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THE DETERMINANTS OF SMEs CAPITAL STRUCTURE: OVERCOMING SUPPLY CONSTRAINTS

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Abstract

This paper studies the most relevant literature on firms' capital structure, in general, and Small and Medium Enterprises, in particular. Evidencing that SMEs' financing needs to evolve with their age, literature notes that failures in this market stem generally from a shortage in capital supply and from the extreme degree of opacity which characterizes young and small corporations. The forthcoming Basel III regulations will strengthen the future banking environment but probably affect even more financing to small businesses. Given that the imperfections of this market are not only present in periods of economic turmoils but also on a structural basis, finding ways to enhance SMEs' transparency, and designing instrument to reduce dependence from bank credit, should be a priority for future actions undertaken by practitioners and regulators. Following the effective examples of the Indian SMEs Rating Agency, of the Korean corporate bonds market and of the growing phenomenon of crowdfunding, this work analyzes their pros and cons as well as their potential to become worldwide industry standards.

1. Introduction

Small and Medium Enterprises (SMEs) are usually described as those corporations too small to obtain access to traditional banking channels but too big to access microfinance. Traditional theories have described these companies' financing choices as a function of costs and benefits connected to each source of capital, as well as in relation to their age and maturity. However, due to their high informational opacity, SMEs may encounter severe difficulties in signaling the quality of their businesses. Due to this peculiarity, the survival of many small businesses is put at stake whenever the quantity of funds available is reduced.

Several instruments have been designed to overcome these difficulties, but especially during economic turmoils, even those tools might lead to sub-optimal financing equilibria if the supply side of the channel is blocked. The short-term impact of a credit crunch highly reduces the effectiveness of traditional SMEs financing channels, leaving those companies with an insufficient spectrum of funding opportunities. Up-to-date frameworks, while recognizing the relevance of these issues, still have not agreed on which concrete tools can be designed to help SMEs overcome the impasse.

This work will start by examining the Demand side of the framework, trying to understand how the focus of classic theories, namely the Pecking Order Theory, the Trade-Off Model and the Market Timing Theory has shifted during the last years. Up to today, these theories have received mixed empirical evidence, and most of firms' financing criteria remain still unexplained.

Secondly, I will study in detail how SMEs define their capital structure. The most relevant theoretical contributions (above all, by Berger and Udell) evidence that small businesses' financing evolves with their age and with the reduction of their informational opacity. In practice, SMEs tend to rely mostly on private capital contributions, and seldom access capital markets due to the lack of verifiable data about their quality. However, several are the instruments practitioners have identified to increase the ability of SMEs to establish financing relations: among them, the use of personal guarantees as collateral, the definition of appropriate covenants and maturities and the creation of personal relations with capital lenders seem to be the most widely used.

Then, with a solid theoretical background, the attention will move to the Supply side of financing, to investigate the role intermediaries, and lenders in general, have in periods of credit tightening. Furthermore, I will study why, in Europe, the provisions of Basel II have not worked and how Basel III will deploy its impact in the years to come. The biggest impact of the forthcoming regulations will likely be deployed over small financing institutions and, consequently, on SMEs. In Europe, the creation of a Small Business Act posed the ground for the definition of less burdensome regulatory requirements for SMEs.

To understand if the capital structure landscape will change in the future in the light of the new legislations, the last section of this study investigates whether there is room for the adoption of new financial instruments to serve SMEs' needs, and what could be effective ways to increase their informational transparency. Creating a Rating Agency dedicated to SMEs, and requiring each small corporation to obtain a credit rating may be the key to reduce SMEs' opacity and to pave the way for their

entrance in the corporate bond market, today practically inaccessible. The development of SMEs' dedicated stock markets, and the diffusion of the instrument of crowdfunding, may add extra steps in the classical small businesses' financing cycle. The contribution of Governments seems absolutely necessary in the creation of fertile environments for SMEs growth and in the support (financial and non) of their needs.

2. Traditional capital structure frameworks

In this section I will present the most widely accepted frameworks of capital structure, the Trade-Off Model, the Pecking Order Theory and the Market Timing Theory, emphasizing on their indications for SMEs' financing. These theories were developed after that the famous prediction of Modigliani and Miller (1958), which stated that in perfect and frictionless capital markets firms' choices of financing are irrelevant to firm value, was found not consistent with what happens in the real (imperfect) world. Over the years, academics relaxed hypothesis on the perfection of financial markets and evidenced that capital structure choices do matter, and that the interaction of several factors defines specific combinations of debt and equity which strongly affect the value of the firm.

2.1 The three basic theories

According to the original "static" specification of Jensen and Meckling (1976), the *Trade-off Model* predicts that firms' capital structure is defined by a trade-off between debt's benefits and costs. By considering that interests are tax deductible, and that this feature decreases the quantity of taxes to be paid, Modigliani and Miller refined their initial proposition by introducing the concept of interest tax shield. In a simple unrealistic context in which debt is assumed to be risk-free, and in which there is no punishment for increasing leverage in terms of increasing costs, the basic MM paradigm implied an optimal capital structure with 100% debt, which makes little sense if compared to empirical observations. Probably, this is one of the reasons why the trade-off theory quickly gained popularity among academics.

The “tax-bankruptcy trade-off” approach links the benefits of interests’ tax deductibility with the costs of bankruptcy and financial distress. The optimal capital structure is found at the point in which the marginal benefit of a higher interest tax shield from an increase leverage is exactly offset by the marginal increase in the costs of raising extra debt. Firms who can benefit from higher tax shields of debt and which suffer lower cost of financial distress will tend towards their preferred capital structure by raising extra debt and/or by reducing equity. In this specification, the value of a levered firm is equal to the value of the unlevered firm plus the present value of the tax shields, minus the present value of financial distress costs.

Instead, the “agency” perspective describes extra debt as a tool to control managers’ behavior given the threat of bankruptcy if debt is not repaid. When a firm is levered, the higher the riskiness of an operation, the higher the conflict of interest for managers if decisions have a lower impact on equity-holders than on debt-holders. On the other hand, debt has the agency benefit of granting firm owners a higher control over the company.

The Trade-off Model is, up to today, the most widely used and studied model of capital structure. Especially in its dynamic version (according to which leverage ratios are adjusted within a specific optimal range), it is considered a quite effective approximation of the real-world behaviors. Indeed, probably the biggest shortcoming of the classical Trade-off Model is that it represents a “static” one-period theory. The model identifies an optimal capital structure according to the interaction of the aforementioned factors (interest tax shield and distress costs) and implicitly assumes that every company should be at its optimal capital structure in any given moment, which can be defined at least unrealistic. Hence, by including a multi-period analysis

in the framework, the model can reach the more realistic conclusion that a company can be in a sub-optimal capital structure at a given time, while tending towards the optimum in a subsequent moment.

Developed as an alternative to the Trade-off Model, the *Pecking Order Theory*, as described by Myers and Majluf (1984) and Myers (1984), states that the first financial decision to be made by a corporation concerns its ability to support business with cash flows generated from internal activities, namely retained earnings, which pose no adverse selection problems. Should the firm not find enough internal funds to finance positive NVP projects, the recourse to outside funding may become necessary. Whenever external sources are required, debt is preferred to equity due to the lower costs required to raise debt. In fact, both debt and equity require a risk premium, but that premium will be larger on equity due to its higher riskiness.

In addition to that, the concept of asymmetric information is usually used to explain the relevance of this theory. Whenever there is a mismatch in information availability about a firm, the use of debt over equity is normally preferred because it signals confidence in the profitability of a project, and that the current stock price is undervalued. In fact, if the stock price was overvalued, the firm would obviously prefer issuing equity. However, the issuance of new shares of equity is usually interpreted by the market as lack of confidence in current management, and that the share price may be above its fair value, given that it is assumed that managers should behave in the best interest of existing shareholders and that they dispose of better information that outside investors. Hence, issuing new shares usually leads to a drop in share price, making this source of capital the least preferable after internal funding and debt.

The Pecking Order Theory is usually explained also by noting the impact of transaction costs, i.e. all those costs that are normally incurred when participating in an exchange or in accessing a market. These costs, mainly associated with the generation of external finance, have a fundamental role in determining the choice of financing sources. Companies will lean towards internal equity financing, at first, given that it implies the lower burden in terms of transaction costs. Then, if necessary, the firm will access external debt financing and, at last, external equity financing.

At last, the *Market Timing Theory*, formalized by Baker and Wurgler (2002), observes that managers will use those financial tools that appear to be more favorable in the moment they need financing: they will issue equity following a general stock price increase (and repurchase when prices drop), and look for debt financing when interest rates are low. Firms do not actually care about choosing debt or equity, and may raise funds even if unnecessary, if conditions appear extremely favorable, as well as defer financing if none of the markets appears attractive. The important consequence of this theory is that the financial structure of a firm, in a given period of its history, will then be function of the favorable conditions which made certain sources more favorable than other in the past.

2.2 Testing the traditional frameworks

These theoretical works have so far received mixed theoretical evidence, with the work of Titman and Wessel (1988) paving the way for the subsequent thorough empirical analyses. For example, in their comprehensive work, Frank and Goyal

(2009) study the impact of a series of factors that previous theoretical literature deemed critical in the understanding of firms' capital structure. They identify a list of six findings ("core factors"), statistically significant and robust, that best describe the determinants of market leverage. Namely, they find the firms that display a higher leverage are those that:

1. Belong to an industry in which the median firms displays a high leverage;
2. Have a lower market-to-book ratio;
3. Have more tangible assets;
4. Have lower profitability;
5. Are larger (as measured by asset value);
6. Compete in a high-inflation environment.

The authors find that five out of these six factors behave as predicted by the static trade-off theory; the behavior of profits, instead, is consistent only with dynamic trade-off models in which leverage is left free to move and adjusted only if it goes over a certain threshold. On the other hand, even though the pecking order theory succeeds in predicting correctly the effects of profits, it does not manage to explain many firms' financing decisions. Market timing theory, at last, is too little developed to be considered a reliable predictor of firm's behavior, even though Baker and Wurgler (2002) find strong empirical evidence when trying to describe capital structure as an accumulation of past attempts to benefit from the currently best conditions in the market.

Therefore, for the interest of this work, what theories predict is that the smaller and the less tangible a firm is, the lower the degree of indebtedness one should expect to

see. Similarly, Fama and French (2002) observe that equity issuances are common specifically in the small/high growth firms cluster.

Graham and Leary (2011), however, strongly believe that none of the extant theories has ever been able to explain thoroughly the observable heterogeneities in firms' financing decisions. In their point of view, it is impossible to reject the Trade-off Model in a broad sense, according to which a company decides how to fund its projects after trading off costs and benefits of each source of capital. However, the classical specifications of the theories either lack enough observations, or are not suitable to explain the aspects of capital structure they were supposed to. Hence, they list the approaches the most recent literature used to explain traditional theories' failure, namely:

- A more refined measurement of fundamental variables (leverage, distress costs, tax shields);
- A higher consideration for non-financial stakeholders (suppliers and customers, employees, labor unions);
- A more prominent role for capital supply;
- An optimization of financial contracting (collateral and asset redeployability, maturity, covenants and renegotiation);
- The inclusion of the hypothesis that it may be too costly, thus unfeasible, for a firm to frequently optimize its capital structure, hence not allowing for the observation of significant shifts in financing decisions.

As regards the applicability per-se of these traditional theories in the context of small and medium enterprises, it is impossible not to argue that small entrepreneurs will surely choose their sources of financing by trading-off their costs and benefits, and that they will use a hierarchy of sources in a well-defined way. However, as regards the validity of the Trade-off Model for SMEs, there are several reasons why the basic framework, which works for large corporations, may not fit this sector:

- Small entrepreneurs might be lacking financial knowledge and ignore the concept of interest tax shield, thus behave irrationally without weighting the potential benefit connected to debt;
- As it will be demonstrated in the next chapter, some kind of financial constraints may not allow the small firm to lever up to its optimal level;
- The perceived bankruptcy costs may be too high for a small entrepreneur managing personally his business, often family owned and with a high sentimental value.

On the other hand, the classical pecking order theory should be able to explain the behavior of SMEs when looking for finance, as it does for large corporations. Indeed, if it's true that most small firms are owned by a single shareholder, who is contemporarily the director and manager of the enterprise, an eventual issue of equity would dilute its shareholding and lead to a loss of power to lead the company. In order to avoid this phenomenon, a small entrepreneur would naturally prefer debt to equity. Hence, classical theories do have some predictive power to explain small firms' financing behavior. However, the analysis of the next chapter will show that the choices of financing of SMEs have some peculiarities that completely differentiate them from the normal behavior of a large corporation.

Among the unanswered questions in literature indicated by the recent work of Graham and Leary (2011), this work attempts to shed more light on the supply side of financing (and its impact on SMEs financing) and to the prominent role of financial contracting as a driver of firm's financing decisions.

It has been demonstrated that pp-to-date studies only explained a portion of firms' financing behaviors. Small and medium enterprises represent the bulk of developed economies, both in terms of employment and turnover. However, due to their specific characteristics, they are also the most exposed entities to macroeconomic fluctuations. To survive the effects of financial turmoils, SMEs shall strive to build a scrupulous knowledge of their financing opportunities. Mastering a large enough portfolio of alternative tools, they will be able to finance their activities, even in periods of crisis, by molding their liability side regardless of supply shortages.

3. SMEs financing

Growth of Small and Medium Enterprises is often hampered by the existence of a wide array of obstacles to access common sources of financing. Without the possibility of obtaining as much capital as required by the investments they want to undertake, they find huge obstacles to increase their productivity and competitiveness, as well as to enter new markets and hire new employees. In this section I will analyze the process according to which academics and practitioners believe SMEs obtain their funds. This process, particularly different from the one used to finance large businesses, uses tools and instruments whose functioning and applicability strictly depend on the peculiarities of small firms' structure.

Before the groundbreaking work of Berger and Udell (1998), which will be widely analyzed in the pages to follow, a comprehensive analysis of SMEs' capital structure decisions was practically absent. Academics tried to use the insights of the traditional capital structure frameworks and applied them to the small businesses' sector, highlighting some of the aspects which pinpointed the generation of more complete SMEs financing specifications. It had been clearly understood that the classical agency theory would not apply in a straightforward way to the SMEs environment, given that usually the owners are also managers in most of small businesses. Nevertheless, it was also clear that the high riskiness of young and small enterprises generated practically all the problems described by the agency theory, namely the misuse of informational asymmetries and the potential for moral hazard and adverse selection. It had also been realized, but still not formalized, that small businesses tended to signal their value to potential investors by choosing their financial structure, rather than by providing specific information or data. Furthermore, it was

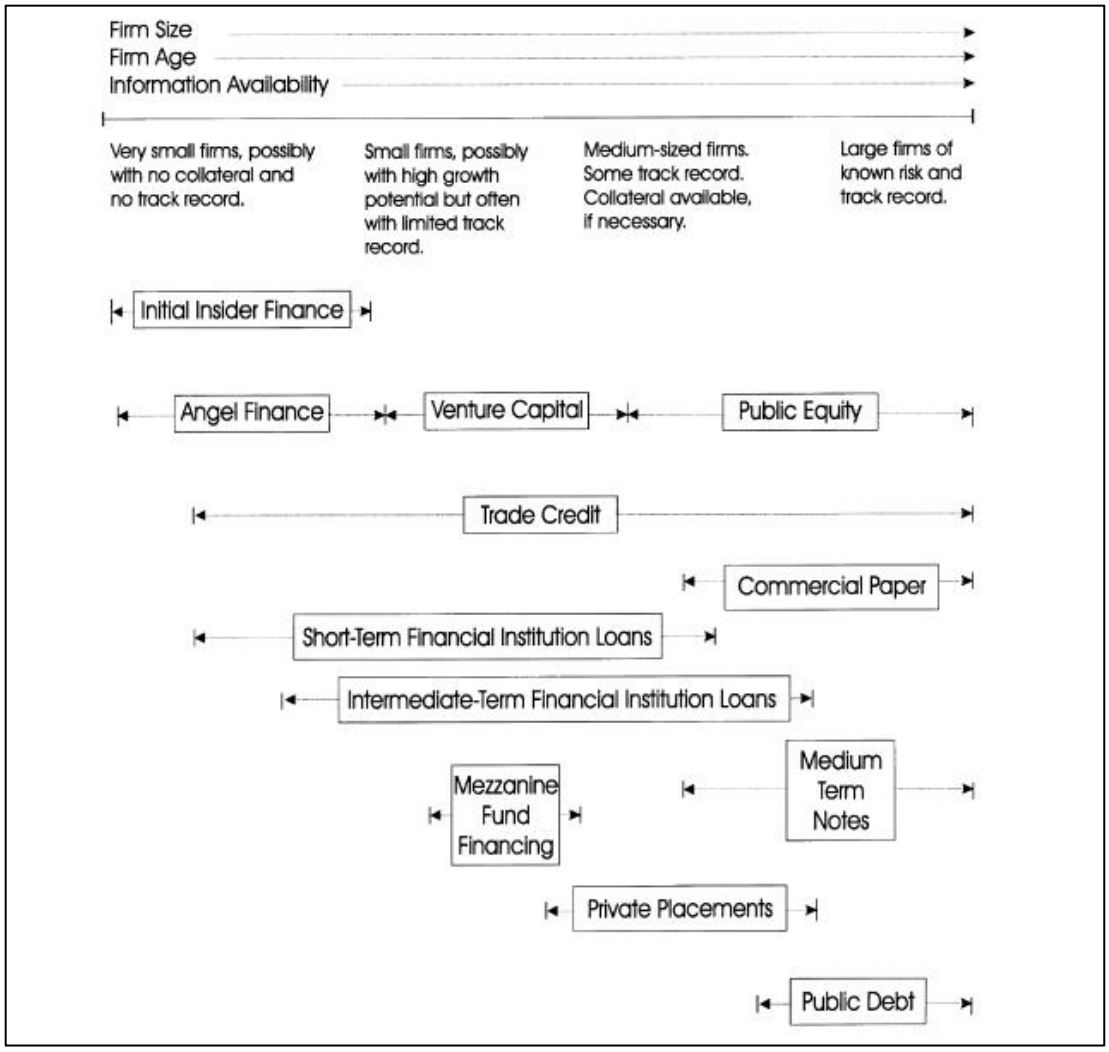
also clear, from empirical analysis, that small firms were using some sort of pecking order in their financing choices.

3.1 Sources of Small Business Finance

The fundamental characteristic of small firms when approaching financing markets is their high degree of informational opacity. The contracts they stipulate are usually kept private. They seldom access public markets. And most of them do not keep "standard" financial statements. Absent easily accessible data and information, financial intermediaries find it very difficult, if not impossible at all, to exercise their usual *screening* and *monitoring* functions. What intermediaries do in financial markets regards, mainly, the process of collecting information about potential customers, evaluating their quality, designing contracts based on clients' characteristics and assessing ex-post compliance to contractual terms. Due to their lack of transparency, SMEs may encounter difficulties in signaling their quality and, therefore, building financing relationships.

Banks may consider it too burdensome to tailor specific offers to SMEs due to their high credit risk and cost to serve; if they decide to fund a small business, banks will hedge their positions with the help of highly complex and structured contracts. On the other hand, informationally transparent businesses, larger and more mature, easily access public stock and bond market with simple and generic contracts.

The most prominent theoretical work in SMEs literature, written by Berger and Udell in 1998, points out that SMEs financing decisions depend mainly on their sector of activity and on their growth cycle.



Source: Berger and Udell (1998)

According to the authors, SMEs have financing needs and preferences that evolve as the firm grows and reduces its informational opacity, becoming more transparent. For the majority of small businesses, different capital structures may be optimal at a certain stage of the cycle, but less effective in others:

- Most micro and small businesses have their financing needs guaranteed by personal finances of the owners or by other “insiders”. The first projects of a young and opaque startup will likely be financed by a mix of *insider finance* and *angel financing*. With the former the authors refer to equity funding provided by the funders or by their families or friends. Instead, “angels” are usually defined as wealthy individuals that, alone or in the form of investment groups, in an informal and non-intermediated manner, invest huge amounts of money in exchange of a part of the company’s stock. In this “seed” phase the business idea may still be at an embryonic stage, and the company’s assets mainly intangible.
- Later on, as a business plan is developed and the product tested, intermediated forms of equity and debt financing take over to expand the company’s scale. As regards the equity side, external funding comes mainly in the form of *private equity* first, and *venture capital* afterwards, when the complexity of projects increases and when an already significant amount of investors is willing to contact an intermediary to invest in the firm. In addition to private equity, at this stage SMEs external funding is then provided by private debt suppliers, rather than by public markets.
- Even if quite expensive, the young small company will heavily rely on *trade credit*, i.e. delays of payments, in the settlement of deals with suppliers. It is convenient for a SME to use working capital finance because it is an instrument which can be used even during credit crunches, and because it is likely that suppliers, which have better private information than financial institutions, will require easy procedures and conditions. And the same is true

for suppliers, which can threat small entrepreneurs to withdraw from future contracting if payments are not met.

- As the firm grows, a small business increases its ability to access public sources of capital, mainly in the form of debt. Extant SMEs literature indicates asset tangibility as the key for accessing external debt. By becoming more tangible, small enterprises increase their ability to pledge firm's possessions as collateral, along with the entrepreneur's personal belongings. This is because the higher the degree of asset redeployability, the higher the ability of firms to sell their assets in case of financial distress and to honor their obligations, so the higher the willingness of financial institutions to provide them with capital.
- The biggest part of the external debt financing is provided through lines of credit and short-term loans, usually by a single banking institution. Life-insurance companies, mezzanine debt funds, credit cards, leasing and factoring companies share the remaining (Berger and Udell, 1998; Ayadi, 2005). However, previous theoretical and empirical works have demonstrated that the amount of external debt financing is much more relevant for small firms than it could be expected under the "tangibility" hypothesis[1]. In fact, the financial intertwining between entrepreneurs' and firms' capitals reduces the rigidity of the framework above described, and increases the difficulties in describing thoroughly how SMEs' financing works. Indeed, in the moment entrepreneurs use their personal belongings to guarantee firm's loans, part of "external" financing becomes somehow "internal", and personal relationships

[1] See for example Berger and Udell (1998) for a theoretical framework and Graham and Leary (2011) for empirical findings.

between local bank branches and individual entrepreneurs become more valuable than physical collateral. It may be way easier to value the track record of an entrepreneur rather than data of a newly born business.

At last, it is worth to underline that not all small businesses are designed to go public on the stock market with an IPO. While literature recognizes that there is a sort of complementarity between angel financing and venture capital, and between venture capital and public equity, the development of SMEs stock markets is still to be considered slow, especially in Italy[2].

After these consideration, it is clear that one should take the "growth cycle" paradigm as a simplifying assumption of SMEs financing patterns, given that there is margin for the anticipation of external financing even during firms' earlier stages. In addition to that the fact that growing small firms tend to obtain external equity before external debt seems to be evidence against the traditional Pecking Order Theory. Berger and Udell (2003) point at the existence of a significant moral hazard problem for small firms as a plausible reason for this fact – external debt suppliers will never finance small entrepreneurs unless risk can be shared among several individuals (i.e. several equity owners).

To close this paragraph, it is beneficial to stress that informational opacity surely is the most prominent factor distinguishing SMEs financing to large businesses financing, but not the only one. Informational opacity can be interpreted as a generator of variable costs, given that the lower the amount of information available,

[2] See Caccavaio, Carmassi, Di Giorgio and Spallone (2012), who studied the reasons why Italian SMEs are less prone than their European counterparts to go public and raise external equity through the stock market.

the higher the costs associated to SMEs financing in terms of fees and interest rates. However, many of the costs connected to accessing public funding are essentially fixed, and generate economies of scale in the size of the operation. Indeed, raising equity and issuing public debt involve significant fixed costs in the process of due diligence and in the distribution and registration of the securities. If it's true that the size of a financial operation is correlated with the dimension of the business, these costs can be easily absorbed by large businesses, but may become difficult obstacles to overcome for SMEs. At last, large firms are not bound by their size to use specific sources of capital, but can freely choose to access private or public markets according to their specific needs.

3.2 Reducing informational opacity

In absence of tools to increase SMEs transparency, banks cannot trust their alleged quality and may be obliged to increase the cost to obtain financing. However, small firms and financial intermediaries do have a series of instruments to reduce the informational opacity problem[3]. Through the deployment of these tools, financial institutions are able to offer funding to small businesses without being obliged to impose extremely penalizing terms, As verified empirically by Berger and Udell (2003), these include, in detail:

- *Collateral and Guarantees.* The use of collateral as an instrument to increase SMEs transparency falls within the context of the so-called "asset-based

[3] As already highlighted in the first part of this work, these same tools, belonging to the category of financial contracting instruments, have been identified by Graham and Leary (2011) as reasons for the failure of classical capital structure frameworks in explaining firms' financing heterogeneity

lending", under which lenders value the suitability of a financing operation according to the collectability and liquidability of firm's assets. Much has already been said on this topic; here it is worth adding that we can distinguish between "outside" collateral, which refers to assets external to the firm as the entrepreneur's personal belongings, and "inside" collateral, which refers to pledging the firm's assets to secure a loan. Given that most SMEs cannot rely on as tangible assets as large firms do, outside collateral and "personal guarantees" (claims against the whole entrepreneur wealth) account for most of the contractual mechanisms used. This is also because these instrument align the interests of lenders and entrepreneurs, reducing adverse selection problems arising before the definition of the contracts, and moral hazard problems after credit is granted. Indeed, collateral and guarantees can assure lower costs of financing and prevent credit rationing because a financial intermediary can more easily assess the value of the pledged asset rather than of the whole firm on a continuous basis. Particularly useful for a small business is the use of accounts receivable and inventory as inside collateral to grant variable credit lines according to the value of the underlying asset. By doing so, the risk exposure of the supplier of capital depends only on the value of the collateral, rather than on the entire firm. Moreover, a financial institution can monitor the performance of the firm in the short term with low risk, and gain useful information to build safer relationships on a longer basis.

- *Debt Covenants and Maturity*. To ensure that borrowers will not embark upon excessively risky projects, small businesses' suppliers tend to apply strict covenants to shorter-term contracts, according to the degree of

informational opacity. The threat of not respecting a covenant can force small firms to ask permission to undertake specific actions, thus reducing the overall riskiness of firm's projects and increasing the probability that positive NVP project are chosen. Normally, a firm can be found in breach of a covenant only in the face of a verifiable event; given that the generation of information over informationally opaque firms can be extremely costly, a shorter maturity may be a more feasible instrument that a strict covenant to control small firms' behavior. However, contracts are usually renegotiated as long as firms grow and reduce their riskiness, maturities are expanded and covenants softened. In addition to that, firms can be exempted from certain obligations if the threat of breaching a covenant forces the firm to discard particularly appealing activities.

- *Loan commitments.* It is a forward contract under which a financing institution promises to supply a firm with debt in a future moment at some pre-specified conditions, unless the firm demonstrates a severe and identifiable deterioration in its financial standing, or if is found in breach of covenants. Especially in the form of lines of credit, loan commitments guarantee a flexible and safe source of capital to the borrower, given that they can be freely activated even in conditions of credit crunch. On the other hand, given that this financing instrument is normally used to cover short-term needs (e.g. working capital requirements), a supplier gains enough time to evaluate the reliability of a borrower before eventually providing loans or longer-term financing.

- *Relationship lending.* The day-by-day contact between borrower and supplier is a very powerful tool to overcome potential informational opacity problems. Information collected by a financing institution on the entrepreneur and its activity may help defining less burdensome contracts, in terms of lower interest rates, higher capital availability and protection against adverse economic conditions. It is in the best interest of a small firm to bind its financing activity to a single commercial bank: by allowing the financing institution to check its business and the network in which it operates, the enterprise creates reciprocal trust and the basis for long-term cooperation. The accumulation of formal and informal information over the years may even compensate for the absence of official audited statements, making relationship lending a much more effective tool for SMEs financing that than the typical "financial statement lending". However, relationship lending may also turn into a double-edged weapon: access to exclusive information may confer excessive power to the bank, and may oblige the small firm to establish multiple banking relationships in the attempt of avoiding exploitation, increasing overall transaction costs. Furthermore, if a bank suffers liquidity problems and stops supplying credit (a particularly relevant hypothesis during financial crises as the current), the market may interpret it as evidence of deterioration in the conditions of the firm, even if none had occurred[4]. Hence, at the expense of higher costs, a small firm may be willing

[4] See Ross (1977) for further details of the "signaling theory of debt", according to which providing debt funding to a company is evidence on the market that the firm is in good health. The provider of capital, indeed, acts as a scrutinizer of the firm's health, and by granting funding it is giving a message of stability and trustworthiness.

(or be obliged) to connect to various banks, especially during credit crunches, in order to avoid signaling to the market the existence of problems not directly connected to the business, but rather to the entire economy.

3.3 Constraints to SMEs bank financing

The phenomenon of SMEs being subject to financial constraints is at the core of the most up-to-date literature[5]. Several surveys on small enterprises[6] confirm the perceived existence of constraints as one of the biggest issues small businesses face in their activity. In perfect capital markets, investment decisions should not depend on funds' availability, but rather on the quality and potential of the project to be financed. Instead, what happens in reality is that, even without business-related reasons, many small firms face disproportionate costs of borrowing (in terms of fees and interest rates) which cut them off from the external debt financing channel.

The ability and willingness of small business lenders to supply debt financing to SMEs, as already discussed, is mostly affected by small firms' informational opacity. Academics and practitioners have identified several factors influencing the supply of credit to small businesses; among them, as effectively described by Hackbarth et al. (2006), the most relevant factor is probably represented by the impact of *Macroeconomic Factors*[7]. According to them, macroeconomic conditions have a

[5] See, for instance, Korajczyk and Levy (2003) and Maksimovic, Demirguc-Kunt and Ayyagari (2006).

[6] See European Central Bank (2007).

[7] Other variables that are generally included in the context, but less relevant to this work, are Consolidation in the Banking Industry, Racial Discrimination and Technological Innovation. The latter, however, is considered as a factor having a strong positive impact on SMEs as a lever for

strong impact on credit risk, on firms' financing decisions and on optimal leverage. Their model predicts that enterprises should restrain from adjusting their capital structure during recessions, but rather do it rapidly during booms, in order to benefit from more accommodating economic conditions. As it has already been evidenced, the problem with SMEs is that, ascertained the existence of financing constraints, they have limited ability to modify their capital structure at will, but rather depend on suppliers' ability to provide them with capital.

The transmission mechanism of monetary policy, which is triggered in reaction to any economic shock, operates to a large extent through the banking channel[8]. According to this view, macroeconomic events either reduce banks' reserves and thus the supply of credit ("bank lending view"), or reduce the value of assets to be pledged as collateral through higher interest rates ("balance sheet view"). Shocks to the real economy and to the financial sector, as well as changes in the governmental or regulatory frameworks, are likely to wield their strongest impact over small firms, the most vulnerable actors in the business environment. In fact, in reaction to worsening macroeconomic conditions, distressed banks attempt to reduce their risk exposure by drastically cutting their supply of credit to small firms, relatively riskier that bigger enterprises, with the aim of rebuilding their balance sheets and comply to regulatory provisions.

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reducing informational opacity: in fact, modern softwares and the internet increased the ability of small businesses to transmit information about their quality. See Berger and Udell (2003) for more details.

[8] See Gertler and Gilchrist (1991) and Dolignon and Rogers (2010).

The process of adjusting towards the stringent Basel III requirements, and the combined deterioration of governments' financial positions[9], are posing a heavy burden on the banking sector and on the functioning of traditional financing channels. The credit crunch of the early 90s in Asia and the US led to similar problems for SMEs that previous regulation did not manage to solve. Already back in 1998, Berger and Udell predicted that shocks to the banking sector would have a strong short-term impact on banks which, in the attempt to restore the stability of their balance sheets, would reduce their risk exposure by cutting financing to the riskiest businesses. The next chapter of this work will illustrate the evolution of the most important rules on capital requirements, verifying also empirically the extent to which the recent credit crunch and regulatory changes affected (and will keep affecting) SMEs access to financing.

[9] In the ECB Bank Lending Surveys of January and April 2012, the impact of these two forces is clearly identified as the main reason for the deterioration of financing relations between banks and corporations.

4. Factors affecting the supply side of capital structure

The classic capital structure literature assumes that firms, absent supply constraints, can borrow as much debt as they will, setting their desired leverage ratio, as long as their debt capacities have not been met. In this framework, whenever the net benefit of raising debt increases (higher tax shield, lower financial distress costs), firms act regardless of supply conditions and access the debt channel: again, demand factors are the only variables influencing variations in firms' capital structure.

Nevertheless, whenever a financial turmoil imposes constraints over the ability of financial intermediaries to lend resources to companies, it is impossible not to include the supply side of financing into the analysis. As described by Faulkender and Petersen (2005), if a firm's bank suffers an external shock to its capital, independent from demand, this shock is likely to reverse its effects also on the financing firm. SMEs normally tend to establish a direct connection with a single banking entity, usually on a territorial or reputational basis. As the authors note, if a firm cannot easily move to private to public debt markets because of informational opacity, which is the SMEs case, a shock to the banking market will have an even more severe impact on firm financing than a shock on the public bond market.

Even though SME banking keeps on being considered one of the sectors with the higher growth perspectives[10], there may then be some external constraints hampering the willingness of banks to sustain this market. Absent the support of financial institutions, small businesses enter a vicious circle in which the distribution of

[10] See IFC (2010a) for a thorough analysis of the topic. Banks are aware that there is margin for further intervention in this sector: should the informational opacity problem be solved, SMEs would represent a really profitable segment due to their high necessity of capital to develop their innovative ideas.

information about their quality is reduced to the minimum. In this context, financial crises, and their consequences, perhaps represent the most relevant factor to take into account.

4.1 The impact of regulation

The recent global financial crisis wiped off the value of banks' balance sheets and caused the liquidation or nationalization of many credit institutions. Those that survived, bogged down by flat growth perspectives, did so at the expense of severe post-crisis distress due to weakened capital, reduced investor confidence and tougher rules on capital requirements. All these reasons on one hand hampered banks' capacity (and willingness) to lend money to businesses, in particular to small and riskier corporations, and on the other hand increased their operational costs in the process of restoring confidence and complying to the new regulatory framework. Hence, through the traditional channels, firms ended up paying more for less given that, to counterbalance the previously cited constraints, banks both raised lending interest rates and fees, and reduced the supply of capital.

What we are witnessing now, with the advent of the new Basel III provisions, is that the whole banking system, in the preparation of more severe requirements on capital to be set aside to survive endemic crises, reduced its willingness to give out funds, especially to small and medium enterprises. Financial intermediaries have a fundamental *signaling* role in the economic system: financing a firm is a message to markets that the company has solid financial perspectives, and that there is a high probability that it will honor its debt. When banks step back and stop supplying

credit, there is less information in the market and this reflects into higher costs for borrowers in terms of interest rates. The interesting question is to study how this phenomenon affects firms' financing choices, and to what extent it depends on regulatory changes.

4.2 The road to Basel III

By raising capital requirements for banking institutions, the new regulatory framework aims at strengthening the financial stability of the economy and at restoring the confidence of all economic actors. It is likely that, at least in the short-term, the new stringent requirement will mostly affect the smallest financial institutions, whose business is strictly bound to small and medium enterprises. However, the analysis of the provisions of the new Basel Capital Accord requires some considerations on its predecessors, Basel I and II, whose shortcomings prompted the definition of the new criteria, which are more stringent than before.

Developed over four years by the Basel Committee on Banking Supervision, the capital regulations of Basel I came into effect in December 1992, with the objective of requiring banks to keep sufficient capital to absorb eventual losses without causing systemic problems and, furthermore, to create a common global regulatory ground. Evolving and refining Basel I provisions, Basel II was released in June 2004 to deal with a wide array of regulatory and supervisory issues that its forerunner left unresolved, including accounting standards, liquidity requirements and risk management criteria. Its main principle, the "first pillar", defines a minimum "regulatory capital" to buffer unexpected losses with a complex system of asset risk

weighting[11]. The second pillar aimed at stimulating banks to refine their risk-management techniques under a strict supervision of national authorities. The third, and last, pillar required banks to disclose all the relevant information that market participants might consider necessary to evaluate a bank's activities and risk profile, both quantitatively and qualitatively.

The aim of this regulatory framework was to create a system in which banks could absorb unexpected losses such as those that normally occur during a financial crisis. However, the recent financial turmoil evidenced several drawbacks of the Basel II accord; some of them are still heritance of unresolved Basel I shortcomings, and the others have been clearly identified by literature and institutions[12]. Among the most important, it is worth underline that:

- Quantitatively, the capital requirements were inadequate (read: too low) to tolerate the huge losses incurred during the toughest crisis since the Great Depression; qualitatively, capital requirements were not clearly defined (read: unclear and inconsistent definitions);
- The risk-weighting formulas were "portfolio invariant", i.e. they assumed optimal diversification and design capital requirements on the risk of a specific asset independently of the concentration of that asset in a portfolio; this may be a useful simplification, but underestimated the impact of diversification on portfolio risk;

[11]The three main sources of risk that are identified are credit risk, operational risk and market risk. Banks can choose between a fixed-weights simplified approach (for smaller institutions), the "standardized approach" (risk weights based on external rating assessments) or the "Internal Rating Based" approach (rating produced internally).

[12] See Blundell-Wignall, A. and Atkinson, P. (2010) for a comprehensive review.

- Too much freedom was left on assets' risk-weighting, fundamental to the assessment of counterparty risk; rating agencies proved to be too exposed to potential conflicts of interest, thus reducing the reliability of their evaluations; furthermore, the Value-at-Risk models used in the Basel II framework only relied on a single-index model, inadequate to capture complex risk events;
- Capital requirements were clearly pro-cyclical, which tended to overestimate risks in bad situations and underestimate them in good times; in this context, if the economy is healthy, counterparty risk is reduced as well as capital requirements, but if the economy sours capital requirements rise along the increase in risk, causing a further restriction of bank lending; and, in addition to that, this phenomenon is amplified by the notorious pro-cyclicality of both internal and external ratings;
- Incentives to securitization, which was misused to remove assets from balance sheet to reduce risk-weighting; this allowed banks to bypass the rules and reduce their capital requirements, rather than to enhance liquidity.

4.3 The New Basel accord

The new Basel III rules aim at resolving the flaws of previous regulations that the recent financial crisis dramatically exposed. Basel III's main focus is on capital and funding. The quality and depth of quality of capital will be improved by raising capital requirement ratios. The renewed focus on liquidity management will foster banks' risk management with the designation of instruments to contrast the pro-

cyclicality of Basel II, and by requiring more stable and longer-term relationships in banking operations.

According to Blundell-Wignall and Atkinson (2010), four are the targets that the new rules aim at reaching:

1. *Raising the quality, consistency and transparency of the capital base* by reforming and tightening the criteria for the definition of capital requirements, privileging equity as the best form of capital;
2. *Enhancing risk coverage*, trying to capture both on- and off-balance sheet risks. The objective is to remove the pro-cyclicality connected to volatility-based risk inputs, to penalize increased counterparty risk, to promote "good" risk taking. The Basel Committee also debated the possibility of increasing the role of external ratings, to be confronted with internal evaluations autonomously developed by economic entities (and in this direction goes the proposal advanced by this paper in the last section);
3. *Introducing a target leverage ratio*, with the intention to avoid excessive indebtedness and subsequent excessive deleveraging in crisis situations;
4. *Attenuating the cyclicality of capital requirements* by using forward-looking metrics (stressing expected losses rather than incurred when computing Probabilities of Default) and by promoting the accumulation of extra "capital buffers" above those requested by regulations.

In this context, indeed very interesting and potentially effective seems to be the creation of capital buffers to be accumulated in periods of distress and to be accessed should banks' capital ratios fall below a given threshold. In addition to that, as

regards point 2), the new rules increase the risk-weighting attached to off-balance sheet items. to counteract the phenomenon according to which banks, under Basel II, used securitization as a tool to reduce the burden of capital requirements.

Nevertheless, Blundell-Wignall and Atkinson (2010) underline that several problems that had been spotted with the previous regulatory frameworks still have not been solved. Namely, little attention (if none) seems to have been given to asset concentration in portfolios (risk weights are still linear to facilitate simplicity) and to alternative risk factors (the model still uses a single global credit risk factor).

Moreover, the imposition of a leverage ratio will not stop the phenomenon under which banks, by shifting "promises" to entities with alternative regulatory and tax treatments in the banking environment, elude the risk-weighting system and expand their leverage at will, as they did in the recent financial crisis. Should this issues not be faced in the near future, banks will keep on tending towards lower weighted assets and to transfer "promises" outside the banking system, creating the basis for new bubbles and crises.

Hence, the way ahead should be in the direction of defining instruments to penalize this *regulatory arbitrage*, imposing common global capital requirements and reducing costs of complying to regulatory changes. What must be added here is that much room to maneuver is left to non-bank financial institutions, the so-called "shadow banking" system (investment banks, hedge funds, pension funds, and so forth). The new Basel accord posed no restrictions to their actions, thus leaving unchanged their high propensity to risk and guaranteeing them a competitive

advantage over the traditional banking system. Therefore, shadow banking is likely to have a prominent role in the near future as provider of credit.

The implementation timeline for the new rules is voluntarily loose, to avoid posing excessive weight on an economic environment that is slowly recovering from the 2007 crisis. The application of the new rules will start in January 2013, and banks will have until 2019 to fine-tune their balance sheets to the stricter requirements: enough time to avoid a negative impact on lending and to favor eventual adjustments to the regulatory setting.

However, at least in the short-term, the most leveraged and small banks, thus the ones with lower capital ratios, may be forced to reduce their lending activity, which is likely to worsen financing conditions for startups and SMEs. Due to their size and scarce resources, in relation to bigger companies, SMEs are those that suffer the most from the costs of stricter regulations.

4.4 The Small Business Act

In this complex context, potentially disruptive for smaller companies, the European Commission developed, between 2008 and 2010, further measures aimed at facilitating SME's access to finance and capital markets. Recognizing the prominent role of SMEs in the European economic environment, regulators and Member States defined in the so-called "Small Business Act" a comprehensive policy framework to serve as guideline for National and Community rules, with the objective of stimulating growth, job creation and financial stability, applying the so-called "Think Small First" principle.

Among its several sections, this piece of regulation gives interesting insights also in the area of SMEs financial structure. The attempt here is to guide future rules towards the simplification and facilitation of mechanisms for access to capital. Each forthcoming legislation which may affect SMEs will have to pass the so-called "SME test", aimed at assessing the feasibility and sustainability of the specific proposals. This preventive regulatory verification, aimed at assessing the potential impact of a new rule, uses a wide variety of tools to put in contact regulators with SMEs representatives. In these "round tables", the industries and sectors likely to be affected are individuated, and the potential effects estimated. Then follows a quantitative and qualitative analysis of the potential impact on SMEs, as well as of the benefits which may offset the financial and administrative costs previously individuated. At last, the committees try to assess alternative courses of action and options, to confront the initial proposal with the modifications which rose during discussions.

With the support of this cooperative process, the combined effort of Member States and the European Commission created an environment through which European SMEs will:

1. Benefit from strengthened loan guarantee schemes, in order to support growth and research;
2. Have easier access to EU funds;
3. Increase their informational transparency;
4. Enjoy a higher intellectual property protection;
5. Be supported on their international operations on globalized markets;

6. Benefit from the future creation of a database of EU small businesses to exchange information and promote networking among firms.

Each State is currently working to speed up its internal bureaucratic procedures, reducing the steps required to access EU funds and facilitating the dialogue between firms and authorities. In particular, whenever a legislation is likely to pose a disproportionate burden on SMEs' ability to obtain financing, as compared to large firms, on a case-by-case basis specific companies may:

a) Be exempted from certain obligations and benefit from lighter administrative procedures (application of the "only once" principle: documents and information shall be requested only one time by an administrative body if they were already solicited in a previous occasion);
b) Temporarily reduce tax payments or fees (e.g. delay accounting for VAT if payments from clients still have not be received);
c) Receive direct financial aid to cover high fixed costs;
d) Benefit from simplified reporting obligations (e.g. utilization of e-invoicing).

To sum up, even though the impact of the new stringent regulation on capital requirements is likely to revert its strongest effect especially on small firms' financing ability, there seems to exist some legislative margin (at least in Europe) to design flexible measures aimed at sustaining SMEs financial survival.

Understanding the fundamental role SMEs play in national economies, as drivers of employment and growth, institutions and Governments are cooperating to design an environment in which small business will be able to blow the strike of future crises.

4.5 Current lending situation

Small and Medium Enterprises, as already said, largely depend on bank services. As described by Beck, Demirguc-Kunt and Maksimovic (2005), this is due to the fact that they cannot rely on sufficient internal funds and that they cannot access public capital markets, as well as to the absence of qualified staff to undertake financial operations.

It is then useful to verify how, and to what extent, banks are reacting to the combined action of three forces: the process of adjusting to Basel III requirements, the tail of 2008 financial crisis and the current sovereign debt crisis. The implementation of Basel III is expected to increase the capital buffers that banks will have to hold against risky SME loans. This translates into higher costs for banks to fund these loans, a cost which will likely be passed on to their clients. More pessimistically, the higher capital charge for banks may further discourage financial institutions to grant loans to SMEs, reducing even more the flow of funds to the sector.

When asked, banks themselves consider the SMEs sector as a very profitable environment, and have over time increased their attention and efforts to serve it[13]. While the SMEs banking industry is growing the most in emerging countries, access to finance always tended to be easier for small businesses operating in developed countries. However the combination of the widely analyzed regulatory obstacles and macroeconomic factors contributed to the weakening of SMEs banking relationships, reverting the positive trend that was increasing bank supply of credit to SMEs before the recent financial turmoil.

[13] See Beck, Demirguc-Kunt and Martinez Peria (2008). According to their survey, most banks (80% of respondents), perceive the SME segment to be “big and with good prospects”.

To describe the current status of bank lending, I analyzed the most recent ECB Bank Lending Surveys (BLS). In the beginning of the year, the survey reporting the situation at the end of 2011 indicated that most of European banks were in an ongoing process of capital reinforcement, as a response to the imminent introduction of the widely analyzed Basel III capital requirements.

Surveyed banks pointed at the weak European economic outlook and the sovereign debt crisis as the main reasons for the net tightening of credit standards; in particular, short- and long-term loans to SMEs had decreased by 28% in the last quarter of 2011, following a deteriorating trend that lasted all over 2011. As a result, on average banks had increased margins on loans, increased fees, increased collateral requirements and reduced the size of their loans.

As regards the most recent picture, reporting the situation after the first quarter of the current year, the April 2012 BLS indicates that credit standards kept on tightening, but at a slower pace. While this highlights that the banking industry is still suffering, the slowing trend may indeed represent good news. A much higher percentage of banks responded that the market environment represents less of a threat, but still a big number indicated that the process of balance sheet consolidation is far from being over. At last, respondents indicated that the sovereign debt crisis is not deteriorating their positions, and that expectations are of a stabilizing economy.

However, the consolidation of balance sheet to rebuild financial ratios keeps or representing a big burden on banks' ability to fund enterprises. Even though it is projected for 2012 that this process will likely affect more large than small corporations, the picture for SMEs is definitely rough.

Indeed, the “Survey on the access to finance of SMEs in the Euro area” published in April 2012 describes a quite difficult situation for small businesses. According to the survey, more European SMEs than before reported deteriorations in their turnover and profits. In addition to that, external financing needs (i.e. demand) increased between October 2011 and March 2012 as a response to high uncertainty about the availability of bank financing in the short-term, but the access to bank loans continued to worsen. On average, firms reported a deterioration in the availability of bank loans and an increase in rejection rates on loans requests, which resulted in a decline in leverage. Further deterioration in the availability of funds is expected by European SMEs to last all over the remaining of 2012.

What appears evident, from the analysis of recent data and from the extrapolation of trends over funds’ availability in the years of the recent financial crisis, is that empirical evidence confirms theoretical expectations. The imposition of stricter regulatory requirements and the strike of financial crises pose on banks a severe hindrance to their ability to provide corporations with the necessary funds, and small businesses are those which are hit the most.

5. Enhancing SMEs liquidity

Expanding financing sources for SMEs is vital to support them establish and enhance their operations, develop new products, expand their employee base and production facilities. As I described previously, most small businesses begin as simple ideas from a limited number of "wannabe entrepreneurs", who fund their first activities with their own savings and turn to family and close friends to receive support in exchange for a share in the business. If the idea works, the business requires new investments to expand the operations but, for the wide range of problems that have been analyzed, it is much harder to obtain financing from banks, capital markets or other suppliers of credit because the guarantees offered by a large, old and solid business are practically absent. The aforementioned framework of Berger and Udell (1998) seems a valid proxy of what is observable in reality, but there is undoubtedly some margin to strengthen it with the presence of new instruments.

Indeed, studying ways to foster SMEs' access to funding implies accepting that either current instruments are not qualitatively and quantitatively sufficient, or that, if existent, they are not adequate to help small firms overcome their financing constraints. If the traditional framework, according to which SMEs financing needs evolve according to their age and growth cycle, seems to hold in "normal conditions", empirical evidence (in terms of high failure rate of small businesses during periods of crisis) seems to confirm there exists a gap which can be filled by the introduction of a set of new tools. Despite the recognized importance of SMEs as drivers of a country's growth, they keep being constrained by the insufficiency in the offer of financial product and services.

This *financing gap* can be closed if both governments and private institutions, in accordance with extant legislations, design specific actions and systems to be deployed, in a joint effort, to enhance SMEs' market liquidity. Taketa and Udell (2007), which introduced the concept of "lending channels", hypothesized that a financial shock may lead to the closure of certain channels in favor of the development of others. While they missed enough data to verify empirically if this phenomenon applied on the complete array of Japanese SMEs' financial sources after the Asian crisis in the 90s, their idea is undoubtedly stimulating. It is therefore tantalizing to believe that the contraction of the banking channel imposed by the recent financial crisis and by the impact of Basel III rules left the door opened for the development of new financing sectors, which this study aims at identifying.

The most compelling challenge for regulators and governments is definitely attempting to increase the level of transparency of small businesses. As it has already been noted, lowering SMEs' informational opacity would be the key to enhance financial institutions' ability to scrutinize them and establish lending relationships. The information asymmetries which exist between lenders and opaque borrowers can softened in three ways:

1. A firm's ability to signal its credit worthiness, through an institutional assessment, external rating of an independent agency or the provision of collateral;
2. A strong relationship between lender and borrower;
3. Direct lenders' examination (due diligence).

While literature has verified that somehow each SME uses all three ways to provide information to the market, the first seems to be the less used, even if it would probably be the most effective. One of the objectives of this section is to study the possibility to design actions capable of increasing small businesses' transparency.

Moreover, a comprehensive assessment of extant proposals of SMEs alternative financing opportunities seems to be absent in up-to date theoretical works; the following paragraphs, stemming from the analysis of isolated best-practices, will value their potential of adoption on a more widespread basis as cornerstones of SMEs financing.

5.1 The role of Governments

The recent regulatory changes, and the actions undertaken to develop the market for SMEs finance indicate that Governments clearly recognized the importance of supporting the small businesses sector. The most recent reforms, like those analyzed in the previous chapter, aim at decreasing legal and regulatory burdens for SMEs, either by reducing accounting requirements, or by de-formalizing processes or, at last, by exempting banks from certain capital requirements whenever SMEs represent a big share of their portfolios.

Direct intervention with the provision of goods, services or explicit funding, is also a course of action that many Governments have recently started taking into account. In addition to that, among the most valid observations[14], it is worth to underline that:

[14] See OECD (2006) and IFC & McKinsey and co. (2010) for several suggestions for actions that Governments could take to support the SMEs sector.

- Governmental actions to support SMEs must be carefully focused, with the specific objective of improving market efficiency and to pave the way for the entrance of the private sector in SME finance as a prominent actor;
- Governments shall strive to increase awareness among small entrepreneurs about the range of financing opportunities available to them from sectors alternative to traditional financing intermediaries;
- If measures of direct lending or intervention by Governments are designed, they shall be driven by a principle of risk sharing, in order to avoid overexposing public finances to excessively risky operations. Hence, official funds shall be employed in partnership with alternative sources (e.g. entrepreneurs, banks, universities), i.e. Governments guarantee part of banks' exposure to SMEs, either on a loan-by-loan, or on a portfolio basis;
- Governments may provide education and training to small entrepreneurs about financial statement preparation, which would be extremely beneficial in the eventual establishment of financing relationships given its potential to increase information spreading. In addition to that, Governments should support the creation of "credit information infrastructures" as credit bureaus, collateral registries and on-line databases. The use of the internet as a vehicle of data and information, as well as a platform to facilitate the encounter between demand and supply, has a huge potential.

However, to assess the potential success of governmental-driven actions, national States must find ways to measure the size of SMEs' financing gap and the extent to which the impact of their actions yields positive effects in facilitating SMEs funding. This is surely an area for future empirical exploration.

What Governments should do to support SMEs appears clear from the analysis of the wide amount of suggestions that academics and practitioners advanced to institutions and regulators. Still, what is missing is the translation of these good proposals into concrete actions able to create a stable environment in which SMEs' opacity is reduced, and in which SMEs can choose their financing sources without stumbling on their traditional financial constraints. The proposals included in the following paragraphs aim exactly at addressing these issues.

5.2 Rating for SMEs

Faulkender and Petersen (2005) have verified empirically that firms with a higher tangibility have a higher chance to obtain a credit rating. Those firms, which tend to be mature and characterized by a little degree of volatility, and which can provide a wide enough track record, will have easier access to public debt markets and, thus, will be able to reach a higher degree of indebtedness. It has already been pointed out that, whenever markets are characterized by severe financing shortages, having the possibility to choose among several sources of capital is of the utmost importance. Contemporarily to the introduction of Basel II principles, Ayadi (2005) suggested that a better definition of the rating process for granting funds to SMEs would be key for the strengthening of SMEs-banks relationships. However, the forthcoming rules of Basel III do not seem to have developed this topic in such a groundbreaking way.

Obtaining a credit rating is usually considered a too expensive and burdensome practice for a SME to be undertaken. However, given the notorious problems they face when raising funds, approaching a rating agency may be represent a viable

solution even for small businesses. But why would a rating system dedicated to SMEs represent a useful instrument to help small businesses financing? Again, the consideration to be made regards the reluctance of financial institution to provide funding to SMEs without a proven track record or transparent information about their quality. Giving SMEs the chance to give objective financial data to intermediaries and potential suppliers of capital is probably the ultimate solution to solve their financing problems.

Surprisingly, nowadays an example of a well-functioning rating system for SMEs can be found only in India and, to a minor extent, in Japan. In India, where the system is already well-oiled, a restricted number of agencies[15] has built relationships with local banks in order to offer significantly lower interest rates on loans to their rated clients. Those institutions fulfill the typical tasks of a rating agency, i.e. assessing in detail the stability, health and riskiness of a firm, but apply it to the small businesses' environment in order to evaluate their ability to honor future financial obligations.

The key aspect of the evaluation method of Indian SMEs' Rating Agencies, and which differentiates it to the common approach used for large corporations, lies in the fact that they use a *turnover-based* fee structure (fees are proportional to the size of the business), and that each firm is evaluated *relatively* to a group of similar-sized companies. While the latter does not represent alone such a breakthrough feature (for instance, Morningstar has made this principle one of its cornerstones in the evaluation of investment funds), the combination with the former creates a rating

[15] Among all, CRISIL and SMERA are the most influential players. See *www.crisil.com* and *www.smera.in* for the details of their offers.

process which does not weigh excessively on the firm's finances (being it proportioned to the dimension of the business), and that fairly evaluates each firm according to the characteristics of the sector it belongs to. I

n addition to that, given that these ratings remain valid just for a year and can be easily renewed upon the payment of an appropriate fee, those SMEs willing to access public markets will have their creditworthiness frequently checked, strengthening personal relationships and triggering a mechanism to periodically enhance public transparency. Moreover, it is fundamental to stress that the Indian Government sponsors SMEs' rating by providing a one-time subsidy to cover part (up to 75%) of the first process' expenses. Then, all subsequent ratings are entirely paid by the enterprise.

If a light and effective evaluative system is set up to assess SMEs' creditworthiness, and if Governments step in to support the process, it is in the best interest of each small firm to obtain a credit rating. The creation of a new framework is necessary, because it is impossible to evaluate small businesses with the same parameters and scales used for large businesses.

A rating system for SMEs cannot rely exclusively on "hard" financial data due to their limitedness and, often, incompleteness; instead, a joint evaluation of one-year financial data and of "soft" data surely moves in the direction of overcoming some of the problems identified with Basel II, and that still have not been fully solved by the upcoming reform. Furthermore, whenever sovereign debt crises increase attention over public spending, and with States struggling to provide financial aid to small businesses given the limited resources available, such a system helps Governments

step in and nurture the small businesses environment in a direct and effective manner, deploying public finances in a transparent way.

Nonetheless, ascertained the ability of this instrument to shed light on a firm's characteristics and to enhance its transparency, it is difficult to understand why a SMEs Rating Agency has never been established neither in Europe nor in the US. In the context of reaching an always better assessment of SMEs' credit risk, as promised by Basel III, the creation of such an institution would definitely represent an effective complement to the traditional approaches. By blending an independent third-party evaluation of financial and informal data, it would help banks estimate effectively a small business' riskiness and minimize its expected losses, prompting the recreation of solid bank-firm relationships even in periods of crisis.

The eventual creation of a database of SMEs ratings would help spread data in today's scattered SMEs market, broadening the chance of finding potential investors. This instrument would guarantee the creation of an unprecedented method for SMEs information sharing, key to define the risk and required return of lending to a small business. There is definitely room for further discussion of the topic in the future: a proposal of reform of the current (and forthcoming) regulatory framework may establish this "light" SMEs rating as the fundamental tool to ease information asymmetries which afflict financing to small businesses.

5.3 SMEs Corporate Bonds and the role of Securitization

As regards the sector of debt financing, it is universally recognized that SMEs tend to rely excessively on bank loans, and that one of the main reasons of small businesses'

failures lies exactly in the absence of loans availability during crises. Even though many have been the attempts to reduce the dependence from bank intermediation in favor a more complete access to capital markets, the high riskiness and informational opacity of SMEs appear as difficult obstacles to overcome.

In addition to that, due to the high fixed costs connected to the issuance of public bonds, as well as to the minimum size required for the offer to be marketable, SMEs have always been considered unsuitable to access this market. The issuance of SMEs' bonds, due to their high riskiness, would be labeled as "junk" and appear today, in the light of the last financial crisis, as highly unattractive to the public of investors.

Given that Basel III requirements will increase the burden for banks financing risky SMEs, a well designed access to the bond market would appear as a potential way out. Unlike bank loans, which create a binding relationship with a single financing entity, corporate bonds allow firms to raise money from a differentiated multitude of investors. If most of those investors are generally represented by wealthy individuals, small businesses would even find in *angels* the natural recipients of a bond offer, but could also call on the generalized community of non-sophisticated investors willing to diversify their portfolios.

As reported by Park et al. (2008), the Korean Government designed an instrument which contributed to the strong development of the local SMEs environment during the last decade, as a response to the crisis that hit the Asian market in the 90s. The Primary Collateralized Bond Obligation (P-CBO) program, which started in 1999, used the instrument of securitization to eliminate liquidity constraints in small

businesses financing. This program follows a long tradition of reforms designed by the Korean government to support small businesses, which formally started with the Korea Guarantee Scheme (KODIT) in 1976. Hence, given the good health of the SMEs sector in Korea, and the evidence that a well-thought Government intervention can be helpful to stimulate small businesses' stability and growth, it is then possible to draw lessons from the experience of this country.

Being asset-backed securities, P-CBOs are bonds sold by a Special Purpose Vehicle and whose underlying assets are represented by a pool of SMEs' corporate bonds. Those securities are "elaborated" by the intervention of external "credit enhancers" (banks, insurance companies, credit guarantee funds) and evaluated by an external rating agency, and usually sold in different tranches with different quality.

Even though, for the sake of simplicity, the details of the product will be omitted, it is worth to underline that in the way it is designed, a P-CBO manages to pool together a wide variety of SMEs' bonds, characterized by different riskiness, and therefore reduces the aggregate risk of default. If a single company has a too high credit risk, a pool of different SMEs diversifies away most of idiosyncratic risk and may eventually become an attractive and remunerative investment in an investor's portfolio.

We can find a good example of a platform for the exchange of SMEs corporate bonds in Germany, where over the last two years several regional German stock exchanges opened areas for the purchase and sale of SMEs corporate bonds, stimulating the creation of a secondary market and the creation of liquidity. The German case says that it works for SMEs to issue bonds directly on regional stock

exchange platforms, disintermediating the operation by avoiding to pass through banks to originate the offer. This represents a huge cost reduction for small businesses, as well as a way to approach directly a public of local interested investors.

However, the reliability of rating agencies, which have the fundamental role of certifying the quality of the issuance, has reduced drastically during the recent financial crisis. Also in this context, the help of a dedicated SMEs Rating Agency may represent the correct lever to re-introduce a securitized instrument in the market. In fact, the issuance of a corporate bond requires careful and thorough planning, during which the entire financing situation of the company is scanned, analyzed and evaluated. Probably no one would fulfill this task better than a dedicated Rating Agency.

In this way this financing instrument, which many SMEs have never even taken into consideration, would represent an optimal complementary element. Moreover, the financial support of Governments (in the payment of part – or the totality – of fixed expenses and origination fees in periods of financial distress) may stimulate the development of the instrument by reassuring investors on its quality. Governments may even directly purchase P-CBOs as a means of subsidizing at once a pool of diverse businesses, given that purchase of a single security addresses funds to several individual entities.

According to the European Investment Fund (2011), however, the securitization market for European SMEs, after years of strong development, has almost disappeared as a result of the recent financial crisis. Even though most of the

traditional structured product were normally present in this market (mostly in the form of securitized loans to SMEs), the fact that those instruments practically disappeared after the crisis implies that none of them was actually able to address SMEs financing needs in the moment they needed it most.

In addition to that, it is also true that the contagion effect which spread in the markets contributed to the mystification of securitization as one of the reasons for the crisis. However, securitization is only an instrument, which if used properly can be a great liquidity enhancer. If used aggressively and without care for risk, it can become a driver of negative financial effects. Indeed, this market will regain volume, and become again a useful tool to support SMEs financing requirements, only if investors rebuild their confidence in the instrument itself and in the safety of the market, and if their position is supported by the existence of a sufficiently liquid secondary market.

This process will take time, but in this direction goes the effort of global institutions to establish a clear and reliable regulatory framework, in the attempt of increasing the stability and transparency of structured finance operations. Indeed, in the proposals of Basel III, we can look at the provision of a mandatory additional disclosure of information, at the requirement of an ongoing rigorous assessment of each market member's position, and at the creation of unified databases as clear steps towards the recreation of a solid background for financial operations.

The proposal of creating a European SMEs Rating Agency, as well as the possibility of introducing a product similar to the Korean of P-CBOs, would probably help injecting new lifeblood in the struggling SMEs debt market.

5.4 Equity and Crowdfunding

As reported by a recent study by Caccavaio, Carmassi, Di Giorgio and Spallone (2012), only 7% of European SMEs accessed equity financing in 2011, and the smallest percentages are reported in those countries where small businesses are more present (as Spain, Italy and Portugal). Listing on a stock market is one of the solutions identified by literature to raise firms' transparency and visibility in the market, but entrepreneurs still have not taken this opportunity seriously into account.

As reported by the previously cited study, among the reasons identified by Italian SMEs as obstacles for going public, the existence of admission fees, of burdensome listing requirements and the loss of working time that all the process implies seem to be the most relevant. The large majority of the sample believes that the introduction of Basel III requirements will increase funding costs for SMEs, and hence believe that support from institutions and regulators to favor their listing (by reducing costs or granting tax advantages) may be one of the solutions to stimulate the small businesses sector.

Regulators responded with the creation of ad-hoc stock markets dedicated to SMEs, reducing the high fixed costs and strict listing requirements which always kept SMEs away from going public. Still, except for those countries historically characterized by a strong presence of institutional investors (US and UK), SMEs listing has not yet gained consensus among small entrepreneurs. In the next years, it is likely that this topic will be at the centre of discussions between companies, regulators and governments.

The final objective of any regulatory change, or of any creation of new financing instruments for SMEs, is eventually to expanding the potential source of investors. For instance, there is currently a big debate in the US, among practitioners and regulators, about the opportunity of institutionalizing crowdfunding as a means for SMEs to raise equity funding. All over the world, in a period in which banks restrained from providing capital to small businesses, crowd-lending from non-bank institutions, a form of "peer-to-peer" exchange, started gaining increasing attention. Up to today, this tool has been used mainly in the form of donations or, at the most, of debt; in the EU, instead, it is possible to find a few examples (UK above all) of equity crowdfunding.

Recently, in April 2012, the US Congress approved the so-called "JOBS Act", which reduces the regulatory burden for small businesses in the process of obtaining financing. According to this Act, each individual may participate in public capital placements on a few registered on-line "funding portals", without having to pass through the rigid requirements on public offerings imposed by the SEC. If the concepts underlined by this legislation are exported in other regulatory environments, this simple and direct instrument, which uses internet as a common platform for individual investors to make arbitrary funding contributions to an entity in quest for capital, may soon play an important role in SMEs financing.

The benefits of such an instrument are evident, as well as the drawbacks. At the expense of being obliged to reveal the innovative business idea requiring funding, given that the platforms do not guarantee any scheme to protect intellectual property, each company can access a potentially immense crowd of investors. On the other hand, by being forced to expose the business to the magnifying glass of the public of

investors, small firms have a great tool to reduce their informational opacity. The use of new technologies as the internet allows individual investors (businesses or people) to lend directly to the borrower without the necessity to pass through an intermediary. Hence these particular deserving ideas, which might not fit the standard requirements for traditional financing, are then allowed to receive capital directly from future potential customers, which may act as catalyzers to bring in new investors. The creation of a group of firm advocates may use word of mouth and social media to help the company grow and gain its place in the market.

Critics say that single investors may be exposed to inadequate investments to their risk profile and knowledge, and that frauds are just behind the corner. This is true, but well-regulated platforms, with third-party evaluations and a system of feedbacks over the quality of the business would work to strengthen the safety of the operation: then, the market would eliminate bad ideas, and support the good ones. Peer-to-peer financing has developed so far thanks to a permissive regulatory framework, which stimulated the growth of the idea and the entrance of a public of investors, but which is not sustainable if the instrument has to develop and to become an “institutional” tool for SMEs financing.

Crowd-lending, despite its ability to create a mechanism to finance even the smallest companies, carries with it new risks and a huge potential for misuse. These online platforms require regulation providing appropriate consumer protection without the risk of hampering innovation, and the process which is currently being undertaken in the US is evidence that the message has been understood. Government support is fundamental to allow for the development and affirmation of the product, as well as to create awareness and to attract safe investments.

In the framework of Berger and Udell (1998), this instrument may fit perfectly as complement to angel financing in the early stages of a SME's growth cycle: given that few are those "philanthropists" willing to invest huge amounts of money in small businesses (i.e. angels), crowdfunding may represent in the future for spurring equity investments in SMEs, given that allows any individual investor to give businesses any potentially amount of money.

6. Concluding remarks

The International Finance Corporation (2010) verified that SMEs' importance in a state increases with the income of a country, suggesting that SMEs' themselves could be a driver of economic growth. Furthermore, according to a study of the European Commission published in 2007, the higher share of SMEs in national economies in higher in Spain, Italy, Greece and Portugal than in the rest of Europe. While it would be interesting for future research to ascertain if the dominant presence of SMEs in an economy is somehow correlated with the causes of a crisis, it is worth to note that these are the countries where the current economic downturn is yielding its strongest effects.

Hence, finding ways to support SMEs financing is probably the key to help national economies survive financial turmoils. If SMEs, especially the most innovative and young enterprises, are not able to find the funding they require, their brilliant ideas will never manage to be developed into actual products, regardless of their potential. For that, the economy will be deprived of potential sources of growth. Since SMEs tend to lack knowledge about the array of financing tools they may have, the effort of all the parties involved must be in the direction of building an environment where small businesses can easily access capital markets.

This study, appreciating the developments in the regulatory settings proposed by the New Basel Accord, underlines that there is fertile ground for the creation of new instruments to fill the gap between SMEs financing needs and current capital supply shortages. The classic capital structure theories, as well as the works dedicated to small firms financing, explained in detail how SMEs find their sources of financing. However, the process is often blocked due to a series of factors, both internal (small

firms' informational opacity) and external (financial crises, regulatory changes). Establishing a light rating for small businesses as a prerequisite for accessing public funding would dramatically reduce the high informational opacity afflicting small businesses. The development of a market for SMEs corporate bonds, as well as the creation of safe on-line crowdfunding platforms, could definitely widen the portfolio of instruments small firms can access whenever bank loans, still the most widely financing tool used, are not available. National States' task still remains the one of creating a favorable environment for small business, in which the exchange of information can be eased and the portfolio of financing tools broadened. Governments may have an important role is supporting SMEs by covering fixed expenses, especially in the hearth of a crisis. Building a transparent infrastructure for SME financing through capital markets, in today's environment, appears a more efficient approach than directly providing financing to SMEs. The results of this theoretical study are consistent with the indications of the recent G20 summit in Seoul[16].

[16] See IFC (2010b) for the report of the G20 meeting in Seoul, which analyzed the financial constraints still afflicting SMEs nowadays and give some proposals to increase their access to finance.

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