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The Financing of SMEs and the Role of Knowledge: Some Evidence from Trentino–South Tyrol, 1950s-1990s

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In this essay I explore the role of knowledge in the financing of SMEs by combining the results of theoretical and empirical analysis with historical evidence. Theoretical explanations of the role of banks place particular emphasis on information asymmetries, thereby accounting for the privileged relationships that local banks have traditionally developed with small firms. However, as suggested in the "capabilities" literature, the concept of knowledge should be distinguished from that of information. Moreover, the operation of local banks has been strongly affected in the past by both government intervention and the attitude of the supervisory authorities. After providing a conceptual framework, I present some historical findings on the interweaving of economics and politics in SME finance with reference to the Italian experience. I then investigate the role of knowledge in the financing of SMEs in Trentino–South Tyrol—a region in northeastern Italy—in the second half of the twentieth century. For this purpose, I draw mainly on qualitative evidence provided by the records of *Mediocredito Trentino–Alto Adige*, a public law credit institute established in 1953 to issue medium- and long-term loans to SMEs in the region.

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> Where is the wisdom we have lost in knowledge?
> Where is the knowledge we have lost in information?
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> —T. S. Eliot, "Choruses from 'The Rock' "

The purpose of this paper is to explore the role of knowledge in the financing of small and medium-sized enterprises (SMEs) by combining the results of theoretical and empirical analysis with historical evidence. The financing of SMEs has recently become the subject of animated debate among economists and policymakers. International organizations such as the World Bank and the Organisation for Economic Co-operation and Development (OECD) have paid growing attention to the study of the financing gap from which smaller firms are supposed to suffer.[1] Besides being a particularly critical issue for poor countries, small firms' access to external sources of finance is a matter of concern also for developed countries with advanced financial systems. In particular, structural changes in the banking industry and the impact of economic downturns on lending to SMEs have induced politicians and economists to include the issue of small firms' finance on their political and research agenda.[2]

Far from being a recent phenomenon, the problem of SME finance can be traced back to the nineteenth-century development of modern banking systems in Western countries. In that period, an array of local financial intermediaries emerged to satisfy the special needs of smaller businesses, a major theoretical explanation being that small local banks—despite many weaknesses—were more efficient in overcoming information asymmetries by exploiting local information networks.[3] Throughout the twentieth century, despite a widespread concentration process, small banks continued to play an important role in many countries. Nonetheless, it is difficult to justify their persistence merely in terms of their superior efficiency, because local banks also benefited from government protection, driven by economic as well as by social and political considerations. It is well known that, from the interwar period onward, the entire banking sector was transformed into one of the most closely regulated areas of the

[1] The T. S. Eliot epigraph is from *Collected Poems, 1909-1962* (London, 1963), 161. OECD, *The SME Financing Gap*, vol. 1: *Theory and Evidence* (Paris, 2006); Thorsten Beck and Asli Demirgüç -Kunt, "Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint," *Journal of Banking & Finance* 30 (Nov. 2006): 2931-43. A World Bank conference on small and medium-size enterprise access to finance was organized in 2004.

[2] Emblematic in this regard is the SME Finance Forum activated in 2010 by the European Commission.

[3] Robert Cull et al., "Historical Financing of Small- and Medium-Size Enterprises," *Journal of Banking & Finance* 30 (Nov. 2006): 3017-42.

economy, and politics began to exert a profound influence on banking structures. Governments acted as arbitrators in the conflict between large and small banks, in some cases state credit banks were introduced to finance small firms, and local public and cooperative intermediaries were granted special privileges. SME finance became strongly characterized by the interplay of economic and political factors.[4] Finally, in the last quarter of the twentieth century, an international trend towards liberalisation enhanced competition and consolidation in the banking industry, while technological progress changed the way in which information was collected and processed. These transformations profoundly affected the role of knowledge in banking activities, and started to threaten the survival of small banks, casting doubt on the existence of a binding relationship between the size of banks and their capacity to serve small firms' needs.[5]

One contention of this paper is that in any historical inquiry into the role of knowledge in banking activities, the concept of knowledge must be distinguished from that of information. Knowledge is different from information in that it is the ability to understand something and make sense of it: an ability that is based on both formal training and past experience. As a consequence, attention must be paid not only to how information asymmetries are reduced, but also to the long-run accumulation of capabilities, and how they were acquired by small banks heterogeneous in terms of size, ownership structure, and specialization. At the same time, account must be taken of the social and political embeddedness of banks—that is, of the institutional environment and the territorial system in which they operate—because such factors deeply influence how information is gathered and used and how knowledge is accumulated. Entering the "black box" and examining the bank records can facilitate this kind of investigation.

The essay is organized as follows. I first provide a conceptual framework clarifying the concept of knowledge used in the study. Then I present some historical findings on the interweaving between economics and politics in SME finance with reference to the Italian experience. I finally investigate the role of knowledge in the financing of SMEs in Trentino-

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[4] Francesca Carnevali, *Europe's Advantage: Banks and Small Firms in Britain, France, Germany, and Italy since 1918* (Oxford, England, 2005); Daniel Verdier, *Moving Money: Banking and Finance in the Industrialized World* (Cambridge, England, 2002); Stefano Battilossi and Jaime Reis, eds., *State and Financial Systems in Europe and the USA: Historical Perspectives on Regulation and Supervision in the Nineteenth and Twentieth Centuries* (Burlington, Vt., 2010).

[5] Silvio Goglio, "Local Credit and Territorial Development: General Aspects and the Italian Experience," in *Recovery and Development in the European Periphery (1945-1960)*, ed. Andrea Bonoldi and Andrea Leonardi (Bologna, 2007), 241-80; see p. 280.

South Tyrol—a region in northeastern Italy—in the second half of the twentieth century. For this purpose, I draw on both the literature and the qualitative evidence provided by the records of *Mediocredito Trentino–Alto Adige*, a regional credit institute issuing medium- and long-term loans to SMEs.

Banks and Knowledge: A Conceptual Framework

Theoretical explanations of the role of banks place particular emphasis on the role of knowledge. Among the several functions performed by banks, that of remedying information asymmetries between investors and borrowers is deemed the most important by the theory of financial intermediation. Because of information asymmetries and opportunistic behavior, lending involves a large amount of transaction costs connected to the gathering of information about loan applicants, the monitoring of borrowers, and, in some cases, the enforcement of contract clauses. In order to evaluate potential customers' creditworthiness and ability to repay, banks draw on both "hard" and "soft" information. Hard information is usually derived from balance sheet data, outstanding orders, collateral such as real estate, plants, and machinery, or the track record as reported by credit agencies. In contrast, soft information relates to qualitative judgments about the applicant's trustworthiness and the business's prospects, which are based on the owner's characteristics, credit history information collected through other banks, the purpose of the loan, and so on. A fundamental difference between the two kinds of information concerns the way in which each can be transmitted between separate organizations or channelled through the different organizational levels within a bank. Whereas quantitative information can be easily transmitted in a formalized way, soft information may be difficult to codify and transfer.[6]

The relative importance of hard and soft information and the magnitude of information asymmetries do change according to the features of loan applicants. In this regard, it has been argued that SMEs suffer from financial constraints and credit rationing because lending to small firms typically involves higher information asymmetries. SMEs usually have weaker track records, poor accounting systems, and less collateral to offer, so that they are more opaque. For this reason, banks face higher costs in assessing small firms' creditworthiness, and the fact that small firms apply for smaller loans further increases the transaction costs per unit lent. Consequently, banks may tend to refuse loans to

[6] On the distinction between hard and soft information, see Mitchell A. Petersen, *Information: Hard and Soft*, Working Paper, 2004; viewed 15 Feb. 2011. URL: http://www.kellogg.northwestern.edu/faculty/petersen/htm/working.htm.

smaller customers, or they will charge such a high interest rate that the client is discouraged from taking out a loan.

In reality, banking systems comprise a variety of financial intermediaries that employ different organizational structures and screening techniques, and thus have different cost functions. From this perspective, local intermediaries are traditionally supposed to have a comparative advantage in small firms' finance over larger banks, on the grounds that physical proximity and the ability to exploit close personal relationships based on trust facilitate access to information by local banks, and reduce the costs of ascertaining a firm's creditworthiness. Decentralized organizations and decision-making processes therefore are usually deemed to be more efficient in lending to small firms. The conventional wisdom has developed that local banks are more inclined than large central banks to finance small businesses because they are better suited to engaging in "relationship lending"—a form of lending primarily based on soft information gathered through constant and personal contacts with business owners and the local community.[7] As suggested by recent research, regional networks and local knowledge can play an important role in the financing of SMEs, since they facilitate the bank's access to relevant information, often of the soft kind.[8] A regional economic network may be defined as a set of relationships that exist among actors located in the same geographical area and that are based on both market transactions and social and political relations. The concept has been extensively applied to the analysis of inter-firm relations in industrial districts. However, as has been suggested, similar cooperative relationships may be regarded as also including other agents such as banks and trade associations. The main ideas are that inclusion in a regional network helps local banks reduce the cost of evaluating potential borrowers, and that there are co-operation incentives that can be linked to opportunism—that is, interest in the common welfare—as well as to historical ties among agents who share a common language, culture, and history.[9]

[7] Thorsten Beck, Asli Demirgüç-Kunt, and María Soledad Martínez Pería, "Bank Financing for SMEs: Evidence Across Countries and Bank-Ownership Types," European Banking Center, Discussion Paper no. 2009–20 (Sept. 2009), 1.

[8] Some authors go as far as setting networks against banks as alternative organizational forms. They argue that credit market intermediaries may be thought as falling within a spectrum of organizational forms, within which networks represent alternative intermediaries that, under some conditions, can be better than banks at screening applicants, monitoring borrowers, and enforcing contracts: Andrew Godley and Duncan M. Ross, "Introduction: Banks, Networks and Small Firm Finance," *Business History* 38 (July 1996): 1-10.

[9] Francesca Carnevali, "Between Markets and Networks: Regional Banks in Italy," *Business History* 38 (July 1996): 84-100.

In recent decades, technological progress has profoundly altered the way in which information is collected and processed, and it has contributed to the spread of "transactions-based lending" techniques such as financial statement lending, asset-based lending, and credit scoring. These financial techniques are mainly based on hard quantifiable and verifiable information, which has the advantage of being easier for the managements of large organizations to track. In particular, credit scoring—where personal and business information is collected and entered into a model to predict the firm's future loan performance—has been recently extended to small businesses.[10] As a consequence, some scholars have drawn on recent empirical findings to dispute the conventional wisdom concerning the privileged relationship between local banks and small firms, arguing that different lending technologies and organization structures are suited to SME financing. In other words, relationship lending and the decentralization of decision-making centers are no longer the only efficient ways to finance small businesses. Larger banks using hard information and credit scoring and resorting to transaction lending could also play an important role in SME finance.[11] Nevertheless, mixed evidence has been provided on the impact of banking concentration and increasing functional distances on small firms' financing constraints.[12]

For the purposes of this essay, one limitation of asymmetric information models and the empirical analysis based on them is that they view information and knowledge as almost synonymous.[13] They focus on information asymmetry between banks and borrowers, which means that the fundamental problem is that the principal "may not know about the agent's type or actions. . . . The information problems economists address, therefore, are roughly equivalent to problems of data collection," whether

[10] Allen N. Berger, "The Economic Effects of Technological Progress: Evidence from the Banking Industry," *Journal of Money, Credit and Banking* 35 (April 2003): 141-76; see pp. 152, 163.

[11] Beck, Demirgüç-Kunt, and Martínez Pería, "Bank Financing for SMEs"; Allen N. Berger and Gregory F. Udell, "A More Complete Conceptual Framework for SME Finance," *Journal of Banking & Finance* 30 (Nov. 2006): 2945-66; Augusto de la Torre et al., "Bank Involvement with SMEs: Beyond Relationship Lending," *Journal of Banking & Finance* 34 (Sept. 2010): 2280-93.

[12] Allen N. Berger and Gregory F. Udell, "Small Business Credit Availability and Relationship Lending: The Importance of Bank Organisational Structure," *The Economic Journal* 112 (Feb. 2002): F32-F53; Pietro Alessandrini, Andrea F. Presbitero, and Alberto Zazzaro, "Banks, Distances and Firms' Financing Constraints," *Review of Finance* 13 (April 2009): 261-307.

[13] On the concept of knowledge, see Nathalie Lazaric and Edward Lorenz, eds., *Knowledge, Learning and Routines*, vol. 1: *Knowledge and Learning* (Cheltenham, England, 2003).

in the form of soft or hard data, and knowledge is nothing more than the acquisition of facts.[14] However, reducing the concept of knowledge to a private transfer of information is to take too simplistic a view. Proper understanding of the role of knowledge in banking activities requires that a distinction be drawn between knowledge and information. As Alanson Minkler has argued, knowledge differs from information in that it is the ability to understand something and make sense of it.[15] Knowledge may be further qualified as explicit—standardized and codified—or tacit—as in the case of contextual and informal knowledge.[16] In particular, the tacit and empirical components have to do with past experience and "knowledge of the particular circumstances of time and place."[17] In this sense, following the "capabilities" literature, banks may be regarded as repositories of pooled knowledge and skills, where knowledge is typically dispersed among many individuals and cannot be easily transferred.[18] Thus not all small banks are alike. Besides differing in size and ownership structure, individual banks have distinctive features linked to the capabilities of the personnel, the institutional environment in which the banks operate, and multiple interactions with the local community. Knowledge is the outcome of a dynamic learning process that has to do with the creation of skilled personnel, organizational routines, and relational networks with other economic and institutional agents.

Between Economics and Politics: Banks and Small Firms in History

Theoretical explanations of small firms' financing constraints seem to account for the emergence in the nineteenth century of a multiplicity of local financial intermediaries specifically addressing SME needs. It has been argued that the strength of local banks was their ability to "tap into local information networks and hence extend credit to firms that were too young or small to secure funds from large regional or national institu-

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[14] Alanson P. Minkler, "The Problem with Dispersed Knowledge: Firms in Theory and Practice," *KYKLOS* 46 (Nov. 1993): 569-87, quotation at p. 570.

[15] Ibid.

[16] Ikujiro Nonaka and Hirotaka Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York, 1995), 8.

[17] This phrase was first used by Friedrich A. Hayek, "The Use of Knowledge in Society," *American Economic Review* 35 (Sept. 1945): 519-30, quotation at p. 524.

[18] Minkler, "The Problem with Dispersed Knowledge," 583; Martin Fransman, "Information, Knowledge, Vision and Theories of the Firm," *Industrial and Corporate Change* 3, no. 3 (1994): 713-57.

tions."[19] Emblematic is the case of credit cooperatives, which originated in Germany in the second half of the nineteenth century. They were based on two main models: the popular banks, introduced by Schulze Delitzsch in urban centers to finance small manufacturers and traders, and the rural banks, which operated according to the Raiffeisen model granting long-term loans to small farmers and artisans. The ability of these intermediaries to mobilize local information flows reduced transaction costs in both screening and monitoring activities. Because operations were confined to a small geographic area—particularly in the case of rural credit cooperatives, which often operated in a single parish—all members knew each other well and were induced to monitor each other. At the same time, the unlimited liability of members for the bank's obligations provided a strong incentive for peer monitoring.[20]

In the following century, despite a widespread concentration process, these local financial intermediaries—including savings banks—continued to play an important role in many countries. Nonetheless, it is difficult to explain their emergence and persistence merely in terms of superior efficiency, given that local banks were established in some cases by public initiative and often benefited from government protection, which was driven by economic as well as by social and political considerations. Throughout the twentieth century, public intervention in the banking sector gained strength, taking the form of increasing regulation, as well as the promotion of public and semi-public lending institutions. State credit banks were introduced in several countries—among them Sweden and the Netherlands—for the specific purpose of financing small firms.[21] In particular, recent research has highlighted how, in France, Germany, and Italy, government attitudes and policies in favor of small firms—which were seen as "preservers of social stability and as valuable pools of votes"—promoted the development of segmented banking systems.[22]

The Italian case exemplifies how government policies and the attitude of the banking authorities shaped the banking system. At the beginning of the twentieth century, the Italian banking system consisted of a handful of banks with a nationwide branch network and a multitude of small and medium-sized banks operating within restricted geographic boundaries. These included a large number of non-profit institutions such as savings banks, popular banks, and rural credit cooperatives, and a more restricted

[19] Cull et al., "Historical Financing," 3020.

[20] Timothy W. Guinnane, "Cooperatives as Information Machines: German Rural Credit Cooperatives, 1883-1914," *Journal of Economic History* 61 (June 2001): 366-89.

[21] Verdier, *Moving Money,* 239.

[22] Carnevali, *Europe's Advantage,* 197.

group of commercial banks, mainly based in the northwest. Against the background of this territorial segmentation of banking activities, the Bank Law of 1936 introduced a temporal specialization—that is, a rigid separation between short and long-term credit.[23] In the new regulatory framework, which was intended to stabilize the banking system after the Great Depression, ordinary deposit banks were allowed to grant only short-term loans, whereas long-term lending was restricted to special credit institutes, which had to finance themselves by issuing bonds.

In the postwar period, the policy pursued by the central bank, the *Banca d'Italia,* was to strengthen small and medium-sized banks *vis-à-vis* the large national institutes. In order to promote the stability of the banking system and to protect local banks, which were thought to provide crucial assistance to SMEs, competition was restricted, both by limiting the establishment of new banks and the opening of new branches by the larger ones and by preventing mergers.[24] The ability of local credit institutions to support SME financial needs was in fact limited by normative constraints concerning not only the duration of loans—which were restricted to the short term—but also their size; the overall exposure to a single borrower could not amount to more than one-fifth of the bank's capital and reserves. Nonetheless, the provisions of law were evaded in practice—with the supervisory authorities' consent—through prolongation of loan repayment schedules and breaches of credit ceilings.[25] Thus, local banks regularly satisfied the normal medium- and long-term credit requirements of SMEs through formally ordinary credit. Overall, the supervisory authorities deemed short-term loans to be adequate to finance small firms' fixed capital investments, but the government took a different position.

SMEs were thought to suffer from a lack of financial intermediaries providing long-term finance. Indeed, the large credit institutes and the special banks issuing long-term loans proved more inclined to finance larger concerns, overlooking the long-term financial needs of small firms, which could not address the stock and securities market either. This led to enactment of Law 445 in 1950, which introduced special tax exemptions to promote the establishment of regionally based special credit institutes—the *Mediocrediti regionali*—which were intended to provide SMEs with medium-term loans for capital investments.[26] The government's attitude

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[23] Andrea Leonardi, "Industrial Credit and Special Banks in Relaunching the Italian Banking System after World War II," in *Recovery and Development*, ed. Bonoldi and Leonardi, 201-40.

[24] Carnevali, *Europe's Advantage*, 179-81.

[25] Leonardi, "Industrial Credit," 216.

[26] On the debate leading to approval of Law 445/1950, and the role of SMEs, see Pietro Cafaro and Andrea Locatelli, "Marginal in Strong Areas: The 'Mediocredito

was evidently affected by social and political motives. The leading political party, the Christian Democrats, was certainly aware of the importance of small firms for employment, but it was also inclined to undertake a policy in favor of small business ownership in order to gain consensus, reduce social tensions, and cope with the growing influence of the Communist party.[27]

There were two main reasons for restricting operation of the *Mediocrediti* to the regional boundaries. First, because the institutes were allowed neither to collect savings from the public nor to have a network of branches, the territorial delimitation should have promoted the subscription of bonds by local banks, as well as their cooperation in the collection of loan applications. Second, the regional scope was intended to provide a better knowledge and understanding of local firms' needs and prospects.[28] The *Mediocrediti* were to be created by consortia of local banks in the various regions, but owing to inadequate support they were slow to take off. They gained momentum only after enactment of a second legal provision, Law 949 in 1952, which instituted the *Mediocredito Centrale* to provide resources at below-market rates to the regional institutes. During the 1950s, eleven *Mediocrediti regionali* were set up in the north central region of Italy.[29]

Against the background of the recent re-evaluation of the role of small businesses, and their contribution to decentralized development in Italy, some scholars have stressed the importance of the financial support provided by local banks. Analyses have focused mainly on industrial districts where, it has been suggested, credit was abundant because of lower screening, monitoring, and enforcement costs, and economic and political connections between bank managers and local entrepreneurs.[30] In contrast, other scholars have questioned the existence of closer relations between district firms and local banks, arguing that the former did not have significant advantages in terms of cost and availability of

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Regionale Lombardo' and the Organisational Structure of the Medium-Term Corporate Lending Banks under the Guidance of Giordano Dell'Amore," in *Recovery and Development*, ed. Bonoldi and Leonardi, 163-99.

[27] Carnevali, *Europe's Advantage*, 172-77.

[28] Ibid., 186.

[29] In the postwar period, before the establishment of *Mediocrediti regionali*, special sections of large public law banks were designed to issue loans to SMEs, and special credit institutes were established in southern Italy: Leonardi, "Industrial Credit."

[30] Carnevali, *Europe's Advantage*, 177; Giuseppe Conti and Giovanni Ferri, "Banche locali e sviluppo economico decentrato," in *Storia del capitalismo italiano*, ed. Fabrizio Barca (Rome, 1997), 429-65.

credit.[31] As for the *Mediocrediti regionali*, their operation has attracted a large amount of criticism. They have been criticized for directing a substantial part of their activities to the distribution of subsidized credit through bureaucratic procedures, as well as for failing to establish an effective relationship with borrowers. It has been argued that, although firms were subjected to detailed evaluation, the analysis did not go beyond the rating procedure preliminary to the concession of credit and was not followed by constant monitoring, consultation, and assistance to the firm.[32] Far from rebutting this criticism, I show that an in-depth analysis of the management of these institutes reveals some specificities in their operation and yields useful insights into the role of knowledge in financing SMEs. The assessment method used to reduce risk and the decision-making process warrant particular attention, as do the long-run accumulation of knowledge and its impact on the regional institutes' strategies in facing the new challenges of the late twentieth century.

The restructuring of the Italian banking industry after the 1990s had strong implications for the *Mediocrediti regionali*. Following a general trend toward liberalization, and especially the European Economic Community's legislation on banking, a new regulatory framework was introduced to help Italian banks withstand international competition. The Amato Law of 1990 promoted the transformation of public banks into joint-stock banks, and put an end to the principle of territorial segmentation. Then, the new Bank Law of 1993 definitively removed the functional specialization, stimulating a wave of mergers and acquisitions in the banking industry. Larger banks pursued a strategy of acquisition of the local banks as the most rapid and efficient way to exploit their networks of information. At the same time, technological progress facilitated the consolidation process via the introduction of computer-based credit-rating systems in which customers' creditworthiness was assessed in centralized back office locations. Thus, while on the one hand local banks were freed from traditional constraints, on the other they became the target of the expansion strategies of larger banks. This was also the case with the *Mediocrediti regionali*, which transformed themselves from public law institutes into joint-stock banks. As state incentives to SMEs were gradually dismantled, they had to pursue a new positioning strategy in response to a changing competitive environment, taking account of their distinctive competencies.

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[31] Federico Signorini, ed., *Lo sviluppo locale: Un'indagine della Banca d'Italia sui distretti industriali* (Corigliano Calabro, Italy, 2000). For a brief review of the debate see Goglio, "Local Credit and Territorial Development," 272-75.

[32] Marcello de Cecco and Giovanni Ferri, *Le banche d'affari in Italia* (Bologna, 1996), 172-73.

Some Evidence from Trentino–South Tyrol: The Case of *Mediocredito Trentino–Alto Adige*

The *Istituto per l'Esercizio del Credito a Medio e Lungo Termine nella Regione Trentino–Alto Adige*—later known as *Mediocredito Trentino–Alto Adige* (MTAA)—was established in 1953 as a public law credit institute headquartered in Trento. Its endowment fund amounted to 1,600 million lire, of which 50 percent was provided by the Treasury, 28 percent by the regional government, and 22 percent by local banks. The function of MTAA was to promote the development of productive activities by issuing medium- and long-term loans to SMEs in Trentino–South Tyrol, a small and mainly mountainous region located in northeastern Italy and made up of two provinces, the province of Trento, called Trentino, and that of Bolzano/Bozen, called Alto Adige/South Tyrol (see Fig. 1).[33]

Figure 1
Map of Italy with Provincial Boundaries

[33] For a brief overview of the MTAA operation up to the early 1970s, see Cinzia Lorandini, "Mediocredito Trentino–Alto Adige and Its Role in Promoting Entrepreneurship in Trentino and South Tyrol (1954-1972)," in *Recovery and Development*, ed. Bonoldi and Leonardi, 311-40.

The region had distinctive institutional and cultural features that inevitably influenced the MTAA's operation. Under the Autonomy Statute granted in 1948, the regional government had particular legislative and administrative powers. This special status was acknowledged in fulfilment of the De Gasperi-Gruber Agreement, an accord negotiated between Italy and Austria, and annexed to the 1946 Paris Treaty, intended to protect the German-speaking ethnic group that made up the majority of the population in South Tyrol.[34] The regional government saw MTAA as a suitable instrument with which to foster new job creation, thereby tackling the problem of unemployment and rural underemployment that afflicted the local economy; MTAA ended up by devoting the bulk of its activities to the issue of subsidized loans under state and regional provisions.

In the postwar period, the region was one of the most backward areas in north central Italy, with a predominant agricultural sector and significant out-migration, especially from Trentino. In the second half of the twentieth century, however, after undergoing a transition to a tertiary-based economy, the region reached unprecedented levels of well-being, ranking high in Italy for income per capita.[35] MTAA accompanied this transformation by financing industrial and commercial activities and tourist infrastructures, as well as farmers and agricultural cooperatives (see Fig. 2). Although MTAA had an agricultural credit section that issued loans to the agricultural sector, its activities were mainly devoted to the financing of small and medium-sized industrial firms, which are the focus of this essay. Because SMEs were defined as those with no more than 500 employees and an invested capital amounting to no more than 1.5 billion lire, all industrial businesses operating in the region were in practice potential applicants, except for the artisanal firms—which were excluded until the 1980s—and a handful of large establishments owned by extra-regional companies.

The short-term financial needs of local businesses were satisfied by an array of local non-profit intermediaries which made up an extremely frag-

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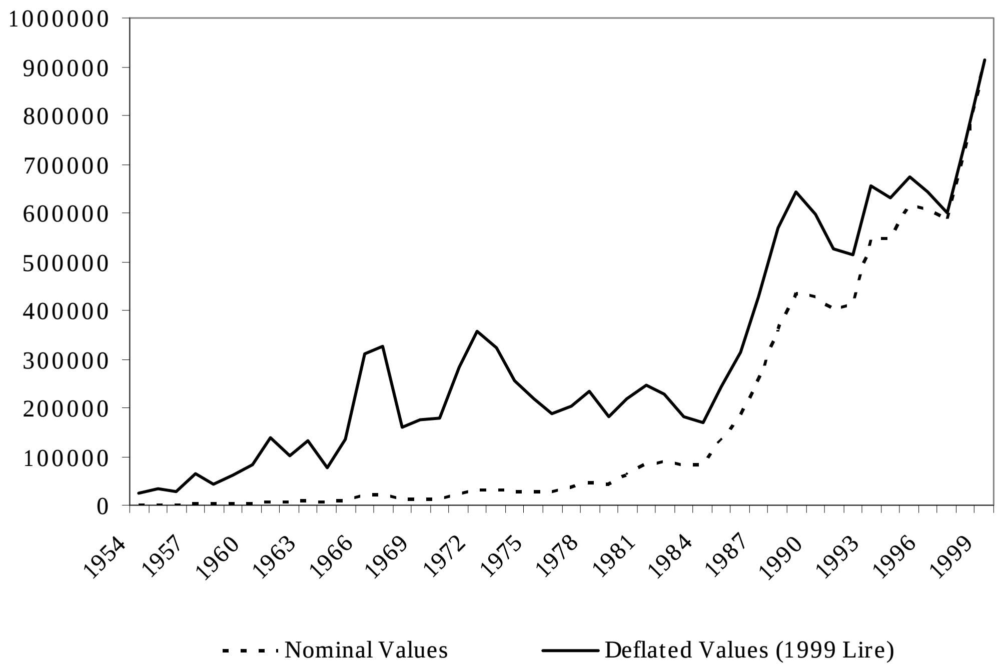
[34] The territory within the region of Trentino–South Tyrol had been transferred from Austria to Italy after the First World War. At that time, while the southern part was overwhelmingly Italian, in the northern part almost 90 percent of the population was German-speaking. In the interwar period, following the Fascist rise to power, South Tyrol was victim of a process of assimilation, aimed at destroying the German culture and identity. On the South Tyrol question, see Rolf Steininger, *South Tyrol: A Minority Conflict of the Twentieth Century* (New Brunswick, N.J., 2003).

[35] Andrea Bonoldi, "A Farewell to Marginality: Development Paths in the Italian Alpine Provinces since World War II," in *Recovery and Development,* ed. Bonoldi and Leonardi, 129-61; see pp. 142-45.

mented banking system. The only local intermediaries of significant size were two savings banks—the *Cassa di risparmio di Trento e Rovereto* and the *Cassa di risparmio della provincia di Bolzano*—each operating in a single province with around thirty branches in total, and the *Banca di Trento e Bolzano*, the only joint stock bank active in the entire region with a network of branches in the major centers. The savings banks, tradition-

Figure 2
Loans Approved, 1954-1999
(million lire)



Source: Author's elaborations of data from *Bilanci, 1954-1999,* Archivio del Mediocredito Trentino–Alto Adige, Trento.

ally less involved in industrial finance, dated back to the mid-nineteenth century, whereas the *Banca di Trento e Bolzano*, which was inclined to take relatively higher risks, had been created in the 1930s and was controlled by a financial arm of the Catholic Church. The other local intermediaries comprised a small private bank and many credit cooperatives, which represented a distinctive feature of the regional banking system. These were three popular banks operating with a handful of branches in the province of Bolzano, and more than two hundred rural banks—named *Casse rurali* in Trentino and *Raiffeisenkassen* in South Tyrol—that were mostly single-branch agencies serving the smaller villages. Overall, the local banking system satisfied the ordinary financial needs of local firms by applying rudimentary screening techniques based on the gathering of soft information and relationship lending. Long-term loans were also provided through rolled-over overdrafts, but industrial lending remained inadequate. Given the high level of liquidity of local banks, resulting from the particularly high saving propensity of the population and the low propensity to invest, there was no problem of scarce resources. In fact, around 70 percent of all deposits were held by savings banks and rural banks, but the loan/deposit ratio was rather low, hovering around 50 percent.[36]

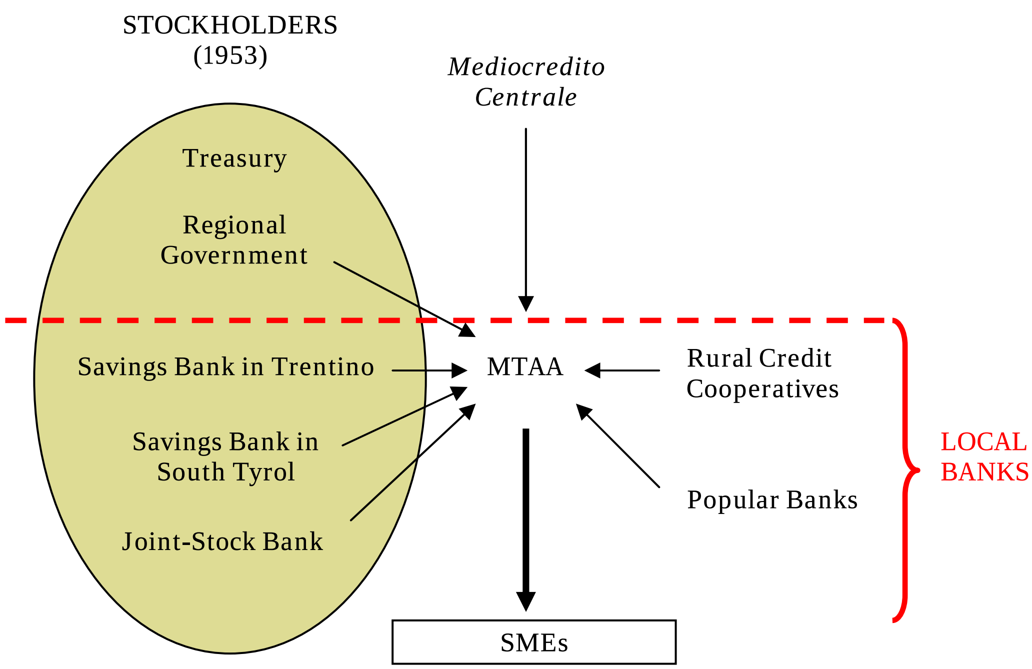
The economic and institutional context influenced the configuration of the MTAA stockholders, which comprised the Treasury, the regional government, and the three major local banks. While the regional government was the dominant stockholder along with the Treasury, the few banking participants held a minority stake. This balance was reflected in the composition of the twelve-member board of directors, where the president and five members represented the Treasury, the deputy president, two members the regional government, and three members the bank participants. The local stockholders played a crucial role both in the provision of resources and in the issuing of loans. Since MTAA was not allowed to collect savings among the public or to have branch offices, the possible sources of financing, apart from its own capital, were the means provided by *Mediocredito Centrale*, bond issues, and credit openings by the participants. Thus, the fact that the bank stockholders were deeply rooted in the local community had far-reaching implications for the operation of MTAA, which had to rely heavily on the other banks' branches for the placement of bonds with the general public and, to some extent, for the collection of loan applications. Extensive cooperation was also established with the popular banks and the rural banks. Thus, local resources—as well as those provided by *Mediocredito Centrale*—were mobilized for local needs (see Fig. 3). MTAA became an interface between national and local authorities, other local banks, and local firms, and it developed substantial skills in the financing of small firms and in the granting of subsidized credit. Inclusion in a regional network—actually composed of two quite distinct provincial networks—facilitated the exploitation of several information channels, although social and political embeddedness in the local community also had drawbacks for the MTAA's operation.

As for the assessment procedure, of primary importance are defining what kind of information was used to evaluate potential borrowers and how was it collected, on the one hand, and what were the main criteria used to determine whether or not to grant a loan, on the other. Despite the

[36] Mario Zane, *Il mercato del credito del Trentino-Alto Adige* (Trento, Italy, 1968), 211-28.

paucity of archival evidence resulting from the destruction of almost all origination files dating from the 1950s to the 1960s, the remaining documents provide some interesting insights into the origination process.[37] Generally, the evaluation of applicants involved the gathering

Figure 3
Financial Flows to MTAA



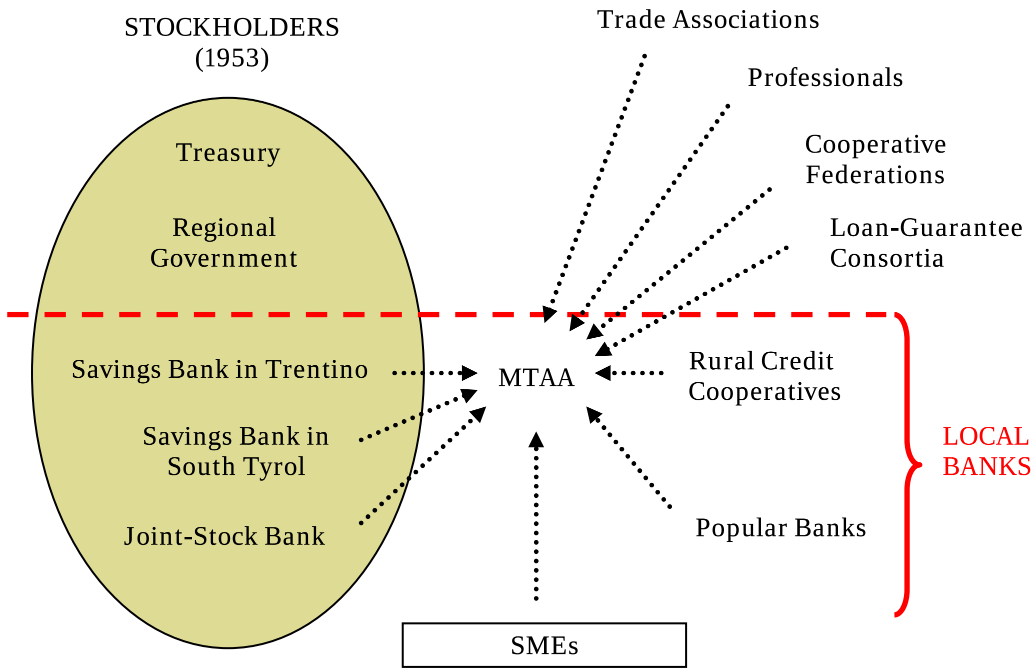
of both soft and hard information, mainly regarding the purpose of the loan, the firm's characteristics and prospects, and the guarantees offered. Loans usually financed the establishment of new plants or the enlargement and modernization of existing ones; the impact of such plans on employment and productivity was considered in order to assess the validity of the project. An overall evaluation of the applicant's economic and financial means was made in order to establish the firm's capacity to meet the repayment instalments, and data from the most recent balance sheets were requested for this purpose. When reclassified according to prudential criteria, these data made it possible to verify whether the firm had sufficient profitability to fulfil its commitments, adequate assets, and a balanced ratio between its own and borrowed capital. The rating report

[37] Only 25 files have survived relative to the first two decades of operation: *Pratiche istruttorie*, Archivio del Mediocredito Trentino–Alto Adige, Trento.

concluded with an evaluation of the guarantees and collaterals. Loans were always secured on real estate and/or machinery. Moreover, to facilitate enforcement of contract clauses in the case of non-compliance, the financing was granted upon issue of promissory notes, if necessary guaranteed by a third party. Investigation was made into the moral qualities, abilities, and the real assets of the owners, managers, or possible guarantors.

Inclusion in a regional network enabled MTAA to gather information about a person's wealth and character (see Fig. 4). Local banks, in particular, were in a position to know who needed capital, how owners or

Figure 4
Information Flows to MTAA



managers had performed in the past, and what kind of collateral they could provide. Bank participants and credit cooperatives, as well as the two provincial cooperative federations and local professionals, informed MTAA about the capabilities, integrity, solvency, and punctuality in payments of potential borrowers. Local banks—along with trade associations and artisan unions—also collected loan applications on behalf of MTAA. The complementarities achieved with the MTAA's operation provided strong incentives to cooperate. Indeed, local banks often granted advances to customers waiting for financing from MTAA, and at the same time the latter's medium-term loans spurred demand for short-term lending. More generally, as has been suggested, cooperation was linked to the common interest in the region's economic welfare.[38] From the 1980s onward, MTAA further developed its networking ability by reaching various agreements with loan-guarantee cooperatives and consortia, the aim being not only to reduce risks but also to create new channels for the collection of loan applications.

However, although local sources of information were exploited to investigate the applicants' creditworthiness, information asymmetries evidently remained quite high, because MTAA resorted extensively to collaterals. A classification of existing loans in 1969, drawn up according to the guarantees and collaterals provided, confirms that loans were highly protected (see Table 1). This does not mean, however, that soft information was of scant importance. In fact, the boundary between hard and soft information was not clear-cut; quantitative values could entail a "soft"

Table 1
Guarantees and Collaterals on Outstanding Loans (1969)

Guarantees and Collaterals	Number of Loans	%
A	224	23.9
A + B	226	24.1
A + C	190	20.3
A + B + C	101	10.8
A + D	116	12.4
A + D + (B and/or C)	79	8.4
Total	936	100.0

Source: Verbale della seduta del Consiglio di Amministrazione, 24 June 1969, p. 240, Archivio del Mediocredito Trentino–Alto Adige.
Notes: Loans issued by the agricultural credit section, and those on Law 1142 of 1966 to flood-damaged firms are excluded.
A = Business collateral (mortgage, lien on machinery, and promissory note)
B = Mortgage on non-business assets (owner's or third party's property)
C = Personal endorsement
D = Bank, company, or state guarantee

component implying a discretionary judgment that could not be accurately quantified in a number. As was argued at the end of the 1960s, when the MTAA surveyors evaluated investments in plants and machineries offered

[38] Carnevali, *Europe's Advantage*, 86-87.

as collaterals, they did not estimate assets at their distress sale value, but instead usually referred to the current value. The reason put forward was that it was deemed important, when financing an industrial firm, “normally to take account of the technical and moral potential of the management, the assets represented by the custom, experience in the specific economic sector, the creditworthiness enjoyed by the firm.”[39]

A further aspect to be considered is that the kind of information used to make loan decisions varied somewhat according to the features of potential borrowers, with particular regard to the firm’s size. The category of SMEs comprised a wide range of businesses, from individual firms and small partnerships to larger companies with dozens of employees; although applicants usually had to submit an array of documents, including a form with details about income and assets, not all files were equally meticulous. Because small non-incorporated firms were not required by law to draw up annual balance sheets, they lacked the proper accounting procedures necessary to produce reliable financial statements, a situation further complicated by the overlap between business and personal assets and income. For this reason, the board of directors maintained, in the case of small enterprises with rudimentary or even non-existent accounting, the MTAA officers took care to verify that “substantial”—rather than formal—requirements such as the applicant’s quality and attitude, the investment project, and the collateral offered were met.[40]

With regard to the role of balance sheet data, of particular interest is the debate that developed within the board of directors in the 1970s, concerning the usefulness of financial ratios in the assessment procedure. The issue was raised by Albert Galvan, deputy president and former bank officer, who urged the director general to provide the board with a critical analysis of the applicant’s balance sheet and a comparison between some financial and economic indicators when presenting loan proposals. By contrast, the representative of the *Banca di Trento e Bolzano*, Dario Vettorazzi, claimed that it was most important to know whether the applicant was a good entrepreneur and the project well founded, and that it was not on the basis of some indicators that the board could draw its conclusions.[41] Galvan argued that several banks in South Tyrol had already introduced this kind of analysis and that neglecting it would be a sign of backwardness. The director replied that the balance sheet analysis

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[39] *Verbale della seduta del Consiglio di Amministrazione (Verbale CdA)*, 24 June 1969, p. 239, Archivio del Mediocredito Trentino–Alto Adige.

[40] *Verbale CdA*, 24 June 1969, p. 238.

[41] *Verbale CdA*, 20 Dec. 1976, pp. 154-55.

was indeed performed by the loan originators—who had attended special courses for this purpose—but in his opinion it was not the board's duty to evaluate and discuss balance sheet data and systems of indicators. Others maintained that this required excessively in-depth analysis that would have exceeded the board's competencies and would have been inconsistent with the limited amount of time and attention that could be devoted to each decision. The debate concluded with the majority of the board members agreeing that analytical data and indicators should be made available on request to single members and provided to the board when expressly required.[42] The assessment procedure was also affected by the firms' attitude toward the MTAA investigations, which was often characterized by a lack of cooperation. When, following an inspection, the *Banca d'Italia* officers remarked that controls were sometimes incomplete, the board of directors expressly mentioned this problem by referring to the firms' attempts to disguise, most often for fiscal reasons, their actual conditions.[43]

The assessment procedures clearly involved multifaceted aspects, but what further emerges from the board minutes is the dynamic character of a learning process based on both practical experience and formal education. As the board itself admitted, in the first fifteen years the investigation procedures had been gradually refined through practice with the application of various special provisions.[44] It was not until the 1970s that the need was perceived to define all procedures formally—from the application submission to the final approval—specifying criteria and methods for the origination process as well as the officers' tasks and duties.[45] MTAA encountered numerous difficulties in finding qualified personnel with professional backgrounds in banking, and ideally speaking both German and Italian, although some technical assistance was provided by Assireme, the association grouping all *Mediocrediti regionali*.[46] Attendance in special courses organized by Assireme contributed to refining the loan officers' surveying capabilities, but a major step forward was taken in the mid-1970s when coordination of the office was entrusted to a young inspector, who provided special expertise in the management of medium-term loans deriving from his former employment at *Istituto Mobiliare Italiano*, one of the largest industrial credit banks in Italy.[47]

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[42] Ibid., 17 Jan. 1977, pp. 189-91.

[43] Ibid., 20 Nov. 1972, p. 176.

[44] Ibid., 24 June 1969.

[45] Ibid., 17 June 1974, pp. 376-77.

[46] Ibid., 24 June 1969, p. 247; 20 Nov. 1972, p. 176.

[47] Ibid., 17 June 1974, pp. 376-77.

The monitoring procedures were also revised with time. Loans were initially issued upon presentation of a declaration, signed by a professional and a firm representative, stating that the operation to be financed had really taken place, but on-site inspections were subsequently introduced.[48] However, they were not always conducted, as noticed by the supervisory authorities. In this regard, the board's justification was that there were alternative ways to verify the execution of investments, such as a check of the balance sheet, surveys made during the origination phase, and others. More pragmatically, how to monitor a project's fulfilment was evaluated case by case, taking into account both the "proven reliability" of the firm and the opportunity to avoid unnecessary burdens.[49] Only if necessary were inspections made after liquidation of the loan, thus confirming the absence of a constant relationship with customers.

The criteria used to make loan decisions were developed in a quite informal way. At the beginning of the 1970s they had still to be formally approved by the board of directors—the procedure criticized by the *Banca d'Italia* officers.[50] Given the public role of MTAA and the strong presence of the Treasury and the regional government among its stockholders, the priority of employment creation was certainly a factor that weighed heavily on lending decisions and sometimes led to underestimation of technical-economic aspects, especially in the case of loans to larger firms. Thus, when the central bank's officers noted that in some instances the size of a loan was disproportionately large in relation to the borrower's assets and income, the board of directors claimed that these were mainly "cases with marked and clear social motivations."[51] Moreover, the conditions granted to the applicant depended on whether the loan was subsidized by the local or national government, and—in the case of non-subsidized loans—on whether or not it was refinanced by *Mediocredito Centrale*. In both circumstances, the prolongation of the lending process resulting from bureaucracy induced the director general to devise certain shortcuts. Instead of waiting for the board's deliberations, he sent provisional extracts of the meeting minutes to the Ministry of Industry and similarly to *Mediocredito Centrale*, in order to know in advance, in the former case, whether the loans could benefit from facilitating laws and, in the latter, whether they could be rediscounted; this practice was abandoned after the admonitions of the supervisory authorities.[52]

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[48] Later, the borrower was also asked to provide a list of all expenditure documents: *Verbale CdA*, 24 June 1969, p. 243.

[49] *Verbale CdA*, 20 Nov. 1972, p. 178.

[50] Ibid., p. 172.

[51] Ibid., 24 June 1969, p. 243.

[52] Ibid., 20 Nov. 1972, p. 173.

The granting of loans under public provisions was a major channel through which non-economic criteria influenced the allocation of resources. In the case of subsidized loans the applicants' screening was heavily conditioned by the criteria used to grant public benefits. The constraints influencing MTAA regarding the issue of subsidized credit were particularly stringent, as confirmed by the fact that at least 65 percent of loans in the 1975 balance sheet had been granted at a subsidized rates.[53] The impact of public priorities and special legislative measures is exemplified by events in the aftermath of the 1966 flood, which caused huge damage, especially in the southern part of the region. On that occasion acceptances jumped from about 70 to more than 90 percent of loan applications. Assuming that the proportion of applications rejected gives an approximate idea of the degree of selection, it seems that dependence on the subsidized credit legislation attenuated the role of the rating criteria. In this case, the need to deal with an emergency situation, as well as the subsidiary guarantee supplied by the state on loans to flood-damaged firms, induced MTAA to apply less rigorous selection parameters, even as demand for loans increased owing to a heavily subsidized rate. In any case, the impact of legal provisions was stated clearly in the board of directors' reply to critical comments by the supervisory authorities. Following the 1972 inspection, the *Banca d'Italia* officers complained that some preliminary investigations were not sufficiently thorough and lacked the technical assessments necessary to verify the validity of projects. They argued that the balance sheet analysis was almost always based on data provided by the firms themselves, and that their reliability was seldom checked. The board's reply was that in the case of loans under state or regional provisions, validity was indirectly recognized as a consequence of admission to public benefits, although MTAA always endeavoured to make careful assessments.[54]

In addition to the application of legal provisions, a further factor actually or potentially affecting loan conditions and approval was MTAA's financial dependence on its stockholders, with regard to both the regional government and the bank participants. A clear instance is the Regional Law 21 of 1970, whereby the regional government made available to MTAA one billion lire. This was aimed at reducing the interest rate charged to several firms that had taken out non-subsidized loans, but the crucial aspect was that the regional government had the prerogative to decide which firms could benefit from the interest rate reduction, thus restricting MTAA's decision-making independence.[55] A few years later, substantial

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[53] Ibid., 22 March 1976, pp. 385-86.

[54] Ibid., 20 Nov. 1972, p. 176.

[55] Ibid., 8 March 1971, pp. 109-10.

risks of interference also arose from the bank stockholders, on which MTAA had to rely in a period of liquidity crises. In that circumstance, some members of the board argued that the bank participants who subscribed the MTAA bonds should be entitled to establish the priorities in the allocation of the financial means that they provided. This prerogative was contested by other members, however, who noted that it would create a dangerous precedent, opening the way to multiple interferences in the board's decisions—for example, by other institutions that actively participated in the purchase of bonds such as the credit cooperatives.[56]

MTAA was evidently torn between its two roles as a bank on the one hand and an instrument of economic policy on the other. At first the main public interlocutor was the regional government, but in the 1970s—after approval of a new special statute that transferred almost all powers from the region to the autonomous provinces of Trento and Bolzano—the provincial governments gradually emerged as the main referents. The board members were clearly aware of the importance of close communication with the provincial and municipal authorities. Especially in the case of initiatives intended to establish large industrial sites, it was deemed crucial to agree on a common policy that would consider all the advantages and drawbacks of proposals such as the impact on local employment, production prospects, suitability of location, environmental issues, and the need for administrative approvals.[57] As the need emerged to set priority criteria in the allocation of resources, the board of directors was divided between those who stressed the independence of MTAA, urging the application of banking criteria, and those who instead emphasized its role as an instrument of economic policy. Nevertheless, they all agreed that it was necessary to reach an understanding with the provincial governments, given the political appointment of several board members, the nature of the loans issued, and the public majority stake.[58]

In the 1980s a major change occurred among the stockholders: the exit of the Treasury, and the entry of the Autonomous Provinces and the credit cooperative movement. The new banking participants were the two clearing banks of the rural credit cooperatives and the three South Tyrolean popular banks. Eventually, however, 66 percent of MTAA capital was still in public hands—equally distributed between the region and the provinces—whereas 28 percent was controlled by the founding banks and the rest by the credit cooperatives.[59]

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[56] Ibid., 22 Nov. 1976, pp. 118-21.

[57] Ibid., 14 Jan. 1974, p. 69.

[58] Ibid., 17 Jan. 1977, pp. 181-86.

[59] *Verbale dell'Assemblea generale*, 26 April 1983, p. 48.

Another major event in that period was the opening of a branch office in Bolzano, which took upon itself all loan originations concerning the South Tyrolean firms. In fact, a bureau had already been opened in 1974 with the purpose of improving the flow of information to the South Tyroleans. The idea was that a local agency could better inform would-be German-speaking applicants about MTAA activities and the documents to be presented. The bureau was also considered psychologically important for enhancing relations with the South Tyroleans, whose applications for industrial loans had traditionally been scarcer. Yet the South Tyrolean members of the board repeatedly complained about the limited tasks assigned to the bureau until, in 1982, after the statute had been modified, a branch office started operations.[60]

The greatest impact on the management of MTAA derived, however, from the institutional changes of the 1990s, when the entire regional banking system was restructured. Like all other *Mediocrediti regionali*, in 1992 MTAA transformed itself into a joint-stock bank, but in contrast to almost all other institutes, it did not fall under the control of larger banking groups. With the removal of territorial and functional restrictions, nonetheless, it had to develop a new positioning strategy in the credit market, given that local banks that had previously cooperated with MTAA such as the savings banks and the *Banca di Trento e Bolzano* had turned into its competitors.

Capitalizing on the expertise accumulated in the past, MTAA specialized in the provision of financial and banking services to small firms for investments in real estate, plants, and machinery, while it extended the range of its services in order to meet the needs of an increasingly demanding clientele. Besides engaging in short-term lending and assisting firms in debt rescheduling, the new Investment Bank extended its activities to leasing and merchant banking. But it also continued its old business of granting subsidized loans under regional and provincial provisions. In so doing, MTAA took advantage of a staff specialized in business financial analysis and in the technical evaluation of investment projects, as well as of a wide network of contacts and agreements with public institutions, loan-guarantee consortia, credit cooperatives, and other banks. This network was further widened when MTAA extended the geographical scope of its operation. Growing competition combined with the limited size of the regional catchment area induced the bank to expand its activities into neighboring provinces, and in 1995 a branch office was opened in Treviso.[61] At the same time, MTAA increasingly relied on local intermediaries such as banks, associations, and professional offices to

[60] *Verbale CdA*, 18 Feb. 1974, p. 147; 28 June 1982, p. 32.

[61] Ibid., 26 May 1995, pp. 925-28.

gather loan applications and, in some cases, to obtain some form of co-operation in the origination process.[62]

Conclusion

This paper has shown that entering the "black box" can facilitate investigation of the role of knowledge in banking activities. The business records of MTAA—a public law credit institute established in the 1950s to issue medium- and long-term loans to SMEs in the region—provide interesting insights into how information was collected and used, capabilities were developed, and organizational routines and information networks were created. A preliminary investigation of archival documents has suggested that the MTAA's inclusion in a regional network characterized by historical, economic, and institutional ties provided it with effective channels through which to gather soft information, despite the widespread recourse to collateral to protect loans. On the other hand, the decision-making process was subject to multiple factors of interference because of the dominant role of local authorities and the granting of subsidized loans under public provisions. The case of MTAA clearly exemplifies how the interweaving of economic and political factors shaped the process of knowledge accumulation. The individual and organizational capabilities gradually developed over forty years of operation were reflected in the strategy pursued in the 1990s. Against the background of the institutional changes that radically transformed the Italian and the regional banking industry, MTAA took advantage of the technical skills of its staff and of its in-depth understanding of SME needs, and ended up by specializing in the provision of financial and banking services to small firms while at the same time extending the range of its products. In so doing, it continued to exploit its privileged relationships with both the local authorities and the cooperative movement, and it further extended the geographical scope of its activities and network of relations to adjoining regions.

[62] Ibid., 24 March 2000, pp. 1219-20.