



**Current challenges for SMEs and regional banks  
in the European Union**

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## EXECUTIVE SUMMARY

*The European Union faces three major challenges: the imminent COVID-19 pandemic; the more fundamental climate crisis, and the longer-time fallout of the ECB's unconventional monetary policy. Households, enterprises, markets, and regions are hit in various ways and along different timelines. Their chances to counter and mitigate these multiple crises vary considerably.*

*SMEs, the core of the European economy, are particularly hit in the pandemic as they are disproportionately active in the most afflicted service sectors. Simultaneously, they are crucial in the fight against the climate crisis, where new ideas, technologies, business models are to be implemented in a decentralised, local way. To support this transformation process, they depend on vital local banks as their main financiers. Based on proximity, well-informed regional banks can provide lenders with better credit conditions and channel pandemic-related support programmes faster and in a more targeted way. However, regional banks are faced with the double burden of negative interest rates and increasingly burdensome regulations.*

*In our empirical analysis, we find a major contradiction between, on the one hand, significant heterogeneity in national and regional goods and financial markets and, on the other hand, supranational monetary and regulatory policies of the 'one-size-fits-all' kind. Grounded in institutional complementarities, the differences in national and regional social and economic structures have value in themselves and constitute the basis of comparative advantages. As long as financial and regulatory policies are implemented on a supranational level, diverse and unintended consequences in the individual EU Member States are likely to result, however.*

*For sustainable development, the principle of subsidiarity is called up, and diversity must be put to work to benefit all. For SMEs to overcome the pandemic-related travails, public support programmes must be adapted and retargeted. During the recovery period, tools have to be designed to fight the already evident follow-up problems of the crisis, namely large debt burdens, to avoid a financial backlash later. Improving SMEs financing conditions remains a major task. For regional banks, a return to positive interest rates and more differentiated regulations in such diverse fields as bank capital and the ESG taxonomy are of utmost importance.*

## Social Media summary

*This research shows that for a successful fight against the Covid-19 pandemic and the climate crisis, better working conditions for SMEs and local banks, their main funding partners, are indispensable.*

## Keywords

#SME, #local bank, #Covid-19, #Green Deal, #unconventional monetary policy



### Short bio

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## 1. Introduction

Economic policymaking in the EU is currently dominated by both the imminent and ongoing threats of the COVID-19 pandemic and the more fundamental yet more gradual challenges of climate change. At the same time, European firms and banks try to cope with the longer-time fallout of the ECB's unconventional monetary policy. Negative interest rates and massive asset purchase programmes are themselves consequences of the ECB's attempt to mitigate the damages from the Great Financial Crisis and the euro area sovereign debt and banking crisis.

As different as they are, these shocks evolve simultaneously. They hit households, enterprises, markets, and regions in various ways and along with different timelines. Also, the prospects to counter and mitigate these multiple crises vary considerably.

Concerning the COVID-19 pandemic, after many misconceptions and bad decisions, there are signs that policymakers have caught up with the unprecedented ramifications of the pandemic. At last, they seem to move "on top of the wave" (Gortsos & Ringe, 2021). Yet, many questions remain, e.g. concerning new variants of the coronavirus and the ongoing political, social and economic challenges of vaccinating and testing. While the economic recovery seems to proceed faster than during previous crisis-related recessions, the ultimate fallout of the crisis and the future course to a possibly "new" normal remains to be seen.

Concerning climate change, threatening to evolve in a climate crisis, policymakers are currently reformulating more ambitious decarbonisation goals – internationally, EU wide, and on the national and regional level. Concomitantly, an intensive "search for solutions" has begun. To mitigate the impending damages of climate change, the European Green Deal was set up to master the process of a climate-neutral EU by 2050. The NextGenerationEU programme is combining the challenges of the COVID-19 pandemic and climate change. It aims to repair the immediate economic and social damage brought about by the pandemic to build a Europe that "will be greener, more digital, more resilient and better fit for the current and forthcoming challenges" (European Commission, 2019)

The third challenge to European enterprises, the fallout from the ECB's unconventional monetary policy, might seem to be of lesser urgency as these policies could be easily reversed, at least on a technical level. The ECB implemented the unconventional monetary measures to fight the financial crises of 2008 to 2013. In the beginning, it was able to mitigate the short-term crisis effects and was thus part of the solution. Increasingly, however, it is becoming part of the problem as negative interest rates and enormous asset purchase programmes erode the equity base of financial institutions and compromise the funding of European firms, particularly small and medium-sized enterprises. With the COVID-19 pandemic, the ECB has moved even further away from normalising its policy. Instead, monetary policy has become even more expansionary and unconventional with a perspective on interest rates of "lower for longer".

These crises and the economic policy responses have profound repercussions for the European economy not only on the aggregate but also on the regional level. While some regions are relatively resilient and can meet the challenges to recover comparably swiftly, other areas are more fragile



and struggle to cope with these shocks. Behind this wide heterogeneity lay differences in the capabilities of local firms and their funding banks. As Europe's 25 million SMEs make up the core of the European economy, they are central in overcoming the ongoing crises and strengthening regional resilience. They are closely connected with their local communities, and their value-added plays an essential role in developing the local economies.

The COVID-19 pandemic particularly hits SMEs as they are disproportionately active in the most affected service sectors. At the same time, due to their considerable flexibility, they are crucial for a swift rebuilding of the EU after the recession when far-reaching reallocations are necessary. They are also exceptionally qualified to meet the new challenges of the imminent climate change. The EU's Green Deal calls for innovative ideas in production technologies and new business models to be implemented in a decentralised and local way. It seems most likely that SMEs are specially qualified to implement and benefit from this transformation process. As they are mainly located in rural areas, they are crucial for developing non-urban sites and securing Europe's diversity.

To fulfil all of these demands and generate economic advantages and stability and offer social benefits to their local communities, SMEs are in dire need of adequate finance. The crucial question thus is how SMEs can be funded in an economic environment that places local banks, their natural financing partners, at a disadvantage. The COVID-19 pandemic leaves SMEs disproportionately in bad economic health with subsequent losses and non-performing loans in regional banks' portfolios. More importantly, local banks' equity base and thus their lending capacity has been eroded on average over the last years by the unconventional monetary policy of the ECB. With the ECB's negative interest rate policy and the massive asset purchases, the net interest margin of local banks has been compressed. Due to their limited possibilities to diversify into other businesses, their profitability and thus their equity base is at risk.

In this situation, the centralised regulatory approach in the EU has put further pressure on local banks. This approach is motivated by the idea that national financial sectors in Europe converge to a single model of market-based finance, accompanied by a further concentration and thus increased market power of ever-growing banks. The great heterogeneity in the national banking systems in Europe is not accounted for under this perspective. The question then is how to secure adequate funding for SMEs.

In the subsequent chapter 2, we analyse the specific advantages and disadvantages of small, locally orientated banks and their comparative advantage in funding SMEs. Chapter 3 widens the perspective and examines the marked heterogeneity in Europe's national banking systems, particularly the competitive situation and profitability. Chapter 4 investigates the specific challenges of the ongoing COVID-19 pandemic. What progress have regional banks and their SME customers made fighting the pandemic related damages, and what challenges remain? Chapter 5 discusses how climate change and EU policies provide SMEs and regional banks with new opportunities and new challenges and obstacles. The ECB's unconventional monetary policy and its accompanying effects are analysed in Chapter 6. Chapter 7 examines how centralised monetary and regulatory policies conflict with the great diversity of Europe's national banking



sectors. Finally, chapter 8 draws first conclusions and identifies options for ensuring adequate finance for SMEs and thus furthering a balanced regional development in the European Union.



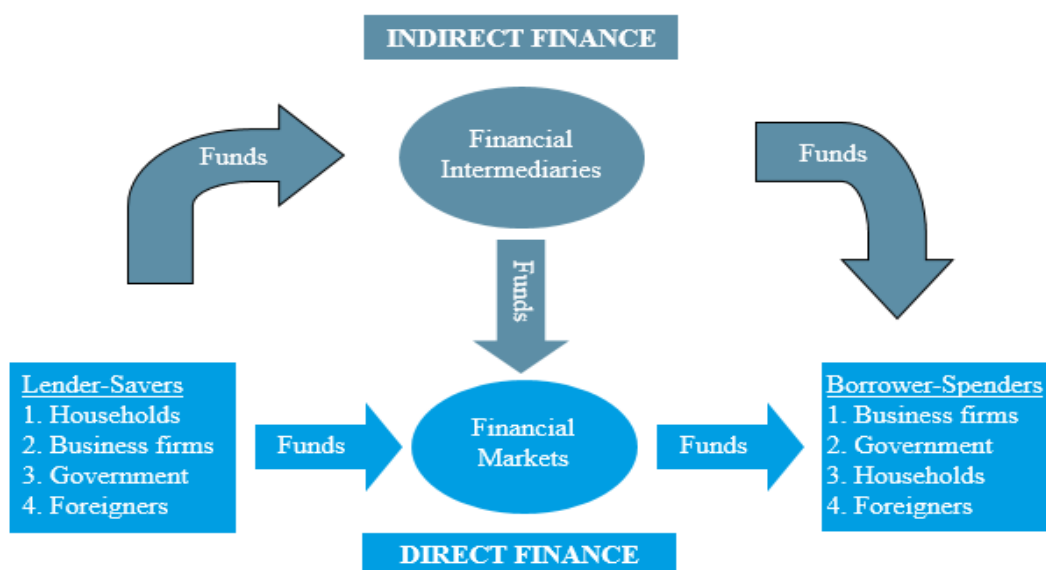
## 2. Regional banks' business model

### 2.1 Fundamentals

Concerning their financial needs, agents can be divided into two groups: those who spent less than their regular income and those who consume more than their current earnings. Via specific markets, the first category offers their savings to the latter group, which borrows these funds to finance their expenses (Gischer et al., 2020; Mishkin, 2018). In (perfect) market models, lender-savers interact with borrower-spenders, and the traditional Walrasian mechanism of supply and demand leads to a market-clearing equilibrium interest rate. Technically, efficient capital markets offer solutions to overcome the problems of static budget constraints and, therefore, build the foundations of intertemporal utility maximisation models.

The particular role of economic agents in capital markets systematically reflects their time preferences. A buyer of a corporate bond, for example, is voluntarily restricting his present consumption in favour of future expenses after the bond is refunded. The opposite holds for a borrower, e.g. the issuer of the corporate bond, who obviously prefers present expenditures and simultaneously limits his future income when repaying the initial liability. In contrast to spot markets, new issued financial capital is always traded via future contracts: the buyer acts first with his payment while the seller's duties, e.g. interest payments and final redemption, affect the future. Secondary spot markets, e.g. stock exchanges, improve premature liquidation of long-term financial investments but do not change the initial obligations of the borrower (see figure 2.1).

**Figure 2.1: Typology of financial systems**



Source: Mishkin (2018)



In contemporary industrialised economies, typical borrower-spenders are private enterprises, and private households represent typical lender-savers.<sup>1</sup> However, most commonly, these two parties do not collaborate directly. They need additional support from so-called monetary financial intermediaries (MFI), especially banks or similar credit institutions. Initially, MFIs accept deposits from private savers and, in reverse, provide loans to corporate borrowers. This stylised mechanism makes up for the most relevant items on a (regional) bank's balance sheet: loans to private borrowers on the asset side and deposits from private agents on the liability side.

## 2.2. Banks' economic functions and their sources of income

Indirect financial contracts offered by banks include a couple of simultaneous advantages that may improve the position of private depositors. Traditionally, at least three particular functions are assigned to banks (Wagner 1857):

- Risk transformation,
- Lot size transformation,
- Term transformation.

While direct investments like buying a bond are linked to a single asset with its particular yield or repayment risks, deposits at a private bank can be considered a purchase of participation in the MFI's loan portfolio. Hence, the depositor's risk is diversified to a more or less large number of different (and predominantly separated) bank claims. Therefore, the private saver's probability of default is lower than in the direct investment case. This applies explicitly to loan portfolios that are well-diversified regarding industries and regions as well as the legal structures of borrowers.

Lot size transformation builds on the ability of banks to bundle small-scaled deposits to grant larger sized loans. An appropriate mixture of single loan volumes is necessary to control successfully for liquidity and repayment risks and supports the intrinsic intentions of depositors, e.g. higher yield.

From a macroeconomic perspective, banks' economic functions on the asset side primarily focus on private customers without direct access to institutional financial markets, hence on small and medium-sized enterprises (SME) in particular. Regionally operating MFIs provide skilled staff familiar with their neighbourhood's social-economic problems and their respective infrastructure. Therefore, a region's positive and sustainable development depends on a well-functioning partnership between experienced real investors and their professional internal or external financiers on the other side. Lending to newcomers or start-ups, situations where responsible local banks are of the highest importance, may increase the region's industrial diversity in the long run.

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<sup>1</sup> Of course, different constellations may arise in practice (see figure 2.1), but on an aggregate basis this assumption fits quite well with most of EU Member States.

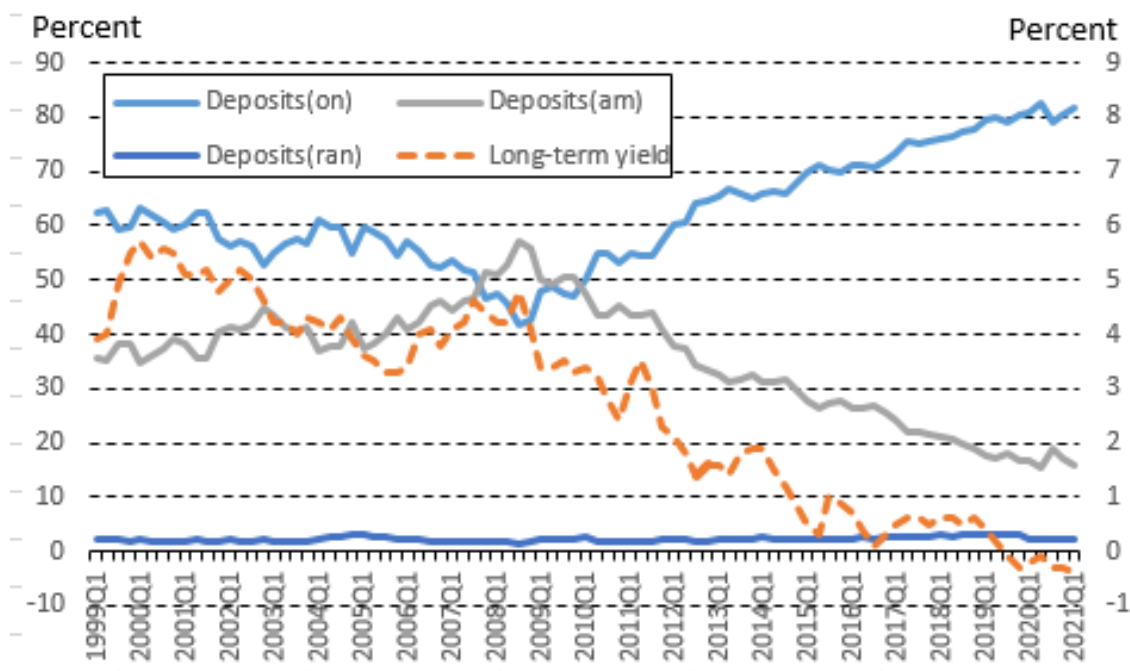


The COVID-19 pandemic impressively revealed the positive nexus between borrowers and lenders operating in a confidential relationship ("house-banks") even in exceptional situations.

Although referred to as a bank's "natural" task, the term transformation is ambivalently judged in theory and practice. The basic idea is relatively simple: On average, the maturity of deposits is shorter than the maturity of loans. Empirically, short term yields are typically lower than long term yields; hence, it is most attractive for a bank to transform short-term deposits into long-term loans, thereby gaining the so-called term premium.

However, this model is inherently unstable. At least two apparent risks have to be considered: First, liquidity problems may arise if customers call for repayment of their deposits before the corresponding loans are due. Secondly, profitability may decrease if the overall yield level rises and long-term loans had been granted with fixed interest rates. In this case, banks' interest expenses would increase while interest income may stay constant. Therefore, two appropriate measures to control for these risks are of vital interest for bank managers. An institution related indicator for the probability of deposit withdrawals and the actual position of the yield curve provide initial information to estimate liquidity and interest rate risks.

**Figure 2.2: Long-term yield (right-hand scale) and shares of total deposits with different maturities (left-hand scale)**



Source: ECB, Deutsche Bundesbank



The main categories for deposits are overnight, or checkable, accounts (on), deposits with agreed maturity (am), and savings accounts redeemable at notice (ran). The particular aggregate structure of these items varies over time and depends on interest differences, too. The traditional liquidity preference theory presents an instructive explanation for individual behaviour. If the interest level is comparatively low, rising rates can be expected, and the overall volume of short-term deposits will be high and vice versa. The opposite is true for the asset side of a bank's balance sheet. Borrowers prefer long-term contracts and fixed conditions at a low interest rate level and hesitate to incur debts at all in more expensive situations.

Figure 2.2 illustrates the situation in the EMU during the last two decades. Some yield movements were visible until the financial crisis but did not significantly change the customers' liquidity preferences. In detail, the share of overnight deposits [on] slightly decreased, while the deposits with agreed maturity [am]. The tight linkage between interest rate and deposit structure became apparent in the aftermath of the financial crisis. The massive fall of long-term yields almost to zero induced a simultaneous increase of checkable deposits reflecting the customers' beliefs for higher rates in the (near) future.

For a (regional) bank focusing on term transformation, the risks increase with such higher shares of overnight deposits. The average maturity of these funds is not precisely calculable, and the bank has to secure sufficient liquidity. Technically, MFIs analyse the relevant volumes on a daily basis and try to identify the minimum holdings of checkable deposits over a more extended period ("dead stock"). However, in the end, they have to rely on their experience and have to strengthen their risk-taking capacity by supplying additional equity capital.

Not only different maturities lead to yield spreads but also lending rates are reasonably higher than deposit rates (see figure 2.3). As long as deposit insurance schemes exist, private bank deposits are more or less riskless. Hence, the offered interest payments depend on competition between MFIs and opportunities for private agents to invest in risk-free alternative assets. Most likely, the bargaining position of a representative depositor is rather low. As a potential lender, a bank faces a couple of investment risks. Even for collateralised loans, the probability of default is inherently positive. Therefore, banks systematically charge risk premiums for loans depending on the soundness of the particular borrower. Finally, the nominal interest margin, i.e. the effective spread between lending and deposit rates, is a vital component MFIs profitability.<sup>2</sup> Figure 2.3 shows that the depicted economies' banking industries<sup>3</sup> suffered from significantly decreasing interest margins after the financial crisis. Over time, the decline of lending rates has been more pronounced than the deposit rates' downturn. A recovery to prior levels and spreads is not yet in sight.

Interest rate related income has a significant impact on most banks' total earnings and their stability (see also ch. 2). Figure 2.4 attests to a rather large and stable share of net interest income to operating income for the banking industries in the three selected countries. The different levels are due to divergent structural characteristics of the particular national banking systems. Especially small and medium-sized MFIs strongly depend on loans and deposits to implement their business

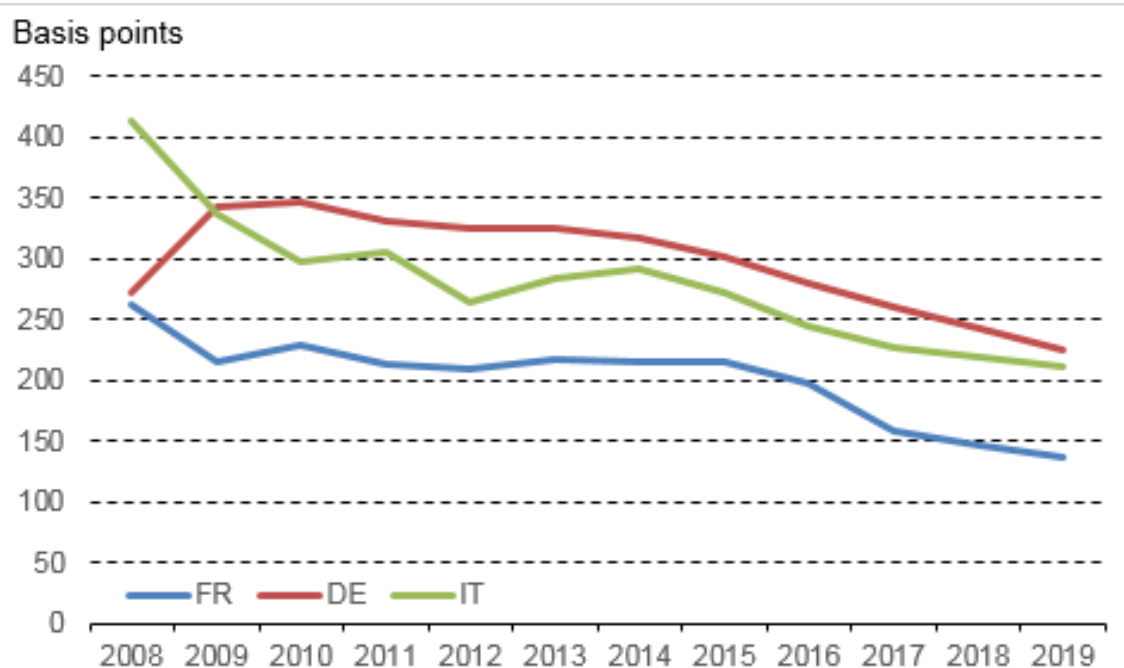
<sup>2</sup> Gischer et al. 2015 verify technical problems and inaccuracies of prevailing methods to calculate the interest margin in practice.

<sup>3</sup> Reliable long-term data is available for rather large countries only.



model, while larger institutions are more able to diversify and to create a second mainstay in commission related transactions.

**Figure 2.3: Spread between reference lending and deposit rates**

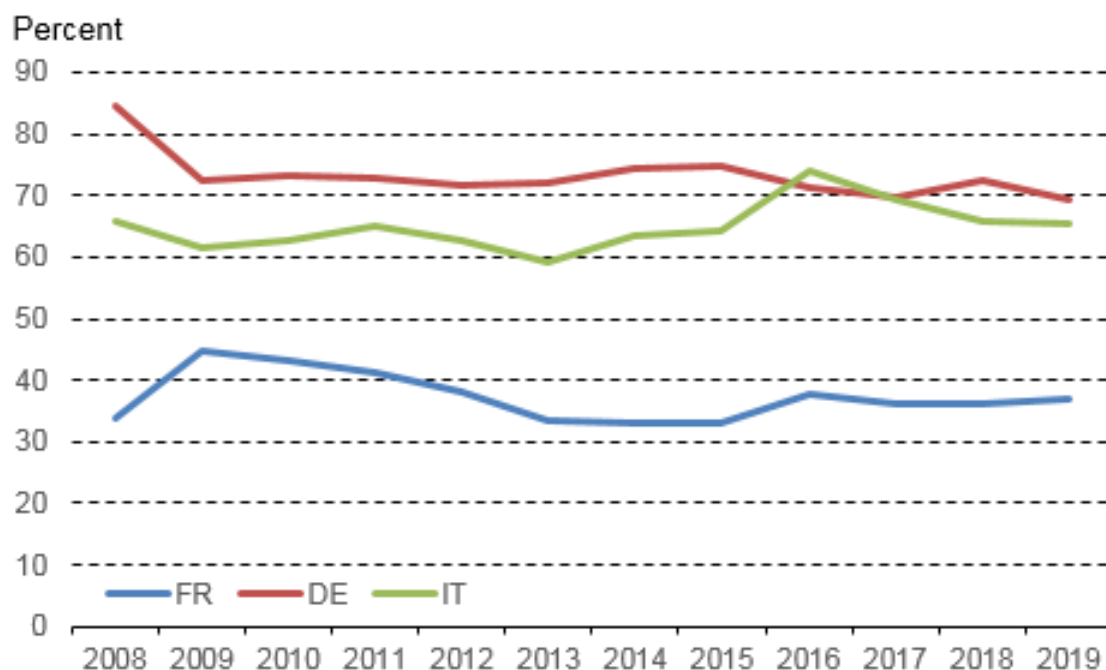


Source: IMF

After the financial crisis, banks' business strategies, at least in the countries represented in figure 2.4, appeared almost stable. The significant differences in the impact levels of interest income on profits suggest that French MFIs focus on fee or commission income rather than interest income. This outcome may be due to less competitive pressure in non-loan markets and more extensive opportunities to diversify. As the available data is only of the aggregate type, an alternative interpretation would be that the French results may reflect a different industry structure than in the case of Italy or Germany (see ch. 2 for details).



**Figure 2.4: Net interest income to operating income<sup>4</sup>**



Source: IMF

### 2.3. Impact of the yield curve

The respective outcome of a bank's term transformation activities is closely related to the underlying yield curve, i.e. the structure of market interest rates for different times to maturity of financial claims. Over time both the level and the slope of a yield curve change. Empirically, so-called normal yield curves show a positive but volatile slope, i.e. the long-term yield is more or less distinctly higher than short-term yield, leading to a positive term spread. However, the yield curve's shape may even change entirely and turn to a negative slope ("inverted yield curve") so that the term spread is negative, too. In recent years, a flat yield curve with a term spread of (almost) zero can be observed (see figure 2.5).<sup>5</sup>

Economic incentives for a bank to actively engage in term transformation depend on both the difference between lending and deposit rates as well as the yield spread. Thus the precise calculation of the long-term loan rate for a certain borrower has to regard factors such as the

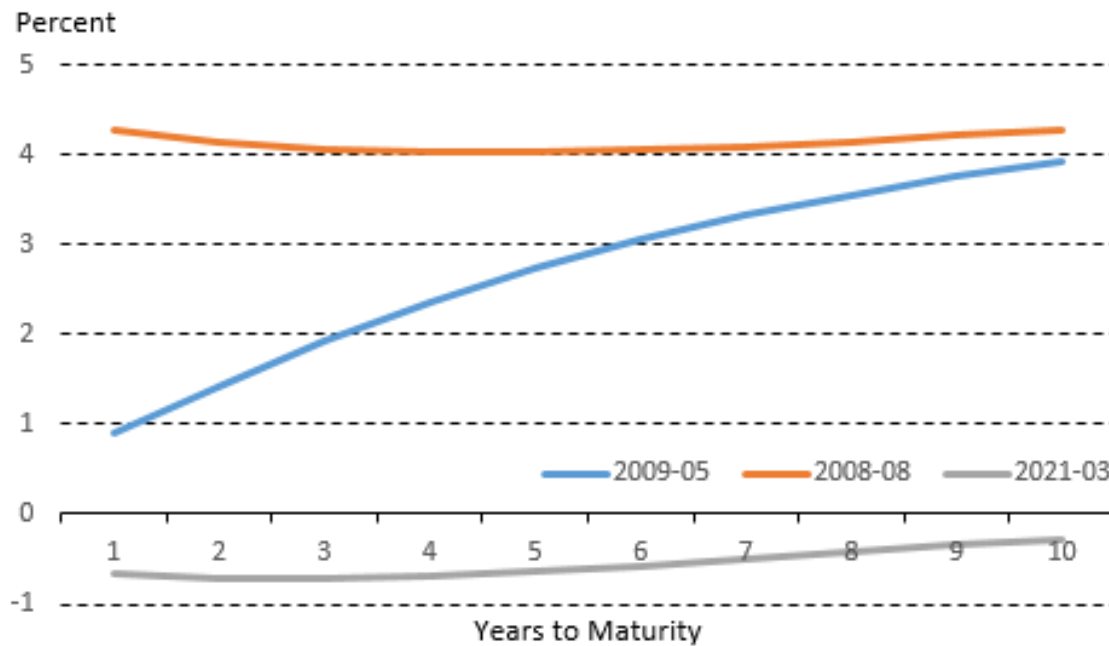
<sup>4</sup> Unfortunately, technical terms are not identically used and applied in international context. The term interest margin, for example, is quite often also addressed to monetary flows, i.e. interest income minus interest expenses. To avoid confusion, we carefully try to distinguish between flows and arithmetical differences of scaled numbers.

<sup>5</sup> Of course the individual yield curves differ for each country not only in the EU. For sake of lucidity we show the German figures only, shapes and levels of the yield curves are substantially similar in the ECU.



expected probability of default, the average refinance costs, i.e. the interest expenses for the claimed deposits, the financial markets' yield expectations indicated by the yield spread, and the actual market power of the bank. Obviously, an adequate positive slope of the yield curve supports the MFI's willingness for term transformation as it enhances the expected net profits of the lending business.

**Figure 2.5: Selected yield curves in Germany**

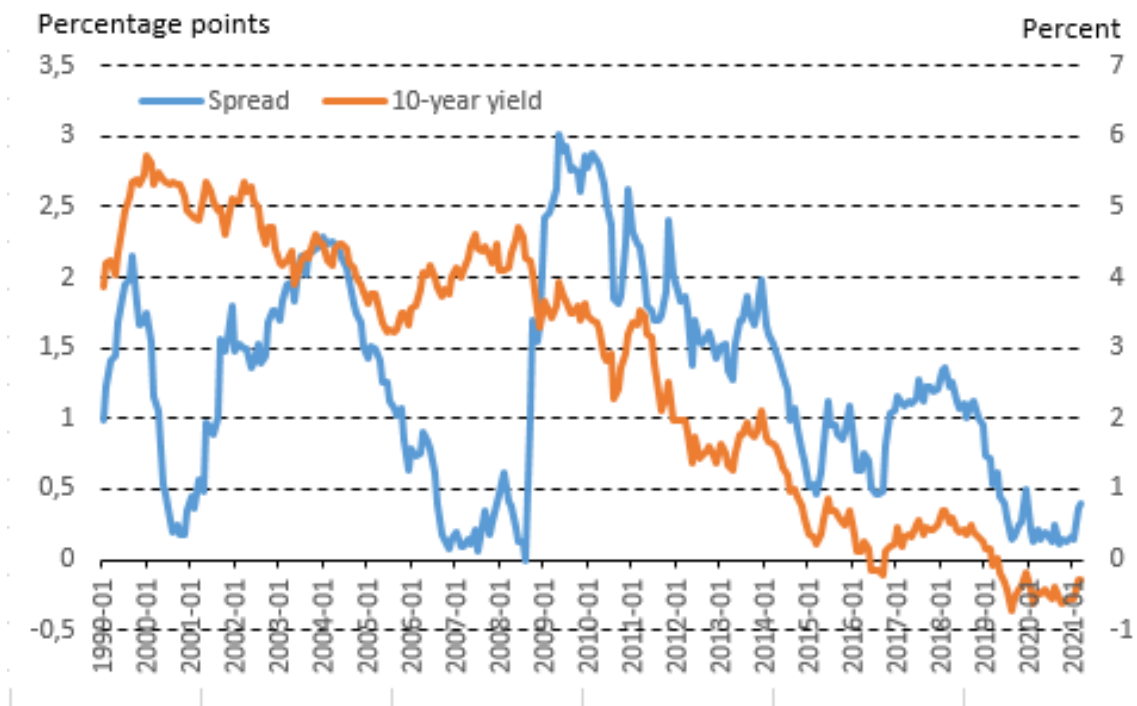


Source: Deutsche Bundesbank

Figure 2.6 shows that financial market conditions completely changed during the last two decades. Except for a slight transitory rebound between 2006 and 2009, the long-term yield almost steadily decreased since 1999. While the yield spread cyclically changed in the first decade, it declined parallel to the downturn of long-run interest rates after the financial crisis. For almost two years, banks have to cope with negative interest rates and yield spreads of less than 50 basis points.



**Figure 2.6: Long-term yield and term spread in Germany**



Source: Deutsche Bundesbank, own calculations

## 2.4. Consequences for the banking industries

Additionally, for the first time in June 2014, the European Central Bank (ECB) introduced negative rates on the deposit facility, which banks may use to make overnight deposits with the Eurosystem. In some EMU Member States, e.g. Germany, competitive conditions prevent MFIs to pass on these charges to their customers. Hence, the Zero Lower Bound (ZLB) still holds for most private deposits on banks' balance sheets. Thus, internal cross-subsidising is needed to compensate the costs of storing liquidity with the ECB partly. As a result, especially small and medium-sized banks faced severe pressure on their operating income.

Figure 2.7 displays that banks in large EU Member States are highly invested in lending operations. Although French MFIs started at a lower level after the financial crisis in recent years, even in France, similar to Germany and Italy, total gross loans make up two-thirds of total assets in the respective banking industry. Active risk tasking<sup>6</sup> is (still) a vital part of the business models, although the macroeconomic circumstances changed during the last decade.

The impact of decreasing interest rates and downwards shifting yield curves on bank profits can be approximated using data on net interest income.<sup>7</sup> Relating the interest margin to total gross

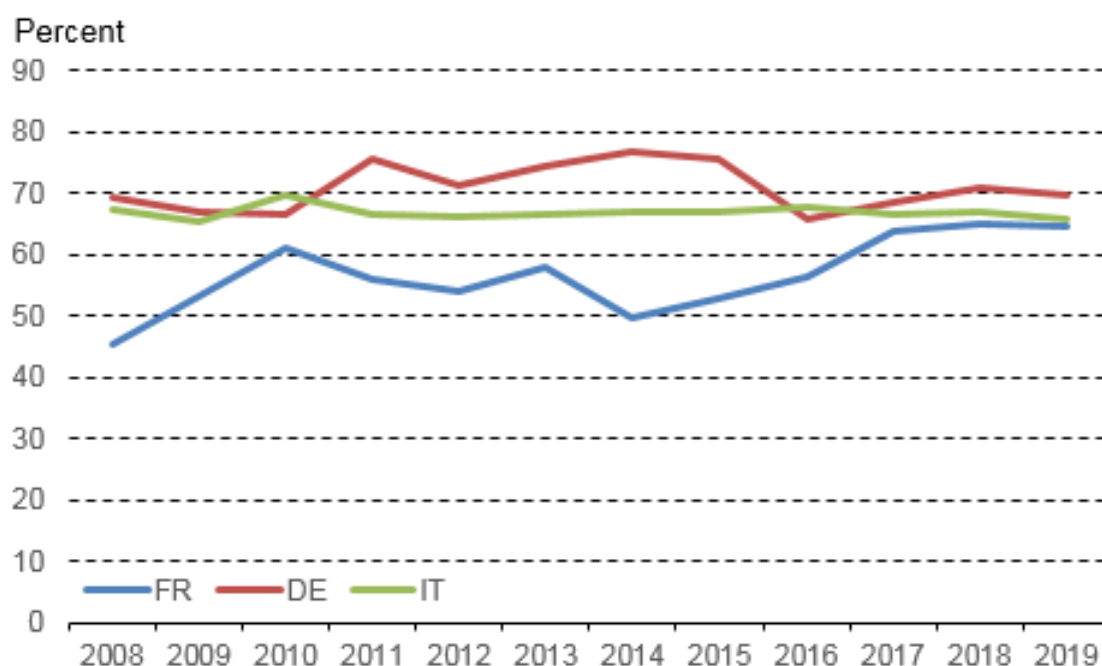
<sup>6</sup> The well-known quote „Banking is risk taking.“ is ascribed to the former Federal Reserve Chairman Ben Bernanke.

<sup>7</sup> Net interest income equals gross interest income minus interest expenses and is identical to the IMF-label Interest margin.



loans gives an indicator for the average markup on banks' refinancing costs measured in basis points.

**Figure 2.7: Share of lending operations (Total Gross Loans to Total Assets)**



Source: IMF, own calculations

Figure 2.8 provides interesting details. First, the average markup level for German banks has been the lowest during the period under observation. Furthermore, the range of the markup is relatively small. Secondly, for Italian and French MFIs, the profitability of lending declined by nearly 80 basis points.<sup>8</sup> Thirdly, while the markup trend is still negative in France and Germany, the downturn in Italy seems to have been stabilised since 2016 on a level that is 50 basis points higher than in the two other countries.

Of course, all the presented stylised facts conceal many country-specific structural details that may affect the empirical results. Nevertheless, to a large extent, banks' fundamental conditions for profitable lending are currently not met:

- a sufficient spread between the loan rate and refinancing costs,
- reliable expectations for future interest rate changes,
- resilient experience in acquiring deposits,

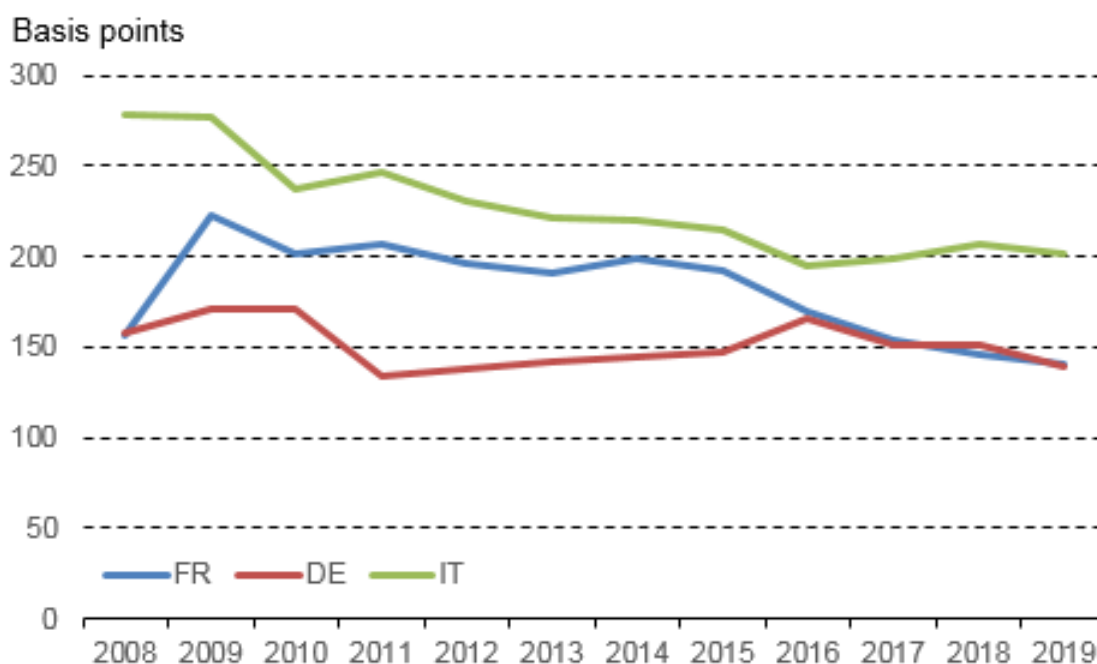
<sup>8</sup> Note that we refer to non risk adjusted figures only, hence markup differences may at least partly be due to divergent risk profiles of the particular aggregate loan portfolios.



- a credible and transparent central bank strategy,
- appropriate regulation.

At present, the traditional business model of retail banks is fundamentally threatened. The operating margins almost collapsed during the last years, and actual challenges caused by the corona pandemic erode the average quality of prospective borrowers. Even low-risk investments in sovereign or corporate bonds are undermined by ongoing ECB purchase programs keeping yields on historically low levels.

**Figure 2.8: Profitability in lending (interest margin to total gross loans)**



Source: IMF; own calculations

## 2.5. Impact on small and medium-sized enterprises

Although (very) large and globally operating firms attract prominent attention in public or political discussions, their share in national value-added or employment is substantial but dominant only in some economies. In Germany, for example, far less than one per cent of all enterprises reported annual revenues of more than one billion Euros in 2019; their total share makes up for a third in aggregate revenues. The impact of SMEs is almost identical, but this segment represents more than



99 per cent of all private businesses in Germany. The situation is quite similar in most EU Member States; hence, the economic importance of SMEs for the financial industry is comparable for the rest of the euro area.

Big firms have access to external financial sources through various channels. Additional liabilities may be attracted in institutional capital markets, e.g. stock exchanges, by arranging bonded loan contracts preferably with insurance companies or exploiting cash flow differentials with affiliates. Additionally, committed credit lines with large banks can also be used. The framework for SMEs is somewhat different. Their dependence on local banks is vital for most firms; only a few of them regularly operate with more than one financial institution. Any restriction in credit availability may seriously harm the economic conditions of SMEs.

As already pointed out, the ECB's monetary policy during the last decade deteriorated the business parameters of banks significantly. While large MFIs may partly intensify efforts in fee-based businesses to compensate losses in interest-bearing markets, regionally operating (small) banks are less diversified. Their loan portfolios are rather sticky, and their customers have to deal with particular market challenges and, therefore, are on average unable to deal with considerably negative adjusted bank charges. Regulation enforcements constitute a second thread for local banks. During the still ongoing pandemic, the riskiness of loan portfolios simultaneously increased, followed by rising tier capital requirements for already existing contracts.

As a consequence, not only the technical ability but also the willingness of regional banks for additional lending is more or less limited. In a situation where SMEs need financial support to overcome the problems caused by the COVID-19 pandemic, large parts of EMU's finance industry is widely constrained. Most probably, the prospects of many SMEs are at least challenging. They have to deal with shortfalls in revenues, opaque expectations on future demand, disrupted and changing supply chains, and uncertainty regarding a successful containment of the virus. Well-balanced monetary policy and regulation strategies could create a sustainable starting point to strengthen regional banks and support SMEs.



### 3. Competition and performance in European banking industries

#### 3.1. Theoretical background

The explicit commitment to decentralized and competitive markets represents a constitutional element of the EU. However, the national interpretations of the optimal level of competition differ significantly, not only regarding financial markets. Although still a major topic in contemporary economic theory, (neo-)classical perfect market equilibria are no longer the relevant policy benchmark. They have long been replaced by ideas of (so-called) workable competition (Clark 1940) or contestable markets (Baumol et al. 1982). Part of these more pragmatic frameworks is a separation between structure, conduct, and performance (SCP-paradigm) of agents in relevant markets. The primary consequences can be easily derived by comparing the particular equilibria in monopolies and perfectly competitive allocations. The former is denoted by relatively high prices and low traded quantities, while the latter represents the opposite, i.e. significantly lower prices and larger quantities.

The SCP approach emphasizes systemic relationships between the number of competitors and their market behaviour; hence, the firm's profitability is a technical consequence of the intensity of competition (Chamberlin 1933, Robinson 1933, Bain 1956, d'Aspremont & Dos Santos Ferreira 2021). As a result, market prices are not necessarily equal even for more or less homogenous goods since imperfections, e.g. divergent preferences, different locations, and transactions costs, allow for individual mark-ups on marginal cost of production.<sup>9</sup> Moreover, economic barriers to entry (and consequently to exit) to a specific market must also be considered. Even potential competition impacts the incumbent's behaviour, as long as extraordinary profit margins may make a newcomer's market entry sufficiently probable. The New Empirical Industrial Organisations (NEIO) literature has introduced a bundle of models and techniques to investigate markets' characteristics and unique features. For the sake of lucidity, the following analysis concentrates on examples and stylized facts (Richter et al. 2020, Boone 2008).

The research strategy to decipher the regular empirical observation of mismatches between market prices and the marginal cost of production not only in monopolies was boosted by game-theoretic approaches. Although simplified dynamic models had already been discussed in the 1930s (Stackelberg 1934), especially the theory of sequential games enlightened the research on strategic interdependencies between firms operating in the same markets (Nash 1950, Selten 1965, and Harsanyi 1967, 1968a, 1968b, Rasmussen 2006). These topics became more and more prominent according to a significantly increased importance of globalization in real goods markets and financial systems. The euro area is the best example for focusing on cross-border examinations of firms' behaviour and (efficient) allocations on liberalized common markets. However, as already addressed in Gischer & Herz (2020), the distinctive heterogeneity of agents, i.e. a limited number of EU-wide operating Systemically Important Banks (SIBs) and a majority of relatively small

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<sup>9</sup> An early indicator was introduced by Lerner (1944).

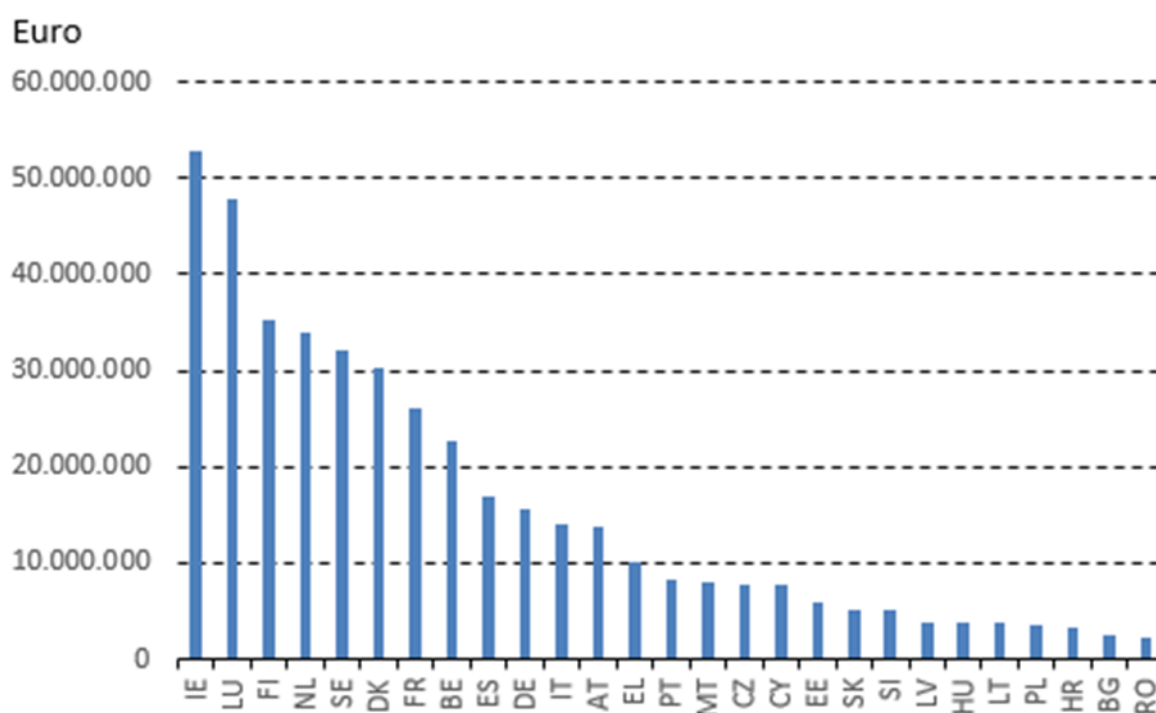


banks with regional customers and domestic markets<sup>10</sup>, enormously complicate drawing adequate conclusions. Furthermore, reliable data for the whole range of financial institutions is at most partly available. Nevertheless, we may indirectly arrive at some valuable findings.

### 3.2. Stylized facts

Looking back on the evolution of the EU, the latest extensive enlargement took place in 2004 when, except for Malta and Cyprus, eight former communist countries<sup>11</sup> from Central and Eastern Europe joined the Union. Until 2013 Romania, Bulgaria and Croatia entered the EU, too, while the United Kingdom left the Union in 2020. The economic incline between the "older" and the "younger" member states is still clearly visible; the enduring impact of more than five decades of non-market economy regimes leave their marks (see figure 3.1).

**Figure 3.1: Banks' total assets per employee (2020)**



Source: ECB; own calculations

<sup>10</sup> In 2020, total assets of all banks in France added up to almost 10500 billion Euros while Latvia's banking industry reported total assets of less than 25 billion Euros.

<sup>11</sup> Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovak Republic, Slovenia and Hungary.



All countries that joined the EU after 2004 show a very low "Banks'-Total-Assets-per- Employee-Ratio" compared to the EU Member States having joined earlier. Only Greece's and Portugal's figures are on a similarly low level. Although the displayed ratio does not reflect a productivity measure in a technical sense,<sup>12</sup> the asset side of a bank balance sheet is the primary source of generating periodical income, e.g. interest payments of borrowers. Hence, the particular value indicates the potential for regular earnings to compensate for administrative expenses, including staff costs. Not surprisingly, there is an evident correlation between a member states' income level (GDP per capita) and its banking system's development stage (balance sheet total per employee). Figure 3.2 conveys a first impression.

**Figure 3.2: Balance sheet total per employee and GDP per capita (2020)**



Source: Eurostat, ECB, own calculations

The empirical dispersion of the GDP per capita values in the EU is considerable, and concurrently almost half of the member states generate a relatively low national income per capita. It seems reasonable to conclude that the banking sectors in these countries predominantly consist of small banks with a regionally limited operation area. In most cases, even large MFIs in confined

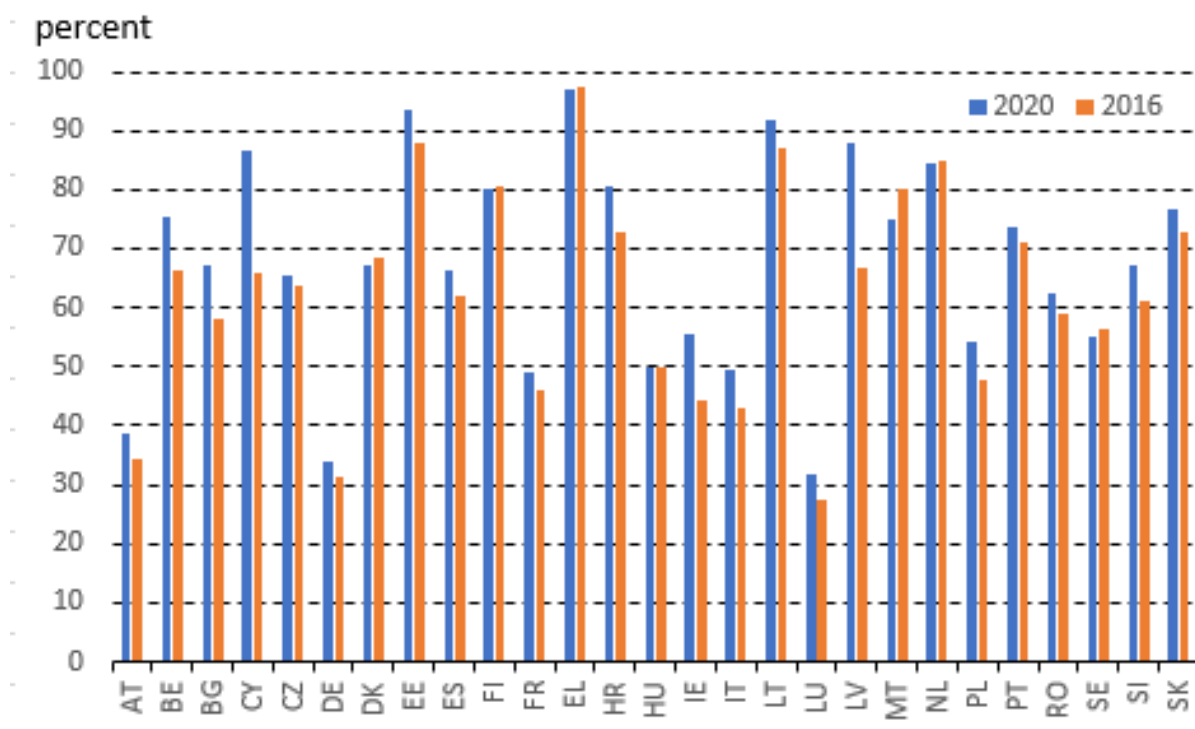
<sup>12</sup> *Per capita* output is often regarded as an indicator for labor productivity.



domestic markets are not comparable to typical players in large and widely diversified economies.<sup>13</sup> Furthermore, competitive conditions in national bank industries depend on the size and structure of the incumbent firms and the capacity of the real goods sector. In an environment of SMEs, the challenges for MFIs are (more or less) manageable and focused on the daily needs of their stable customers. On average, staff requirements are less flexible, personnel expenses are more or less constant, and economies of scale may only be realized in individual cases. Hence, incentives to cut costs and intensify competition are relatively small.

A standard measure for competitive conditions in an industry is the so-called CR5. It is defined as the sum of the shares of the five largest firms in a market. Usually, revenues are the reference of firms' market shares, but in banking markets, revenues or sales are not readily applicable concepts. Therefore, the single banks' fraction of total aggregate assets is used instead. The economic interpretation of this indicator is straightforward: The larger the CR5, the stronger the entire national market is affected by a small set of banks. Since the probability for collusion increases with a decreasing number of (potential) rivals, low values of CR5 are preferred if viable and sustainable competition is intended.

**Figure 3.3: Concentration ratio CR5 (total assets) in EMU national banking industries**



Source: ECB

<sup>13</sup> We do not address the exceptions of Ireland and Luxembourg where local concentrations of internationally operating banks emerged primarily due to corporate tax reasons



Figure 3.3 reports the CR5-values in 2016 and 2020 for all EU Member States. At least the following stylized facts are worth to be explicitly mentioned:

1. Only three countries report CR5-values of less than one-third of the market (Austria, Germany, and Luxembourg).
2. Almost half of the country sample hosts banking industries in which the five largest firms control at least three-quarters of the national market.
3. Even in already highly concentrated national markets, CR5 increased (significantly) between 2016 and 2020.

The empirical evidence supports the widely discussed findings that many established bank systems can be modelled using a dominant-bank approach (VanHoose 2013). This framework suggests that a large bank (or a group of collusively acting banks) has gained sufficient market power to set interest rates and earn non-competitive rents. Small institutions, also part of the system, benefit from the dominant bank's strategy and act as the competitive fringe in sub-markets of minor importance for the dominant bank. It can be shown that stable equilibria in joint market models may be derived where even uniform interest rates lead to significant profits for the dominant bank, and the fringe banks can at least cover total costs.

At first sight, high concentration ratios must not threaten the placid co-existence of large and small banks. However, the larger the market share of the dominant bank, the smaller the potential sub-market for the whole group of fringe banks and, consequently, the opportunities to make profits at all. Therefore, the economic incentives to run a fringe bank, i.e. a small and regionally operating MFI, decline, and its regular clientele may lose the primary financial services provider. Figure 3.3 indicates that the still operating competitive fringe is likely to disappear in many European bank markets.

### 3.3. Performance measures

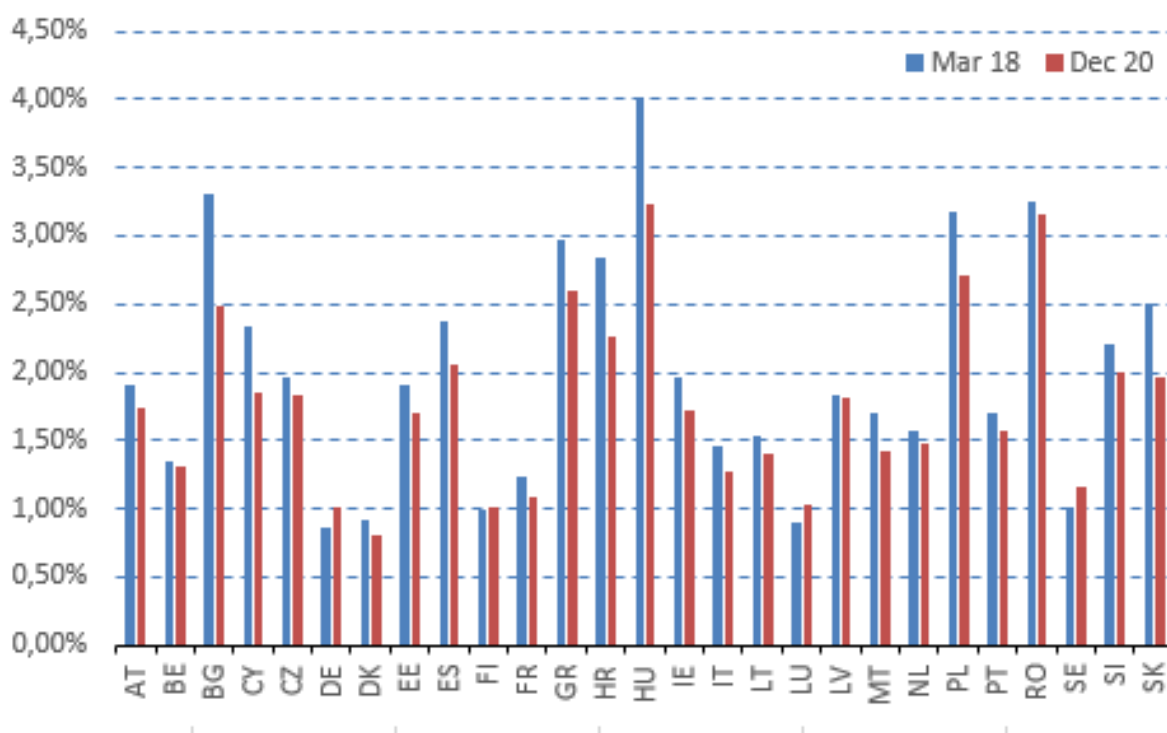
It is very challenging for several reasons to evaluate the consequences of the ongoing concentration processes in EU banking markets empirically:

1. A comprehensive and reliable data set of income statements from European banks of different sizes and following divergent business models is not available so far.
2. Despite fundamental initiatives to harmonize national business law in the EU, accounting policies still differ considerably in many member states.
3. Only very few national central banks provide consistent annual information on their domestic financial systems and their MFIs in particular.



4. A couple of (small) national banking industries are dominated by foreign institutes, which need not necessarily follow all obligations to disclose publicly.

**Figure 3.4: Net interest margin in national banking industries**



Source: EBA

To gain at least some indirect insights, we use data from the Risk Dashboard Interactive Tool of the European Banking Authority (EBA). The sample consists of quarterly figures from 130 banks covering more than 80% of the EU banking sector as measured by total assets. We limit our analysis to basic indicators of bank profitability which are consistently used in theory and practice.

In general, the net interest margin (NIM) denotes the ratio of net interest income to average earning assets. Net interest income for banks is defined as interest income minus interest expenses. Most regularly, total assets are used as the denominator instead of earning assets. Figure 3.4 displays the NIM values in the EU banking industries in March 2018 and December 2020. Again the marked heterogeneity is striking.

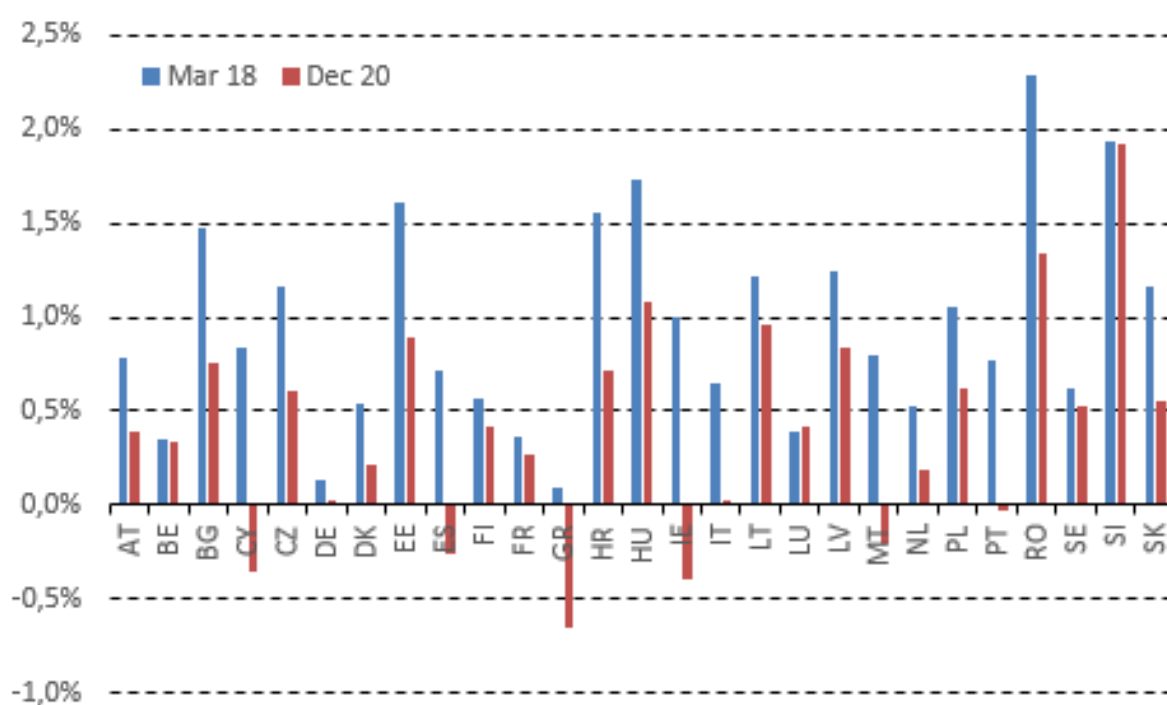
In 2018 the spread between the national systems with the highest and lowest NIM amount to more than three percentage points. By 2020 the difference had come down to 2.4 percentage points. Overall the profitability of interest-bearing transactions for EU banks dropped considerably,



especially in Central and Eastern Member States. Nevertheless, the NIM values are still higher than in the Western Member States.

However, the NIM values only reflect the effects of changes in variable components of the income statements. The net impact of an ongoing decrease of the overall interest rate level in the EU was negative, i.e. lower loan rates for private households or enterprises could not be adequately compensated by simultaneous adjustments on the liability side of the balance sheet. Allegedly the Lower Zero Bound (LZB) still holds for the majority of European banks. This situation causes critical problems, especially for small MFIs. They have to cover their comparably higher fixed costs with lower variable income, and therefore, their business model is put under additional pressure (see also chapters 1 and 6).

**Figure 3.5: Return on assets (RoA) in national banking industries**



Source: EBA

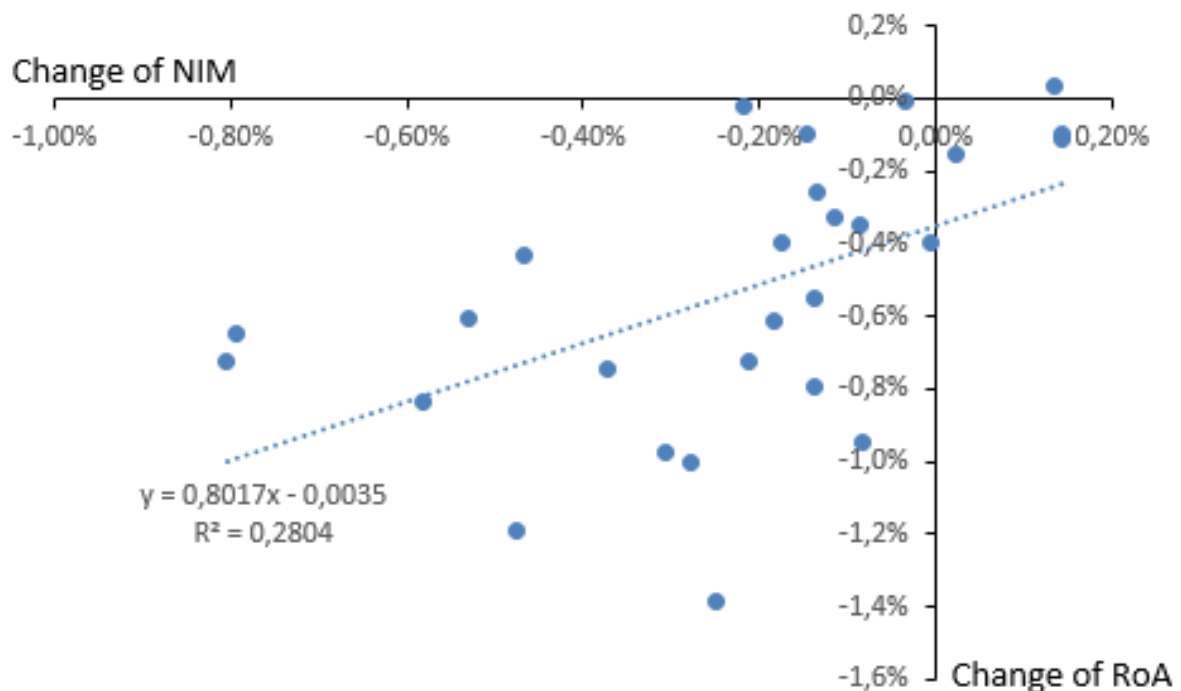
Figure 3.5 shows the implications of falling interest rates for the Return on Assets (RoA) which is defined as the ratio of Net Income to Total Assets. Again the results are mixed, the ratios vary significantly across the sample, but they are at least positive in 2018 for all EU Member States. The picture changes in 2020: Except for Belgium, Luxembourg, and Slovenia, banks in all other countries report partly significant declines in the RoA. In five Member States, the banking



industries made no profits at all. On average, the drop in profitability amounts to 0.5 percentage points, more than a half of the initial RoA-level in 2018.

These developments are also related to the ECB's unconventional monetary policy on private banks' performance (see chapter 6). A decade of historically low central bank interest rates has left visible marks in MFIs income statements. Decreasing net interest margins threaten conventional lending strategies because a transfer of adequate risk premia failed due to upper-interest bounds. Regionally operating banks with a strong focus on private lending suffered the most. Their clientele is limited, and alternative business fields are not at hand. Figure 3.6 indicates the discussed relationship between changes of NIM and RoA.

**Figure 3.6: Changes of net interest margin and return on assets (2018 – 2020)**



Source: EBA, own calculations

Another standard measure of a firm's profitability, the Return on Equity (RoE), must be interpreted very carefully. The 'simple' RoE-value is systematically misleading since a high return on equity seems to signal outstanding profitability. The other side of the coin shows the rub: A constant net income assumed, the return on equity increases with the surge of the debt ratio ('leverage'). In the banking industry, the scale of RoE may even indicate the MFI's risk level.

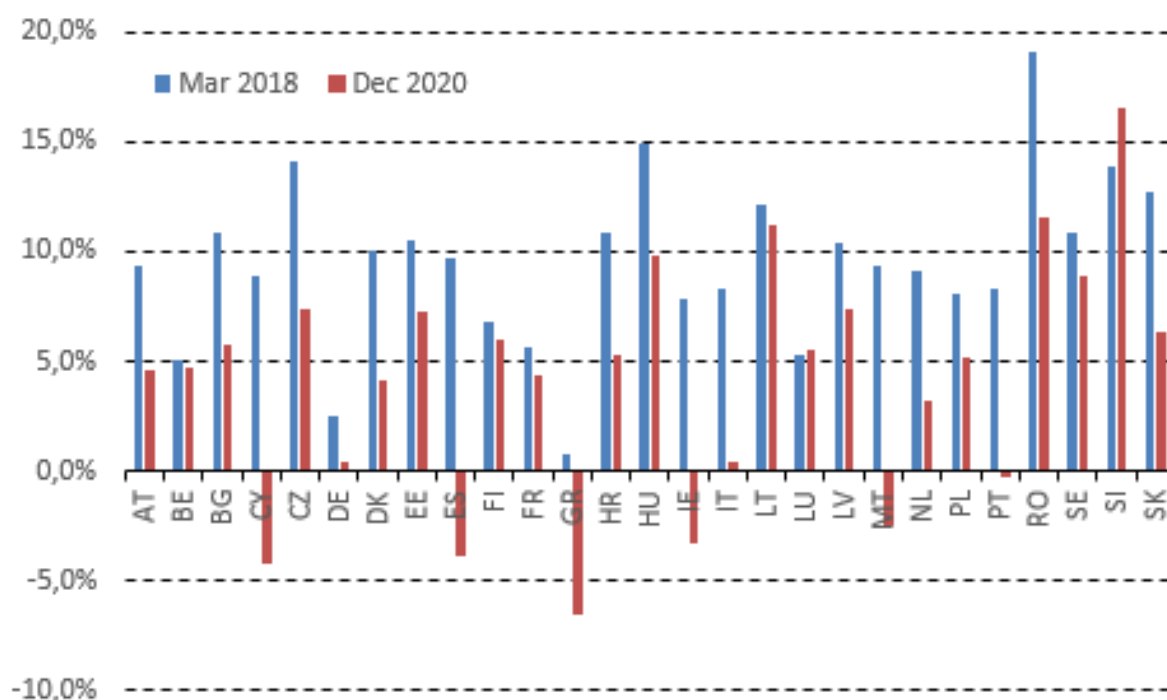
Internationally operating large banks are regularly organized as stock corporations. Owners of these institutions are not primarily interested in financial business but in improvements of their



shareholder value. Consequently, managers of listed banks have an incentive to minimize the equity ratio within the framework of regulatory requirements. A high RoE-value, therefore, promises an attractive dividend payment. The distance between ownership and customer may hamper shareholders' appreciation of risk-reducing increases in capital and simultaneously limited payouts.

Regionally operating MFIs very often follow a relationship banking approach. Local ownership is not only possible but also quite common. At least a minor motive of investing in bank capital is to support the economic prospects of the homeland. Reasonable profits are, of course, a necessary condition for individual risk-taking but participation in equity with a small or medium-sized bank is more or less a relatively long-term investment. Not surprisingly, regional or local banks' equity ratios tend to be higher than listed institutions'.

**Figure 3.7: Return on equity (RoE)**



Source: EBA

Considering the caveats mentioned above, figure 3.7 reveals complementary information. Already familiar patterns are perceptible: a wide dispersion of country-specific RoE-values and a massive decline of the statistics in 2020. The Czech Republic, Hungary, and Romania present outstanding results in 2018 with RoEs of almost 15 per cent or more, the values in 2020 are still above average but less impressive. Overall the profitability of equity invested in EU banks more than halved from

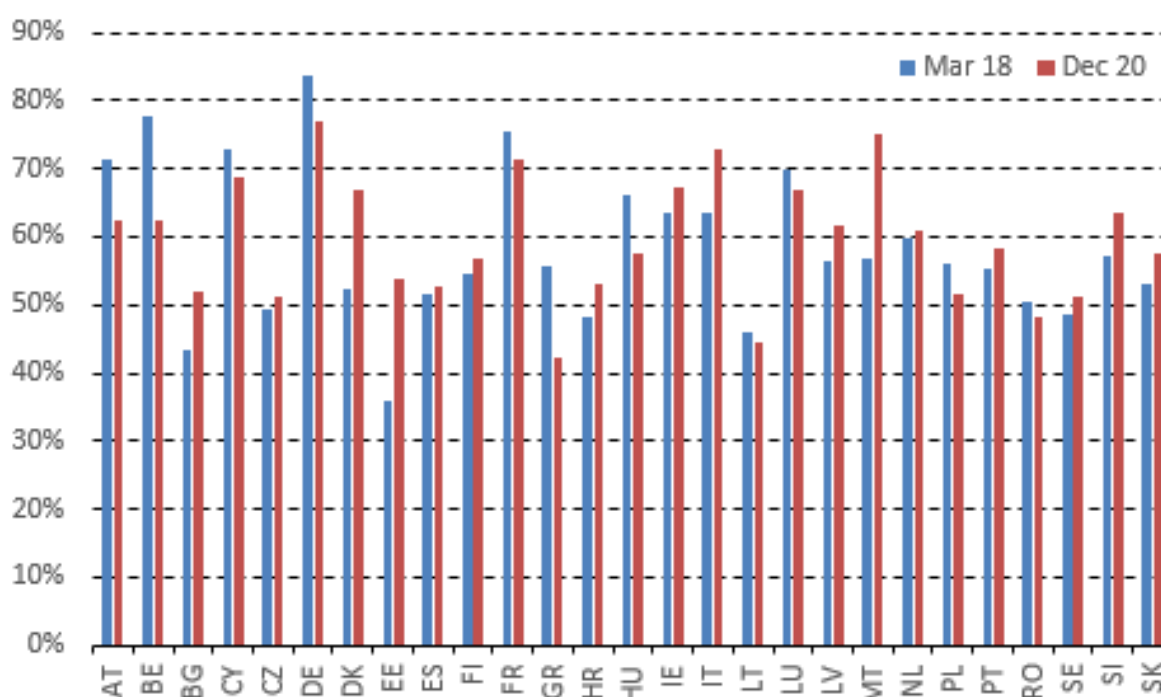


about nine per cent in 2018 to nearly four per cent in 2020. Historically low interest rates are, quite obviously, not attractive for shareholders of banks in the EU.

To complete our brief performance survey in the EU's banking industries, we address another prominent measure consistently applied but equally often misunderstood or incorrectly adopted (Richter & Gischer 2019, Richter 2013). The Cost Income Ratio (CIR) deviates from measures discussed so far because it explicitly incorporates income and expenses. The most common definition considers the ratio of operating expenses to operating income. The interpretation seems quite apparent: the CIR shows which amount of costs is necessary to generate one unit of income. Therefore, the lower the CIR value, the more profitably the bank operates. Looking deeper into the topic, the limitations of this measure are apparent. The problems arise in both components of the definition:

1. The size of the denominator is susceptible to competitive conditions in a banking system. Market power allows for mark-ups on loan rates and mark-downs on deposit rates. Hence, constrained competition has a positive impact on the CIR's denominator and simultaneously on its value.
2. The most important item of operating expenses is nominal staff costs. Banks (or countries) with very skilled or experienced workforces pay higher salaries. Additionally, the national wage level is of utmost importance. Thus, the size of the numerator is affected by country-specific characteristics; systems with relatively low wage levels display low numerators and low CIR values.

**Figure 3.8: Cost Income Ratio**



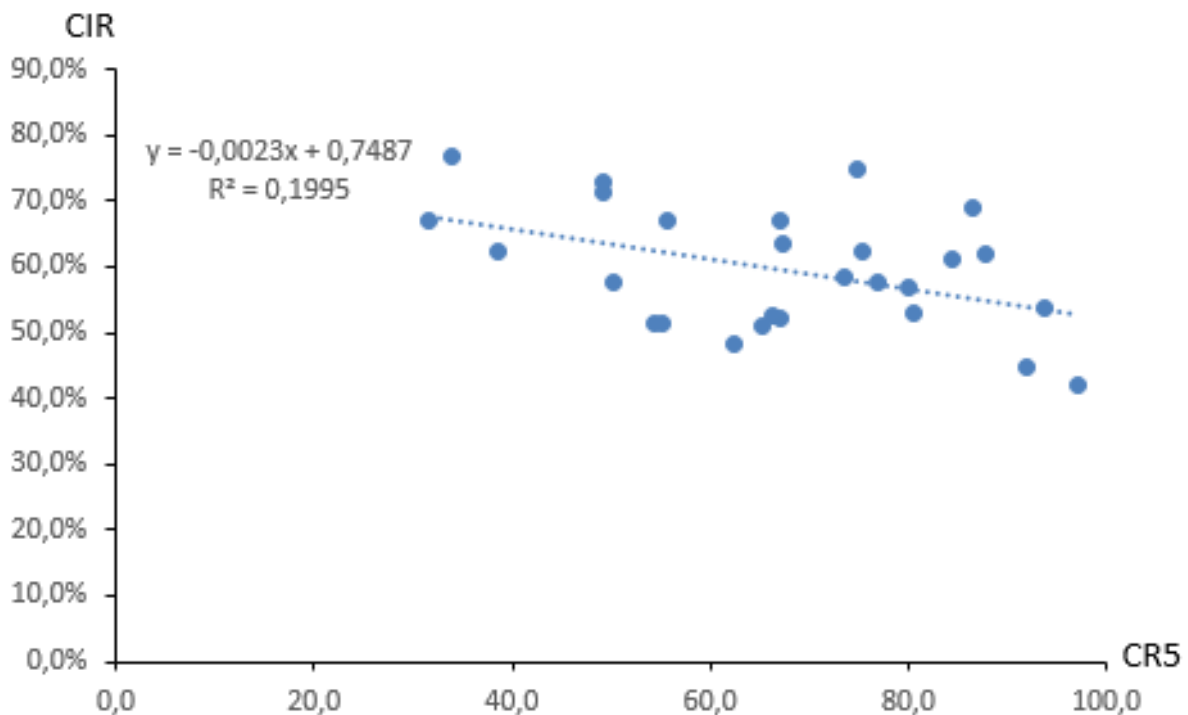
Source: EBA



Figure 3.8 reveals ambiguous results. Once more, the national CIR levels differ decisively, but the temporal adjustments are more varied compared to RoA or RoE. While RoA- and RoE-values declined in almost all EU Member States between 2018 and 2020, the pattern of changes is different for national CIR-values. Significant improvements of up to 15 per cent (Denmark) come along with considerable deteriorations of nearly 20 per cent (Estonia, Malta). These results seem to fit with the conjecture that industries with primarily small banks are, more than others, strained by fixed costs and reduced opportunities to strengthen their business models.

Our initial hint regarding the possible impact of country-specific conditions of competition on the respective nations' CIR is to some extent empirically supported (see figure 3.9). The EU Member States with dominant banks exhibit comparatively low CIR-values.

**Figure 3.9: CIR and CR5 (2020)**



Source: EBA, ECB, own calculations

Of course, the cursory analysis presented above cannot reflect all details of every national banking system. Nevertheless, some interesting observations are worth to be kept in mind. A framework with a single central bank and but nineteen differently structured finance industries is – almost by



definition – incapable of inducing identical monetary impacts in all countries. Unconventional monetary policy during the last decade affected both interest rate levels as well as the shapes and the spreads of the yield curves. On average, the business parameters, especially for traditional retail banks, deteriorated. The considerable heterogeneity inside the ECU revealed visible disadvantages for small and competitive bank systems. Larger industries containing dominating banks seem to induce less competitive pressure and more favourable profit conditions.

The consequences for SMEs are ambiguous. In a (comparatively larger) hybrid banking system with institutions following different business models, their borrowing chances have not changed. When operating in a relatively small economy characterized by regional (retail-)banks, SMEs might face both problems acquiring investment loans or accepting less attractive conditions. Finance industries dominated by large banks are supposed to leave the SME business to the competitive fringe widely. These small banks willingness to lend is finally conditional to their remaining risk capacity.

However, local banks and even their customers may profit from a "technical" advantage. As already discussed in Gischer & Herz (2020), the availability of information about potential lenders plays a vital role in calculating loan conditions and, therefore, assess the acceptable level of risk. Screening costs are, besides others, dependent on the geographical distance between bank and customer. Hotelling (1929) and Salop (1979) provide widely adopted models to derive essential economic explanations of the importance of spatial conditions for pricing in competitive markets.

Melcher (2020) shows that a bank's advantage of proximity to potential lenders is limited, e.g. profit maximization results in an optimal business area where both banks and customers are better off than in alternative settings. Lenders benefit from lower average risks while borrowers receive comparatively more attractive conditions. Zurek (2020) presents empirical evidence for Germany in line with a spatial model of this kind.

For SMEs, more consolidated banking industries, as strived for by the European Commission and the ECB, means deteriorating credit conditions. The average distance to potential lenders increases, and, hence, screening costs for a post-merger bank now operating in a rather sizeable local market rise, too. Simultaneously, the lender's average riskiness also increases, while the effects on expected profits are unclear. Most likely, the bank will reject more loan applications due to unattractive cost or risk conditions, and SMEs may lose their financiers.



## 4. The COVID-19 pandemic – challenges and policy options

### 4.1. SMEs – liquidity and solvency problems

The COVID-19 pandemic is an unprecedented, complex economic crisis that involves shocks to demand, supply, and productivity. On the supply side, national lockdowns have reduced labour supply in many sectors as workers were forced to stay at home. Subsequent reductions in the supply of intermediate products and restrictions on the international flow of workers and goods have put additional pressure on supply chains, further constraining the supply side of economies. On the demand side, legal restrictions and behavioural changes due to the fear of infections induced dramatic changes in sectoral demand for goods and services. While some sectors, e.g. restaurants, cinemas, and retail shops, have had to cope with a dramatic drop in demand, others, such as online shops, home-improvement, and garden centres, have profited from increased demand. In addition, aggregate demand declined due to the increased uncertainty as households' precautionary savings have grown, and consumption opportunities have been restricted, while firms have put on hold investment projects. Labour productivity has also declined, at least in the short run, as businesses have had to cover higher costs due to increased hygiene measures, and labour input has been reduced (Diez et al., 2021)

As a consequence, firms are under pressure from two sides. While revenues have plummeted, enterprises must still cover their operating costs and meet financial obligations to creditors and suppliers. Due to the severity of the crisis and the uncertainty over the future course of the recovery, many businesses might run out of financial resources. The fear from the onset of the pandemic has been that many companies will fail, and many jobs will be lost. A particular problem could be that serious consequences of the COVID-19 pandemic will only become apparent after some delay, the so-called time bomb scenario (Gourinchas et al., 2021).

From a legal and financial perspective, enterprises face two distinct but related existential threats, illiquidity and insolvency. First, they have to ensure that they are liquid, i.e. that they can meet their financial obligations daily with large enough cash flows, liquid assets, and credit lines. Secondly, they have to ensure that they are solvent, i.e., they can meet their long-term debts and financial obligations. Solvent firms display positive equity, i.e. the sum of their assets exceeds their liabilities. For firms with limited liability, illiquidity as well as insolvency trigger bankruptcy proceedings. For firms with personal liability, as is typical for SMEs, illiquidity is the leading cause of bankruptcy. Despite several differences, both concepts are closely related. To prevent illiquidity, firms might turn to loss-making fire sales of long-term assets that could jeopardise their solvency. Analogously, a drop in asset values could mean that a firm becomes insolvent, which could imperil its liquidity status as it might become more difficult or even impossible to obtain liquid funds from its bank.

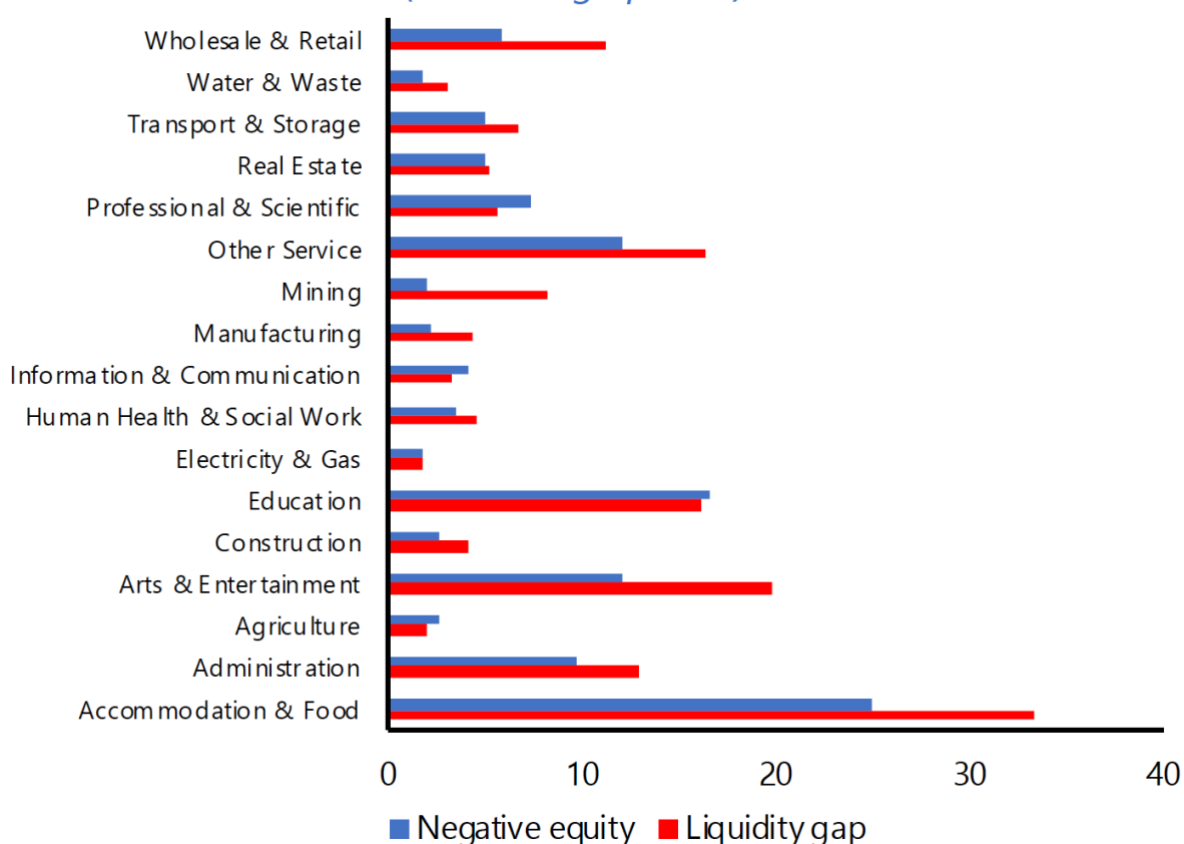
While the COVID-19 pandemic hit firms in general, the situation is even more severe for small and medium-sized enterprises, the core of Europe's economy. The 25 million SMEs in the EU account for 99 per cent of all firms, create 85 per cent of all new jobs and generate about three-



fifths of EU value-added. They are especially affected as they account for a disproportionate share of jobs in service sectors most afflicted by the COVID-19 outbreak and the subsequent containment measures. For example, just before the onset of the COVID-19 pandemic, firms with fewer than 50 employees accounted for about two-thirds of jobs in food, accommodation services, and wholesale and retail trade versus only one-third in manufacturing (Diez et al., 2020).

In the current COVID-19 pandemic, SMEs are especially exposed due to their financial vulnerability – they are critically dependent on debt, especially bank loans, for financing. Under normal circumstances, typical liquidity shortages can be managed via short-term loans without endangering the businesses' survival. However, even then, the access of SMEs to credit is more limited and at a higher cost (Acharya et al., 2014; Gopinath et al., 2017). In the current crisis, SMEs might not be able to secure fresh funding at all, given the widespread lack of sufficient collateral.

**Figure 4.1: Increase in share of firms with liquidity gap or negative equity in 2020: by industry (percentage points)**



Source: Diez et al. (2021)



While the COVID-19 pandemic is a global shock, individual sectors have been affected quite differently, as argued above. In an interesting simulation study, the IMF has tried to gauge the dimension of possible illiquidity and insolvency problems on the sectoral level for several European countries for the year 2020. In the counterfactual simulation of no government support, they find that the risk to jobs at SMEs might double to about 11 to 16 per cent overall during the 2020-21 period. There is also a great deal of sectoral heterogeneity in expected liquidity, equity gaps and related bankruptcy rates. Not surprisingly, customer-oriented, contact-intensive sectors are most affected, including accommodation and food service, arts, entertainment and recreation, and education (Figure 4.1). On the other side of the spectrum, there is a much lower risk of job losses in sectors such as agriculture, mining, or manufacturing.

From a regional perspective, a survey among German SMEs interestingly finds that enterprises in rural areas have higher equity and returns on sales during the pandemic than in metropolitan areas (Deutscher Sparkassen- und Giroverband, 2021). In combination with differences in sectoral composition and financial vulnerability of firms at the onset of the crisis, the differences in sectoral shocks add up to a high degree of heterogeneity in European countries' bankruptcy rates (Díez et al. 2020). Other studies like Gourinchas et al. (2021) obtain similar evidence.

#### **4.2. The SME-regional bank nexus**

The COVID-19 pandemic with its far-reaching and complex effects is likely to harm the banking sector seriously and threaten financial stability. In particular regional banks are likely to suffer as they cannot isolate themselves against the troubles of SMEs, their closest and most important clients. In the crisis, regional banks' capital is affected via three channels: profitability, assets, and risk weights. As the macroeconomic environment deteriorates and default rates increase, banks are likely to (i) raise provisions for higher loan losses across all asset types, and face lower income from nonlending activities; (ii) to write off additional nonperforming loans to insolvent borrowers and bankrupt firms while at the same time prospects for effective collateral recovery diminish; and (iii) face higher credit risk weights and thus lower capital ratios as they take into account the increased riskiness of corporate, consumer and mortgage exposures (Aiyer et al., 2021). This increased risk sensitivity can be due to the genuine risk evaluation by banks. It can also be driven by regulatory requirements in situations in which banks would - based on their assessments - continue to lend to enterprises.

As SMEs pandemic-related problems can directly harm the viability of regional banks, in turn, these problems are likely to affect SMEs negatively. Empirical evidence suggests that whenever credit dries up, SMEs are first affected (Díez et al., 2020; Chodorow-Reich et al., 2020). Should the (regional) banking sector as the primary source of external funding for SMEs tighten access to credit and prevent rollover of pre-pandemic SME maturing debts, failure rates of SMEs could dramatically increase. This would particularly affect SMEs that are likely to have a viable business model but run into financial difficulties due to debt accumulated before the pandemic.



In the pandemic regional banks have also proved to be essential agents in bringing government support to needy SMEs. In several countries, regional banks are important information providers on government programs and intermediate credits and guarantees for their SMEs clients (see also chapter 7, Hancké et al., 2021).

### 4.3. Government support in the COVID-19 pandemic

A fundamental aspect in predicting the longer-run economic consequences of the COVID-19 pandemic is to understand whether or not the shock is persistent. Will the economy return quickly to its pre-crisis level, or will it stagnate and take a long time to work its way out of the crisis? While the initial shock to the economy might prove to be temporary as lockdowns and other containment measures can be reduced swiftly due to increased testing and vaccinating, rising insolvency risks among SMEs and larger firms might hold up a timely recovery.

This is a primary concern for policymakers everywhere. Should a wave of SME bankruptcies occur, the efforts to contain the economic consequences of the pandemic would have failed. The workers currently on temporary layoff or furloughed may instead become unemployed; banks could experience significant losses on their loan book; the prospect of a financial crisis would increase significantly, with an increase in the associated fiscal costs.

SMEs could thus take centre stage and become a persistent drag on the economic recovery. Insofar as sales remain depressed while costs cannot be cut accordingly, a growing share of SMEs (and other firms) could accumulate unportable losses and become insolvent. Consequently, millions of jobs may be abolished, weakening the recovery, and strengthening the market power of large firms in advanced economies (Akcigit et al., 2021). Adequate public support to address these SMEs' liquidity shortages is thus essential to ensure a smooth economic recovery.

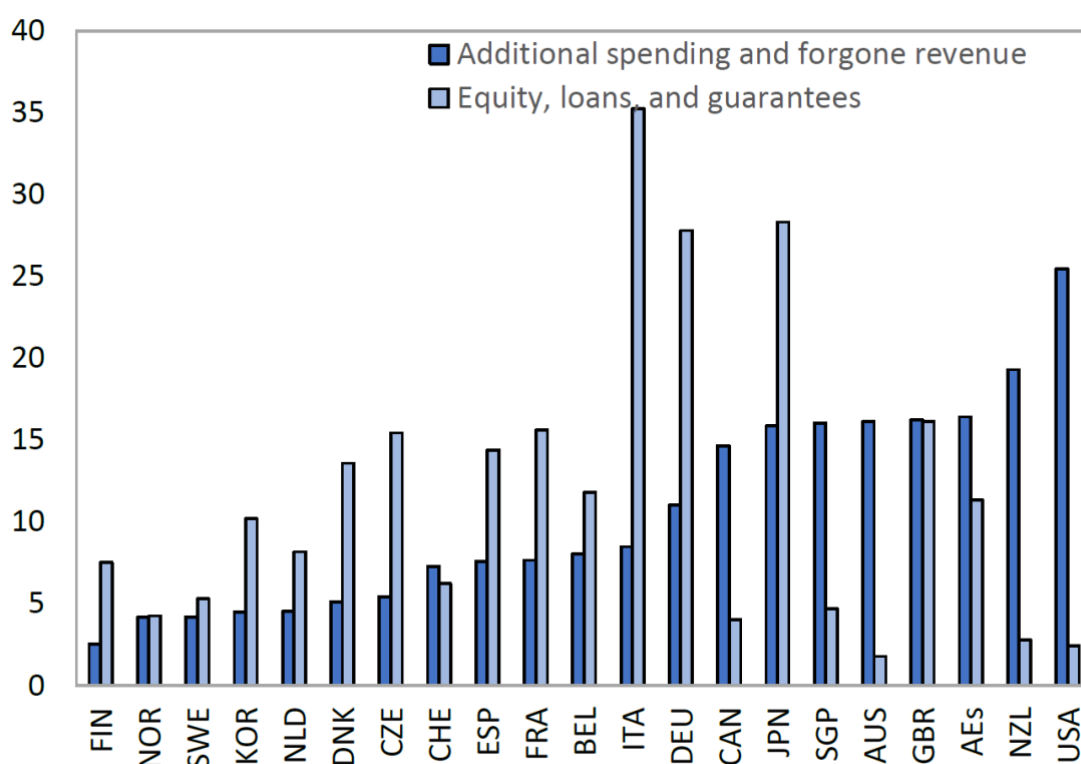
So far, the risks of a dramatic increase in business bankruptcies and concomitant losses of jobs have not materialised due to massive government interventions. In a sort of 'whatever it takes' approach, most governments have not only seriously increased discretionary spending, including forgone revenues. They have also set up different forms of liquidity support, particularly for SMEs (OECD, 2020). In Europe up to 2021:Q1, additional spending is typically estimated to amount between five to ten per cent of GDP. At the same time, liquidity measures, including loans, credit guarantees, moratoria, and asset purchases, are around ten per cent of GDP, with maximum values for Italy and Germany of up to 35 and 28 per cent, respectively (figure 4.2.).

These public support programmes have mitigated the immediate risk of SMEs running out of liquidity and going bankrupt (IMF, 2020; Gourinchas et al., 2021). Due to these measures, bankruptcy rates in most countries have stayed stable or even decreased, not the least as bankruptcy proceedings have been suspended via public moratoria. However, de facto, many SMEs are likely to face continued liquidity pressures. The danger increases that "zombie firms" are kept afloat, i.e.



enterprises that are de facto bankrupt but can continue business due to massive government support and bankruptcy moratoria.

**Figure 4.2: Discretionary fiscal response to the COVID-19 crisis in selected countries  
(Percent of GDP)**



Source: IMF (2021)

However, since most support programmes have been in the form of credit, like loans and loan guarantees, rather than solvency support, e.g. equity injections, they had only a modest effect on firms' solvency risks. A serious worry is that public loan guarantees might overburden SMEs with debt which could adversely affect their solvency and future access to private credit. Further, large senior-debt claims held by banks or government agencies could discourage new (junior) financing for firms with weak balance sheets—particularly given high uncertainty about many firms' recovery prospects. As a consequence, these firms might delay profitable investment opportunities and lay off workers, which, in turn, would undermine the broader economic recovery.

While the economic situation may currently look stable due to government support programmes, impaired access to credit markets remains a main danger and vulnerability for 2021 and the



subsequent years. Should the banking sector tighten access to credit and prevent rollover of pre-pandemic SME maturing debts, failure rates would spike up considerably. Moreover, restrained access to finance would hit all SMEs, particularly those that would be considered viable in a no-pandemic environment. To prevent such a 'time bomb' scenario, continued access of SMEs to finance is crucial (see also below, Gourinchas et al., 2021).

#### **4.4. Adapting and phasing out government support**

In the immediate response to the COVID-19 pandemic, governments emphasised liquidity measures and provided blanket rather than targeted support. As the health situation seems to improve in Europe, public policies may need to gradually shift away from liquidity toward solvency support and better target their measures to reduce fiscal costs and avoid misguided incentives.

Conventional policy advice urges in "normal" times (i) to provide liquidity support only to solvent but illiquid firms, (ii) to restructure insolvent but viable firms - those whose net present value of expected future earnings exceeds their liquidation value -, and (iii) to provide an adequate framework to liquidate no viable firms. Possibly, due to the specifics of this crisis, a stronger case could be made for broader solvency support because of a wider gap between the crisis cost to the economy as a whole and the private cost to individual creditors and debtors of letting firms fail. For example, due to increased uncertainty in the COVID-19 pandemic in connection with financial market imperfections, viable firms may not find adequate financial resources. They may be pushed into liquidation as overwhelmed courts could fail to restructure such firms. It may also be challenging to identify viable, solvent firms that deserve financial support.

Both solvency support and restructuring are especially challenging for SMEs, and ill-designed solvency support could entail sizable fiscal costs and adverse economic side effects. Government agencies typically cannot directly inject equity in smaller non-listed firms. Moreover, restructuring procedures work better for larger firms than for smaller ones, not the least, as SMEs have smaller economic value relative to the transaction costs of such potentially complex procedures. Thus, they typically do not file for insolvency but are directly liquidated. The pandemic could heighten these challenges if it leads to large-scale equity needs and extreme pressure on restructuring mechanisms. It is also challenging to improve the effectiveness of any "quasi" equity support. Ill-designed support schemes could entail high fiscal costs and sustain "zombie" firms that should instead be liquidated so their capital and workers can be reallocated (Diez et al., 2020, see also chapter 6).

As the pandemic unfolded, state guarantees on bank loans to firms were aimed to ensure emergency access to liquidity. With the end of the lockdown and the first steps back to – a possibly new – normality, firms will differ in their economic health and degree of (excessive) debt levels. As a first approximation, businesses can be classified into (i) privately viable, i.e., the present value



of profits exceeds recovery value, and solvent as the present value of profits exceeds current debt, (ii) neither viable and nor solvent, and as an intermediate case (iii) viable under "normal" conditions but insolvent due to the shock and thus in need of debt restructuring.

**Table 4.1: Financial conditions of firms and adequacy of government support\***

Support Financial status quo	support	No support
Viable, liquid	gift	√
Viable, illiquid	√	default
Not viable	zombie	√

\* √ indicates, that current measures are adequate.

Source: own

The primary addressees of public support programmes should be viable firms currently illiquid due to the COVID-19 pandemic. For them, aid should be continued so that they can work themselves out of the economic problems. In contrast, support should be ended for the majority of firms that are viable and solvent despite the pandemic and nevertheless got (untargeted) financial aid as a 'gift' as well as for the non-viable 'zombie' firms (see table 4.1).

Even after the end of the lockdown, it isn't easy to evaluate which firms will survive and which will have to close. If banks cannot fully diversify credit risk, which is in particular likely for regional banks with close links to their local communities, they might ask for too high a risk premium or refuse to lend altogether. In addition, as most banks have experienced decreasing capital ratios during the COVID-19 crisis, they might be more reluctant to lend even to viable firms that are short on liquidity. In this situation, the government could mitigate a possible credit crunch by providing partial loan guarantees. It is in a better position than banks to diversify credit risk and to absorb the macro risks due to uncertainty about the further evolution of the pandemic and the effects of testing and vaccinating. Loan guarantees are not to be designed to save all firms. By correcting for the specific pandemic-related uncertainties and limitations in financial markets, they should improve credit pricing, which, in turn, should improve business decisions. Even with loan guarantees and other support measures, some firms will drop out of the market as they are either insolvent and/or unviable (Blanchard et al., 2020).



Whatever the specific details of the support measures, governments should resist the temptation to intervene in a discretionary way on the level of individual firms, in particular in the case of restructuring SME debt. While governments might have some expertise and experience negotiating the restructuring of claims on mid-cap companies with creditors and stakeholders, this does not apply to SMEs. It would be challenging to resist political pressures and ensure consistent and fair treatment of all SMEs. Instead, authorities should work with (regional) banks, the typical main private creditors of SMEs, with more granular information and a better capacity to use it. Governments should provide a clear set of options, e.g. pre-announcing and accepting favourable haircuts on its claims in debt restructuring and continuation of firms. Blanchard et al. (2020) urge that this process should thus be as quick and simple as possible, with the leading creditor bank in charge of the restructuring and only a limited number of parties involved in the complex bargaining.

#### **4.5. (Regional) Banks and Regulation**

While capital markets seem to function more or less well during the COVID-19 pandemic, not the least supported by central banks' unconventional monetary policies, the major challenges may be concentrated on companies lacking direct access to capital markets. In particular, SMEs depend on bank loans, so any constraints to bank credit supply could create correspondingly large obstacles for economic recovery. The so-called time bomb scenario pictures the devastating effects of a drop in bank lending during a post-crisis recovery as balance sheet pressures could hinder banks' ability to support credit growth during a recovery.

In this situation, bank regulators have provided capital and liquidity relief for banks to absorb losses better while continuing to lend. Chief among the measures have been (i) to increase capital levels by "asking" banks to retain profits, (ii) to lower capital requirements, e.g. by waiving risk weights on government-guaranteed loans, and (iii) to increase banks' lending space, e.g. by releasing countercyclical buffers as is intended in the case of a financial crisis (IMF, 2020b). At the same time, banks entered the pandemic with a much better capital position than in the case of the Great Financial Crisis and the European sovereign debt and banking crisis. This improved initial position and the regulatory measures helped that - to date - the crisis's impact on bank capital has been relatively limited, and bank lending developed relatively smoothly (Aiyar et al., 2021).

In their policies, bank regulators have to balance the benefits and costs of their policies carefully. If bank regulators are too restrictive and do not make good use of their manoeuvring space in implementing regulatory standards, bank lending and thus the overall economic recovery might suffer. Therefore, the Basel Committee and national authorities have exercised considerable flexibility and, e.g. have encouraged banks to work "constructively and prudently" with their borrowers. However, such proposals are not easily implemented and can have considerable downsides. If regulators publicly suggest banks be more flexible in general that may not help the individual bank when taking specific loan decisions. Such suggestions are necessarily rather vague



and thus may increase uncertainty in the banking sector so that the intended increase in loans may not be realised.

If regulators ease too much, as has happened in some cases when standards have been relaxed below minimum requirements of the Basel framework, there are risks of undermining the credibility of the internationally agreed standards. That could contribute to market segmentation and may increase the risks to bank safety and soundness. Banks may be pushed to lending to insolvent borrowers and not sufficiently recognise loan losses, which may jeopardise the financial soundness of banks and the recovery as credit is diverted from productive uses (IMF 2020b).

Taken together, the COVID-19 pandemic induced an unprecedented economic crisis with far-reaching consequences for the economic viability of SMEs and regional banks as their main financiers. The strengths and weaknesses of these firms have been highlighted in the crisis as if under a magnifying glass. SMEs have suffered more than larger firms in the pandemic as they are disproportionately active in the sectors most affected by the pandemic and the subsequent containment and hygiene measures. Not surprisingly, regional banks as their primary providers of financial services and funds are also disproportionately hit. It is, therefore, crucial to prevent negative financial feedback from regional banks to SMEs to secure a swift and stable economic recovery.

Government measures as diverse as wage subsidies, loan guarantees and bankruptcy moratoria have so far mitigated the economic fallout from the COVID-19 pandemic. The ultra-expansionary monetary policy of the ECB and a less restrictive approach by bank regulators may have also helped overall. Yet, it is characteristic for all these policy fields that they find it easier to support large firms than the very diverse SMEs.

Therefore, it is crucial for a swift and stable exit out of the COVID-19 crisis that public authorities continue with their support, particularly for SMEs and regional banks, until the recovery is well underway and the process of catching up has stabilised. During this recovery period, tools have to be designed to fight the already evident follow-up problems of the crisis, namely larger debt burdens, so that in the short to medium term, a financial backlash can be avoided.



## 5. Challenges from EU's Green Deal policies

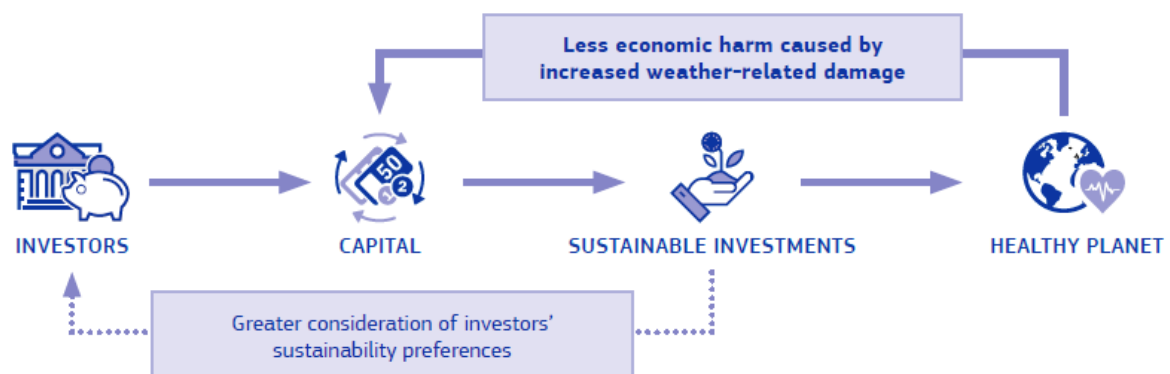
### 5.1. Basic ideas

Undoubtedly, climate change and its consequences for the global environment are the most demanding threats of humankind. With its Green Deal approach, the EU intends to increase the efficient use of resources by moving to a clean, circular economy and focusing on biodiversity and cutting pollution (European Commission, 2019). The goal is to make the EU climate-neutral by 2050. "Reaching this target will require action by all sectors of our economy, including

- investing in environmentally-friendly technologies
- supporting industry to innovate
- rolling out cleaner, cheaper and healthier forms of private and public transport
- decarbonising the energy sector
- ensuring buildings are more energy efficient
- working with international partners to improve global environmental standards." (European Commission, 2019).

Figure 5.1 depicts how financial systems may be involved to make private corporate investments more sustainable. Not only the preferences of firms to consider environmental constraints when planning new investments are essential, but the willingness of potential lenders is necessary to support a new approach of corporate strategies.

**Figure 5.1: Sustainable investments and sustainable finance**



Source: European Commission (2019)



The traditional microeconomic theory discusses two methods to identify efficient production technologies: First, maximise the possible output with a given budget or, secondly, minimise the total production costs for a given output. Exogenous factor prices assumed, competitive markets ensure a single optimal technology choice and provide Pareto efficient (macro) allocations.

One of this approach's major shortcomings is the absence of externalities. Simple textbook models focus on a firm's direct costs and disregard social and environmental interferences. As a result, the individual and social willingness to pay differ, so that market prices are too low to cover the negative external effects of corporate production. By applying a Pigouvian tax, effective prices may correct the socially inefficient or undesirable outcomes on markets with negative externalities (Pigou 1920, Baumol 1972). Pollution is one of the most relevant fields of such market failures. Public measures like regulation are also a means to avoid inefficient allocations, at least partially.

However, in practice, firms' investment decisions are likely to follow primarily direct cost-reducing strategies. Of course, consumer preferences may indicate to include environmental components, but competitive pressure limits a single investor's individual degrees of freedom. This is particularly true for debt-financed investments.

Although the EU Green Deal strategy in a first step focuses on institutional capital markets, Monetary Financial Institutions are also directly involved. Potential lenders are obliged to screen their customer's corporate investment projects carefully whether they comply with sustainability objectives. In this setting, banks screen and monitor the potential investment projects of their customers and thereby serve as agents to implement the ESG strategy on a wide scale in all local areas and industries. Banks' active contribution is almost indispensable, especially in countries and regions with limited infrastructural resources.

With this new approach, additional regulations are associated, which further strain the position of regional banks in an already demanding environment (see also chapters 2 and 6). A new challenge has been created in connection with the "European Green Deal" program. The detailed adoption of ecological elements to firms' investment in intangible assets is known as "Environment, Social, and Corporate Governance (ESG)". The upcoming Basel IV provisions include a detailed taxonomy that must be applied to prepare and calculate private corporate loan contracts. This novel procedure is considerably elaborate and time-consuming and severely weakens the particular business models of small and medium-sized MFIs.

A common language and a clear definition of 'sustainable' are needed to implement the strategy's fundamental goals (Busch 2021).<sup>14</sup> Therefore, a standard classification system for sustainable economic activities, the "EU taxonomy", has been developed (European Union, 2020). The Taxonomy Regulation assigns the Commission to establish a list of environmentally sustainable activities by defining technical screening criteria for each environmental objective through additional provisions. Based on an extensive report of a Technical Expert Group (TEG), the main outline of the framework refers to six goals (EU TEG 2020):

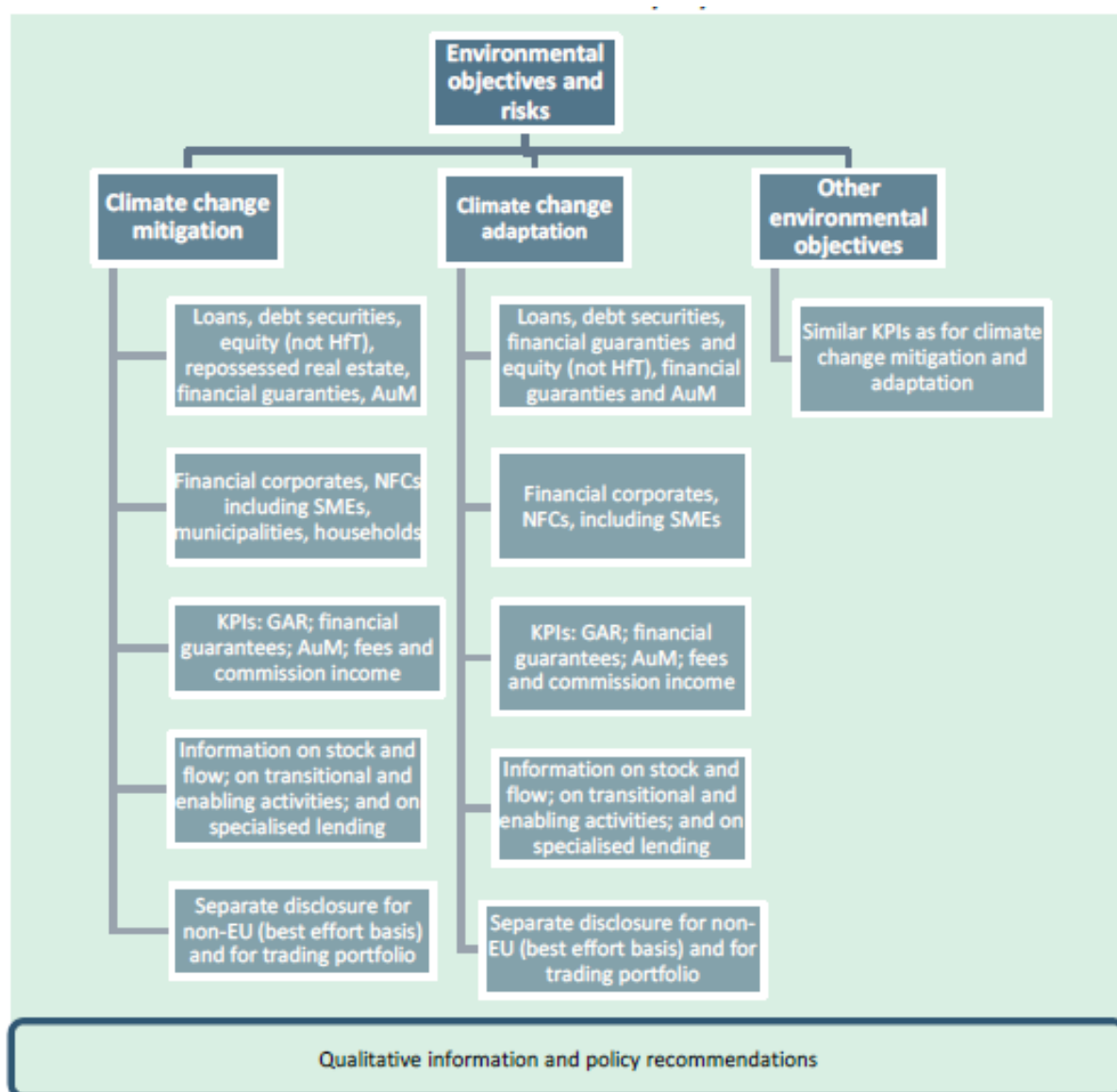
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<sup>14</sup> See European Commission (2021) for more detailed information. We focus on general remarks only.



- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems.

**Figure 5.2: Disclosures under Article 8 Taxonomy by credit institutions**



Source: EBA (2021), p. 11



Not surprisingly, an extraordinarily complex and diverse problem like "green finance" requires detailed procedures and recommendations. Even its basic rules and provisions add up to hundreds of pages filled with profound definitions and abbreviations like DNSH or KPI<sup>15</sup> a bank or a private investor has to keep in mind when planning future investments. The already mentioned TEG report consists of about 60 pages; its annexe with "Updated methodology & Updated Technical Screening Criteria" comprises approximately 600 pages, in addition. The so-called "Sustainable-Finance-TEG-Taxonomy-Tools" refer to more than 20 regulations, directives, guidelines, decisions or recommended practices and distinguish between almost 600 different types of private investments.

At last, the European Banking Authority (EBA) presented an "Advice to the Commission on KPIs and the Methodology for Disclosure by Credit Institutions and Investment Firms under the NFRD on how and to what Extent their Activities qualify as environmentally sustainable according to the EU Taxonomy Regulation". Figure 5.2 provides an overview of the scope of the disclosures by banks, which may be relevant and sufficient to show their alignment with the EU Taxonomy. Figure 5.3 displays the economic activities for which performance thresholds should be set.

**Figure 5.3: Taxonomy regulation**



Source: EU TEG (2020), p. 2

The Taxonomy does not yet include all economic sectors of the EU Member States. It will at first be applied to large companies and particular groups of financial market participants only. Historical experience suggests that the involved organisations will most likely press forward and succeed in extending the taxonomy to the remaining sectors and financial institutions.

<sup>15</sup> DNSH stands for "Do No Significant Harm" and KPI for "Key Performance Indicator", respectively.



## 5.2. Reorganisation of the EU banking industry

Without going into too much detail, it is evident that banks' additional functional responsibilities will be substantial once this novel concept has been implemented. At least a couple of other and more fundamental questions need to be discussed in both the political and the organisational environment. There is reason to believe that the transfer of bank supervision to the ECB causes persisting ambiguities regarding the EU authorities' particular spheres of duties. Neither the "Treaties of the European Union" nor the "Statute of the European System of Central Banks and the European Central Bank" explicitly authorise the ECB to control macroeconomic policymaking besides establishing a workable monetary framework. In retrospect, at the peak of the financial crisis, the ECB became the only European institution capable and willing to act. During the subsequent period of severe sovereign debt problems of individual EU Member States, the ongoing discussions revealed divergent positions in decision-making bodies that had been almost unable to come to reasonable compromises. Simultaneously, the euro depreciated against many important currencies and uncertainty about a broad and ongoing recovery of EU economies increased.

These precarious developments came to a sudden stop on 25 July 2012: "Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough." (ECB, 2012). These two sentences by then ECB President Mario Draghi became a complete game-changer. The consequences were at least twofold:

1. The world, banks and investors included, suddenly took notice of a strong, solid, and determined opponent fighting for European interests by applying even exceptional instruments if necessary.
2. Since the Council of the European Union, the European Commission and the European Parliament still appeared more or less estranged, the ECB faced no substantial opposition from other EU institutions.

The ECB quickly realised its dominant role in economic policy discussions even on non-monetary topics and began to support a complete reorganisation of the European financial industries. In 2014 the European Banking Union (EBU) started with establishing a Single Supervisory Mechanism (SSM) first, accompanied by the assumed supervisory authority of the ECB. It should be mentioned that the legal foundation of the extended mandate, referring to Article 127(6) of the Treaty on the Functioning of the European Union (TFEU), was controversially discussed. The ECB's twin role as the single authority for monetary policy and as the ultimate supervisor of the financial systems is very susceptible to potential conflicts of interest.

For the banking industry, the regulatory framework changed substantially. The pure number of influential players increased. Now not only national supervisory authorities, frequently supported by national central banks, are in charge but also centralised European institutions, e.g. ECB and EBA, regularly determine rules and procedures. The initial (misleading) ideas of a single rule book and a level playing field caused many problems, especially for smaller banks with limited business opportunities.



Numerous novel obligations for the banks accompanied the ongoing process of finalising the European Banking Union. The three pillar model consisting of the SSM, a new Single Resolution Mechanism (SRM), and a (still pending) European Deposit Insurance System (EDIS) represents the core of the reorganisation of previously separated national finance industries. Side by side with the Supervisory Review and Evaluation Process (SREP), itself organised by almost a dozen "clarifying" guidelines, the evolution is on its way with no end in sight. Currently, the number of constituent legal provisions every bank in the EBU has to comply with is estimated to be at least 500, with an average volume of 100 pages each, adding up to 50,000 pages of binding rules.

Now the planned implementation of the Green Deal and Sustainable Finance will come on top. For sure, these topics are of utmost relevance for all economic sectors in the EU Member States. Therefore, the ECB and the EBA have to be involved, but the impact of these institutions, strictly speaking without almost any direct democratic control, gives rise to doubts. The framework sketched in chapter 5.1 has more or less wholly been designed inside the supervisory system, i.e. ECB, EBA and TEG. Whether these agents should be assumed to dispose of superior knowledge about the vast problems of implementing the Green Deal program is – at least – discussable.

### **5.3. The future way forward?**

While ECB and EBA are the executive originators of the procedures and provisions described above, banks and their private customers represent the institutions finally affected. The novel rules may change the business behaviour of both groups and, additionally, define a modified bilateral exchange of information. Once again, SMEs and their traditional finance partners, regionally operating banks, will quite likely suffer the most.

In the fight against global warming, the EU Green Deal calls for innovative ideas in technology and new business models. The new approaches are implemented in a decentralised and local way so that SMEs are natural leaders to monitor and benefit from this transformation process. Regional banks play an essential role in this grand challenge, as their detailed knowledge of local conditions is vital for an appropriate allocation of funds and government aid.

Up to now, an agreement on a loan contract starts with a particular application of a customer. An ongoing relationship simplifies the formal conditions, as much relevant information about the potential borrower is available for the bank. Nonetheless, a detailed screening routine is necessary due to supervisory provisions. Reliable disclosure of the customer's latest business figures is needed to support or accelerate the process. Applicable collateral can also help reduce a loan's potential riskiness and simultaneously improve the contract's conditions. All in all, contemporary credit analysis focuses on borrowers economic capability based on their financial statements and the banks' records, if available, or interviews with the applicants.

Almost any kind of credit information is costly. Hence, there is a trade-off between the expected value of additional screening and its marginal cost. Since the value of new information is naturally



vague, a budget constraint technically limits the search process. Skilful loan officers are needed to ensure optimal information and acceptable risks with capped costs. Note that information costs may even be sunk if a particular credit analysis' outcome recommends rejecting the initial application. Technically, these expenditures have to be covered by the net profits of realised loan contracts.

Banks' statutory requirements might considerably change with a Green Deal policy. Henceforth, a lender will be obliged to comply with its internal economic benchmarks, e.g. profitability or risk distribution, and obey detailed taxonomy regulations. Now the loan officer will have to ascertain whether the loan's intended purpose is "green" or "sustainable" in the taxonomy's sense. Capital requirements trigger the incentive mechanism: The larger the share of "green" loans in a bank's portfolio, the lower the capital requirements and vice versa. More precise, "non-green" contracts induce capital mark-ups compared to "sustainable" investments. Because additional capital causes higher costs, interest rates for "non-sustainable" loans will also be higher than for "green" ones.

Most likely, screening costs will increase for all new loans under the green taxonomy. Even more, the probability of realising sunk costs also rises because not all loan applicants with "non-green" investment projects may be willing or able to accept less attractive contracts. Overall the average bank's loan portfolio is supposed to shrink while operating costs are likely to rise. Hence, bank profitability may come under additional pressure in the near future. These problems may particularly arise for regionally operating banks with limited opportunities to adopt alternative business strategies.

Small MFIs focus on lending to local customers and, therefore, emphasise interest income rather than fees or commissions. In the short run, the economic infrastructure for a regional bank is more or less fixed. A fundamental change of the local environment takes time and very often needs public financial support. A single firm needs positive economic incentives to invest in "green" projects; the supervisory driven feedback of a bank may even lead in the opposite direction: more detailed disclosure, additional information on sustainability-related investment plans, verification of DNSH, etc.

Again, small and medium-sized enterprises might be systematically disadvantaged. To shift to "green" investments, they need appropriate skills to implement new technology and enter unfamiliar markets. Average risks increase while future profits are more uncertain and the investment portfolios lack diversity. SMEs' financial reserves quite often are also negligible and external resources available only with local banks. Even if the firm accepts the higher risk and is optimistic about prevailing against new competitors, it still has to convince a potential lender that the designated investment is "green".

Again the problem of heterogeneity arises since particular (national) interests may cause conflicts in classifying production techniques or specific inputs. Natural gas power stations, e.g., are labelled "green undertakings", although fossil energy is used. Similar discussions arise regarding nuclear energy that produces no harmful emissions but nuclear waste instead (Busch 2021).

Putting both sides together, a dilemma remains: None of the players can be perfectly sure that the "underlying", i.e. the investment project, of a loan contract is "green" in terms of the taxonomy as



long as the responsible supervisory institution has not approved it. Hence, "Green Deal", "Sustainable Finance", and "Green Taxonomy" are rather opaque programs with considerable risks for banks and private investors. As with other dimensions of a typical loan contract, banks do not seem to have a comparative advantage in verifying the sustainability of a specific investment. To take a simple example from a typical real estate loan: regulators do not ask banks to check the stability of a particular construction. These structural engineering calculations are left to specialised engineering companies. Some "official surveyor agencies" analogously need to be established to certify loan financed "green" investments beforehand.

An important step to implement a baseline of harmonisation is the Sustainable Finance Disclosure Regulation (SFDR) (European Union, 2019). Although another bulk of rules and directions is put in force, the positive impact is likely to prevail. Without an EU-wide rulebook, some (national) competitive advantage may arise as long as standards and rules considerably differ between member states. At least partially, a higher and consistent level of transparency might be established (Busch 2021).

Overall, the specific challenges of climate change for SMEs and regional banks that come at different levels must be addressed. The associated structural transformation opens up new chances on the local level for SMEs while at the same time leaving some business models obsolete, making depreciations in bank balance sheets necessary and creating additional demand for capital. Public transformation programmes like the EU's Green Deal can only be implemented on the regional level and thus depend on an adequate financial infrastructure that can channel the funds to SMEs.

More specifically for the banking industry, the upcoming ESG-regulations prompt banks to carefully screen loan applications for sticking to ecological requirements set by the EU in general and by the ECB in particular. Again, the directions are profoundly detailed, so that the task to fulfil the rules is expensive and time-consuming. Especially for smaller loan engagements, large banks are likely to avoid monitoring costs since their comparative advantages are in other different fields. Without local savings or cooperative banks, SMEs would face additional obstacles in rendering accessible external financial sources, which in turn would make the implementation of the Green Deal more difficult.



## **6. ECB's unconventional monetary policy, banks' sustainability and SME finance**

European companies, especially small- and medium-sized enterprises, depend on bank lending as their main funding source. The banking sector's primary function of channelling funds from savers to firms and households is essential to ensure investment and economic development, but it is a fundamentally risky activity. Shocks to banks' risk-bearing capacity can restrict credit supply and therefore may require monetary policy to act and improve the workings of financial markets.

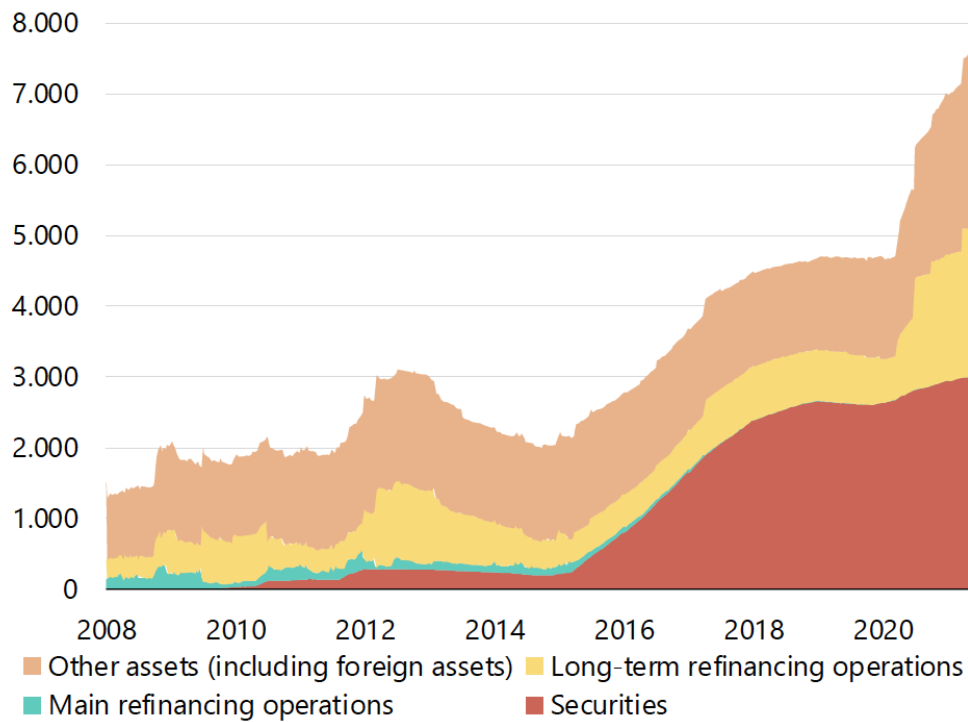
As a monetary union with a supranational monetary policy institution and 19 participating countries with major differences in their economic structures, business cycles, economic policies, cultures, and languages, the heterogeneous structure of the euro area poses additional challenges to monetary policy. Given this tremendous heterogeneity, the effects of monetary policy may differ substantially across countries and sectors.

### **6.1. ECB's unconventional monetary policy and interest rates**

In the wake of the more recent financial, sovereign debt, and pandemic crises, policymakers in the euro area have responded with a wide range of expansionary measures, chief among them the European Central Bank's unconventional monetary policy. It can be roughly divided into three phases, (i) the period of the Great Financial Crisis as well as the subsequent euro area sovereign debt and banking crisis from 2008 to 2012, characterised by long-term, large-scale liquidity provision to banks and targeted asset purchase programmes; (ii) the period of persistently low inflation and stagnation from 2013 to 2019, in which forward guidance, negative deposit rates and eventually large-scale asset purchases have been major policy instruments; (iii) the COVID-19 pandemic since early 2020, characterised by a further stepping up of the large-scale asset purchases (see figures 6.1. and 6.2.).

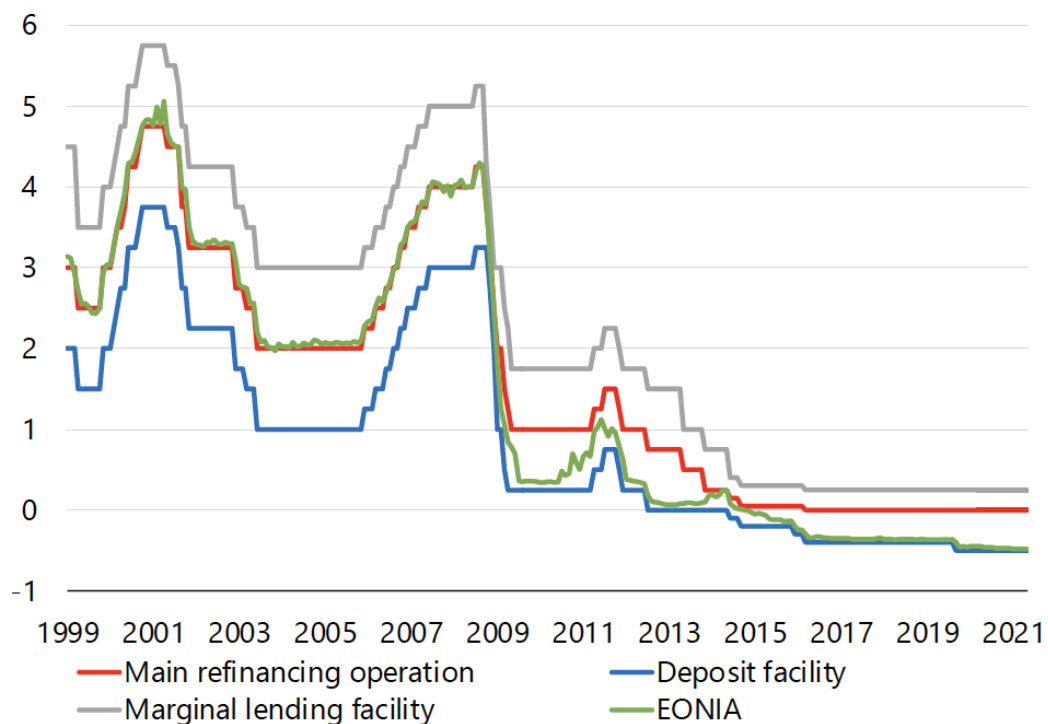


**Figure 6.1: Eurosystem balance sheet (bill. of euros, 2008 - 2021)**



Source: European Central Bank, own calculations

**Figure 6.2: Eurosystem policy rates and EONIA (per cent, 2008 - 2021)**



Source: European Central Bank.



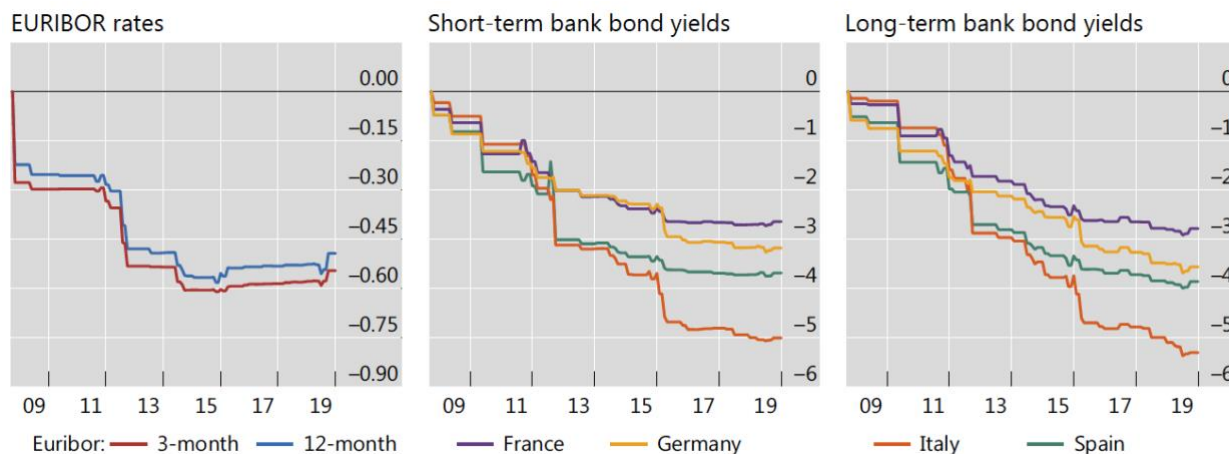
With its unprecedented monetary policy measures, the Eurosystem has targeted credit market conditions through several channels. The first element is the direct effect on the benchmark money and capital market rates. The ample liquidity provision reduces liquidity risks, which can also lower the credit risks of solvent but illiquid firms. Due to the strong sovereign-bank nexus in the euro area also spreads on sovereigns and banks should decrease. Benchmark money market rates and capital market rates, in particular sovereign bond yields, are likely to fall. This effect is amplified by a lower level of expected future policy rates and shrinking term premia. Specific for the case of the euro area, bond purchases also work through a sovereign credit risk channel and redenomination risk channel, i.e. they lower the risk of a euro area breakup and a subsequent redenomination of the euro area exiteers' debts into their new currencies. As a second element, the reduction in benchmark money and capital market rates should be passed through to retail lending and deposit rates offered to households and non-financial corporations. If banks set retail lending and deposit rates as a mark-up/mark-down over the benchmark money and capital market rates, a reduction in benchmark rates translates directly into lower retail rates, most likely with a delay due to the sluggishness of retail rate adjustment. The reduction of ECB's policy rates should reinforce these effects (Hofmann et al., 2020).

How did these unconventional interest reductions and large scale asset purchases affect money and capital market rates, and subsequently, banks' retail lending and deposit rates? To what extent did the Eurosystem succeed in improving credit conditions for households and firms? What have been the economic side effects, i.e. the collateral damage, of this policy?

The extensive literature on the interest effects of the ECB's unconventional monetary policy finds by and large that these measures have succeeded in lower money and capital market rates. In a comprehensive, exemplary event study of the unconventional monetary policy, Hofmann et al. (2020) study the announcement effects so that they can embrace a wide range of policy measures. They find for four major euro area countries, France, Germany, Italy, and Spain, that the ECB has significantly lowered rates. However, the effects differ substantially over time and concerning the different market rates. The impact on EURIBOR rates was somewhat limited, with an overall decrease of about 0.5 percentage points (Figure 6.3., left-hand panel). The principal reductions are linked to the large-scale liquidity provisions announced in October 2008 and the lowering of the deposit facility rate to zero in July 2012. The wide range of other very expansionary measures after 2012 seems not to have had any significant effect, possibly because rates have already been relatively low.



**Figure 6.3: Cumulative announcement effects of ECB's unconventional monetary policy**  
(Percentage points, cumulative from September 2008)



Source: Hofmann et al. (2020)

In contrast, announcement effects on bank bond yields were more pronounced, yet again differing vastly over time and across countries (Figure 6.3., centre and right-hand panels). Yields on short- and long-term bank bonds fell in total by between less than three percentage points in France and more than five percentage points in Italy. They had a more substantial effect on those countries most affected by financial stress and economic weakness over the period. Again, the reductions in bank bond yields are related to a few measures that were announced early on, namely the Outright Monetary Transactions (OMT) in 2012 and the start of the Asset Purchase Programme (APP) in mid-2014.

## 6.2. Bank lending and deposit rates and the net interest margin

To what degree have the lower money and capital market rates been passed on to retail lending and deposit rates for households and firms? And how was the spread between lending and deposit rates and thus banks' profitability affected? Due to ECB's unconventional monetary policy, market interest rates have been exceptionally low for more than a decade. Protracted periods of low interest rates have been found to impact bank net interest margins (NIM) substantially. As the interest rate level decreases, deposit rates are usually stickier downwards than retail lending rates, an asymmetry that is more pronounced the lower the interest rate level (Borio et al., 2017; Claessens et al., 2018; Brei et al., 2019).

There are several effects at work. Firstly, banks' reluctance to charge negative interest rates on retail deposits implies an effective lower bound, through which an interest rate reduction at negative rates has an even larger, nonlinear effect on the net interest margin than at low but positive



rates (Klein, 2020). Simulation results by Hofmann et al. (2020) indicate that for the recent period of unconventional monetary policy, the lending-deposit rate spreads were significantly reduced by between 50–150 basis points in the case of Germany and by up to 100–250 basis points in the case of Italy. Results for France and Spain are mostly insignificant, possibly due to lower competitive pressures in the banking sector. Again there exists great heterogeneity between countries, and again the main effects occur early on in 2011 and 2016. (Cruz-García et al., 2019; Claessens et al. 2018; Altavilla et al., 2017). The resulting compression of the net interest margin is exacerbated by the negative deposit facility rate, as banks have to pay for excess liquidity held at the ECB. This direct cost reduces banks' interest income even further. In September 2019, the ECB introduced a two-tier system for remunerating excess liquidity holdings to somewhat lessen this interest burden.

Secondly, the ECB explicitly aims with its asset purchase programmes at lowering long-run interest rates to promote investments and, more generally, interest-sensitive goods demand. Concomitantly, the yield curve becomes flattened, and the term premium shrinks, which puts additional pressure, especially on small banks. They perform the essential tasks of maturity transformation for their SME customers, i.e. taking in short-term deposits and handing out long-term loans. With the reduced spread between short- and long-term interest rates, the net interest margin shrinks, impairing the profitability of financial intermediaries, which makes it even more difficult for them to rebuild their equity.

In addition, there is a third short-run mechanism that affects the net interest margin in the transition phase whenever the interest rate level changes. In a period of a decreasing interest rate level, deposit rates decline faster due to their shorter maturity, while the average interest rate on (fixed rate) loans declines more slowly due to the longer maturity. As a consequence, the net interest margin may temporarily increase. Analogously during a period of rising market interest rate, the net interest margin is additionally compressed as refinancing costs increase while long-term, low yielding loans still dominate the credit portfolio. This combination of a "low for long" interest environment with an already compressed net interest margin can make the return to normality, i.e. higher interest rate, a very risky and complicated endeavour. It can seriously put banks into jeopardy as they have to cope with a further deterioration of their already small net interest income in the process of rising interest rates.

### 6.3. Bank lending

At first glance, low net interest margins are not necessarily bad from a macroeconomic and monetary policy perspective. They can reflect intense competition in the banking sector and low funding costs for the private sector. In competitive markets, banks' ability to set interest rates should be limited, and interest rate pass-through should be comprehensive (Van Leuvensteijn et al., 2013; Klein, 2020).



But what are the longer-term effects of a declining net interest margin? How did the expansionary monetary policy affect banks' loan business? In correspondence with the declining market interest rates, banks lowered the rates on commercial loans. When lending is, on average, less profitable, banks, particularly more profitable banks and retail lenders, may cut lending. At the same time, the compression of the interest margin creates incentives for banks to "search for yield".

Interestingly, at negative rates, this second effect seems to dominate. As banks face downward pressure on interest income, most of them try to stabilise their income by granting more loans regardless of the average margin they earn. As they (have to) move away from low-yield short-term liquid assets to high-yield long-term illiquid assets, they potentially increase their interest risk exposure as they are willing to accept lower premiums for bearing duration risk (Molyneux et al., 2020). Neuenkrich & Nöckel (2018) among others, find that prolonged periods of low interest rates decrease risk perception and increase risk tolerance by banks.

Besides lowering interest rates, ECB's large scale asset-purchase programmes may also work more directly via the portfolio rebalancing channel, especially in distressed euro area countries. Within its Securities Markets Programme (SMP), the ECB, e.g. bought distressed sovereign bonds with long maturities from Italy, Ireland, Spain, Portugal and Greece, the expectation being that banks substitute these bonds with assets of shorter duration. Shortened duration and enhanced reserves should increase banks' ability and willingness to extend more loans, given that a lack of regulatory capital does not restrict them. In addition, these purchases should lower uncertainty in financial markets via the implied commitment by the central bank to stabilise financial markets. More secure national banking sectors should also improve SMEs' finance, mainly via bank credits (Ferrando et al., 2018). These effects may differ for the specific instruments of the ECB's unconventional monetary policy. Koetter (2020), e.g. finds for the OMT programme that banks increased commercial lending while curtailing lending to private households, developments that are also driven by changes in credit demand.

The unconventional monetary policy may influence not only the level but also the structure of new business loans. The growing literature on so-called zombie firms finds that poorly capitalised banks took advantage of the ECB's unconventional monetary policy, particularly the very long-term refinancing operations (VLTROs). To avert the otherwise imminent risk of forfeiting existing liabilities, they evergreened exposures to non-viable zombie firms, thereby increasing credit risk. Based on the improved financing via the ECB's unconventional monetary policy, these zombie firms have even been able to leverage their trade credit by borrowing from downstream and upstream firms. In the aggregate bank, lending increased, and its structure changed. Particularly under-capitalised banks extended credit to low-quality borrowers to prevent bailouts. These firms then used the new credits to build up cash reserves rather than to invest. Nevertheless, the default probability of these zombie firms increased (Bittner et al., 2021).



#### 6.4. Bank profitability

Banks' profitability determines their ability to generate capital internally and thus their potential to provide adequate funding to firms and households. Profitable banks can attract capital from market investors at lower costs and generate equity through retained earnings. In turn, well-capitalised banks can adequately intermediate between savers and investors and mitigate economic shocks. Robust bank profitability, therefore, contributes not only to an adequate transmission of monetary policy but also to bank soundness and financial stability. Accordingly, concerns about financial (in)stability are behind the ongoing debate about the potential adverse effects of the unconventional monetary policy on bank profitability through the compression of banks' net interest margins. Lower margins reduce banks' ability to build up capital so that their shock-absorbing capacity is weakened (Klein, 2020).

The unconventional monetary policy affects bank profitability through several channels, and the overall impact from these channels is unclear ex-ante. As discussed above, monetary policy is likely to reduce net interest income via different channels, not the least by flattening the yield curve so that unit interest margins may shrink, particularly at very low interest levels. At the same time, the unconventional monetary policy eases bank funding conditions, e.g. by allowing banks to obtain long-term funding at negative rates through the TLTROs. More importantly, the adverse effects on net interest margins may be partially offset by the positive impact of policy measures on macroeconomic conditions with higher intermediation volumes and better credit quality on average. The lower interest rates also induce capital gains on the securities held by banks, with a positive impact on profits.

In addition to the increased credit risks discussed above, there are also major interest rate risks accumulating in the banking sector. In the current low-interest-rate environment in the euro area, there is also the risk of a sudden increase in interest rates and heightened interest rate risk. Molyneux et al. (2020) find that the effects of the ECB's monetary policy depend on the banks' specific business models. Banks that rely on core deposits hold more floating-interest rate loans and diversify their lending, either by sector or geography, are less exposed to an increase in interest rates. Small banks focusing on the conventional deposit and loan business should have some safety buffer, while their focus on the local business restricts the possibility of diversifying lending.

In this situation, studies of the specific case of small banks are of particular interest. Juntilla et al. (2021) analyse the effects of the unconventional monetary policy on the financial situation of the OP Group of cooperative banks in Finland. They find that the introduction of negative money market interest rates in European interbank markets since 2014 initially improved the profitability of Finland's OP banks. Results are more pronounced for the largest cooperative banks that seem to have the most vital interest and the best opportunities to increase wholesale funding. These findings are related to the increased reliance of Finnish cooperative banks on wholesale funding during the period of negative interest rates. However, since the beginning of 2017, even the biggest cooperative banks had to face a compression of their net interest margin and a subsequent loss of profitability. Smaller cooperative banks have experienced a much stronger deterioration of their



NIM in times of negative interest rates than during times of positive interest rates. The authors conclude that their "results raise extremely serious concerns for the near-term profitability of banks due to the obvious continuation of negative interest rates in Europe at least during the real economic survival period from the COVID-19 crisis." In a study on Austrian banks, Kerbl & Steiner (2020) find that an expansionary monetary policy overall induces risk-taking. On the one hand, banks subject to tightening capital requirements reduce the probability of default and expected loss of their customers more strongly. On the other hand, smaller, regional deposit-financed banks, which are to a greater extent affected by decreasing interest rates due to margin pressure, show stronger signs of risk-taking.

Faced with compressed net interest margins, banks have essentially two options to improve their profitability. They can revise their credit transactions and search for alternative sources of profit, in particular fee-based businesses. Concerning the loan business, banks have reacted along two lines. First, banks have reduced their loan loss provisions with declining interest rates. In the short term, this may be justified as the debt service for flexible rate loans and new loans are less demanding in such a low-interest-rate environment. Not only is debt service for given credit volumes smaller, but with the expansionary effects that may come with low interest rates, the general business environment of firms may be more favourable. However, should rates increase in the future, it may become impossible for firms to continue to service their flexible rate debt – an unsustainable situation. The situation is further aggravated when banks increase their lending in a negative interest rate environment (see above section 6.3.). As they finance more risky, less viable projects, they trade-off short-term profits for long-term losses due to higher default rates in the future. As an alternative, banks can expand into other businesses fields to generate fee-income that is independent of interest rate development.

Given the distinct heterogeneity of the European banking sector with its wide variety of business models, it does not surprise that banks differ significantly in their ability to protect their profitability in a low-interest-rate environment. Banks with more diversified portfolios and more wholesale funding have been less constrained by low and partly negative interest rates. Thus, universal or larger commercial banks have more stable interest income due to larger, more diversified portfolios and more options to increase their net non-interest income, for example, through cross-selling activities.

In contrast, portfolios of small regional banks are less diversified due to their more local business environment, so that their credit portfolios are more unbalanced. In an environment of negative interest rates, these smaller banks that follow more traditional business models are perceived as relatively riskier. More specifically, Lopez et al. (2018) find that the overall profitability of banks funded at more than 75% through customer deposits is declining as interest rates become negative. In particular, increases in net non-interest income are not able to offset the reduction in interest income. One consequence of this finding is that retail banks, which are often not listed on the stock exchange, are less able to boost their capital through retained earnings (Nucera et al., 2017; Klein, 2020).



## 6.5. Unconventional monetary policy and financial stability – the dose makes the poison

In reacting to a sequence of crises affecting financial markets since 2008, the ECB first introduced new unconventional instruments, which it then used more and more aggressively over time. A policy of low-interest rates turned into one of keeping interest rates negative for long, and a policy of directly decreasing long-run yields via asset purchases developed into massive, at times even nation-specific asset purchasing programmes with the Eurosystem's balance sheet to quintuple since 2008 with the "whatever it takes" option looming in the background

In the beginning, these measures seemed to have achieved the intended goals, namely to stabilise the euro area's economy and, in particular, its financial sector, at least in the short run. However, as the asset purchase programmes have continued to grow and interest rates seem to stay "lower for longer", these measures appear to lose more and more of their effectiveness. At the same time, the accompanying collateral damage seems to be growing. In particular, risks to financial stability are on the rise.

When implementing its negative interest rate policy, the ECB accepted that retail lending and deposit rates declined asymmetrically so that the net interest margin of banks and thus an essential component of their income shrunk. As intended by the ECB, the banking sector reacted to these losses in revenues by increasing the supply of loans, with the negative side effect of deteriorating loan quality. While bank profits have been stabilised in the short run by various measures such as reduced loan provisions, the increased credit risks are likely to materialise in the medium to long run.

While the unconventional monetary policy was supposed to mitigate the crisis, it undermined market discipline, impaired capital allocation, and further reinforced instabilities and the risk of financial contagion within the real sector over the longer term. Given the marked heterogeneity in the banking sector, these adverse side effects of the unconventional monetary policy have spread very unevenly across the euro area's banks and beyond. It is mainly the group of small banks and their SME customers that have to cope with the deteriorating market conditions. At the core of small banks' business model lies maturity transformation and the provision of credit to regional businesses. There is only very little scope to diversify the credit portfolio or generate fee-based businesses as an alternative source of income. Also, the options to obtain capital from external investors are more limited for small regional banks, making it very difficult for them to rebuild equity.

The longer this situation lasts, the more severe the consequences will be.



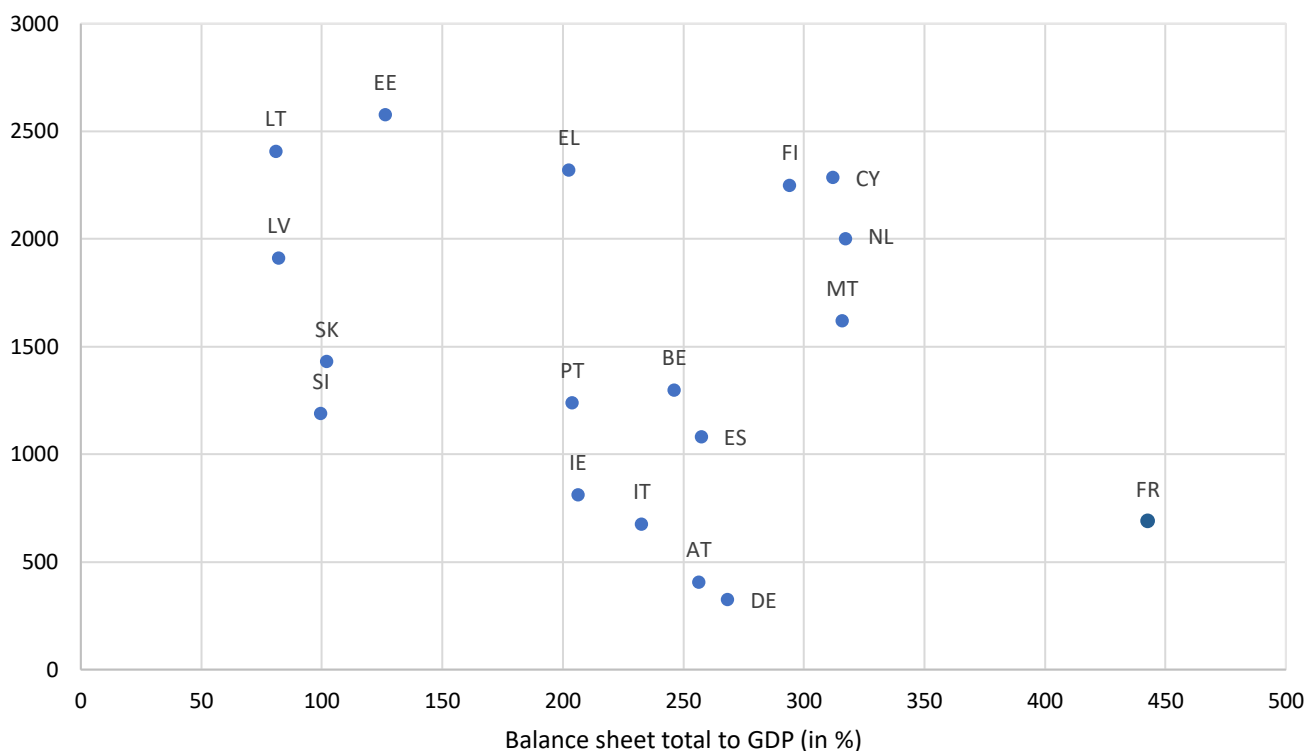
## 7. Supranational regulatory policies and heterogeneity in finance – one size does not fit all

Two opposing forces drive the financial sector in the European Union. On the one side, European finance is marked by a distinct heterogeneity as national financial sectors differ to a considerable, possibly increasing degree, e.g. concerning size and concentration of the banking sector (see Figure 7.1). The size of the banking sector as measured by the banks' balance sheet total relative to GDP varies between around 80 per cent for countries like Lithuania and the more than fivefold value for France, namely about 450 per cent. Concentration in the banking sector also varies considerably, with a market share of the five largest credit institutions between 34 per cent in Germany and 97 per cent in Greece. On the other side, regulatory policies are supranational and thus of the "one-size-fits-all" kind. Diverse and unintended consequences in the individual EU Member States are likely to result when such homogenous policies are implemented in a heterogeneous environment.

**Figure 7.1: Size and degree of concentration of banking sectors in the EU, 2020**

**(Banks' balance sheet total to GDP in per cent, Herfindahl index, without Luxembourg)**

Herfindahl index



Source: European Central Bank, Eurostat, own calculations



In the following, we first characterise the underlying assumptions of supranational regulatory policies. Secondly, we discuss how the marked heterogeneity in finance arises and how path dependence stabilises and even enforces differences between national banking sectors. Thirdly, we apply the concept of institutional complementarities to analyse how differences in national economies should be viewed in a systemic concept and how they contribute to a nation's comparative institutional advantage in a changing environment. Finally, we examine how supranational regulatory policies in the EU nations can have quite distinct and often unintended effects for regional banks and SMEs on the national level.

### 7.1. Supranational regulatory policies

The financial sector differs in many dimensions from other sectors in the economy. Chief among them is the importance of public policies that have a particularly large impact on the production opportunities of financial firms. In the EU and especially in the Euro Area, these regulatory and monetary policies are of the supranational kind. The Single Rulebook and initiatives like the capital market and the banking union are implemented under the implicit presupposition that one size fits all or, more precisely, one size *should* fit all.

This approach builds on several assumptions. Firms and banks are thought to be relatively homogenous groups of enterprises that can be analysed within the model of a representative firm and a representative bank, respectively. Economic, political, and social institutions are believed not to matter or be of minor importance only. This institutional framework is assumed to not substantially constrain households, enterprises, and policymakers in their decisions. In line with the perception of homogenous banks, financial systems in advanced capitalist economies are envisioned to converge on a market-based system (e.g. Lazonick and O'Sullivan, 2001). Adjustments to such an equilibrium are expected to occur swiftly with only minor costs. Accordingly, specific regulations are believed to work similarly in the individual Member States with likewise consequences under very different institutional and economic environments.

These assumptions are at odds with economic reality in the EU, which is quite different and intrinsically much more complex. Economic and political institutions do matter and are important determinants of everyday decisions by private and public decision-makers. As institutions differ between nations, not the least due to historical developments, economic structures have evolved differently in the Member States – a group of countries that not without reason self-characterises as being "united in diversity".



## 7.2. Heterogeneity in EU's financial sectors – self-enforcing feedback and path dependence

The EU Member States differ to a considerable and possibly increasing degree in the way enterprises are funded. The traditional dichotomy of large, internationally operating firms and more traditional, domestically oriented SMEs is increasingly supplemented by intermediate, mid-to-large sized firms with their distinct funding pattern. This gives rise to several specific trends. Some large international enterprises converge to a market-based finance model with direct access to (inter)national debt and equity markets. At the same time, SMEs typically continue to operate in their more conventional nation-specific mode, which seems to be optimal for them given their specific business environment. Within the EU, vast differences in SME financing have evolved and persist today. In a representative group of Member States, e.g. the share of regular bank loans in SMEs external investment funding varies between 50 to almost 80 per cent, while leasing or hire purchases contribute 30 per cent in Sweden and less than 10 per cent in Spain. Finally, the evolving intermediate group of mid-to-large size firms is of a hybrid character which takes up elements of Blue Chip companies and conventional SMEs (e.g. Deeg, 2009; European Investment Bank, 2020; Gischer & Herz, 2020).

Given these trends, diversity is growing in the financial sectors of the EU Member States and on the level of the EU. A relatively small number of large international companies seem to converge in their mode of financing. At the same time, the national patterns of finance are still distinct - there is no such thing as a single European model of SME finance (Deeg, 2009).

What are the driving forces behind these developments? Why are SME finance and the role of regional banks so different in the Member States, and why is this structure so persistent? Generally, the financial sector is "special" because market participants typically interact under asymmetric information, e.g., in credit markets, potential lenders are less informed than borrowers. Hence, financial intermediaries have to deal in their loan negotiations most regularly with moral hazard and/or adverse selection (Stiglitz & Weiss, 1981; Greenbaum & Thakor, 2007).

To reduce such information problems, a borrower who plans an almost riskless investment has an implicit incentive to reveal any required (and available) information to the lender (Spence, 1973). At the same time, a bank is interested in acquiring adequate information on the (new) customer to evaluate the riskiness of a potential loan. Nowadays, appropriate screenings are an essential regulation device for institutional credit contracts (Art. 190 Regulation (EU) No 573/2013).

Both parties in a credit deal are interested in keeping information costs as low as possible. Depending on firm size, different approaches may be chosen. Rating agencies regularly review large companies with publicly traded stocks so that very often, several credit quality measures are publicly available. These firms have a wide range of potential (international) lenders and instruments to their avail.

The market position of SMEs differs significantly as public information about them is typically not available. As they are restricted to their local financial infrastructure, the number of potential creditors and credit instruments is somewhat limited. In particular, regional banks and SMEs have developed suitable business practices to overcome these limitations, particularly in rural regions.



As available public data is scarce, "soft facts", created by daily observations and non-business encounters, are more relevant for lending decisions. The personal contact between the bank's loan officer and the owner-manager of a firm may operate as a binding link and an appropriate source of information. Repeated contacts and contracts can be useful instruments to build mutual confidence and learn about each other's behaviour, so lenders and borrowers benefit. Banks also rely on direct monitoring mechanisms of their loans and investments rather than indirect market-based monitoring. This type of relational banking, which is in the form of implicit contracts (Howitt, 1981), can provide long-term, "patient" capital to SMEs. Thus, SMEs have generally been served well by this system of resilient relationships with their banks which, in turn, are sufficiently familiar with the idiosyncratic characteristics and needs of these clients (Gischer & Herz, 2020).

This form of finance also has significant advantages for regional banks, as SMEs' specific needs and features provide an important niche for regional banks to operate on. As SMEs on average demand relatively small credit volumes and as information on SMEs is local in character, possible economies of scale and/or scope in lending do not set in. In this market segment, large banks often cannot or do not find it attractive to offer loans on competitive terms so that small banks thrive on their comparative advantage over their larger rivals.

As a resilient relationship between a borrower and its bank can reduce reservations and suspicions on both sides, it very often generates a 'win-win situation'. The lender's credit risk can be more reliably assessed so that the required risk premium and thus the credit interest rate can be lower than for previously unknown customers. In critical economic situations, the support of a longstanding "house bank" is more likely because its expertise can be incorporated in an appropriate strategy for recovery. SMEs regularly (and voluntarily) rely on such long-term oriented relationship banking. Together, SMEs and regional banks seem to form a specific kind of economic symbiosis between particular clusters of borrowers and lenders (VanHoose, 2017).

The interrelations between regional banks and SMEs tend to reinforce each other. In working credit relations, regional banks gain private information about their SMEs clients, which should help mitigate the problem of asymmetric information, particularly in future financing deals. The competitive advantage of small banks improves as they can provide their SME customers with more attractive overall credit conditions. In turn, better financing conditions should support and further SMEs' economic development.

As SMEs and regional banks forge closer business relations, quasi lock-in effects may set in, further stabilising such interrelations. They come at a price, however. Reputation and private information are extremely difficult to transfer, so that the costs for SMEs to switch to another lender may become prohibitive (Klemperer, 1987). Market power in these constellations is severely biased, and a bank may be able to exploit its dominant position since a borrower under pressure is unlikely to find an alternative creditor. Also, incumbent banks may leverage their local market power due to close relationship ties with their customers to deter newcomers and thus limit competition in market-based, arm's lengths credit markets (Yafeh & Yosha, 2001). However, the benefits are likely to outweigh overall the disadvantages in daily practice (Gischer & Herz, 2020).



Interestingly, these interrelations evolve as SMEs and regional banks have proven to successfully adapt to new developments in financial markets and thus to develop and improve SME financing. The introduction of credit ratings for SMEs is an interesting example case of how regional banks adopted the house bank principle to changes in the regulatory environment. Credit ratings became mandatory in Germany in the second half of the 2000s under the Basel II process. Banks were enabled to demand more financial disclosure and transparency from their SME customers. In turn, these demands pushed many SMEs to upgrade and professionalise their accounting and financial management practices. While this development could have weakened the model of relationship banking, quite the opposite seemed to have happened. While personal trust is still essential, the foundation of that trust has shifted from informal reputation (indirect monitoring) to direct monitoring via information disclosure. Firms with weak reputations have an incentive to increase financial disclosure to improve their standings with banks. With credit monitoring, banks gain more potential leverage over SMEs because they are getting more information on a more regular basis. When firms run into trouble, banks are now in a stronger position to influence management decisions. All in all, these innovations seemed to have strengthened and sustained the house bank principle (Deeg 2014).

Self-enforcing feedback effects do not only govern the interrelations between the real and the financial sector, but they also drive structural change within the two sectors. In finance, the different markets are highly interdependent. The intensity of bank-customer relationships directly affects markets with arm's length competition. Banks may have an incentive to increase market power by investing in relationship banking when faced with more intense competition in other markets (Yafeh & Yosha, 2001). As regional banks profit from their comparative advantage in SME financing, they can strengthen their networks and infrastructure. E.g. by pooling IT and other back-office services in central units and organisations, they may realise economies of scale in specific business fields and successfully compete with larger rivals. In turn, they should become more competitive in their core business of providing commercial loans. Similar network effects should be achievable as SMEs see their competitiveness improve by enhanced financing conditions.

These self-enforcing lock-in effects in the SME-regional bank nexus are at work in all EU Member States. These countries differ in their economic, social and political institutions and come from different historical backgrounds. Therefore, it should not surprise that SME finance patterns are quite distinct within the EU and that the resulting differences between the Member States are relatively stable over time due to path dependence.

### **7.3. Institutional complementarities**

In their concept of institutional complementarities Hall and Soskice (2001) emphasise that differences in regional and national economies should be viewed in a systemic context. Formulated



in very general terms, the interaction of two (or more) mutually reinforcing elements of a particular capitalist system can produce performance effects that are superior to the sum of the performance effects of each of these elements individually. As a result, sensible policies may fail if crucial elements in the institutional make-up are missing that reinforce their effects. More specifically, institutional features in an economy, e.g. the characteristics of labour and financial markets, reflect the decisions of private households, firms, banks, and public policymakers. As they interact, these institutional elements determine a nation's comparative institutional (and economic) advantage and shape the reaction of private and public agents to changes in their economic environment.

Based on specific combinations of institutional features Hall and Soskice (2001) identify different "varieties of capitalism". They identify, e.g. liberal market economies with relatively flexible labour markets that are typically complemented by market-based finance. As firms can flexibly adapt their workforce to changing market conditions, they can respond to the demands of relatively short-term investors. Also, if market conditions improve, flexible financial markets provide firms with the necessary means to respond and increase production quickly. In contrast, if market conditions change for firms in a so-called coordinated market economy like Germany, firms cannot adapt their working force as rapidly and thus require more "patient" investors and lenders such as banks.

Thus, specific institutional features in an economy cannot adequately be evaluated in isolation but instead must be put in context. The economic, social, and political structure of a country results from optimising the decisions of private and public agents. They typically take the institutional framework as given and try to make the best choices under this constraint. In the aggregate, the decisions, in turn, change the business environment, which induces a new round of adjustments. As new shocks arrive, decisions are also (re)considered. Thus, the development of the institutional framework and the social and economic structure of a nation can be regarded as an evolutionary process in which firms constantly (re)evaluate their business environment and (re) optimise their decisions. As such, a nation's institutional framework and its social and economic structure have value in themselves. Differences between national economic and institutional systems should not be considered as deficiencies. Rather they constitute the basis of comparative advantages.

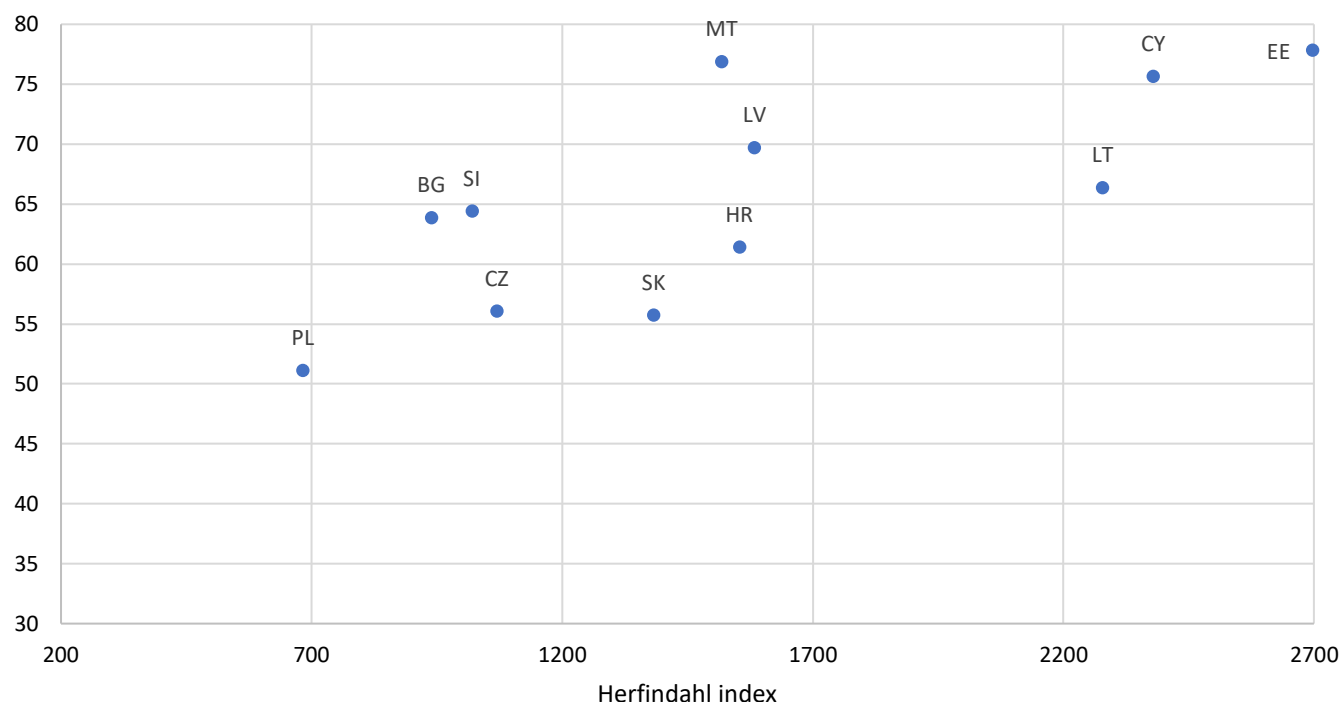
From this perceptive, several important implications follow. The EU Member States should not be assumed as homogenous as they differ in their institutional frameworks and the structure of their real and financial sectors. Firms and banks in the EU operate under different institutional constraints. Also, changes in one sector, either by unexpected shocks like COVID-19 or by deliberate policy decisions, are typically not confined to this sector. They have far-reaching economy-wide consequences as, e.g. firms in other sectors adjust to changes in the directly affected areas and re-optimize their business models. The same uniform shock and/or policy has different, potentially unintended consequences under different institutional environments. Economies are likely to react quite differently to the same shocks may they come from globalisation or a pandemic such as COVID-19. Thereby, the heterogeneity of countries is likely to increase.



**Figure 7.2 Concentration in Banking and share of SMEs in valued-added in Northern and Western EU Member States, 2018**

**(Ex-EU15, Herfindahl index of national banking sectors, share of SMEs in aggregated value-added, per cent)**

Share of value added by  
SMEs (in %)



Source: European Central Bank, Eurostat, own calculations

The recent COVID-19 shock and the subsequent stabilisation policies (IMF, 2021) provide an interesting case study of how existing structures on the national level determine the type of specific policy actions, thereby re-enforcing existing structures and the comparative institutional advantage. Hancké et al. (2021) examine how public financial support for firms was organised based on a set of mutually reinforcing institutional arrangements – the well-known "complementarities". They find that e.g. in Germany, financial support for SMEs was channelled via the well-established network of regional banks and the state-owned development bank KfW. As a result, SMEs swiftly received supporting resources while micro and very large enterprises were not reached with these measures. In contrast, financial support for businesses in the UK had to be provided via commercial banks, and policy primarily targeted micro and very large firms, putting much less emphasis on conventional SMEs. Given this background, there is no single equilibrium business model like, e.g. the so-called market-based system to which banks are likely to converge – quite the opposite. Due to differences in the initial situation of EU Member States, policies to push for more economic integration as envisioned, e.g. by the EU's single market, impose high costs on banks with a deviating business model. In addition, it does not necessarily

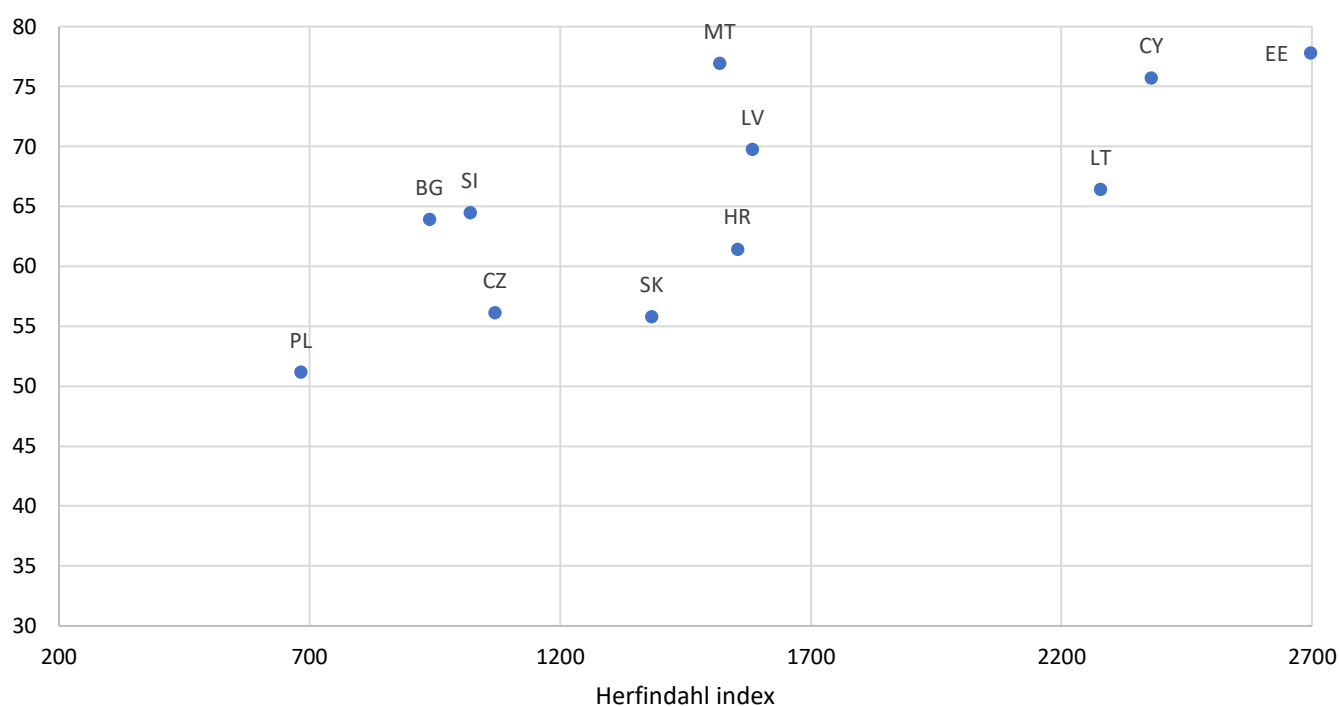


lead to convergence on a common business model. As a result, supranational policies are likely to have very distinct effects in individual countries. Policies that aim to implement a single union-wide business model for banks are likely to impose disproportionately high costs not only on banks with deviating commercial strategies but particularly on their SMEs customers who have only limited options to dodge the concomitant costs.

**Figure 7.3. Concentration in banking and share of SMEs in value-added in Central and Eastern EU Member States, 2018**

(Herfindahl index of national banking sectors, share of SMEs in aggregated value-added, per cent)

Share of value added by  
SMEs (in %)



Source: European Central Bank, Eurostat, own calculations

In such an environment, the burden of proof when implementing supranational regulations is clearly with the political decision-makers. Even on an aggregate level, there is no evidence in the EU that the capital market-based model of banking should be superior. In countries with a relatively concentrated banking sector dominated by a few banks, such as France, the share of employment in SMEs is on a roughly similar level as in Germany with its more decentralised banking system (see Figure 7.2.). Similarly, the relative importance of SMEs is comparable in



countries with banking systems that are highly centralised such as Finland and Greece and more decentralised, as in the case of Italy (see Figure 7.2.).

Thus policy should avoid imposing specific business models on banks or other firms as this may have far-reaching and unintended consequences. Instead, the given economic structure in a country should primarily be viewed as the result of an evolutionary process in which firms and banks continuously optimise their business models and adjust to an ever-changing economic, social and political environment.

#### **7.4. Policy recommendations - less is more**

From a systemic perspective, banks and their customers build on their institutional complementarities to improve productivity in dynamic interaction. As they continuously (re)optimise their businesses in an evolutionary process under the given institutional constraints, they have created economic eco-systems whose effectiveness is subject to the specific national institutional restrictions. In evaluating national banking systems in the EU, the country-specific features of the financial systems have to be considered, and the analysis needs to be tailored to the needs of the individual Member States.

It is highly unlikely that banks in the EU should converge on one single banking model, e.g. market-based finance, as it is often predicted or even demanded. Instead, it is more likely that the great heterogeneity in EU finance persists and may even increase. At the same time, bank regulation in the EU is most often of the one-size-fits-all type and is implemented on the supranational level. Due to the distinct heterogeneity in the European finance sector, we find that uniform supranational measures have quite particular and often unintended consequences on regional banks and their SME customers on the national level.

In the practical implementation of EU banking regulation, small regional banks typically incurred disproportionate burdens and costs. They have been made subject to regulations and rulings that have been initially designed for big, systemically important financial institutions. As these rulings place by construction high fixed costs on each institution, small banks are over proportionately burdened. In recent years, e.g. the implementation of Basel III and the establishment of the European Banking Union created about 500 different legislative acts filling more than 50,000 pages of rules and instructions. Evidently, regional banks are particularly burdened by such administrative measures.

As there is no single agreed-upon banking model in the EU, the different national banking systems have a value of their own. Regulations that are biased against specific national banking models have to be avoided. The burden of proof when intervening with national banking systems is clearly with the supranational institutions. Supranational EU policies mustn't interfere with the specifics



of finance on the national level. In particular, policies that put specific financial instruments and institutions at a disadvantage are not acceptable. As a result, any supranational policy should be checked for possible structural effects, i.e. whether it is neutral concerning the heterogeneous business models of banks and firms in the EU. Should a policy impose disproportionate costs on specific business models, it must be scrapped or at least corrected.

Policymakers are called upon to reduce disproportionate burdens as far as possible. Instead of complete regulatory harmonisation, rather mutual recognition of national regulations should be the way to go. If EU economies were broadly similar, it might be possible to agree on 'best practice', allowing a transition period of laggards to catch up. There are, however, profound institutional differences among EU's political economies, on which enterprises have come to rely for competitive advantage. They are not likely to agree upon high levels of regulatory harmonisation as this would compromise the institutions and firm strategies, which form their specific comparative advantage. EU-wide negotiations are unlikely to be the vehicles for cross-national institutional convergence as some hope for.

Thus, regulatory measures should be formulated in general terms and implemented in a restrained fashion. Too detailed rulings should be avoided, and regional banks degrees of freedom should be increased – not the least as they are not systemically relevant. In the end, the main task of policy is to improve the capacities of firms and banks to coordinate with each other - and not to identify new projects to force convergence to a common business model.

To support the issue of a balanced implementation of banking regulation in the EU, changes in the organisation of advocacy groups and the political process may also be called upon. As national financial markets in the Member States are heavily influenced by political and legal decisions of European authorities, e.g. European Banking Association (EBA), European Securities and Markets Authority (ESMA) and European Insurance and Occupational Pensions Authority (EIOPA), the representation of interest should also be organised more on the EU level. Potential influence in policymaking processes is vital and of particular importance for regionally operating banks. Thus, they should cooperate in national and supranational advocacy groups. However, a membership in such "teams" may end up in constrained independence so that a well-balanced combination of rights and duties is called for.



## 8. Conclusions

Economies in Europe and the rest of the world are currently struggling with two major exogenous shocks: Covid-19 and global warming. The former is expected to be controllable by vaccination and more elaborate medical therapies. Unfortunately, the latter seems to accelerate rather than slow down, and no convincing worldwide organised cooperation is visible yet. However, private agents like banks, enterprises, or households have to cope with fast-changing parameters. More than ever, effective policy measures are needed to secure public welfare and peaceful coexistence.

Most likely, climate change is by far the most significant challenge for humankind. Our planet is severely suffering from (at least partly) civilisation-induced ecological disasters, e.g. area-wide wildland fires, extreme heatwaves, massive flooding, heavy rain events. Simultaneously, worldwide the population has to deal with still increasing emissions caused by firms, private and public traffic, or even private households that are climate-damaging and hazardous to health. The EU Green Deal initiative is a necessary and strong signal to stop prevailing trends and enforce a rethinking of environmental awareness.

Any political instrument is intended to change private behaviour based on an appropriate transmission mechanism. In decentralised market economies, personal decisions depend on positive or negative incentives. Market prices represent the most critical signals for (potential) buyers or sellers of goods and services. Consequently, policymakers use taxes or subsidies to affect prices or market conditions.

As laid down in the European Treaties, none of the European political bodies has the power to direct tax collecting. Hence, alternative tools have to be applied in implementing policies, e.g. by using regulation channels. At least two different approaches are available: (i) An agent's individual economic choices can exogenously be restricted. (ii) An agent's degrees of freedom are affected by a supervising third party. Currently, both procedures are implemented in the Green Deal program.

The former option is used by explicitly defining 'green' investments for private enterprises on real goods markets and financial investors via an extensive taxonomy. Agents are supposed to decide whether to benefit from easier access to sustainable markets by complying with 'green' regulations or sticking to less climate-friendly investments in products that may be prohibited in the (near) future. The latter alternative shifts the environmental responsibility to a third party, e.g. an MFI. As a potential lender, a bank screens the investment projects of its customers and is awarded more favourable capital requirements if it funds 'green' projects.

The EU Green Deal is an essential, comprehensive, and appropriate initiative. However, so far, the impact on existing (macro-) economic conditions seem to be only incompletely considered. Rules and measures are typically designed from a rather theoretical perspective. Therefore, they particularly fit the requirements of the regulators, while the regulateds' sensitivities come off short. The technical and organisational infrastructure differs significantly between the EU Member States, and the respective socio-economic conditions are hardly comparable.



Any improvement in the global climate quite naturally depends on appropriate support of all pollutant emitting economic actors. Private firms, in general, contribute predominantly to environmental conditions and, therefore, are at the centre of attention. This is particularly true for small and medium-sized enterprises since they play a significant role in rural areas and smaller EU Member States.

SMEs will probably have persistent difficulties coping with the expected conditions under an implemented Green Deal. They predominantly operate on single or regional markets. Compared to large firms, their business models are less resilient or diversified. A sustainable realignment of an SME's production processes and its investment plans may overexert its financial capacity and jeopardise its long-term existence. Consequently, SMEs need time and guidance to obtain the necessary technical skills to handle new environmental requirements and comply with extended disclosure obligations.

The same holds for regionally operating financial institutions. Their loan portfolios consist to a large extent of claims to SMEs, so the problems mentioned above arise indirectly. Although local banks are willing to fund 'green' investments, the respective demand may be lacking. Additionally, the potential lenders have to control whether the main characteristics of investments are in line with the taxonomy. Again, specific skills and experience are necessary to meet the regulative demand.

The outcome is rather opaque: (i) If customers cannot switch to 'green' investments, banks will charge higher interest rates to make up for additional capital requirements. (ii) At first glance, sustainable loan contracts are a win-win situation for banks and customers. However, the inherent loan risk is systematically higher for both parties since they simultaneously operate in unfamiliar territories. The implications of the Green Deal program may even end up in persistent disadvantages for regions already infrastructurally left behind.

For a complete perspective, another player has to be taken into account, the European Central Bank. The performance of financial institutions in the EMU heavily depends on the ECB's monetary policy. Negative deposit rates are historically unique and significantly strain banks' incomes. Furthermore, the trend of decreasing interest rates and reduced credit spreads lasts for nearly two decades. In the end, the (so-called) unconventional monetary strategy is an attack on traditional business models of regionally operating banks (Rogacki 2021).

Since 2009 several extensive asset purchasing programs distort prices on European bond markets. Technically, ECB interventions induce a considerable increase in aggregate demand for sovereign and corporate bonds resulting in higher prices and lower yields. Consequently, banks, commonly diversifying their portfolios with bonds, are restricted to invest in securities with moderate risks and modest expected returns. Hence, their interest income is additionally comprised with no feasible compensation insight. Once more, local or regional banks suffer the most because they focus on traditional retail business and are heavily dependent on adequate net interest income.

Summing up, SMEs, as well as regionally operating MFIs, are simultaneously facing at least three challenges: the macroeconomic disruptions caused by the Covid-19-pandemic, the requirements of the EU Green Deal, and the unconventional monetary policy of the ECB. Every task alone is



novel and demanding. Together they may even threaten a firm's or bank's existence. Therefore, political measures and obligations should be most carefully designed and applied.

The following recommendations might be considered:

1. Policymakers should not neglect the significant heterogeneity within the EU and the EMU. The ideas of so-called level playing fields or single rule books are misleading. Acceptance and efficacy may increase if measures and provisions distinguish between agents of different sizes, structures, and importance. "Too big to fail" situations do not only exist in the banking industry. The Covid-19-pandemic reveals that global players with thousands of employees have by far better access to public support than SMEs in their local environment. The same is true for MFIs. Contagion risk induced by a regional bank is much smaller compared to a nationwide or even globally operating institution. Consecutively, statutory requirements based on the Green Deal initiative, e.g. rules for disclosure or accounting, should also differentiate between 'large' and 'small institutions'.
2. To avoid misperception, the independence of the European Central Bank is vital. However, the ECB's unconventional monetary policy failed to perform properly in the last couple of years. European financial markets have been flooded with liquidity to an unprecedented extent. Even central bank interest rates became partially negative, making private banks' business significantly more demanding but having almost no positive impact on markets outside the financial sector. Most probably, a waiver of negative ECB interest rates on deposit facilities would relieve banks and their customers and strengthen the system's resilience as a whole.
3. Small and medium-sized enterprises are essential supporting pillars of national economies in the EU. They represent indispensable parts of regional infrastructure and provide a crucial share of jobs in their local environment. SMEs rely on banks' financial expertise in their neighbourhood, especially partners that understand their customer's business and provide support even in critical situations. Hence, the particular combination of local enterprises and local banks ensures a region's economic attraction and helps to build up a reliable social infrastructure. Most likely, the closure of the local bank is the first step to a region's deterioration. Empirical evidence indicates that easy access to financial services is a necessary condition for regional prosperity.
4. Rules are necessary to establish workable (political and economic) systems. Of course, complex problems require elaborate regulation, but too detailed provisions may instead threaten the intended target. The EU Green Deal is a project of prime importance. However, the presented taxonomy provides a somewhat disturbing variety of facts that may overstrain affected enterprises or banks to properly deal with the pitfalls of the regulatory labyrinth. The fight against climate change is too important a goal to be endangered by inappropriate rulings. Political decision-makers should keep in mind that quite often, less is more.



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