economic Empowerment (BEE).
- Results have been disappointing to date and many substantive issues remain unresolved.

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Market gaps in SME lending

- In reality, there are many factors causing gaps and distortions in the SME credit market.
- The problem of "access to credit" by SMEs cannot be framed exclusively in terms of the availability of debt finance (a quantity dimension) but also needs to be addressed in other dimensions, such as the range of products available, the nature of institutions supplying credit and the geographic reach of supply.
- The reasons for the emergence of market gaps or distortions are multiple, including market competition, barriers to the entry of new providers, and the need for complementary financial and non-financial services.

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Public policy working at cross purposes

- The structure of credit supply can also be adversely influenced by existing regulations
- On the one hand, the official objectives of public policy include the promotion of SMEs as well as BEE; on the other hand, certain aspects of the legal and regulatory framework actually work against the achievement of the stated objectives of public policy.
- This is in part due to the existence of a legacy of policy instruments inherited from the past, to the introduction of well-meaning measures that are actually counter-productive, or to lack of inter-institutional communication and coordination.

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The impact of Basel II

- One particular area of concern is financial sector regulation, especially the impact of the New Basel Capital Accord (Basel II).
- The largest banks in South Africa are using the more advanced approaches under Basel II for managing credit risk broadly in line with internationally accepted practices.
- The key determinant of credit risk is the default probability.
- In fact, in the spirit of the Basle II framework, improvement of the measured default probability could be considered the central design paradigm for public policy toward the promotion of SME credit.

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The impact of Basel II

- The IRB approach is sensitive to changes in risk profiles rewarding low default probabilities and does not necessarily lead to an overall reduction of credit supply.
- The advanced IRB approach facilitates screening of high and low-rated SMEs, risk-sensitive pricing implies changes in capital adequacy requirements.
- Under the advanced IRB approach highly rated SMEs could require banks to hold below average capital charges, whereas low-rated firms cause lenders to hold above average capital charges.
- Different lending procedures and varying risk management techniques lead to diverse outcomes from lender to lender.
- Banks opting for the advanced IRB approaches have an advantage over banks using the foundation or standardised IRB approaches.
- Medium- to poor quality SME borrower might be better off requesting a loan from a bank using a foundation or standardised approach.

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The impact of Basel II

- The higher risk-sensitivity introduced in capital adequacy leads to increases in capital requirements in times of an economic downturn, as well as lower requirements during an upturn.
- As a result, in a downturn high capital requirements may slow down the flow of loans to lower –rated SMEs and others, which in turn could intensify the economic slowdown.
- Scope for regulatory forbearance.

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Policy discussion

SHORT-TERM

- Introduce fiscal incentives to overcome the SME debt and equity gap.
- Review and strengthen risk modelling strategies at the individual bank level to ensure that SMEs are being assessed fairly and improve bank disclosure on the nature of its decision-taking process at the level of SMEs.
- Reform the regulatory framework to promote the availability and improve the quality of collateral and guarantees at the level of individual SMEs.
- Encourage SMEs and financial institutions to consider using financial products other than term-loans in accordance with the purpose of funds, including options such as leasing, factoring and purchase order financing.
- Continue the promotion of non-bank lending and advisory services to SMEs (e.g., to improve the accounting, controlling and management methods within SMEs).

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Policy discussion

MEDIUM-TERM

- Eliminate pricing and procedural distortions emerging from usury provisions.
- Improve access to data information on individual SMEs as well as at the sector level by strengthening statistical systems.
- Assess the impact of social and environmental regulation on the flow of credit to SMEs (e.g., the Equator Principles and recent legislation on waste management).
- Promote market competition in the SME market segment.

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Policy discussion

LONG-TERM

- Promote the emergence of venture-capital market.
- Promote the emergence of large-scale securitised-asset markets.
- Promote the emergence of CLO-fund finance for SMEs.

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ANNEX D: PROMOTING ACCESS TO CREDIT TO SMES IN SOUTH AFRICA: A POLICY-MAKER'S PERSPECTIVE

First Workshop Outline

Objectives

The workshop will provide an opportunity to promote a balanced vision and understanding of regulatory and other systemic barriers to SME access to credit in South Africa, in a constructive, learning environment using international best practice as a benchmark, from the perspective of policy-makers. This workshop is part of a series that looks at the issues from three distinct, complementary perspectives: policy-makers, financial sector practitioners and credit risk managers. The workshops will be jointly sponsored by FSP, the Banking Association and the NSBAC.

Target participant profile

This workshop will be aimed at financial sector supervisors from the public and private financial sector, policy-makers, and other stakeholders interested in the promotion of SME access to credit at the policy level.

Workshop size

Given the complexity of topics to be discussed, a maximum of 15 participants is recommended.

Workshop organization

Facilities should include standard equipment including whiteboard/blackboard, writing materials and a projection screen. The facilitator will bring his own portable computer. Workshop planning allows for mid-morning and mid-afternoon coffee breaks about 20 minute each, as well as lunch break.

Workshop duration

This is a 1-day workshop, equivalent to 8 hours of group activity.

Name of facilitator

Workshop activities will be facilitated by Mario A. Cuevas. To motivate discussion, selected individuals and organizations will be invited to present their perspectives.

Indicative workshop topics

As background material, workshop participants will receive advance copies of the USAID document titled "Improving the SME Credit Environment by Using Modern Risk Management Tools – Draft Interim Report".

A brief review will be conducted of the observed process of assessing SME portfolio risk in South Africa against the background of international best practice. The impact of regulatory burden on access to credit and the cost of credit will be discussed. Suggestions on potential changes to the prudential regulatory and broader regulatory system flowing from the workshop will be noted. Emphasis will be placed on a more nuanced understanding of the impact of prudential regulation and how to facilitate the flow of credit to “disadvantaged” sectors, including SMEs, will be discussed within a “best practice” context. Brief conclusions and recommendations will be drawn.

The following questions will be considered from the perspective of policy-makers:

- What, if any, are the main regulatory and systemic obstacles to SME access to credit?
- Does prudential provisioning and related regulatory framework create unreasonable obstacles and/or costs?
- What is the interaction between regulation and policy and how is such interaction understood in South Africa?
- How do regulatory and banking institutions evaluate SME portfolio risk and is this consistent with international practices?
- What are the additional costs imposed by the regulatory burden?
- In conjunction with National Treasury and existing Cabinet guidelines, how can sound regulatory impact assessment (RIA) principles be applied to new, proposed regulations?

Follow up activities

Follow up activities will include:

- There will be a second workshop, dealing with the same broad topics as the one described here, but with a different focus and audience. Participants in the second workshop will be those responsible for the application of policy, regulatory compliance, and risk and credit assessment. As background, participants in the second workshop will receive a brief summary of the first workshop (described here).
- There will be a third workshop dealing with SME credit risk management from a quantitative perspective.

Following completion of all activities a “Final Report” as well as a brief “Interpretive Summary” of the outcomes and conclusions of these workshops will be prepared.

ANNEX E: PROMOTING ACCESS TO CREDIT TO SMES IN SOUTH AFRICA: A PRACTITIONER'S PERSPECTIVE

Second Workshop Outline

Objectives

The workshop will provide an opportunity to promote a balanced vision and understanding of regulatory and other systemic barriers to SME access to credit in South Africa, in a constructive, learning environment using international best practice as a benchmark, from the perspective of practitioners. This workshop is part of a series that looks at the issues from three distinct, complementary perspectives: policy-makers, financial sector practitioners and credit risk managers. The workshops will be jointly sponsored by FSP, the Banking Association and the NSBAC.

Target participant profile

Participants will be those responsible for the application of policy, regulatory compliance, risk and credit assessment in South African banking and financial sectors. Those who participated in the policy-maker workshop may also attend upon request.

Workshop size

Given the complexity of topics to be discussed, a maximum of 15 participants is recommended.

Workshop organization

Facilities should include standard equipment including whiteboard/blackboard, writing materials and a projection screen. The facilitator will bring his own portable computer. Workshop planning allows for mid-morning and mid-afternoon coffee breaks about 20 minute each, as well as lunch break.

Workshop duration

This is a 1-day workshop, equivalent to 8 hours of group activity.

Name of facilitator

Workshop activities will be facilitated by Mario A. Cuevas. To motivate discussion, selected individuals and organizations will be invited to present their perspectives.

Indicative workshop topics

As background material, workshop participants will receive advance copies of the USAID document titled "Improving the SME Credit Environment by Using Modern Risk Management Tools – Draft Interim Report".
A brief review will be conducted of the observed process of assessing SME portfolio risk in South Africa against the background of international best practice. The impact of regulatory burden on access to credit and the cost of credit will be discussed. Suggestions on potential

changes to the prudential regulatory and broader regulatory system flowing from the workshop will be noted. Emphasis will be placed on a more nuanced understanding of the impact of prudential regulation and how to facilitate the flow of credit to “disadvantaged” sectors, including SMEs, will be discussed within a “best practice” context. Brief conclusions and recommendations will be drawn.

The workshop will have a relatively practical slant and handouts will be designed to promote common terminology and understanding, and designed to promote further reading and learning.

The following questions will be considered from the perspective of practitioners:

- What, if any, are the main regulatory and systemic obstacles to SME access to credit?
- Does prudential provisioning and related regulatory framework create unreasonable obstacles and/or costs?
- What is the interaction between regulation and policy and how is such interaction understood in South Africa?
- How do regulatory and banking institutions evaluate SME portfolio risk and is this consistent with international practices?
- What are the additional costs imposed by the regulatory burden?
- In conjunction with National Treasury and existing Cabinet guidelines, how can sound regulatory impact assessment (RIA) principles be applied to new, proposed regulations?

Follow up activities

- There will be a third workshop dealing with SME credit risk management from a quantitative perspective, focussing on simulation and econometric methods in the context of the more advanced credit risk methods proposed under Basel II.
- Detailed “debrief” sessions will be held to present major stakeholders and USAID with the main thrust of the activities, findings and conclusions.

Following completion of all activities a brief “Final Report” in USAID format as well as a brief “Interpretative Summary” of the outcomes and conclusions of the workshops will be prepared. The Interpretive Summary shall be distributed to participants of both training sessions, those interviewed during the preparation stage and other stakeholders

ANNEX F: CREDIT AND LIQUIDITY RISK MEASUREMENT

USING MONTE CARLO SIMULATION: COURSE OUTLINE

Course objectives

Participants will learn how to apply Monte Carlo simulation techniques to credit and liquidity risk measurement with reference to sound international banking principles and the more advanced IRB methods proposed under Basel II, with special application to SME and consumer portfolios. Key theoretical results and insights will be provided throughout the course, stressing mathematical intuition rather than formal development of theory. Risk modeling software will be used to facilitate understanding and promote applied skill development, but software will be used primarily as a teaching tool.

Target participant profile

This course is mainly aimed at supervisory and management level (a) risk professionals employed by regulatory agencies and public sector institutions responsible for overseeing financial markets, (b) risk practitioners employed in credit granting institutions who already understand the institutional and regulatory context for risk management; and. It is assumed that participants already have some familiarity with risk models and the Basel principles, and are willing to undertake hands-on quantitative analysis using specialized risk software, specifically Palisade's Decision Tools Suite (DTS). Although no advanced knowledge of Excel is expected, participants should be comfortable conducting routine operations and tasks in Excel; also, they are expected to feel comfortable using and applying basic finance and statistics concepts.

Required software and hardware

Each participant should have access to a computer throughout the duration of the course. Aside from standard Office software, which would include Excel, computers will have at least a demo version of DTS already installed. Information on DTS can be found in http://www.palisade.com/decisiontools_suite/. It is assumed that (demo) software is already installed and operating at the beginning of the course—no time allowance is made for installation and troubleshooting.

Course size

Given the complexity of the topics to be taught and the expected intensity of the course, a maximum classroom size of 12 should be expected. This classroom size allows for individualized support by the trainer as well as classroom interaction and discussion.

Course organization

Classroom should have standard teaching equipment including whiteboard/blackboard, writing materials and a projection screen. The trainer will bring his own portable computer. Course planning allows for mid-morning and mid-afternoon coffee breaks about 20 minute each, as well as lunch break.

Course duration

This is a 2-day course, equivalent to 16 hours of classroom activity.

Name of trainer

The course will be taught by Mario A. Cuevas.

Indicative course topics

- Using basic statistics and finance concepts – a refresher using @Risk / DTS software.
- Selecting and specifying risk model inputs as random variables in @Risk / DTS.
- Designing and specifying a risk map in @Risk / DTS.
- Selecting and specifying risk model outputs in @Risk / DTS.
- Interpretation of simple risk models using @Risk / DTS functions and resources.
- Applications to basic finance models (e.g., project valuation).
- Applications to financial forecasting (e.g., interest rate and yield curve projection).
- Generic Value at Risk (VaR) analysis using @Risk / DTS.
- Advanced credit risk measurement and Monte Carlo simulation.
- Measurement of Expected and Unexpected Loss, and VaR in credit risk models with special reference to SME and consumer portfolios.
- Credit risk modelling for SME and consumer portfolios – an econometric approach to measurement of default probability.
- Introducing systemic risk into credit risk models using @Risk / DTS with special reference to SME and consumer portfolios.
- Liquidity risk measurement and liquidity management with Monte Carlo simulation using @Risk / DTS.
- Joint analysis of liquidity and credit risk at the balance sheet level using a first order approximation.