

Financial Stability, Resolution of Systemic Banking Crises and COVID-19:

Toward an Appropriate Role for Public Support and Bailouts

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Abstract

A wide range of approaches has been applied to address banking and other financial crises. The nature of the approach depends on the nature of the crisis, its origins, evolution and context. Systemic banking crises are among the most common and costly to address. The experiences of the three major international financial crises of the past 25 years – the Asian Financial Crisis, the Global Financial Crisis, and the European Debt Crisis – offer critical lessons regarding the most effective approaches in tackling bank solvency during a systemic crisis. One of the most common and also effective methods has been the transfer of non-performing loans (NPLs) to an Asset Management Company (AMC) that performs workouts or liquidates stressed loan portfolios at a more opportune time to amortize losses. In most cases the use of AMCs has delivered positive results for the taxpayer.

Contemporary consensus as regards tackling bank solvency during a systemic financial crisis focuses heavily on prevention of government bailouts in order to protect state finances and curb moral hazard. However, an overly dogmatic focus on preventing public financial support in the context of a systemic bank solvency crisis may place insurmountable obstacles to the use of state-backed AMCs and other forms of resolution of NPLs and bank recapitalization. This paper provides a new perspective on the common belief that public support in the context of systemic bank insolvency – i.e. bank bailouts – is an inefficient use of public funds or conducive to moral hazard.

Our study finds that state-backed AMCs can be effective in recapitalizing banking systems, depending on the modus operandi of the restructuring, funding and the conditions attached to the fiscal backstop. With respect to systemic banking crises or those caused by exogenous factors, such as the unprecedented disruption of economic activity due the Covid-19 pandemic, preservation of financial stability and not containment of moral hazard should be policy-makers' predominant goal. Thus, we suggest that a combination of balance sheet restructuring and the use of AMCs to manage NPLs is the optimal approach.

Keywords: Banking Crisis; Bailouts; Bank Regulation; Non-performing Loans; Asset Management Companies; Covid-19.

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I. INTRODUCTION

Banking crises are commonly caused by over-extended loan books, balance sheets loaded with non-performing exposures, and high leverage ratios that stress bank balance sheets.¹ When an economy expands, credit standards tend to be relaxed causing asset prices to increase above so-called fundamental values. Conversely when the economic cycle contracts and default risk rises, the central bank's role is to dampen credit demand by tightening monetary policy, while banks tighten credit standards. The combined impact of these measures increases the cost of credit. Borrowers with high credit default risk are forced to de-lever by selling assets, which places downward pressure on asset prices.² If asset sales are widespread, this will trigger fire sales and bank defaults, preceding a financial crisis.³

Over-extended loan books transform into high levels of non-performing loans (NPLs) and the ensuing debt overhang dampens growth while the credit cycle stalls when demand for credit is greatest.⁴ As the economy enters into the recession phase, banks must manage balance sheet and liquidity stress creating solvency risks.⁵ Regulators – in normal times – should take preventative measures comprising: (i) appropriate prudential regulations including levels of loan pre-provisioning, loan-to-income, loan-to-value ratios, debt service coverage ratios, and micro and macroprudential capital, liquidity and leverage requirements; (ii) close monitoring of NPL recognition, ratios and volumes; (iii) disclosure and auditing requirements; (iv) requirements for stress testing and contingency planning (such as in the context of recovery and resolution plans); (v) requirements for capital instruments which can be used in the context of restructuring (“bail-in”); and (vi) design of appropriate systems for dealing with liquidity provision, resolution (including insolvency) and customer protection (e.g. deposit insurance).⁶

¹ John Geanakoplos, ‘Solving the Present Crisis and Managing the Leverage Cycle’, (2010) *FRBNY Economic Policy Review* 101-131; ‘The Leverage Cycle’ in Daron Acemoglu, Kenneth Rogoff, and Michael Woodford, eds., *NBER Macroeconomics Annual 2009, Volume 24* (Chicago: University of Chicago Press, 2010), pp. 1–65.

² See: Markus Brunnermeier, Andrew Crocket, Charles Goodhart, Avinash D. Persaud, and Hyun Shin, ‘The Fundamental Principles of Financial Regulation’, (January 2009) *Geneva Reports on the World Economy* 11, 5 et seq.

³ Nobuhiro Kiyotaki and John Moore, ‘Credit Cycles’, (April 1997) 105 *Journal of Political Economy* 2, 211–248. Naturally, causality is reciprocal.

⁴ Emiliós Avgouleas, ‘Bank Leverage Ratios and Financial Stability: A Micro- and Macroprudential Perspective’, (October 2015) *Levy Economics Institute, Working Paper No. 849*: available at <https://www.econstor.eu/bitstream/10419/146977/1/840973446.pdf>.

⁵ See: Hyman P. Minsky, ‘The Financial Instability Hypothesis’, (1992) *Levy Economics Institute of Bard College Working Paper No. 74*; and ‘Financial Instability Revisited: The Economics of Disaster— Fundamental Reappraisal of the Discount Mechanism’, (1970) *Board of Governors of the Federal Reserve System*.

⁶ This paper uses NPL ratios primarily sourced from the World Bank.

Ideally, these measures would counter the cycle and allow banks to keep lending in a downturn through the release of capital buffers and also at the same time to deal with normal failures.⁷

But the effectiveness of counter-cyclical measures depends to a great extent on the magnitude of the crisis and origins and overall levels of bad assets. Therefore, in a systemic shock like that which is increasingly being presented by Covid-19 due to the dual supply and demand shocks that have engulfed the global economy,⁸ it is doubtful if bank buffers can last for the duration of the shock as it moves from largely being about liquidity to increasingly being about solvency. As this process continues, the level of NPLs will inevitably rise, threatening a systemic solvency crisis in the banking sector.

The measure of bank losses from NPLs is reflected on the balance sheet – normally the difference between an asset’s “net present value”⁹ and the ultimate recovery amount (i.e., loss given default). The recovery amount is contingent on the borrower restructuring its debt contract or the market, if the distressed asset or collateral is liquidated. Loss given default is minimized where the legal system is functioning in a pro-creditor environment (including judicial and extra-judicial proceedings) and loan recovery or asset disposal procedures are not burdensome or obstructive.

If the bank adopts prudent loss-provisioning policies prior to an NPL disposal or writing-off an exposure, any loss will be absorbed by the bank’s capital base. Inadequate loan-loss provisioning will adversely affect bank profitability because a portion of the bank’s assets will become contra assets or an expense, eroding its capital reserves. High NPL levels weigh on

⁷ Stijn Claessens, ‘An Overview of Macroprudential Policy Tools’, (December 2014) *IMF WP/14/214*: available at <https://www.imf.org/external/pubs/ft/wp/2014/wp14214.pdf>.

⁸ Kristalina Georgieva, *Confronting the Crisis: Priorities for the Global Economy*, International Monetary Fund (Apr. 9, 2020), at <https://www.imf.org/en/News/Articles/2020/04/07/sp040920-SMs2020-Curtain-Raiser>. For an updated account see Gita Gopinath, *The Great Lockdown through a Global Lens*, IMF Blog (June 16, 2020), at <https://blogs.imf.org/2020/06/16/the-great-lockdown-through-a-global-lens/>.

⁹ In the simplest terms: “net present value is the present value of the cash flows at the required rate of return of your project compared to your initial investment, or ROI [return on investment], for a project or expenditure.”: Amy Gallo, ‘A Refresher on Net Present Value’, (19 November 2014) *Harvard Business Review*: available at <http://hbr.org/2014/11/a-refresher-on-net-present-value>.

$$NPV = \sum_{t=1}^N \frac{Cash\ flow_t}{(1+i)^t} - initial\ investment$$

Where “N” is the total number of time periods for the cash flow being discounted; “t” is the duration of the cash flow period; and “i” is the discount or interest rate.

bank liquidity and in the extreme, solvency, which can disrupt financial stability and sustainable economic development.¹⁰

To understand the potential solvency risks for financial institutions and if necessary, to take appropriate actions to stabilize bank balance sheets, regulators need the tools and expertise to identify NPLs. Proper management of NPLs enables banks to extend new credit, which is crucial for boosting economic activity and for restoring profitability which makes easier bank recapitalisation. It follows that crisis resolution action that focuses on bank balance sheets strengthens financial stability and leads to a reduction of systemic risk. Arguably, the most effective approach to stabilize a banking system inundated with high NPL ratios is to realize a legal transfer of NPLs to an asset management company (AMC). Such an approach can also be combined with a range of mechanisms focused on recapitalization in order to prevent both a systemic collapse as well as to support the availability of finance necessary to support economic recovery, a very important aspect of the post-Covid 19 era.

This paper analyzes evidence from the three major international banking crises of the past twenty-five years to explain why restructuring banks' balance sheets is the most effective approach to address an insolvent banking system. Examples and evidence are drawn from countries most affected by the banking crises in Asia, the United States, and Europe.

The importance of these findings, which indicate why the structured use of AMCs – despite fears of moral hazard risk – is an effective way to tackle a systemic bank solvency crisis, cannot be underestimated. They are particularly significant in the context of the Covid-19 pandemic and its economic and financial impact. In the current global environment of pandemic-driven economic damage coupled with unprecedented supply and demand shocks, a tsunami of NPLs is widely expected that will greatly impair the functionality of banking systems across developed and developing economies, with the potential for systemic banking insolvency.¹¹

¹⁰ See: Emiliós Avgouleas, 'The EU Framework Dealing with Non-Performing Exposures: Legal and Economic Analysis' in Danny Busch and Guido Ferrarini, *European Banking Union* (OUP, 2nd edn, 2020), Ch. 8.

¹¹ The most recent update of IMF Global Financial Stability Report predicts a wave of bankruptcies that will put pressure on banks. See *Global Financial Stability Report Update: Financial Conditions have Eased, but Insolvencies Loom Large*, (Jun. 2020), at https://www.imf.org/en/Publications/GFSR/Issues/2020/06/25/global-financial-stability-report-june-2020-update?utm_medium=email&utm_source=govdelivery, 6.

Identification of effective bank stabilization remedies is of cardinal importance for ensuring robust economic recovery and, thus, at the forefront of the global financial stability debate.

This paper is divided in six sections following the introduction. Section II defines and discusses the regulatory treatment, causes, and consequences of NPLs. Section III discusses systemic bank resolution standards and moral hazard. Section IV analyses the 1997 Asian Financial Crisis, focusing on the resolution approaches used in Thailand, Indonesia, South Korea, and Malaysia. This includes a study of AMCs and recent resolution measures in the People's Republic of China (China). Section V examines the bailouts of UBS, RBS, and Citigroup during the 2008 Global Financial crisis (GFC). Section VI analyzes the 2010 Eurozone Debt Crisis in Spain, Ireland, Italy, and Greece. Section VII concludes.

II. IDENTIFICATION, TREATMENT, CAUSES, AND CONSEQUENCES OF NON-PERFORMING LOANS

The first step in rescuing a banking system is prevention, although historically prevention alone has proved insufficient. Significant work over the past twenty years has led to the development of additional mechanisms, although there is no consensus among regulators.¹² For example, views vary on the most effective approach to resolve systemically important banks (SIBs).¹³ When prevention is unsuccessful and NPLs levels increase, identifying NPLs is an obvious starting point and critical for mitigating banking system weakness but one where there is often surprising lack of clarity.

A. Non-performing Loans: Definition, Regulatory Issues, and Accounting Treatment

Systemizing an NPL definition is problematic because the extent of non-performance varies, resulting in different types of delinquent loans. The Basel Committee on Banking Supervision (BCBS) defines a non-performing exposure (NPE) as loan and debt securities centering on delinquency status from exposures (i) defaulted under the Basel II framework, (ii) that are credit impaired according to the applicable accounting framework, and (iii) all others more

¹² See: Rolf Weber, Douglas Arner, Evan Gibson and Simone Baumann, 'Addressing Systemic Risk: Financial Regulatory Design', (2014) 49 Texas International Law Journal 149.

¹³ See: Douglas Arner and Joseph Norton, 'Building a Framework to Address Failure of Complex Global Financial Institutions', 39 Hong Kong Law Journal 95, 95-128 (2009).

than 90 days due.¹⁴ A Basel II default uses a similar definition to the International Monetary Fund (IMF)—a default on principle and interest that lasts more than 90 days.¹⁵

Adopting internationally accepted NPE/NPL classifications promotes confidence in banks' financial position, credit risk, and solvency.¹⁶ NPL classification is the most universally accepted method to identify credit exposures. Flaws in the methodology have been identified by the BCBS, notably when NPL definitions are determined only by ex post collectability—i.e., 90 days past due. Jurisdictions rarely share the same definition of NPLs.¹⁷ This is explained by each jurisdiction's banking system being unique and stylized qualitative factors to measure NPLs.

International Financial Reporting Standard 9 (IFRS 9) provides an internationally accepted accounting treatment for impaired assets based on forward-looking or expected credit losses (ECLs). This approach comprises of quantitative and qualitative measures—the timing of recording a loan loss provision and when to move NPLs/NPEs off-balance sheet.¹⁸ ECLs account for performing loans when credit risk increases, that affect bank balance sheets when credit growth and credit risk expectations increase—i.e., at the top of the credit cycle heading into a contraction.

IFRS 9 can influence capital buffers and trigger bail-in debt instruments—for example, contingent convertibles (CoCos). As NPL recognition under IFRS 9 is subject to banks' discretion, there is an incentive to procrastinate to avoid bail-in triggering events. The IMF recognizes this and recommends incentives to accelerate the transfer of NPLs/NPEs off-balance sheet.¹⁹ It is unclear how this will materialize in practice. For developed markets, IFRS 9 officially commenced in 2018 and for developing markets (e.g., Asia) from 2025.

¹⁴ BCBS, 'Guidelines: Prudential Treatment of problem assets - definitions of non-performing exposures and forbearance', (April 2017) *Bank for International Settlements*, 1 and 8: available at <http://www.bis.org/bcbs/publ/d403.htm>.

¹⁵ The term "non-performing loans" is not uniform among jurisdictions. This paper adopts the IMF definition: Adriaan M. Bloem and Russel Freeman, 'The Treatment of Nonperforming Loans', (June 2005) *IMF, Issue Paper Prepared for the July 2005 Meeting of the Advisory Expert Panel*, 8.

¹⁶ World Bank, 'Bank Loan Classification and Provisioning Practices in Selected Developed and Emerging Countries', (2002) *A Survey of Current Practices in Countries Represented on the Basel Core Principles Liaison Group*, 3.

¹⁷ David Bholat, Rosa Lastra, Sheri Markose, Andrea Miglionico, and Kallol Sen, 'Non-performing Loans: Regulatory and Accounting Treatments of Assets', (April 2016) *Bank of England, Staff Working Paper No. 594*, 22 and 23.

¹⁸ *Ibid* 36 and 37.

¹⁹ IMF, 'Ireland: Ex Post Evaluation of Exceptional Access Under the 2010 Extended Arrangement', (January 2015) *IMF Country Report No. 15/20*, 52.

In April 2017 the BCBS released the Guidelines: Prudential treatment of problem assets – definitions of non-performing exposures and forbearance, to harmonize quantitative and qualitative criteria used for credit categorization and for countries with no NPE definition. The guidelines identify criteria to upgrade an exposure from non-performing to performing and the interaction between non-performing and forbearance.²⁰ This is complemented by the Standards - Regulatory treatment of accounting provisions, that focus on the timing of a credit loss or when an NPL/NPE is recorded. To overcome the problem where IFRS 9 NPL/NPE recognition is subject to banks' discretion, the BCBS supports the early recognition of credit losses. This approach harmonizes accounting provisions with the Basel III capital requirements, with any shortfalls deducted from Common Equity Tier 1 (CET1).²¹

Accounting classifications are important because NPLs/NPEs recorded at fair value affect the level of loan-loss provisions and when NPLs/NPEs are written off. Valuations are procyclical because they are overstated during rapid economic expansions and understated in downturns.²² Thus the ECL seeks to smooth valuation volatility and strengthen banks' capital position. In the European Union (EU): Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses give effect to ECLs in IFRS 9 and recognize the BCBS requirements.

In July 2015, the BCBS released Guidelines for identifying and dealing with weak banks. Guidance is given on asset quality, namely negotiating agreements with debtors, taking possession of collateral, writing off long-term NPLs, and selling and transferring assets to AMCs. Asset recovery is to be economic, fair, expeditious, and on a net-present-value basis. The transfer of assets off-balance sheet is for bank viability, management to address problems and strategies, and AMCs to maximize recovery value.²³

²⁰ BCBS, 'Guidelines: Prudential Treatment of problem assets - definitions of non-performing exposures and forbearance', (April 2017) *Bank for International Settlements*, 1: available at <http://www.bis.org/bcbs/publ/d403.htm>; and 'Prudential Treatment of problem assets - definitions of non-performing exposures and forbearance – consultative document', (April 2016) *Bank for International Settlements*, 7: available at <http://www.bis.org/bcbs/publ/d367.htm>.

²¹ BIS, 'Standards - Regulatory treatment of accounting provisions – interim approach and transitional arrangements', (March 2017), 1, 6, and 7.

²² David Bholat, Rosa Lastra, Sheri Markose, Andrea Miglionico, and Kallol Sen, 'Non-performing Loans: Regulatory and Accounting Treatments of Assets', (April 2016) *Bank of England, Staff Working Paper No. 594*, 21.

²³ BCBS, 'Guidelines for identifying and dealing with weak banks', (July 2015) *Bank for International Settlements*, 38 and 49.

B. Causes and Consequences of Non-Performing Loans

History has shown that excessive NPLs arise from connected banking transactions (sometimes called “crony banking”), fraud, or uncommercial underwriting standards, and contracting macroeconomic cycles that devalue collateral. Contracting macroeconomic cycles pose the greatest challenge for measuring credit exposures. For example, Spain was one of the worst affected countries during the Eurozone debt crisis despite banks having sound pre-provisioning lending.²⁴ Spanish real estate and the economy were disproportionately inflated by the low interest rate policy of the European Central Bank (ECB), rendering prudential measures ineffective.²⁵ This provides an important moral hazard lesson for two reasons. Spain highlights the limitations of the moral hazard argument and legislation where the macroeconomic cycle and monetary policy have caused an NPL crisis rather than bank management and shareholders (or creditors).

An insightful econometric methodology pioneered by Klein²⁶ differentiates between bank-specific and macroeconomic factors using dynamic panel regressions. This method was adopted by the IMF to study Italian NPLs.²⁷ The authors ran fixed effects and “generalized method of moments” regressions of NPLs on common macroeconomic bank variables and bank-specific variables, to determine the role each played in the build-up of NPLs. The authors found that macroeconomic variables play a significant role in the accumulation of NPLs, concluding that both bank-level and macroeconomic factors have affected Italian banks’ asset quality. Lower bank profitability is associated with higher NPL levels and a rapid loan book expansion due to high growth rates or low interest rates which, on average, results in lower asset quality:

Overall, the results show that the recession, which was of exceptional duration and intensity, had a profound impact on banks’ asset quality, which was exacerbated by

²⁴ On the mechanics and effects of the Spanish dynamic pre-provisioning system adopted in the mid-2000s as a macroprudential measure, see: Gabriel Jiménez, Steven Ongena, Jose-Luis Peydró, and Jesus Saurina, ‘Macroprudential policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments’, (May 2012) *Barcelona GSE Working Paper Series, Working Paper no 628*.

²⁵ See: Gabriel Jiménez, Steven Ongena, Jose-Luis Peydró, and Jesus Saurina, ‘Hazardous Times for Monetary Policy: What Do Twenty-Three Million Bank Loans Say About the Effects of Monetary Policy on Credit Risk?’, (March 2014) 82 *Econometrica* 2, 463-505.

²⁶ Nir Klein, ‘Nonperforming Loans in CESEE: Determinants and Impact on Macroeconomic Performance’, (March 2013) *IMF Working Paper, WP/13/72*.

²⁷ See: Anke Weber, Emanuel Kopp, and Jose Garrido, ‘Cleaning-up Bank Balance Sheets: Economic, Legal, and Supervisory Measures for Italy’, (July 2016) *IMF Working Paper, WP/16/135*, 9-11.

bank-specific factors.²⁸

C. Economic Consequences of Non-Performing Loans and Moral Hazard Legislation

A significant and creditable body of research suggests that banking sector NPL levels can be important for credit extension and growth.²⁹ Weak bank balance sheets can dampen economic activity, especially in economies such as the EU which rely on bank financing. Studies have also found that banking systems characterized by high NPLs tend to reduce credit-to-GDP ratios and GDP growth, while increasing unemployment. A 2015 IMF study of EU bank data sourced over a period of five years was consistent with these findings.³⁰

Aiyar et al. also found that high NPL ratios constrain bank capital that could otherwise be used to increase lending, reduce bank profitability, and raise funding costs—thereby stifling the supply of credit.³¹ Reducing NPLs expeditiously is crucial to support credit growth. For this reason, the view of the European Stability Mechanism (ESM)—sole reliance on GDP growth will not lead to a substantial decline in NPL levels—is justifiable.³² An IMF report notes that reducing NPL levels is required for a long-term recovery to follow a financial crisis.³³ While the IMF has made the NPL ratio a key measurement of financial strength,³⁴ there is no

²⁸ Ibid, 9. In particular the authors of the paper note: “The prolonged recession led to higher default risk for large corporates and banks, which are typically low-default portfolios.”

²⁹ The literature on financial dependence and growth is well established, see: Raghuram G. Rajan and Luigi Zingales, ‘Financial Dependence and Growth’, (1998) 88 *The American Economic Review* 3, 559-586; and Anil K. Kashyap, Owen A. Lamont, and Jeremy C. Stein, ‘Credit Conditions and the Cyclical Behavior of Inventories’, (1994) 109 *Quarterly Journal of Economics* 3, 565-592. Several recent studies have looked specifically at the feedback effects from NPLs to macroeconomic performance and have reached similar conclusions. For example: Nir Klein, ‘Nonperforming Loans in CESEE: Determinants and Impact on Macroeconomic Performance’, (March 2013) *IMF Working Paper, WP/13/72*; Mwanza Nkusu, ‘Nonperforming Loans and Macroeconomic Vulnerabilities in Advanced Economies’, (2011) *IMF Working Paper, WP/11/161*; Ananthakrishnan Prasad and Raphael A. Espinoza, ‘Nonperforming Loans in the GCC Banking System and their Macroeconomic Effects’, (2010) *IMF Working Paper, WP/10/224*; and Wolfgang Bergthaler, Kenneth Kang, Yan Liu, and Dermot Monaghan, ‘Tackling small and medium sized enterprise problem loans in Europe’, (March 2015) *IMF Staff Discussion Note, SDN/15/04*.

³⁰ Shekhar Aiyar, Wolfgang Bergthaler, Jose M. Garrido, Anna Ilyina, Andreas Jobst, Kenneth Kang, Dmitry Kovtun, Yan Liu, Dermot Monaghan, and Marina Moretti, ‘A Strategy for Resolving Europe’s Problem Loans’, (September 2015) *IMF Staff Discussion Note, SDN/15/19*.

³¹ European Stability Mechanism, ‘ESM Annual Report 2015’, (June 2016).

³² Shekhar Aiyar, Anna Ilyina, and Andrea Jobst, ‘How to tackle Europe’s non-performing loan problem’, (5 November 2015), Figure 2: available at <http://www.voxeu.org/article/how-tackle-europe-s-non-performing-loan-problem>.

³³ European Stability Mechanism, ‘ESM Annual Report 2015’, (June 2016), 42-43.

³⁴ World Bank Group, IMF, European Investment Bank, European Bank for Reconstruction and Development, ECB, and European Commission, ‘European Banking Coordination “Vienna Initiative” - Working Group on NPLs in Central, Eastern and Southeastern Europe’, (March 2012).

³⁵ The IMF employs a “nonperforming loans net of provisions to capital” ratio as an indication of the extent to which losses can be absorbed before the sector becomes technically insolvent, see: IMF, ‘Financial Soundness Indicators and the IMF’, (Last Updated: November 2015) referring to IMF, ‘Financial Soundness Indicators: Compilation Guide’, (2006), Part II, [6.15].

explanation or definition of an acceptable NPL ratio, implying that the optimal ratio is the lowest possible. The rationale being, based on the IMF report, that NPLs on banks' balance sheets create uncertainty and weigh on the ability to resume lending, and therefore aggregate demand and investment.³⁵

This uncertainty relates to a bank's solvency³⁶—not writing-down the true value of NPLs—because the market presumes that the accounting value of capital is overstated. Regardless of how well a bank appears to be capitalized, NPLs reduce bank profitability which is associated with illiquidity or insolvency.³⁷

The abundance of NPLs in the EU in the aftermath of the Eurozone debt crisis has been a significant cause of anaemic economic activity because of reduced lending and the persistent impression of bank fragility. Another unresolved issue is NPLs suppressing the economic activity of overextended borrowers³⁸ which can trap resources in unproductive activities. Resolving impaired loans is tantamount to tackling debt overhang, stimulating viable firms' demand for new loans, while encouraging unviable firms to wind-down.³⁹ Unclogging the bank lending channels will augment the transmission of monetary policy to the real economy.

These findings elucidate how NPLs should be managed. A concentration of unresolved legacy loans and restricted credit supply impacts on economic growth, innovation, and the Schumpeterian cycle. In the longer term, this induces unregulated or under-regulated parallel financing that can increase overall lending rather than decrease the supply of credit. A good example is China where most legacy loans are held by state-owned enterprises (SOEs) operating in the manufacturing sector, in contrast to technology companies that access ingenuous and riskier (from a financial stability perspective) forms of finance. This is especially valid for NPLs generated from gyrations in the macroeconomic cycle rather than loose underwriting standards, crony banking, or fraud. Thus, taking a too principled stance vis-

³⁵ European Stability Mechanism, 'ESM Annual Report 2015', (June 2016), 4. 2016

³⁶ In fact, if a separate set of variables to what European Banking Authority uses for its stress tests is employed, the impression of vulnerability is even stronger, see: Viral V. Acharya, Diane Pieret, and Sascha Steffen, 'Capital Shortfalls of European Banks since the Start of the Banking Union', (28 July 2016): available at [http://www.pages.stern.nyu.edu/~sternfin/vacharya/public_html/pdfs/shortfalls_v27July2016%20\(1\).pdf](http://www.pages.stern.nyu.edu/~sternfin/vacharya/public_html/pdfs/shortfalls_v27July2016%20(1).pdf).

³⁷ Ibid. Indicatively, the authors note that "Since the start of the Banking Union in November 2014, European banks lost nearly half their market capitalization."

³⁸ For example, 80% of NPLs in Italy are loans to corporates, see: Nadège Jassaud and Kenneth Kang, 'A Strategy for Developing a Market for Nonperforming Loans in Italy', (February 2015) *IMF Working Paper*, WP/15/24, 6.

³⁹ Ibid, 17; and Shekhar Aiyar, Anna Ilyina, and Andrea Jobst, 'How to tackle Europe's non-performing loan problem', (5 November 2015): available at <http://www.voxeu.org/article/how-tackle-europe-s-non-performing-loan-problem>.

a-vis moral hazard in relation to NPL resolution is overwhelmingly counterproductive.

Loss recognition pursuant to IFRS 9 can influence capital buffers and trigger bail-in events. Thus bank management is incentivized to avoid triggering bail-in events.⁴⁰ The regulators' response in such circumstances is uncertain, in contrast to idiosyncratically resolving a single bank.⁴¹ This is because triggering CoCos or other bail-in instruments en masse could prove disruptive in a systemic crisis or a banking system excessively burdened with NPLs.⁴²

The IMF suggests that Italian bank managers face a number of obstacles which disincentivize the timely resolution of NPLs.⁴³ Motivated bank management coupled with a timely and effective NPL resolution is key to the resumption of bank lending, tackling debt overhang, the duration and rate of NPL recovery, and mitigating bank losses. The IMF states:

The delays depreciate the value of the NPLs, and the prices buyers are ready to pay, after discounting the delays, are not attractive for the banks. A reduction in the time to recover loans would have a positive impact in the price of NPLs.⁴⁴

From this framework, we consider a series of case studies that involve managing major banking crises over the past twenty years.

III. SYSTEMIC BANK RESOLUTION STANDARDS AND MORAL HAZARD

A. International Approach

Banks facing large scale NPLs may experience a severe capital reduction. Capital write-offs can push an ailing bank into resolution. Resolution regimes, analogous to the US Orderly Liquidation Authority⁴⁵ and the EU Bank Recovery and Resolution Directive⁴⁶ (BRRD), are

⁴⁰ IMF, 'Ireland: Ex Post Evaluation of Exceptional Access Under the 2010 Extended Arrangement', (January 2015) *IMF Country Report No. 15/20*, 52.

⁴¹ Emiliou Avgouleas and Charles Goodhart, 'Critical Reflections of Bank Bail-ins', (2015) 1 *Journal of Financial Regulation* 1, 3-29.

⁴² See: Emiliou Avgouleas and Charles Goodhart, 'An Anatomy of Bank Bail-ins – Why the Eurozone Needs a Fiscal Backstop for the Banking', (2016) 2 *European Economy*, 75-90.

⁴³ See: Nadège Jassaud and Kenneth Kang, 'A Strategy for Developing a Market for Nonperforming Loans in Italy', (February 2015) *IMF Working Paper, WP/15/24*.

⁴⁴ José Garrido, 'Insolvency and Enforcement Reforms in Italy', (July 2016) *IMF Working Paper, WP/16/134*, 6.

⁴⁵ Title II of the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010 (Act (Pub L 111–203, HR 4173)).

⁴⁶ Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms OJ L 2014 173/190 or BRRD.

designed for orderly bank failures to preserve systemic stability. These regimes aim to eliminate the too-big-to-fail subsidy⁴⁷ by curbing shareholders and managers propensity to select riskier assets.⁴⁸ Resolution regimes can have ex post mechanisms to secure adequate funds to cover bank losses.⁴⁹

Publicly funded bank rescues are historically associated with moral hazard because senior unsecured creditors are typically unaffected at the expense of the taxpayer.⁵⁰ For this reason, public bailouts are regarded as a major source of excessive risk taking or moral hazard and represent weak monitoring by creditors. There is a widely held belief that contemporary resolution regimes can overcome this problem by eliminating public assistance or by severely curtailing access to public funds.⁵¹ This chapter argues that unlike the US and to a large extent the EU BRRD, bank resolution and NPL standards should take less of a doctrinal approach by offering a pragmatic view of this problem and of temporary public funding to resolve high NPL ratios.

The Financial Stability Board (FSB) Key Attributes Assessment Methodology for the Banking Sector (Key Attributes) sets out a bank resolution framework for global SIBs (G-SIBs), subject to preconditions.⁵² As cross border cooperation is a key component of these resolution powers,

⁴⁷ Joao A. C. Santos, 'Evidence from the Bond Market on Banks' "Too-Big-To-Fail" Subsidy', (December 2014) 20 *Federal Reserve Bank of New York, Economic Policy Review* 29; Kenichi Ueda and Beatrice Weder Di Mauro, 'Quantifying the Value of the Subsidy for systemically Important Financial Institutions', (2011) *IMF Working Paper WP/12/128*; Zan Li, Shisheng Qu, and Jing Zhang, 'Quantifying the Value of Implicit Government Guarantees for Large Financial Institutions', (2011) *Moody's Analytics Quantitative Research Group*; and Donald P. Morgan and Kevin J. Stiroh, 'Too Big To Fail after All These Years', (September 2005) *Federal Reserve Bank of New York Staff Reports, Staff Report no. 220*.

⁴⁸ Gara Alfonso, Joao Santos, and James Traina, 'Do "Too Big To Fail" Banks Take on More Risk?', (2014) 20 *Federal Reserve Bank of New York, Economic Policy Review* 2; Luis Brandao Marques, Ricardo Correa, and Horacio Saprizza, 'International Evidence on Government Support and Risk Taking in the Banking Sector', (2013) *IMF Working Paper 13/94*; and Blaise Gadanetz, Kostas Tsatsaronis, and Yener Altunbas, 'Spoil and Lazy: The Impact of State Support on Bank Behavior in the International Loan Market', (2012) 8 *International Journal of Central Banking* 121.

⁴⁹ See: Emilios Avgouleas and Charles Goodhart, 'An Anatomy of Bank Bail-ins – Why the Eurozone Needs a Fiscal Backstop for the Banking Sector', (5 December 2016), *European Economy* 2016.2, 75-90; and 'Critical Reflections on Bank Bail-ins', (2015) 1 *Journal of Financial Regulation* 1, 3-27.

⁵⁰ Yet bailout costs may not be accurately measured unless the cost of the alternative—instability—is also considered. See: Mathias Dewatripont, 'European Banking: Bail-out, Bail-in and State Aid Control', (2014) 34 *International Journal of Industrial Organisation* 37. With the US Troubled Asset Relief Program, public intervention may be recovered in the long-term which makes calculating the cost of public bailouts even more complex.

⁵¹ Emilios Avgouleas and Charles Goodhart, 'Bank resolution 10 Years from the global financial crisis: A systematic reappraisal' in Douglas Arner, Emilios Avgouleas, & Steven Schwarcz (eds.), *Systemic Risk in the Financial Sector: Ten Years after the Great Crash* (Toronto: McGill-Queen's University Press, 2019), Ch. 9.

⁵² Preconditions include:

- (i) an established framework for financial stability, surveillance, and policy formulation;
- (ii) an effective system of supervision, regulation, and the oversight of banks;

the FSB issued guidance, namely the Principles for Cross-border Effectiveness of Resolution Actions.⁵³

Critically, the Key Attributes state that an effective resolution regime:

is to make feasible the resolution of financial institutions without severe systemic disruption and without exposing taxpayers to loss, while protecting vital economic functions through mechanisms which make it possible for shareholders and unsecured and uninsured creditors to absorb losses in a manner that respects the hierarchy of claims in liquidation.⁵⁴

The options to resolve an unviable bank are stabilization and liquidation, which are underpinned by resolution powers, namely:

- (i) removing and replacing senior management and directors;
- (ii) appointing an administrator;
- (iii) powers to terminate, continue, or assign contracts;
- (iv) the power to purchase or sell assets;
- (v) writing down debt and restructuring bank operations;
- (vi) continuity of essential services;

-
- (iii) effective protection schemes for depositors and other protected clients or customers, and clear rules on the treatment of client assets;
 - (iv) a robust accounting, auditing, and disclosure regime; and
 - (v) a developed legal framework and judicial system.

See: FSB, 'Key Attributes Assessment Methodology for the Banking Sector – Methodology for Assessing the Implementation of the Key Attributes of Effective Resolution Regimes for Financial Institutions in the Banking Sector', (19 October 2016), 13.

⁵³ These cover (i) statutory approaches, (ii) contractual recognition, (iii) temporary stays and early termination rights, and (iv) a bail-in tool. Contractual recognition supports cross border resolution enforceability, for example the write down, cancellation, or conversion of debt instruments. Where bail-in instruments are governed by foreign law, bail-in recognition clauses are to support debt instruments for home resolutions. See: FSB, 'Principles for Cross-border Effectiveness of Resolution Actions', (3 November 2015), 7-8.

⁵⁴ Financial Stability Board, 'Key Attributes of Effective Resolution Regimes for Financial Institutions,' (4 November 2011), 3.

- (vii) overriding shareholder rights to facilitate a merger, takeover, sale of business operations, recapitalization, or other measures to restructure or dispose of the bank's business, liabilities, or assets;
- (viii) establishing a separate bridge institution or asset management vehicle to transfer run-down NPLs or difficult to value assets;
- (ix) carry out a bail-in within resolution;
- (x) impose a moratorium to suspend payments to unsecured creditors and customers; and
- (xi) effecting an orderly liquidation.⁵⁵

When bail-in tools are used to transfer impaired assets, the resolution authority's powers encompass: (i) a write-down that respects the hierarchy of claims in liquidation, equity, or other instruments to absorb losses, (ii) converting into equity or bank-under-resolution ownership instruments that respect the hierarchy of claims in liquidation, and (iii) upon entry into resolution, convert or write down any CoCos or contractual bail-in instruments where terms have not been triggered.⁵⁶

All of these resolution approaches explicitly provide the resolution authority with the power to sell or transfer bank assets and liabilities. This includes a transfer to a bridge bank or a third party private-sector buyer without requiring the consent of interested parties or creditors, nor constituting a contractual default or termination event.⁵⁷ The AMC approach of selling or transferring NPLs can be an effective resolution option but it requires strengthening the regulatory powers to overcome resistance from shareholders and especially creditors, given that this will inevitably crystallize bank losses.

The FSB mandates that the private sector is the first funding choice for bank resolutions. Government funding conditions are designed to mitigate moral hazard and any losses incurred by the government must be recovered.⁵⁸ It is entirely plausible that AMCs can preclude the involvement of public money given that this resolution approach reduces NPL ratios. This will

⁵⁵ Ibid, 7 and 8.

⁵⁶ Ibid, 9.

⁵⁷ Ibid.

⁵⁸ FSB, 'Guiding principles on the temporary funding needed to support the orderly resolution of a global systemically important bank ("G-SIB")', (18 August 2016), 9-18.

be necessary when a crisis is systemic from macroeconomic developments, or as a consequence of exogenous factors such as the inevitable tsunami of new NPLs from the Covid-19 economic fallout.

Conversely, bank failures can be caused by idiosyncratic factors such as management's focus on return-on-equity and bonuses, which can induce relaxed lending standards. In these circumstances bailouts should be precluded because of moral hazard concerns. Creditors should also bear the full cost of bank losses once shareholder funds have been exhausted.⁵⁹

From the standpoint of potential sources of funding, there are numerous related tools available to reduce systemic risk. For example G-SIBs, which have been compared to super-polluters⁶⁰ that spread risk due to implicit government guarantees, are subject to higher loss absorbency requirements and increased going-concern loss absorbency.⁶¹

In addition to higher capital requirements (going concern loss absorbency) G-SIBs are required to hold total loss-absorbing capital (TLAC) as gone-concern loss absorbency, is designed to ensure funds that are available only for loss-absorbency and recapitalization for an orderly resolution to minimize financial instability, ensure the continuity of critical functions, and avoid exposing taxpayers to losses.⁶² Firstly, TLAC is a precautionary measure which supports market confidence that an G-SIB has adequate liabilities to readily absorb losses. Secondly, TLAC can stabilize the banking system ex post, since designated liabilities can be bailed-in to absorb bank losses while minimizing the risk of secured creditor flight, which could certainly trigger, rather than contain, a systemic banking crisis.⁶³

⁵⁹ On the distinction between applying bail-in to a bank that has failed for idiosyncratic reasons and a bank resolved due to systemic upheaval, see: Emiliios Avgouleas and Charles Goodhart, 'Critical Reflections on Bank Bail-ins', (2015) 1 *Journal of Financial Regulation* 1, 3-27; and 'Bank resolution 10 Years from the global financial crisis: A systematic reappraisal' in Douglas Arner, Emiliios Avgouleas, & Steven Schwarcz (eds.), *Systemic Risk in the Financial Sector: Ten Years after the Great Crash* (Toronto: McGill-Queen's University Press, 2019), Ch. 9.

⁶⁰ Andrew G. Haldane, 'The 100 Billion question', (30 March 2010) *comment given at the Institute of Regulation & Risk, Hong Kong*; see also: Andrew G. Haldane and Vasileios Madouros, 'The dog and the frisbee', (31 August 2012) *Speech at the Federal Reserve Bank of Kansas City's 366th economic policy symposium, "The changing policy landscape", Jackson Hole, Wyoming*.

⁶¹ BCBS, 'Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement', (July 2013) Bank for International Settlements, 3.

⁶² FSB, 'Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution: Total Loss-absorbing Capacity (TLAC) Term Sheet', (9 November 2015), 5.

⁶³ On the latter, see: Emiliios Avgouleas and Charles Goodhart, 'Critical Reflections on Bank Bail-ins', (2015) 1 *Journal of Financial Regulation* 1, 3-27.

Minimum TLAC must be at least 16% of the resolution group's risk-weighted assets, which will increase to at least 18% by 2022.⁶⁴ These requirements are in addition to the Basel III capital requirements.⁶⁵ Presuming regulatory capital reflects a bank's approach to offsetting lending and structural reforms, including ring-fencing adopted by the UK, this will render difficulties in containing moral hazard with a bail-in resolution and no public funding.

B. European Union Standards and the Single Resolution Mechanism

The Single Supervisory Mechanism (SSM) was the first step towards an EU banking union which is applicable to member banks.⁶⁶ Its main aims are to ensure safety and soundness of the EU banking system, increase financial integration and stability, and ensure consistent supervision. The ECB enforces the SSM by being responsible for (i) reviews, inspections, and investigations, (ii) licensing, (iii) assessing qualifying holdings, (iv) compliance, and (v) setting countercyclical capital buffers.⁶⁷

Another pillar of the EU banking union is the Single Resolution Mechanism (SRM). The Single Resolution Board (SRB), with national resolution authorities, form the SRM which is designed to ensure an orderly resolution of banks while mitigating taxpayer expenditure.

In 2014, the EU enacted the BRRD to deal with failing banks beyond national regimes while conforming with the Key Attributes.⁶⁸ The paramount purpose of the BRRD is to eliminate public bailouts and thus contain the doom loop that bound together sovereign and banking sector solvency. This avoids the mutualization of bank risk in the Eurozone by mitigating the fiscal burden sharing of bank losses among EU members.⁶⁹ A BRRD resolution must satisfy a number of objectives: (i) safeguarding the continuity of essential banking operations, (ii)

⁶⁴ FSB, 'Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution: Total Loss-absorbing Capacity (TLAC) Term Sheet', (9 November 2015), 10.

⁶⁵ BCBS, 'Basell III: A global regulatory framework for more resilient banks and banking systems', (December 2010 (rev June 2011)) *Bank for International Settlements*, 62-3.

⁶⁶ See: Emiliios Avgouleas and Douglas Arner, 'The Eurozone Debt Crisis and the European Banking Union: "Hard Choices", "Intolerable Dilemmas" and the Question of Sovereignty', (2017) 50(1) *The International Lawyer* 29.

⁶⁷ European Central Bank, 'Single Supervisory Mechanism': available at <https://www.bankingsupervision.europa.eu/about/thessm/html/index.en.html>.

⁶⁸ European Commission, 'EU Bank Recovery and Resolution Directive (BRRD): Frequently Asked Questions', (15 April 2014) *Memo*, 1 and 3.

⁶⁹ See: Emiliios Avgouleas and Charles Goodhart, 'Critical Reflections on Bank Bail-ins', (2015) 1 *Journal of Financial Regulation* 1, 3-27.

protecting deposits, client assets, and public funds, (iii) minimizing risks to financial stability, and (iv) avoiding unnecessary destruction of value.⁷⁰

Part IV of the BRRD specifies four resolution tools: (i) the sale of business tool, (ii) the bridge institution tool, (iii) the asset separation tool (i.e., AMCs), and (iv) the bail-in tool.⁷¹ Bail-in tools are viewed as important to mitigating moral hazard when there is a strong reliance on bailouts. The BRRD bail-in tool allows the resolution authority to write down or convert to equity the claims of creditors in accordance with a predetermined hierarchy. This reduces the extent of a capital injection, the taxpayer burden and, in principle, acts as an additional capital buffer.⁷² What is proving problematic is the BRRD requirement for banks in resolution to effect a minimum bail-in of 8% of liabilities before any contribution of public funds or from the resolution fund.⁷³

The ECB released guidelines aimed at reducing the exposure of SIBs with high NPL levels over realistic and ambitious time horizons. Although the guidance is non-binding, regulators can opt for a “comply or explain” regime. Similar to the BCBS Guidelines: Prudential treatment of problem assets – definitions of non-performing exposures and forbearance, the ECB guidelines focus on NPLs and forbearance. In 2018 the European Banking Authority (EBA) released Guidelines on management of non-performing and forborne exposures. The ECB guidance and EBA guidelines limit NPEs to reporting requirements.⁷⁴ Definitions in the ECB, EBA, and BCBS documents are analogous, as is the link between NPEs and forbearance. The ECB guidance and EBA guidelines provides short- and long-term options for consistent prudential treatment of distressed assets and the application of IFRS 9 and ECLs.

⁷⁰ European Commission, ‘EU Bank Recovery and Resolution Directive (BRRD): Frequently Asked Questions’, (15 April 2014) *Memo*, 3.

⁷¹ Chapter IV, arts. 2-5, BRRD.

⁷² European Central Bank, ‘Systemic Implications of the European bail-in tool: a multi-layered network analysis’, (May 2016) *Financial Stability Review – Special features*, 120.

⁷³ Art. 37(10(a)) and Recs 73, 75, BRRD. For the advantages and disadvantages of this approach, see: Emilius Avgouleas and Charles Goodhart, ‘A Critical Evaluation of Bail-in as a Bank Recapitalisation Mechanism’, (July 2014) *CEPR Discussion Paper No. DP10065*.

⁷⁴ ECB, ‘Guidance to banks on non-performing loans’, (March 2017), 6, 8 and 47; and EBA, ‘Guidelines on management of non-performing and forborne exposures’, (31 October 2018).

The EU Economic and Financial Affairs Council issued an action plan to move NPLs off-balance sheet and establishing national AMCs in July 2017.⁷⁵ At the time, there were almost €1 trillion NPLs with small and medium enterprises having the highest exposure.⁷⁶

IV. THE ASIAN FINANCIAL CRISIS AND BANK RESTRUCTURING

Asia experienced its most significant modern financial crisis in 1997-1998. Severe economic and structural imbalances leading into the crisis destabilized banking systems. This section examines the severe effects on banking systems and the regulatory approaches of Thailand, Indonesia, South Korea, and Malaysia. China's approach to banking system restructuring will follow. These case studies reveal that weak credit and bank governance regimes coupled with endemically lax supervision are rooted in a variety of causes rather than solely being a consequence of moral hazard arising from the prospect of a bailout. Radical balance sheet restructuring supported by public funds minimized taxpayer exposure and ex post bank losses, which led to a resumption of lending.

A. Thailand

The easing of foreign exchange restrictions in the early 1990s enabled Thai banks to source funds internationally. Credit and reporting standards were lax. By 1996 the NPL ratio was 13%⁷⁷ with banks holding \$847 billion of NPLs.⁷⁸ The banking system rapidly unwound from rising NPLs and a credit shortage.⁷⁹

On 5 August 1997 standby support of \$17.2 billion was provided by the IMF to restructure the financial sector by.⁸⁰

⁷⁵ Council of the European Union, 'Council conclusions on Action plan to tackle non-performing loans in Europe', (11 July 2017) *Press Release*, [8].

⁷⁶ Small and medium enterprises represent 16.7% compared with 7.5% for large companies and 4.7% for households: Council of the European Union, 'Report of the FSC Subgroup on Non-Performing Loans', (31 May 2017), [13] and [21].

⁷⁷ Giancarlo Corsetti, Paolo Presenti, and Nouriel Roubini, 'What Caused the Asian Currency and Financial Crisis? Part I: A Marcoeconomic Overview', (December 1998) *National Bureau of Economic Research, Working Paper 6833*, 26 and 46 (Table 21) referring to BIS 1997 statistics. Lending by financial companies equated to about a third of all commercial bank lending. Non-bank financial companies realised similar NPL ratios.

⁷⁸ Masahiro Kawai and Ken-ichi Takayasu, 'The Economic Crisis and Financial Sector Restructuring in Thailand' in Asian Development Bank, 'Rising to the Challenge in Asia: A Study of Financial Markets: Volume 11 – Thailand', (December 1999), 47.

⁷⁹ Tarrin Nimmanahaeminda, 'Statement by the Hon. Tarrin Nimmanahaeminda, Governor of the Bank for Thailand, at the Joint Annual Discussion', (October 1998) *International Monetary Fund, World Bank Group, Press Release No. 26*, 3.

⁸⁰ \$ symbolizes US\$.

(i) identifying and closing insolvent institutions; (ii) applying blanket government depositor and creditor guarantees; and (iii) implementing structural and regulatory reforms.⁸¹

In August 1997 the Financial Restructuring Package prompted the development of a private AMC framework.⁸² NPLs transferred to state-owned AMCs from state-owned banks were guaranteed by the Financial Institutions Development Fund (FIDF), which sustained losses.⁸³ In 1999, the Bank of Thailand (BoT) was tasked with supervising state-owned AMCs.⁸⁴ The BoT also supported NPL transfers to private AMCs. In accordance with the Emergency Decree on Asset Management Company (1998), AMCs managed distressed assets and resolved bad debts through asset restructurings, asset sales, foreclosures, or other legal actions. Distressed debt resolution was facilitated by revised rules—NPLs were recognized after six months rather than twelve and provisions were made for NPLs during bank restructurings.⁸⁵

To accelerate debt restructuring, a dispute resolution mechanism was established to assist with voluntary out-of-court restructurings and to spread the debt burden between debtors and creditors. Thailand's NPL ratio reached 42.9% (1998) and NPLs rose to ฿2,729 billion in 1999, equivalent to 47.7% of total credit.⁸⁶ NPLs took until 2005 to fall below 10% and to 2010 to reach 3.9%.⁸⁷ Borrowings to bail out financial institutions amounted to ฿1.4 trillion. Emergency legislation enabled the government to issue bonds to fund the bailouts.⁸⁸

B. Indonesia

Contagion spread from Thailand throughout Asia, with Indonesia experiencing a rapid currency devaluation.⁸⁹ The banking system was vulnerable from crony lending, fraud, and loose underwriting standards. On 31 October 1997 the Bank of Indonesia and the IMF

⁸¹ Andrew Berg, 'The Asia Crisis: Causes, Policy Responses, and Outcomes', (October 1999) *International Monetary Fund, Asia Pacific Department, Working Paper 138*, 53.

⁸² Bank of Thailand, 'Supervision Report 2001-2002', 12.

⁸³ *Ibid.*, 20.

⁸⁴ Bank of Thailand, 'Supervision Report 2000', 6.

⁸⁵ *Ibid.*, 5 and 17.

⁸⁶ Bank of Thailand, 'Supervision Report 2001-2002', 32.

⁸⁷ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

⁸⁸ Bank of Thailand, 'Financial Institutions Development Fund': available at https://www.bot.or.th/English/BOTStoryTelling/Pages/FIDF_StoryTelling_FI.aspx.

⁸⁹ Stephen Sherlock, 'Crisis in Indonesia: Economy, Society and Politics', (April 1998) *Parliament of Australia, Current Issues Brief 13 1997-98*: available at http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Publications_Archive/CIB/CIB9798/98cib13.

announced a resolution package whereby performing assets were transferred from insolvent to solvent banks.⁹⁰ The remaining banks were subject to the following conditions: (i) new investors would inject capital to cover some losses, (ii) NPLs would be restructured over 20 years, (iii) new investors pledged collateral for restructured NPLs, and (iv) investor NPL losses were covered by a Bank of Indonesia loan.⁹¹

With NPLs remaining on-balance sheet, restructuring insolvent banks was futile.⁹² On 5 November 1997, an IMF \$10 billion standby facility was approved to support financial stability and banking reforms. A second IMF program was announced on 15 January 1998, followed by a government emergency plan involving (i) a blanket depositor and creditor guarantee, (ii) establishing the Indonesia Bank Restructuring Agency (IBRA) to rehabilitate weak banks and NPLs, and (iii) a corporate restructuring plan.⁹³

The IBRA had three management functions over NPLs, investments, and a bank restructuring unit.⁹⁴ This enabled the IBRA to legally sell insolvent banks' NPLs without needing approval from borrowers or bank owners.⁹⁵ In April 1998, IBRA closed seven banks, another seven were taken over (management was replaced in six), and 16 banks came under IBRA control.⁹⁶ Bank audits revealed wide spread connected lending and six banks with NPL ratios approaching 55%, with one exceeding 90%.⁹⁷

The Indonesian Debt Restructuring Agency was established to reduce short-term funding pressures and to design a distressed debt restructuring framework. Advice and mediation

⁹⁰ Carl-Johan Lindgren, Tomás J.T. Balino, Charles Enoch, Anne-Marie Gulde, Marc Quintyn, and Leslie Teo, 'Financial Sector Crisis and Restructuring: Lessons from Asia', (1999) *International Monetary Fund, Occasional Paper 188*, 58.

⁹¹ Charles Enoch, Barbara Baldwin, Olivier Frécaut, and Arto Kovanen, 'Indonesia: Anatomy of a Banking Crisis Two years of Living Dangerously 1997-1999', (2001) *International Monetary Fund, IMF Working Paper 52*, 29.

⁹² *Ibid.*

⁹³ Carl-Johan Lindgren, Tomás J.T. Balino, Charles Enoch, Anne-Marie Gulde, Marc Quintyn, and Leslie Teo, 'Financial Sector Crisis and Restructuring: Lessons from Asia', (1999) *International Monetary Fund, Occasional Paper 188*, 59.

⁹⁴ Ben Fung, Jason George, Stefan Hohl, and Guonan Ma, 'Public asset management companies in East Asia – Case studies', (2004) *Bank for International Settlements*, 8-9.

⁹⁵ Charles Enoch, Barbara Baldwin, Olivier Frécaut, and Arto Kovanen, 'Indonesia: Anatomy of a Banking Crisis Two years of Living Dangerously 1997-1999', (2001) *IMF Working Paper, WP/01/ 52*, 77 and 78.

⁹⁶ *Ibid.*, 34.

⁹⁷ Carl-Johan Lindgren, Tomás J.T. Balino, Charles Enoch, Anne-Marie Gulde, Marc Quintyn, and Leslie Teo, 'Financial Sector Crisis and Restructuring: Lessons from Asia', (1999) *International Monetary Fund, Occasional Paper 188*, 61; and Charles Enoch, Barbara Baldwin, Olivier Frécaut, and Arto Kovanen, 'Indonesia: Anatomy of a Banking Crisis Two years of Living Dangerously 1997-1999', (2001) *International Monetary Fund, IMF Working Paper 52*, 36.

services were offered by the Jakarta Initiative Task Force which eventually oversaw one-third of all voluntary corporate debt restructuring agreements.⁹⁸

Over Rp400 trillion of government-issued bonds, or 35% of GDP, were issued to fund the bank recapitalization program.⁹⁹ Bank numbers halved following state closures and takeovers.¹⁰⁰ The IBRA was responsible for Rp234 trillion of NPLs, representing 19% of GDP.¹⁰¹ NPL ratios peaked in 1998 at 48.6%, before falling to 31.9% in 2001, and 6.8% by 2003.¹⁰²

C. South Korea

In 1997 South Korea's financial sector was underdeveloped, NPLs stood at 5.8%, and the banking system was heavily exposed to short-term foreign debt.¹⁰³ Following a sharp drop in the won, South Korea experienced capital flight because it lacked sufficient foreign currency liquidity to meet maturing liabilities.¹⁰⁴ To absorb rapidly increasing NPLs, a fund was established with ₩3.5 trillion under the supervision of the Korean Asset Management Corporation (KAMCO).¹⁰⁵

The Korea Deposit Insurance Corporation (KDIC) was established to resolve and restructure banks, and provided supervisors with legal control over failing banks' capital.¹⁰⁶ The Financial Supervisory Service¹⁰⁷ and the banking supervisor—the Financial Supervisory Commission (FSC)—were empowered to enforce write offs, mergers, and closures.¹⁰⁸ A corporate

⁹⁸ Charles Enoch, Barbara Baldwin, Olivier Frécaut, and Arto Kovanen, 'Indonesia: Anatomy of a Banking Crisis Two years of Living Dangerously 1997-1999', (2001) *International Monetary Fund, IMF Working Paper* 52, 37 and 40.

⁹⁹ Authors calculations referring to: *ibid*, 107.

¹⁰⁰ Carl-Johan Lindgren, Tomás J.T. Balino, Charles Enoch, Anne-Marie Gulde, Marc Quintyn, and Leslie Teo, 'Financial Sector Crisis and Restructuring: Lessons from Asia', (1999) *International Monetary Fund, Occasional Paper* 188, 65.

¹⁰¹ Authors calculations referring to: Charles Enoch, Barbara Baldwin, Olivier Frécaut, and Arto Kovanen, 'Indonesia: Anatomy of a Banking Crisis Two years of Living Dangerously 1997-1999', (2001) *International Monetary Fund, IMF Working Paper* 52, 39.

¹⁰² World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

¹⁰³ *Ibid*.

¹⁰⁴ Bank of Korea, 'Annual Report: 1997', 4 and 17.

¹⁰⁵ *Ibid*, 17, 27, and 29.

¹⁰⁶ *Ibid*, 28.

¹⁰⁷ The administrative arm of the FSC.

¹⁰⁸ Bank of Korea, 'Annual Report: 1997', 28-29; Kim Kihwan, 'The 1997-98 Korean Financial Crisis: Causes, Policy Response, and Lessons', (2006) *The High Level Seminar on Crisis Prevention in Emerging Markets, Singapore*, 13-14; and OECD, 'Insolvency Systems in Asia: An Efficiency Perspective', (2001) *Finance and Investment*, 179.

restructuring coordination committee acted as a voluntary mediator for debt restructuring.¹⁰⁹ The KDIC supervised bank recapitalizations and KAMCO managed NPLs, with the FSC coordinating.

Viable or solvent banks' NPLs were purchased by the KAMCO fund on the condition of merger, management replacement, and downsizing.¹¹⁰ This was supported by government capital injections and financed with bond issues.¹¹¹ Banks with high NPL ratios were closed and weak banks had to submit rehabilitation plans.¹¹²

On 4 December 1997, the IMF granted South Korea \$21 billion of standby credit and \$36 billion on completion of the program.¹¹³ The first IMF restructuring exercise focused on distressed banks. Legislation changed the definition of bank capital to reduce leverage and debt-to-equity ratios. The classification of assets and the BCBS capital adequacy requirements were tightened.¹¹⁴ Loan-loss provisioning was abandoned and forward-looking NPL classifications adopted.¹¹⁵

FSC assessments of 12 banks revealed inadequate capital adequacy ratios.¹¹⁶ Between 1998 and 2002, nine banks merged and bank numbers fell from 33 to 19.¹¹⁷ The KDIC ceased operations in 2001 with recapitalizations of over ₩128 trillion.¹¹⁸ NPL ratios peaked at 8.9% (2000) before falling to 3.4% in 2001.¹¹⁹

D. Malaysia

Malaysia's loan growth averaged 25% per annum between 1994 and 1997. Banks held 43.6% of total assets and property sector loans accounted for one-third of all loans.¹²⁰ NPLs surged

¹⁰⁹ Dongsoo Kang, 'Key Success Factors on the Revitalization of Distressed Firms: A Case of the Korean Workouts', (February 2004) *Korea Development Institute*, 2-2.

¹¹⁰ Bank of Korea, 'Annual Report: 1998', 38-39.

¹¹¹ Kim Kihwan, 'The 1997-98 Korean Financial Crisis: Causes, Policy Response, and Lessons', (2006) *The High Level Seminar on Crisis Prevention in Emerging Markets, Singapore*, 14-15.

¹¹² Bank of Korea, 'Annual Report: 1998', 38.

¹¹³ Bank of Korea, 'Annual Report: 1997', 17.

¹¹⁴ Bank of Korea, 'Annual Report: 1998', 39, 45 and 46.

¹¹⁵ Kim Kihwan, 'The 1997-98 Korean Financial Crisis: Causes, Policy Response, and Lessons', (2006) *The High Level Seminar on Crisis Prevention in Emerging Markets, Singapore*, 16.

¹¹⁶ Bank of Korea, 'Annual Report: 1998', 39.

¹¹⁷ Bank of Korea, 'Annual Report: 2003', 58.

¹¹⁸ Authors calculations: Bank of Korea, 'Annual Report: 2001', 51; Bank of Korea, 'Annual Report: 2002', 49.

¹¹⁹ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

¹²⁰ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-1997', Ch 4, 9 and 13.

190% to RM3,646 million during 1997.¹²¹ Prior to the crisis, NPLs had been 4.1% before peaking at 18.6% in 1998.¹²²

A pre-emptive crisis program was introduced to address structural weaknesses. NPLs were reclassified closer to international standards by reducing the period in arrears from six to three months and improving detection, identification, and monitoring.¹²³ Capital controls were applied to stem outflows.¹²⁴

In contrast to other countries in Asia at the time, Malaysia only accepted IMF technical assistance. A restructuring plan created a (i) merger plan, (ii) AMC—Danaharta—to manage NPLs, (iii) special purpose vehicle—Danamodal, and (iv) a Corporate Debt Restructuring Committee (CDRC).¹²⁵

Danaharta was a limited liability company owned by the central bank with the objective of maximizing NPL recovery values and purchasing unmanageable NPLs as a form of capital injection. Banks sold NPLs to Danaharta if their gross NPL ratio exceeded 10%, with the residual written down and restructured. Recapitalized banks sold NPLs to Danaharta at fair market value, funded by the government and, when market conditions allowed, the sale of bonds.¹²⁶

Danaharta ceased purchasing NPLs in 2001 having dealt with RM52.4 billion, an expected recovery rate of 59%, and bonds totalling RM11.1 billion.¹²⁷ This fiscal backstop and NPL portfolio restructuring proved successful. By 2005, RM29 billion or 94% of RM30.8 billion of outstanding NPLs had been recovered, with NPL ratios dropping to 9.4%.¹²⁸

Danamodal was responsible for bank recapitalizations. Existing bank shareholders were decimated because all losses were absorbed prior to recapitalization. In contrast to Danaharta,

¹²¹ Author's calculations based on: Ibid, Ch 4, 3, and 9. Loan loss reserves amounted to 92% of NPLs, loan loss provisioning was RM1, 365 and 3, 964 million.

¹²² World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

¹²³ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-1997', Ch 4, 4-5.

¹²⁴ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-1998', Ch 1, 4: after the depreciation of Ringgit by 40% the government introduced exchange control measures to stabilise short-term capital flows.

¹²⁵ Ibid, Ch 4, 11. These were independent bodies.

¹²⁶ Ibid, Ch 4, 12.

¹²⁷ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2000', Ch 4, 14: Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2002', Ch 4, 116.

¹²⁸ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2004', Ch 4, 108; World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

the central bank enforced Danamodal's powers whereby capital was only injected into viable banks on commercial terms,¹²⁹ amounting to RM7.6 billion for 10 institutions.¹³⁰ Danamodal recovered RM6.6 billion by 2003 before being wound down.¹³¹

The CDRC facilitated the voluntary restructuring of corporate debt. Recovery proceeds consisted of cash, redeemable instruments, and rescheduled debts.¹³² The CDRC was closed on 15 August 2002 which ended Malaysia's debt restructuring program.

E. China

1. Asset Management Companies: 1998-2008

China was insulated from the Asian financial crisis because its financial markets were closed, currency convertibility was controlled, and the economy was posting strong GDP growth. The banking system and its supervision were in transition during the crisis. Dominating the banking sector were four state-owned banks which accounted for nearly two-thirds of total assets.

Despite strong GDP growth, the banking system was characterized by structural weaknesses, nascent prudential supervision, and lax underwriting standards. In 1997 the NPL ratio was 20%.¹³³ Reforms to address NPLs included (i) the recapitalization of state-owned banks, (ii) adopting international NPL classification standards, (iii) enforcing commercially viable loans, and (iv) banning local governments from influencing lending decisions.¹³⁴ The last two reforms centre on strengthening credit standards and quashing connected lending. Bank recapitalizations were funded by RMB270 billion in government bonds.¹³⁵

In 1999, four state-owned AMC's were established to transfer NPLs from corresponding state-owned banks.¹³⁶ Transfers of NPLs in 1999-2000 amounted to RMB1.4 trillion, about 20% of

¹²⁹ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-1998', Ch 4, 12.

¹³⁰ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2001', Ch 4, 12 and 134.

¹³¹ Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2003', Ch 4, 107. Danamodal expected to recover the outstanding RM 1 billion from one institution.

¹³² Bank Negara Malaysia, 'Bank Negara Malaysia Annual Report-2002', Ch 4, 115.

¹³³ BIS, 'Strengthening the Banking System In China: Issues And Experiences', (March 1999): YK Mo, 'A review of recent banking reforms', 91.

¹³⁴ *Ibid.*, 93.

¹³⁵ *Ibid.*, 93-96.

¹³⁶ See: Barry Hsu, Douglas Arner, and Qun Wan, 'Policy Functions as Law: Legislative Forbearance in China's Asset Management Companies', (2007) 23 *UCLA Pacific Basin Law Journal* 129, 129-171.

the banks' combined loan book, or 18% of GDP. One estimation maintains that this was less than half of total NPLs.¹³⁷

NPLs were purchased by state-owned AMCs issuing bonds, with credit supplied by the central bank. Disposals were slow and the recovery rate was 21%.¹³⁸ The government decided to list two state-owned banks in Hong Kong and the central bank transferred RMB320 billion in NPLs to their AMCs at approximately 35% of book value.¹³⁹ To offset the banks' NPLs, \$45 billion was injected to boost capital adequacy ratios and new lending.¹⁴⁰ Although NPLs eventually fell to 2.4% in 2008, this reduction was attributed to very strong GDP growth, rather than AMC transfers.¹⁴¹

2. *Managing Non-Performing Loans Post-2008: An Increasing Concern*

As growth rates decelerated and levels of indebtedness rose, NPLs have substantially increased, reaching \$1.5 trillion in June 2019.¹⁴² Yet between 2016 and 2018, banks disposed of RMB4.4 trillion of NPLs.¹⁴³ As of mid-2018, the OECD estimated that SOEs accounted for 82% of all corporate debt.¹⁴⁴

Regulatory reforms were implemented to accelerate NPL recognition. In 2018 the China Banking and Insurance Regulatory Commission (CBIRC) introduced 90-day NPL recognition rules. The CBIRC issued "window guidance" to request the six-largest banks to recognize NPLs which are 60 days overdue. Reports suggest that some banks began using more stringent

¹³⁷ Guonan Ma and Ben SC Fung, 'China's asset management corporations', (August 2002) *BIS Working Papers No 115*, 2.

¹³⁸ *Ibid*, 4 and 11-12.

¹³⁹ Guonan Ma, 'Who pays China's bank restructuring bill?', (2006) *Centre D'Etudes Prospectives Et D'Informations Internationales*, 112.

¹⁴⁰ The Economist, 'Botox shot: Injections of capital may soon wear off', (8 January 2004) *Recapitalising China's Banks, Hong Kong*: available at <http://www.economist.com/node/2338716>.

¹⁴¹ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

¹⁴² PwC, 'The China NPL market in 2020', (2020), 3.

¹⁴³ Dinny McMahon, 'Slow, Steady, Cheap, and Painless – Making Sense of China's Bad Loan Strategy,' (8 April 2019) *Marco Polo*: available at http://marcopolo.org/cleanup_analysis/slow-steady-cheap-and-painless-making-sense-of-chinas-bad-loan-strategy/.

¹⁴⁴ Margit Molnar and Jiangyuan Lu, 'State-owned Firms Behind China's Corporate Debt', (7 February 2019) *OECD ECO/WKP (2019)5*, 8.

NPL-recognition practices, for example 30 days due.¹⁴⁵ Nonetheless, NPL disposals have been prolonged because of understated NPL levels.¹⁴⁶

The CBIRC relaxed NPL recognition rules in February 2020 when the economic ramifications from the Covid-19 pandemic became apparent.¹⁴⁷ This is contrary to the IMF policy to preserve financial stability, maintain banking system soundness, and sustain economic activity during the Covid-19 pandemic: “Loan classification and provisioning rules should not be eased, and it is critical to measure NPLs and potential losses as accurately as possible.”¹⁴⁸ The CBIRC has stated, however, that “Saving corporates now is saving banks themselves.”¹⁴⁹

China’s NPL ecosystem is quite different to 20 years ago. There is a developed NPL market and the big four banks are not the primary source of NPLs and systemic risk. Small- and medium-sized banks (i.e., local and rural) are the biggest potential source of systemic risk because collectively they form a large segment of the banking system and have high levels of poor quality NPLs.¹⁵⁰ The big four banks have established asset investment corporations (AICs) to manage the NPLs which reduces supply and supports prices. Consequently, AMCs are managing lower quality NPLs.¹⁵¹

Provincial and local governments have become involved in bank restructures, established AMCs (more than 50) and financial asset exchanges, and have introduced credit risk regulations.¹⁵² This is beneficial because local governments can order local SOEs to sell NPLs.¹⁵³

¹⁴⁵ Wu Xiaomeng and Liu Xiao, ‘Regulators Pressure Banks to Speed Up Bad-Debt Recognition’, (12 June 2019) *Caixin*; Georgina Lee, ‘China’s biggest banks well prepped on non-performing loans, ready for stricter reporting standard’, (15 May 2019) *SCMP*; and Cheng Leng and Shu Zhang, ‘China bank first-quarter bad loans hit 16-year-high as regulator tightens oversight’, (10 May 2019) *Reuters*.

¹⁴⁶ Dinny McMahon, ‘Slow, Steady, Cheap, and Painless – Making Sense of China’s Bad Loan Strategy’, (8 April 2019) *Marco Polo*: available at https://marcopolo.org/cleanup_analysis/slow-steady-cheap-and-painless-making-sense-of-chinas-bad-loan-strategy/#_edn1.

¹⁴⁷ Bloomberg, ‘China Makes Bad Loans Disappear as Virus Pummels Banks’, (27 February 2020) *Bloomberg News*.

¹⁴⁸ IMF, ‘Policy Steps to Address the Corona Virus’, (2020), 3.

¹⁴⁹ Bloomberg, ‘China Makes Bad Loans Disappear as Virus Pummels Banks’, (27 February 2020) *Bloomberg News*.

¹⁵⁰ Wu Xiaomeng and Liu Xiao, ‘Regulators Pressure Banks to Speed Up Bad-Debt Recognition’, (12 June 2019) *Caixin*.

¹⁵¹ Dinny McMahon, ‘China’s Major Banks Turn Inward to Deal with Bad Loans’, (21 May 2019) *Marco Polo*: available at <https://marcopolo.org/china-bad-loans-amc-write-offs/>.

¹⁵² Hu Yue and Denise Jia, ‘China’s Regulator Drafts Rules for Local AMCs’, (16 February 2019) *Caixin*.

¹⁵³ Liu Ran and Wu Hongyuran (rewritten by Han Wei), ‘Carving up the Non-performing Loan Elephant’, (2016) *CaixinOnline*: available at <http://www.english.caixin.com/2016-08-08/100975319.html>.

Until May 2019 bank bailouts were rare. This changed when the People's Bank of China (PBOC) and the CBIRC decided to nationalize the Bank of Baoshang, the Shandong Provincial Government's restructured Heng Feng Bank, and ICBC and Cinda Asset Management provided the Bank of Jinzhou with a large capital injection. In contrast to bailouts being funded by the Ministry of Finance or the PBOC, these bailouts were funded by China's sovereign wealth fund and public AMCs.¹⁵⁴ In September 2019, the PBOC stated that shareholders will be primarily responsible for future bank failures.¹⁵⁵

F. Lessons from the East Asian Experiences

During banking crises balance sheets are placed under extreme stress that require restructuring through capital injections, renegotiating credit terms, and transferring distressed assets off-balance sheet. Effective bank resolution regimes require legal and regulatory frameworks, and supervision to address: (i) risk management, (ii) capital and liquidity buffers, (iii) large exposure restrictions, (iv) transparent credit standards, (v) bank restructuring frameworks, and (vi) distressed debt transfer mechanisms.

Capital adequacy ratios of up to 10% that satisfied the BCBS Basel recommendations proved insufficient to absorb high levels of NPLs during the Asian financial crisis. When banks required balance sheet and business model restructuring to remain solvent, NPL and resolution regimes were either underdeveloped or non-existent. Indonesia, Thailand, and South Korea were forced to accept IMF support to bailout and recapitalize their banking systems.

The IMF bank resolution policies focused on closing and liquidating insolvent institutions and government guarantees. Capital restructuring was a last resort. Indonesia epitomizes the policy of closing rather than restructuring banks, with numbers halving within a few years. Bank closures reduced Indonesia's NPL ratio, yet this is attributable to closing a few banks with particularly high NPL ratios. A concentration of bank closures in Thailand did not correlate with a drop in NPL ratios in the short term. Indonesia and Thailand had the highest level of closures and experienced the deepest and longest disruptions to their banking systems and the most extensive use of public funds.

¹⁵⁴ Dinny McMahon, 'Is There a Method Behind Beijing's Bank Rescue Madness?', (18 November 2019) *Marco Polo*: available at <https://marcopolo.org/beijing-bank-rescue-method/>.

¹⁵⁵ Tom Mitchell and Yuan Yang, 'China central bank head warns on strength of regional lenders', (24 September 2019) *Financial Times*, Beijing.

Resolving systemic banking system crises by focusing on closures weakens confidence. Paradoxically, this was a condition of the IMF support program. To contrast, Malaysia did not request an IMF bailout nor supported bank closures, instead it relied on a NPL transfer mechanism. This resulted in a more effective banking sector restructuring program that maintained confidence throughout the crisis.

Indonesia's reluctance to implement reforms and promulgate legislation intensified its banking crisis and hindered NPL resolution efforts. In contrast, South Korea's existing framework was expeditiously modified which proved effective at mitigating rising NPLs. All jurisdictions experienced a significant reduction in NPLs and banking system stabilization following bank consolidations and debt restructuring arrangements. The timing of the responses offers a valuable lesson. For example, Thailand was slow to respond and Indonesia was reluctant to implement reforms which maintained banking system fragility as NPLs continued to surge.

The East Asian experience shows that expeditious debt restructuring and legal frameworks rather than bank closures proved to be the most effective approach. All resolution programmes involved public funding, although there were variations in the approach to restructuring. Government guarantees were critical for stabilizing banking systems and a condition of the IMF bailout.

The use of AMCs was instrumental in cleansing balance sheets of NPLs, strengthening capital ratios, and re-starting lending to aid the economic recovery. AMCs were funded either by government capital injections or the sale of bonds. Legal and regulatory infrastructure was a prerequisite for the expeditious transfer and sale of NPLs.

There is no clear evidence whether state-owned or private AMCs are more effective. Debt overhang from Thailand's NPLs program is an ongoing problem. China's state-owned AMC performance cannot be duly assessed around the time of the state-owned bank privatizations because of distortions from the extensive bank recapitalizations. More recently China has been struggling to reduce the volume of NPLs, despite the instruction of AICs and provincial AMCs.

KAMCO is a good example of how a pre-existing AMC can promptly abate a potential banking crisis (from a surge in NPLs) and a fund to purchase NPLs can be profitable despite reliance on taxpayer funding. In our view, this is an important finding. Banks need to be equipped with the tools to manage NPLs promptly to avoid distressed assets festering, balance sheets destabilizing and impairing confidence, which is apparent in some Eurozone countries.

V. BANK RESCUE CASE STUDIES FROM THE GLOBAL FINANCIAL CRISIS

This section focuses on the approaches adopted during the GFC in Switzerland, the UK, and US to restructure UBS, the Royal Bank of Scotland (RBS), and Citigroup. Switzerland and the UK employed Asset Protection Schemes (APS) utilising state guarantees rather than asset sales. The US opted for a guarantee and the Troubled Asset Relief Program (TARP) to purchase distressed assets.¹⁵⁶

A. UBS

On 1 October 2007, UBS announced a write down of CHF4 billion from investments in asset-backed securities and collateralized debt obligations.¹⁵⁷ Performance of these instruments was linked to NPLs—US subprime mortgages.¹⁵⁸

UBS received a government capital injection of CHF6 billion, consisting of mandatory convertible notes (i.e., converting into equity) and the sale of NPLs and NPL linked instruments, from the central bank, the Swiss National Bank (SNB).¹⁵⁹ These distressed assets were then transferred to a special purpose vehicle (SPV), the StabFund.¹⁶⁰ The StabFund was designed to absorb UBS distressed assets and produce a return on its investments. Distressed asset purchases were financed by SNB loans and UBS equity contributions—a maximum of 10% of asset purchased up to \$6 billion. Equity contributions were designed to absorb the first 10% of losses.¹⁶¹

Distressed assets totalling \$38.7 billion were sold to the StabFund between December 2008 and April 2009. Asset sales amounted to \$15.8 billion which were used to repay SNB loans.¹⁶²

¹⁵⁶ On TARP, see: Board of Governors of the Federal Reserve System, ‘Troubled Asset Relief Program (TARP) Information’: available at <http://www.federalreserve.gov/bankinginfo/tarpinfo.htm>.

¹⁵⁷ Securities and Exchange Commission, ‘UBS AG Form 6-K’, (1 October 2007) *Report on Foreign Issuer, Washington*, 2; and Swiss Federal Banking Commission, ‘Subprime Crisis: SFBC Investigation into the Causes of the Write-downs of UBS AG’, (September 2008), 4. The subsidiary was Dillon Read Capital Management.

¹⁵⁸ For a description of securitisation, see: Phillip R. Wood, *Project Finance, Securitisations, Subordinated Debt, Volume 5* (London: Sweet and Maxwell Limited, 2007), pp. 111-174.

¹⁵⁹ SNB, ‘SNB StabFund repays Swiss National Bank loan’, (16 August 2013) *Press Release*, 1.

¹⁶⁰ StabFund or stabilisation fund.

¹⁶¹ SNB, ‘SNB purchases StabFund from SNB’, (8 November 2013) *Press Release*, 1;

‘SNB StabFund repays Swiss National Bank loan’, (16 August 2013) *Press Release*, 1; and

‘SNB’s special purpose vehicle for UBS assets to be domiciled in Switzerland’, (26 November 2008) *Press Release*, 1 and 2. The StabFund was a limited partnership consisting of two partners solely owned by the SNB: an unlimited liability partner managing the SPV, and a limited liability partner.

¹⁶² SNB, ‘SNB purchases StabFund from SNB’, (8 November 2013) *Press Release*, 2.

A profit of CHF1.2 billion was realized by the Swiss government selling its CHF6 billion UBS equity stake. The final SNB loan repayment was made by UBS in August 2013 and it purchased the StabFund in September 2013.

B. Royal Bank of Scotland

RBS grew dubiously through a series of aggressive acquisitions, notably the 2007 partial purchase of ABN AMRO.¹⁶³ Following the failure of Lehman Brothers, the capital and liquidity of RBS became severely strained and NPLs rose dramatically, reaching 9% by 2013.¹⁶⁴

On 8 October 2008, the UK government announced that RBS would be recapitalized. The European Commission approved the Bank of England's (BoE) plan which included a guarantee under EU State Aid Rules.¹⁶⁵ An initial sale of RBS shares (£15 billion), underwritten by the government, attracted virtually no subscribers. This forced the government to purchase most of RBS' shares—effectively a capital injection and nationalization. BoE emergency loans provided an additional £20 billion recapitalization,¹⁶⁶ with the government holding 90.6 billion RBS shares or 84% of its capital.¹⁶⁷

On 3 November 2008 the government established United Kingdom Financial Investments Ltd to manage RBS' recapitalization and the government's investment. A condition of the RBS capital injection was participation in the Asset Protection Scheme (APS), which was established to protect banks against losses on distressed assets.¹⁶⁸ RBS sought protection for

¹⁶³ See: House of Commons Treasury Committee, 'The FSA's report into the failure of RBS,' (October 2012) *Fifth Report of Session 2012-13*.

¹⁶⁴ European Commission, 'United Kingdom Restructuring of the Royal Bank of Scotland following its recapitalisation by the State and its participation in the Asset Restructuring Scheme', (14 December 2009) *State aid No N 422/2009 and N 621/2009*, 6; and Moody's Investor Services, 'The Royal Bank of Scotland Group plc – Substantial Restructuring Progress Underpins Our Positive Outlook', (January 2016), 7: available at <http://www.investors.rbs.com/~media/Files/R/RBS-IR/credit-ratings/moody/2016%2001%2011%20Moody's%20on%20RBS%20-%20Substantial%20Restructuring%20Progress%20Underpins%20Our%20Positive%20Outlook.pdf>.

¹⁶⁵ European Commission, 'State aid: Commission approves impaired asset relief measure and restructuring plan of Royal Bank of Scotland', (14 December 2009) *Press Release*: available at http://www.europa.eu/rapid/press-release_IP-09-1915_en.html; and European Commission, 'United Kingdom Restructuring of the Royal Bank of Scotland following its recapitalisation by the State and its participation in the Asset Restructuring Scheme', (14 December 2009) *State aid No N 422/2009 and N 621/2009*, 7.

¹⁶⁶ European Commission, 'United Kingdom Restructuring of the Royal Bank of Scotland following its recapitalisation by the State and its participation in the Asset Restructuring Scheme', (14 December 2009) *State aid No N 422/2009 and N 621/2009*, 7.

¹⁶⁷ UKFI, 'UK Financial Investments Limited (UKFI) Update on UKFI Market Investments March 2010', 4.

¹⁶⁸ APA, 'Annual Report and Accounts 2009-10', (July 2010) *HC 259*, 20.

£282 billion in assets (e.g., NPLs). The government provided a guarantee against 90% of losses above the first £60 billion.¹⁶⁹

APS operated analogous to a state-owned AMC managing bank NPLs, except that asset ownership was retained by the bank. This arrangement was quicker to implement and did not require capital injections to purchase distressed assets. There were however disadvantages—retaining distressed assets on-balance sheet and the bank not receiving any NPL sale proceeds. Government capital injections were required to maintain bank solvency until NPL returns were realized.¹⁷⁰ RBS exited the APS on 18 October 2012 after removing over £1 trillion in assets from its balance sheet.¹⁷¹ The APS ceased operations with a £5 billion profit.¹⁷²

On 3 November 2009, the government announced that RBS would be restructured including inter alia raising its CET1 ratio above 8% (compared to 4% in 2008) and disposing non-core assets.¹⁷³ RBS struggled and in July 2017 made an agreement with the European Commission in satisfaction of State Aid Rules to commit £835 million in new lending instead of closing branches.¹⁷⁴

In March 2020, the Office of Budget Responsibility estimated that taxpayers would incur a loss of £32 billion on the government's £45 billion bailout. At the time of writing, the UK Treasury still holds a 62% stake in RBS.

C. Citigroup

¹⁶⁹ IMF, 'United Kingdom: Crisis Management and Bank Resolution Technical Note', (July 2011) *IMF Country Report No. 11/228*, 20, fn 13.

¹⁷⁰ National Audit Office, 'HM Treasury, The Asset Protection Scheme', (21 December 2010) *Report by the Comptroller and Auditor General, HC 567, Session 2010-2011*, 5.

¹⁷¹ Rothschild, 'The UK investment in Royal Bank of Scotland', (10 June 2015) *Rothschild Report*, 3.

¹⁷² APA, 'Annual Report and Accounts for the period from 1 April 2012 to 31 October 2012', (12 June 2012) *HC 120*, 6.

¹⁷³ European Commission, 'United Kingdom Restructuring of the Royal Bank of Scotland following its recapitalisation by the State and its participation in the Asset Restructuring Scheme', (14 December 2009) *State aid No N 422/2009 and N 621/2009*, 12-13.

¹⁷⁴ European Commission, 'State aid: Statement on agreement in principle between Commissioner Vestager and UK Government on Royal Bank of Scotland commitment', (26 July 2017) *Press Release*.

The \$700 billion TARP was designed to stabilize the US financial system by purchasing distressed assets.¹⁷⁵ TARP consisted of subprograms including the Capital Purchase Program to inter alia strengthen bank capital.¹⁷⁶

Citigroup was a recipient, receiving \$25 billion and on 23 November 2008 agreed to a government bailout which included a \$301 billion government guarantee on a pool of distressed assets under the Asset Guarantee Program (AGP). Distressed assets were retained on Citigroup's balance sheet.

The terms of AGP rendered Citigroup liable for the first \$39.5 billion in losses. TARP and Citigroup would then absorb \$5 billion and \$0.6 billion respectively. Subsequent losses were absorbed at \$10 billion by the Federal Deposit Insurance Corporation and \$1.1 billion by Citigroup. Losses thereafter would be serviced by the Federal Reserve Bank of New York securing a loan over the remaining guaranteed assets at 90% collateral value.¹⁷⁷

To strengthen Citigroup's balance sheet a TARP capital injection of \$20 billion was exchanged for Citigroup preferred shares. This approach, the Targeted Investment Program (TIP), was adopted because standard TARP funding was insufficient to stabilize Citigroup.¹⁷⁸

Citigroup's share price continued to decline precipitously, undermining the TIP capital injection. In July 2009, \$25 billion in preferred equity obtained through TARP was exchanged for common stock. Citigroup had become partially nationalized.

In September 2009, Citigroup notified the US Treasury that it intended to repay TIP and terminate the AGP. Conditions included maintaining sufficient capital levels, the ability to access long-term debt markets without government assistance, and raising common equity by 50% of the Treasury's redeemable equity. On 23 December 2009 Citigroup increased its capital levels by issuing 5.4 billion common shares for \$17 billion and tangible equity units for \$3.5 billion. The Treasury unwound its position in Citigroup's TARP, AGP, and TIP programs on 10 December 2010, selling 7.7 billion common shares for a \$12 billion profit.¹⁷⁹

¹⁷⁵ Board of Governors of the Federal Reserve, 'Troubled Asset Relief Program (TARP) Information': available at <http://www.federalreserve.gov/bankinginfo/tarpinfo.htm>; and Emergency Economic Stabilization Act 2008, s 102.

¹⁷⁶ FDIC, '2008 Annual Report 2008', Part I, Supervision and Consumer Protection.

¹⁷⁷ *Ibid*, 19-21.

¹⁷⁸ *Ibid*, 18.

¹⁷⁹ *Ibid*, 9, 34, 38, and 40.

D. Analysis and Evaluation

In the early stages of the GFC bailouts of systemic banks was preferred to closure and liquidation, perhaps, because of the lack of legally viable bail-in tools. The approach taken in the UBS, RBS, and Citigroup rescues was the antithesis of the IMF approach during the Asian financial crisis. In the GFC, governments provided massive capital injections, effecting bank nationalizations, albeit structured, and importantly to avoid distressed assets being transferred onto government balance sheets.

G-SIBs became fragile from an overexposure to NPLs and/or NPL-linked financial instruments. This complicated bailouts and AMC's capacity to sequester distressed assets from banks. RBS and Citigroup were subject to government guarantees and retaining distressed assets on-balance sheet. UBS transferred distressed assets to an AMC—a similar process to that adopted in the Asian financial crisis. Both approaches strengthened bank balance sheets and stabilized banking systems, eventually enabling banks to resume lending. Nevertheless, both GFC programs exposed governments to bailout liability.

Rescue frameworks were sourced from existing legislation to aid prompt implementation. Participating banks signed contractual agreements with regulators to facilitate restructuring and uphold obligations. Hesitation in the UK forced the government to purchase equity in RBS after its share issue failed. This hesitation is analogous to that of Indonesia and Thailand which undermined confidence and the success of their bailout programs.

Switzerland injected capital and took an ownership position in UBS at the beginning of its program. This restructuring approach highlights the advantage of loss control when using an AMC as opposed to a state guarantee. Regulators can control the timing of the sale of NPLs until favourable market conditions prevail, effectively mitigating losses and government liability.

In contrast, RBS and Citigroup retained distressed assets on-balance sheet, necessitating larger capital injections to strengthen balance sheets and therefore increasing state ownership, heightening potential taxpayer risk. Bank liability from the disposal of distressed assets under the UK and US Asset Protection (guarantee) schemes (APS) compelled banks to absorb initial losses. Distressed asset sales under a guarantee scheme are usually implemented when market conditions will not mitigate losses. Thus, an APS guarantee approach can create inefficiencies

since the risk of government liability is elevated by depressed asset markets. This can necessitate further capital injections.

The GFC guarantee schemes were profitable and relatively short lived. Despite substantial taxpayer risk, the APS guarantee programs were effective and efficient in managing distressed assets, stabilizing G-SIBs, stemming creditor runs, and maintaining banking system stability.

Switzerland's central bank had a far greater exposure to potential losses than that from the UK and US guarantee schemes. Since the SNB was the AMC creditor and equity holder, if the AMC failed, the SNB would be exposed to unlimited liability. If UBS' losses were substantial, the exposure of SNB and ultimately the taxpayer would shield UBS from liability. While this approach risks compromising a central bank's credibility and credit standing, there is no realistic solvency risk because central bank losses in its issued currency can be inflated and absorbed in the long run. Conversely, Switzerland's approach is more effective in strengthening banks' capital base and more efficient since further capital raising is not necessary. For these reasons this approach is preferable to an APS guarantee scheme.

IV. THE EUROZONE DEBT CRISIS AND BANKING SECTOR RESTRUCTURING

A. The Post-2018 Regime for Bank Debt Restructuring

Before analyzing the impact of the Eurozone debt crisis on the banking systems of Spain, Ireland, Italy, and Greece, we examine the post-2018 EU bank debt restructuring regime. From our analysis one point stands out: stricken Eurozone countries were more proactive in tackling banks' distressed debt before the implementation of the BRRD, even though the EU state aid regime has remained largely unaltered.

Once the EU, and especially the European Monetary Union, moved towards a more centralized policy for tackling NPLs, state-backed AMCs were abandoned in favour of private-sector AMCs.¹⁸⁰ The European Council agreed in July 2017 on an NPL action plan outlining:¹⁸¹

¹⁸⁰ Section IV.A. draws on: Emiliós Avgouleas, 'The EU Framework Dealing with Non-Performing Exposures: Legal and Economic Analysis' in Danny Busch and Guido Ferrarini, *European Banking Union* (OUP, 2nd edn, 2020), Ch. 8.

¹⁸¹ European Council, 'Banking: Council sets out action plan for non-performing loans', (11 July 2017) *Press Release* 456/17.

- (i) more intensive supervision for banks with high levels of NPLs;
- (ii) the reform of domestic insolvency and debt recovery frameworks;
- (iii) the development of secondary markets for NPLs (i.e., distressed debt or assets); and
- (iv) the use of private-sector AMCs to provide a structural solution for distressed debt markets.

In March 2018 the EU Commission submitted a package of measures together with the Second Progress Report on the Reduction of Non-Performing Loans in Europe.¹⁸² The European Parliament and Council endorsed the 2018 NPL proposals by agreeing in June 2019 to pass the “banking package” into EU law with the promulgation of the Capital Requirements Regulation (CRR II)¹⁸³ and the Capital Requirements Directive. In April 2019, amendments to CRR II created a statutory prudential “backstop” which is designed to prevent under-provisioning for expected-loss NPLs.¹⁸⁴

The objective of these measures is to reduce NPL ratios and future excessive NPL accumulations. These measures can be taxonomized as follows:

- (i) augmenting market-based solutions for the massive disposal of NPLs through legal and regulatory reforms and EU-wide infrastructure that facilitates the disclosure and pooling of buyer interest and liquidity, including initiatives for pan-EU NPL platforms;¹⁸⁵

¹⁸² European Commission, ‘Second Progress Report on the Reduction of Non-Performing Loans in Europe’, (14 March 2018) *Brussels, 14.3.2018 COM(2018) 133 final*.

¹⁸³ Regulation (EU) 2019/876 of The European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012 (CRR II); and Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures (Capital Requirements Directive).

¹⁸⁴ Regulation (EU) 2019/630 of the European Parliament and of the Council of 17 April 2019 amending Regulation (EU) No 575/2013 as regards minimum loss coverage for non-performing exposures.

¹⁸⁵ European Commission, ‘European Platforms for Non-Performing Loans’ *Accompanying the document Third Progress Report on the reduction of non-performing loans and further risk reduction in the Banking Union*, (28 November 2018) *Brussels, 28.11.2018 SWD(2018) 472 final*.

- (ii) introducing measures to build a liquid market for distressed debt, at the domestic and EU level, including the recent initiatives by EU bodies for disclosure and transparency standardization;¹⁸⁶
- (iii) expanding the micro-prudential framework through supervisory requirements imposed by the SSM. Firstly, requiring Eurozone banks to build capability for the timely detection and effective management of NPLs. Secondly, establishing quantitative NPL reduction targets over short-, medium-, and long-term time horizons.¹⁸⁷ To achieve these targets, banks should improve NPL governance and use NPL reduction approaches as described in the ECB Guidance to Banks on Non-performing Loans (2017).¹⁸⁸ Banks should go beyond strategies (i), (ii), and (iii) outlined in this taxonomy, by introducing:¹⁸⁹
 - (a) a hold/forbearance strategy that, depending on borrower capability and expertise, can lead to workouts;
 - (b) active portfolio reductions, through sales and by writing-off provisioned NPL exposures that are deemed unrecoverable;
 - (c) a change of exposure type: including foreclosure, debt-to-equity swaps, debt-to-asset swaps, or collateral substitution; and
 - (d) legal options involving insolvency proceedings or out-of-court solutions;

and;
- (iv) strengthening prudential backstops to compel banks to provision for NPLs ex ante and thus have adequate capital reserves when writing-off NPLs.¹⁹⁰ This is

¹⁸⁶ For example: EBA, ‘Final Report: Guidelines on disclosure of non-performing and forborne exposures’, (17 December 2018) *EBA/GL/2018/10 17/12/2018*; and ‘NPL transaction templates’: available at <https://eba.europa.eu/risk-analysis-and-data/eba-work-on-npls>.

¹⁸⁷ ECB, ‘Guidance to Banks on Non-Performing Loans’, (March 2017), 12–13.

¹⁸⁸ *Ibid*, 12.

¹⁸⁹ *Ibid*, 8-17. For the full articulation of the NPL reduction, governance, and write off techniques into EU supervisory standards, see: EBA, ‘Final Report: Guidelines on management of non-performing and forborne exposures’, (31 October 2018) *EBA/GL/2018/06*.

¹⁹⁰ For the most recent EU pronouncement of this policy, see: European Council, ‘Non-performing Loans: Political Agreement Reached on Capital Requirements for Banks’ Bad Loans’, (18 December 2018) *Press Release 815/18*.

a proactive measure that targets future accumulation of NPLs by incentivizing banks to take ex ante action against NPL accumulation.¹⁹¹ Hopefully the backstop will provide a strong incentive for banks to strengthen under-writing standards and provide a disincentive against lax loan underwriting practices.

Nevertheless, with the economic impact of the Covid-19 pandemic on Eurozone economies forecast to be severe, the European Commission has sanctioned the temporary suspension of state aid restrictions.¹⁹² This may result in a direct recapitalization of private-sector firms by the state.¹⁹³ Relaxing EU state aid rules will inevitably be extended to the financial sector in the near future. Of course, the European Commission has published blueprints on how to develop private-sector AMCs¹⁹⁴ and on a liquid pan-European market for distressed bank debt exclusive of state support.¹⁹⁵ These market-based solutions are expected to be supported by the future introduction of legislation, in accordance with the EU 2019 “banking package”, on the liquidation of collateral.

In the reality of the Covid-19 pandemic, the utilization of state-backed AMCs will depend on the bargaining power of member states and the volume of new NPLs. EU members with fragile banking systems, such as Greece, Italy, and Cyprus, will likely introduce state-backed AMCs to manage the fresh supply of NPLs. This prediction is relevant given the survey below of AMC performance in the EU during the early stages of the GFC and the Eurozone debt crisis.

¹⁹¹ By building-up capital buffers ex ante, banks will reduce the provision of credit thereby reducing credit growth in the event of a credit bubble. However, these measures will affect credit growth in other times which will make prudential backstops a very blunt regulatory instrument.

¹⁹² On 19 March 2020, the EU Competition Commissioner, Margrethe Vestager, introduced the “Temporary Framework for State aid measures” to assist businesses accessing the liquidity and financial support to maintain viability during the Covid-19 economic downturn. The framework provides measures that do not qualify as state aid, such as financial support given directly to consumers and support measures under the rules for rescue and restructuring aid to meet acute liquidity needs and support undertakings facing financial difficulties. See: European Commission, ‘Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak’, (20 March 2020) *Communication from the Commission 2020/C 91 I/01*, 1–9.

¹⁹³ See: Javier Espinoza, ‘Brussels considers further relaxation of state aid rules’, (6 April 2020) *Financial Times*, Brussels.

¹⁹⁴ See: European Commission, ‘AMC Blueprint *Accompanying the document* Second Progress Report on the Reduction of Non-Performing Loans in Europe’, (14 March 2018) *SWD/2018/072 final*.

¹⁹⁵ European Commission, ‘Third Progress Report on the reduction of non-performing loans and further risk reduction in the Banking Union’, (28 November 2018) *COM(2018) 766 final*.

B. Spain

Spain experienced a property bubble prior to the Eurozone debt crisis. After the bubble burst in January 2009, Spain entered recession at which point NPLs exceeded 4%.¹⁹⁶

The government established the Fund for Orderly Bank Restructuring (FROB) to restructure banks. FROB was capitalized with €9 billion to takeover non-viable banks, subscribe convertible instruments to merge viable banks, and subscribe ordinary shares to recapitalize viable banks.¹⁹⁷ The banking system reform strategy was implemented in three phases: consolidation, solvency improvement, and cleaning up balance sheets.¹⁹⁸

Following a second recession in 2012, Spain sought a banking system bailout of €100 billion from the ESM. Financial assistance was implemented through FROB in accordance with EU State Aid Rules. Conditions included diagnosing bank capital requirements based on asset quality, transferring distressed assets to an AMC, recapitalizing and restructuring viable banks, and an orderly resolution of non-viable banks involving burden sharing with the private sector.¹⁹⁹ The bailout program consisted of early intervention, restructuring, and resolution.

Banking system stress tests identified additional capital requirements which resulted in partial bank nationalizations for €38.9 billion and €2.5 billion to establish the Asset Management Company for Assets Arising from Bank Restructuring (Sareb).²⁰⁰

Sareb's purpose is to receive, manage, and dispose of distressed assets from banks in receipt of government assistance.²⁰¹ FROB has the power to transfer distressed assets from banks to Sareb for independent management.²⁰² SIBs own 55% of Sareb while FROB (i.e., the government) owns 45%. In exchange for distressed assets, Sareb issues government guaranteed bonds that can be used as collateral for financing.²⁰³ Banking system NPLs at the time were

¹⁹⁶ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

¹⁹⁷ FROB, 'Fund for Orderly Bank Restructuring (FROB)', (April 2012), 7.

¹⁹⁸ Ibid, 8.

¹⁹⁹ European Commission, 'Post-programme surveillance for Spain': available at http://www.ec.europa.eu/economy_finance/assistance_eu_ms/spain/index_en.htm (visited on 31 January 2016).

²⁰⁰ Banco De Espana, 'Financial Stability Report 11/2012', (2012), 40.

²⁰¹ Sareb, 'Half Year Report. H1 2013', 1. Sareb is a public limited company with a 15 year lifespan to liquidate assets.

²⁰² See generally: Banco De Espana, 'Briefing note on Royal Decree-Law 24/2012 on restructuring and resolution of credit institutions', (25 September 2012).

²⁰³ IMF, 'Spain: Financial Sector Reform—Third Progress Report', (July 2013) *IMF Country Report No. 13/205*, 9.

about €330 billion.²⁰⁴ From January 2013, banks were required to hold a capital ratio of 9%.²⁰⁵ Spain exited the EU financial assistance program in January 2014. The NPL ratio rose to 9.4% in 2014 before dropping to 5.5% in 2016, and 4.8% in January 2020.²⁰⁶

Although Sareb has been successful in reducing banks NPL ratios to manageable levels, it has posted losses for every financial year since its inception in 2014. The recovery of Spain's real estate sector has been critical for Sareb's profitability because 100% of its assets are held in Spain and are collateralized in real estate. Exogenous market forces and competition have contributed to Sareb's losses.

Lessons drawn from Sareb suggest that the efficient use public resources by an AMC is contingent on: (i) the development of the market for NPL collateral, (ii) collateral concentration, (iii) NPL quality, (iv) market competition, and (v) foreign investor participation.

C. Ireland

Ireland is one of the best examples of a successful implementation of a state-backed AMC. The National Asset Management Agency (NAMA), established in December 2009, fully repaid €31.8 billion of total debt by March 2020 and is expected to post a €4 billion surplus.²⁰⁷ This was achieved despite NAMA having bought the bulk of its NPLs at a premium over market price, based on the principle of so-called Long-Term Economic Value (LTEV).

The chronicle of NAMA unfolded as follows. Ireland experienced a credit boom typified by connected lending and low credit standards that produced a highly levered banking system heavily exposed to the property market.²⁰⁸ Illiquid wholesale funding markets coincided with a downturn in the credit and property cycles, triggered a collapse in the banking system.²⁰⁹ To manage a spike in bank NPLs, NAMA was empowered to provide capital, credit, and

²⁰⁴ Banco De Espana, 'Financial Stability Report 5/2013', (2013), 22, Table 2.1.

²⁰⁵ Ibid, 13.

²⁰⁶ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

²⁰⁷ See: NAMA, 'Press Statement - NAMA redeems last remaining €1.064 billion of outstanding debt', (2 March 2020): available at <https://www.nama.ie/news/press-statement-nama-redeems-outstanding-1-064-million-in-subordinated-debt>.

²⁰⁸ Commission of Investigation into the Banking Sector in Ireland, 'Misjudging Risk: Causes of the Systemic Banking Crisis in Ireland', (March 2011) *Report of the Commission of Investigation into the Banking Sector in Ireland*, ii.

²⁰⁹ Patrick Honohan, 'The Irish Banking Crisis Regulatory and Financial Stability Policy 2003-2008', (31 May 2010) *A Report to the Minister of Finance by the Governor of the Central Bank*, 22.

restructurings or reorganizations.²¹⁰ The purpose of NAMA was to address serious economic threats, and the stability of banks and the finance sector by, inter alia, (i) producing an expeditious and efficient economic recovery, (ii) protecting state and taxpayer interests, (iii) restructuring banks, and (iv) restoring banking system confidence.²¹¹

In December 2010 Ireland accepted an IMF/EU €85 billion bailout. Key objectives of the rescue program were to identify viable banks and implement strengthening measures (i.e., downsizing and reorganization), recapitalize banks, encourage bank deposit inflows and market-based funding, strengthen banking supervision, and introduce a bank resolution framework.²¹²

NAMA acquired bank NPLs secured on real estate amounting to €74.2 billion, involving 850 debtors and 11,000 loans collateralized on 16,000 properties.²¹³ NPLs were acquired at a 57% discount over face value and below book value, yet above market value due to the LTEV premium. NAMA paid €31.8 billion by issuing government guaranteed senior notes and €1.6 billion in subordinated debt securities.²¹⁴ Delays in restructuring distressed debt included legal obstacles, such as a one year foreclosure moratorium on defaults and a High Court decision to prohibit summary proceedings for mortgages originating before 2009.²¹⁵ In October 2017 all senior debt had been redeemed (three years ahead of schedule) and in March 2020, all subordinated debt was redeemed.²¹⁶

Ireland exited the IMF/EU bailout in December 2013. Nonetheless, Irish banks still held a substantial volume of NPLs on-balance sheet. The IMF attributed this to weak accounting standards,²¹⁷ notably IAS 39—a backward looking provisioning approach for loss accruals. Mortgage arrear resolution targets were introduced, forcing banks to sustain short-term

²¹⁰ ss12(2)(a) and (d), NAMA Act 2009.

²¹¹ ss2 (a) and (b), NAMA Act 2009.

²¹² IMF, 'IMF Approves €22.5 Billion Loan for Ireland', (16 December 2010); available at <http://www.imf.org/external/pubs/ft/survey/so/2010/car121610a.htm>.

²¹³ Department of Finance (Ireland), 'National Asset Management Agency': available at <http://www.finance.gov.ie/what-we-do/banking-financial-services/shareholding-management-unit/national-asset-management-agency>.

²¹⁴ NAMA, 'Section 227 Review', (July 2014), 12.

²¹⁵ IMF, 'Ireland: Ex Post Evaluation of Exceptional Access Under the 2010 Extended Arrangement', (January 2015) *IMF Country Report No. 15/20*, 52.

²¹⁶ NAMA, 'NAMA Bonds': available at <https://www.nama.ie/financial/nama-bonds/>.

²¹⁷ IMF, 'Ireland: Ex Post Evaluation of Exceptional Access Under the 2010 Extended Arrangement', (January 2015) *IMF Country Report No. 15/20*, 52.

forbearance which reduced arrears.²¹⁸ NPLs peaked in 2013 at 31.8%, more than two years after transfers to NAMA began.²¹⁹ In 2014, the NPL ratios for the three largest banks were 17%, 33%, and 45%.²²⁰

The reason for establishing an AMC, which is in accordance with the BRRD, is to cleanse bank balance sheets of distressed assets.²²¹ In contrast, NAMA focused on redeeming senior debt and the NAMA Act 2009 concentrates on efficiency rather than reducing NPL ratios.²²² Therefore, compliance with the BRRD is compromised. High NPL ratios impede banks' proper functioning which obliges NAMA to focus on purchasing NPLs to cleanse bank balance sheets.

From 2013 to 2017 the volume of NPLs on bank balance sheet nonetheless fell from €80 to €30 billion. This reduction is not solely attributable to NAMA. Two thirds of 2017 NPLs were derived for house purchases. Banks' mortgage books have experienced a "self-cure" because of improved economic conditions.²²³ Ireland's NPL ratio fell from 11.5% in 2017 to 5.7% in 2018.²²⁴

D. Italy

The Italian economy prior to 2008 experienced a prolonged period of low growth because of structural economic imbalances and an inert public sector. This low growth environment was accentuated by the Eurozone debt crisis and contributed to Italy's very high levels of sovereign indebtedness, which has hovered around 135% of GDP since 2014.

With the onset of the Eurozone debt crisis in early 2010, credit conditions tightened when wholesale funding markets became illiquid and credit risk intensified. By the end of 2011, the Italian banking system's CET1 averaged 9.3% and leverage was lower than comparable

²¹⁸ Sharon Doherty, 'Sharon Doherty: NPL workout and resolution in the euro area', (6 October 2016) *Bank for International Settlements*.

²¹⁹ Central Bank of Ireland, 'Non-Performing Loans: The Irish perspective on a European problem – Deputy Governor Ed Sibley', (22 September 2017) *Speech at the second annual conference of the ESRB, Frankfurt*: Available at <https://www.centralbank.ie/news/article/non-performing-loans-dg-ed-sibley21Sept2017>.

²²⁰ FitchRatings, '2015 Outlook: Irish Banks', (16 December 2014) *Outlook Report*, 1.

²²¹ Art 42 (5) (b) and (c), BRRD.

²²² ss10(2) and 11(d), NAMA Act 2009.

²²³ Shannon Donnery, Trevor Fitzpatrick, Darren Greaney, Fergal McCann, and Michael O'Keeffe, 'Resolving Non-Performing Loans in Ireland: 2010-2018', (April 2018) *Central Bank of Ireland Quarterly Bulletin* 02, 59 and 68.

²²⁴ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

European banks.²²⁵ Italy's NPL ratio was 11.7% with over half of gross NPLs being bad debts.²²⁶

The government introduced a number of reforms:

- (i) pre-bankruptcy creditor agreements to facilitate full or partial company sales;
- (ii) out-of-court dispute procedures;
- (iii) frivolous cases were discouraged; and
- (iv) summary proceedings were enforced.²²⁷

One-third of procedures lasted between three to five years.²²⁸ Italy's high NPL levels were a maintained because of prolonged credit recovery procedures.²²⁹

The government introduced amendments in August 2015 to increase creditor recovery rates by promoting out-of-court restructuring agreements and forced collateral sales were simplified and shortened.²³⁰ Tax treatments of loan loss provisions allowed for full and immediate tax deductibility of loan write-downs and write-offs. These reforms resulted in expeditious bankruptcy and enforcement procedures.²³¹

To circumvent inefficient procedures, large banks, hedge funds, and private equity firms have formed SPV partnerships targeting corporate loans. These partnerships restructure companies with for example, debt-to-equity swaps and capital injections.²³² Large banks set up AMCs to dispose of NPLs off-balance sheet. Progress was initially slow because Italy's NPL market was virtually non-existent prior to 2015.²³³

²²⁵ Bank of Italy, 'Annual Report for 2011', (2012), 143 and 144.

²²⁶ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>; and Bank of Italy, 'Annual Report for 2011', (2012), 155-6.

²²⁷ Bank of Italy, 'Annual Report for 2014', (2015), 110-111.

²²⁸ Bank of Italy, 'Financial Stability Report No. 1 / 2016', 34 and 35.

²²⁹ Bank of Italy, 'Annual Report for 2014', (2015), 118.

²³⁰ Bank of Italy, 'Financial Stability Report No. 2 / 2015', 38.

²³¹ Ibid.

²³² Nadège Jassaud and Kenneth Kang, 'A Strategy for Developing a Market for Nonperforming Loans in Italy', (February 2015) *IMF Working Paper, WP/15/24*, 18. For example, UniCredit, Intesa, KKR, and Alvarez & Marsal.

²³³ Ibid, 17

The banking system comprises of many small banks that are inexperienced in managing NPLs.²³⁴ In November 2015, four unviable small banks were recapitalized by the central bank's AMC and resolution fund, the National Resolution Fund, with €3.6 billion financing from the three largest banks.²³⁵ Existing shareholders and subordinated debt absorb losses.²³⁶ All four banks were restructured into bridge banks with bad debts transferred to an AMC.²³⁷ In May 2017, the EU approved the sale of three bridge banks to UBI Banca for nominal consideration—€1. The bridge banks are burdened with high NPLs, requiring €450 million of capital.²³⁸ A condition of the sale obliged the National Resolution Fund to inject €810 million of capital and grant risk guarantees.

One obstacle under the BRRD bail-in rules is when NPL restructuring results in substantial losses which require a recapitalization. Before a failing bank receives a capital injection, creditors (i.e., bondholders) must be bailed-in to the equivalent of 8% of liabilities. With retail investors constituting one-third of bondholders, any bail-in will affect a large proportion of the population and have potentially adverse consequences for the banking system and the economy.²³⁹

After failing to raise €5 billion in capital in December 2016, the government approved a bailout of Monte dei Paschi di Siena (Italy's third largest bank²⁴⁰), circumventing the EU BRRD. The recapitalization was designed not to trigger a bail-in. Retail investors were fully compensated with newly issued senior bonds.²⁴¹

In May 2017, two banks were liquidated as precautionary recapitalizations were not deemed viable by the ECB and the SRB. A decree issued by the Italian government in June 2017

²³⁴ Bank of Italy, 'Annual Report for 2014', (2015), 118.

²³⁵ On 16 November 2015, the EU Bank Recovery and Resolution Directive was transposed into national legislation.

²³⁶ European Commission, 'State aid: Commission approves resolution plans for four small Italian banks Banca Marche, Banca Eturia, Carife and Carichieti', (22 November 2015) *Press Release*, 1.

²³⁷ Nuova Banca delle Marche; Nuova Banca dell'Eturia e del Lazio; Nuova Cassa di Risparmio di Chieti; and Nuova Cassa di Risparmio di Ferrara.

²³⁸ Reuters, 'Fitch: Italy Bridge Banks Sale Highlights Post-Resolution costs,' (20 January 2017).

²³⁹ IMF, 'Italy – 2016 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Italy', (July 2016) *IMF Country Report No. 16/222*, 1, 24, 25, 27, 33,34, 79 and 82.

²⁴⁰ In 2017 the Bank of Italy identified Intesa Sanpaolo and Banca Monte dei Paschi di Siena as D-SIBs with UniCredit also being a G-SIB: Bank of Italy, 'Financial Stability Report No. 1 / 2017'.

²⁴¹ Dipartimento del Tesoro, 'Guarantee on Securitization of Bank Non Performing Loans (GACS) to be introduced shortly,' (2016): available at http://www.dt.tesoro.it/en/news/news_gacs.html; and Banca D'Italia, 'The "precautionary recapitalization" of Banca Monte dei Paschi di Siena,' (2016): available at <https://www.bancaditalia.it/media/approfondimenti/2016/ricapitalizzazione-mps/index.html?com.dotmarketing.htmlpage.language=1>.

provided the legal framework for the liquidations, including public support to guarantee an orderly exit from the banking system. Shareholders and junior bondholders shared losses and no bail-in mechanism was used.²⁴²

The EU approved a further €8.1 billion (€5.4 billion net public funding) recapitalization of Monte dei Paschi di Siena in July 2017 after the bank agreed to transfer NPLs to an AMC and cap executive pay. Concerns were raised by the ECB over Monte dei Paschi di Siena's ability to maintain capital buffers. The government underwrote a €3.9 billion capital injection and converted €4.2 billion of subordinated bonds to equity which has resulted in the state acquiring a 70% ownership stake.²⁴³

Private equity AMCs participated in the process. KKR Credit launched an AMC called Pillarstone Italy in October 2015. Pillarstone has two functions, NPL resolution and corporate restructuring.²⁴⁴ Pillarstone took on the debts of five companies including paper maker Burgo and Lediberg, theme park manager Alfa Park, telecommunications group Sirti, and the shipping company Premuda.²⁴⁵ The companies are being relaunched after Pillarstone injects capital and absorbs NPLs sourced from Italian banks.²⁴⁶

In February 2016, the Ministry of Economics and Finance issued a securitization guarantee (GACS) acting as an APS for senior notes issued by SPV purchasers of NPLs. Banks access the facility for a fee. Banks are incentivized to transfer NPLs off-balance sheet because the guarantee effects a true sale, reduces risk and uncertainty, and ameliorates price discovery. Initial NPL transfers were relatively low until 2017 when a number of enormous NPL sales were finalized by Italy's largest banks. Italy's NPL ratio dropped sharply from 16% in 2017 to 8% in 2019.²⁴⁷

²⁴² Veneto Banca and Banca Popolare di Vicenza – both banks lacked sufficient resources to cover future losses: Ignazio Visco, 'Address by the Governor of the Bank of Italy', (12 July 2017) *Italian Banking Association Annual Meeting*, 4-5. Some retail junior bondholders were compensated for losses.

²⁴³ Bank of Italy, 'Financial Stability Report No. 2 / 2017', 33; and Ignazio Visco, 'Address by the Governor of the Bank of Italy', (12 July 2017) *Italian Banking Association Annual Meeting*, 4.

²⁴⁴ The Economist, 'Bargain hunt,' (20 August 2016): available at <http://www.economist.com/news/finance-and-economics/21705341-structural-obstacles-make-italian-banks-bad-loans-hard-sell-bargain-hunt>.

²⁴⁵ Francesca Landini and Massimo Gaia, 'KKR unit takes on Italian shipping company debt from banks', (22 April 2016) *Reuters, Hot Stocks*.

²⁴⁶ Alberto Quarati, 'Milan Stock Exchange: deal with Pillarstone lifts Premuda shares', (23 April 2016) *The Medi Telegraph*: available at <http://www.themeditegraph.com/en/shipping/shipowners/2016/04/23/milan-stock-exchange-deal-with-pillarstone-lifts-premuda-shares-SBSLE6pawMaK9My3Jct0kM/index.html>.

²⁴⁷ World Bank, 'Bank nonperforming loans to gross loans', data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>; and

E. Greece

Doubts concerning the sustainability of Greek debt became apparent in the second half of 2009 as the economy entered recession and a sovereign debt crisis unfolded. Investors began to lose confidence in Greece's ability to service its bonds. In April 2010 the Greek government requested an IMF/EU bailout.

Conditions of the €110 billion package included reining in fiscal spending, structural reforms to rebalance the economy, and stabilizing the banking system by inter alia, establishing the Hellenic Financial Stability Fund (HFSF)—a private entity. Banks maintained liquidity and capital from the HFSF and ECB Emergency Liquidity Assistance (ELA). These arrangements assisted in bank reconstructions, providing loans for resolutions, and managing NPLs.²⁴⁸

Twelve banks were placed into liquidation or resolved in 2013.²⁴⁹ NPLs were retained on-balance sheet as a distressed debt legal framework did not become operational until November 2015. By 2016 the NPL ratio reached 47% where it has remained, the second highest in the Eurozone.²⁵⁰

A number of legal framework weaknesses identified by the HFSF has led to the introduction of out-of-court mechanisms to facilitate negotiations between debtors, creditors, and banks, and an out-of-court workout procedure. Judicial impediments persisted because most judges lacked debt restructuring experience and there were delays in court hearings due to the volume of cases and inefficient procedural rules. The 2016 NPL law and subsequent legal amendments addressed some of these flaws, although impediments persisted.²⁵¹

On 17 May 2016 following the recapitalizations of two of the largest banks, Alpha Bank and Eurobank, KKR Credit reached an agreement to assign and manage credit and equity exposures in an AMC managed by Pillarstone.²⁵² KKR utilized a similar AMC platform as in Italy. In

CEIC, 'Italy Non Performing Loans Ratio': available at <https://www.ceicdata.com/en/indicator/italy/non-performing-loans-ratio>.

²⁴⁸ Hellenic Financial Stability Fund, 'What we do': available at http://www.hfsf.gr/en/about_whatwedo.htm (visited on 26 October 2016).

²⁴⁹ Bank of Greece, 'The Chronicle Of The Greek Crisis: The Bank Of Greece 2008-2013', (2014), viii.

²⁵⁰ European Banking Authority, 'EBA Report On The Dynamics and Drivers of Non-performing Exposures in the EU Banking Sector', (22 July 2016), 12.

²⁵¹ Hellenic Financial Stability Fund, 'Progress update of HFSF's study on NPL market impediments', (June 2017), 4-10; and 'Updated Analysis of Non-Regulatory Constraints & Impediments for the development of the NPL market in Greece', (September 2016), 18 to 23.

²⁵² KKR, 'Alpha Bank, Eurobank and KKR Reach Agreement to Support Greek Companies', (17 May 2016) *Media Centre*: available at

contrast to Pillarstone Italy, the European Bank for Reconstruction and Development (EBRD) provided a capital injection up to €50 million and Pillarstone Greece offers corporate governance advice.²⁵³ Pillarstone Greece was the first entity to be licensed by the Bank of Greece to manage NPEs.

In late 2019 the Greek government launched an APS (guarantee scheme) analogous to the Italian GACS—banks pay a fee for a securitization guarantee of senior notes issued by SPVs that are recipients of their NPLs. The Hercules Asset Protection Scheme differs from GACS as the senior notes are not investment grade. Hercules is designed to remove €30 billion of NPLs from banks' balance sheets by 2021.²⁵⁴ Whether the bank NPL reduction targets will be achieved is doubtful considering that Greece is forecast to be one of the worse affected economies in the EU from the Covid-19 pandemic.²⁵⁵

F. Analysis and Evaluation

The EU/IMF bailout programmes prescribe consolidation, capital injections, and using AMCs to cleanse balance sheets of distressed assets. Consolidation involves mergers and downsizing rather than closures.

Ireland and Spain merged and nationalized (i.e., recapitalized) banks prior to establishing AMCs. Closure and liquidation is the last resort which is in contrast to the approach by the IMF during the Asian financial crisis. Capital injections have been critical in maintaining bank solvency and stability.

When the property markets in Spain and Ireland collapsed, NPL ratios rose significantly, mirroring those of Thailand and Indonesia. The surge in NPLs during the Eurozone and Asian crises highlights that satisfying international standards does not necessarily reflect banking system strength.

http://www.media.kkr.com/media/media_releasedetail.cfm?ReleaseID=971220&utm_source=Public%20Affairs&utm_medium=Twitter&utm_term=Pillarstone%20Agreement&utm_campaign=Press%20Release.

²⁵³ Axel Reiser, 'EBRD to invest in Pillarstone Greece', (11 May 2017) *EBRD News*: available at <https://www.ebrd.com/news/2017/ebd-to-invest-in-pillarstone-greece.html>.

²⁵⁴ European Commission, 'State aid: Commission approves market conform asset protection scheme for banks in Greece', (10 October 2019) *Press Release*: available at https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6058.

²⁵⁵ European Commission, 'State aid: Commission approves €2 billion Greek guarantee measure to support companies affected by the coronavirus outbreak', (3 April 2020) *Press Release*.

The 2006 NPL ratios in Spain and Ireland were less than 1%²⁵⁶ because of the 2005 adoption of incurred loss accounting standards and securitization, which allowed banks to reduce loss provisioning.²⁵⁷ Italy, which used the same standard, had an NPL ratio of 6.6% in 2006, higher than South Korea and Malaysia, but significantly lower than Indonesia and Thailand.²⁵⁸ This is alarming because NPLs were clearly understated. For this reason, incurred loss accounting should be avoided.

Ireland established an AMC prior to its EU/IMF bailout, similar to Malaysia in the 1990s, which has assisted in stabilizing the banking system. The favourable economic conditions that led to a “self-cure” of the majority of NPLs on Irish bank balance sheets will likely revert in the ensuing global Covid-19 recession. Spain established a public-private AMC, as an EU bail-out condition, which has significantly reduced NPL levels.

Following successive bank recapitalizations and the promulgation of NPL laws to facilitate AMC transfers, Greece and Italy have reached agreements with private-sector AMCs. Delays in establishing legal frameworks to facilitate efficient NPL transfers destabilized the Greek and Italian banking systems. Recurring delays in dealing with high NPL ratios on banks’ balance sheets intensified potential insolvencies and perpetuated a vicious cycle of recession, illiquidity, and debt overhang. The subsequent introduction of GACS in Italy has been instrumental in transferring large volumes of NPLs off-balance sheet and has significantly reduced banks’ NPL ratios.

In the Asian and Eurozone crises, legal frameworks were severely underdeveloped. Laws were required to establish AMCs and effect efficient NPL transfers off-balance sheet. Legislation per se is not sufficient, as viable AMCs require well-functioning distressed asset markets.²⁵⁹ Successful distressed asset markets are in turn, characterized by short legal processes.²⁶⁰

²⁵⁶ World Bank, ‘Bank nonperforming loans to gross loans’, data: available at <http://www.data.worldbank.org/indicator/FB.AST.NPER.ZS?page=2>.

²⁵⁷ OECD, ‘OECD Economic Surveys: Ireland’, (2011), 77: referring to IMF Financial Soundness Indicators.

²⁵⁸ Ibid.

²⁵⁹ Shekhar Aiyar, Wolfgang Bergthaler, Jose M. Garrido, Anna Ilyina, Andreas Jobst, Kenneth Kang, Dmitry Kovtun, Yan Liu, Demot Monaghan, and Marina Moretti, ‘A Strategy for Resolving Europe’s Problem Loans’, (September 2015) *IMF Staff Discussion Note, SDN/15/19*, 14.

²⁶⁰ Edward I. Altman, ‘The Role of Distressed Debt Markets, Hedge Funds and Recent Trends in Bankruptcy on the Outcomes of Chapter 11 Reorganizations’, (2013) *NYU Stern Business School*, 17.

Evidence suggests that domestic markets for distressed assets grow in tandem with the level of NPLs, viable AMCs,²⁶¹ and expeditious transfer and sale mechanisms.

For structural reasons the EU market for distressed debt is relatively illiquid because, for example, legal and cultural obstacles persist in Greece and Italy. Eliminating or diminishing the profit incentive for NPL purchases produces a disincentive for AMCs to participate in distressed asset markets, which constrains market development and liquidity.

Bond issues funded the purchases of NPLs from banks in Ireland, Spain, Italy, and Greece. The ownership structure and the *raison d'être* of the schemes in Ireland and Spain are quite different. Ireland's AMC is 100% government owned, exposing taxpayers to unlimited liability. This explains why its statutory purpose is to pay down debt. To contrast, Spain's AMC (Sareb) is partially privatized, with Spanish taxpayers exposed to the government's 45% equity share. The use of private-sector AMCs in Italy is proving to be profitable and effective, with strong market growth. Profitability of the Greek scheme is compromised by low bond ratings and the ensuing global Covid-19 recession.

Italy's GACS incentivizes banks to transfer NPLs because the guarantee increases prices. SPVs are incentivized to purchase Italian NPLs because securitized notes are guaranteed at investment grade, lowering their funding costs. Government guarantees therefore require calibration to balance the competing incentives of NPL transfers off-balance sheet and the NPL purchases by AMCs and SPVs.

VII. CONCLUSION

The IMF approach to banking crises has evolved from closing down banks to aligning with the FSB Key Attributes: strengthening bank balance sheets to support a return of financial stability. This resolution approach is designed around maintaining an orderly banking system and the continuity of vital economic functions while mitigating taxpayer exposure and threats to sovereign solvency. Evidence experiences of the past 25 years supports the use of public funds where the bank rescue programme involves a radical restructuring of balance sheets, particularly in the context of SIBs. When the threat of a systemic banking crisis or a surge of NPLs is identified, restructuring has been effective in maintaining banking system stability.

²⁶¹ Nadège Jassaud and Kenneth Kang, 'A Strategy for Developing a Market for Nonperforming Loans in Italy', (February 2015) *IMF Working Paper, WP/15/24*, 19 (Figure 14) referring to PwC.

Reluctance or hesitation to implement reforms can intensify banking crises and undermine long-term bank solvency.

Robust capital, leverage, and liquidity buffers reduce the risk of bank failures. However, regulators can misjudge banking system strength by relying on compliance with international standards. Banks that are fully compliant (ex ante) with international standards can experience a rapid deterioration of their capital position from exogenous and endogenous shocks, namely adverse macroeconomic developments or contagion from a financial crisis. When capital buffers are under stress and private funding is unavailable, the government should be allowed to make a capital injection for systemic or macroeconomic stability into a viable yet failing bank, thereby inciting market confidence. When a bank is under severe stress from systemic and macroeconomic factors, the argument against public support for fear of giving rise to moral hazard is untenable. In a limited number of cases, state injections of capital will result in the government taking an ownership position in a systemically important bank, which may be necessary to restore market confidence. Idiosyncratic lending however should be avoided.

Banks need the tools to manage balance sheets promptly and to avoid NPLs destabilizing capital adequacy and banking system confidence. Bail-in tools can provide additional capital to strengthen bank balance sheets by converting creditor claims to equity when there is no danger of contagion, especially when the key cause of bank failure is idiosyncratic—for example, fraud. In a financial crisis, an anti-bailout bias can cause the collapse of credit markets and the banking system, leading to widespread economic disruption. A consistent bailout approach, including cross-border cooperation, instils confidence and stability in a banking system.

It is advisable that regulators adopt a broad and uniform definition of NPLs/NPEs, for example the BCBS definition, to capture the widest range of distressed assets. Accounting treatments should avoid fair value and incurred loss accounting which underestimate banking system vulnerability. ECL and accounting treatments which harmonize with the NPE definition (BCBS) provide a more accurate financial position.

A public authority must be designated to coordinate the management of an NPL resolution programme. This can greatly reduce information asymmetries and conflicts of interest between

creditors attempting to optimize restructuring outcomes.²⁶² A public authority could also supervise private-sector AMCs and be tasked with the implementation of legal and infrastructural changes designed to boost secondary NPL market liquidity.

AMCs are effective at strengthening bank capital without the need for ongoing capital injections, and the timing of distressed asset sales can be controlled until more favourable market conditions prevail. Using private-sector AMCs (or perhaps AMCs with a measure of government investment), in contrast to government bailouts, is preferable since government ownership and taxpayer liability is absent (or the level is significantly lower). In contrast, public AMCs can expose the government to unlimited liability, burdening the taxpayer.

A key problem for AMCs is asset valuation. From an accounting perspective, bad debts are considered uncollectable. Thus, the chances of AMC profitability are low unless bad debts are bought at a steep discount that exceeds funding costs. This benefits the AMC at the expense of the bank. To contrast, a guarantee places liability on the government, primarily for the bank's benefit and can assist in sustaining AMC viability. A public AMC is unlikely to satisfy the objective of ensuring the most efficient use of public resources, although in the long run this may prove to be a more efficient solution than other bailout options.

Government guarantees can be critical for banking system stability. Large exposures to NPL-linked financial instruments can complicate the design of AMCs to sequester banks from distressed assets. In these circumstances, retaining distressed assets on-balance sheet supported by government guarantees is the preferred option. Government guarantees that retain distressed assets on-balance sheet can lack control over the timing of sales, exposing governments to substantive liability and extensive capital injections. Guarantees should only be used when banks can be returned to viability and NPL sales can be controlled.

Debt restructuring requires legislative frameworks and infrastructure. If NPL legislation or infrastructure is absent or deficient, a programme should be designed that is expeditious and ideally takes an ex ante approach. Delays in promulgating legal support or infrastructure destabilizes banking systems by maintaining and intensifying high NPL ratios on-balance sheet.

²⁶² Emiliios Avgouleas and Charles Goodhart, “Utilizing AMCs to tackle Eurozone’s legacy non-performing loans” (2017) 1 *European Economy - Banks Regulation and the Real Sector* 97-11.

Effective and expeditious NPL transfers depend on passing NPL legislation that builds suitable bankruptcy, arbitration, and civil procedures. These requirements should not depress NPL sales, values, or distressed asset markets. Legal infrastructure should enable all banks regardless of size to participate in the restructuring programme. AMCs require the capacity to manage a wide range of distressed assets to ensure that bank participation is maximized.

To incentivize NPL transfers, government guarantees can be placed on NPL sales to private AMCs and AMC bond issues. The efficiency of NPL transfers is heightened in a market-based system because government guarantees require calibration to balance the competing incentives of transferring NPLs off-balance sheet and minimizing AMC losses from NPL purchases. As guarantees expose taxpayers to liability and increase the cost of a programme, fees can be charged to offset costs.

An AMC must be capable of maximizing discretionary NPL sales. Ideally NPLs are sold when market conditions yield profit and an efficient transfer. Successful NPL sales require a developed distressed asset market. In turn successful distressed asset markets require expeditious legal processes. If the market is underdeveloped or obstructed, the government needs to design policies to create investment incentives or remove legal and regulatory obstacles. In general, legal and regulatory obstacles are those that penalize or act as a disincentive for NPL transfers, purchases, and the development of liquid secondary markets for distressed debt. The optimum market-based restructuring solution for NPLs utilizes private-sector AMCs, a tax regime that promotes distressed asset markets, and a legal system that ensures the efficient and effective transfer of NPLs.

Assuming these conditions are fulfilled, AMCs can be very effective in cleansing bank balance sheets of NPLs, strengthening capital ratios in the long term, and enhancing banks' capacity to restart lending. Where the majority of funding is sourced from the private sector (i.e., bond issues), this will act as a counter-cyclical relief mechanism that stabilizes a banking system overly burdened with NPLs, while mitigating taxpayer expenditure.

This is an important lesson for the policy planners around the world, in developed countries, emerging market economies and in international organizations and financial institutions. Experience from the past twenty-five years suggests that when approaching NPLs and bank restructurings, a shift towards balance sheet strengthening is of the utmost importance rather

than an excessive focus over mitigating moral hazard. Bailing out a banking system should not overestimate the latter where the causes of a crisis are systemic.

Today, the Covid-19 pandemic seems likely to trigger widespread financial turbulence and the IMF forecasts a new wave of NPLs to engulf the banks around the world and dramatically worsening the impact of the pandemic on the global economy. Therefore, focusing on balance sheet strengthening and adopting a pragmatic rather than dogmatic approach to bank crisis resolution will be of paramount importance for the support of robust economic recovery in the post-Covid 19 era for both developed and developing countries.