

The Changing Role of Banks in the Financial System: Social versus Conventional Banks

Simon Cornée, Anastasia Cozarenco, Ariane Szafarz

Social banks have emerged as a new group of banks that call themselves as “alternative”, “ethical”, “sustainable”, and “value-based”. Their small market share increases at a rapid pace and is still expected to grow in the future. Social banks are institutions with both (at least some) activities of financial intermediation and one or several non-financial missions, typically based on environmental and social values. By unpacking the observable, real-life differences between social banks and conventional banks, this chapter paves the way to theorizing the multidimensional characteristics of social banks within the global banking industry. Business models, governance issues, lending technologies; and social outcomes appear to be key aspects to understand how innovative, value-based, social banks work and how they might one day substantively affect mainstream banking business.

Keywords Social banks, ethical banks, social mission, financial cooperatives, microcredit

JEL Classifications G21, B55, H23, G32, G28, H81

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Abstract

Social banks have emerged as a new group of banks that call themselves as “alternative”, “ethical”, “sustainable”, and “value-based”. Their small market share increases at a rapid pace and is still expected to grow in the future. Social banks are institutions with both (at least some) activities of financial intermediation and one or several non-financial missions, typically based on environmental and social values. By unpacking the observable, real-life differences between social banks and conventional banks, this chapter paves the way to theorizing the multidimensional characteristics of social banks within the global banking industry. Business models, governance issues, lending technologies; and social outcomes appear to be key aspects to understand how innovative, value-based, social banks work and how they might one day substantively affect mainstream banking business.

1. Introduction

The financial sector landscape has seen the development of a new mindset on banking in line with social, environmental, and ethical values. This chapter puts together the diverse financial institutions created along these views. For simplicity, we group them under the label of “social banks (SBs)”, while acknowledging the significant heterogeneity of social missions that can be pursued by these institutions. SBs are at the intersection of two sets: the large set of banking institutions on the one hand, and the value-based grassroots initiatives aimed at addressing financial operations by prioritizing non-financial outcomes on the other hand (Mersland et al., 2019). The latter category includes various entities, such as crowdfunding platforms, microfinance institutions, financial cooperatives, community development banks, and charitable foundations (Cornée et al., 2021), which are concerned with providing funding opportunities and “put the person at the center of the intervention” (Milano, 2011). In short, SBs are financial intermediaries paying attention to the consequences of their financial operations on society and nature (Benedikter, 2011; Weber and Remer, 2011; Cornée and Szafarz, 2014; Paulet et al., 2015). SBs are therefore hybrid organizations (Billis, 2010) in the sense of contributing to the common good while seeking to be financially sustainable.

This chapter focusses on SBs as financial institutions. SBs differ from social impact investing, which is, according to Rizzi et al. (2018), another “dominant” form of social finance. While both social banking and social impact investing pursue social goals, impact investing has specific strategies about fund allocation and client services, seeking to combine social outcomes and financial returns, whereas SBs introduce social values into their business activities; their ethical principles lead to financing social initiatives and generate fair financial returns (Rizzi et al., 2018). Only a few socially responsible investment funds meet the holistic ethical needs of SBs (Krause and Battenfeld, 2019). Impact investing is considered in another chapter of this book.

2. Social Banks in the Field

The roots of social banking can be traced back to the late middle age. According to Milano (2011), the Monti di Pietà,¹ started in the 15th century in Italy and spread later to the rest of Europe, can be considered as first examples of SBs. The *raison d'être* of Monti di Pietà consisted in combatting usury practices and providing low-income individual with financial services at fair prices. In the second half of the 18th century, the first savings banks appeared in Europe and secured saving schemes to the middle and low classes, without any speculative intention.

Lending money to the poor is currently considered as the mantra of microfinance institutions, which are mainly active in the Global South, but still exist also as a niche market in rich countries. Most microfinance institutions are subsidized (D'Espallier et al., 2013). A minority of microfinance institutions have the legal status of banks and are called microbanks. Microbanks fall under the definition of SBs. Yet many microfinance institutions have other statuses, such as NGO (non-governmental organizations) and NBFIs (non-bank financial institutions), which strictly speaking leave them aside from the banking sector (Tchakoute-Tchuigoua, 2010; Périlleux et al., 2012) even though transitioning to banks is a possible evolution (D'Espallier et al., 2017).

In the middle of the 19th century, the first cooperative models emerged in England with the Rochdale society (1840) and in France with Philippe Bouchez (1830-1840) and Louis Blanc (1848). At the same time, the cooperative banking movement gained momentum in Germany. This evolution was triggered by the industrial revolution that weakened small business holders and craftspersons in urban areas and the disbanding of the ancient feudal system that plunged peasants and rural residents into misery. During this turmoil period, two important German figures, Hermann Schulze-Delitzsch and Friedrich Raiffeisen, laid the foundations of modern

¹ Monte means a combination of loans, while Pietà refers to an image of Passion of Christ (Milano, 2011).

cooperative credit (Cornée et al., 2018). The two men were motivated by distinct ideologies: Raiffeisen was inspired by Christian values, while Schulze-Delitzsch, a liberal, perceived cooperation as a means of offering equal opportunities rather than equality per se. Regardless, the common objective of the nascent cooperative banks was defying usury and offering fair lending opportunities to low-income groups (Guinnane, 1997; 2001; 2003).

This successful cooperative movement spread to the whole world. Today, many SBs are governed as cooperatives, but the cooperative status alone does not guarantee that a bank is social. The divide between social and cooperative banks is subtle. On the one hand, current cooperative banks are primarily oriented toward their members' interest (*mutual interest*) by facilitating credit availability and forging long-term clientele relationships (Périlleux and Nyssens, 2017). They do not take advantage of their bargaining power to “hold up” their borrowers (Angelini et al., 1998). On the other hand, social banks fund projects of general interest with attractive conditions and promote the common good (Cornée & Szafarz, 2014). Beyond the motivation of helping poor people escape predatory lending, ethics in banking is observable through everyday fair practices toward customers and other stakeholders, transparency of operations, and refraining from excessive speculation (Kalmi, 2014, Cornée et al., 2016).

Based on Gui's (1984) classical distinction between *mutual interest* and *general interest* in the third sector, one could therefore argue that, even though SBs have prolonged the historical missions of cooperative and savings banks and made more explicit their social missions, today's cooperative banks do not automatically qualify as SBs. This distinction does not preclude cooperative banks in their pursuance of mutual interest from generating positive externalities by stabilizing the financial sector (Hesse & Čihák, 2007), smoothing monetary policy contractions (Ferri et al., 2014), and contributing to reducing inequalities (Brei et al., 2018; Minetti et al., 2020).

Despite their predominantly European roots, SBs have later developed in most regions of the world. The first US social bank, the *Shorebank* (formerly *South Shore Bank*), a community development bank, was founded in 1973 in Chicago, followed by the Wainwright Bank and Trust Cy in the 1980s (Benedikter, 2011). Yet, U.S. and European SBs are quite different. According to Benedikter (2011), two main differences between U.S. and European SBs which relate to the founding impulse and the meaning of being social. First, SBs in the US emerged mainly as local initiatives, while their European counterparts tend to have a general scope addressing broad societal issues. Second, U.S. prosocial institutions are typically associated with charities helping disadvantaged people. In Europe, “social” encompasses issues related to environment, technology, and culture, which concern large sections of the population.

Most SBs belong to at least one network identified as a professional association of SBs: FEBEA (*Fédération Européenne des Banques Ethiques et Alternatives*), INAISE (*International Association of Investors in the Social Economy*), and GABV (*Global Alliance for Banking on Values*). FEBEA² is a European non-profit organization, created in 2001 to develop and promote ethical finance principles. It was founded by six SBs: *Crédit Coopératif* (France), *Caisse Solidaire du Nord Pas-de-Calais* (France), *Crédal* (Belgium), *Hefboom* (Belgium), *Banca Etica* (Italy), and *TISE* (Poland). Nowadays, it gathers 33 financial institutions from 15 European countries. According to FEBEA’s website, the core values of social banking rely on five basic principles: 1) Money serves the common good; 2) Transparent use of money for the real economy; 3) Credit add value by supporting social economy and social entrepreneurship; 4) Avoid speculation and reinvest profits in line with social objectives. These principles imply that SBs should focus on funding cultural, social, and environmental projects.

INAISE³ is a global network of socially and environmentally oriented financial institutions. Created in 1989, INAISE grew rapidly as social finance gained importance in

² <https://febea.org/>

³ <http://inaise.org/en/>

visibility and volume of activity worldwide. It has currently 23 members active in 19 countries. INAISE promotes transparency, trust, equal and fair access to finance, quality of the services, sustainability, cooperation, democracy, local footprint. INAISE focuses on social investing, but only four of its members have a bank legal status (*BMS S.A.* in Mali, *Caisse d'Economie Solidaire Desjardins* in Canada, *Ecology Building Society* in the UK, and *Triodos Bank* in the Netherlands).

GABV⁴ was founded in 2009 by ten banks inspired by a common aspiration for a fairer financial system. Today, the organization is present in 40 countries. According to GABV (2020), 29% of its 63 members are based in Europe, 22% are active in North America, 22% are in Asia and the Pacific, 21% are in Latin America, and the remaining 6% are in Africa. The six guiding principles of GABV membership are: social, environmental, and sustainable impact; financing real economy; long-term relationships with clients; self-sustainability and resilience; transparent and inclusive governance; and embeddedness of these values in the culture of the bank.

Despite their historical background, SBs attracted public interest only since the 2007 financial crisis. The massive involvement of banks in suspicious operations on mortgage-backed securities and other obscure derivative products lead the public to realize there was a critical need to align the management of financial institutions with ethical principles. The crisis also showed that, in contrast to several conventional banks, which faced high losses and bankruptcy, SBs were insulated from the detrimental consequences of the crisis. In fact, the assets of European SBs increased by 20-25% per year on average during the 2006-2008 period (Benedikter, 2011). Between 2007 and 2012, the net income of SBs experienced an average 16% annual growth rate (Weber, 2013) and their asset quality improved significantly compared to large conventional banks (Mykhayliv and Zauner, 2018). This remarkably resilient growth

⁴ <https://www.gabv.org/>

during the crisis can be explained by clients of conventional banks realizing that the highly speculative operations of their banks were putting their own savings at risk. As a consequence, these savers shifted their assets toward SBs, which were accurately perceived as safer. Valls Martínez et al. (2020) observe a similar trend during the period that stretched from 2015 to 2018.

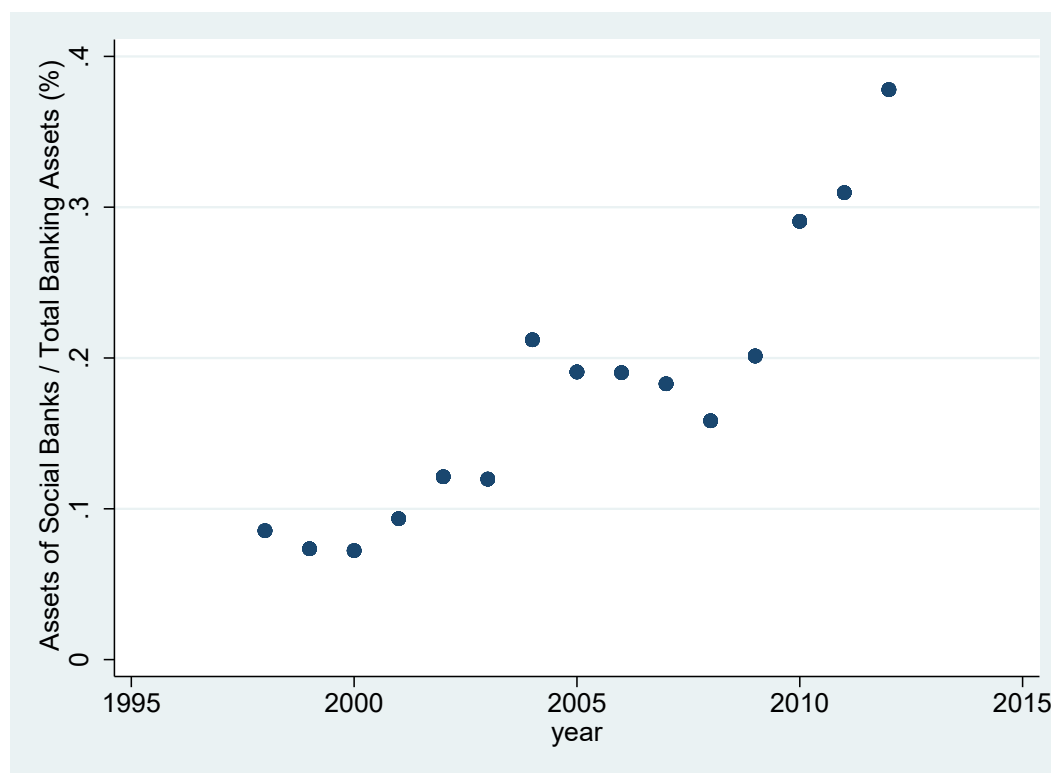
Table 1. Market Shares (%) of Social Banks in 1998 and 2012 in European Countries

Country	Social banks	Share in total banking assets (%)	
		1998	2012
Denmark	Andelskassen OIKOS, Folkesparekassen*, Merkur - Den Almennyttige Andelskasse*	0,015%	0,051%
France	Crédit Coopératif*, La Nef*	0,203%	0,224%
Germany	Bank für Sozialwirtschaft Aktiengesellschaft*, GLS Gemeinschaftsbank eG*, IntegraBank eG München*, Ökobank eG*, Steyler Bank GmbH, UmweltBank AG*	0,078%	0,192%
Italy	Banca Popolare Etica SPA*, Cassa Padana Banca di Credito*, Cassa Rurale di Bolzano Soc. Cooperativa*, Eticredito-Banca Etica Adriatica SpA	0,000%	0,111%
Malta	APS Bank Limited*	n/a	n/a
Netherlands	Algemene Spaarbank voor Nederland - ASN Bank NV, Triodos Bank NV*	0,591%	0,885%
Norway	Cultura Sparebank*	0,000%	0,013%
Spain	Caja Laboral Popular Coop. de Credito, Colonya, Caixa d'Estalvis de Pollença*	0,000%	1,175%
Sweden	Ekobanken medlemsbank*	0,000%	0,010%
Switzerland	Alternative Bank Schweiz ABS*, Freie Gemeinschaftsbank BCL*	0,023%	0,062%
UK	CAF Bank Ltd, Charity Bank Limited (The)*, Co-operative Bank Plc (The), Ecology Building Society (The)*, Reliance Bank Limited	0,062%	0,902%
Mean		0,097%	0,363%

To illustrate how instrumental the financial crisis was to the economic development of social banking, we build on the set of European SBs identified by Cornée et al. (2020). Table 1 and Figure 1 provide complementary perspectives on the impressive growth of SB market shares in Europe, the stronghold of social banking between 1998 and 2012. Table 1 compares national market shares of SBs in 1998 and 2012. Figure 1 shows the global evolution of yearly market shares averaged across countries. The figure shows that SBs experienced a remarkable

growth pace over the 1998-2012 period, as their market share was multiplied by four (from 0.10% to 0.40%). Despite their growing popularity, SBs are still small players in the financial landscape.

Figure 1. Market Share (%) of Social Banks in Europe



Recent professional accounts corroborate the successful evolution of SBs beyond the borders of Europe. GABV reports that, over the 2010-2019 period, the average SB annual asset growth rate was 15.2%, to be compared to 2.7% for global systemic banks (GABV, 2020). Recent work suggests that the upwards trend is there to stay. For Germany, Krause and Battenfeld (2019) view the potential market size of SBs between 10% and 26% of adult population, while Mykhayliv and Zauner's (2018) estimation of 15.2 million potential customers sits closer to the lower bound of the interval.

3. Empirical Studies on Social Banks

Identifying SBs is a challenging task (San-Jose et al., 2011; Karl, 2015; Cornée et al., 2020). By design, SBs differ from conventional banks by promoting social objectives in lending, but

there is also significant heterogeneity among SBs. Social banks are identifiable from conventional banks in several dimensions, among which: A specific target clientele, alternative risk management techniques adapted to addressing the challenges raised by the special asymmetric information stemming from this clientele, transparent information and simple intermediation, and stakeholder participation in decision making. The remaining of this section will address these dimensions through the lens of empirical evidence. The purpose is to assess the practical consequences for banking activity of committing to social values.

3.1. Target Clientele

Asset side: Borrowers. The financial transactions of SBs focus on funding the real economy rather than trading in speculative markets (Cornée et al., 2016). SBs provide services to social enterprises (Defourny, 2014), non-profit organizations, and community-oriented projects to boost local development (Périlleux, 2015). These endeavors are evidently less profitable than their for-profit counterparts. Although social enterprises sometimes make profits, their main goal is not profit maximization (Besley and Ghatak, 2017). Social enterprises typically promote financial inclusion of disadvantaged people, women's empowerment, fair trade, clean energies and recycling, community services, and so on (Di Domenico et al., 2010). Yet they can vary substantially (Borzaga and Defourny, 2001). According to Defourny and Nyssens (2008; 2010), social enterprises are defined by the combination of entrepreneurial nature and social orientation. Due to these characteristics, social enterprises find it difficult to attract funding from conventional banks, and therefore seek preferably financing from prosocial funders, such as social banks.

Conventional banks are ill-adapted to funding prosocial entities, which are typically both less remunerative and more informationally opaque than projects undertaken by for-profit firms, thereby leading to severe credit rationing for projects undertaken by social economy actors. This hypothetical mismatch offers a rationale for SBs. By studying Banca Etica, a large

SB operating in Italy, with more than half of its borrowers being not-for-profit entities, Becchetti et al. (2011) provide evidence corroborating the hypothesis. They show that roughly 20% of the loans granted by Banca Etica are subject to rationing (i.e., the amount disbursed is lower than the amount requested by the borrower), while loans are denied to 15% of the applicants. This denial rate is low compared to that of conventional banks (Minetti and Zhu, 2011), confirming that SBs facilitate access to credit for borrowers otherwise redlined or rationed.

SBs also seek to alleviate indirect forms of credit rationing. In this respect, low collateralization is claimed to be a distinctive feature of social banking. While mainstream banks generally require collateral from the vast majority of their small-business borrowers, Becchetti and Garcia (2011) report that *Banca Etica* has 42 percent of uncollateralized loans. The requested collateralization depends positively on *ex ante* risk, and negatively on the existing relationship with the borrowers. The authors also show that the SB counterbalances low collateral requirements by maintaining close connections with umbrella organizations of social enterprises. Likewise, most microfinance institutions require no formal collateral from their borrowers. Instead, they rely on social collateralization, a mechanism particularly relevant for group lending (Postelnicu et al., 2014).

Liability side: Depositors and Users of other Banking Services. Krause and Battenfeld (2019) provide novel evidence on the pool of potential users of the services proposed by social banks. Based on a survey with German respondents who are customers of either SBs or conventional banks, their results show that the two groups differ significantly in gender, age, and education. Male customers are more likely associated with SBs than female ones. The authors suggest that this could have to do with the fact that social banking is in an early stage of development. Moreover, SB customers tend to be younger, more urban, with higher education, but there is no significant difference in income levels. The authors argue that the socioeconomic profile of

customers is linked to greater awareness and understanding of social and ecological issues. As opposed to clients of conventional banks, the clients of SBs are also logically more motivated by social returns than by financial returns. This is in line with Bauer and Smeets's (2015) study documenting that investors with stronger social identification toward their bank—typically highly educated, young, and low-wealth individuals—allocate substantially more of their wealth to this bank. These strong-identifying investors expect low returns from their investment.

3.2. Matching the Two Sides: Overcoming Information Asymmetry

Akin to conventional banks, the credit activity of SBs can be confronted to severe information asymmetries (Diamond, 1984; Bhattacharya and Thakor, 1993). Typical devices for addressing these obstacles include screening, selection, and monitoring mechanisms. The social mission of SBs entails two distinct informational issues: 1) assessing the creditworthiness of loan applicants that have relatively opaque and informal functioning based on unconventional economic objectives, and 2) gauging the social commitment and feasibility of the projects to be funded.

Assessing creditworthiness. SBs deal with a specific pool of borrowers whose creditworthiness is uneasy to assess. Like small and medium enterprises (SMEs), which are known to be opaque (Berger and Udell, 2002), social enterprises are difficult to assess with standard, quantitative lending technologies (Farber and Reichert, 2021). The issue is even more acute for social enterprises than for standard SMEs. The financial sustainability of prosocial entities depends on features that are hard to quantify, such as relational capital, acquisition of nonmarket resources, and social value creation (Cornée, 2014). Two factors may further magnify informational opacity. First, social enterprises are often innovative businesses, preventing lenders from using past experience to reduce the informational gap. Second, social enterprises

operate on a small scale and anchor their activities in local communities, thereby adding complexity to disclosing business facts.

To tackle these informational problems, SBs typically resort to relational approaches. Relationship lending (Cornée et al., 2012) is regarded as a powerful technology against information asymmetry, particularly when it comes to adverse selection. Equipped with their relational methods, SBs serve borrowers otherwise excluded or severely rationed by the mainstream banking market due to their informational opacity. This unique know-how of social banks helps fill the market gap and alleviate credit rationing (Stiglitz and Weiss, 1981).

The lending technology of SBs is built on collecting both quantitative and qualitative information. In conventional credit market, the use of quantitative (hard), financial and standardized information has increased at the expense of qualitative (soft) information (e.g., the skills of the entrepreneur, the company's governance, the quality of the project to be financed, etc.). The banking sector has been fully engaged in the information revolution for several decades by developing increasingly complex information systems (Artis and Cornée, 2016). In contrast, SBs gather soft information on opaque credit applicants at the selection stage. They can appraise the creditworthiness of their loan applicants with great accuracy and make well-informed credit decisions. There is surprisingly little academic interest in the beneficial aspects of soft information in creditworthiness assessment. Based on proprietary data retrieved from a French SB, Cornée (2019) shows however that soft—in addition to hard—information increases accuracy of credit default models. For small social enterprises, soft information tends to be even more valuable than hard information. The lending technology based on relationship lending and soft information models relies on the skills of loan officers and underlines the importance of staff retention (Artis and Cornée, 2016; Doering and Wry, 2022; Godfroid et al., 2022).

Still collecting soft information can be tedious and costly. The cost-benefit analysis of Cornée (2019) weighs the pros and cons of using soft information by opposing the cost reduction gained from improved predictive accuracy of defaults to the increase in labor costs. The results suggest that the former effect dominates the latter, thus indicating that collecting soft information is likely valuable. Interestingly, the outcome is larger for firms in a credit relationship with the bank, which eases the collection of soft information and increases its predictive value.

Social Screening. SBs are accountable to their socially minded funders and must show the pro-social accomplishments of the capital they allocate. Hence, in addition to conducting creditworthiness assessments, SBs are bound to assess the social dimension of projects submitted for funding, and often develop social scores in addition to credit evaluation. In sum, SBs spend resources to screen loan applicants on both a financial basis *and* a social basis.

Social credit scoring is bank specific, which explains why credit granting by SBs is often considered a black box. To open the box, Cornée and Szafarz (2014) exploit a hand-collected dataset on the business loans granted by a French social bank, *La Nef*. Each borrower in their sample was graded on both a social scale and a financial scale. In contrast to the financial rating, the social rating, interpreted as a proxy for the proximity between the applicant's and the bank's social identities, is not determined according to strict rules.

To assess the cost of extra workload devoted to social screening, Cornée et al. (2018) use balance-sheet information from European banks. Their results suggest that the operating costs of SBs are not significantly higher than those of their mainstream counterparts, meaning that the extra costs of dual screening might be offset by a cheaper workforce from intrinsically motivated staff, accepting lower wages in exchange for working in a social enterprise. If so, despite labor intensive dual screening stemming from their mission, SBs manage to avoid

excessive costs. Mykhayliv and Zauner (2018) compare the performance of SBs with that of “big banks” and confirm that SBs have lower operating costs than their non-social counterparts.

3.3 *Transparency and Simple Intermediation*

Informational asymmetries go beyond the relationship between a bank and its clients. They also plague the relationship between the bank and its funders, shareholders, and depositors. In social banking, the double bottom line makes it even more demanding to consolidate trust between stakeholders. Empirical evidence shows that SBs operate more transparently than other banks. They carry out fewer speculative and obscure transactions than their purely for-profit counterparts. They also favor direct intermediation by focusing on simple savings and loan products (Mykhayliv and Zauner, 2018). This strategy translates into a higher share of interest income in the total bank’s income combined with a higher deposit-to-asset ratio and a lower loan-to-asset ratio, highlighting excess liquidity (Cornée et al., 2016). The difficulty SBs face in transforming deposits into credits could be due to their stringent selectivity reducing lending opportunities. High selectivity leads to the paradoxical situation in which social screening can undermine direct intermediation and transparency. Still, SBs manage excess liquidity prudently relying on simple financial transactions.

Overall, despite being confronted to losses like other banks, SBs are immune to the impact of toxic assets. San-Jose et al. (2011) confirm that European SBs are more transparent to their stakeholders than other banks, and that they preferably use simple intermediation. Most SBs release exhaustive lists of the businesses and individuals they support and disclose the loan characteristics, such as amount and duration, as well as the aim of the funded projects. The websites and annual reports of SBs inform about their asset management. In sum, the empirical literature confirms that SBs adhere to the values and principles promoted by their associations, namely: transparency, trust, and no speculative operations.

3.4. Stakeholder Involvement

SBs tend to adopt specific ownership and governance structures while allowing for some diversity in legal statuses: They can be either stakeholder banks or shareholder banks. The most common status of SB stakeholder ownership is cooperative bank, which naturally limits owners' residual claims (Kalmi, 2014). For SBs, having a cooperative status facilitates aligning the interests of the managers with the bank's social mission (Kitson, 1996). Cooperatives also tend to adopt low-risk investment strategies (Hesse and Čihák, 2006).

However, not all SBs are governed by stakeholder ownership. In Cornée et al.'s (2020) sample, 39% of the SBs have a shareholder-owned status associated with specific limitations. For example, shareholders' voting rights at Alternative Bank Schweiz (ABS, Switzerland) and Triodos Bank (The Netherlands and Belgium) are capped. Each ABS shareholder must remain below the 3-percent voting right threshold. Triodos Bank's shares are held in trust by an ad-hoc foundation, whose board is appointed by depository receipt holders with limited voting rights. Both stakeholder ownership and shareholder ownership structure with self-regulatory arrangements help SBs fulfill the same objective of restricting profit distribution and curbing the power of dominant capital holders. This limitation of ownership claims is instrumental to obviate breaches in the moral contracts between a SB and its stakeholders. For instance, the goodwill of depositors toward the SB could depreciate if they are suspicious about their donations or sacrifices being pocketed by capital holders. Likewise, employees may refrain from accepting below-market wages if they fear that their benevolent efforts serve capital holders' interests.

4. Theorizing the Business Model of Social Banks

The expression "business model" is frequently employed loosely to designate anything that has to do with the functioning of a sector. In contrast, there is an academic consensus on characterizing the so-called "business model" in terms of value creation (Yip and Bocken,

2018). To do so, Osterwalder and Pigneur (2010) use an extensive framework based on nine building blocks: key partners, key resources, key activities, value propositions, customer relationships, customer segments, channels, revenue streams and cost structure. Accordingly, we structure this section in three parts dealing with: the supply side focusing on the key partners and resources of SBs; the demand side addressing the key activities, value propositions, customer relationships and segments served by SBs, and finally the global perspective linking the supply and the demand sides and addressing the channels, revenue streams and cost structure of SBs.

4.1. Supply Side: Socially Minded Funders

Most funders of SBs are convinced that doing good does not come for free. In other words, financing social projects requires waiving at least some capital returns. This fact can be theorized, and subsequently tested, for two separate groups of funders: depositors and owners.

The financial sacrifice of SB depositors can be measured by the “social premium” computed as the spread between the interest rate they receive from the SB and the market interest rate obtained from for a similar savings opportunity. Becchetti and Garcia (2011) estimate that the annual social premium conveyed by *Banca Etica* was around 150 basis-points (or 1.5%) in 2007. A panel analysis conducted by Cornée et al. (2020) on 5,400 European banks over the 1998-2013 period confirms the existence of a significant social premium. The recent macroeconomic situation, characterized by negative market rates, is particularly detrimental to the banks largely funded by deposits (Basten & Mariathasan, 2018; Eggertsson et al., 2019). In this context, two SBs, namely *Alternative Swiss Bank* and *Triodos*, were among pioneers in imposing explicitly negative deposit rates.

Regarding owners, SBs, usually implement ownership structures that strongly restricts residual claimants’ rights. This governance design can be understood as a credible commitment device toward depositors who accept to receive below-market interest rates. Since financial

intermediation is plagued by asymmetric information, SBs need to convince their depositors that their sacrifice is not just another way to increase owners' profits. Empirical evidence indicates that SBs abide by the principles of reduced ownership rights and limited profit distribution. In this regard, San-Jose et al. (2011, p. 152) report that "*the dimension of obtaining benefit refers to good bank management, because ethical banks do not generally distribute benefits between shareholders and, if at all they do so, the distribution is very limited, and profit is, therefore, only residual.*" Using return on assets as a measure of owners' remuneration, Cornée et al. (2020) confirm this statement. Their estimation associate SBs with a sizeable 20 basis-points deduction in return on assets with respect to a global average of 0.50%.

The financial sacrifice of prosocial investors and depositors is rationalized by their intrinsic motivation. Experimental evidence on reciprocal behavior consistently shows that a large proportion of individuals exhibit social preferences: They care not only for their self-interest, but also for the well-being of others (Gintis et al., 2004). Reciprocity typically arises when individuals are prone to sacrifice their own resources to encourage positive action or punish negative action (Fehr and Gächter, 2000).

Reciprocal motivations are boosted by social identification, that is by a person's sense of self derived from perceived membership to a social group (Akerlof and Kranton, 2005). In social banking, the social premium is likely to be greater when the investor self-identifies with the ethical values promoted by the bank. Riedl and Smeets (2017) elucidates the behavioral micro-foundations of social investment thanks to a unique data set that links administrative data of conventional and social investors to their behavior in controlled experiments and to their answers in a comprehensive survey. The authors find that the intrinsic social preferences revealed through a trust game conducted in lab⁵ are correlated with real-life social investments.

⁵ The authors use a variant of the trust game coined by Berg et al. (1995). The two players are endowed with EUR 50. The first mover (the sender) decides on an amount between EUR 0 and 50 to send to the second mover. The amount sent is tripled by the experimenter, and the second mover (the receiver) decides how much of the money he/she returns to the sender. Hence, the sender's earnings are EUR 50 minus the amount sent back plus the amount

Compared to conventional investors, social investors have also a higher propensity to donate to charities, suggesting that social investment is not a substitute for charity donations.

In sum, the social contribution of SBs to the common good is unambiguously conditional on investors making financial sacrifices, enabling access to capital at lower cost.

4.2. *Demand Side: Prosocial Borrowers*

Thanks to their access to cheaper funding capital, SBs channel the financial sacrifices of their funders to the lending side of the balance sheet by offering preferential credit conditions to their borrowers. Cornée et al. (2020) show that the average interest rates charged to borrowers in social banks is significantly lower than in conventional banks for same-risk loans. At the micro level, Cornée and Szafarz (2014) find that, all else equal, borrowers with a higher social rating receive loans with lower interest rates and have a lower probability of default. Becchetti et al. (2011) highlight that the fraction of nonperforming loans of SBs is low when compared to that of the conventional banking sector.

Like for funders, reciprocity and social identification help rationalize the lender-borrower interactions in social banking (Périlleux, 2015). In this case, reciprocity can be theorized as either unconditional or conditional (Cornée et al., 2021). In the theoretical setting proposed by Barigozzi and Tedeschi (2015; 2019), reciprocity is unconditional and simply derives from the nature of SBs. Under unconditional reciprocity, prosocial borrowers perceive an added stream of utility for being granted a loan by a SB, and spontaneously reduce their probability of (strategic) default. In contrast, under conditional reciprocity, the borrowers need a (costly) signal sent by the lender to experience reciprocity. In both cases, the reciprocal borrower will exert more effort to repay the loan (Fehr and Zehnder, 2006; Brown and Zehnder, 2007).

returned by the receiver. The receiver's earnings are EUR 50 plus the triple of the amount received from the sender minus the money sent back. The authors use the second mover's behavior as a measure of intrinsic social preferences.

Cornée et al. (2012) provide experimental evidence showing that social bankers charge fairer rates than commercial bankers, thereby reducing the borrowers' propensity to shirk by choosing risky investment projects. Value-sharing between lenders and borrowers is deemed to further strengthen conditional reciprocity. The asymmetric-information model developed by Cornée and Szafarz (2014) encapsulates this view. The SB performs a costly screening to detect the extent to which credit applicants share its social values and adjust its interest rate accordingly. In return, motivated borrowers who realize they benefit from a rebate in interest rate granted by the SB (because of their values) reciprocate, thereby reducing moral hazard and credit defaults.⁶

4.3. *A Global Perspective on Social Banking*

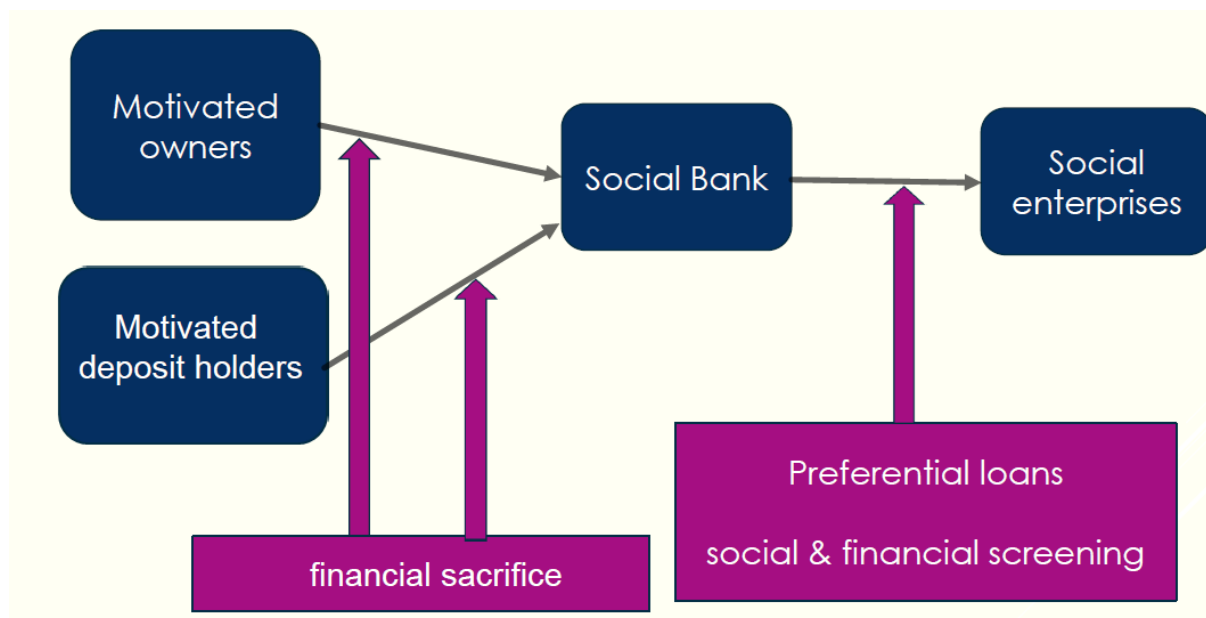
Ultimately, SBs appear as financial institutions bridging the gap between social funders and motivated borrowers. By matching the two sides of impact-based financial intermediation, they promote social values and serve the common good (Cornée et al., 2021). Figure 2 sketches the global picture in which SBs are funded by motivated owners and deposit holders who accept to make a financial sacrifice and provide preferential loans at low interest rates to social enterprises. In brief, they pass their funders' financial sacrifice on to carefully screened borrowers.

Most social SBs charge near-zero interest rates while the least social SBs charge just-below-market rates. Consequently, the leeway of SBs may be represented by an interest rate segment that is circumscribed by a lower limit of zero and an upper limit of the market interest rate. They use social and financial screenings to select their borrowers. The business model

⁶ Evidence indicates that any non-financial factor increasing borrower creditworthiness is favorable to risk management (Weber et al., 2010). Chava (2014) also suggests that firms generating less negative environmental externalities benefit from cheaper capital.

presented in Figure 2 is in line with Cornée et al. (2020) suggesting a two-pillar business model of value-based financial intermediation.

Figure 2: Social Banking



5. Conclusion

This chapter started by listing the principles and values claimed by SBs. Next it moved to checking how these principles are put into practice. Last, it discussed how social banking is theorized in the academic literature. Overall, there is good news: SBs do walk the talk. The claimed missions of social banking materialize as actual deeds. SBs finance the real economy, they assess the ethicality of loan applicants, they are transparent on their activities, and they refrain from complex, potentially speculative financial operations.

Our literature survey rationalizes the role played by SBs in the global financial landscape with an integrated representation of social banking as value-based financial intermediation addressing a gap in the credit market. Investors that fund SBs, be they capital-holders or depositors, assent to trade values for financial remuneration. The social premium

they grant is fundamental for SBs to accomplish their very mission, which consists in carefully selecting social projects and providing them with capital at below-market interest rates. If SBs did not exist, many social projects would remain denied or severely credit rationed.

Being a unique niche, social banking offers an attractive alternative to the big-bank model harshly criticized during the last financial crisis. The remarkable achievement of SBs provides additional proof that grassroots economic initiatives are welcome and can be sustainable, even without financial support from public authorities. From a historical perspective, social banking corresponds to the new generation of financial actors seeking to strike a balance between community/social goals and financial constraints (i.e., breaking even or achieving a modest surplus) in the footsteps of Monti di Pietà, savings banks, and credit cooperatives.

At the institutional level, however, these flourishing alternative banks could benefit from an adapted regulatory framework (Serres, 2019). The current framework poorly fits social banking mainly because the Basel accords force banks to use lending technologies based on hard information, which are at odds with the relational soft-information approach central in financing social economy enterprises (Ferri and Neuberger, 2015; Rajan et al., 2010). In addition, the transition from the originate-to-hold model, in which banks keep the loans they grant in their own balance sheet, to the originate-to-distribute model, whereby loans are sold in structured financial markets, contributes to releasing complex products, such as securitized loans and other financial derivatives (Diamond and Rajan, 2009).⁷ Developing such products collide with the core principles of simple intermediation and transparency advocated by SBs.

Some segments of social banking, such as microcredit activities benefit however from a specific regulatory framework that recognizes their prosocial specifics. Regulators in most

⁷ In the last two decades and mostly in the US, financial intermediation largely adopted the originate-to-distribute model. Nevertheless, the potentially complex consequences of originate-to-distribute operations in terms of information and incentives are mainly ignored by the current Basel supervisory framework (Ferri and Neuberger, 2015).

industrialized countries carefully monitor the activities of microcredit institutions, probably because these institutions receive significant subsidies from national and supranational public authorities and their activities belong to social finance (Morduch and Ogden, 2019; Cozarenco et al., 2022). Key regulatory rules impose ceilings on interest rates and loan sizes (see Cozarenco and Szafarz, 2019, for a detailed lists of obligatory and recommended ceilings in place in North America and Europe). While interest rate caps have long been in use as protection against loan sharks (Caballero-Montes et al., 2021), loan ceilings are less common and they can have unexpected perverse effects, such as encouraging small enterprises that can afford it to combine loans from conventional banks and microcredit institutions, while leaving others with harsher access to credit (Cozarenco and Szafarz, 2020).

In terms of market weight, SBs represent the bulk of social finance organizations. Yet there exists a broad spectrum of actors participating in non-banking social finance. These alternative vehicles of social finance encompass crowdfunding platforms and a myriad of local community-based financial initiatives, which mostly remain below the radar (Gafni et al., 2021). These initiatives can take the form of informal/local savings groups and associations promoting complementary currencies (Meyer and Hudon, 2017). SBs are distinguished by their legal banking structure and the financial and operational constraints attached to it. Meanwhile, this legal framework has also the advantage of allowing SBs operate at much large scale as a full-fledge financial intermediary. But the question as to which is the global financial structure that would best serve social endeavors, and ultimately the common good, is still open.

References:

- Akerlof, G.A., and R.E. Kranton, (2005). Identity and the economics of organizations. *Journal of Economic Perspectives*, 19(1), 9-32.
- Artis, A., and S. Cornée (2016). Composition, interprétation et mémorisation du savoir idiosyncrasique dans la banque solidaire. *Systemes d'Information Management*, 21(3), 93-131.
- Angelini, P., R. Di Salvo, R., and G. Ferri (1998). Availability and cost of credit for small businesses: Customer relationships and credit cooperatives. *Journal of Banking & Finance*, 22(6-8), 925-954.
- Barigozzi, F., and Tedeschi, P. (2015). Credit markets with ethical banks and motivated borrowers. *Review of Finance*, 19(3), 1281–1313.
- Barigozzi, F., and Tedeschi, P. (2019). On the Credibility of Ethical Banking. *Journal of Economic Behavior & Organization*, 166, 381–402.
- Bauer, R., & Smeets, P. (2015). Social identification and investment decisions. *Journal of Economic Behavior & Organization*, 117, 121-134.
- Becchetti, L., M. Garcia, and Trovato, G. (2011). Credit rationing and credit view: Empirical evidence from loan data. *Journal of Money, Credit and Banking*, 43(6), 1217–1245.
- Benedikter, R. (2011). *Social Banking and Social Finance*, Springer: New York.
- Berger, A.N., and Udell, G.F. (2002). Small business credit availability and relationship lending: The importance of bank organizational structure. *Economic Journal*, 112(477), F32-F53.
- Besley, T., and Ghatak, M. (2017). Profit with purpose? A theory of social enterprise. *American Economic Journal: Economic Policy*, 9(3), 19-58.
- Bhattacharya, S., and Thakor, A.V. (1993). Contemporary banking theory. *Journal of Financial Intermediation*, 3(1), 2-50.
- Borzaga, C., and Defourny, J. (Eds.) (2001). *The Emergence of Social Enterprise*. London – New York: Routledge.
- Brei, M., G. Ferri, and L. Gambacorta (2018), “Finance structure and income inequality,” BIS Working Paper No 76.
- Brown, M., and C. Zehnder (2007). Credit reporting, relationship banking, and loan repayment. *Journal of Money, Credit & Banking*, 39(8), 1883-1918.
- Caballero-Montes, T., C. Godfroid, and M. Labie, M. (2021). Are interest rate caps a relevant tool to cool down overheating microfinance markets? *Strategic Change*, 30(4), 319-330.
- Chava, S. (2014). Environmental externalities and cost of capital. *Management Science*, 60, 9, 2223-2247.

- Cornée, S. (2014). Soft information and default prediction in cooperative and social banks. *Journal of Entrepreneurial and Organizational Diversity*, 3(1), 89-109.
- Cornée, S. (2019). The relevance of soft information for predicting small business credit default: Evidence from a social bank. *Journal of Small Business Management*, 57(3), 699-719.
- Cornée, S., L. Fattobene, and M. Migliorelli (2018), “An overview of cooperative banking in Europe,” in: Migliorelli, M. (Eds.), *New Cooperative Banking in Europe. Strategies for Adapting the Business Model Post Crisis*, Springer, pp. 1–27.
- Cornée, S., M. Jegers, M., and A. Szafarz (2021). Feasible institutions of social finance: A taxonomy. CEBRIG Working Paper N°21-001.
- Cornée, S., P. Kalmi, and A. Szafarz (2018). How costly is social screening? Evidence from the banking industry. *Economics Bulletin*, 38(1), 532-540.
- Cornée, S., P. Kalmi, and A. Szafarz (2016). Selectivity and transparency in social banking: Evidence from Europe. *Journal of Economic Issues*, 50(2), 494–502.
- Cornée, S., P. Kalmi, and A. Szafarz (2020). The business model of social banks. *Kyklos*, 73(2), 196–226.
- Cornée, S., D. Masclet, and G. Thenet (2012). Credit relationships: Evidence from experiments with real bankers. *Journal of Money, Credit and Banking*, 44(5), 957–980.
- Cornée, S., and A. Szafarz (2014). Vive la Différence: Social banks and reciprocity in the credit market. *Journal of Business Ethics*, 125(3), 361–380.
- Cozarenco, A., V. Hartarska, and A. Szafarz (2022), Subsidies to microfinance institutions: How do they affect cost efficiency and mission drift? *Applied Economics*, forthcoming.
- Cozarenco, A. and A. Szafarz (2019), Microfinance in the North: Where do we stand? in Hudon, M., M. Labie, and A. Szafarz (Eds.) *Research Agenda for Financial Inclusion and Microfinance*, Cheltenham: Edward Elgar Publishing, 125-137.
- Cozarenco, A. and A. Szafarz (2020). The regulation of prosocial lending: Are loan ceilings effective? *Journal of Banking & Finance*, 121, 105979.
- Defourny, J. (2014). From third sector to social enterprise: A European research trajectory. In Defourny, J., Hulgård, L., and Pestoff, V. (Eds.), *Social Enterprise and the Third Sector*, London: Routledge, pp. 33-57.
- Defourny, J., and Nyssens, M. (2010). Conceptions of social enterprise and social entrepreneurship in Europe and the United States: Convergences and divergences. *Journal of Social Entrepreneurship*, 1(1), 32-53.
- Defourny, J., and Nyssens, M. (2008). Social enterprise in Europe: Recent trends and developments. *Social Enterprise Journal*, 4(3), 202-228.

D'Espallier, B., J. Goedecke, M. Hudon, M., and R. Mersland (2017). From NGOs to banks: Does institutional transformation alter the business model of microfinance institutions? *World Development*, 89, 19-33.

D'Espallier, B., M. Hudon, M., and A. Szafarz (2013). Unsubsidized microfinance institutions. *Economics letters*, 120(2), 174-176.

Diamond, D.W. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies*, 51(3), 393-414.

Diamond, D.W. and R.G. Rajan. (2009). The credit crisis: Conjectures about causes and remedies. *American Economic Review*, 99(2), 606-10.

Di Domenico, M., H. Haugh, and P. Tracey (2010). Social bricolage: Theorizing social value creation in social enterprises. *Entrepreneurship Theory and Practice*, 34(4), 681-703.

Doering, L and T. Wry (2022), The challenges of supporting necessity entrepreneurs: Understanding loan officer exit in microfinance. *Journal of Business Venturing*, 37(2), 106189,

Fehr, E., and K. Schmidt (2003). Theories of fairness and reciprocity—evidence and economic applications. In M. Dewatripont, Hansen, L., and Turnovsky, S. (Eds.), *Advances in Economics and Econometrics—8th World Congress*, Econometric Society Monographs. Cambridge: Cambridge University Press.

Fehr, E., and C. Zehnder (2005). Reputation and credit market formation. FINRISK Working Paper, University of Zurich.

GABV (2020). Annual report. Retrieved on January 4th, 2022, <https://www.gabv.org/wp-content/uploads/2021/12/Annual-Report-2019-EN.pdf>

Farber, V. A., and P. Reichert (2021). Market infrastructure for social ventures. In Lehner, O.M. (Ed.) *A Research Agenda for Social Finance*. Edward Elgar Publishing, pp. 79-98.

Ferri, G., P. Kalmi, and E. Kerola (2014), “Does Bank Ownership Affect Lending Behavior? Evidence from the Euro Area,” *Journal of Banking & Finance*, 48, 194–209.

Ferri, G. and D. Neuberger (2015). The banking regulatory bubble and how to get out of it. In: Calciano, F., F. Fiordelisi, and G. Scarano (Eds.). *The Restructuring of Banks and Financial Systems in the Euro Area and the Financing of SMEs*. London: Palgrave Macmillan, pp. 31–61.

Gafni, H., M. Hudon, and A. Périlleux (2021). Business or basic needs? The impact of loan purpose on social crowdfunding platforms. *Journal of Business Ethics*, 173(4), 777-793.

Godfroid, C., N. Otit, and R. Mersland (2022). Employee tenure and staff performance: The case of a social enterprise. *Journal of Business Research*, 139, 457-467.

Gui, B. (1991), The economic rationale for the ‘third sector’. *Annals of Public and Cooperative Economics*, 62(4): 551–572.

Guinnane, T.W. (1997), Regional Organizations in the German Cooperative Banking System in the Late 19th Century. *Research in Economics*, 51(3), 251–274.

Guinnane, T.W. (2001), Cooperatives as information machines: German rural credit cooperatives, 1883–1914. *Journal of Economic History*, 61(2), 366–389.

Guinnane, T.W. (2003), A ‘friend and advisor’: external auditing and confidence in Germany's credit cooperatives, 1889-1914. *Business History Review*, 77(2), 235–264.

Hesse, H., and M. Čihák (2007). Cooperative banks and financial stability. *IMF Working Papers 07/02*, Washington: International Monetary Fund.

Iannotta, G., G. Nocera, and A. Sironi (2007). Ownership structure, risk and performance in the European banking industry. *Journal of Banking & Finance*, 31(7), 2127-2149.

Karl, M.A. (2015). Are ethical and social banks less risky? Evidence from a new dataset. Working Paper 96, DIW Berlin and Institut für Wirtschaftsforschung Halle.

Kalmi, P. (2007). The disappearance of cooperatives from economics textbooks. *Cambridge Journal of Economics*, 31(4), 625-647.

Kalmi, P. (2014). Ethics, banking and ownership. *Bezpieczny Bank*, 2(55), 27-37.

Kerlin, J.A. (2006). Social enterprise in the United States and Europe: Understanding and learning from the differences. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 17(3), 246.

Kitson, A. (1996). Taking the pulse: Ethics and the British cooperative bank. *Journal of Business Ethics*, 15(9), 1021-1031.

Krause, K., and Battenfeld, D. (2019). Coming out of the niche? Social banking in Germany: an empirical analysis of consumer characteristics and market size. *Journal of Business Ethics*, 155(3), 889–911.

Mersland, R., S.A. Nyarko, and A. Szafarz (2019). Do social enterprises walk the talk? Assessing microfinance performances with mission statements. *Journal of Business Venturing Insights*, 11, e00117.

Meyer, C., and M. Hudon (2017). Alternative organizations in finance: Commoning in complementary currencies. *Organization*, 629-647.

Milano, R. (2011). Social banking: A brief history. In *Social Banks and the Future of Sustainable Finance*, edited by O. Weber and S. Remer. London: Routledge, 15-47

Minetti, R., P. Murro, and V. Peruzzi (2020), “Not all banks are equal. Cooperative banking and income inequality,” *Economic Inquiry*, forthcoming.

Minetti, R., and S.C. Zhu (2011). Credit constraints and firm export: Microeconomic evidence from Italy. *Journal of International Economics*, 83(2), 109-125.

Morduch, J., and T. Ogden (2019). The challenges of social investment through the lens of microfinance, in Hudon, M., M. Labie and A. Szafarz (Eds.) *A Research Agenda for Financial Inclusion and Microfinance*. Cheltenham, U.K.: Edward Elgar Publishing, pp.12–26.

Mykhayliv, D. and K.G. Zauner (2018). The financial and economic performance of social banks. *Applied Economics*, 50(34-35), 3833–3839.

Osterwalder, A. and Y. Pigneur (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. John Wiley & Sons, Hoboken, New Jersey.

Paulet, E., M. Parnaudeau, and F. Relano (2015). Banking with ethics: Strategic moves and structural changes of the banking industry in the aftermath of the subprime mortgage crisis. *Journal of Business Ethics*, 131(1), 199-207.

Périlleux, A. (2015). When social enterprises engage in finance: Agents of change in lending relationships, a Belgian typology. *Strategic Change*, 24(3), 285-300.

Périlleux, A. and M. Nyssens (2017). Understanding cooperative finance as a new common. *Annals of Public and Cooperative Economics*, 88(2), 155-177.

Périlleux, A., M. Hudon, and E. Bloy (2012). Surplus distribution in microfinance: Differences among cooperative, nonprofit, and shareholder forms of ownership. *Nonprofit and Voluntary Sector Quarterly*, 41(3), 386-404.

Postelnicu, L., N. Hermes, and A. Szafarz (2014). Defining social collateral in microfinance group lending. In Mersland R. and Strøm R.Ø. (eds) *Microfinance Institutions*, Palgrave Macmillan, London, pp. 187-207.

Rajan, U., A. Seru, and V. Vig (2010). Statistical default models and incentives. *American Economic Review*, 100(2), 506-10.

Riedl, A. and P. Smeets (2017). Why do investors hold socially responsible mutual funds? *Journal of Finance*, 72(6), 2505-2550.

Rizzi, F., C. Pellegrini, and M. Battaglia (2018). The structuring of social finance: Emerging approaches for supporting environmentally and socially impactful projects. *Journal of Cleaner Production*, 170, 805-817.

San-Jose, L., J.L Retolaza, and J. Gutierrez (2011). Are ethical banks different? A comparative analysis using the radical affinity index. *Journal of Business Ethics*, 100(1), 151–173.

Serres, C. (2019). Commons generating companies: What does it take to be one? *Academy of Management Proceedings*, 1, 14352.

Stiglitz, J.E. and A. Weiss (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3), 393-410.

Tchakoute-Tchuigoua, H. (2010) Is there a difference in performance by the legal status of microfinance institutions? *Quarterly Review of Economics and Finance*, 50(4), 436-442.

Valls Martínez, M.D.C., S. Cruz Rambaud, and I.M. Parra Oller (2020). Sustainable and conventional banking in Europe. *PloS one*, 15(2), 0229420.

Weber, O. (2013). Social banks and their profitability: Is social banking in line with business success. *Prospective Innovation at Ethical Banking and Finance*, 1(1), 1-19.

Weber, O., R.W. Scholz, and G. Michalik (2010). Incorporating sustainability criteria into credit risk management. *Business Strategy and the Environment*, 19(1), 39-50.

Weber, O. and S. Remer (2011). *Social Banks and the Future of Sustainable Finance*. Routledge.

Yip A.W.H. and N.M.P. Bocken (2018). Sustainable business model archetypes for the banking industry. *Journal of Cleaner Production*, 17, 150-169.