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Banking Crisis and SME Credit Risk Assessment

1.1 Introduction

The financial crisis that began in 2008 unveiled the connection between the economic cycle and the frequency of default. The combination of the procyclical nature of credit ratings and the volatility of evaluations based on fair value or mark-to-market has brought about the contraction of bank capital while also requiring an increase in capital absorption (risk-weighted assets: RWAs).

The effects of the new Basel III regulations will become apparent over time. Nonetheless, the contraction of RWAs in order to strengthen bank core tier capital has induced a severe reduction of the credit available to enterprises, and this is particularly true regarding SME funding needs.

SMEs are significant for the real economy: enterprises with fewer than 250 employees are estimated to have accounted for 99.8 % of the total number of enterprises across Europe, 66 % of employment, 57 % of turnover and 58 % of added value.

There is a strong relationship between bank capital buffers and lending growth in the fringe countries of the European Union (EU). The lower the bank capital buffer, the lower the lending growth rate (IMF 2013a).

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The percentage of reduction in loans granted before the crisis in 2007, and again in June 2015, is acute in Ireland, Spain, Portugal, France, The Netherlands and Italy (in the range 50–20 %). Access to credit represents the second biggest problem faced by entrepreneurs, falling just behind the ability to find customers.

It is straightforward to compute the cost of having a loan as an asset on a bank balance sheet. If we assume a Tier 1 ratio of 10 % and a Return on Equity of 10 % (and a tax rate of 50 %), it is easy to affirm that the bank needs at least 200 basis points of income to satisfy both (1) capital requirements; and (2) targeted Return on Equity [10 % × 10 %/(1 – 50 %)]. From a banking perspective, a 200 basis point income floor must be assumed in addition to the expected loss estimation of the loan.

If we compare the bank cost of having a loan as an asset before and after Basel III, we can see a material increase in this cost; over the same period, credit derivative indexes show a strong increase followed by a huge reduction in the cost of credit risk protection. In Fig. 1.1, we can see the dynamics of credit cost in terms of remuneration of capital requirements and the cost of a credit risk protection based on i-Traxx Europe 5 years.

In Fig. 1.1, three time periods are identified:

1. Before 2007: The bank cost of having an investment grade loan as an asset was more expensive than selling the loan (and the credit risk). Before 2007, the banking industry had conceived the Originate-to-Distribute model and active credit portfolio management (ACPM)/Credit Treasury played a central role in the new banking business model.
2. 2008–2012: The cost of credit risk protection was very high and volatile. The financial crisis became a crisis in the real economy, to which the regulators responded through three different actions: (i) new higher capital requirements and one Banking Union; (ii) an abundance of liquidity to avoid any bank default risk (such as the long-term refinancing operation, LTRO etc.); and (iii) setting the conditions to favor non-bank actors entering the loan origination market.

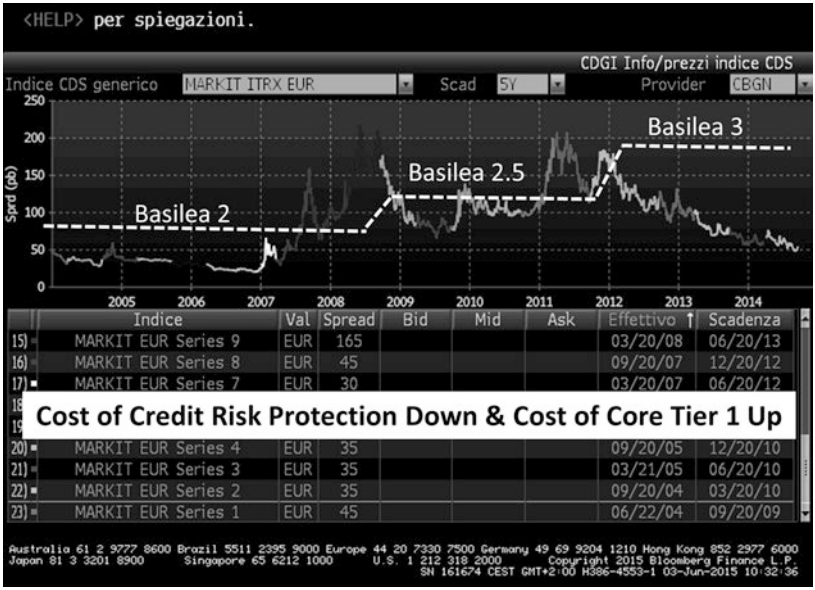

Fig. 1.1 Cost of credit for a bank and cost of buying credit risk protection (Source: Our elaboration on regulatory capital and Bloomberg data)

3. 2013–2016: The bank cost of having an investment grade loan as an asset is now more expensive than selling the loan (and the credit risk). Could this mean a return to the Originate-to-Distribute Model? Perhaps not. However, we do believe that there is plenty of space for non-bank investors to enter the business of granting, repackaging, buying and selling loans.

A new credit market, complementary to bank credit, is necessary for the development of the real economy. Non-bank investors would be able to finance SMEs; such investors would need a better understanding of the SME credit risk and opportunities than that of commercial banks, which is a not an easy task. To this extent, the ability to read the information held in Central Credit Registers (CCRs) takes on an important role for non-bank investors in reducing imbalances in the availability of information, thus making these new credit channels more efficient and capable.

- CCRs play a key role in supporting supervisory activity and improving the banking and financial sectors. These systems gained greater importance during Basel II/Basel III, establishing the first reliable information repositories able to provide data and test assumptions for new regulation. During the current crisis, and given the existence of information gaps, the importance of complete, accurate and timely credit information in the financial system is evident (Gutierrez and Hwang 2010).
- CCRs are a means of: (1) helping to impose discipline on borrowers, (2) facilitating appropriate analysis of their creditworthiness, and (3) fostering greater transparency and more competition between banks (Artigas 2004).
- CCRs operated by central banks exist in 14 EU countries, covering approximately 13 million bank–SME relationships.

It is relevant to note that the lower the turnover of the SME, the lower the accuracy ratio on the Financial Module and the higher the accuracy ratio on CCR-Based Behavioral Modules, when based on CCR data more generally (see Fig. 1.2):

1. SMEs – the lower the turnover, the greater the role of banks in funding and the higher the value added by analysis of CCR data;

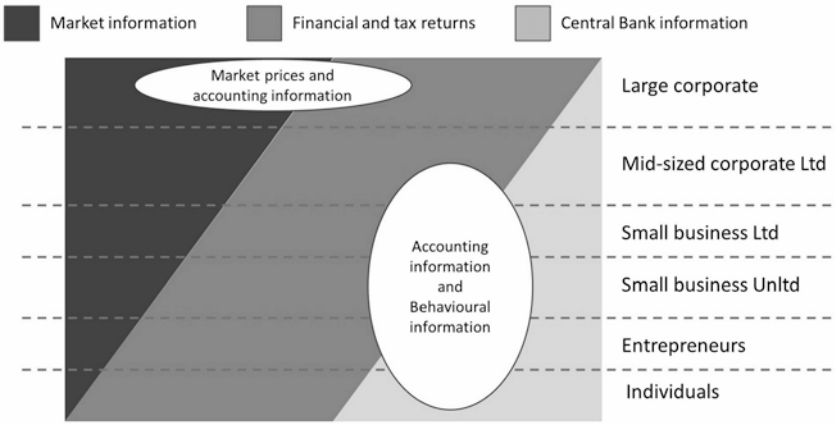

Fig. 1.2 Source of information and typology of valuation

2. Large corporations – the higher the turnover, the lesser the role of banks in funding and the lower the value added by analysis of CCR data.

In other words, the role of the CCR in estimating SME credit risk is, in a certain sense, equivalent to the role of market prices in estimating credit risk in public and large corporations. This is due to: (1) the reliability of CCR data; (2) its strong correlation with a 90-days past due definition of default; and (3) the immediacy of data availability.

The purpose of this volume is to offer an operative guide for non-bank investors.

1.2 The structure of the book

Chapter 2 (Stefano Fontana) presents an overview of the significance of SMEs in Europe and discusses the new funding channels and actors that are rapidly entering the SME funding market in the EU.

Chapter 3 (Stefano Fontana) offers an introduction to the funding of European SMEs through securitization and discusses the key role played by Central Credit Registers in supporting supervisory activity and improving the banking and financial sectors.

Chapter 4 (Gianluca Oricchio) presents corporate and SME credit rating models, discussing the main steps in developing a rating model. The chapter goes on to present SME sub-segment models related to the probability of default (PD) encountered in corporate entities. The chapter also considers the term structure of probability of default, the production of European transition matrices based on the different phases of the cycle itself, validation of internal credit rating models and the validation of the PD model. The chapter closes with a section on the performance assessment of PD and the backtesting related to the model.

Chapter 5 (Gianluca Oricchio) describes the methodology and the estimation and validation processes of a proprietary SME Credit Rating Model (DefaultMetrics™ 2.0), which is able to differentiate the relationships between SMEs and hausbanks (or leading banks) from those between SMEs and multiple banks (non-leading banks). This approach has proven to be very effective in improving the performance and accu-

racy of the quantitative model developed for Italy, as well as in testing its applicability in other EU countries.

Chapter 6 (Sergio Lugaresi) discusses the large set of tools now in place in order to restart the SME credit engine in Europe. This chapter describes in great detail all the measures proposed and the steps taken to head the economy in a more stable and productive direction.

Chapter 7 (Andrea Crovetto) investigates E-platforms as alternative funding options for SMEs. This model is based on low costs, technological performance and the leverage afforded by intermediation facilities Internet capabilities offer. The chapter provides an in-depth examination of the interaction between alternative and traditional funding channels.

Chapter 8 (Andrea Crovetto) presents a case study undertaken on Epic – an investment company (SIM) authorized and regulated by Consob and Bank of Italy that was established in 2014. Epic is Italy's first FinTech platform where Italian SMEs can present their development projects to a selected audience of institutional investors (investment funds, family offices, banks, insurance companies, investment companies, pension funds) and private investors classified as qualified under the Markets in Financial Instruments Directive (MiFID) (Directive 2004/39/EC), which has been in force since November 2007.