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The FDIC bank crisis management experience: lessons for the EU Banking Union

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Overview

The US Federal Deposit Insurance Corporation (FDIC) responsibilities span three key regulatory functions – banking regulation and supervision, resolution and receivership, and bank deposit insurance – a feature seldom found on the international scene and in stark contrast to the European framework. In addition, the FDIC's accumulated experience in bank failure management makes this institution a point of reference in the ongoing debate on possible reforms of the European Union bank crisis management framework and deposit insurance scheme. The analysis of the US regulatory framework and the FDIC experience highlights four main factors that explain its superior performance, when compared to that of the European Banking Union: (a) the concentration of different functions into one authority; (b) the presence of a single framework for banking resolution flexibly applicable to all banks, regardless of their size; (c) the possibility to use the deposit insurance fund to protect also uninsured deposits, under the least cost principle, when – as part of purchase & assumption transactions – it allows for a reduction of fund disbursements; (d) the absence of antitrust constraints.

1. Introduction and main conclusions

The Federal Deposit Insurance Corporation (FDIC or Corporation) has unique characteristics in the context of US

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financial regulation. Contrary to the fragmentation that prevails in the rest of US banking and insurance regulation, the FDIC has authority over all federally insured depository institutions (IDIs or credit institutions) operating in the US, with the exception of credit unions. Also, the FDIC has exceptional characteristics compared to similar institutions in other countries, where deposit insurance institutions do not usually simultaneously have responsibility for banking supervision (which the FDIC shares with other federal authorities), deposit insurance and bank resolution and receivership management. In particular, functions are concentrated in the Corporation, which in the European Banking Union are distributed between the Single Supervisory Mechanism (SSM), the national supervisory authorities, the Single Resolution Board (SRB), the national resolution authorities, the national deposit insurance schemes and, finally, the forthcoming European Common Deposit Insurance Scheme (EDIS).

The number of banks supervised by the FDIC, its accumulated experience in managing the failure of over 3,500 banks between 1980 and 2019 while protecting guaranteed deposits and offering, in 59% of cases, protection of uninsured deposits consistent with the least cost principle (Table 1), make it a point of reference in the ongoing debate on possible reforms of the European Banking Union and deposit insurance schemes.[1] This note summarizes the main characteristics of the FDIC and evaluates their relevance for the completion of the European Banking Union.

Table 1: Number and percentage of resolutions by type of resolution (1980-2019)

Type of resolution	**1980-2019**		**S&L crisis 1980-1996**		**Subprime crisis 2008-2014**	
	#	%	#	%	#	%
Payout	**677**	**19%**	**646**	**22%**	**26**	**5%**
Purchase and Assumption	**2,233**	**63%**	**1,688**	**57%**	**481**	**93%**
– Insured deposits only	140	4%	104	4%	10	2%
– Insured and uninsured deposits, certain other liabilities and a portion of the assets	2,093	59%	1,584	54%	471	91%
Assistance* or repurchase (insured and uninsured deposits remain protected)	**591**	**17%**	**578**	**20%**	**13**	**3%**
Others	37	1%	37	1%	0	0%
Total	**3,538**	**100%**	**2,949**	**100%**	**520**	**100%**

The Dodd-Frank Law enacted in July 2010 eliminated this option altogether.
Source: FDIC.

[1] F. Restoy, "*How to improve crisis management in the banking union: a European FDIC?*", Lisbon, 4 July 2019 (available at www.bis.org); F. Restoy, "*Crisis management framework: what remains to be done*", welcoming remarks by Fernando Restoy, Chairman, Financial Stability Institute, Bank for International Settlements, at the FSI-IADI conference on crisis management, resolution and deposit insurance: what's next and how to prepare, Basel, 4 September 2019 (available at www.bis.org); P. Baudino, A. Gagliano, E. Rulli, R. Walters, "*How to manage failures of non-systemic banks? A review of country practices*", Financial Stability Institute, FSI Insights on policy implementation n. 10, October 2018 (available at www.bis.org); A. Gelpern, N. Veron, "*An effective Regime for Non-viable Banks: US Experience and Considerations for EU Reform*", European Parliament, Econ Governance Support Unit (EGOV), July 2019 (available at www.europarl.europa.eu); A. De Aldisio, G. Aloia, A. Bentivegna, A. Gagliano, E. Giorgiantonio, C. Lanfranchi, M. Maltese, "*Towards a framework for orderly liquidation of banks in the EU*", Banca d'Italia, Notes on Financial Stability and Supervision, n.15, August 2019 (available at www.bancaditalia.it).

2. The FDIC: a three-pronged institution

The FDIC structure and powers have been shaped by the regulatory innovations enacted by Congress in response to major US bank crises. In 1933, in the aftermath of the Great Depression when 9,000 banks (one third of the US banks) suspended operations or failed, Congress created the FDIC to restore the stability and public confidence in the US banking system. Following the Savings & Loan Associations (S&L) crisis and the 2008 subprime crisis, Congress passed the 1991 FDIC Improvement Act (FDICIA) and the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act (DFA) which strengthened the powers of the FDIC.

Today the FDIC, with about 5,800 employees, guarantees the deposits of about 5,300 IDIs (Tab. 2): 4,600 federal and state commercial banks, and 700 savings institutions. The exception is credit unions, which are regulated and supervised by the National Credit Union Administration (NCUA) even in the case of a crisis. IDIs pay premiums to the FDIC based upon their risk, as estimated by the FDIC. These premiums fund FDIC's operations as well as two funds: the Deposit Insurance Fund (DIF) and the Federal Savings and Loan Insurance Corporation (FSLIC) Resolution Fund (FRF). The former protects insured deposits of failing insured institutions, the latter is for insurance-related expenses of receiverships transferred to the FDIC from the FSLIC.[2]

Table 2: Assets, deposits, and insured deposits by type of institution and federal agency
(Second quarter 2019; dollar figures in millions)

Commercial Banks and Savings Institutions	**Number of Institutions**	**Total Assets**	**Domestic Deposits**	**Insured Deposits**
FDIC-Insured Commercial Banks	4630	17,098,031	11,823,312	6,899,756
FDIC-Supervised	3086	2,674,036	2,119,423	1,448,410
OCC-Supervised	798	11,489,918	7,666,963	4,336,012
Federal Reserve-Supervised	746	2,934,078	2,036,926	1,115,334
FDIC-Insured Savings Institutions	673	1,169,203	924,306	755,207
FDIC-Supervised	332	373,314	280,423	219,105
OCC-Supervised	305	765,291	619,575	516,632
Federal Reserve-Supervised	36	30,598	24,309	19,470
Total Commercial Banks and Savings Institutions	**5303**	**18,267,235**	**12,747,618**	**7,654,964**
Other FDIC-Insured Institutions				
U.S. Branches of Foreign Banks	9	93,034	41,159	36,634
Total FDIC-Insured Institutions	**5,313**	**18,360,268**	**12,788,777**	**7,691,598**

Source: FDIC Quarterly Banking Profile, Q2 2019.

To protect the stability of the US financial system, subsequent regulatory innovations have increased the role of the FDIC in crisis management and response, broadened

[2] The FDIC oversees the Orderly Liquidation Fund (OLF): a fund for the receivership of Systemically Important Financial Institutions (SIFIs) under a procedure called the Orderly Liquidation Authority (OLA).

its scope to encompass systemically important financial institutions, and resulted in the concentration in the FDIC of the three following key banking crisis management functions:[3]

1. ***Insurance of bank deposits and administration of the deposit insurance fund***. IDIs benefit from the FDIC deposit insurance of up to $250,000 for each account class and individual or legal entity within the same institution. Government deposits are also insured. Deposit insurance for each individual or legal entity could easily exceed $250,000. At the end of the second quarter of 2019, the FDIC estimated that insured deposits scattered across 5,300 IDIs totaled $7.7 trillion or 60% of total US bank deposits (Table 2). For insured deposit payoffs the FDIC can use both the resources contained in the DIF, approximately 1,41% of the insured deposits (over $108 billion)[4] and a non-interest-bearing backup line of credit of $100 billion from the US Treasury.[5]

2. ***Banking regulation and supervision of the IDIs together with other federal authorities***. The FDIC supervises FDIC-insured state-chartered institutions whose size is typically small or medium. For larger institutions, supervision is mainly carried out by other federal agencies, namely the Office of Comptroller of the Currency (OCC) and the Federal Reserve System (FED). However, the FDIC retains the backup authority to revoke the license of these larger institutions. At the end of the second quarter of 2019, the FDIC had about 3,400 commercial banks and savings institutions under its direct supervision, equal to two thirds of the IDIs whereas the OCC and the Fed supervised about 1,100 and 800 banks respectively (Table 2).

3. ***Resolution and receivership***. The resolution is a procedure carried out on a failing IDI under special rules which are outside of ordinary bankruptcy law. The methods for carrying out this procedure are mainly two: Purchase and Assumption (P&A) and liquidation or deposit payoff. In the former, the FDIC transfers the bulk of the assets and deposits (insured and otherwise) of the failing institutions to the assuming institutions or AI. In the latter, which is generally carried out when there are no buyers for the P&A, the FDIC undertakes a piecemeal liquidation of the bank's assets and allocates the proceeds to the institution's creditors according to the creditors hierarchy. The choice of the method influences the use of the DIF. In the case of P&A, the DIF covers the difference between the value of the assets transferred to the buyer and that of the relevant liabilities (insured and uninsured deposits) that the buyer takes on. In the event of liquidation, the DIF is used to reimburse insured deposits whereas the FDIC retains the assets and to the extent possible recovers what has been paid out by the DIF (deposit payoff). In both cases, the FDIC acts as liquidation agent or receiver with special powers. As part of the resolution procedure, the FDIC

[3] "*Resolutions Handbook*", Federal Deposit Insurance Corporation, January 2019 (available at www.fdic.gov).

[4] 2% when fully funded.

[5] The insured depository institutions shall repay the line of credit. The FDIC has another credit line of $100 billion for working capital financing with the Federal Financing Bank, a US Treasury agency. For a detailed analysis see: FDIC, "*Crisis and Response: An FDIC History, 2008–2013*", July 2019 (available at www.fdic.gov).

has the responsibility of protecting the insured deposits first, and then the other creditors of the failing institution.

The current resolution framework is the result of regulatory changes introduced in the aftermath of the two main crises of the last forty years. The FDIC Improvement Act (FDICIA) passed by Congress in 1991 after the S&L crisis transferred the responsibility of insuring saving institutions' deposits to the FDIC and introduced two key pillars into the US framework for banks resolution: (a) the Prompt Corrective Action (PCA), a set of rules that regulates how federal banking agencies, including the FDIC, resolve the problems of insured depository institutions in relation to the progressive weakening of a bank's capital till the revocation of the banking license and the start of the resolution process and (b) the Least Cost Principle, the rule that requires the FDIC to choose the resolution method (P&A or liquidation) that minimizes the losses for the DIF.[6] In 2010 after the subprime crisis, Congress passed the Dodd-Frank Act (DFA) expanding the scope of the FDIC to include management of troubled bank holding companies and systemically important financial institutions (previously assigned to the FED) through a specific procedure, the Orderly Liquidation Authority (OLA) and a dedicated fund, the Orderly Liquidation Fund (OLF), financed by the US Treasury. Therefore, with the DFA, the FDIC has become the go-to institution for US bank and financial institution resolutions.

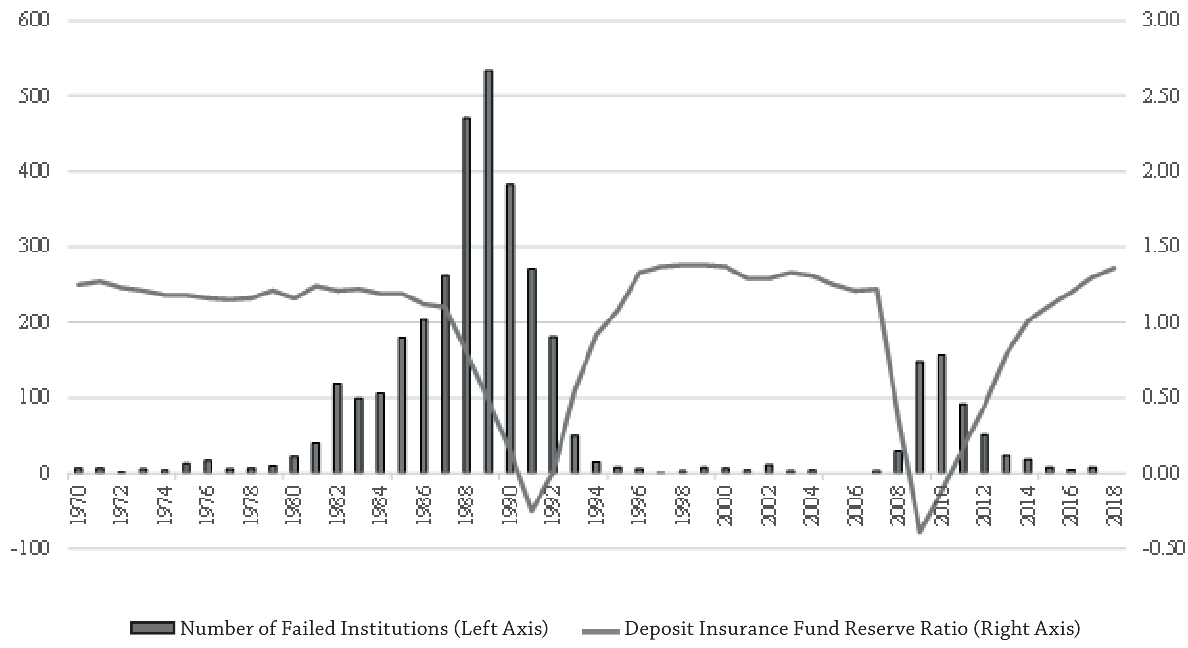
3. The FDIC during the savings and loan and the subprime crises

Of the over 3,500 FDIC resolutions in the period 1980-2019, approximately 3,000 occurred in the 1980s during the S&L crisis and 500 between 2008 and 2013 during the subprime crisis. A comparison between the resolution methods carried out by the FDIC in these two crises reveals a decisive tendency to make greater use of the Purchase and Assumption (P&A) method, at the expense of liquidation with the simultaneous reimbursement of insured deposits (deposit payoff) from the DIF. **In fact, the number of P&A as a percentage of the total number of resolutions rose from 57% during the S&L crisis to 93% during the subprime crisis, the vast majority of which (91%) included the transfer of insured and uninsured deposits to the AI, while liquidation decreased from 22% to 5%** (Table 1). This trend is the result of several factors including the FDIC's increasing resolution experience as well as legislative innovation after the S&L crisis, which curbed the use of the DIF.

During the S&L crisis, more than 2,900 banks failed (Chart 1) drying up the deposit insurance fund of the Federal Savings and Loan Insurance Corporation (FSLIC), the body then responsible for resolving S&L associations. In response to that, Congress asked the FDIC to insure the deposits of the S&L and later on transferred the resolution and receivership duties of the FSLIC to the FDIC. The expanded perimeter of the

[6] The FDIC can deviate from the least cost principle when there is a serious risk of systemic instability. The so-called systemic risk exception (SRE) shall be decided by the Secretary of the Treasury, in consultation with the President, on a proposal adopted by a qualified majority of the Board of the FDIC and the FED.

Chart 1: Number of failed institutions and Deposit Insurance Fund balance



Source: FDIC.

FDIC's responsibility resulted in significant draws of funds from the DIF and a deficit of $7 billion in 1991. The FDIC replenished the deficit by drawing from the credit lines established by the US Treasury to support depositors' confidence, as the FSLIC deposit insurance was transferred to the FDIC.

During the subprime crisis, the FDIC took extraordinary measures through an extensive interpretation of the FDICIA systemic risk exception. The Corporation drew from the DIF to support the operations of non-failing institutions (open bank assistance) and to provide liquidity guarantees for a total exposure of $1,150 billion at the end of 2009. As during the S&L crisis, the DIF, whose size had already fallen to $52 billion in March 2008, partly due to the failure of large credit institutions such as Washington Mutual and IndyMac, dried up and fell to a negative balance of $21 billion at the end 2009. The DFA, enacted at the beginning of 2010, allowed the FDIC to set the designated reserve ratio above the required statutory minimum and to request IDIs to frontload future payments bringing the DIF back into positive territory without tapping into the US Treasury's credit lines.

The majority of resolved institutions during the subprime crisis were small. For instance, between 2008 and 2013, excluding Washington Mutual, the FDIC resolved 488 IDIs with total assets of $370 billion (Table 3). The FDIC has proven extremely effective in managing the crises of these institutions, while the failure of larger and more complex banks required the intervention of the Treasury together with other institutions.

Table 3: FDIC Losses by Type of Resolution, 2008–2013						
Resolution Type	**Number of failures**	**Total Assets ($ billions)**	**Total Cost to FDIC ($ billions)**	**Loss Rate (Cost/Assets)**		
				Weighted Mean	**Mean**	**Median**
P&A						
- *Washington Mutual*	1	307	0	0%	0%	0%
- *Other Whole Bank P&A*	78	12,9	2,2	16,8%	23%	23,4%
- *P&A with loss share*	304	312,1	56,8	18,2%	22,3%	21,6%
- *Other P&A*	80	38,4	9,3	24,3%	33,9%	34,1%
Total P&A	463	670,4	68,3	10,2%	24,4%	23,3%
Piecemeal liquidation and insured deposits payout	26	15,9	4,4	27,4%	33,2%	34,7%
Total	**489**	**686,3**	**72,7**	**10,6%**	**24,9%**	**23,6%**

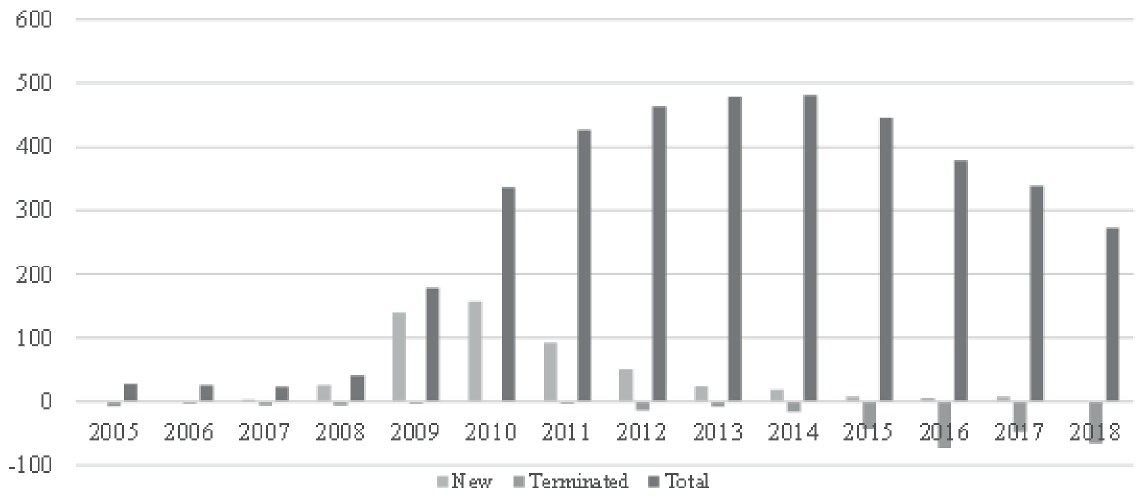
Source: FDIC, Crisis and Response, p.200.

Although the number of failed institutions during the subprime crisis was lower than those of the S&L crisis (Chart 1), **the subprime crisis propagated faster** and the total amount of insured deposits subject to the FDIC guarantee was as high as those in the S&L crisis. In particular, from December 2008 to December 2009, the number of problem banks rose from 252 to 702 (an average pace of nearly two banks per day) and reached a peak of about 900 banks in 2010 for a total of $459 billion in assets. Throughout the same period, the FDIC resolved 140 institutions.

Given the rapid spread of the crisis, effective coordination of bank supervision among the regulatory authorities was crucial in identifying problem banks quickly. Coordination among regulatory authorities was and still is essential to reduce the consequences of bank failures. The PCA allowed for the timely identification and recapitalization or resolution of problem banks. The effective coordination among supervisory authorities helped to contain the number of failing institutions and accelerated their resolution. For example, of the 1,792 problem banks identified in the period January 2008-March 2017, 532 were resolved, 294 were merged into or acquired by another entity without FDIC intervention, 112 are still problem banks and 854 are no more classified as problem banks.

The increasing use of the P&A method and the sharp reduction of insured deposit reimbursement has been a feature of FDIC resolutions throughout the subprime crisis. Regulatory changes introduced before the subprime crisis have constrained the use of piecemeal liquidations with the associated payoff of insured deposits. Besides the introduction of the least cost principle, other regulatory changes that have increased the relative cost of the deposit payoffs are the 1993 National Depositor Preference Law that revised the creditors' priority of claims against failed depository institutions **and removed FDIC priority in the recovery of reimbursed deposits**. The 2010 DFA, moreover, increased the FDIC insurance from $100,000 to $250,000. These regulatory changes, together with the FDIC's and the other supervisory agencies' growing experience in dealing with failing institutions - gained after the FDICIA was passed into law - have resulted in a relative increase in the use of P&A. According to the FDIC,[7] the extensive use of P&A has increased its crisis management efficiency, reducing the cost for the DIF and increasing the chances of the recovery of uninsured deposits. In fact, the P&A method is more efficient than liquidation as it preserves the value of the banks' franchise and lowers the FDIC's administrative expenses. This trend towards a greater use of P&A is apparent in the breakdown of the number of cases by type of resolution (Table 1). In the 2008-2014 period, 520 institutions were resolved of which only 26 (5%) required some form of deposit payoff whereas 481 (93%) were resolved through P&A transactions. In any case, the depositors bore minimal losses: the few direct payoffs involved very small intermediaries whose liabilities were almost entirely composed by insured deposits[8] while the vast majority of P&A transactions (471 or 91% of the total number of resolved institutions) resulted in the transfer of both insured and uninsured deposits, therefore without any loss for depositors. The minimization of losses for the DIF, on one hand, and the almost complete protection of depositors, including uninsured depositors, on the other hand, show the successful balance achieved by the FDIC between reducing moral hazard and preserving the value of banks as a going concern. Due to the long time required to transfer banks' assets not subject to P&A procedures, the number of institutions in receivership grew until 2015 and remains higher today than it was before the crisis (Chart 2).

Chart 2: New, Terminated and Total Receiverships (2005-2018)



Source: FDIC annual reports.

Despite the results achieved, the FDIC has not been immune from criticism. On several occasions the legislature has intervened, for instance, by varying the powers of the FDIC in order to reduce the perception of arbitrariness in its decision making or by limiting and, ultimately, eliminating open bank assistance or by increasing its accountability towards citizens and Congress. However, in other circumstances, the legislature has expanded the powers of the FDIC. The DFA, while confirming that bank

7 See for example: *Crisis & Response*, cit., p.185; *Resolutions Handbook*, cit., p.17.

8 Of the 26 intermediaries, 4 had total assets between $1 billion and $1.5 billion with a maximum level of uninsured deposits of $4.2 million; 15 had total assets between $100 million and $1 billion; 6 had less than $100 million in total assets. In all cases the share of uninsured deposits was minimal.

holding companies (non-bank holdings that control one or more banks) are normally subject to the bankruptcy law, has granted the FDIC the authority to act as receiver and use the OLF to manage the crisis if there are financial stability implications from the application of the bankruptcy law.

4. The FDIC and the Banking Union: four key differences...

By comparing the FDIC experience in managing the S&L and the subprime banking crises with the initial implementation of the EU Bank Recovery and Resolution Directive (BRRD), four key differences emerge that have influenced the relative performance of the two frameworks. By analyzing these differences, it is possible to lay down a set of solutions to some of the problems that have emerged in the start-up phase of the EU framework.

The first difference concerns the degree of concentration of the crisis management functions. In the earlier sections we have showed that the attribution of responsibilities in the management of banking crises in the US is very different from that of Europe: strongly centralized in the former, strongly decentralized in the latter. The "three pillars" that make up the European Banking Union –Single Supervisory Mechanism (SSM), Single Resolution Mechanism (SRM) and the forthcoming European Deposit Insurance Scheme (EDIS) - correspond to the three functions of the FDIC. In Europe, these three functions are further split between European Union institutions and Member States: on the supervisory front between the SSM and the national supervisory authorities, on banking crisis management between the SRM and the national resolution authorities, and on the deposit insurance front between the national deposit insurance schemes and the forthcoming EDIS.[9]

A second distinctive element of the two frameworks is the different emphasis on the size of the failing institution as a criterion for selecting the type of resolution method. A unique feature of the European framework is that the resolution process is reserved for systemically relevant credit institutions, i.e. those for whom resolution is in the "public interest". The criterion that "the resolution is for the few and not for the many", as stated by the Chair of the SRB, and the presumption therefore that liquidation at the national level is the default procedure for "the many" does not exist in the US framework. Although size determines a different path for systemically important financial institutions in the US (the OLA, Title 2 of the DFA), the principle that separate methods (liquidation versus P&A transactions) should be applied depending on the size of the failing institution is outside of the scope of US banking crisis regulation. Indeed, the empirical evidence from the crisis management shows that the FDIC largely relied, and increasingly so over time, upon P&A transaction for small failing US institutions in lieu of liquidation.

[9] 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), A. Gelpern, N. Veron "*An Effective Regime for Non-viable Banks: US Experience and Considerations for EU Reform*", cit.

A third difference concerns the burden sharing requirements and the other conditions laid out by the two frameworks for resolving failing institutions and to access the insurance funds. Contrary to the European framework that sets quantitative parameters, the US framework relies on an empirical rule, the least cost principle, to define the conditions to access the DIF. In fact, the US framework does not require – as a precondition of any deployment of DIF funds in a P&A transaction – that shareholders and creditors of a failing bank bear a minimum amount of losses. Rather the access to the DIF is guided by the least cost principle, allowing the FDIC to use the DIF for P&A transactions (also for the benefit of creditors other from insured depositors) whenever the economic burden for the DIF would be lower than in the case of liquidation. This pragmatic principle does not find application in the European framework either in the case of resolution under the BRRD or in the liquidation procedures governed by national laws. In fact, the former provides that failing banks can access the Single Resolution Fund (SRF) to absorb their losses or to be recapitalized as long as their shareholders and creditors bear at least 8% (bail-in) of the bank's liabilities, including its own funds. As per national legislations, only a few countries[10] allow the use of deposit insurance funds to support the sale of some or all of the asset and liabilities of a failing institution to another institution along the lines of the US P&A. Even where this use is envisaged, two constraints of the European framework limit the use of national funds to these alternative interventions: the maximum deposit guarantee, which is € 100,000 in Europe as opposed to $ 250,000 in the US and the different ranking attributed to deposits insurers in receivership (in the US the FDIC participate *pari passu* with the uninsured deposits to the liquidation losses while in Europe the deposit guarantee schemes are senior to the uninsured deposits). These constraints make the payoffs of insured deposits the least expensive solution for European deposit insurance funds, due to their higher seniority, which allows them to fully recover the amount of the repayment. [11]

Finally, the inclusion of the antitrust law within European banking crisis management procedures is absent in the US framework. The principle of taxpayer protection and the ensuing limit on the use of public resources to contain moral hazard is a cornerstone of the US banking crisis management legislation. Nevertheless, the US framework does not include the Department of Justice (DOJ), the US antitrust authority, as part of banking crisis management. The rationale for this exclusion is predicated on the belief that the effects of state aid on market prices in orderly market conditions differ from those in a crisis when market prices no longer reflect production costs. In this context, it would be pointless to protect the taxpayer by estimating a hypothetical "fair market fire sale price". On the contrary a far more effective protection

[10] Currently 17 of the 27 EU Member States can only make use of national deposit insurance funds for the reimbursement of deposits guaranteed under the liquidation procedure. CEPS, *Options and national discretions under the Deposit Guarantee Scheme Directive and their treatment in the context of a European Deposit Insurance Scheme*, Report for the European Commission, November 2019 (available at www.ec.europa.eu).

[11] For an analysis of the role of these constraints in the European context, see De Aldisio *et al*. "*Towards a framework for orderly liquidations of banks in the EU*", cit.

can be achieved by generating positive net proceeds by selling in orderly markets banks' assets purchased at fire sale prices during the crisis. [12]

5. ... that affect the relative performance of the two frameworks...

The fragmentation of the European framework increases the complexity of banking crisis management. In the US, the concentration of supervision, deposit insurance and crisis management in a single institution and the exclusion of the antitrust authority speed up the resolution of failing institutions: normally it takes 90 days from the identification of a critically undercapitalized institution to the start of the receivership. Also, there is one single resolution procedure at the US federal level, despite different state corporate or contract legislations. On the contrary, in the EU framework the fragmentation of supervision, deposit insurance and crisis management across several institutions and the further allocation of each of them between European and national authorities introduce uncertainty in the resolution process, including the timing of their completion and their outcome. Furthermore, it spreads thin the limited stock of professional skills and experience to draw on.

Another consequence of fragmentation is the actual, potential, or perceived unequal treatment of creditors of the same bank in different countries or similar situations. The uncertainty that characterizes state aid procedures[13] in the European Union could result in different outcomes from the deposit guarantee systems under similar circumstances. Furthermore, different national regulations could result in different treatments of creditors, potentially violating (or making it impossible to measure) the no creditor worse off (NCWO) principle (i.e., the rule that prescribe that creditors do not incur greater losses in a resolution under the BRRD than they would have received in an insolvency procedure under national law). These different treatments, either real or perceived, could corrode the perception of fairness and negatively affect social cohesion, as documented by the vast international media coverage of the few cases of resolution of Italian banks, as opposed to the modest attention of the 3,500 resolutions of banks of similar size in the US over the last forty years.

Finally, the constraints embedded in the European framework that limit the use of resolution or deposit guarantee funds are not efficient. The penalty for creditors envisaged by the BRRD as a precondition to access the resolution fund and the regulatory constraints on the use of guarantee systems different from deposit payoffs do not find an equivalent in the FDIC, whose crisis management strategies depend on the least cost principle as a key tool to minimize the use of the DIF. Furthermore, the presumption that the ambiguous "public interest" criterion established by the law could be used to distinguish the entities that should be liquidated (non-systemic

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[12] For an analysis of these matters see B. Bernanke, "*The Courage to Act: A Memoir of a Crisis and Its Aftermath*", chapter 15, Norton, 2017.

[13] See EU court ruling that overruled the decision of the Directorate-General for Competition on the rescue of the Italian "Banca Tercas".

institutions) from those that should be resolved (systemic institutions) deprives the European institutions of the clarity and transparency that the least cost principle grants to the FDIC. The excessive reliance on strict regulatory provisions that are difficult to apply has stiffened the European framework, discouraging the use of the SRM without, however, significantly achieving any of the main objectives underlying the framework: reducing moral hazard and excessive risk-taking, enabling the orderly resolution of failing intermediaries without systemic consequences and breaking the vicious circle between banks and States. [14] Indeed, the emphasis in European regulation on the need to impose losses on shareholders and creditors to discourage moral hazard has obscured the objectives, that resolution procedures in the banking sector should have, of preserving the franchise value of the failing institution, ensuring that its critical functions as a going-concern are not dispersed, and protecting the public's trust in the banking system.

6. … and suggest enhancements to the Banking Union regulation

The comparison with the regulatory framework and the historical evidence of the FDIC suggests a series of possible regulatory enhancements to the rigid and fragmented European framework, regarding deposit guarantee funds in the context of the creation of the "third pillar" and the completion of the Banking Union. Among the enhancements we can include the following:

1. **Increase concentration of functions**. The US experience suggests that there are efficiency gains in concentrating the functions of the three pillars of the Banking Union within a single institution. In the Eurozone, where the supervisory activity is already carried out by the SSM and the national supervisory authorities, more concentration could be achieved in the two remaining functions of deposit insurance and bank resolution. This is also the solution identified by the European Commission, which provides that the SRB will be responsible for managing the forthcoming EDIS. To reduce the dispersion among the actors, the current distinction between resolution funds and deposits guarantee funds should also be weakened. A similar distinction is not present in the US framework which allows the FDIC to draw on a single fund to support P&A transactions and liquidations.

2. **Converge national procedures**. The US experience provides useful insights regarding the convergence of banking crisis management procedures in the context of national laws. The coexistence in the US of a patchwork of state laws, for instance for corporate or employment law, has not prevented the introduction of a single procedure for managing banking crises at the federal level. Similarly, in Europe, a greater convergence of the rules applicable to resolution procedures could be achieved despite the diverse national laws, for example, by introducing common rules at European level for the orderly liquidation of non-systemic banks modeled after the US P&A.[15]

[14] For similar criticisms of the European rules on burden sharing see Gelpern and Veron (2019) and IMF (2019).

[15] For a proposal in this direction see De Aldisio *et al*. "*Towards a framework for orderly liquidations of banks in the EU*", cit.

3. **Introduce the least cost principle as the key resolution criterion**. The empirical evidence from the US shows that the concentration of functions is not in itself sufficient to improve the effectiveness of the resolution process unless it is associated with increased institutional flexibility. In the US, the selected intervention strategy, namely P&A vs liquidation with payoff of insured deposits, is not dependent on a criterion mandated by law but on the minimization of the use of funds from the DIF, as dictated by the least cost principle and by market conditions. Within the European framework, this flexibility would require facilitating the use of depositor guarantee funds both in resolution and in liquidation, removing existing regulatory constraints, and applying the least cost principle as the guiding rule for accessing the funds. To this end, the super-priority attributed to the DGS should also be eliminated and the deposit insurance of €100,000 should be increased.[16]

4. **Use the least cost principle as a tool for the convergence of national procedures**. The least cost principle would not only make the European framework more flexible, it could represent a unifying rule facilitating the progressive integration of national and European procedures. It would offer a common principle, paving the way for the harmonization of SRB procedures and those of national deposit insurance and bank resolution authorities, which is a precondition for the possible future transfer of bank resolution responsibilities from the Member States to the European Union.

[16] Furthermore, BRRD article 109 should be revised as regards the rule under which the deposit insurance fund cannot absorb more losses than those that would be absorbed by insured depositors in case of bail-in. This rule should be replaced by the least cost test rule, under which the deposit insurance fund should be allowed to provide resources to absorb losses and recapitalize the institutions under resolution up to the amount that would have been allocated to reimburse insured depositors had the failing institution been liquidated.