



FINANCE

EQUITABLE GROWTH, FINANCE & INSTITUTIONS NOTES

How Insolvency and Creditor/Debtor Regimes Can Help Address Nonperforming Loans

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High non-performing loan (NPL) levels can threaten financial stability and also have a significant negative impact on credit, inflation, and real GDP. As such, efforts are commonly undertaken to contain the growth of NPLs and to help resolve them when they reach problematic levels. Insolvency and creditor/debtor rights (ICR) regimes are one of the complementary tools in the policy maker's arsenal for these purposes. This note reviews the empirical literature on the impact that effective ICR regimes can have on NPLs. Specifically, it highlights the potential impact of (i) effective ICR on increasing loan repayment probability; (ii) effective enforcement mechanisms on lowering banks' cumulative losses from NPLs; (iii) efficient pre-insolvency mechanisms and (iv) stronger insolvency frameworks on adjusting NPL levels faster; and (v) targeted NPL reform—including ICR reform—on fostering economic growth.





Introduction

Non-performing loans (NPLs) erode the profitability and can threaten the solvency of banks, and when a sufficiently large volume of loans is affected, they can potentially threaten financial sector stability. Efficient legal regimes that promote effective insolvency and creditor/debtor rights (ICR) are important tools that facilitate debt recovery, reduce the cost of credit, increase access to finance and, as a result, help improve NPL levels.

This Policy Note examines the relationship between effective ICR systems and NPL levels. In particular, it identifies relevant empirical studies that illustrate how effective ICR systems can help mitigate the rise in NPLs and resolve existing NPLs, potentially strengthening overall financial sector stability and limiting credit misallocation. The scope of this note is limited to the relationship between ICR regimes and NPL levels, although it is important to note that ICR regimes are only one possible set of complementary tools for dealing with bank NPL problems and that broader institutional, regulatory, and legal reform are likely to be needed for a more comprehensive NPL

resolution strategy. For instance, some of the main tools of NPL resolution include (i) debt restructuring; (ii) write-offs; (iii) direct sales; (iv) securitization; (v) asset protection schemes; and (vi) centralized asset management companies (Baudino and Yun 2017; World Bank FinSAC 2016). As pillar (i) conveys, strengthening ICR regimes is an integral component of this broader NPL resolution strategy, even with the challenges of legal reform during a time of systemic crisis (Baudino and Yun 2017).

It is also important to note that the impact of NPL levels is only one positive outcome of improved ICR systems. Strengthening a country's ICR system has also been shown to have effects associated with a lower cost of credit; an increased availability of credit; increased returns to creditors; job preservation through reorganization frameworks; and promotion of entrepreneurship. These other benefits of a sound ICR system have been explored in more detail in earlier publications (World Bank 2014a).



High Levels of NPLs Can Impact Financial Sector Stability

In modern economies, banks are typically the primary financial intermediaries and are fundamental to a stable financial system, one that is “capable of efficiently allocating resources, assessing and managing financial risks, maintaining employment levels close to the economy’s natural rate, and eliminating price movements of real or financial assets that will affect monetary stability or employment levels” (World Bank 2016a). When banks are not able to recover the money lent, the financial system and the economy at large may suffer.¹

Despite standardization efforts by international standard-setting bodies (Basel Committee on Banking Supervision 2017), NPLs are still defined in various ways.² In most jurisdictions, NPLs are defined as bank loans that have been delinquent for more than a specified number of days, usually more than 90, or which are deemed unlikely to be paid according to predefined criteria -known as “unlikely to pay” or “UTP” criteria- (Basel Committee on Banking Supervision 2017).³ NPL levels — calculated as the ratio between NPLs and total bank loans — are largely driven by macroeconomic conditions (Ari, Chen, and Ratnovski 2019), but they can themselves have significant impact on the economy through strong feedback effects (Klein 2013, Section IV; Beck, Jakubik, and Piloiu 2013). In particular, high NPL levels undermine bank lending and, more generally, the supply of credit, with disproportionately negative effects for small and medium-sized companies (Klein 2014; Cucinelli 2015). High NPL levels also hamper investment by overleveraged firms

(Inaba et al. 2005), as more income is channeled into debt servicing (Aiyar et al. 2015a; European Banking Coordination “Vienna” Initiative 2012, Section 2). Increases in NPL levels are accordingly associated with a significant negative impact on credit, inflation, and real GDP (Klein 2013, Section IV).

When NPL levels rise, banks are required to raise provisions and hold more regulatory capital, impairing their balance sheets (Miglionico 2019). The balance sheet impact is often aggravated by the associated private sector debt overhang problem, as weak demand for credit also contributes to shrinking bank profits (Council of the European Union 2017, Chapter 2). These compounded effects often lead to bank failures (Lu and Whidbee 2013), and can represent a significant threat to the stability of the financial sector (Bottazzi, De Sanctis, and Vanni 2010).

It is therefore important to adequately understand all forces affecting NPL levels and what measures can be put in place to decrease them once they rise. The importance of this understanding is heightened at a time when the COVID-19 pandemic threatens to trigger liquidity and solvency crises around the globe (Adrian and Natalucci 2020; Ari, Chen, and Ratnovski 2020a), particularly as NPL levels were seen to sharply increase during previous crises (Ari, Chen, and Ratnovski 2019). The rest of this note focuses on the role that ICR systems have in mitigating the rise of NPLs and in facilitating their resolution.

1. Deterioration in asset quality is not the only channel of potential financial instability. Importantly, others relate to the liability side of banks’ balance sheets (for instance, when liquidity problems morph into solvency issues). We thank Pietro Calice for this comment.

2. Moreover, the rigor of actual enforcement shows important differences, even between jurisdictions with similar regulatory definitions. The authors thank Miquel Dijkman for suggesting this addition.

3. Again, these criteria vary across countries and institutions. As such, the IMF states that loans may be classified as NPLs when (unspecified) “evidence exists to reclassify them as nonperforming even in the absence of a 90-day past due payment, such as when the debtor files for bankruptcy” (see International Monetary Fund 2019, 192). Similarly, the European Central Bank also includes in its NPL definition loans for which “the debtor is assessed as unlikely to pay its credit obligations in full without realization of collateral, regardless of the existence of any past-due amount or of the number of days past due” — without specifying how that “unlikeliness” is to be evaluated and noting, instead, that it is for banks to have clearly defined internal criteria to identify indicators of unlikeliness to pay (UTP). See European Central Bank 2017, 50.



Effective ICR Regimes Facilitate Debt Recovery and Affect NPLs

In this note, ICR is broadly defined as the set of prerogatives that supply “efficient, transparent, and reliable methods for recovering debt, including the seizure and sale of immovable and movable assets and sale or collection of intangible assets” (World Bank Group 2016b). Debt recovery methods include bilateral debt enforcement processes — both in and out of court — as well as the insolvency system. The latter include tools ranging from informal out-of-court workouts and pre-insolvency proceedings to formal proceedings and provide for an “orderly process for the reorganization or liquidation

of insolvent entities in a collective manner,”⁴ while trying to accommodate a balance between creditor recovery and debtor protection (La Porta et al. 1998).

ICR regimes have an impact on both the likelihood of a borrower defaulting as well as on the tools that banks can use to maximize creditor recovery when a borrower does default. Data shows that increased creditor recovery is positively associated with higher levels of credit to the private sector (Figure 1).

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FIGURE 1 - Recovery Rate and Domestic Credit to Private Sector



Source: World Bank Group Indicators and Doing Business 2020

4. See Menezes 2014, the previous World Bank Group Viewpoint on debt resolution and business exit, describing, among other things, the positive association between more effective ICR regimes and wider access to credit and the negative relationship of the former with the cost of credit.

Additional analysis on strong ICR regimes' positive effects on private sector development, particularly credit, entrepreneurship, and growth have been set out in related notes (World Bank Group 2014a). Moreover, other World Bank publications describe specifically the benefits of ICR systems in crisis situations, including to address debt overhang, facilitate restructurings, preserve employment, and ensure micro and small businesses are able to effectively exit the market (World Bank Group 2020a, 2020b, 2018, 2017).

The World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes (the "Principles") and the UNCITRAL Legislative Guide on Insolvency Law (the "Legislative Guide") have been recognized by the Financial Stability Board as representing the international consensus on best practices for evaluating and developing national insolvency regimes, including enhancing creditor rights. The Principles provide best practice benchmarks for ensuring ICR regimes can facilitate the survival of viable but distressed firms, help reduce the risk associated with lending to such firms, and ease the exit of nonviable, insolvent firms (World Bank Group 2016b).

Policy makers are increasingly reaching consensus regarding the positive influence of effective ICR regimes on addressing NPL levels (Council of the European Union 2017, Chapter 4; European Banking Authority 2016, 34), and this note focuses narrowly on examining this issue.⁵ The evidence supporting ICR regimes' effects on both the likelihood of loan repayment and the frequency and magnitude⁶ with which bank loans become nonperforming ("NPL occurrence") is examined in section I below. Sections II through V review the extent to which ICR regimes facilitate the effective management or resolution of nonperforming loans ("NPL resolution").⁷

I. Effective ICR regimes can improve the likelihood of loan repayment, resulting in lower NPL occurrence.

Strong ICR regimes have been found to improve loan repayment and decrease borrowers' risk-taking behavior. Particularly when faced with stronger creditor rights (generally

seen as the enhanced protection of creditors' security interests), borrowers tend to diversify acquisitions, invest in high recovery assets, reduce cash-flow risk, and deleverage their balance sheets (Acharya, Amihud, and Litov 2011). Moreover, the adoption of effective ICR measures reduces default rates, resulting — at least in the short-term — in lower NPL occurrence (Padilla and Requejo 2000). For instance, India established Debt Recovery Tribunals ("DRT") — quasi-legal institutions introduced by the government in 1993 to improve the speed of debt resolution and creditor recovery in the country — that have been associated with reductions in loan delinquency. Indeed, a 2009 study analyzing long-term loan data from a large Indian bank found that the introduction of DRTs led to an increase of up to 11 percent in the likelihood that loans were repaid within 180 days (Visaria 2009, 59).

The evidence suggests that, all other conditions remaining the same, reforming ICR systems could help decrease NPL occurrence. This evidence is supported by a study on NPL determinants in 36 Middle East and African (MENA) banks finding that stronger legal rights (as measured by the legal rights index of the World Bank's Doing Business) are associated with lower NPL levels (Boudriga, Taktak, and Jellouli 2010).⁸ It is worth noting, though, that increases in ICR effectiveness have also been found to widen access to credit and to prevent the exclusion of lower-grade borrowers from the market (Jappelli, Pagano, and Bianco 2005; Haselmann, Pistor, and Vig 2009; Houston et al. 2010; Vig 2013). As these effects are associated with riskier lending, the aggregate effect of ICR frameworks on NPL occurrence might be described as ambiguous.

II. Effective and faster enforcement mechanisms reduce cumulative losses suffered by banks and are associated with lower NPL levels.

Effective ICR frameworks, which are often found in more developed credit markets, protect creditors by minimizing the time required for them to enforce their rights against defaulting borrowers (Dam 2006). By contrast, legal environments where contract enforcement — including enforcement of debt contracts — is slower, curtails creditors' ability to recover their loans.

5. Other World Bank Group publications address some of the legal challenges affecting NPL resolution. See, for example, Cerruti et al. 2019, Chapter 2.

6. The expected loss to banks from their loan portfolios is calculated based on both the probability of the loans defaulting and the magnitude of the losses experienced, if and to the extent that such loans default (see Heitz and Narayanamoorthy 2020).

7. At times, countries report NPL ratios that may to some extent distort the underlying economic realities. While this problem is especially relevant in the context of cross-country analysis, the papers reported in this policy note deploy a battery of econometrical tests to attempt to control for these distortions.

8. Based on data collected from 36 commercial banks located across 12 MENA countries for the period 2002–2006 and information from the "legal rights index" of the World Bank Doing Business Report, the paper found that countries with more effective legal rights have lower NPL levels, a result that is highly statistically significant.

Few investigations have been made into the impact of alternative enforcement mechanisms on NPL levels. What evidence is available, however, suggests that out-of-court mechanisms for the enforcement of creditor rights might help reduce bank losses from NPLs. A 2014 article investigated the impact of regulatory and enforcement changes on mortgage lending and risk in India, where the introduction of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act 2002 (SARFAESI) strengthened out-of-court enforcement rights. Specifically, following the reform, financial institutions and asset reconstruction companies may take enforcement actions without court intervention where a nonperforming asset is secured, is over minimum threshold amount (Rs. 100,000), and accounts for more than 20 percent of the borrower's outstanding debt. By looking into loan-level data from a large Indian mortgage provider and analyzing expected losses following short-term loan delinquency before and after the introduction of SARFAESI, the authors found a negative association between improvement in out-of-court enforcement rights for banks and losses from NPLs. The effect appears to be concentrated on the worst cases of delinquent debtors (Campbell, Ramadorai, and Ranish 2015).⁹

Faster court enforcement also links to NPL levels. After controlling for macroeconomic and bank-specific variables, a recent paper on the determinants of NPL levels in 140 large European banks found that the number of days required to enforce contracts in each jurisdiction can have a statistically significant impact on NPL levels. More specifically, a reduction of 30 days in the average time required to enforce a contract (as measured by the World Bank's Doing Business)¹⁰ is associated with a mean decline of the NPL ratio of 0.24 percentage points (Cerulli et al. 2017).

III. Efficient pre-insolvency mechanisms can increase the adjustment speed of NPL levels.

Pre-insolvency tools include various legal mechanisms that facilitate restructuring at a stage before a firm is legally insolvent and enters formal insolvency procedures. These mechanisms complement out-of-court workouts and core insolvency regimes (see section IV). While out-of-court workouts have come into wide use to facilitate NPL resolution during financial crises (Claessens 2005), their confidential nature has limited the development of an empirical literature

on their effects, particularly on NPL levels. The formal nature of pre-insolvency tools, in turn, has permitted an incipient accumulation of research on their effects on NPL ratios.

NPL data from EU Member States for the period 2007–2012 was analyzed in a 2015 paper in light of the level of pre-insolvency efficiency in the different Member States, as measured according to 12 indicators (Carcea 2015).¹¹ These indicators were designed to assess the ease with which firms in each jurisdiction can restructure debt before insolvency arises and reflect, in particular, four composite dimensions of pre-insolvency efficiency: (i) easiness/availability of preventive measures; (ii) efforts to facilitate continuation of debtors' operations; (iii) direct and indirect costs of the measures; and (iv) debt sustainability. The results show that more efficient pre-insolvency mechanisms increase the rate at which NPL levels decline and return to normal in the aftermath of macroeconomic shock. In particular, countries in the upper tercile of restructuring efficiency — which includes early-warning procedures, better majority decision options, and better debt discharge possibilities — increased the adjustment speed of the NPL rate by almost 14 percentage points relative to those in the lower tercile.

IV. Effective insolvency regimes can facilitate NPL resolution.

The role of effective insolvency regimes in strengthening creditor recovery has been clearly established in the literature. Insolvency regimes provide a range of tools facilitating firm restructuring and liquidation with the overall objective of maximizing creditor recovery and allocating risk among stakeholders in a predictable, equitable, and transparent manner (White 1994). Effective insolvency regimes can also play a positive role in facilitating NPL resolution.

A recent paper studied the link between insolvency frameworks and NPL resolution in EU and OECD countries between 2003 and 2016 (Consolo, Malfa, and Pierluigi 2018). The study constructed an insolvency framework index based on World Bank Doing Business data from three separate indicators (Getting Credit, Enforcing Contracts, and Resolving Insolvency). The findings suggest that jurisdictions with stronger insolvency frameworks are able to adjust NPL levels faster. Moreover, stronger insolvency frameworks are associated with faster private sector deleveraging, both for households and for nonfinancial corporations. These results highlight the potential of insolvency frameworks to facilitate economic recovery (Carcea et al. 2015).

9. Notably, a larger impact was caused by a change in the regulatory classification of NPLs (from 180 days delinquent to 90 days delinquent).

10. World Bank Group "Doing Business — Enforcing Contracts" data is available at <https://www.doingbusiness.org/en/data/exploretopics/enforcing-contracts>.

11. NPL data derives from the IMF Financial Soundness Indicators for the period 2007–2012. The IMF Financial Soundness Indicators can be found at <https://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA>.



V. Targeted NPL reform fosters economic growth.

In light of the evidence that high NPL levels have a negative impact on the economy and may, in certain cases, pose a threat to financial stability, it is not uncommon for policy makers to seek measures to reduce NPL levels — but, as discussed above, more than one policy approach can contribute to a comprehensive NPL strategy. Since NPL levels reflect the ratio between NPLs and total loans, policy makers can combat high NPL levels by specifically targeting defaulted bank loans — in particular by strengthening ICR regimes (“targeted NPL reform”) — or by fostering total loan growth.

A 2016 paper surveying a sample of 100 countries during the period between 1997 and 2014 sought to measure the relative impact of these two approaches to banks’ NPL problem. More specifically, a cross-country dataset was built containing 73 NPL reduction episodes (defined as events during which

the NPL ratios in a particular country fell by at least seven percentage points) and the responses associated with them. These NPL reduction episodes were then divided into two categories: (i) reduction episodes in which countries had adopted targeted measures for the active reduction in their stock of NPLs (including encouraging the move of NPLs into asset management companies, facilitating the restructuring of NPLs, and reforming insolvency laws); and (ii) reduction episodes in which countries enjoyed or engineered a growth in new loans. A control group was also compiled from countries that had experienced NPL ratios in excess of 7 percent for three years in a row but no action was taken to address them and, simultaneously, credit failed to grow (Balgova, Nies, and Plekhanov 2016, 3). The study found that countries that actively attempted to reduce NPLs during the sample period (category (i)) achieved more economic growth than countries (in the control group) that failed to take any action to combat their NPL levels; the differences revealed were as much as a 3 to 4 percentage point increase in GDP growth and a 13 percentage point increase in investment growth.¹²

12. These results were on par with those of countries that reduced NPL levels following a growth in new loans.



Conclusion

NPLs have significant negative impact on the financial system and the economy as a whole. In addition to affecting economic development through various supply channels — curtailing access to credit, discouraging investment, and aggravating unemployment rates — high NPL ratios also represent a significant threat to financial stability, with important systemic consequences.

The evidence described in this Policy Note suggests that ICR reform can be a powerful tool for combating the NPL problem. Indeed, a growing number of studies suggest that effective ICR regimes, particularly those promoting strong creditors' rights, have the effect of decreasing the frequency and magnitude with which loans become nonperforming. Evidence also shows that more effective ICR regimes can further contribute to improving NPL resolution. In particular, faster contract and out-of-court enforcement, more efficient pre-insolvency mechanisms, and

effective insolvency frameworks are all associated with a statistically significant positive impact on reducing NPL levels or accelerating the speed with which these levels are reduced — countries that take an active stance against NPL levels experience more growth than countries that fail to adopt any measures to combat these loans.

The lessons described above might be especially relevant as the world learns how to deal with the economic effects of the COVID-19 pandemic, which is expected to lead to a sharp increase in NPL levels in numerous jurisdictions (Laeven and Laryea 2009, 3; Jassaud and Kang 2015, Part III). Facilitating a faster and stronger economic recovery will require policy makers to mobilize the full range of tools available to them for addressing NPL levels, and in this context, the importance of effective ICR systems should be borne in mind.



Bibliography

Acharya, V.V., Y. Amihud, and L. Litov. 2011. “Creditor Rights and Corporate Risk-Taking.” *Journal of Financial Economics* 102 (1): 150–66.

Adrian, T., and F. Natalucci. 2020. “COVID-19 Crisis Poses Threat to Financial Stability.” *IMFBlog*, April 14. International Monetary Fund, Washington, DC.
<https://blogs.imf.org/2020/04/14/covid-19-crisis-poses-threat-to-financial-stability/>.

Aiyar, S., Jobst, A., Kang, K., Monaghan, D., Moretti, M. Portier, J., Bergthaler, W., Garrido, J. M., and Liu, Y. 2015a. “Policy Options for Tackling Non-Performing Loans in the Euro Area.” IMF Euro Area Policies. International Monetary Fund, Washington, DC.

Aiyar, Shekhar, Wolfgang Bergthaler, Jose M. Garrido, Anna Ilyina, Andreas Jobst, Kenneth Kang, Dmitry Kovtun, Yan Liu, Dermot Monaghan, and Marina Moretti. 2015b. “A Strategy for Resolving Europe’s Problem Loans.” IMF Staff Discussion Note. International Monetary Fund, Washington, DC.

Araujo, A., R. Ferreira, and B. Funchal. 2012. “The Brazilian Bankruptcy Law Experience.” *Journal of Corporate Finance* 18 (4): 994–1004.

Ari, A., S. Chen, and L. Ratnovski. 2019. “The Dynamics of Non-Performing Loans During Banking Crises: A New Database.” IMF Working Paper WP/19/272, 2019. International Monetary Fund, Washington, DC.

Ari, A., S. Chen, and L. Ratnovski. 2020a. “COVID-19 and Non-performing Loans: Lessons from Past Crises.” European Central Bank Research Bulletin 71, May 27. European Central Bank, Frankfurt am Main, Germany.

Armour, J., A. Hsu, A. and Walters. 2012. “The Costs and Benefits of Secured Creditor Control in Bankruptcy: Evidence from the U.K.” *Review of Law and Economics* 8 (1). DOI: <https://doi.org/10.1515/1555-5879.1507>.

Avgouleas, E., and C. Goodhart, C. 2017. “Utilizing AMCs to Tackle Eurozone’s Legacy Non-Performing Loans.” *European Economy: Banks, Regulation and the Real Sector*. July. <https://european-economy.eu/2017-1/utilizing-amcs-to-tackle-eurozones-legacy-non-performing-loans/>.

Balgova, M., M. Nies, and A. Plekhanov. 2016. “The Economic Impact of Reducing Non-Performing Loans.” EBRD Working Paper 193. European Bank for Reconstruction and Development, London.

Basel Committee on Banking Supervision. 2017. “Guidelines: Prudential Treatment of Problem Assets —Definitions of Non-Performing Exposures and Forbearance.” Bank for International Settlements, Basel, Switzerland. Available at <https://www.bis.org/bcbs/publ/d403.pdf>.

- Baudino, P., and H. Yun. 2017. “Resolution of Non-Performing Loans — Policy Options.” FSI Insights on Policy Implementation 3. Financial Stability Institute, Basel, Switzerland.
- Beck, T., P. Jakubik, and A. PiloIU. 2013. “Non-Performing Loans: What Matters in Addition to the Economic Cycle?” European Central Bank Working Paper 1515. European Central Bank, Frankfurt am Main, Germany.
- Bergstrom, C., P. Englund, and P. Thorell. 2003. “Securum and the Way out of the Banking Crisis.” Summary of a report commissioned by SNS, Centre for Business and Policy Studies, Stockholm, Sweden.
- Berkowitz, E., C. Lin, and Y. Ma. 2013. “The Real and Financial Effects of Property Rights: Evidence from a Natural Experiment.” Working Paper.
- Bottazzi, G., A. De Sanctis, and F. Vanni. 2010. “Non-Performing Loans and Systemic Risk in Financial Networks.” LEM Papers Series 2016/08. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3539741.
- Boudriga, A., N.B. Taktak, and S. Jellouli. 2010. “Bank Specific, Business and Institutional Environment Determinants of Banks Nonperforming Loans: Evidence from MENA Countries.” Economic Research Forum Working Paper. Economic Research Forum, Giza, Egypt.
- Campbell, J.Y., T. Ramadorai, and B. Ranish. 2015. “Impact of Regulation on Mortgage Risk: Evidence from India.” *American Economic Journal: Economic Policy* 7 (4): 71–102.
- Carcea, Mihaela Carpus, Daria Ciriaci, Dimitri Lorenzani, Peter Pontuch, and Carlos Cuerdo. 2015. “The Economic Impact of Rescue and Recovery Frameworks in the EU.” European Economy — Discussion Papers 2015-004. Directorate General Economic and Financial Affairs (DG ECFIN), European Commission, Brussels, Belgium.
- Cerulli, G., V. D’Apice, F. Fiordelisi, and F. Masala. 2017. “NPLs in Europe: The Role of Systematic and Idiosyncratic Factors.” Working Paper. Italian Banking Association, Rome, Italy.
- Cerruti, Caroline, Eric Douglas Cruikshank, Josep M. Julià, Andrés F. Martinez, and Marta Sánchez Saché. 2019. *DARP—Creating Distressed Assets Markets: Lessons Learned Since the Global Financial Crisis and Opportunities for Investors in Emerging Markets Today*. Washington, D.C.: IFC, World Bank Group.
<https://www.ifc.org/wps/wcm/connect/8f536e4a-e717-4085-afd3-271bffcd73bd/201910-Distressed-Assets-Recovery-Program.pdf?MOD=AJPERES&CVID=mSejBRe>.
- Claessens, S. 2005. “Policy Approaches to Corporate Restructuring Around the World: What Worked, What Failed?” In *Corporate Restructuring, Lessons from Experience*, edited by M. Pomerleano and W. Shaw. Washington, DC: World Bank.
- Consolo, A., F. Malfa, and B. Pierluigi. 2018. “Insolvency Frameworks and Private Debt: An Empirical Investigation.” European Central Bank Working Paper 2189. European Central Bank, Frankfurt am Main, Germany. Available at <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2189.en.pdf>.
- Constâncio, Vítor. 2017. “Resolving Europe’s NPL Burden: Challenges and Benefits.” Keynote speech at conference hosted by Bruegel, “Tackling Europe’s Non-Performing Loans Crisis: Restructuring Debt, Reviving Growth,” Brussels, Belgium, February 3.

Council of the European Union. 2017. "Report of the FSC Subgroup on Non-Performing Loans." EF 113 ECOFIN 481, 9854/17. Council of the European Union, Brussels.

Cucinelli, D. 2015. "The Impact of Non-Performing Loans on Bank Lending Behaviour: Evidence from the Italian Banking Sector." *Eurasian Journal of Business and Economics* 8: 59–71.

Dam, Kenneth W. 2006. "The Judiciary and Economic Development." John M. Olin Law & Economics Working Paper 287 (Second Series). University of Chicago Law School, Chicago.

European Banking Authority. 2016. "EBA Report on the Dynamics and Drivers of Non-Performing Exposures in the EU Banking Sector." European Banking Authority, Paris, France.

European Banking Coordination "Vienna" Initiative, Working Group on NPLs in Central, Eastern and Southeastern Europe. 2012. "Non-Performing Loans in Central, Eastern and Southeastern Europe." European Commission, European Bank Coordination "Vienna" Initiative, Brussels, Belgium.

European Central Bank. 2017. "Guidance to Banks on Non-Performing Loans." European Central Bank, Banking Supervision, Frankfurt am Main, Germany.

European Commission, Financial Stability, Financial Services and Capital Markets Union. 2018. "Commission Measures to Address the Risks Related to NPLs." European Commission, Brussels, Belgium. Available at https://ec.europa.eu/info/publications/180314-proposal-non-performing-loans_en.

European Commission. 2018a. "Proposal for a Directive of the European Parliament and of the Council on Credit Servicers, Credit Purchasers and the Recovery of Collateral." COM (2018) 135 final, March 14. European Commission, Brussels, Belgium. Available at <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/1446-Development-of-secondary-markets-for-non-performing-loans>.

European Commission. 2018b. "Proposal for a Regulation of the European Parliament and of the Council on Amending Regulation (EU) No 575/2013 as Regards Minimum Loss Coverage for Nonperforming Exposures." COM (2018) 134 final, March 14. European Commission, Brussels, Belgium. Available at <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/1183-Statutory-prudential-backstops-addressing-insufficient-provisioning-for-newly-originated-loans-that-turn-non-performing>.

European Council of the European Union. 2017. "Council Conclusions on Action Plan to Tackle Non-Performing Loans in Europe" July 11, 2017. European Council of the European Union, Brussels, Belgium. Available at <https://www.consilium.europa.eu/en/press/press-releases/2017/07/11/conclusions-non-performing-loans/>.

European Systemic Risk Board. 2017. "Resolving Non-Performing Loans in Europe." July. European Systemic Risk Board, Frankfurt am Main. Available at https://www.esrb.europa.eu/pub/pdf/reports/20170711_resolving_npl_report.en.pdf.

European Systemic Risk Board. 2019. "Macroprudential Approaches to Non-Performing Loans." European Systemic Risk Board, Frankfurt am Main. Available at https://www.esrb.europa.eu/pub/pdf/reports/esrb.report190128_macroprudentialapproachestonon-performingloans.en.pdf.

- Frisby, S. 2007. "A Preliminary Analysis of Pre-Packaged Administrations." Report to The Association of Business Recovery Professionals, London, England.
- Garrido, J. 2016. "Insolvency and Enforcement Reforms in Italy." IMF Working Paper 16/134. International Monetary Fund, Washington, DC.
- Gamboa-Cavazos, Mario, and Frank Schneider. 2007. "Bankruptcy as a Legal Process." *SSRN Electronic Journal*. 10.2139/ssrn.979614.
- Gine, X., and I. Love. 2010. "Do Reorganisation Costs Matter for Efficiency? Evidence from a Bankruptcy Reform in Colombia." *Journal of Law and Economics* 53 (4): 833–64.
- Haselmann, R.F.H., K. Pistor, and V. Vig. 2009. "How Law Affects Lending." *Review of Financial Studies* 23 (2): 549–80.
- Heitz, Amanda, and Ganapathi S. Narayanamoorthy. 2020. "Creditor Rights and Bank Losses." *Journal of Financial and Quantitative Analysis*. Available at SSRN: <https://ssrn.com/abstract=3137144> or <http://dx.doi.org/10.2139/ssrn.3137144>.
- Houston, J.F., C. Lin, P. Lin, and Y. Ma. 2010. "Creditor Rights, Information Sharing, and Bank Risk Taking." *Journal of Financial Economics* 96: 485–512.
- Inaba, Nobuo, Takashi Kozu, Toshitaka Sekine, and Takashi Nagahata. 2005. "Non-Performing Loans and the Real Economy: Japan's Experience." BIS Working Paper 22. Bank for International Settlements, Basel, Switzerland. Available at <http://www.bis.org/publ/bppdf/bispap22g.pdf>.
- International Monetary Fund. 2019. "Financial Soundness Indicators Compilation Guide." International Monetary Fund, Washington, DC.
- International Monetary Fund. 2020. "Global Financial Stability Report: Markets in the Time of COVID-19." April. International Monetary Fund, Washington, DC.
- International Monetary Fund, Statistics Department. 2005. "The Treatment of Nonperforming Loans." BOPCOM-05/29. International Monetary Fund, Washington, DC.
- Jappelli, T., M. Pagano, and M. Bianco. 2005. "Courts and Banks: Effects of Judicial Enforcement on Credit Markets." *Journal of Money, Credit, and Banking* 37 (2): 223–44.
- Jassaud, N., and K.H. Kang. 2015. "A Strategy for Developing a Market for Nonperforming Loans in Italy." IMF Working Papers. International Monetary Fund, Washington, DC.
- Klein, N. "Non-Performing Loans in CESEE: Determinants and Impact on Macroeconomic Performance." IMF Working Paper WP/13/72. International Monetary Fund, Washington, DC.
- Klein, Nir. 2014. "Small and Medium Size Enterprises, Credit Supply Shocks, and Economic Recovery in Europe." IMF Working Paper No. 14/98. International Monetary Fund, Washington, DC.
- Krueger, Anne, and Aaron Tornell. 1999. "The Role of Bank Restructuring in Recovering from Crises: Mexico 1995–98." NBER Working Paper. National Bureau of Economic Research, Cambridge, MA, USA.

- La Porta, R., F. Lopez-de-Sillanes, A. Shleifer, and R.W. Vishny. 1998. "Law and Finance." *Journal of Political Economy* 106 (6): 1113–55.
- Laeven, L. and Laryea, T. "Principles of Household Debt Restructuring." IMF Staff Position Note, SPN/09/2015, 26 June 2009, 3.
- Lu, W., and D. Whidbee. 2013. "Bank Structure and Failure During the Financial Crisis." *Journal of Financial Economic Policy* 5: 281–99.
- Manning, N., R. Mukherjee, and O. Gokcekus. 2000. "Public Officials and Their Institutional Environment: An Analytical Model for Assessing the Impact of Institutional Change on Public Sector Performance." Policy Research Working Paper WPS2427. World Bank, Washington, DC. Available at http://documents.worldbank.org/curated/en/140311468761962095/121521322_20041117154544/additional/multi-page.pdf.
- Menezes, A.P. 2014. "Debt Resolution and Business Exit: Insolvency Reform for Credit, Entrepreneurship, and Growth." Public Policy for the Private Sector Note 343. World Bank Group, Washington, DC.
- Miglionico, A. 2019. "Restructuring Non-Performing Loans for Bank Recovery: Private Workouts and Securitisation Mechanisms." *European Company and Financial Law Review* 16 (6): 746–70.
- North, D. C. 1991. "Institutions." *Journal of Economic Perspectives* 5 (1): 97–112.
- Padilla, A.J., and A. Requejo. 2000. "The Costs and Benefits of the Strict Protection of Creditor Rights: Theory and Evidence." Inter-American Development Bank, Washington, DC.
- Polo, A. 2011. "Preservation of Value, Conflict of Interests, and Reputation in a 'Contractualist' Bankruptcy System." Paper delivered at "Reputation Symposium 2011," Oxford University Centre for Corporate Reputation, University of Oxford, Oxford, UK.
- Van Praag, M., and P.H. Versloot. 2008. "The Economic Benefits and Costs of Entrepreneurship: A Review of the Research." *Foundations and Trends in Entrepreneurship* 4 (2): 65–154.
- Vig, V. 2013. "Access to Collateral and Corporate Debt Structure: Evidence from a Natural Experiment." *Journal of Finance* 68 (3): 881–928.
- Visaria, S. 2009. "Legal Reform and Loan Repayment: The Microeconomic Impact of Debt Recovery Tribunals in India." *American Economic Journal: Applied Economics* 1 (3): 59–81.
- White, Michelle J. 1994. "Corporate Bankruptcy as a Filtering Device: Chapter 11 Reorganizations and Out-of-Court Debt Restructurings." *Journal of Law, Economics, and Organization* 10 (2): 268–95.
- World Bank Group. 2014a. "Insolvency Reform for Credit, Entrepreneurship and Growth." Insolvency & Debt Resolution Viewpoint. World Bank, Washington, DC.
- World Bank Group. 2014b. "Mind Society and Behaviour." Report. World Bank, Washington, DC. Available at <http://documents.worldbank.org/curated/en/645741468339541646/pdf/928630WDR0978100Box385358B00PUBLIC0.pdf>.

World Bank. 2016a. "Background." Global Financial Development Report. World Bank, Washington, DC. <https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-stability>.

World Bank Group. 2016b. "Principles for Effective Insolvency and Creditor/Debtor Regimes." World Bank, Washington, DC. <https://www.worldbank.org/en/topic/financialsector/brief/the-world-bank-principles-for-effective-insolvency-and-creditor-rights>.

World Bank Group. 2017. "Report on the Treatment of MSME Insolvency." World Bank, Washington, DC.

World Bank Group. 2018. "Saving Entrepreneurs, Saving Enterprises: Proposals on the Treatment of MSME Insolvency." World Bank, Washington, DC.

World Bank Group. 2020a. "COVID-19 Outbreak: Corporate Insolvency How Can Out-of-Court Workouts Help?" May. World Bank, Washington, DC.

World Bank Group. 2020b. "COVID-19 Outbreak: Implications on Corporate and Individual Insolvency." April 13. World Bank, Washington, DC. <http://pubdocs.worldbank.org/en/912121588018942884/COVID-19-Outbreak-Implications-on-Corporate-and-Individual-Insolvency.pdf>.

World Bank Group. 2020c. "COVID-19 and Non-Performing Loan Resolution in the Europe and Central Asia region". December 2020. World Bank, Washington DC. <http://pubdocs.worldbank.org/en/460131608647127680/FinSAC-COVID-19-and-NPL-Policy-Note-Dec2020.pdf>

World Bank Group. Data Catalog. World Bank, Washington, DC. Available at <https://datacatalog.worldbank.org/provisions-nonperforming-loans>.

World Bank Group. Enterprise Surveys. World Bank, Washington, DC. Available at <https://www.enterprisesurveys.org/en/data/exploretopics/finance>.

World Bank, FinSAC. 2016. "Non-Performing Loans Technical Assistance." Brochure. World Bank, Washington, DC.

