LETTER

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TRÉSOR-ECONOMICS

Firms' access to bank credit

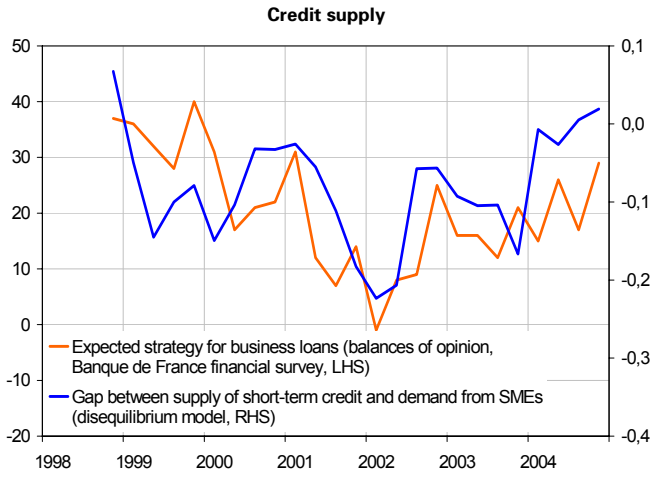
This study was prepared under the authority of the Treasury and Economic Policy General Directorate and does not necessarily reflect the position of the Ministry of the Economy, Finance and Industry.

- Firms may be denied access to bank loans even if they are willing to pay high interest. This phenomenon - known as "credit rationing" - remains hard to quantify, as credit supply and demand are not directly observable. However, some evidence suggests that credit rationing has been significant in France during the 1990s.

- A disequilibrium model estimated on French data for the recent period suggests that banks failed to satisfy a large share of demand from small and medium-sized enterprises (SMEs) for short-term credit (*crédits de trésorerie*, a form of cash advance) in 2001. This situation - apparently confirmed by the Banque de France financial survey - seemed to be partly due to credit rationing, which restricted the ability of SMEs to finance economically viable projects.

- To limit the risk of credit rationing, the French State takes on a share of the credit risk via a guarantee scheme set up by Oséo / Sofaris. The State needs to charge banks for the guarantee at a high enough price for banks to confine its use to categories of risky firms vulnerable to rationing. The State raised its price in 2004 in order to target the incentive more effectively and restrict the windfall gain for banks.

- These developments - as well as the implementation of new capital adequacy standards (Basel II) - should also incite the banking sector to practice greater risk-based discrimination and lead to a better-adapted pricing of credit.



Source : Banque de France, DGTPE calculations

DGTPE
DIRECTION GÉNÉRALE DU TRÉSOR ET DE LA POLITIQUE ÉCONOMIQUE

1. Credit rationing

1.1 A recurrent phenomenon that cannot be observed directly

"Credit rationing" denotes the banking sector's refusal to lend to certain individuals or enterprises, even if they are willing to accept high interest rates to cover the banks' expenses. These include money-market refinancing (i.e. cost of funds), overheads, and the interest margin, but also the "risk premium" (spread) needed to offset losses incurred when borrowers default.

In theory, this market inefficiency occurs when banks are unable to identify their customers' characteristics with perfect accuracy and therefore cannot price the credit risk properly. By charging an undifferentiated average rate to a given category of borrowers, banks attract only loan applicants with above-average risk. Raising the rate is not enough to break this vicious circle. The phenomenon, referred to as "adverse selection", can lead banks to withdraw from this market. The result is known as a "credit crunch"[1].

Despite the Banque de France's setting up of highly detailed databases to inform banks about firms' characteristics[2], credit rationing is, to a certain extent, unavoidable. This was enhanced by several historical factors, mainly the existence of a "usury rate" (abolished in 2003 for incorporated enterprises, and in 2005 for unincorporated enterprises) that capped banks' lending rates. Moreover, lending to SMEs requires both a specific organization relying on risk expertise and a local presence - a combination that not all French banks master equally well.

Credit rationing is hard to detect as credit supply and demand are not directly observable. In particular, a fall in loan outstandings may be due to weaker credit demand in an economic slowdown rather than to difficulties in obtaining loans. Also, a situation where credit demand exceeds supply may not necessarily result from credit rationing, as excess demand may come from unprofitable firms.

1.2 A phenomenon that, however, may have been significant in the early 1990s

According to a recent analysis[3], the wholesale/retail trade sector experienced credit rationing in the early 1990s. The study uses an econometric method called "natural experiments," which compares changes in two groups of initially similar firms after an exogenous shock confined to one group. Here, the shock considered is the new eligibility for CODEVI loans[4] granted to wholesale SMEs and retail SMEs in 1993 and 1995 respectively.

The study shows that the extension of the eligibility to CODEVI loans resulted in a 4% rise in long-term debt of the targeted companies, implying that the latter were financially constrained beforehand. In theory, such an increase in indebtedness may also mean that borrowers used the cheaper CODEVI funds to implement projects previously viewed as insufficiently profitable. However, the additional borrowings apparently generated significant profits[5], going beyond the windfall effect that one might expect from a straightforward interest-rate subsidy. The implication is that the projects were actually profitable but had not been realised sooner owing to lack of funds.

2. Has credit been rationed in recent years?

Bank strategies have changed substantially over the last 15 years. The findings in regard to credit rationing in the early 1990s do not necessarily remain valid today.

We can analyse the imbalances between supply and demand in the credit market by using disequilibrium models, mainly the one developed by Maddala and Nelson (1974)[6].

The method consists in estimating credit supply and demand indirectly by assuming that the volume of credit actually extended is equal to the minimum of the volumes of credit supply and demand, both estimated with econometric tools. Credit rationing is deemed to exist if estimated supply is lower than estimated demand. Such a model had never been applied to France before.

(1) See J. Stiglitz et A. Weiss (1981): "Credit rationing in Market with imperfect information", *The American Economic Review*).

(2) The Banque de France acts as a credit bureau by providing the very detailed credit registry "FIBEN" which includes data on companies' indebtness.

(3) Laurent Bach (2005) : "Dans quelle mesure les entreprises françaises font-elles face à des contraintes de crédit? Estimation à partir des dispositifs d'aide au financement des PME (1991-2000)", *Master's Dissertation at EHESS/Delta.*

(4) CODEVI stands for "Industrial Development Accounts" Introduced in 1983, the system collects funds from individual savers via tax-sheltered passbooks equivalent to the standard French "Livret A" account. The resources are redistributed as loans to SMEs in eligible goods-producing industries.

(5) According to the model, €100 of additional debt would have yielded an additional €136 of EBITA within a year.

(6) G. Maddala et F. Nelson (1974): " Maximum likelihood methods for models in market disequilibrium", *Econometrica.*

Box 1: **The desequilibrium model**

The volume of credit extended at date t , Q_t , is written $Q_t = Min(D_t, S_t)$ where D_t and S_t denote credit demand and supply respectively and are determined by the following equations: *Demand* $D_t = \beta_D' X_t^D + u_t^D$ and *Supply* $S_t = \beta_S' X_t^S + u_t^S$, where X_t^D and X_t^S are the determinants of credit demand and supply respectively and u_t^D and u_t^S are independent Gaussian white noises with variances of σ_1 and σ_2 respectively.

The choice of determinants is delicate: ideally, we should select variables that influence exclusively either credit supply or credit demand. In practice, such a distinction is nearly impossible, and some of the variables used-such as the interest rate-actually influence both supply and demand. Our model draws rather extensively on academic studies produced in other countries[a].

There is credit rationing if $Q_t = S_t < D_t$. The model's parameters $[\beta_D, \beta_S, \sigma_1, \sigma_2]$ are estimated from the equation $Q_t = Min(D_t, S_t)$ and the sole observation of the volume of credit Q_t actually granted. The classic approach involving a maximum-likelihood estimation (MLE) did not yield satisfactory results. The use of different and very close initialisation values produced highly divergent and sometimes unbounded results. We therefore decided to work with the EM (Expectation Maximisation) algorithm instead[b].

The coefficient signs obtained are broadly consistent with theoretical forecasts. In some cases, several effects work in opposite directions: the improvements in business outlook and expected cash flows apparently stimulate demand for short-term credit, but so does the worsening climate in the manufacturing industry and in current conditions. We can interpret the first phenomenon as the consequence of demand stimulated by business activity; the second, instead, reflects demand for credit by ailing firms seeking to avert default.

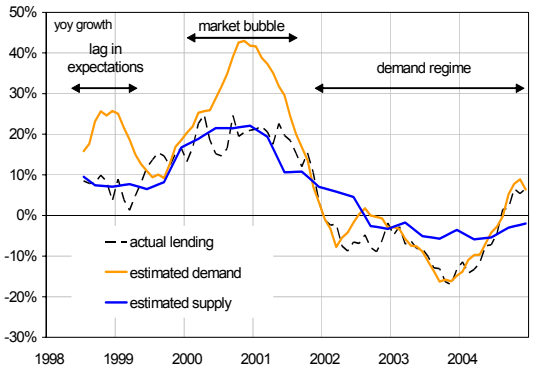
a. See H. Kierzenkowski (2002): "A theoretical and empirical assessment of the bank lending channel and loan market disequilibrium in Poland", *National Bank of Poland*.
b. J.D. Hamilton (1994): "Time series analysis", *Princeton University Press*.

2.1 Large French firms do not appear to have experienced restrictions on access to bank loans in recent years

The application of disequilibrium models to France over the period 1997-2004 suggests that large companies did not suffer credit rationing over the last few years: the outstandings curve (see chart 1) for 2001-2004 is mainly shaped by demand variables such as economic conditions and financial position. The peaks in estimated demand observed in 1998 and 2001 do not reflect credit rationing so much as atypical phenomena in the economic cycle that the model was unable to take into account. These consisted of a gap between economic expectations and actual economic conditions in 1998, followed by a stock-market bubble in 2001, which incited large corporations to turn to the fixed income market[7] for their financing needs.

The model yields similar results when it is confined to investment loans, categorised as medium/long-term credit. By contrast, for cash advances (*crédits de trésorerie*) - classified as short-term credit - the study observed no atypical situation at the beginning of the period, and the main determinant of the changes in outstandings is the demand curve between 1997 and 2004.

Chart 1: Total lending to large companies (yoy growth)



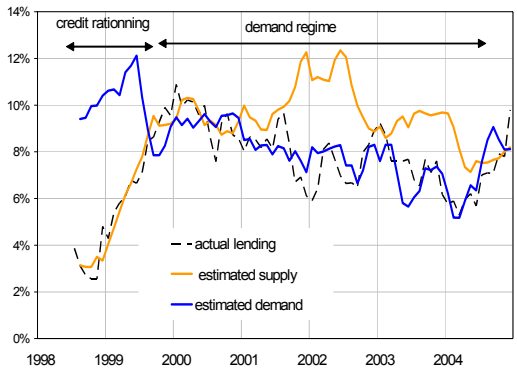
Source: Banque de France data and DGTPE calculations.

2.2 By contrast, SMEs apparently had difficulty obtaining short-term credit in 2001

As from the second half of 1999, SMEs, like large corporations, do not seem to have experienced restrictions in access to investment loans. The study shows a demand regime throughout the period 2000-2004 (see Chart 2). **By contrast, loan outstandings display a supply-regime profile from mid-1998 to the end of 1999.** This could mean that banks eased supply restrictions only very gradually amid a brisk demand recovery. As a likely consequence, SMEs relied more heavily on self-financing or equity increases.

(7) The model used does not take into account external financing channels other than bank loans.

Chart 2: Investment loans to SMEs (yoy growth)



Source: Banque de France data and DGTPE calculations.

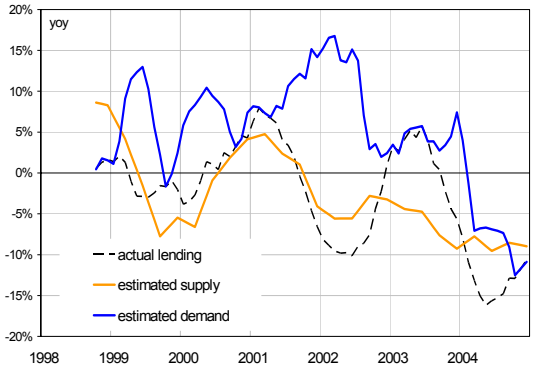
By contrast, the study finds little correlation between the change in SME short-term credit outstandings and SME demand. According to the estimates, credit-supply variables such as firm failure rate, yield-curve slope, and bad-debt ratio are the most powerful determinants of credit demand in this loan category. Overall, the model has trouble explaining changes in short-term credit (see chart 3) and the results should therefore be interpreted cautiously. The inconclusive quality of our results for this loan category may also come from the artificial volatility of data on outstanding cash advances extended to SMEs[8], which explains why we decided to focus on manufacturing industries.

The model suggests that banks failed to meet a significant share of manufacturing SMEs' demand for short-term credit in 2001. The gap between estimated credit supply and demand appears to have peaked at end-2001, which is consistent with the findings of Banque de France financial survey of banks (see chart 4).

This situation would partly be due to genuine credit rationing that restricted SMEs' access to funding economically viable projects. According to the model (see box 1), the sharp rise in credit demand observed during the period was driven by the conjunction of (1) an economic upturn (brighter outlook and improved expected cash-flow) and (2) a worsening of past and current conditions (implying a potential increase in demand for short-term credit by ailing firms).

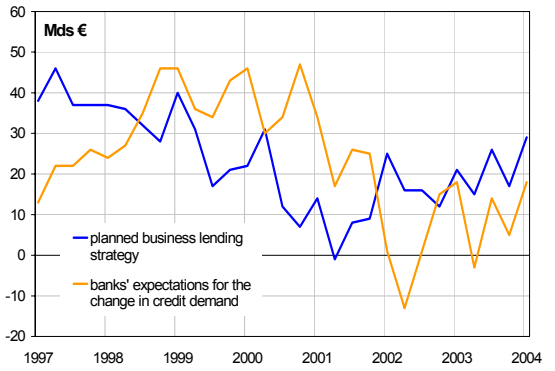
By contrast, there appears to have been no significant credit rationing since 2003: the decrease in short-term loan outstanding is due to weaker demand, caused by the combination of an improved contemporary climate and an expected worsening of future conditions.

Chart 3: short-term lending to manufacturing SMEs



Source: Banque de France data and DGTPE calculations.

Chart 4: banks' credit demand and planned supply strategy



Source: Banque de France quarterly financial survey.

3. Is public intervention desirable to curb bank credit rationing?

3.1 In theory, the most efficient public intervention method is to guarantee a proportion of bank loans

When market imperfections restrict SMEs' credit access, State intervention is a natural scenario for curtailing their effects. To improve credit access for constrained firms, the State can offer incentives to banks to set aside specific resources for funding firms (this is known as "targeted loans" [prêts fléchés]), or to extend loans on below-market terms ("subsidised loans" [prêts bonifiés]).

CODEVI loans are a good example of targeted loans. The State can also reduce the banks' exposure to risky firms ses by taking over a share of the losses in case of default ("guaranteed loans" [prêts garantis]).

(8) This high volatility is due to the fact that the Banque de France does not track loans below €76,000. When a company's loan outstandings fall from €76,000 to €75,999, the corresponding amount disappears from the statistics. To minimize the phenomenon, the analysis is confined to short-term credit extended to SMEs in the manufacturing sector, which, as a rule, tend to be larger. On 1 January 2006, the cutoff value was lowered from €76,000 to €25,000: in the longer run, this should substantially improve the quality of the estimation.

There is consensus in the academic literature[9] that the most effective intervention method to address credit rationing is guaranteed loans. Unlike other approaches, guaranteed loans have the advantage of directly tying the government's incentive to the borrower's risk level. Subsidised and targeted loans are more likely to generate "windfall gains" for banks (when the latter simply pocket the public subsidy and use the scheme for loans that they would have extended anyway) or distortions (public scheme enabling banks to finance insufficiently profitable projects).

3.2 However, loan guarantees must be well priced to be effective

A public loan-guarantee scheme is characterised by the category of eligible enterprises or loans, the percentage of the loan guaranteed by the State, and the pricing of the guarantee, i.e., the risk-sharing fee that the State will charge to the bank. These parameters determine the system's effectiveness and should help prevent several potentially undesirable effects:

- Borrowers should not be offered guaranteed loans on overly attractive terms. This will inhibit them from designing their projects in such a way as to obtain the loans. Businesses may generate a "moral hazard" risk, in particular when the granting of a guaranteed loan exempts the borrower from the need to put up collateral (a mandatory requirement in the British system, for example[10]). Academic research on the subject tends to show that State guarantees can actually be counter-productive and increase credit rationing.
- The price of the guarantee should be sufficiently close to real costs in order to avoid misallocation of resources by banks to projects which profitability is inadequate relative to risk exposure, or to projects that would have been financed even without a public guarantee (windfall gain). Consequently, prices should be high enough to deter banks from using the public guarantee for financing low-risk projects, or from restricting eligibility.

Compared with equivalent schemes set up in other countries, the French guarantee scheme is characterised by a lower selectivity of eligible firms. Pricing thus plays a decisive role in the scheme's implementation. Fee levels rank mid-way between those of the UK and the US:

In France, Oséo / Sofaris offers a guarantee which covers 40% to 70% of the loan. The price is set at 0.6%, 0.7% or 0.9% of the full amount depending on whether the guarantee covers 40%, 50% or 70% of the loan. Measured against the guaranteed amount, this represents 150, 140, and 130 basis points (bps) respectively. The recipients are firms in start-up, ownership-transfer, and growth phases selected by the banks.

In the United States, the SBA (Small Business Administration) guarantees up to 85% of loans under $150,000 and up to 75% of loans exceeding $150,000[11]. The relatively modest price consists of (1) a premium ranging from 2% to 3.5% of the guaranteed amount, paid upfront when the loan is issued, plus (2) an annual 0.545% charge on the guaranteed portion. The program is wide-ranging, as it aims to finance very risky and/or long-term projects, start-ups, very young businesses, and firms with no collateral. The windfall gains, however, are sharply curtailed by the obligation for applicants to prove that they were unable to obtain regular loans from the banks.

The distinguishing features of the United Kingdom's Small Firms Loan Guarantee (SFLG) programme are uniform coverage (75%) and a high premium (2% of the total amount per annum). The exclusive targets are small firms without collateral, selected by the banks. This very high selectivity in favour of risky companies (1) generates a risk of moral hazard[12], by encouraging business owners to increase risk-taking in order to qualify for the guarantee.

3.3 In France, credit rationing appears to concern companies with a 5-year default risk exceeding 20%

To design State intervention efficiently, we need to identify the risk level above which access to bank credit is presumably restricted. As we cannot observe such information directly, we apply a rough approximation method in order to obtain an initial estimate.

In theory, the credit risk level should be visible in bank lending rates, since they incorporate the risk premium (spread) computed directly from risk indicators such as the Banque de France score[13].

(9) Cf. W. Gale, (1990) : "Federal Lending and the Market for Credit", *Journal of Public Economics*.

(10) In France, a collateral may be required but is restricted (no mortgage on main residence, and personal collateral limited to 50% of total loan amount).

(11) The U.S. scheme does not set a minimum value for the guarantee.

(12) W. Gale (1990) : "Federal Lending and the Market for Credit", *Journal of Public Economics*.

(13) The Banque de France scores each enterprise's risk on the basis of accounting and financial data. It then assigns firms to one of 7 risk classes by score: classes 1-3 gather risky firms, class 4 neutral enterprises and classes 5-7 low-risk firms.

Box 2: **Modeling**

The analytical framework adopted here is the one proposed by Stiglitz and Weiss[a] and, later, by Gale[b], namely credit market with adverse selection. Entrepreneurs are characterised by the fact that they learn the expected return on their project before the bank's lending terms, hence there is no moral hazard[c]. The potential requirement of a collateral is not taken into account and banks do not compete against one another, i.e., they are entitled to the full surplus of the relationship with the entrepreneur.

As in the Stiglitz-Weiss analytical framework, firms without equity need to borrow a given sum-normalised to unity from a bank to finance a risky project. The project succeeds with a probability *p*, in which case its return is equal to *R.* If it fails, the firm is liquidated and its value is equal to *D*. A project is viable only if its expected yield is equal to or greater than *T*, the opportunity cost of the funds invested in the project, which we can also be interpreted as the return on equity (ROE) demanded by shareholders. The project's viability condition can thus be written as follows:

$$p(1+R)+(1-p)D \geq T+1$$

Banks face an information-asymmetry problem: they only know the firm's risk class, characterised by a mean probability of success p_m and an expected yield R_m, but they do not know the values of these parameters for a specific firm. A class contains two types of firms: low-risk and risky units, with respective probabilities of success p_1 and p_2, and respective expected yields R_1 and R_2 .

Banks can contract a guarantee that allows them, in the event of the borrower's default, to recover their entire claim on a portion δ of the loan and a residual value *D-X* on the non-guaranteed portion, in exchange of a premium equal to a fraction γ of the guaranteed amount.

Let us assume two classes of enterprise, A and B, with mean probabilities of success p_m^A and p_m^B respectively. Only the second class faces credit rationing, which means that the bank cannot offer class-B borrowers a rate enabling it to make a profit.

The goals are to ensure that (1) banks will have no incentive to use the guarantee for class-A enterprises, which are not rationed, and (2) the guarantee will effectively restore a positive expected profit for the banks when it is used for class-B borrowers. To this end, the pricing parameters γ and δ must meet certain conditions. These will make it possible to define an lower and an upper limit for γ, $\gamma_{max}(\delta)$, which is an increasing function of the coverage ratio of the guarantee δ.

These hypotheses are written in formal terms to yield the following condition, which expresses the pricing area that makes the guarantee scheme efficient (area shown in chart 5 of the text):

$$(1-p_m^A)(1-D+X) < \gamma \leq (1-p_m^B)(1-D+X) - \frac{\Phi_B}{\delta} \leq (1-p_m^B)(1-D+X) - \Phi_B$$

$$\underbrace{\qquad\qquad}_{\gamma_{\min}(\delta)} \qquad \underbrace{\qquad\qquad}_{\gamma_{\max}(\delta)} \qquad \underbrace{\qquad\qquad}_{\gamma_{\max}}$$

where Φ_B is a constant, increasing in the risk dispersion in class B (and hence in the information asymmetry responsible for adverse selection).

For the interval $[\gamma_{min},\gamma_{max}(\delta)]$, defined by the previous equation not to be empty, the fraction δ must exceed a given value δ_{min}. The optimal solution is thus for the State to set the two parameters of the guarantee in the following order: (1) the minimum coverage ratio that will ensure a non-empty interval $[\gamma_{min}(\delta),\gamma_{max}(\delta)]$ and (2) the corresponding cost γ_{max}.

a. "Credit Rationing in Market with Imperfect Information", J. Stiglitz et A. Weiss, 1981, *The American Economic Review.*
b. "Federal Lending and the Market for Credit", W. Gale, 1990, *Journal of Public Economics.*
c. Moral hazard can occur when the business owner has some latitude in choosing the project to be launched with the loan obtained. Specifically, once the interest rate has been negotiated, the borrower may choose a riskier project in order to obtain a higher return in the event of success.

The risk premia presented in table 1 are, by definition, constructed to make sure that the expected profit of the bank is equal to 0 when the rate of the loan is equal to the risklessfirm interest rate plus this premium[14]. The premiums can vary by almost 1,000 bps according to the firm's score. However, we cannot straightforward derive the premium actually charged by the bank, because the lending rate depends on other factors as well, such as overheads, refinancing costs, and cross-subsidies with other banking services. By contrast, the size of the variation in the credit's cost can provide useful information to estimate the effective risk premium, and thus the risk taken by the bank.

Table 1: Actuarial risk premiums as a function of the Banque de France risk class

Risk class	at 2 years	at 5 years
1	13,4%	9,5%
2	5,6%	4,9%
3	3,5%	3,3%
4	1,4%	1,5%
5	0,7%	0,8%
6	0,2%	0,3%
7	0,1%	0,1%

Source: DGTPE. calculations.

The loan-price dispersion actually observed is indeed much smaller than one would expect if all firms were granted loans. For example, for the two loan categories reported in table 2[15], actual interest rates display a dispersion of about 150 bps. This range turns out to be identical to the one determined for low-risk firms in classes 4-7. At first glance, the figures seem to suggest that banks confine their loans to this category of firms and do not lend to the riskier ones. This interpretation, however, neglects the Oséo / Sofaris loan guarantee, which allows banks to extend business loans without passing on the full cost of the risk through their lending rates[16].

In sum, credit rationing appears to affect firms which risk level is equivalent to or greater than the Banque de France's score no. 3, i.e., a 5-year default risk exceeding 20%.

Table 2: Medium/long-term lending rates, 2005 Q4

Loan amount	1st decile rate	Average rate	9th decile rate
≤15 245€	3,04%	3,68%	4,49%
>15 245 et ≤45 735	2,94%	3,60%	4,40%

Source: Banque de France monthly bulletin, january 2006.

3.4 The pricing should be high enough to prevent the scheme from attracting low-risk firms

Once the State has chosen its intervention target, modelling can supply an initial estimate of the optimal guarantee pricing that will minimise windfall gains. The model, described in appendix 2, makes it possible to determine the optimal parameters of the guarantee, i.e., its pricing and coverage ("covered portion" or proportion of loan outstanding covered by the guarantee). The State can thus target its intervention at a specific category of firms and minimise the fiscal cost of the programme.

The model assumes that banks can only identify the Banque de France risk class for each firm without knowing their individual risk level. The model thus takes into account (1) the banks' imperfect information (i.e., "information asymmetry") and (2) the players' opportunistic behaviour, which may lead banks to pick insufficiently risky projects or to select over-risky firms in spite of themselves ("adverse selection").

Assuming-consistently with the previous results-that class 3 is subject to credit rationing and is the main target of the guarantee, the model yields the following results:

- The guarantee must be priced high enough to prevent its use by banks for firms outside the public-intervention target. It must therefore exceed the risk premium for firms with easy access to bank credit. Moreover, the price must be low enough to ensure that the banks' expected yield on a guaranteed loan will be high enough to offset adverse selection. **According to our modelling exercise, the guarantee price should stand within the 150-250 bps range: the exact value, in turn, depends on the guaranteed portion.**
- The guarantee's scope of coverage must be broad

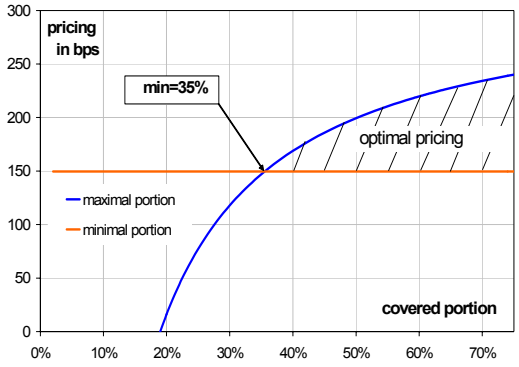
(14) Risk premia result from an actuarial calculation using the probabilities of default, conditioned by the age of an «average» firm of a given risk class.

(15) We focus on these two categories because they comprise most of the loans guaranteed by Sofaris under the "creation and ownership-transfer funds" programme. In 2003-according to a study by INSEE (the National Institute of Statistics) using the Sofaris database-the average size of a loan guaranteed under the "creation fund" programme was about €15,000 and that of a loan covered by the "ownership-transfer fund" programme was €33,000.

(16) For example, the maximum Sofaris guarantee under the "creation fund" program, which covers 70% of losses and is priced at 90 basis points, would allow banks to lend to class-2 firms by charging a 230-bp spread instead of a theoretical 490 (230 = (1-70%) * 490 + 90), or only 90 bps above the spread for medium-risk firms (medium risk = class 4 in the Bank of France scoring table).

enough to encourage banks to use it in the "risky" target segment, the corresponding price increasing with the coverage. **The simulations conducted under the previous assumptions indicate that the guarantee should cover at least 35% of losses.**

Chart 5: Optimal pricing range for the guarantee



Interpretation: The pink line is the average risk premium for unrationed borrowers. The guarantee must be priced higher in order to avoid its use for these firms. The blue curve bounds the area where banks issuing guaranteed loans to rationed firms with the guarantee will achieve zero profit. A higher fee will make the guarantee too expensive. In other words, the related fiscal expenditure will be too modest to offset adverse selection and incite banks to lend to the high-risk segment. The optimal pricing area thus lies between the two curves.

The fraction of the loan guaranteed by Oséo / Sofaris (between 40% and 70% for an average 43% coverage) therefore seems a sufficient incentive, but the guarantee may be priced too low (130 to 150 bps). This level is indeed slightly below what the previous analysis, based on admittedly cautious assumptions, regards as optimal pricing (targeting class-2 rather than class-3 risk would lead to distinctly higher prices, on the order of 300 bps). Despite the roughness of the proposed model this result seems both robust and intuitive, since the guarantee remains priced slightly below the risk cost for the average firm-which, in theory, lies outside the system's target range.

These findings led Oséo / Sofaris to a cautious raise in its fee in July 2004, with the aim of improving the scheme's targeting.

More generally, this change should incite banks to price credit more efficiently, and initiate a virtuous circle that promotes risk financing. As the previous analysis of bank pricing showed, the banking industry does not fass the true value of risk into the cost of credit. This is partly due to the cross-subsidies that have been implemented between bank credit and financial services. Oséo / Sofaris's increasingly frequent requirement that fees are charged to banks rather than to borrowers should also encourage banks to price risk more efficiently.

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