Risk Adjusted Credit Pricing: Application to the state's guarantee funds for Moroccan enterprises

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Abstract

Government intervention facilitates access to funding sources for micro, small and medium sized enterprises (MSME). Credit guarantee is a viable solution to reconcile financing needs of MSME to the demands of the financial sector.

The effectiveness of a Guarantee Fund is strongly linked to its ability to balance between its resources and its uses i.e. the equality between the compensation of the losses due to the credit risk, on the one hand, and the commissions, investment products and recoveries on the other.

As a result, the fee structure of the guarantee commission must be able to cover a part of the financial charges resulting from the operation of the credits guarantee, namely credit risk hedging and management cost.

To address this issue, the article presents first an approach based on the internal default risk rating for the estimation of the risk cost, and second an analytical approach based on management-related aggregates for the estimation of the operational guarantee cost.

The information used in this study consists essentially of:

- Databases provided by the CGF[2] and the Ministry of Finance;
- Interviews with CGF officials and entity supervisors;
- Reports and publications from the CGF and BANK AL-MAGHRIB.

Keywords: Economic Modeling, Risk Analysis and Management, Revenue Management and Pricing.

I. The guarantee system of credits in Morocco

The existence of a strong SME structure is a determining factor for countries development, acting not only on the economic growth but also on the social and political stability. However, access to this category of funding often remains a difficult obstacle to overcome.

This problem of funding access for SME worries public authorities and encourages them to find sustainable ways to circumvent it.

Therefore, credit guarantee is one of the devices used around the world. It consists of sharing customer default risk or project with the bank.

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[2]The Central Guarantee Fund (la caisse centrale de garantie)

In Morocco, the public authorities have recently embarked on a vast reform program aimed at boosting investment, modernizing businesses, promoting youth self-employment and promoting social housing for the benefit of the population with modest or irregular income.

The Central Guarantee Fund (La Caisse Centrale de Garantie) is the state's instrument for intervention in economic and social policy, and is at the heart of this support system through a diversified product offering serving businesses.

II. Adjusted pricing to the risk cost and operations management of the enterprises portfolio

The guarantee of SME credits is a sharing of the loss risk between the financial institution (bank) and the guarantee organization. It requires a good control of the risk on the part of the guarantor as well as quantification models of payment default after the model established in the banks.

As for the credit cost pricing applied by banks, it differs according to the commercial policy of each bank and its behaviour in relation to the default risk.

To estimate the credit cost, banks have adopted approaches based on the credit risk quantification model, through the estimation of expected and unexpected losses at well-defined horizons.

In this part, the same credit cost structure applied by the bank will be used to approach the guarantee cost through integrating the peculiarity of guarantee scheme and its financial model.

Components of the guarantee cost

The credit price results from the cost structure and the bank margin, namely:

- ✓ Refinancing cost;
- ✓ Management cost (operational costs): Operating costs reflecting activities related to the granting and management of loans (monitoring and advice, real estate appraisals, balance sheet processing, ...);
- ✓ Risk cost:
  - o Expected losses: Analytical cost resulting from ratings (default probability) and losses in case of default;
  - o Unexpected losses or the cost of equity: Minimum capital requirements for credit activity (role of absorbing "unexpected" losses).

To ensure the reconciliation of the guarantee cost, certain assumptions must be formulated. These assumptions are:

- It is assumed that the expected losses and the operational cost will be covered by the guarantee commission;
- Unexpected losses are assumed to be covered by state grants;
- In the case of a Guarantee Fund, the refinancing cost will not be taken into account since the used guarantee model assumes that the guarantor receives free of charge state grants.

Therefore, the guarantee cost that will be estimated in our study is as follows:

Guarantee cost= Risk cost (expected losses) + Management cost