Relazione al Convegno Baffi Carefin
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di Rainer Masera e Marco Onado

1.Local banks: the issue and the economic literature

The Bruno-Marino paper deals with very substantive questions for the future of the European banking systems: can small- and medium-size banks reach reasonable conditions of operating efficiency and profitability? Can they continue to play a significant role, particularly in the provision of traditional retail services to the local communities?

Besides technical microeconomic issues, the functions performed by local banks have important macro and social implications, confirmed by a wide body of literature, at least from two points of view.

First. A banking system made of banks different by size and business models can absorb shocks more easily and therefore can contribute to financial stability. A financial system may be considered as a fragile ecosystem, whose equilibrium relies on the interaction of a wide variety of species (players). When the Great Financial Crisis erupted, the main banking systems were dominated by giants that had adopted the same business model. When liquidity froze, all of them were operating on the demand side of the market. Supply had evaporated. This view has been also developed in a paper published by *Nature*, one of the most important journals of biological sciences.[1]

An example taken from network analysis can illustrate the reference model and its implications. If adverse shocks on financial intermediaries and markets are sufficiently small, a financial network with dense connections is more resilient to shocks, mainly because of risk sharing and diversification.

In contrast, beyond certain thresholds, dense interconnections become a mechanism for propagation of large shocks and can give rise to instability. Beyond the critical points – which depend on the intensity of the shock, the density function and the response of policy/regulatory authorities – instabilities also of systemic nature can manifest themselves.

A simplistic (sum-of-the-parts) analysis of a complex system, without due attention to transition phases and endogenous risk, leads to inappropriate analytical conclusions and policy prescriptions. The discussions and decisions on circuit breakers to prevent/contain disruptive financial volatility are a well-known example of the problems outlined.[2]

Second. The big trends of the last decades, dominated by globalization and by giant firms whose main goal is to maximize profits, had unintended consequences. The retreat of the State and the (apparent) triumph of the market led to the disruption of social relationships, nationalism and populism. According to Raghuram Rajan, this is mirrored by the fading out of the values of local communities, where there are institutions that favour social inclusion and contribute to reduce

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[1] Andrew G. Haldane - Robert M. May, *Systemic risk in banking ecosystems*, "Nature", January 2011.

[2] See, for instance: D. Helbing, *Systemic Risks in Society and Economics,* IRGC, Lausanne 2010; Securities and Exchange Commission, *SEC Approves Proposals to Address Extraordinary Volatility in Individual Stocks and Broader Stock Market,* Washington D.C., 2012-17; D. Acemoglu et al., *Systemic Risk and Stability in Financial Networks,* American Economic Review, 2015, 105 (2).

social inequalities.[3] Banks have historically been a fundamental component of the fabric of a local community and therefore have a high social value.

In the past decades, the structure of the banking systems has changed dramatically, as a consequence of consolidation through mergers and acquisitions, both in Europe and the United States. The trend has been particularly strong in Europe, also as a consequence of the quest for "national champions" in each of the main countries. As an ESRB paper reports, the near-doubling in the size of the EU banking system (relative to GDP) since 1996 is entirely attributable to the growth of the largest 20 banks.[4]

At the other extreme of the spectrum, there is still a large number of small banks: at the end of 2018 there were 2,453 LSI (Less significant institutions, i.e. banks not supervised by the ECB) most of them characterised by a traditional lending-oriented business model.[5] This sector is an important component of the wider European banking industry, holding roughly one fifth of total assets in the euro area, with values higher than the average in countries such as Germany, Austria, Portugal, Ireland and Poland.

The economic literature stresses the importance of information asymmetries in financial contracts and therefore supports the idea that banks have an advantage in loan markets as they can better use the soft information typical of a customer relationship. This should apply particularly to local banks, in countries (such as the European ones) where the industrial structure is characterized, or even dominated as in Italy, by small and medium firms.

Another strand of economic literature looks at the conditions of efficiency in the banking industry. Notwithstanding decades of discussions, the findings are still controversial: although economies of scale exist, and therefore there is an advantage in the increase of the average size (measured generally in terms of total assets), they cannot be taken for granted and, which is more important, they are significant only for the lower-end tail of the size distribution. A recent research from the Bank of Italy estimates that economies of scale are relevant only below a size (in terms of total assets) of € 500 bn.[6] This is consistent with evidence in the US.

Contrary to the US, the European banking system has not recovered the profitability of the years preceding the Great Financial Crisis. Present levels of Roa (Return on assets) and Roe (Return on equity) of European banks are more or less half than their American counterparts. Profitability is subdued, notwithstanding the recovery in the last years, also because excess capacity accumulated both in large and small banks. In the latter segment, the ECB stresses that there is still a large number of banks of very small scale. There are some 1,200 banks with total assets below € 500 bn, therefore operating in a segment where the average production costs are expected to be higher than in larger banks. This however leaves a vast area of other 1,200 banks operating in the segment where economies of scale must not be taken for granted and therefore cannot be considered *ipso facto* doomed to a condition of inefficiency.

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[3] Raghuram Rajan, *The Third Pillar. How markets and the State leave the community behind*, Penguin, Usa, 2020.

[4] European Systemic Risk Board, *Is Europe Overbanked?*, Reports of the Advisory Scientific Committee
No. 4/June 2014

[5] European Central Bank, *Risk report on less significant institutions*, Frankfurt, January 2020. The total number was reduced in 2018 due to a major structural change in the Italian LSI sector, as a result of reforms that led to the incorporation of 228 BCCs into two new banking groups that are classified as Sis.

[6] Emilia Bonaccorsi di Patti – Federica Ciocchetta, *Economies of scale revisited: evidence from the Italian banking industry*, Questioni di Economia e Financa (Occasional Papers), n. 568, Banca d'Italia, June 2020.

However, the vast area of very small banks is probably the main reason why the ECB finds that LSI as a group show profitability and efficiency indicators lower than Significant Institutions.[7] As the next section shows, there are a few qualifications to be added to this finding. In general, the Bruno-Marino research (that excluded banks with total assets lower than € 500 bn) aims to show that the variance matters more than the average and that there is a wide area of profitability and efficiency also in the lower part of the size distribution.

A final body of literature that is worth remembering concerns the “too-big-to-fail” (TBTF) issue, i.e. problems connected with the top end of the spectrum. Empirical research confirms that this issue is far from being solved.[8] Moreover, banks (in particular, large ones) have become more and more similar in terms of business models: as a result, when faced with an external shock, they are likely to react in a similar way, amplifying its effects.

A few years ago, the Federal Reserve of Dallas focused on TBTF risks in its annual report, under the title “Choosing the Road to Prosperity. Why We Must End Too Big to Fail — Now”. [9] The report defined TBTF a «perversion of capitalism» and moved from the hypothesis that the new legislation enacted by the US Congress could «not prevent the biggest financial institutions from taking excessive risk or growing ever bigger». Another Federal Reserve bank followed suit a few years later.[10] Moreover, the Financial Stability Board launched a wide consultation.[11]

2. A tale of two banking systems: Europe vs. the US

The European banking scenario is very different from the US. To make a long story short, we can point out the following differences.

- The size of the banking system, while still larger than in the US, has been partially absorbed in the last ten years and is explained by both the wealth of the private sector (ESRB) and the level of GDP per capita.
- In Italy in the past ten years the total number of banks - counted at the “maximum level of consolidation” - declined by three/quarters: at end 2020 it stood at 140. The reabsorption of the alleged hypertrophy of the Italian banking system can be assessed also by comparing- at end 2019 - bank assets to GDP and GDP per capita in Italy (208 per cent and € 30.050) and in France (384 per cent and € 36.050).[12]

[7] ECB, cited.

[8] Rhiannon Sowerbutts, Peter Zimmerman, lknur Zer, *Banks’ Disclosure and Financial Stability,* Bank of England Quarterly Bulletin, Q4 2013; International Monetary Fund, ‘Global Financial Stability Report’, Chapter 3, Washington D.C., 2014.

[9] Federal Reserve Bank of Dallas, *Choosing the Road to Prosperity: Why We Must End Too Big to Fail—Now,* Annual Report 2011.

[10] Federal Reserve Bank of Minneapolis, *The Minneapolis Plan to End Too Big to Fai*l, Annual Report, 2016.

[11] Financial Stability Board, *Evaluation of the Effects of Too-Big-to-Fail Reforms*, Consultation Report, 2020. Many responses to this consultation from academia confirm the persistence of implicit subsidies for TBTF banks; see in particular the responses from Anat Admati and Martin Hellwig, available at: https://www.fsb.org/2020/10/public-responses-to-the-evaluation-of-the-effects-of- too-big-to-fail-reforms-consultation-report/.

[12] Rainer Masera, *Prefazione a Vincenzo Pacelli, Francesca Pampurini e Anna Grazia Quaranta*, *Too useful to fail,* ECRA, Roma, 2022.

- The profitability of the European banks recovered, particularly in 2020 and 2021, thanks mainly to the reduction of NPLs and the ensuing provisioning.
- Notwithstanding that, in Italy in 2020 the Italian Roe was still 1.9 per cent (compared with 5.0 a year earlier).[13]
- ECB data confirm that many European banks still cannot reach levels of Roe higher than their cost of capital. The consequence is that price-to-book values are significantly lower than one (even 0.4-0.3). As the FT cynically puts it: the market values those banks more dead than alive.
- This makes issuing new shares difficult and painful for existing shareholders, hampering the strengthening of the banks and the banking system as a whole. Therefore, the issue has negative implications also from a financial stability point of view.
- ECB data for 2019 (the year before the pandemic) show that aggregate Roa for the Euro area banks was 0.37 (0.13 in 2020). Roe was 5.11 (0.13 in 2020).
- The Italian Roa were respectively 0.37 and 0.06 the following year. Roe 4.76 and 0.77.
- However, data referring to the whole area show that small banks performed better after the Great Financial Crisis in terms of Roa and recovered quite quickly, showing a lower variance than large banks both in terms of Roa and Roe. Anyway, in a Modigliani-Miller approach, the satisfactory performance of Roa, the fundamental profitability (particularly in relative terms) should lead to the conclusion that this group is composed also by many efficient institutions.

Notwithstanding that, in Europe many think that further overall consolidation – notably in the medium-small-segment of the size distribution - would benefit both the efficiency and the stability of the banking system, perhaps without paying sufficient attention to the issues of competition, moral hazard and systemic footprint.[14] At any rate, it must be recognized that a political and supervisory support in favour of local banks in the Euro area is strong only in Germany and Austria.

The picture of the other side of the Atlantic is completely different.

- In the US the principle of tailored bank regulation to match idiosyncratic and systemic risk profiles was the hallmark of the Dodd-Frank Act Enhanced Surveillance Framework (2010). The regulatory framework was revised by the Economic Growth, Regulatory Relief and Consumer Protection Act (S.2155 May 2018). In October 2019, the Federal Reserve Board adopted rules in terms of a framework that sorts banks with $100 billion or more in total assets into four categories based on several elements, including asset size, cross-jurisdictional activity, weighted short term wholesale funding, non-bank assets and off-balance sheet exposures.

  The *enhanced* surveillance applies to banks comprising, as of 2021:Q2, 44 domestic and foreign banks. *Ordinary* surveillance applies to 91 banks with $50<Assets<100 billion. Some 5,000 (mainly community banks) have assets of less than $10 billion and a highly simplified regulatory and surveillance framework. The consistent *leitmotiv* of the evolving framework has been the strict application of the principles of tailoring and proportionality.[15]

[13] Banca d'Italia, Relazione 2020, Rome, May 31 2021, p.174.
[14] See G. Santorsola, *Banche minori tra efficienza e proporzionalità*, Dirigenza Bancaria, 2021, n. 211.
[15] For an outline of the evolving frameworks and the complex relevant references see, for instance, Masera, *Community Banks and Local Banks: can we bridge the gap between the two sides of the Atlantic?*", 2019, ECRA Rome and Fed "The Fed Supervision and Regulation Report", 2021, Washington D.C., November.

- The US is characterized by a balance between the biggest banks ("Big Four") and the community banks, while in the EU there is not a counterpart to the Big Four "Global" Banks intertwined with shadow banking activities/operators.
- Regulators and supervisors pay great attention to the segment of Community Banks (CB). As was underlined by Jelena McWilliams[16], the Federal Deposit Insurance Corporation (FDIC) is in a unique position as regulator, supervisor and Resolution Authority to assess CBs and understands their vital role for Small-Medium Enterprises and for the overall economy of the United States.
- The symbiotic relationship between CBs and reference economies was confirmed during the Covid 19 pandemic. As McWilliams underlined in her "Statement on Oversight of Prudential Regulators During the Pandemic before the US House Committee on Financial Services", in the US House Committee on Financial Services, Washington D.C., November 12,2020: "The Paycheck Protection Program (PPP Program) highlighted the vital role of Community Banks in supporting small businesses…. As of the second quarter of 2020 CBs held 31 percent of all PPP loans – a significant share relative to the 13 percent of total industry Commercial&Industrial (C&I) loans…..To further highlight their important role during the pandemic, CBs experienced a growth rate of 13.5 percent for total loans, and 63 percent for C&I loans, in the second quarter of 2020. These rates contrast with the broader banking industry, which experienced a growth rate of 0.6 percent for total loans, and 5.9 percent for C&I loans, during the same period".

  To repeat, the quantitative assessment was monitored with due account of loan quality and with reference to the FDIC improved resolution readiness in several ways, which are detailed in McWilliams' statement.

- A similar attitude was expressed on many occasions by other regulators – notably the Fed - who also underlined the readiness of the authorities to create a regulatory environment which will make it easier for small banks to adopt new technologies. This overall assessment was summarized in a well-known editorial of the Financial Times (Brendan Greeley, "How US Community Banks Became *Irreplaceable*", F.T., August 29, 2021).

- A very recent academic analytical and econometric study confirms these findings (M. Hassan et al., "Weathering the Covid 19 Storm: the case of community banks", Research in International Business and Finance, April, 2022). The study offers evidence on the comparative performance of Community Banks and large Commercial Banks before and during the Covid-19 crisis. The quantitative analysis covers three quarters before and three quarters after the Covid-19 outbreak. Quarter 0 is the fourth quarter of 2019.

  The findings show that CBs significantly outperformed larger commercial banks, in several key operating results, and in their support to local economies[17]. The pandemic's adverse effects on CB performance were less significant in States with higher quality healthcare.

[16] Speech at the FDIC, Washington D.C., June 4, 2019.

[17] This confirms a general finding that after 2010 many CBs were able to obtain a core profitability similar to those of large and very large banks. For a survey of the very ample evidence see Masera, "Per una vera proporzionalità….", 2021. Attention is drawn to a study conducted by EU researchers: Athina Petropoulou et al., "The efficiency of US community banks", Semantic Scholar, April 2020. Account being taken of proportionality at the US regulatory front, it is shown that, in general, size of banks is non-linearly related to efficiency and that large community banks are the

Looking at the regulatory philosophy adopted on the opposite sides of the Atlantic, two differences stand out: proportionality and resolution. These issues will be discussed In the next two sections.

3. Proportionality and tailoring of regulation

Europe has decided to apply the Basel agreements through directives and regulations, binding for all countries and for all banks of each jurisdiction, i.e. it has adopted a "one-size-fits-all" model. On the contrary, the US have chosen to adopt a two tier system: big banks are subject to Basel and its revisions, while the bulk of the banking system is supervised by other authorities and in particular by the FDIC which has developed a very sophisticated model of supervision based on a rating that looks to the entire spectrum of the management of the bank (CAMELS).[18]

The gap between the two areas is getting wider and wider as the Basel regulation becomes more and more sophisticated. Suffice it to remember that the number of pages of the basic regulation has increased from 30 in Basel I to over 600 in Basel III.[19] Mind that, as Haldane underlines, the length of the Basel rulebook understates its complexity. The move to internal models (and the attendant savings of required capital), and from broad asset classes to individual loan exposures, has resulted in a ballooning in the number of estimated risk weights. For a large, complex bank, this has meant a rise in the number of calculations required from single figures a generation ago to several million today.

The Achille's heel of the model sophistication is the generalized adoption of measurable probability schemes (Bayesian and/or frequentistic). This does not recognize the logical and mathematical difficulties of an acritical adoption of knowable probabilities, with the attendant stationarity and ergodicity assumptions in the relevant time series. These issues had been clearly identified a century ago by John Maynard Keynes and Frank Knight.[20]

In the Keynes-Knight world risk identifies situations where probabilities are known, or knowable. Conversely, uncertainty refers to the situation where probabilities cannot be calculated in "objective" ways. Radical uncertainty has paramount importance.[21]

As Kay and King underlined: "In the Spring 2007 the UK Bank Northern Rock announced that it was the best capitalized bank in the United Kingdom, according to the internationally agreed risk calculations embodied in the Basel regulation, that had come into force at the beginning of the

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most efficient. Concurrent evidence is offered by Stefan Jacewitz, "Community Banks have become more efficient on average since the 2008 global financial crisis", Federal Reserve Bank of Kansas City, 2022 May.

[18] The ratings are assigned based on a ratio analysis of the financial statements, combined with on-site examinations made by the competent supervisory regulator. The name is an acronym for (C)apital adequacy; (A)ssets; (M)anagement Capability; (E)arnings; (L)iquidity (also called asset liability management); (S)ensitivity (sensitivity to market risk, especially interest rate risk)-

[19] Andrew Haldane, *The dog and the frisbee*, Bank of England, 2012. p.7

[20] John Maynard Keynes, A Treatise on Probability", 1921; Frank Knight, Risk Uncertainty and Profit", 1921.

[21] For an analytical illustration of these points see, for instance, John Hicks ("Causality in Economics", Blackwell, Oxford, 1980), Kay and King ("Radical Uncertainty", The Bridge Street Press, London, 2020) and Masera ("Thoughts and Reflections Based on Lord King's Seminal Contributions", LEYR, 2021

year. […] In February 2008, beyond rescue, Northern Rock was nationalized […] The approaches to risk […] devised in Basel turned out to be misleading».[22]

The new wave of regulation in the aftermath of the Great Financial Crisis worsened the problem. It has been calculated than in less than 10 years 670 different regulations have been issued, which means 2.5 per week.[23] Regulation therefore determines high (and growing) compliance costs, most of them fixed, therefore not proportional to the size of the bank and the degree of sophistication of its portfolio of loans.

According to Cocozza and Masera,[24] the concept of proportionality, embedded in all legal systems, aims at keeping the level of public intervention – in the form of rules and restrictions or sanctions – appropriate to what is actually needed to achieve the desired social objectives. In banking regulation, proportionality should ensure that rules are applied in a manner that is appropriate, considering the bank's size and internal organization and the nature, scope and complexity of its activities. The drivers for proportionality are not only the size of banks, but also their business models, complexity, and systemic relevance. In theory, simple and "easy to apply rules" are necessary for small and medium-sized banks, while more sophisticated banks may develop their own systems, tailor-made for the risks of their business and their groups.

Therefore, proportionality is originally a matter of calibration of prudential requirements: the existence of resilient business models should not be put at risk by excessively high requirements or by requirements which are not relevant for some business models. Eventually, proportionality turns into a matter of "costs". Complex approaches are costly to implement, and they may have no added value when it comes to measure the risk incurred by simple activities. In addition, undue complexity is another source of risk for both banks and regulators. Thus, banks with a simple and limited activity should be able to implement simplified approaches to avoid undue complexity. In this perspective, proportionality, boosting calibrated diversity, contributes to the resilience of the banking sector. Or else, at least, it should.

Procyclicality is one of the main issues related to the regulatory framework which imposes capital requirements to be calculated as a percentage of bank risky loans: it entails that supervisory capital requirements are higher when economic conditions get worse, and lower in case of economic upturn. Procyclicality is generally considered a sort of acceptable side effect, at least if the context is not extremely severe. On the contrary, if the economic situation worsens considerably - as was the case at the onset of the pandemic - procyclicality could end up as "the" risk driver, since capital requirements could become paradoxically "lethal requirements". This was the situation at the turn of 2019-20.

To limit the economic fallout of the Covid crisis, public authorities implemented major packages of fiscal, monetary and regulatory support measures. In particular, regulators and supervisors

[22] Kay and King, cit., pp-310-11.

[23] Federazione Italiana delle Banche di Credito Cooperativo, Audizione Senato della Repubblica VI Commissione (Finanze e Tesoro), Indagine conoscitiva sul sistema bancario italiano nella prospettiva della vigilanza europea, Roma 2019, pp.

[24] Rosa Cocozza e Rainer Masera, *"Size & fit" of piecemeal liquidation processes,* Open Review of Management, Banking and Finance, 2020, December. According to the econometric evidence presented in the paper - based on the list of banks used for Supervisory Banking Statistics by the ECB for the period 2015-2020 - ROE and ROA exhibit a more relevant shrinkage for large banks rather than for medium-small institutions. These findings have a clear bearing to assess the technical viability of "less significant" banks.

worldwide introduced a “holiday period” on the effectiveness of regulatory requirements, including the so called “calendar provisioning” and the timing of implementation of IFRS9[25].

In Europe the problem of ensuring an effective system of proportionality/tailoring of surveillance has taken new force and is leading to concrete results after the publication of some key policy papers.[26]

In the US, regulators have always paid great attention to the issue of proportionality in banking: the Fed of Dallas has explicitly stated that capital requirements can be a regressive tax for the smallest banks. In particular: «Higher capital requirements across the board could burden smaller banks and probably further crimp lending. These institutions didn’t ignite the financial crisis. They didn’t get much of a helping hand from Uncle Sam. They tend to stick to traditional banking practices. They shouldn’t face the same regulatory burdens as the big banks that follow risky business models».[27]

The need for an enhanced graduation of the prudential framework for community banks has been recently adopted in the US with the faculty granted to qualified CBs to adopt simplified capital requirements based exclusively on ratio to total assets[28]. If all qualified CBs decided to abandon the weighted requirement, regulatory agencies in the US would concentrate their weighted compliance verifications to a mere 7 percent of total banking firms.

4. Recovery and Resolution of Problem Banks

The second key difference between the regulatory frameworks of Europe and the US concerns the recovery and resolution of problem banks.

An efficient system of recovery and resolution of bank crises is fundamental for the smooth functioning of a banking system. Bank crises may happen and always raise problems of public interest. However, there is always a healthy part of a problem bank that must be protected and cannot be left to normal liquidation procedures that fatally decrease value of some assets because they must be evaluated on a *gone concern basis* instead on a *going concern basis*. The interest of depositors and good borrowers must be protected; otherwise, there is a destruction of value. In a sense, even the failure of a small bank is systemic at the local level.

In Europe, the hasty process of the (belated) creation of the Banking Union has left at least two fatal pitfalls: a pan-European deposit insurance is still lacking; the resolution of problem banks (BRRD directive) is very rigid and hinged on two principles: different regimes according to the size of the bank involved; bail-in of creditors when capital falls below minimum requirements.

[25] FSB, *Covid-19 support measures*, 2021, April.

[26] See A. Dombret, “Cui bono? Complex Regulation and its Consequences”, University of Duisburg, 2016; ABI, “Posizione dell’ABI in Materia di Principio di Proporzionalità nella Normativa Europea”, febbraio, Roma; ESRB, “Regulatory Complexity and the Quest for Robust Regulation”, June, 2019 (see, in particular, Box 4 on proposals for revision of banking regulation).

[27] Cit p. 17:

[28] For an extensive analysis of the new rule making and the extensive references, see D. Perkins, “Community Bank, Leverage Ratio: Background and Analysis of Bank Data”, CRS, Washington D.C., November, 2019; Bert Loudis, Daniel Nguyen and Carlo Wix, “Analyzing the Community Bank Leverage Ratio”, FEDS Notes, May 26 2020; Rainer Masera, “Per una vera proporzionalità nella regolazione bancaria dell’Unione Europea”, ECRA, Roma, 2021.

Moreover, if the market is not willing to cover any capital deficit, the fate of the bank is doomed and the bank is declared "failing or likely to fail".

The European procedure looks too rigid and, which is worse, is applicable only to a limited number of banks, leaving the bulk of the system to the regime of traditional liquidation procedures that are suboptimal from a general interest point of view. This explains why Europe needs also a safety net for tackling problem banks of a limited size because even these can have disruptive effects, at least at the local level.

The American framework for the recovery and resolution of banks is completely different from two points of view: the concentration of regulatory powers and the philosophy of interventions in case of crises.

The FDIC has unique features also at international level notably for the breadth of powers. Rare are the cases where the same institution performs all the duties which are covered by the FDIC.
To recall, the Corporation (with other Federal Authorities) oversees deposit guarantees and the management of procedures to be enacted in case of crisis. The FDIC is therefore responsible for functions which in the European institutional framework are distributed among the Single Supervisory Mechanism (SSM), the National Surveillance Authority, the Single Resolution Board (SRB), the competent national Resolution Authorities, the national deposit insurance systems and, finally, the European Deposit Insurance Scheme (EDIS), which has still to be enacted.
In other words, the "three pillars" of the European Banking Union -SSM, SRB and EDIS - correspond to the tree "functions" of the FDIC. Moreover, these functions in Europe are further subdivided between SSM and National Competent Authorities (as regards supervision), between SRM and National Resolution and Liquidation Systems (as regards the management of banking crises), between National deposit insurance systems and the - still to be enacted – EDIS (as regards deposit insurance).

Beyond the concentration of powers the FDIC can avail itself of intervention instruments which appear to be more effective than in the EU case. In particular, the FDIC follows the principles of prompt corrective action and least (not zero) cost with an ample latitude of operative independence.

As a result of the Great Financial Crisis, the FDIC had to tackle a banking crisis propagating as a pandemic: since December 2008 in twelve months the number of problem banks rose from 252 to 702 (almost two per day) and in 2010 reached a peak of 900 banks (totalling $ 459 bn). In total, between 2008 and 2014, (excluding Washington Mutual) the FDIC managed almost 520 bank crises for a total of some $ 400 bn.

The guidelines adopted are worth remembering as they also mark significant differences with the European framework.

- Growing preference for adopting procedures that preserve the sound part of the business (so-called P&A, purchase and assumption) instead of liquidation and refund of insured depositors.
- No segmentation by size class of the bank involved.
- Lack of mandatory and preliminary bail-in of non insured creditors.

- Lack of parameters that limit the discretionary intervention of the regulator The FDIC can use its funds to facilitate P&A deals (even if they benefit non insured creditors) only under the condition that the overall cost is lower than the refund of insured creditors. In this way, the FDIC may "buy time" and avoid the liquidation only because the market is not willing to inject new capital.

In sum, the Agency proved to be very efficient in the management of the problem banks during and after the Great Financial Crisis, notably a wide number of small- and medium-size banks. This is proved by the fact that, out of the 520 problem banks between 2008 and 2014 where it intervened, only for 26 of them an atomistic liquidation proved to be necessary. P&A procedures were successfully adopted in 481 cases.

This explains why both the Bank of Italy[29] and many European politicians[30] are now supporting an evolution of the European regulatory framework towards the American model.

5. The renewed concern in Europe for an effective proportionality in banking regulation

The Basel Capital Accords – the first one issued in 1988 – were conceived for large banks operating internationally. A key goal of the Accords was to ensure a level playing field for cross-border competition. In Europe, on the contrary, the Basel standards have been always applied to all banks and investment firms. The EC justified such approach, reiterating the reason thereof, by referring to the transposition of Basel III: "While the Basel capital adequacy agreements apply to internationally active banks, in the EU they have applied to all banks (more than 8.300) as well as investment firms. This wide scope is necessary in the EU, where banks authorized in one Member State can provide their services across the EU's single market and, as such, are more than likely to engage in cross-border business. Moreover, applying the internationally agreed rules only to a subset of European banks would have created competition distortion and potential for regulatory arbitrage. These specific circumstances were taken into account throughout the process for the transposition of Basel III into the EU legal framework"[31].

However, such analytical justification can and should be turned around. The one-size-fits-all (OSFA) approach to regulation and supervision causes substantial competitive distortions, mainly because it penalizes smaller companies, creating artificial economies of scale that are in fact diseconomies resulting from regulation, as currently acknowledged by the Commission itsels[32].

As indicated, the rationale for and the implementation of a proportional regulatory system for banks were clearly outlined in the US by the Dodd-Frank Act[33].

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[29] Giovanni Majnoni D'Intignano, Andreas Dal Santo, Michele Maltese, La gestione delle crisi bancarie da parte della FDIC: esperienza e lezioni per la Banking Union, in Banca d'Italia, Note di stabilità finanziaria e vigilanza, 22 Agosto 2020

[30] J. Deslandes, C. Dias and M. Magnus, Liquidation of Banks: Towards an 'FDIC' for the Banking Union?", European Parliament, february 2019 (available at www.europarl.europa.eu).

[31] See European Commission, "Capital Requirements – CRD IV/CRR", Memo, Brussels, 16 July, 2013.

[32] See European Commission, "Capital Markets Union: More Proportionate and Risk Sensitive Rules for Strong Investment Firms", Brussels, December 20, 2017.

[33] See C. Dodd and B. Frank, "The Dodd-Frank Wall Street Reform and Consumer Protection Act", US Congress, Washington D.C., July 21, 2010.

Not surprisingly,in Europe average costs from regulation measured in proportion to total assets are a multiple for small-medium banks compared to large "significant" banks, as is clearly shown by BVR[34].

6. The innovation challenges

Looking ahead, a major open question for small-medium size local banks is whether they suffer from significant handicaps in the innovation process. Two main intertwined, but economically distinct facets, have been identified and analyzed, notably on the other side of the Atlantic:

- The first is the partnership with Fintech operators and equity providers, and the relationship with credit platforms, which might represent an alternative to the soft-information advantage on bank customers.[35]
- The second – which is well documented in the US, less so in the EU – is the growth and the changing character of new microbusinesses – mainly online – and their interactions with banks and local economic growth.[36]

These challenges require close, constant attention by banks and supervisors alike. In some European countries the supervisory attitude leans towards the belief that the innovation factors and the ongoing changes may compound the weaknesses of LSIs. It is therefore of interest to briefly explore the approach of (critical) support to banks on these issues under way in the US.

Bowman, Mc Williams and Ryan presented the views of the supervisors, respectively: the Federal Reserve, the Conference of State Bank Supervisors and the Federal Deposit Insurance Corp. at a jointly sponsored Conference on Community Banks.[37] This annual conference brings together researchers, regulators, policy makers and bankers to discuss and debate the many facets of medium-small bank financial intermediation and the future prospects of relationship lending. [38]

Ample empirical evidence was provided to show that CBs were strongly and actively responding to the Small Business Administration Paycheck Protection Program (PPP) and the Fed's Accompanying Liquidity Facility (PPPLF).

A year earlier Bowman[39] had underlined the importance of the links between innovation technologies and CBs and the need to enhance the understanding of the ongoing changes. In

[34] See BVR, "Proportionality in EU Banking Regulation: the Case for a Step-Change to Accompany the Introduction of Basel 4", Berlin, June, 2019.
[35] Fed 2021.
[36] Hartman and Parilla 2022.
[37] Fed, CSBS, FDIC, "Community Banking in the 21st Century", Fed of Saint Louis, 2021, September. In particular, Bowman remarked that "Community banks continue to play a vital role in supporting local communities. Their ability to thrive in an increasingly digital landscape is critical to the economic well-being of those communities" (Bowman 2021).
[38] Of special interest is a paper by Passalacqua et al. which shows the importance – on both sides of the Atlantic – of on-site supervision as a complement to regulation in improving credit allocation and ensuring effective standards of corporate governance (Andrea Passalacqua, Paolo Angelini, Francesca Lotti and Giovanni Soggia, "The real effects of bank supervision: evidence from on-site bank inspections", Banca d'Italia Working Paper, no. 1349, 2021, 14 ottobre).
[39] M. Bowman, "Technology and the Regulatory Agenda for Community Banking", Fed, 2020, December 04.

2021, after meeting with local banks, the Fed released a White Paper, which contains in-depth analysis of innovation partnerships.[40]

The ongoing process has been presented and surveyed in an excellent review article by White.[41] Three primary types of bank/Fintech partnership have been identified, with attendant benefits and risks:

- Operational technology
- Customer oriented models
- Front-end Fintech (or Banking-as-a-Service)

In the first model Fintech partners help improve banks' internal processes and regulatory compliance. According to customer-oriented schemes, the aim is to enhance bank functions which can be directly observed and assessed by customers: typically, opening/closing accounts and using on-line access to bank services and key applications. The third arrangement implies direct interaction of the Fintech partner with bank customers: this widens the range of joint services, but also entails more third-party risks.

The ultimate common goal of bankers and supervisors is to foster what has been called "responsible innovation".

7. Policy implications of the research and conclusions

It is worth summing up the main findings of the Bruno-Marino paper

- The stylized facts looking at the profitability measured by RoA and RoE are: i) large banks tend to outperform smaller banks only before the Great Financial Crisis; ii) the cost-to income ratio is the component of bank profitability that seems to explain most of the gap between top and worse performers; iii) the operational efficiency gap between the two bank groups remains constant across the cycle.
- The econometric analysis aims to assess empirically which bank specific characteristics are more likely to explain the probability for a bank to be top performer (i.e., level of RoA above the sample median). This analysis sheds light on the role played by size, by measuring whether banks belonging to "larger" size categories are more likely to outperform smaller banks. Overall, bank size is found to be broadly neutral and for most of the specifications not statistically significant. Loan portfolio quality and operating efficiency are the characteristics that are more relevant to explain performance gap, and this independently of bank size. The results are stable across specifications and robust to several checks.

The paper offers a solid ground for taking a positive approach to the viability (efficiency/profitability) of small/medium size banks in Europe, in spite of insufficient regulatory proportionality over time. This confirms the findings drawn from the American experience, in a context of in-depth proportionality.

[40] Board of Governors of the Federal Reserve System, "White Paper: Community Bank Access to Innovation through Partnerships", September 2021.
[41] Carl White, "Partners in Innovation: Community Banks and Fintech Firms", Saint Louis Fed, 2021, December 23.

As the previous analysis has shown, this requires fundamental changes in the European regulatory framework. On the one hand, capital requirements must abandon the one-size-fits-all approach and assure methods of supervision tailored to the size of banks. On the other hand, resolution procedures must be better designed to soften the rigidity of the present European regime and avoid the danger of applying national (and disruptive) liquidation procedures to banks that – after a period of recovery under the regulators' supervision – could return to profitability.