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The identification and measurement of non-performing assets: a cross-country comparison

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Executive summary

Non-performing assets (NPAs) are a recurring feature in financial crises. Poor asset quality translates into lower interest income and higher loan loss provisions, eventually leading to a deterioration in banks' profitability and regulatory capital. Over time, high NPAs can lead to bank failures, ultimately threatening financial stability. This, in turn, has negative consequences for the banking system's ability to provide financing to the real economy.

The timely identification of NPAs helps to ensure that the stock of problem assets are recognised on bank balance sheets. Applicable accounting standards on loan impairment and regulatory guidance on NPA entry and exit criteria – which are not harmonised across jurisdictions – set the broader context for the NPA identification process. Notwithstanding differences in both accounting and regulatory frameworks, determining whether and when an exposure is considered "non-performing" is not always clear-cut and requires banks and supervisors to exercise judgment, based on a combination of quantitative and qualitative factors that are common features of regulatory NPA identification regimes.

Effective NPA measurement practices increase the likelihood that NPAs are appropriately recognised in bank earnings and regulatory capital. The financial implications of NPAs boil down to determining *whether* and, if so, *how much* provisions are needed to write down the carrying value of an NPA to its estimated recoverable amount. Provisioning outcomes are heavily influenced by whether jurisdictions are bound by accounting standards, regulatory provisioning guidance or a combination of the two to recognise provisions through the profit and loss (P&L) statement. The various supervisory approaches used to deal with the treatment of accruing interest income on an NPA and loan write-off criteria, among others, also influence how NPAs impact earnings and regulatory capital.

Once a loan is placed on NPA status, the single biggest driver of the required level of provisions is the value assigned to collateral, which is a heavily assumption-dependent process. While international accounting standards do not prescribe valuation approaches, they require banks to value collateral based on the net present value (NPV) method; that is, to consider the time and costs required to acquire and sell collateral. The assumptions that underpin the NPV approach are particularly important in jurisdictions where the legal framework results in long delays for creditors to gain collateral access. Some jurisdictions impose regulatory prescribed haircuts on appraised collateral values supporting an NPA. These two valuation methods differ and can lead to vastly different provisioning outcomes.

This paper focuses on the role that prudential regulation and supervision can play in facilitating the prompt identification and measurement of NPAs, by taking stock of cross-country practices. The FSI stock-take covered prudential requirements and their interaction with locally applicable accounting standards. Select Asian, Latin American and Caribbean countries, as well as the United States and European countries were included in the study.

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The findings reveal considerable differences across jurisdictions in applicable accounting standards, which are exacerbated by divergent prudential frameworks that govern NPA identification and measurement. These differences make it difficult to make meaningful comparisons both within and across jurisdictions on key asset quality metrics, which are often a driver of a bank's overall financial condition and operating performance.

Recently published guidelines by the Basel Committee on Banking Supervision (BCBS) provide an opportunity for supervisory authorities to harmonise NPA identification frameworks. In April 2017, the BCBS published its guidance on prudential treatment of problem assets (PTA), which provides harmonised definitions for "non-performing" and "forborne" exposures, including entry and exit criteria (BCBS (2017)).

There is no comparable internationally harmonised framework that governs NPA measurement. In this context, the FSI stock-take reviews a variety of prudential approaches used in different countries. A number of these practices may provide useful insights for prudential authorities.

Against this background, a range of regulatory and supervisory policy options can be considered, if applicable, to improve existing practices for the identification and measurement of NPAs as outlined below:

- *NPA identification*: extend the application of regulatory NPA identification regimes to encompass all asset classes and exposures; introduce a regulatory definition of NPA and harmonise NPA entry and exit criteria in line with the BCBS PTA guidelines, as necessary; place greater emphasis on qualitative factors to classify large, wholesale exposures as "non-performing" and consider expanding upon the qualitative "unlikely to pay" criteria to facilitate supervisory risk assessments.
- *NPA measurement*: gain powers, if not yet available, to impose prudential backstops (as a downward adjustment in regulatory capital) to deal with situations where accounting provisions on NPAs are deemed inadequate from a supervisory perspective; provide supervisory guidance on the prudent valuation of collateral, if applicable; investigate whether banks *realistically* consider the time and cost required to access and liquidate physical collateral that may support an NPA; consider the introduction of time-bound provisioning requirements for repossessed collateral that is held beyond a certain period of time; explore regulatory or supervisory measures to address the accounting impact of accruing interest income on an NPA; collect supervisory information on "accrued interest earned, not collected" on NPAs; and introduce loan write-off criteria in line with applicable accounting requirements.

Section 1 – Introduction

1. **Following episodes of financial crises, many countries experienced high levels of NPAs,[2] generating policy responses to facilitate their resolution.** For instance, in the aftermath of the global financial crisis that started in 2007, NPA levels surged in several countries. In the European Union, NPLs more than doubled between 2009 and 2014 (Aiyar et al (2015)), with end-2016 NPL ratios reaching peaks of 45% in some of the worst affected countries, in line with the highs recorded in some Asian countries during the Asian financial crisis of the 1990s (Baudino and Yun (2017)).

2. **The recurring role of asset quality problems in triggering financial crises has shined a spotlight on crisis prevention measures, including the need to ensure the timely identification and measurement of NPAs.[3]** High NPAs impair bank earnings by reducing interest income, increasing both borrowing costs[4] and the amount of provisions required for incurred losses. Legal and administrative costs also increase given the additional resources needed to manage and resolve problem loans. These factors can overwhelm bank earnings and weaken regulatory capital, thereby negatively affecting banks' ability to lend to the real economy.[5]

3. **Accounting standard setters play an important role in the NPA identification and measurement process.** Applicable accounting standards prescribe the financial asset valuation principles, which form the basis to determine whether an exposure is "impaired", and to set the requisite provisions needed to absorb losses. For banks, the reported stock of impaired assets and associated provisioning requirements can heavily influence their published financial statements, which are used by market participants to assess an institution's credit risk profile, earnings performance and future prospects.

4. **NPA identification and measurement also have significant prudential implications.** Identification practices are crucial for supervisors to fully appreciate the quality of banks' assets. As for measurement, accounting provisions that are recognised through the P&L account can directly affect regulatory capital.

5. **Supervisory authorities typically supplement accounting standards with different forms of regulatory guidance.** One reason why supervisory guidance may be necessary is because accounting standards are principles-based and are applicable to all industries, not just banks. In practice, it means that banks – whose main area of focus remains the origination, identification and management of credit risk – might require more detailed guidance than what is provided under applicable accounting standards.

6. **Yet supervisory guidance on the NPA identification process varies considerably across jurisdictions.** Based on a survey conducted by the FSI and relevant publicly available information, while all sampled countries have some regulatory framework in place, only some have developed a formal NPA definition. Regardless of whether formal or informal methods are used, there is no uniform NPA definition, covering both entry and exit criteria across surveyed jurisdictions. Variations were also observed in regards to the role of collateral in the NPA identification process, the regulatory treatment of multiple loans

[2] The terms "non-performing assets", "non-performing loans" and "non-performing exposures" are used throughout this paper. However, the three terms are not the same. Of the three, non-performing loans is the narrowest concept, as it refers only to problem loans, but is the term most commonly used in the academic literature as well as among market participants. Non-performing exposures is typically the widest concept, and it includes loans, debt securities and certain off-balance sheet exposures, but may exclude certain asset classes, such as foreclosed collateral. In some jurisdictions that provide a definition of non-performing assets, they include various asset classes such as foreclosed collateral.

[3] NPA identification refers to the process used by banks and supervisors to classify an exposure as "non-performing", while NPA measurement represents the level of provisions required to write down the NPA exposure to its estimated recoverable amount.

[4] Depositors and institutional funds providers are likely to demand higher interest rates at a bank experiencing financial difficulties and exhibiting a higher credit risk profile.

[5] Given the links between high NPAs and the health of both individual banks and the financial system, the FSI has undertaken a number of projects covering NPAs and provisioning practices. See Baudino and Yun (2017) and Restoy and Zamil (2017).

granted to the same borrower or a group of connected borrowers and whether the regulatory-based NPA identification regimes apply to all or only a subset of asset classes. The recently published BCBS PTA guidelines, if adopted by prudential authorities, should facilitate greater harmonisation of NPA identification practices across jurisdictions.

7. **Prudential approaches to NPA measurement also differ.** Provisioning requirements under applicable accounting standards generally follow an NPV approach, which requires banks to consider, in the collateral valuation process, the time and costs required to acquire and sell collateral. In jurisdictions that impose regulatory provisioning requirements, collateral is not always considered in determining provisions; and in cases where collateral is recognised, supervisory prescribed collateral haircuts may be imposed. These varied approaches to – and the judgment involved in – collateral valuation, in conjunction with differences in the role and application of prudential backstops, the regulatory treatment of accrued interest on NPAs, and loan write-offs, can lead to different provisioning outcomes.

8. **The supervisory application of NPA identification and measurement requirements entails significant judgment**. While national authorities typically prescribe both quantitative and qualitative criteria, the extent to which supervisors rely on past-due or qualitative criteria can materially impact *when* an exposure is placed on NPA status. The timing matters because once an exposure is classified as non-performing, it may trigger significant provisioning requirements; and in some jurisdictions it can also impact income recognition.[6] In addition, the process of estimating provisions on NPAs is inherently assumption-dependent and is driven by the estimated value of collateral.

9. **An additional source of variability stems from the interactions between the prudential requirements for NPAs and the accounting treatment of impaired assets.** Accounting and prudential standards on NPA identification and measurement are not necessarily aligned given their different purposes, and supervisory authorities often require some adjustment of accounting data, for prudential purposes. These differences are amplified across jurisdictions because countries do not necessarily follow the same accounting standards. Even where the accounting standards are the same, the interplay between accounting and prudential requirements may follow different approaches, leading to different outcomes on both the reported stock of NPAs and the associated level of provisions.

10. **This paper takes stock of NPA identification and measurement practices across select jurisdictions and identifies a number of regulatory and supervisory policy considerations that may be useful to supervisory authorities.** The findings are based on the results of an FSI survey, along with relevant publications from the BCBS (2015, 2017) and various international organisations, central banks and supervisory authorities.[7] Section 2 outlines applicable accounting standards on NPA identification and measurement and summarises the recent BCBS guidance on the prudential treatment of problem assets. Section 3 discusses the key takeaways of the FSI survey on NPA identification and measurement practices across sampled jurisdictions. Section 4 sets out policy options that supervisors may consider to enhance their NPA identification and measurement process. Section 5 provides brief concluding remarks. The Annex provides detailed information on NPA identification and measurement in the sampled countries.

[6] Some jurisdictions require all or a subset of exposures designated as NPAs to stop accruing interest until the underlying asset is upgraded to a performing status.

[7] See, for instance, D'Hulster, et al (2014) for a similar exercise covering central and eastern European countries, and Aiyar et al (2015) for a discussion of the challenges posed by NPLs in Europe. Gaston and Song (2014) and Bholat et al (2016) provide an overview of the prudential and accounting issues. This paper is, however, unique in its coverage of a large number of countries and regions, covering both NPA identification and measurement.

Section 2 – Accounting and prudential frameworks for problem assets

Overview

11. **The identification and measurement of problem assets have traditionally been subject to both accounting principles and prudential oversight.** The published financial statements of banks are typically the domain of accounting standard setters; as such, accounting rules provide a framework to determine both the credit quality of an exposure and associated provisioning requirements to absorb incurred and expected losses. The accounting principles that are followed by most jurisdictions are based on International Financial Reporting Standards (IFRS). Separately, many prudential regulators also require banks to classify assets according to their credit quality and often intervene with different degrees of intrusiveness on banks' provisioning practices. At the international level, the BCBS has issued guidance on the identification of non-performing exposures, but there is no international regulatory standard on measurement issues, including provisioning practices (BCBS (2017)).

12. **On 1 January 2018, IFRS 9 became effective and replaced International Accounting Standards (IAS) 39.**[8] IAS 39 is often referred to as an "incurred loss" model because a loss event must have occurred as of the balance sheet reporting date in order to trigger loan loss provisions. IFRS 9 eliminates this requirement and requires entities to calculate provisions based on expected rather than incurred losses. From an international accounting perspective, these two standards[9] govern when an exposure should be classified as "impaired" and prescribe a framework to calculate credit loss provisions. IFRS 9 / IAS 39 is used in a large number of jurisdictions and is the benchmark accounting standard used in this report.

13. **Some countries, however, do not follow IFRS.** For instance, in the United States, entities follow US generally accepted accounting principles (US GAAP), which are not the same as applicable standards under IFRS. Until 2020, US entities will follow an incurred loss approach to identifying and measuring impairment based on Accounting Standards Codification (ASC) 450 and 310, which are conceptually similar to IAS 39. Starting in the first quarter of 2020, applicable entities will migrate to the current expected credit loss[10] (CECL) provisioning model, which is broadly comparable to IFRS 9, albeit with some key differences. Other countries may follow local GAAP, which may or may not be fully harmonised with IFRS. Key differences between IFRS and US GAAP on relevant aspects of NPA identification and measurement are documented in this section to illustrate the variations in accounting standards across jurisdictions.

14. **The BCBS has recently introduced a definition of "non-performing exposures" (NPE) which complements the accounting concept of "impaired".** The BCBS NPE definition is designed for supervisory purposes and is not intended to undermine accounting standards that drive the accuracy of loan impairments and associated provisions in published financial statements. In general, the BCBS NPE definition encompasses a broader range of exposures that might not be considered as "impaired" under applicable accounting standards.

15. **With respect to NPA identification, there are important differences within accounting standards and between accounting and prudential frameworks.** For example, within IFRS and existing US GAAP, the definitions of "impaired" are not identical, and these differences will be further accentuated

8 See International Accounting Standards Board (2014).

9 While IFRS 9 became effective in 2018, several jurisdictions which have adopted IFRS remain under IAS 39 as of the publication of this paper, with differing planned dates to migrate to IFRS 9.

10 In June 2016, the Financial Accounting Standards Board issued the CECL model, with a 2020 effective date (FASB (2016)). The main difference between CECL and IFRS 9 ECL is that the former requires banks to book *lifetime* expected credit losses for all loans at credit origination; in contrast, IFRS 9 requires lifetime ECL for Stage 2 and 3 loans only (ie loans where a significant increase in credit risk has occurred since initial recognition or loans that are non-performing), with a 12-month ECL requirement for Stage 1 loans (ie performing loans where no significant increase in credit risk has occurred since credit origination).

when CECL becomes effective in 2020. When comparing accounting with prudential frameworks, the term "non-performing" is a regulatory construct that is broader than the accounting concept of "impaired".

16. **Variations also exist among the two accounting frameworks in regards to NPA measurement.** Applicable provisioning methodologies under IFRS 9 and existing US GAAP are different as the former follows an expected loss approach, while the latter – for an interim period – continues with an incurred loss provisioning methodology. When US GAAP migrates to CECL in 2020, provisioning methodologies will still differ, despite both frameworks requiring provisions based on expected credit losses.

17. **The differences within IFRS and US GAAP provisioning frameworks are exacerbated by variations between accounting and prudential frameworks.** There is no internationally harmonised provisioning framework and practices vary across jurisdictions. Provisioning outcomes are influenced by whether authorities apply accounting or prudential rules, or a combination of the two. As a starting point, the principles- based nature of accounting standards and the judgement involved in their implementation, can lead to cross-country differences. In addition, where jurisdictions apply some sort of regulatory guidance, the construct of the regulatory provisioning guidance and how it interacts with the accounting requirements varies across countries. These varied approaches can lead to different outcomes than if provisions were calculated solely under relevant accounting frameworks.

Accounting frameworks related to NPA identification

Impairment definition

18. **While the definition of "impaired" has remained unchanged, IFRS 9 requires a more granular assessment of credit risk in comparison to IAS 39.** Under IFRS 9, applicable entities must now place financial instruments into three distinct stages, including "performing" (Stage 1), "underperforming" (Stage 2) and "non-performing" (Stage 3), rather than the "unimpaired" and "impaired" categories under IAS 39. Stage 3 is similar to the IAS 39 definition of impaired. The three-stage classification process is used not only to signify the credit quality of an exposure but also to determine the method used to calculate expected credit losses.

19. **In contrast, while US GAAP currently contains a definition of impairment, which is not identical to IFRS, even that will be removed upon the adoption of CECL because it will no longer be relevant for provisioning purposes.** Unlike the current US GAAP impairment framework, the CECL model does not require any threshold to be met (ie impairment) in order to trigger a change in methodology for estimating provisions; and all exposures, regardless of credit quality, will be subject to the same provisioning methodology. Therefore, the CECL framework no longer defines the term "impaired". Table 1 outlines the variations of the 'impaired' definition under IFRS 9, existing US GAAP and CECL.

Comparison of the definition of impaired

Table 1

IFRS 9 and IAS 39	US GAAP (until 2019) – incurred loss model	US GAAP (starting in Q1 2020) – CECL model
Evidence of credit impairment (any one or more of the following events suggest evidence of credit impairment)	**Definition of impaired**	**Definition of impaired**
Significant financial difficulty of the borrower A breach of contract such as default or past-due event The lender has granted the borrower a concession due to the borrower's financial difficulty It is probable that the borrower will enter bankruptcy The disappearance of an active market for that financial asset because of financial difficulties The purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses	A loan is impaired when, based on current information and events, it is probable that a creditor will be unable to collect all amounts due according to the contractual terms of the loan.	None[11]

Forborne exposures

20. **There are subtle differences between the treatment of forborne exposures under IFRS and existing US GAAP.** Under IFRS 9, a financial asset that has been renegotiated (ie forborne) cannot be automatically upgraded to a higher quality status without evidence of demonstrated payment performance under the new terms over a period of time.[12] As the standard does not define what constitutes payment performance "over a period of time", practices could vary across banks in the absence of relevant supervisory guidance. Meanwhile, existing US GAAP requirements make a general presumption that a loan whose terms are modified in a troubled debt restructuring will have already been identified as impaired.

21. **When CECL becomes effective, the issue of whether a restructured troubled debt is "impaired" is less relevant for accounting classification purposes, given the removal of the "impaired" definition under the standard.** As noted earlier, CECL no longer requires banks to identify "impaired" exposures since the standard applies an identical provisioning methodology regardless of whether an exposure is performing, restructured or impaired.

[11] As noted, the removal of the impaired definition under CECL is because the same measurement principle (ie that provisions should cover all cash flows not expected to be collected over the life of a loan) applies to all loans regardless of impairment status.

[12] In practice, this means that loans that are categorised as non-performing (Stage 3) or underperforming (Stage 2) cannot be immediately moved to Stage 1 (performing) upon loan modification.

Accounting frameworks related to NPA measurement

Measurement of expected credit losses

22. **Although IFRS 9 does not change the process used to estimate provisions for "impaired" exposures, it does introduce a fundamental shift to the credit loss provisioning process.** Under IAS 39, banks were required to estimate loan loss provisions only if there was objective evidence of credit impairment as of the balance sheet reporting date. IFRS 9 eliminates this requirement and requires entities to calculate provisions based on expected losses, covering all credit exposures. In this regard, as soon as a credit is originated (or purchased), banks are required to recognise provisions based on 12-month expected losses[13] (ie Stage 1 loans). Once a loan has experienced a "significant increase in credit risk" since initial credit recognition (although it may still be making timely payments) or is impaired, it should be moved to Stage 2 and Stage 3, respectively, with provisions being recognised based on lifetime expected losses.[14] Table 2 compares classification and provisioning requirements under IAS 39 and IFRS 9.

Comparing provisions for impaired exposures under IAS 39 and IFRS 9 — Table 2

IAS 39	**Unimpaired loans** **Impairments:** minimal		**Impaired loans** **Impairments:** lifetime incurred and expected loss
IFRS 9	**Stage 1** Performing loans **Impairment:** 12-month expected loss	**Stage 2** Underperforming loans **Impairment:** lifetime expected loss	**Stage 3** Non-performing loans **Impairments:** lifetime incurred and expected loss

Sources: Barclays; IASB.

23. **In the US context, existing US GAAP is similar in concept to IAS 39 in that a loan must be impaired in order to trigger provisions.** Due to differences between IAS 39 and US GAAP regarding the definition of "impaired", the threshold to trigger provisions may not always be the same, which, in turn, could result in differences in accounting provisions between the two frameworks. Another source of difference relates to timing differences of the adoption of expected loss accounting frameworks. IFRS reporting jurisdictions will need to calculate provisions based on expected credit losses starting in 2018, while US GAAP will – for an interim period – require estimated provisions based on impairment.

24. **Going forward, the US CECL model will no longer require a threshold event to occur, such as impairment, to recognise provisions.** Unlike IFRS 9, CECL requires lifetime expected losses to be calculated on all applicable credit exposures upon credit origination.

Collateral valuation

25. **Under IFRS 9 and US GAAP, collateral is considered in the measurement of expected credit losses, but there are differences in valuation approaches.** IFRS 9 requires entities to consider the time and costs required to foreclose and sell the collateral (NPV concept), discounted at the loan's original effective interest rate in order to determine expected credit losses. As IFRS is applied across a number of jurisdictions globally, with different legal frameworks, the NPV approach to collateral valuation becomes

[13] That is, the likelihood of default over the next 12 months multiplied by the loss-given-default.

[14] That is, the likelihood of default over the life of the loan multiplied by the loss-given-default.

particularly important in countries where creditors face long delays in gaining collateral access of defaulted borrowers due to congested legal frameworks. Such delays can materially affect the estimated value of collateral, which, in turn, affects provisioning requirements.

26. **Both existing US GAAP and the CECL standard specify that, for financial assets where debt repayment is expected to be paid from the sale of collateral, there is no explicit requirement to apply an NPV approach to collateral valuation.** As a practical expedient, an entity can use the fair value of collateral, less the costs to sell to determine the amount of credit loss provisions. In measuring fair value, the time and costs required to sell collateral could, however, be implicitly considered.

Accrual of interest income on impaired exposures

27. **The accounting treatment of interest income recognition on impaired exposures diverges between IFRS 9 and US GAAP.** Under current US GAAP and the forthcoming CECL model, the accrual of interest income on an impaired exposure is not specifically addressed. In the absence of explicit guidance in applicable accounting standards, US banks typically follow regulatory guidance which prohibits the accrual of interest income on certain problem exposures that are placed on non-accrual status.[15] Meanwhile, under IFRS 9 interest income is accrued on a gross basis for Stage 1 and 2 exposures and on a net basis (net of provisions) for Stage 3 (non-performing) exposures.

Loan write-offs

28. **Write-off criteria under IFRS 9 and US GAAP are not the same and can lead to divergent practices.** IFRS 9 requires write-offs if the entity has no reasonable prospects of recovering a financial asset in its entirety or a portion of it. Under the current US GAAP, the asset is required to be written off in the period in which it is deemed uncollectible.[16]

BCBS guidelines on the treatment of problem assets

29. **In April 2017, the BCBS published supervisory guidelines on the prudential treatment of problem assets (BCBS PTA guidelines).** The guidelines provide globally harmonised definitions for two critical terms that drive asset quality assessments within and across jurisdictions: "non-performing exposures" and "forbearance".[17]

30. **The definition of NPE includes harmonised criteria for classifying loans and debt securities based on both quantitative and qualitative considerations.** The BCBS definition of NPE includes all exposures that are defaulted under the Basel II framework; all exposures that are impaired under applicable accounting standards; and all other exposures that are not defaulted or impaired but are material exposures that are more than 90 days past due ***or*** where there is evidence that full repayment is unlikely.

31. **The BCBS PTA guidelines also cover various factors that can influence the classification of an exposure as "non-performing".** In particular, the guidelines specify that collateral should not be considered in the classification of an exposure as non-performing;[18] requires the uniform classification of exposures on a debtor basis, outside of retail exposures; and introduces specific rules to exit the NPE category.

15 These typically include exposures which are 90 days or more past due unless the asset is well secured and in the process of collection and other exposures where full payment of principal or interest is not expected.

16 The same approach will be followed under CECL.

17 See BCBS (2017), pp 12–14.

18 Nevertheless, the guidance does note that collateral can be considered (both positively and negatively) when assessing a borrower's economic incentives to repay under "unlikeliness to pay" criteria.

32. **Importantly, the guidelines outline the interactions between forbearance and non-performing exposures.** In this regard, the guidelines specify the prudential treatment when forbearance is granted to both non-performing and performing exposures; supervisory considerations when multiple forbearance measures are granted to the same debtor; and the criteria to reclassify a forborne, non-performing exposure to performing status.

33. **Collectively, the BCBS NPE definition is broader than the accounting concept of "impaired".** First, the BCBS NPE definition includes a qualitative "unlikely to pay" criteria with no corresponding equivalent in applicable accounting frameworks. Second, there are a number of elements specified in the BCBS NPE definition – such as the NPE designation be applied on a debtor basis,[19] the criteria to exit the NPA category and the minimum repayment period for forborne NPEs to return to performing status – that are not explicitly noted under relevant accounting standards.

Section 3 – NPA identification and measurement practices in selected jurisdictions

34. **During the first half of 2017, the FSI launched a global study – covering selected jurisdictions in Asia, the European Union (EU) countries that are part of the Single Supervisory Mechanism[20] (EU-SSM), the Latin America and the Caribbean (LAC) region and the United States – to ascertain relevant accounting rules, regulatory requirements and supervisory practices related to NPA identification and measurement.** In carrying out the study, 11 countries from Asia and 10 from the LAC region participated in a survey prepared by the FSI.[21] Information on select EU-SSM jurisdictions[22] and the US were obtained from publicly available documents, and from interviews with officials from the ECB and the Board of Governors of the US Federal Reserve System.

35. **Notwithstanding some similarities, the results reveal significant differences in NPA identification and measurement practices across surveyed jurisdictions.** These differences hamper market participants' ability to make meaningful comparisons on key asset quality metrics, including the reported level of NPAs and associated credit loss provisions, across surveyed jurisdictions.

NPA identification

36. **In regards to NPA identification, there are four main reasons for key differences across surveyed jurisdictions**. First, there is no uniform definition of an NPA across sampled countries, including both entry and exit criteria. Second, certain asset classes (such as foreclosed collateral) are exempt from the NPA designation in a number of jurisdictions, while other respondents do not exempt any exposures from the NPA category. Third, several respondents explicitly consider collateral in the NPA identification process, while others determine the credit quality of an exposure without consideration of collateral

19 The BCBS PTA guidelines allow retail exposures to be assessed on a transaction basis.

20 In 2014, 19 EU member countries joined the SSM: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. As the SSM countries are also EU members, area-wide regulation directly applicable to them is the same as that issued at the EU level. While a number of SSM countries have issued national guidance on various issues related to NPA identification and measurement, this paper generally covers guidance issued by the ECB that is uniformly applicable to all SSM jurisdictions (ECB (2017a,2018)).

21 The Asian countries in the sample are China, Hong Kong SAR, India, Indonesia, Iran, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand. The LAC countries in the sample are Argentina, Brazil, Chile, Colombia, Costa Rica, Jamaica, Mexico, Panama, Peru, and Trinidad and Tobago.

22 The information on the SSM countries is sourced from the ECB publications (ECB (2017a,b, 2018)).

support. Finally, while all jurisdictions have prescribed both quantitative (past due) and qualitative criteria, the extent to which supervisors rely on past-due criteria to place an exposure on NPA status varies across jurisdictions.

NPA definition: entry and exit criteria

37. **Outside the EU-SSM region, only some jurisdictions in the sample have issued a formal NPA definition for regulatory purposes.**[23] In the EU, a common definition of NPEs was introduced in 2014[24] by the European Banking Authority (EBA) and is based on a combination of "past due" (90 days) and the forward-looking "unlikely to pay" (UTP) criteria, even if the exposure is currently paying as agreed. Some other jurisdictions in Asia and the LAC region, which have prescribed an NPA definition, have broadly similar criteria, but with added specificities.[25]

38. **Most jurisdictions have developed less prescriptive means to identify NPAs across regulated banks.** In the absence of an explicit NPA definition, market norms and supervisory practices have evolved to leverage off existing regulatory asset classification frameworks or other country-specific methods as proxies for determining NPAs.

39. **In Asia and the LAC region, regulatory asset classification frameworks play a key role in the NPA identification process.** While the number of risk buckets used varies across sampled jurisdictions, one common feature is that the most severe classification categories are typically considered as NPA proxies.

40. **The US also applies a regulatory asset classification framework, but there is no explicit link between its framework and an NPA definition.** In the US, the general market practice has been to consider as NPA the sum of: all nonaccrual assets, all assets 90 days or more past due but still accruing interest and foreclosed collateral. A loan is required to be placed on nonaccrual when payment in full of principal or interest is not expected ***or*** the asset is 90 days or more past due *unless* the asset is both well secured and in the process of collection.[26]

41. **Regardless of whether jurisdictions use formal or informal methods, all jurisdictions have prescribed a combination of quantitative and qualitative criteria to identify NPA exposures.** The use of qualitative criteria, in particular, allows authorities to consider certain exposures as NPAs that might not necessarily be considered as "impaired" under applicable accounting frameworks.

42. **The exit criteria from the NPA category varies significantly across surveyed countries.** Some jurisdictions allow an exit from NPA status once principal and interest (P&I) payments are in arrears for less than three months and the remaining debt is expected to be repaid. Others require repayment of all past-due P&I only or repayment of past-due P&I and an expectation of repayment of remaining principal.

[23] In the EU context, the EBA NPE definition is only binding for supervisory reporting purposes. However, the ECB SSM guidance (2017a) strongly encourages banks to use the NPE definition for their internal risk control and public financial reporting in order to promote alignment.

[24] The EBA introduced this definition, which was adopted via the introduction of the Implementing Technical Standards (ITS) (EBA (2014)). This definition is applicable to all on-balance sheet loans and debt securities, as well as some off-balance sheet commitments. For the definition of default applicable in the EU-SSM, see EBA (2016).

[25] For instance, in one jurisdiction, in addition to the past-due and UTP criteria, assets are required to be classified as NPAs even without any missed contractual payment when they are considered impaired under accounting standards or classified as impaired Substandard, Doubtful and Loss (under its regulatory classification system). In another jurisdiction, all restructured debt arising from financial difficulties of the borrower are to be placed on NPA status.

[26] An asset is considered "well secured" if it is secured by securities or residential mortgages whose value is equal to or higher than the value of the loan and any unpaid accrued interest or the guarantee of a financially responsible party. An asset is "in the process of collection" if collection of the asset is proceeding in a timely manner through legal action or through collection efforts not involving legal action but which are expected to result in debt repayment or restoration to a performing loan in the near term.

Finally, several authorities require repayment of all past-due P&I plus continued debt repayment for a period of time (ranging from two quarters to one year).

43. **While most authorities have prescribed specific criteria to upgrade forborne (restructured) NPAs to the performing category, the minimum payment performance period varies across jurisdictions.** An immediate exit from the NPA category upon restructuring is allowed only in a small minority of countries. In most cases, a minimum number of interest payments must be made for a period of time (ranging between one – three payments and one year) under the revised terms before the loan can exit the NPA category.

The role of asset classification frameworks in NPA identification

44. **Regulatory asset classification frameworks are commonly used in Asia, the LAC region, the US and some EU-SSM jurisdictions.** The US and nearly all (10 of 11) surveyed jurisdictions in Asia require banks to use an asset classification system to classify credit exposures into various risk buckets (with the most common being: Normal, Special Mention (or Watch), Substandard, Doubtful and Loss), based on criteria developed by the prudential regulator. In the LAC countries, all jurisdictions in the sample require banks to use an asset classification system to classify credit exposures into various risk buckets, with the number of buckets varying quite substantially across countries, ranging from five to 16.

45. **In Asia there is convergence around the use of a five-bucket risk framework, with the three most severe asset classification categories (Substandard, Doubtful and Loss) considered as NPAs.** Therefore, the Substandard category (or its equivalent) is considered the entry point of the NPA designation, with the over 90 days past due threshold typically serving as the quantitative backstop. The qualitative criteria are more forward-looking ("well defined weaknesses that may jeopardise debt repayment") that allow supervisors to place exposures in the Substandard category, even if the loan is less than 90 days past due or is not be impaired under applicable accounting rules.

46. **The US applies a similar five-bucket risk framework, but, as noted above, there is no specific link between its regulatory classification system and an NPA designation.** US authorities typically refer to the Substandard, Doubtful and Loss categories as "adversely classified assets". Adversely classified assets encompass a broader range of exposures than NPAs and are used as a standard proxy to determine the aggregate level of credit risk at regulated entities.[27] The usual entry point of "adversely classified assets" is the Substandard category, which includes assets that contain "well defined weaknesses", which, if not corrected, may lead to loss. Similar to the Asian and LAC countries, an exposure can be placed in the Substandard category based on the "well defined weakness" criterion even if the loan is currently paying as agreed.

47. **In the LAC region, some countries use a five-bucket risk framework, while others employ a more granular breakdown, both for the performing and the lowest quality asset classification categories.** In general, countries employing more than five buckets typically require greater risk differentiation within the severe asset classification categories.[28] Supervisors combine the past-due criterion, typically set at 90 days for a commercial loan to be considered non-performing, with qualitative information tracking the borrower's ability to repay, based on various indicators.[29]

[27] In general, this approach is used for banks that are not approved to use internal models to calculate credit risk under the internal ratings-based approaches of the Basel framework.

[28] There are two exceptions. In the sample of countries in the FSI survey, one country that uses a nine-bucket system considers only buckets 8 and 9 as NPAs, while another country that uses a 16-bucket system considers its six most severe categories as NPAs.

[29] For instance, some authorities in the LAC region use indicators such as insolvency risk, deterioration in ability to repay due to sector or market conditions, or cash flow analysis.

48. **In the EU-SSM countries, some national authorities[30] have adopted asset classification systems to supplement the NPE definition prescribed by the EBA.** These regulatory classification systems are broadly similar to the variations used in Asia, the LAC region and the US.

49. **An illustration of the comparisons between the various regulatory (informal and formal) methods to identify NPAs versus the impaired/unimpaired designations under applicable accounting standards is shown in Table 3.** Except for one authority, all other Asian and LAC jurisdictions use regulatory classification systems to identify NPAs. While the number of risk buckets varies, there is a broad mapping between various risk buckets and the most commonly used Normal–Loss categories used under the five-bucket system. The US also uses a five-bucket classification system, but NPAs, in general, are usually a subset of their "adversely classified asset" categories. While some jurisdictions within the EU-SSM apply regulatory risk classification systems, the EU-wide regulatory definition of NPE is used for comparing EU-SSM's approach with the accounting framework in Table 3.

Mapping regulatory NPA frameworks with the accounting concept of impaired — Table 3

<table>
<tr><th>Number of countries</th><th>Framework</th><th>Risk buckets</th><th>Pass / Normal</th><th>Special Mention or Watch</th><th colspan="2">Substandard</th><th>Doubtful</th><th>Loss</th></tr>
<tr><td>9 (6 Asia, 3 LAC)</td><td rowspan="11">Regulatory</td><td>5</td><td>1</td><td>2</td><td colspan="2">3</td><td>4</td><td>5</td></tr>
<tr><td>2 (1 Asia, US)[31]</td><td>5</td><td>1</td><td>2</td><td>3</td><td></td><td>4</td><td>5</td></tr>
<tr><td>3 (2 Asia, 1 LAC)</td><td>4</td><td colspan="2">1</td><td colspan="2">2</td><td>3</td><td>4</td></tr>
<tr><td>1 (Asia)</td><td>6</td><td>1</td><td>2</td><td colspan="2">3</td><td>4–5</td><td>6</td></tr>
<tr><td>1 (LAC)</td><td>6</td><td>1</td><td>2</td><td colspan="2">3</td><td>4</td><td>5–6</td></tr>
<tr><td>1 (LAC)</td><td>6</td><td colspan="2">1–3</td><td colspan="2">4</td><td>5</td><td>6</td></tr>
<tr><td>1 (LAC)</td><td>8</td><td>1–2</td><td>3–4</td><td colspan="3">5–7</td><td>8</td></tr>
<tr><td>1 (LAC)</td><td>9</td><td>1–2</td><td>3–4</td><td colspan="3">5–7</td><td>8–9</td></tr>
<tr><td>1 (LAC)</td><td>9</td><td colspan="4">1–7</td><td>8</td><td>9</td></tr>
<tr><td>1 (LAC)[32]</td><td>16</td><td>1–6</td><td>7–10</td><td colspan="4">11–16</td></tr>
<tr><td>2 (EU-SSM,[33] 1 Asia[34])</td><td>2</td><td colspan="2">Performing</td><td colspan="4">Non-performing</td></tr>
<tr><td></td><td>Accounting (IFRS)</td><td>3</td><td colspan="3">Stage 1 and 2 (unimpaired)</td><td colspan="3">Stage 3 (impaired)</td></tr>
</table>

This table is a very broad approximation of the classification used by the countries in the FSI survey, based on the authors' interpretation of applicable regulatory frameworks.

[30] See the cases of Greece, Ireland, Italy, Slovenia and Spain.

[31] While there is no explicit mapping of the US regulatory classification framework with the NPA designation, for illustrative purposes, the US working definition of NPA would generally include a subset of exposures classified within the Substandard, Doubtful and Loss categories. One jurisdiction in Asia disaggregates Substandard exposures into impaired and unimpaired components, with only the former being considered as NPAs in addition to all Doubtful and Loss exposures.

[32] The number of risk buckets in the table applies for individual commercial loans only. For commercial loans evaluated on a group level, consumer loans and mortgage loans, only two categories, normal and impaired, are used. In addition, in this country, the regulatory categories are also used for accounting purposes since a carve-out was made from IAS 39 for loans and receivables.

[33] For the EU-SSM, the table refers to NPEs, not NPAs (ie it excludes foreclosed assets).

[34] While this one authority in Asia does not apply a regulatory classification system, it has prescribed a regulatory definition of "non-performing" which is broadly similar to the Substandard or worse definitions uses in other jurisdictions.

Comparison of regulatory definition of NPA and accounting concept of impaired

50. **Regardless of whether countries have adopted a regulatory NPA definition or rely on less formal means to identify NPAs, the regulatory frameworks used to capture the volume of NPAs (or equivalent proxies) generally cast a wider net than the accounting concept of "impaired".** This is mainly because the UTP criteria are embedded in the formal NPA definition adopted by some countries, the non-accrual definition used in the US and the entry points of the regulatory classification system that serve as NPA proxies in various jurisdictions in Asia and the LAC region. These qualitative criteria, if used, allows supervisors to classify exposures as NPAs that otherwise might be considered as "unimpaired" or "performing" under applicable accounting frameworks.

51. **On the other hand, the survey results indicate a number of jurisdictions do not utilise the UTP criteria to classify exposures as "non-performing" during on-site inspections**. In the case of retail exposures, the vast majority of surveyed jurisdictions rely on past-due criteria to classify exposures in the NPA (or equivalent) category. This is to be expected as it is not feasible for banks or supervisors to individually review small-balance retail portfolios. A more surprising finding is that a sizeable minority of jurisdictions appear to rely mainly on past-due status to classify wholesale exposures in the more severe classification categories. Similar to retail exposures, such an approach is sensible for certain lower balance wholesale exposures (ie small business loans), but it might be more problematic if it is also extended to large, complex wholesale exposures that could benefit from a more qualitative approach.

52. **Outside the UTP criteria, many jurisdictions have also adopted a uniform treatment for multiple loans granted to the same borrower, enabling authorities to classify certain exposures as NPAs that would not be captured under applicable accounting frameworks.** In a majority of Asian jurisdictions as well as half of the LAC countries,[35] respondents noted that multiple loans granted to the same borrower with at least one NPA are all treated as NPAs. In the EU-SSM jurisdictions, if 20% of the exposures of a debtor is 90 days or more past due, all exposures of this debtor must also be classified as NPE. Conversely, the US does not automatically require a uniform classification (non-accrual) treatment on multiple credit extensions granted to the same borrower. Thus, if one loan meets the criteria for non-accrual status, the bank is required to evaluate other loans granted to the same borrower to determine their status.

53. **Some jurisdictions have also extended the uniform regulatory treatment to different borrowers belonging to the same group.** In the EU-SSM jurisdictions, for connected borrowers belonging to the same group, if one borrower belonging to a larger group is an NPE, non-defaulted group members should also be considered as NPE, except for exposures affected by isolated disputes that are unrelated to the counterparty's solvency. In the US and the majority of both Asian and LAC countries, the classification is done entity by entity.

54. **These prudential approaches to NPA identification that go beyond applicable accounting standards need to be weighed against certain design features of regulatory NPA identification frameworks that can understate the level of NPAs.** First, several countries in the study exclude certain asset classes, such as "foreclosed collateral" from either the NPE designation (EU-SSM) or their regulatory classification system (select countries in Asia and the LAC region). Second, a majority of Asian jurisdictions and three LAC countries allow collateral to be considered in determining regulatory classifications, while the US considers collateral[36] in determining whether an asset is placed in the non-accrual category. In the US context, while assets that are 90 days or more past due but accruing interest would still be captured in

[35] For credit exposures to different borrowers belonging to the same group, the classification is done entity by entity in the majority of both Asian and LAC countries, consistent with international norms.

[36] In this context, if a problem loan is both "well secured" and "in the process of collection" it can be excluded from the non-accrual designation. In other words, both the bank and the supervisory authority expect that the bank will not incur any losses on this exposure.

its NPA definition, exposures that are less than 90 days past due and still accruing interest would not be captured under its framework.

NPA measurement

55. **NPA measurement practices vary considerably and can be explained by a number of factors.** First, in addition to the different accounting standards followed by sampled jurisdictions, provisioning outcomes are influenced by whether authorities apply accounting or prudential rules, or a combination of the two, to set provisioning requirements. Second, while most jurisdictions allow collateral to be considered in determining the amount of provisions, differences in the methods used to value collateral can produce different results, leading to varied provisioning requirements. Third, differences across jurisdictions in the regulatory treatment of the accrual of interest income on NPAs and asset write-offs also play a role in NPA measurement outcomes.

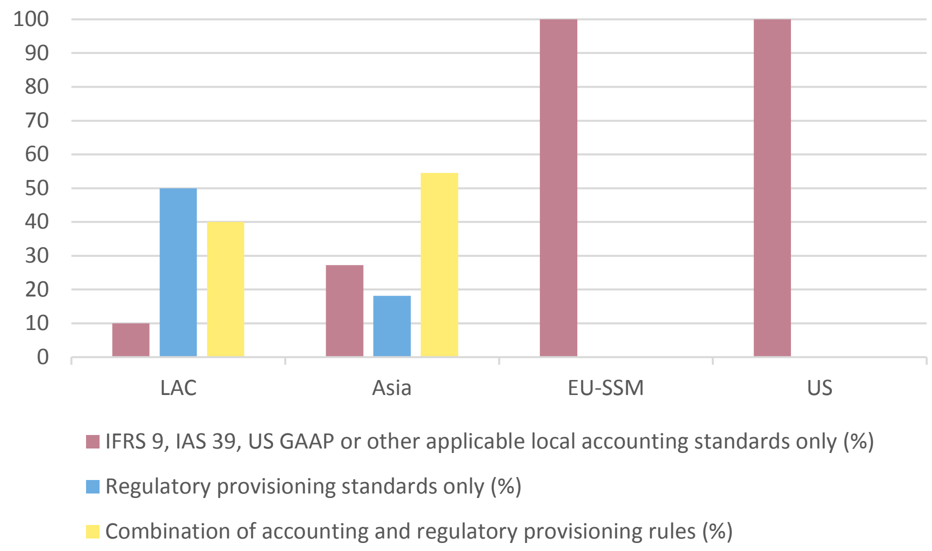
Provisioning framework

56. **Provisioning frameworks applied both across and within regions vary considerably.** Outside the EU-SSM countries and the US,[37] only a few jurisdictions in the sample recognise provisions in earnings based solely on accounting standards. The remaining jurisdictions either use a combination of accounting and regulatory guidance or follow only regulator prescribed rules. In cases where jurisdictions apply a combination of accounting and regulatory guidance, the construct of the regulatory provisioning guidance and how it interacts with the accounting requirements varies across countries, ranging from principles-based guidance to very prescriptive methods.[38] These differences are further accentuated by the use of different accounting standards in some jurisdictions (eg US GAAP versus IFRS), which, collectively, have a material impact on how credit loss provisions are formulated and the amount recognised in the P&L. Chart 1 summarises the various approaches used to recognise provisions in the P&L.

[37] In the US context, authorities have issued detailed regulatory guidance in the form of an interagency policy statement on the allowance for loan and lease losses to outline their supervisory expectations. However, the guidance is in line with US GAAP.

[38] At one extreme, regulatory provisioning guidance consists of broad, principles-based directives that are used to supplement accounting standards to ensure supervisory considerations are incorporated in the provisioning process. In other cases, regulator-prescribed quantitative provisioning rules apply only if they are not satisfied with the bank's application of accounting provisions, while others require parallel calculations and take the higher of the two for purposes of P&L recognition. Various other permutations also exist.

Approach used to estimate and recognise loan loss provisions in the P&L Chart 1



57. **When accounting provisions only are recognised in the P&L statement, prudential authorities typically require some form of backstop.** When prudential authorities have no powers to override the accounting standards, backstops can ensure that prudential provisioning considerations are taken into account, at least, in the calculation of regulatory capital. Although approaches vary across jurisdictions, they all aim at addressing the accounting shortcomings of IAS 39,[39] which generally does not require provisions for non-impaired loans, including those deemed Substandard for regulatory purposes but may not necessarily be "impaired" under accounting rules.

58. **The type of backstop used by the countries in the sample varies in terms of construct, scope and degree of prescriptiveness.** For instance, a globally harmonised regulatory expected loss provisioning backstop[40] is in place for banks that are approved to use internal models to calculate their credit risk weights under the internal ratings-based (IRB) approaches of the Basel framework. In Asia, of the three countries that recognise only accounting provisions in the P&L statement, authorities have also imposed prudential backstops for banks under the standardised approach to credit risk capital measurement. In the EU-SSM countries, national guidance applies to the banks under direct local supervision (ie less significant institutions), and such guidance varies across countries.

59. **Where countries have recently experienced high levels of problem assets, authorities are considering more prescriptive backstops to deal specifically with NPAs.** Following the financial crisis that started in 2007, some EU-SSM countries remain in the process of trying to resolve legacy NPAs. To facilitate the process, the ECB issued non-binding supervisory expectations with respect to prudential

[39] While IFRS 9 requires provisions for unimpaired loans, a number of jurisdictions in the FSI survey plan to retain IAS 39 for an interim period. At this stage, it is unclear the extent to which prudential backstops will be retained upon the adoption of IFRS 9.

[40] Under Basel II, IRB banks must calculate regulatory expected losses according to a pre-specified, globally harmonised methodology and to compare their accounting provisions with total regulatory expected loss, with any shortfalls deducted from regulatory capital.

provisions for uncollateralised and collateralised NPEs with a vintage[41] of two and seven years, respectively (ECB (2018)). In addition, in 2018, the European Commission, as the regulatory arm of the EU, proposed the introduction of minimum provisioning requirements, following a consultation launched in late 2017 (European Commission (2017c, 2018)).

60. **Authorities that apply some variation[42] of regulator-prescribed rules for purposes of recognising provisions in the P&L generally impose minimum provisioning requirements for *all* regulatory asset classification categories, including the Normal and Watch category.** Overall, such approaches have enabled authorities to impose provisioning requirements on certain exposures that may not necessarily be "impaired" under applicable accounting standards that are based on the incurred loss provisioning approaches.[43]

Role of collateral in provisioning and treatment of foreclosed collateral

61. **Most jurisdictions allow collateral to be considered in determining the amount of provisions for a collateralised NPA exposure.** This is the approach taken in the US, EU-SSM jurisdictions and most of the Asian and LAC countries in the sample. However, a notable minority of LAC and Asian countries does not allow any collateral to be recognised for the purpose of determining provisions for all collateralised financial exposures.

62. **In jurisdictions that allow collateral to be considered in setting provisions, two distinct approaches to collateral valuation are used.** One approach follows a regulator-prescribed methodology that uses the appraised collateral value as a starting point and applies supervisor-specified haircuts based primarily on collateral type in order to determine provisioning requirements. This approach is more prevalent in the LAC region (five out of the six countries that allow collateral valuation to affect provisions follow this approach). The second approach, which is more prevalent in Asia and the EU-SSM, follows the IFRS net present value (NPV) method, which requires banks to estimate collateral values taking into consideration the time and costs required to access and dispose of collateral. US GAAP allows entities who have exposures where debt repayment is expected from the sale of collateral, to use the "fair value" of collateral, less costs to sell to calculate provisioning requirements. In measuring fair value, the NPV approach – while not required – may be implicitly used. The supervisor-prescribed haircut and the NPV approaches to collateral valuation are conceptually different and can lead to varied provisioning outcomes.

63. **Provisioning requirements can vary depending on, among other factors, the size of the supervisor-prescribed haircut and the time estimated to sell collateral under the NPV approach.** The example in Table 4 shows the key elements of the collateral valuation that are especially important for the calculation of required provisions in the supervisory haircut and NPV approaches, respectively. To begin with, the reliability of the most recent appraised value is a crucial starting point for either valuation method. Under the supervisor-prescribed haircuts, conservatism in setting provisions can vary depending on the level of haircuts applied to the estimated collateral value, and as haircuts increase, so does the level of provisions. On the other hand, in the NPV approach, assumptions made on the time required to access and sell collateral have significant implications for provisioning requirements.

[41] This refers to the length of time an exposure has been classified as non-performing. The guidance applies to new NPEs that are re-classified from performing to non-performing starting from 1 April 2018 onwards.

[42] As noted earlier, this may be used either exclusively or in combination with accounting rules.

[43] Under both IFRS 9 and CECL, banks are/will be required to estimate provisions on all of its credit exposures, including "unimpaired" exposures.

Comparison of NPA collateral valuation approaches Table 4

Collateral valuation – supervisory haircut approach		Collateral valuation – IAS 39/IFRS 9 approach (NPV)	
Current book value	100	Current book value	100
Physical collateral (appraised value)	100	Physical collateral (appraised value)	100
Original interest rate	6%	Foreclosure costs and cost to sell at 5% of collateral	5
Supervisor-prescribed haircut at 25% of appraised value	75	Estimated value of physical collateral	95
Unsecured amount subject to provisioning (100% of unsecured amount)	25	Present value of estimated recovery: assume 3 years, discounted at 6%	80
Required provisions under regulatory requirements	**25**	Estimated impairment loss	**20**

64. **Given the critical role of collateral in setting provisioning levels, most jurisdictions, although less so in Asia,[44] have prescribed supervisory guidance on prudent collateral valuation standards that support NPAs .** In particular, supervisory guidance is especially detailed when collateral is in the form of real estate assets, as seen in the US and in the EU-SSM countries. This guidance generally requires, among other things, that banks have the internal capacity and processes in place to monitor and report the quality of the collateral. EU-wide regulation also requires that the property valuation be reviewed under certain circumstances and that this review be carried out by an appraiser who possesses the necessary qualifications, ability and experience to execute a valuation and who is independent from the credit decision process.[45] The US prescribes similar requirements.[46]

65. **In most countries, authorities take advantage of on-site inspections to assess the valuation of collateral that back NPAs**. Supervisors appear to regularly review collateral values as part on the on-site process, in the US, EU-SSM jurisdictions, Asia and LAC countries. However, these assessments typically do not trigger a change in the valuation of collateral. In some countries, such as the US, the focus of collateral valuations is to identify material flaws in the assumptions that drive collateral values, and in these cases, they typically require banks to conduct another appraisal. Meanwhile, authorities in the LAC region appear to focus on ensuring that regulator-prescribed collateral haircuts are applied prior to determining provisioning requirements. In the EU-SSM countries, when on-site inspections focus on collateral valuation, the approach appears to be based on challenging the assumptions on the estimated time required to foreclose and sell collateral, which, as noted earlier, can materially impact collateral valuations.

66. **Once collateral is repossessed by the bank, it is subject to minimum provisioning requirements or maximum holding periods in only a few jurisdictions.[47]** In the US, banks that are nationally chartered are generally subject to a five-year maximum holding period for foreclosed assets, though the time can be extended with regulatory approval. One Asian jurisdiction has prescribed time-bound provisioning requirements, requiring 100% provisions once the asset is held for more than five years. Some countries in the LAC region require minimum provisioning requirements, which typically vary depending on whether collateral is represented by movable or immovable property.

44 In Asia, four of 11 jurisdictions sampled have not prescribed prudential guidance on collateral valuation.

45 See Article 208(3)(b) Capital Requirements Regulation, European Parliament (2013).

46 See Federal Deposit Insurance Corporation (2010).

47 Some US states may also have maximum holding periods for foreclosed collateral.

67. **Nevertheless, some authorities apply prudent measurement requirements on foreclosed collateral to ensure a conservative accounting treatment is applied.** For instance, the US authorities require foreclosed assets to be carried at the *lower* of cost or their fair value, less costs to sell; in the EU-SSM, a similar approach is strongly encouraged, while in many jurisdictions in Asia and slightly more than half of the LAC countries collateral is generally required to be carried at its net realisable value.

Treatment of accrued interest income on NPAs

68. **Once an exposure is considered "non-performing", supervisory authorities need to decide what to do, if anything, regarding interest income recognition on problem loans.** Decisions taken are typically driven by the guidance noted in applicable accounting standards together with the powers available to prudential authorities.

69. **Jurisdictions that follow IFRS 9 continue to accrue interest income on a non-performing exposure even if the bank is not receiving any cash income on the underlying asset.** Under IFRS 9, interest accruals on non-performing (Stage 3) exposures are based on a net (of provisions) basis and reflect the amount the institution is expected to recover. Under this approach, because impairment losses are calculated – and recognised in the P&L account – based on the discounted amounts of principal and interest that are not expected to be received, the accrual of interest in earnings merely reflects the "unwinding" of the discount[48].

70. **On the other hand, jurisdictions that have accounting powers or that follow US GAAP typically either prohibit the accrual of interest income on a non-performing exposure or offset its effect in the P&L statement.** Under these approaches, the overarching view appears to be that once a loan is "non-performing", it may no longer be prudent to continue accruing interest on that exposure – even on a net basis – since both the amount and timing of the estimated net recoverable value, through the liquidation of collateral, is heavily assumption-dependent and may not be reliable. For this reason, authorities typically focus on the income statement to ensure that if a bank's assumptions prove to be inaccurate – the P&L account will not be overstated.

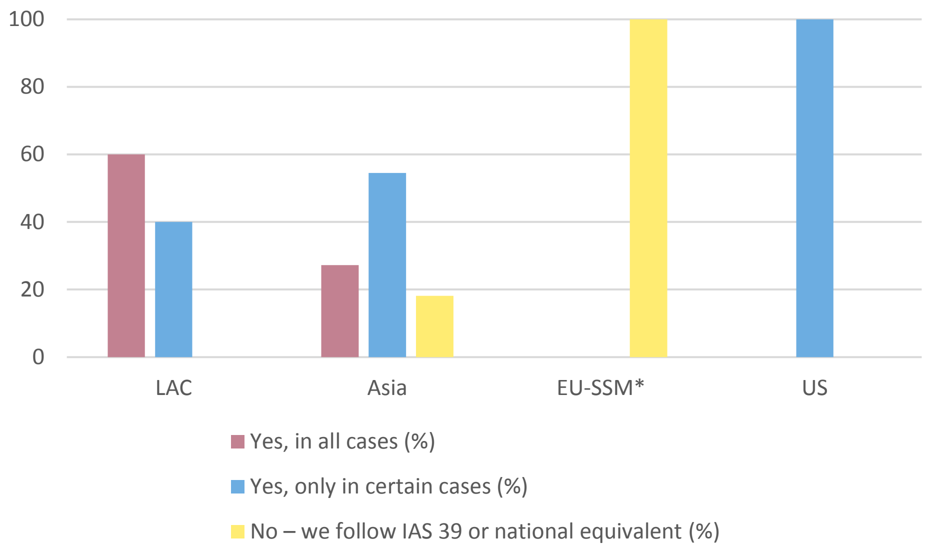
71. **The majority of sampled jurisdictions either impose restrictions on, or neutralise the effect of, the accrual of interest income on NPAs, with some notable exceptions.** Authorities in the US, all the surveyed LAC jurisdictions and almost half of the Asian countries[49] require either all or a subset[50] of NPAs be placed on a non-accrual status. The default approach in the EU-SSM countries is that NPEs continue accruing interest on a net (of provisions) basis, in line with the accounting treatment under IFRS (Chart 2).

[48] The example on table 4 illustrates the concept of the unwinding of the discount. The right-hand column of table 4 shows a hypothetical recoverable amount from collateral at 95 to be received in three years. After discounting the recoverable amount of 95 using the original interest rate of the loan (6%), the present value of the recoverable amount equals to 80. However, since the bank expects to receive 95 in three years, the difference between these two values (15) represents the unwinding of the discount and is accrued into interest income over a three year-period.

[49] An additional two Asian authorities allow the accrual of interest income on NPAs, but require a commensurate amount of provisions to neutralise its impact on earnings.

[50] In several jurisdictions, only the portion of NPAs that are over 90 days past due are subject to a non-accrual designation.

Extent to which banks place NPAs on non-accrual status — Chart 2



* For the EU/SSM, the data refer to NPEs, ie exclude foreclosed assets.

72. **For jurisdictions that place NPAs (or a subset) on non-accrual status, cross-country differences emerge on the treatment of *previously* accrued interest earned but not collected on NPAs.** While the US requires all previously accrued but uncollected interest income to be reversed once an asset is placed on non-accrual status, only half of the LAC countries in the sample require such a reversal, while in Asia the proportion is even lower. These observations indicate that in cases where authorities require banks to stop accruing interest income on NPAs, they have not always required a symmetrical treatment for *previously* accrued but uncollected interest on NPAs.

73. **The regulatory reporting of accrued interest on NPAs is not consistent across jurisdictions and – in some cases – makes it difficult for supervisors to identify its materiality at both the individual bank and banking system levels.** In the US as well as some jurisdictions in Asia and the LAC region, authorities require such assets to be reported separately from loans (either as "other assets" or "accrued interest receivable"); others, including some EU-SSM jurisdictions, require banks to include the amount with the underlying instrument (ie the relevant asset category balance such as loans or securities). Some jurisdictions have not provided any regulatory reporting guidance.

Loan write-offs

74. **In regards to loan write-offs, there is considerable variation in practices.** Most jurisdictions in the sample do not prescribe time limits for loan write-offs and leave this decision to banks.[51] In some jurisdictions, such as the US, six of the sample LAC countries and two Asian countries, the designation of an asset to the Loss category triggers a write-off requirement, but the time limits vary or are not specified. In the US, Loss assets should be written off in the accounting period in which they are identified,[52] while in some LAC jurisdictions the limit can be as high as up to 24 months. In addition to these differences, the

[51] Write-off definitions also tend to be linked to tax regimes, so cross-country differences may stem not only from prudential and accounting requirements, but tax regimes. The implications of tax regimes on loan write-offs are beyond the scope of this paper.

[52] In practice, this generally means the loan should be written off within the same month or quarter it is identified as Loss.

timing of when an exposure gets placed in the Loss category may not be consistent across jurisdictions, further accentuating differences in write-off requirements even in jurisdictions that apply broadly similar write-off criteria. In some jurisdictions, reluctance to trigger a write-off may also reflect its legal implications.[53] Nevertheless, under IFRS 9, banks are required to write off assets, in whole or in part, if there are no reasonable prospects of recovery.

75. **Differences in write-off practices may affect key supervisory indicators for otherwise similar banks.** In the simplified balance sheet of a bank in Table 5, key indicators of asset quality, noted in the bottom two rows of the table, improve once the bank has written off the NPLs. This simple example illustrates that the write-off policy followed by a bank can have a material impact on key asset quality measures used by both supervisors and market participants. This matters as in some jurisdictions write-offs may not be carried out because of tax or legal reasons, which may imply weaker asset quality indicators, even if the bad loans are fully provisioned as noted in the example below.

Example of write-off

Table 5

Balance sheet items/ratios	Bank A (before write-off)	Bank A (after write-off)
Gross loans	1,000	1,000 – 50=950
Gross NPLs	100	100 – 50=50
Fully provisioned NPLs (included in gross NPLs)	50	Written off
Cumulative provisions	130	130 – 50=80
Gross NPLs/gross loans	*100/1000=10%*	*50/950=5.3%*
Cumulative provisions/NPLs	*130/100=130%*	*80/50=160%*

76. **In addition, the lack of timely loan write-offs can allow banks to make minimal provisions on NPAs when the underlying exposure is backed by sufficiently high collateral values.** When a bank is not required to set aside provisions on an NPL because of the high valuation of the collateral, this is contingent on its ability to realise the collateral in a timely manner. For instance, Table 6 illustrates the significant change to the value of collateral when the estimated time horizon for realising the collateral is lengthened from two to eight years. The estimated value of collateral declines by 30% and the required provisions more than double. Unless the time required to access and liquidate collateral is realistically factored into the NPV calculation–- particularly in jurisdictions where the legal foreclosure framework can result in long delays for creditors to access and dispose of collateral – it can materially overstate collateral values and understate the requisite level of provisions. The imposition of timely loan write-off criteria and/or a realistic NPV calculation that incorporates realistic time estimates to sell collateral can help to ensure that banks do not carry underprovisioned legacy NPAs for an extended period of time.

[53] In some jurisdictions, the borrower's debt may be extinguished if the bank formally writes off the loan.

Sensitivity of changes in collateral values to changes in time estimates				Table 6
Collateral valuation – sale in two years			**Collateral valuation – sale in eight years**	
Current book value	100		Current book value	100
Physical collateral (appraised value)	100		Physical collateral (appraised value)	100
Foreclosure costs and cost to sell at 5% of collateral	5		Foreclosure costs and cost to sell at 5% of collateral	5
Estimated value of physical collateral	95		Estimated value of physical collateral	95
Original interest rate	6%		Original interest rate	6%
Present value of estimated recovery: assume 2 years, discounted at 6%	85		Present value of estimated recovery: assume 8 years, discounted at 6%	60
Required provisions	15		Required provisions	40

Section 4 – Implications for policy

77. **The analysis in the preceding two sections reveals differences across countries and within jurisdictions in accounting requirements that are accentuated by divergent prudential frameworks and supervisory practices on NPA identification and measurement.** These differences show that comparing the reported volume of NPAs and provisioning coverage levels across jurisdictions is complex and may be misleading. Nevertheless, opportunities now exist to harmonise domestic NPA identification frameworks based on recent guidance published by the BCBS. While there is no similar internationally harmonised NPA measurement framework to draw upon, the variety of practices noted in this paper highlight a number of prudential considerations that may be helpful to supervisory authorities. On this basis, the following subsections outline a range of policy considerations that authorities may want to contemplate in order to enhance their NPA identification and measurement frameworks.

NPA identification – policy considerations

78. **Authorities may want to reflect on the following areas to strengthen their NPA identification frameworks, where applicable.**

- **The scope of application of regulatory NPA identification regimes:** The findings from the FSI survey and relevant publicly available information indicate that several jurisdictions exclude certain asset classes from the NPA designation. These asset classes include, among other items, "foreclosed collateral", "accrued interest earned but not collected" and "equity interest received in a debt restructuring". These practices can understate the volume of reported NPAs; therefore, extending the application of regulatory NPA identification regimes to encompass all asset classes and exposures would provide a more comprehensive measure of the stock of NPAs at each regulated entity as well as the banking system as a whole.
- **A regulatory definition of "non-performing exposure":** Outside the EU-SSM countries and a few countries in Asia, the FSI study revealed that the vast majority of jurisdictions in the sample have not prescribed a formal NPA definition, with several authorities relying on less formal, jurisdiction-specific methods. The introduction of an official NPA definition – that is consistent with the non-performing exposure definition noted in the BCBS PTA guidelines – can help to standardise the NPA identification process and to facilitate more meaningful comparisons both

within and across jurisdictions. In this regard, the FSI survey uncovered three specific aspects of the BCBS PTA guidelines that merit further attention by prudential authorities, as follows:

- *The role of collateral in the NPA identification process:* Several jurisdictions in the sample noted that collateral is considered in determining the credit quality of an exposure, including its designation within the NPA category. Such an approach can lead to a downward bias in the stock of NPAs, as fully collateralised problem exposures could be excluded from the NPA designation. In general, both the BCBS PTA guidelines and IFRS 9 specify that collateral should have no bearing on determining an exposure's credit categorisation.
- *The NPA classification treatment of multiple loans granted to the same borrower, and if appropriate, to a group of connected borrowers*: If a loan to a troubled borrower is classified as "non-performing", there is a likelihood that other loans to the same borrower can be negatively affected. Consistent with the BCBS PTA guidelines, the majority of surveyed jurisdictions automatically require a uniform classification (ie if one loan is classified as an NPA, all loans to the same borrower must also be classified as NPAs), while some jurisdictions allow banks to make a loan by loan evaluation. The uniform classification approach, in some countries, is also extended to different borrowers belonging to the same group.[54] While the BCBS PTA guidelines do not require a uniform classification for borrowers belonging to the same group, they do note that an NPA designation to one group entity should be considered as one of several inputs when assessing the creditworthiness of other connected borrowers.
- *NPA exit criteria – including forborne NPAs*: The criteria to exit the NPA category vary significantly across surveyed countries. The BCBS guidance outlines a number of specific criteria that should be met prior to an exposure's upgrade to the performing category. It may be useful for authorities to undertake a gap analysis and to compare with the BCBS PTA criteria to ensure that jurisdiction-specific rules incorporate similar factors.

- **The application of qualitative factors to classify large, wholesale exposures as "non-performing":** The review of country practices indicates that a sizeable number of jurisdictions rely primarily on the over 90 days past due quantitative criteria to classify wholesale exposures as "non-performing" or a relevant classification category. Such practices can potentially undermine the effectiveness of the qualitative criteria (ie "unlikely to pay") embedded in the NPA regulatory identification frameworks across sampled jurisdictions. While the 90 days past due criterion is a useful backstop, greater reliance on the qualitative "unlikely to pay" criterion would allow supervisors to place exposures in the NPA category even if the exposure is less than 90 days past due.
- **Supervisory guidance on the qualitative, "unlikely to pay" criteria:** All jurisdictions surveyed contain a mix of quantitative (90 days past due) and qualitative criteria to place exposures in the NPA category. As noted above, the qualitative consideration typically includes a broad "unlikely to pay" criterion or a similar concept ("well defined weakness") that can be used by supervisors to place an exposure in the NPA category even if the exposure is not yet delinquent (or is less than 90 days past due). Nevertheless, as the criterion – by design – is highly subjective and the survey results suggest that it is not always used, supervisory authorities may consider elaborating on this concept in supervisory guidance, if possible, to facilitate supervisory risk assessments.

[54] In the EU-SSM countries, for connected borrowers belonging to the same group, if one borrower belonging to a larger group is an NPE, non-defaulted group members should also be considered NPEs, except exposures affected by isolated disputes that are unrelated to the counterparty's solvency.

NPA measurement – policy considerations

79. **Authorities may want to reflect on the following areas to strengthen their NPA measurement frameworks, where applicable.**

- **Powers to impose prudential backstops to deal with situations where accounting provisions on NPAs are deemed inadequate from a supervisory perspective:** Such a situation can arise, for example, when a bank may have longstanding NPAs that are backed by physical collateral, that may require little or no accounting provisions (because of the value assigned to collateral), but supervisors determine that the collateral cannot be realised in the timeframe projected by the bank. In these situations, supervisors need powers to deduct such prudential provisioning shortfalls, at least from regulatory capital.
- **Supervisory guidance on the prudent valuation of collateral that support NPAs:** Once a loan is classified as non-performing, the single biggest determinant of the level of provisions required is the estimated value of collateral. As the collateral valuation process is subjective and heavily assumption-dependent, supervisory authorities can play an important role in ensuring that the valuation of collateral is prudent and, among other criteria, considers net realisable value. With this in mind, authorities could provide supervisory guidance on the prudent valuation of collateral. For instance, taking into consideration relevant guidance issued by some supervisory authorities, prudent collateral valuation guidelines could include, but not be limited to, the following elements: requirements for appraiser qualifications and independence, the circumstances when external appraisals are required, re-appraisal/revaluation requirements and appraisal review/monitoring expectations of the bank.
- **A realistic assessment of the time and costs required to access and liquidate physical collateral (ie the NPV approach) that may support an NPA:** While such a requirement is formally included under IFRS 9, the assumptions that underpin the NPV approach are particularly important in jurisdictions where the legal framework results in long delays for creditors to gain access to physical collateral. To the extent that banks develop overly optimistic scenarios to gain access to collateral, they can materially understate the level of provisions needed on NPAs. For instance, to ensure a consistent approach to estimating the time component of the NPV approach, one jurisdiction imposes a regulatory prescribed time component to access and sell collateral, by collateral type,[55] while in EU-SSM jurisdictions, the ECB has issued non-binding supervisory expectations to encourage banks to steadily accumulate provisions up to 100% of the carrying amount of collateralised NPEs, if the collateral is not realised within seven years.[56]
- **Provisioning requirements on repossessed collateral if held beyond a certain period of time:** The longer foreclosed collateral is held by a bank, the more likely that either the valuation is too high in comparison to market prices, or the asset is highly illiquid, and its sale may only occur over a longer period of time. The FSI survey shows that only a few countries impose maximum holding periods or prescribe time-bound provisioning requirements on foreclosed collateral. Some countries deal with the P&L implications of fluctuations in foreclosed collateral values by imposing a lower of cost or market valuation approach for prudential purposes. This approach, however, does not ensure that foreclosed assets will not be carried on a bank's balance sheet for an indefinite period of time. If not already in place, the introduction of time-bound provisioning requirements can provide buffers for the bank to absorb the financial impact of a sudden write-down or a write-off of foreclosed collateral. An added benefit of this approach is

[55] See Bank of Thailand (2017).

[56] See ECB (2018).

that it also offers tangible incentives for banks to remove non-earning assets from their books in a timely manner.

- **Regulatory or supervisory measures to deal with the accounting impact of accruing interest on NPAs:** The accrual of interest earned, but not collected, on NPAs – while required under IFRS 9 – may not always be sufficiently prudent from a supervisory perspective. This is particularly the case when the complex estimates related to both the *timing* and *recovery* of amounts due (including principal and interest) from a defaulted borrower prove to be inaccurate. Due to the imprecise and assumption-dependent nature of this calculation, the majority of surveyed jurisdictions have explicit powers to either prohibit the accrual of interest on all or a subset of NPAs or can offset the impact by requiring banks to hold a commensurate amount of associated provisions.[57] Without challenging the application of IFRS 9, authorities could, at a minimum, require banks to report the amount of interest income accrued on NPAs so that other prudential measures, such as deductions from CET 1 or Pillar 2 add-ons, can be considered, if needed.
- **Supervisory information on "accrued interest earned but not collected" on NPAs:** In order for authorities to determine the significance of accrued interest on NPAs at each regulated entity, supervisors need to obtain the requisite bank-level information, and can benefit from collecting such information where this is not already available. The survey results indicate that reporting practices vary and there is no global consensus on the reporting of this line item. Regardless of where banks report this line item in published financial statements, there is a rationale for supervisory reporting purposes that banks provide the supervisor with information on the cumulative amount of "accrued interest earned but not collected" in general, and "accrued interest on NPAs" in particular, on a periodic basis. This is especially important in those countries where the accrual of interest income on NPAs is allowed and follows the accounting guidance. On-site inspections can give supervisors the opportunity to cross-check how the treatment of this income source may affect their assessment of the robustness of a bank's income stream going forward.
- **Loan write-off criteria in line with applicable accounting requirements:** When there are no reasonable prospects of recovery, IFRS 9 requires a write-off, in whole or in part, of the loan. The results of the FSI survey reveal that prudential requirements vary considerably and most jurisdictions do not prescribe time limits for loan write-offs and leave this decision to the banks. Introducing loan write-off criteria would not only align prudential requirements with the write-off principle in IFRS 9, but would also give banks a stronger incentive to manage NPAs promptly, thus avoiding an accumulation of NPAs on their balance sheet. In addition, timely write-off requirements can also facilitate greater comparability of both the stock of NPAs and associated coverage ratios both within and across jurisdictions.

[57] Ideally, and to the extent supervisory powers exist, such an approach would be accompanied by also triggering a reversal of all previously accrued but uncollected interest income once the asset has been placed on non-accrual status.

Section 5 – Concluding remarks

80. **The timely identification and measurement of NPAs play a key role in fostering the safety and soundness of both individual banks and the broader financial system.** Credit risk remains one of the major drivers of bank solvency and, given the limited incentives for banks to promptly identify and recognise NPAs – particularly when their risk profile deteriorates – high levels of NPAs have been a recurrent driver of bank failures and, at a systemic level, of banking crises.

81. **Both accounting and prudential requirements affect the identification and measurement of NPAs, with practices varying across countries.** Given the importance of NPAs for bank solvency assessments, supervisory authorities have, in general, issued prudential requirements that supplement accounting guidance, in order to ensure that banks identify and measure NPAs in a timely manner.

82. **The accounting frameworks used to identify and measure impaired assets vary across jurisdictions.** While IFRS is the prevailing global standard, a number of jurisdictions do not follow IFRS, which can lead to differences in determining both the volume of impaired assets and associated provisions. Even in jurisdictions that apply IFRS, the judgmental nature of the collateral valuation process, particularly in regards to estimating collateral values under the NPV approach, can lead to vastly different provisioning outcomes across IFRS reporting jurisdictions.

83. **The differences in applicable accounting frameworks are further amplified by variations in regulatory NPA identification and measurement frameworks across jurisdictions.** The FSI study revealed a range of practices in regards to both the regulatory framework used to identify NPAs and to measure the associated credit losses. Another key finding is that the interplay between accounting and prudential frameworks in regards to NPA identification and measurement varies across jurisdictions.

84. **Recently published guidelines by the BCBS on the definition of NPEs offer an opportunity to strengthen country practices and to enhance consistency across jurisdictions.** The BCBS PTA publication provides the basis to harmonise the identification of NPAs across jurisdictions, which can facilitate more meaningful comparisons of key asset quality metrics both within and across jurisdictions. Beyond the BCBS PTA guidance, the findings from the FSI survey identify a number of other prudential considerations that may be helpful to enhance NPA identification frameworks across relevant jurisdictions.

85. **In addition, the range of practices outlined in this paper could help authorities to develop approaches to strengthen their NPA measurement regimes.** While there is no international standard on NPA measurement practices, authorities may wish to consider the merits of the suggestions outlined in this report, based on their country-specific needs and circumstances.

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Annex

NPA identification and measurement practices in Asia[58]

NPA identification

NPA definition and role of asset classification frameworks in NPA identification

The vast majority of Asian jurisdictions do not have a formal NPA definition. In the absence of an explicit regulatory NPA definition, market norms and supervisory practices have evolved to leverage off existing regulatory asset classification frameworks as a proxy for determining non-performing assets.

Regulatory asset classification frameworks, which are widely used among surveyed jurisdictions in Asia, play a key role in the NPA identification process. Nearly all (10 of 11) jurisdictions require banks to use an asset classification system to classify credit exposures into various risk buckets (with the most common being: Normal, Watch, Substandard, Doubtful and Loss), generally based on quantitative and qualitative criteria developed by the prudential regulator.

The three most severe asset classification categories (Substandard, Doubtful and Loss) are generally considered as NPAs. The Substandard category (or its equivalent) is generally the entry point of the NPA designation.[59] The definition of Substandard is broadly consistent across surveyed jurisdictions and includes both qualitative and quantitative criteria, with the over 90 days past due threshold typically serving as the quantitative backstop. The links between regulatory asset classification categories and performing and non-performing designations under IFRS 9 are shown in the conceptual example in Table 7.

Mapping regulatory classification regimes in Asia[60] to NPAs (conceptual example only)

Table 7

Number of countries	Regulatory risk buckets	Classification categories					
7	5 buckets	Normal	Watch / Special Mention	Substandard[61]	Doubtful		Loss
1	6 buckets	Normal	Watch / Special Mention	Substandard	Doubtful	Doubtful of Loss	Loss
2	4 buckets	I		II	III		IV
Accounting (IFRS 9)		Performing (Stages 1 and 2)		Non-performing (Stage 3)			

[58] The Asian countries in the sample are China, Hong Kong SAR, India, Indonesia, Iran, Japan, Korea, Malaysia, Philippines, Singapore and Thailand.

[59] One jurisdiction disaggregates Substandard exposures into impaired and unimpaired components, with only the former being considered as NPAs.

[60] One country in Asia does not apply a regulatory classification system and therefore is not included in the chart.

[61] One Asian authority that applies a five-bucket system differentiates between impaired and unimpaired Substandard, with only the impaired Substandard in addition to Doubtful and Loss being considered as NPAs.

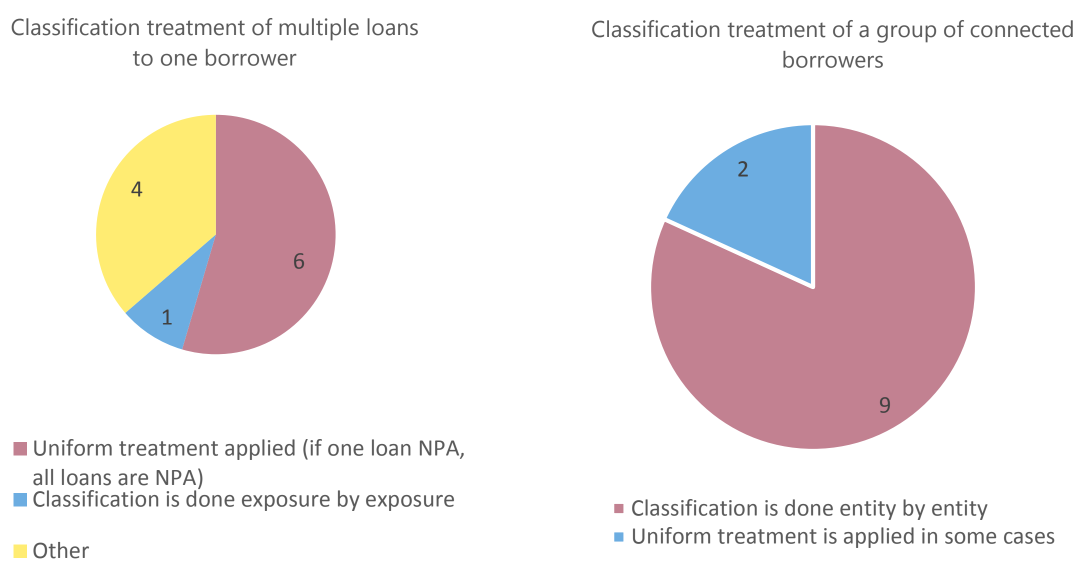
Comparison of regulatory definition of NPA and accounting concept of impaired

Regardless of the number of risk buckets used, the regulatory NPA identification frameworks adopted across surveyed jurisdictions are, in general, broader than the accounting concept of impaired. This is mainly due to the qualitative criteria ("well defined weakness") embedded in the Substandard (or equivalent) designation, which allows supervisors to place certain exposures in this category even if they are less than 90 days past due or may not be impaired under applicable accounting standards.

The majority of Asian jurisdictions have also adopted a uniform classification treatment of multiple loans granted to the same borrower, enabling authorities to classify certain exposures as NPAs that might not be captured as impaired under relevant accounting standards. Several Asian authorities (six of 11), as noted in Chart 3 below, specified that if one exposure to a borrower is classified as an NPA (or relevant classification category), then all exposures to the same borrower are automatically classified as NPA. Of the four jurisdictions that checked "other", two authorities require a uniform classification if the sources of cash flows are connected or if the collateral is supported by the same pool; another authority applies a uniform classification treatment for all wholesale exposures to the same borrower, but multiple retail exposures to one borrower can be assessed on a loan by loan basis.

The uniform classification treatment is, however, rarely extended to a group of connected borrowers belonging to the same group. Only two of 11 Asian authorities have introduced a uniform classification treatment of different borrowers belonging to the same group, and, only if certain conditions are met, such as if either the underlying cash flows of various entities within the group are connected (Chart 3). The majority of surveyed jurisdictions allow an entity by entity classification, which is generally consistent with international norms.

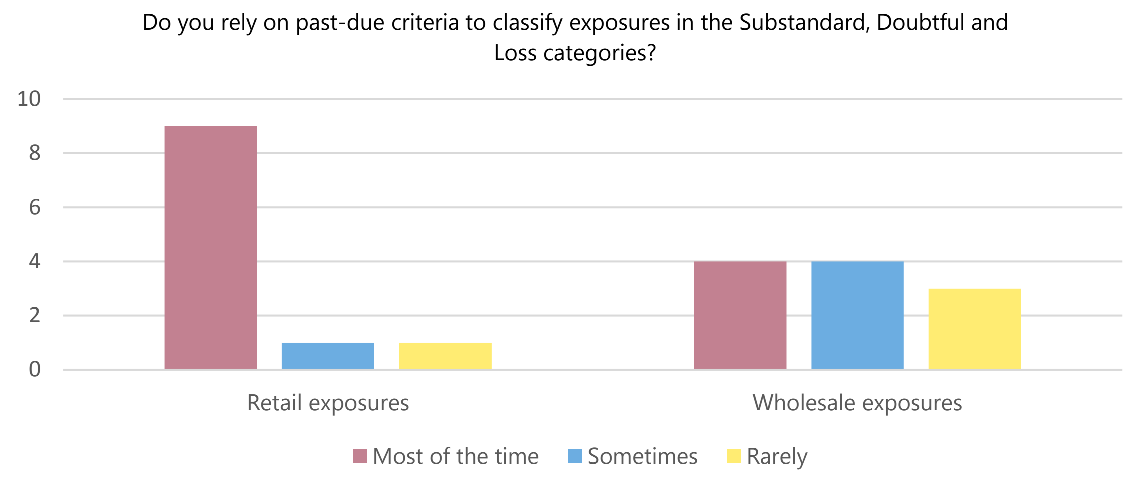
Uniform regulatory classification treatment — Chart 3



On the other hand, there are certain features contained in the NPA identification frameworks in several jurisdictions that can result in a downward bias to the reported level of NPLs. First, seven of the 10 jurisdictions that use regulatory asset classification systems explicitly consider the estimated value of collateral[62] in determining whether a loan should be graded Substandard or worse. Second, some Asian authorities (four of 10) exclude certain asset classes, such as "accrued interest earned but not collected", "foreclosed collateral" and "equity interest received in a debt restructuring" from their regulatory NPA identification regime.

In addition, the extent to which supervisors rely on qualitative or past-due criteria to place exposures in the Substandard category have significant implications for both the timing and stock of reported NPAs. The survey results indicate that the vast majority of jurisdictions (nine of 11) utilise past-due indicators to place retail exposures in the Substandard or worse category; this is an expected outcome and consistent with international norms, given the small balance and homogenous nature of most retail credit portfolios (Chart 4). A sizeable number of respondents (four of 11) also noted that they relied primarily on past-due indicators to place wholesale exposures in the Substandard or worse category. These practices can affect the timing of when exposures are placed on NPA status, resulting in commensurate delays in the recognition of requisite credit loss provisions.

Use of past-due criteria in asset classification during on-site inspections — Chart 4



NPA exit criteria

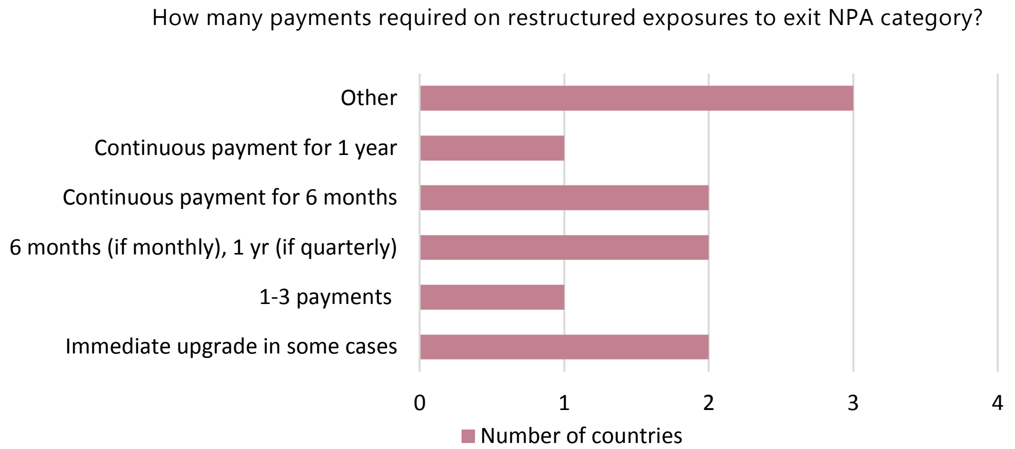
NPA exit criteria vary considerably across Asian jurisdictions and can materially impact the stock of reported NPAs. Some jurisdictions allow an exit once there is repayment of past-due principal and interest (P&I), while others require repayment of P&I and the remaining debt is expected to be repaid. One jurisdiction allows an exit when it does not meet the accounting definition of impaired or the regulatory definition of NPA. Even in cases where the criteria appear broadly similar across a number of jurisdictions – for example, some demonstrated repayment history (quantitative) and an expectation of full debt repayment (qualitative) – the demonstrated repayment history varies from P&I payments received for at least six months, to full repayment of all past-due P&I, to repayment such that P&I is less than three months past due.

Similar variations across jurisdictions were noted for restructured (forborne) exposures to exit the NPA category. As Chart 5 illustrates, for restructured NPAs, the repayment period varies from

62 One of these authorities only recognises cash collateral or loans secured by government bonds for purposes of determining credit classification.

immediate upgrades upon debt restructuring to continued repayments for a period of time (ranging from one–three payments to one year). In one case, the decision to upgrade a restructured NPA is left solely to the bank. These differences can also impact the reported level of NPAs.

Criteria for restructured NPAs to exit NPA category — Chart 5



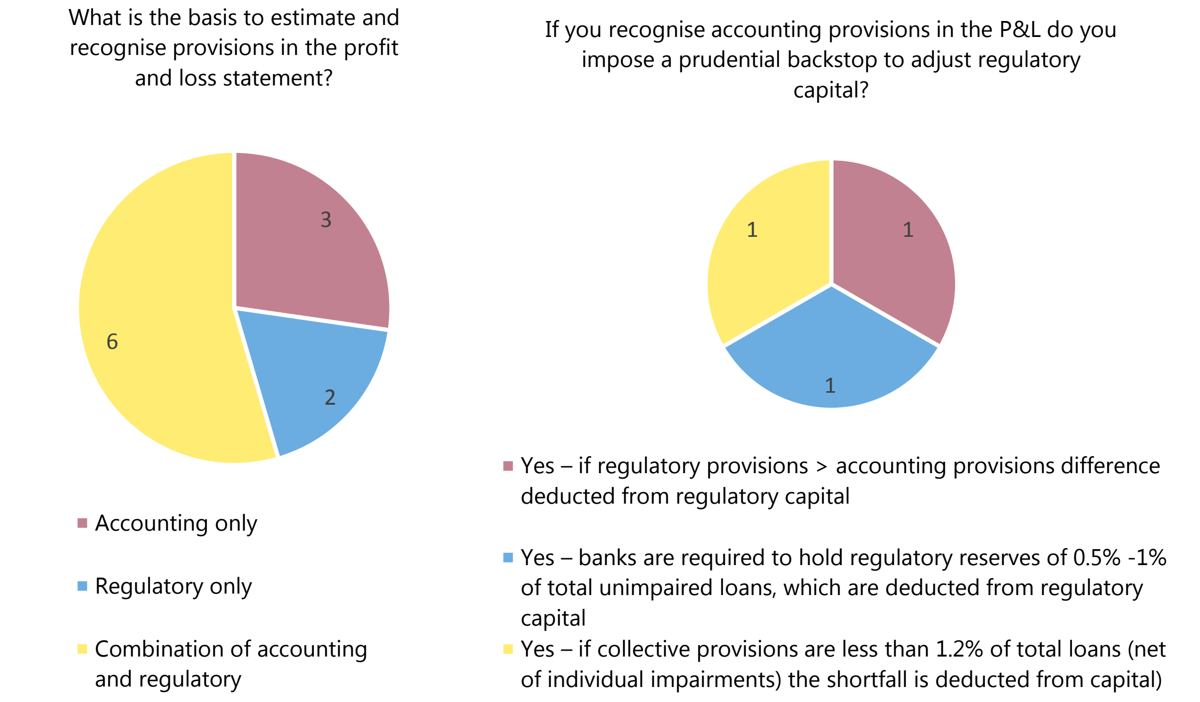
NPA measurement

Provisioning framework

The framework used to estimate and recognise loan loss provisions in the P&L statement varies considerably across surveyed jurisdictions. Only three jurisdictions formulate and recognise provisions based only on applicable international accounting standards, while the remaining jurisdictions either use a combination of accounting ***and*** regulatory provisioning requirements or follow regulator-imposed rules only. The variation in approaches can impact both how loan losses are measured and how much loss is ultimately recognised in the P&L statement.

Of the three jurisdictions that recognise only accounting provisions in the P&L statement, all impose regulatory backstops as a means to deduct provisioning shortfalls (with respect to accounting provisions) in regulatory capital. While the target and construct of the backstops vary, all three aim to address the accounting shortcomings under IAS 39, which generally does not require provisions for non-impaired loans, including those deemed Substandard for regulatory purposes but which may not necessarily be considered "impaired" under accounting rules. Chart 6 illustrates the variations in provisioning frameworks across surveyed Asian jurisdictions.

Applicable provisioning frameworks in surveyed jurisdictions Chart 6



For authorities that apply a combination of accounting and regulatory guidance to determine provisions, the frameworks vary considerably and can lead to different provisioning outcomes. As Table 8 indicates, some authorities impose regulator-prescribed provisioning rules only if they are not satisfied with the bank's application of accounting provisions, while others require parallel calculations and take the higher of the two for purposes of P&L recognition. Various other permutations are also noted below, with the one common denominator being that the prudential authority has powers to impose regulator-prescribed provisioning rules for purposes of P&L recognition.

Interaction between accounting and regulatory frameworks	Table 8
Interaction between accounting and regulatory guidance when both are used in combination to determine provisions	
Countries	Description
2	Small banks or institutions whose accounting methodology is considered inadequate must follow regulatory provisioning rules and recognise in the P&L
1	Follows accounting rules, but provisions of at least 1% of net loans (net of collateral and deduction of individual impairment provisions) must be held and recognised in the P&L
1	Banks must calculate both IFRS and regulatory provisions and take the higher of the two for recognition in the P&L
1	Banks must maintain IAS 39 provisions, but must also maintain reserve coverage of two other ratios and take the higher of the two and recognise in the P&L: provisions to gross loans not less than 2.5% **and** provisions to NPLs of at least 150%
1	Other – authority did not specify methodology

Most authorities that apply regulatory classification systems also impose minimum provisioning requirements. Of the 10 jurisdictions that reported[63] their use, eight explicitly prescribe a range of minimum provisioning requirements that are linked to each asset classification category.[64] The prescribed regulatory provisioning ranges vary across jurisdictions, particularly for two of the three severe asset classification categories that comprise NPAs: Substandard and Doubtful. The Loss category provisioning ranges are broadly consistent across jurisdictions.

Role of collateral in provisioning and treatment of foreclosed collateral

Collateral recognition practices differ across jurisdictions, which may have a material impact on the amount of provisions held on NPAs. While the majority of jurisdictions allow collateral to be considered for purposes of determining provisions on NPAs, a notable minority does not allow collateral recognition for purposes of determining NPA provisions (Chart 7). The latter approach could be driven by either prudential considerations or country-specific circumstances.[65] Interestingly, five jurisdictions that allow collateral recognition for purposes of determining provisions on NPAs do not allow collateral to be considered for purposes of determining provisions for a subset of performing or unimpaired exposures. This approach may reflect authorities' desire to impose a baseline level of provisions on unimpaired exposures that might not otherwise be possible under IAS 39.

[63] One authority removed its minimum provisioning requirements for Substandard, Doubtful and Loss exposures upon the introduction of IFRS 9, but retained the minimum provisioning requirements for the unimpaired loans. This authority is not included within the eight jurisdictions specified above.

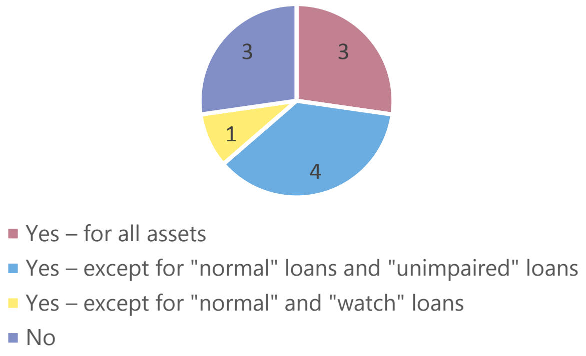
[64] In other words, minimum provisioning requirements are imposed on Normal, Watch, Substandard, Doubtful and Loss category exposures.

[65] For example, there may be long delays in the legal foreclosure process for creditors to gain access to the collateral of defaulted borrowers, rendering the collateral value to be less relevant.

Role of collateral in provisioning

Chart 7

Can collateral be recognised for purposes of determining provisioning requirements?



Despite the critical role that collateral plays in the formulation of provisioning levels, some Asian jurisdictions (four of 11) have not prescribed supervisory guidance on prudent collateral valuation standards. In cases where supervisory expectations are set, the guidance typically encompasses appraiser independence, qualifications and circumstances when external appraisals are required, among other factors.

Once collateral is repossessed by the bank (ie foreclosed collateral), the majority of surveyed jurisdictions (10 of 11) do not impose minimum provisioning requirements, even if the foreclosed collateral cannot be sold with a certain period of time. For foreclosed assets, the primary prudential requirement is to ensure that the asset is carried at its net realisable value. One jurisdiction requires banks to steadily build provisions of up to 100% of the carrying value of the foreclosed asset if it is held for more than five years.

Treatment of accrued interest income on NPAs

Regulator-prescribed rules in several jurisdictions impose some restrictions on a bank's ability to continue accruing interest income on an NPA. A majority (seven of 11) of jurisdictions require banks to either suspend interest payment on NPAs[66] (ie placing loans on non-accrual status) or to neutralise the impact on earnings by requiring a commensurate amount of provisions to be held. Nevertheless, the timing of when a loan gets placed on NPL status – and therefore when interest accruals stop – can vary across jurisdictions.

At the same time, most jurisdictions do not require banks to reverse *previously* accrued interest earned but not collected on an NPA. Only two of 11 jurisdictions require banks to make such reversals in earnings (ie reduce interest income by a commensurate amount), while one other jurisdiction requires banks to fully provision the amount through the P&L.

66 Two authorities place loans on non-accrual status when they are classified as Doubtful – ie the second most severe regulatory classification category.

Practices also diverge on the regulatory reporting of "accrued interest earned but not collected". Some authorities require such assets to be reported separate from loans (either as "other assets" or "accrued interest receivable"), while others have not provided any regulatory guidance.

Loan write-offs

All but two authorities in the Asian sample do not require banks to write off Loss category exposures or fully provisioned NPAs. In some jurisdictions, such an approach may reflect legal implications of asset write-offs.[67] Nevertheless, under IFRS 9, banks are required to write off assets, in whole or in part, if there are no reasonable prospects of recovery.

[67] In some jurisdictions, the borrower's debt may be extinguished if the bank formally writes off the loan.

NPA identification and measurement practices in EU-SSM[68]

NPA identification

NPA definition

All countries within the SSM use the same high-level definition of non-performing exposures (NPEs).[69] In the EU, a common definition of NPEs was introduced in 2014[70] by the EBA and is based on a combination of "past due" (90 days) and the forward-looking "unlikely to pay" (UTP) criteria, even if the exposure is currently paying as agreed.

The NPE definition, however, is only binding for supervisory reporting purposes. In practice, this means that for the purposes of a bank's published financial statements and presentation, banks in the EU are not obliged to adopt the EBA's NPE definition. However, the ECB guidance (ECB (2017a)) strongly encourages banks to use the NPE definition for their internal risk control and public financial reporting, in order to promote alignment.

Collateral plays no role in the classification of an asset as an NPE. Banks are required to classify exposures as non-performing without taking into account the existence of any collateral.[71] Consequently, even fully collateralised exposures can be classified as an NPE if they meet either the past-due or UTP criteria (based on the creditworthiness of the borrower).

The role of asset classification frameworks in NPA identification

The EBA NPE definition covers two buckets, and some countries in the EU-SSM use additional classification categories. The 2014 definition introduced by the EBA envisages only two buckets, "Performing" and "Non-performing", which broadly overlap with the Pass/Normal and Watch ("Performing") and Substandard, Doubtful and Loss ("Non-performing"). The two-bucket approach allows applicable national authorities to include more granular asset classification frameworks under the EBA umbrella NPE definition. For instance, some of the countries[72] with currently high levels of NPEs use additional subcategories for performing and non-performing assets.

68 The EU-SSM countries are: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. EU-wide regulation is directly applicable to them, as for all EU members. This section draws on public documents issued by the ECB, as the central supervisory authority in the SSM (ECB (2017a,2018)).

69 The information on the SSM countries relies primarily on ECB (2017a,b, 2018)).

70 The EBA introduced this definition, which was adopted via the introduction of the Implementing Technical Standards (ITS). This definition, like the one for forbearance, is applicable to all on-balance sheet loans and debt securities, as well as some off-balance sheet commitments, including foreclosed collateral and repossessed assets. The European Commission recently proposed to introduce a common definition of NPEs in accordance with that of the EBA (European Commission (2017b)).

71 Paragraph 148 of European Parliament (2013).

72 According to ECB (2017b), these countries are Greece, Ireland, Italy, Slovenia and Spain. The subcategories for performing or non-performing assets are, however, quite heterogeneous among them. For instance, in Greece NPLs are subdivided into four categories: (i) loans in pre-arrears; (ii) loans in early arrears (1–89 dpd); (iii) NPLs; and (iv) "denounced" loans (ie NPLs to non-cooperative or non-viable debtors). In Ireland, exposures are classified into five categories: (i) performing: includes the subcategories performing without arrears, performing in arrears (1–30 days; 31–60 days; 61–90 days) and renegotiated loans (for borrowers that are not in financial difficulty); (ii) non-performing; (iii) cured: category to reclassify loans that come out from the NPL classification; (iv) foreclosed loans: loans for which there is no likelihood of repayment, resulting in the decision to foreclose; and (v) forbearance.

Comparison of regulatory definition of NPA and accounting concept of impaired

The NPE definition is broader than the accounting concept of "impaired" and the prudential definition of "default". Under the EBA's definition, NPEs can also include exposures that are not recognised as "impaired" or "defaulted" in applicable accounting or regulatory frameworks.

Because of its scope, the NPE definition classifies as non-performing a broader set of credit exposures that would not be captured as NPEs if based solely on applicable accounting frameworks or the Basel definition of default. The main drivers for these differences are:

- *Uniform classification treatment for multiple loans granted to the same borrower*: if 20% of the exposures of a debtor are considered as NPEs, all exposures of this debtor must also be classified as NPEs.
- *Uniform classification treatment of different borrowers belonging to the same group*: for connected borrowers belonging to the same group, a group classification treatment is required; that is, if one borrower belonging to a larger group is an NPE, non-defaulted group members should also be considered as NPEs, except for exposures affected by isolated disputes that are unrelated to the solvency of the counterparty.
- *Regulatory treatment of forborne (restructured) measures granted to the same borrower*: for forborne exposures that are reclassified as performing, banks are required to continue monitoring and reporting the exposures for a period of two years as "forborne". During this period, if a new forbearance measure is granted to the same borrower or if the exposure is more than 30 days past due it must be reclassified as an NPE.

On the other hand, the NPE definition appears to exclude certain asset classes. In particular, foreclosed collateral and equity interest received in a company as part of a debt for equity swap (or to extinguish the outstanding debt) appears to be excluded from the NPE designation. To the extent these asset classes are material, this can potentially understate the level of reported NPEs.

NPA exit criteria

Exit from the NPE category is subject to specific regulatory requirements. EU regulations envisage that exit from the NPE category – including NPE forborne exposures – to a performing status is conditional on adhering to specific criteria, including a 12-month cure period to demonstrate the borrower's payment performance such that concerns about full debt repayment no longer exist.[73]

NPA measurement

Provisioning framework

IFRS are the accounting standards in the EU and determine the level of provisions that are recognised through the P&L.[74] Provisions must be set according to IFRS for almost all the significant institutions (SIs)[75] and in most jurisdictions also for all of the less significant institutions (LSIs).

From a prudential perspective, regulatory provisioning backstops across the EU are in place for SIs that are approved under the IRB approaches to credit risk capital measurement. For IRB banks,

[73] In addition to demonstrated payment performance, other factors that must be met to exit the NPE category include the following: the exposure is not considered impaired or defaulted; there is no past-due amount on the exposure; and the borrower has settled an amount equal to all those previously past due or has otherwise demonstrated its ability to comply with the post-forbearance conditions.

[74] In the EU, IFRS is mandatory only for listed banks.

[75] The exception is SIs that are not listed.

any shortfall in accounting provisions with respect to the regulatory expected loss concept is deducted from Common Equity Tier 1 (CET 1), in line with the requirements of the Basel framework.

Additional supervisory guidance on provisioning was issued in some EU countries. Several high-NPL jurisdictions have issued non-binding provisioning guidance as a means of influencing more conservative provisioning outcomes. In addition, the European Commission recently clarified that the ECB is encouraged to influence a bank's provisioning level within the limits of the applicable accounting framework and to apply the necessary adjustments (deductions and similar treatments) in case accounting provisions are not sufficient from a supervisory perspective (European Commission (2017a)). In some jurisdictions, authorities provide additional provisioning guidance.[76]

Banks are encouraged to book the maximum amount of such provisions under applicable accounting standards (through the P&L). If the accounting standards do not permit such a treatment, banks are expected to examine how to adjust their CET 1 capital on their own initiative. Discrepancies from the prudential provisioning expectations are part of the supervisory dialogue between the ECB and the SIs during the supervisory review and evaluation process (SREP).

More recently, the ECB issued non-binding supervisory expectations for prudential provisioning of non-performing exposures. The guidance is applicable to all SIs and applies only to new exposures classified as NPEs beginning in April 2018 (ECB (2018)). Under it, banks will be expected to fully provision against uncollateralised NPEs within two years and gradually set provisions up to 100% of collateralised NPEs, if the collateral has not been realised within seven years from the date when the underlying exposure was classified as non-performing.[77] Furthermore, following a public consultation in November 2017, the European Commission proposed a revision to the relevant EU regulation, to introduce common minimum coverage levels for incurred and expected losses on newly originated loans that turn non-performing (European Commission (2017c, 2018)). This modification would complement the ECB's supervisory initiative.

Role of collateral in provisioning and treatment of foreclosed collateral

Among the SSM countries, the calculation of impairment provisions for a collateralised financial asset reflects, among other factors, the value of collateral. In this regard, the provisioning calculation must consider both the estimated *time* and *costs* required to acquire and sell the underlying collateral (NPV approach). In particular, due to the protracted time required for creditors to gain access to physical collateral in some EU jurisdictions, it may not always be possible for banks to realise collateral in a timely manner.

Given the importance of robust collateral valuations in estimating NPE losses, most SSM countries have issued guidance on the prudent valuation of collateral. Typically, these requirements cover valuation requirements, data requirements and the appraiser professional requirements, even if in some countries requirements are much more specific (eg limits on banks' reliance on individual appraisers, performance of individual appraisers, appraiser independence). For real estate collateral, authorities have issued further guidance, in addition to the valuation requirements in the Capital Requirement Regulation

[76] For instance, in Spain the supervisory authority (the Bank of Spain) is also the accounting regulator, a unique feature among supervisors in the EU. The Bank of Spain issued binding requirements to guide both the development of own methods for individual estimates of specific provisions and of internal methods for collective estimates of specific and generic provisions. In Portugal, the supervisory authority issued non-binding guidance defining a set of impairment triggers beyond those already established in the accounting standards. It also issued non-binding comply or explain prudential guidance defining the minimum level of provisioning for loans to non-financial corporates depending on specific conditions.

[77] On the basis of the ECB supervisory expectations, banks will be asked to inform the ECB of any differences between their practices and the prudential provisioning expectations, as part of the SREP supervisory dialogue, from early 2021 onwards.

(CRR). In all SSM countries, supervised institutions are required to have a reliable data collection framework for collateral and the pertinent loss-given-default parameters.

Once collateral has been repossessed as a bank asset, it is generally not subject to minimum provisioning requirements, even if the asset cannot be sold within a predefined period of time. Under IFRS, there are a number of approaches to value foreclosed collateral.[78] Although not binding, the SSM strongly encourages banks to classify foreclosed assets as "non-current assets held for sale" under IFRS 5.[79] The primary benefit of this designation, from a prudential standpoint, is that banks are required to measure the foreclosed asset on an ongoing basis at the ***lower*** of cost or its fair value, less costs to sell.

Although collateral valuation is typically not within the scope of on-site inspections, when it is (eg in the context of impairment calculation) reviewed, supervisors challenge the assumptions that drive collateral values. Furthermore, on-site inspections with a quantitative focus challenge the methodology for calculating the provisions, for instance the time estimated to realise collateral. On the other hand, during on-site reviews with a more qualitative focus, there is typically no review of the appropriateness of estimated collateral values; rather the emphasis is on processes for assessing collateral values. When supervisory teams are sceptical about the processes and frequency of collateral valuations, they can report their findings in the inspection report. In such cases, Pillar 2 add-on requirements via the SREP review can be activated.

Treatment of accrued interest income on NPAs

While the vast majority of SSM countries follow applicable accounting standards that allow for the accrual of interest income on an NPA, irrespective of their actual collection, some jurisdictions have developed their own criteria for the treatment of accrual of interest on NPEs. These criteria allow income recognition only in particular cases, such as only if the relevant exposure is likely to be repaid. For all the other jurisdictions, the introduction of IFRS 9 brings no substantial changes, as it continues to allow the accrual of interest income – on the net amount of NPLs – for all Stage 3 loans.

Loan write-offs

Although there is no EU-wide guidance or requirement, some SSM supervisors introduced their own write-off guidelines, particularly in high-NPL jurisdictions. These guidelines are mostly principles-based, relying on three possible criteria, ie arrears, the start of bankruptcy proceedings or an institution-specific approach.[80] At the EU level, the European Commission recently issued a proposal for regulatory change and the ECB issued supervisory expectations, both of which are aimed at banks to fully provision against unsecured and secured NPLs, after a prespecified period of time. While stopping short of mandating write-offs, the European Commission's and ECB publications mitigate the financial consequences of retaining legacy NPLs on a bank's books for an extended period of time. In the absence of EU-wide write-off guidance, write-off practices can diverge quite substantially across countries.

78 Under the IFRS framework, the different valuation approaches are covered under IAS 2, IAS 16, IAS 40 and IAS 5.

79 Under this framework, at the time of initial designation of the foreclosed asset as "held for sale", banks are required to write down the asset based on the difference between its carrying amount and its "fair value", less the costs to sell. After the initial write-down (if any), the adjusted value becomes the new carrying amount of the asset.

80 According to IFRS 9, write-offs become compulsory once there is no expectation of recovery of the loan.

NPA identification and measurement practices in the Latin America and the Caribbean (LAC) region[81]

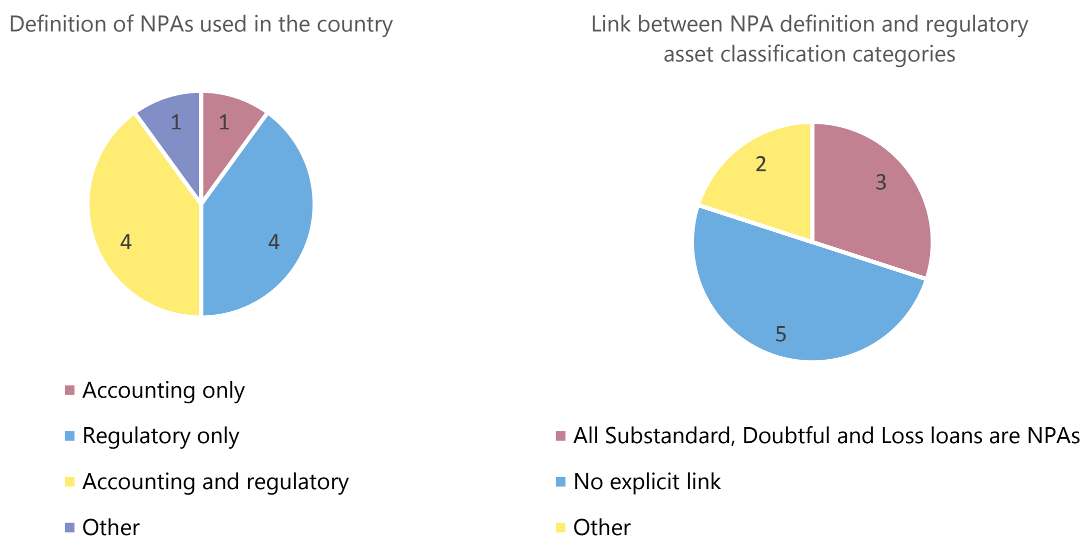
NPA identification

NPA definition

Not all LAC countries have issued a formal NPA definition for regulatory purposes. In less than half of the sample, countries have no explicit definition of NPAs. In the rest of the sample, either an official definition of NPAs was issued by the relevant authority, or an informal definition of NPAs is used.

The classification of an exposure as non-performing relies on both qualitative and quantitative criteria. For the purpose of allocating exposures to the risk buckets, banks use quantitative criteria, which typically include the concept of days past due (dpd), combined with qualitative information, generally reflecting the borrower's capacity to repay the loan, based on various indicators.

NPA definition and regulatory asset classification — Chart 8



Most countries do not rely only on the accounting definition of impaired assets to identify NPAs. Only one country maps the accounting definition of impaired assets one to one in its definition of NPAs. Another country uses the definition of default in the Basel framework's IRB approach to identify NPAs. For the other eight countries, half use a combination of accounting and regulatory concepts, the other half applies their regulatory NPA identification framework (Chart 8).

In some countries, prudential classification regimes contain certain features that may understate the actual level of NPAs. For instance, several countries exclude certain asset classes from regulatory classification, such as "foreclosed collateral", "accrued interest earned but not collected", "equity interest received in a debt restructuring" and "government exposures".

[81] LAC countries in the sample: Argentina, Brazil, Chile, Colombia, Costa Rica, Jamaica, Mexico, Panama, Peru, and Trinidad and Tobago.

Collateral is included in the asset classification only in a small minority of countries. This is the case in only three[82] countries, while in the other cases collateral is considered only to adjust the level of provisions.

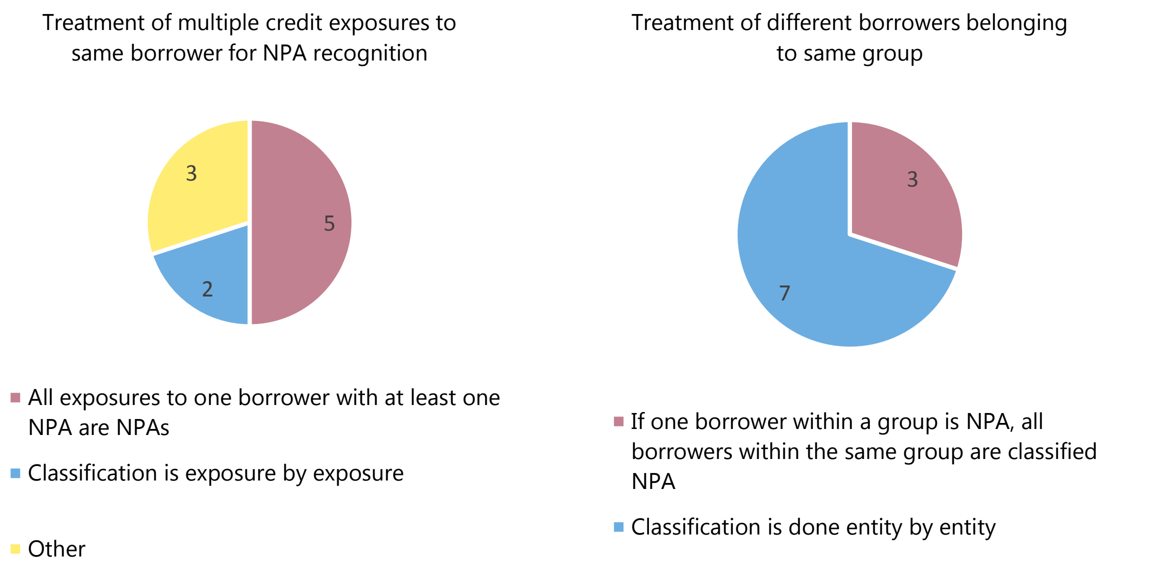
The role of asset classification frameworks in NPA identification

Regulatory asset classification frameworks play a key role in the NPA identification process. All jurisdictions in the sample require banks to use an asset classification system to classify credit exposures into various risk buckets, with the number of buckets varying quite substantially across countries, ranging from five to 16. This classification is used for supervisory monitoring and to set regulatory provisions, and in one case also for the purpose of Pillar 3 disclosures.

Some countries use a five-bucket risk framework, and otherwise in most cases employ a more granular breakdown. In general, countries employing more than five buckets typically require greater risk differentiation within the severe asset classification categories.[83] The thresholds embedded in the dpd criterion vary across countries and types of loans. For instance, the threshold is usually set at 90 days for a commercial loan to be considered non-performing, but in some countries it can be as low as 30 days for microcredit, commercial and retail loans, or a 30 day-delay in the monthly payment together with a 120 days past-due repayment of capital.

In half of the countries, the prudential framework requires a uniform regulatory classification treatment of multiple exposures granted to the same borrower. Multiple loans to the same borrower with at least one NPA are all treated as NPAs in half of the LAC countries. For credit exposures to different borrowers belonging to the same group, the classification is done entity by entity in the majority of countries, consistent with international norms (Chart 9).

Treatment of multiple exposures or to a group — Chart 9



[82] One of these authorities only recognise collateral when there is full collateralisation in the form of cash, gold or export rebates, which affects the classification of the asset as an NPA.

[83] There are two exceptions. One country uses a nine-bucket system and considers only buckets 8 and 9 as NPAs, while another country uses a 16-bucket system and considers its six most severe categories as NPAs.

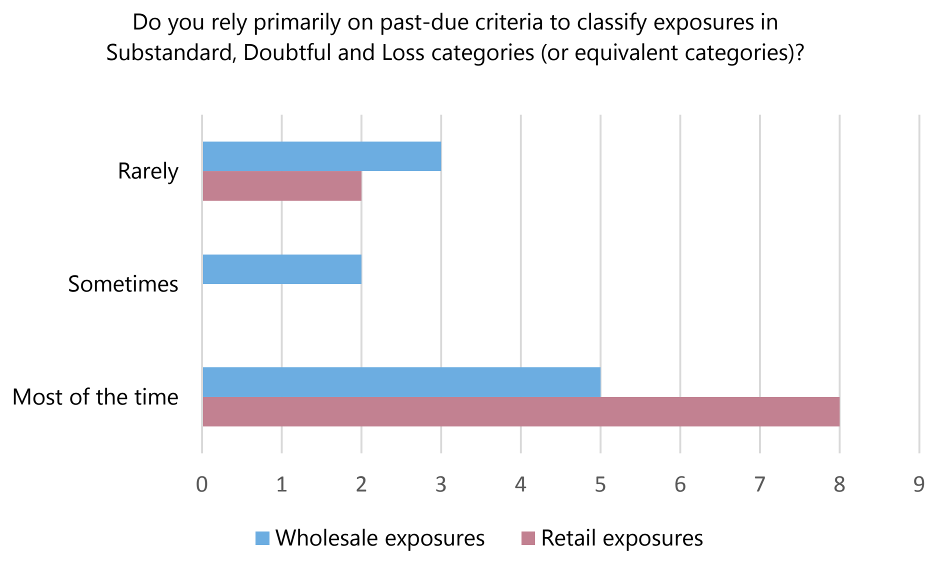
Comparison of regulatory definition of NPAs and accounting concept of impaired

Most countries do not rely only on the accounting definition of impaired assets to identify NPAs. Only one country maps the accounting definition of impaired assets one to one in its definition of NPAs. Another country uses the definition of default in the Basel framework's IRB approach to identify NPAs. Half of the remaining eight countries use a combination of accounting and regulatory concepts; the other half apply their regulatory NPA identification framework (Chart 10).

The mapping between the accounting and the regulatory definitions of NPAs varies across countries. In half of the countries in the sample, there is no explicit link between the two frameworks, although practice provides guidance in the case of these countries, so that all Substandard, Doubtful and Loss are considered NPAs. In the other half, in three cases the link is made explicit, by defining all Substandard, Doubtful and Loss assets as NPAs, while in the remaining two case the Substandard class is excluded from the NPA definition.

In all cases, the regulatory NPA identification framework is generally broader than the accounting concept of impaired. As all sampled countries combine the dpd criterion with some form of qualitative criteria, some exposures may be classified as NPAs even if they may not be considered impaired under applicable accounting standards.

Use of past-due criteria in asset classification during on-site inspections — Chart 10



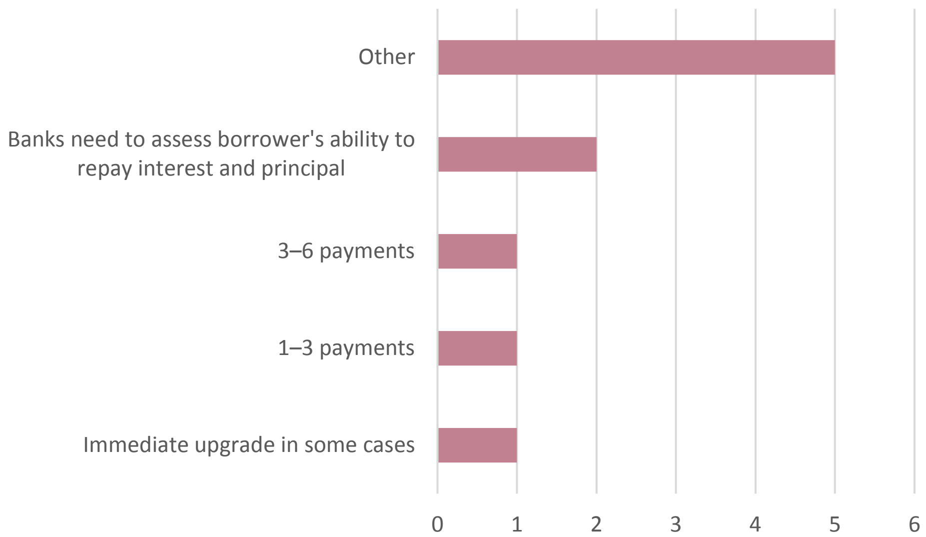
However, reliance on qualitative or past-due criteria to place exposures in the Substandard and below categories could have significant implications for both the timing and stock of reported NPAs. Concerning retail exposures, the majority of countries in the sample (eight out of 10) rely primarily on past-due indicators to place retail exposures in the Substandard or worse categories. As expected, given the larger unit size and heterogeneous nature of commercial credit portfolios, this criterion is less frequently used for wholesale exposures. Nonetheless, in half of the countries, supervisors still rely primarily on past-due indicators to place wholesale exposures in the Substandard or worse categories. Because of the backward nature of the dpd criterion, these practices can delay the time when exposures are placed on NPA status, and thus the recognition of commensurate provisioning requirements. On the other hand, countries that rarely rely on dpd indicators tend to focus their asset classification on other indicators, such as general economic conditions, LTVs or a broader assessment of repayment capacity, based on cash flow analysis, collateral and the client's management qualifications.

NPA exit criteria

Criteria for exiting the NPA class vary considerably across countries. Generally, all countries require some preconditions for reclassifying an asset as performing, but the relevant criteria vary materially across countries, such as a minimum repayment of a certain portion of the outstanding amount, together with meeting all criteria of the next risk classification category. In other cases, authorities require objective evidence (such as new collateral, improved cash flow, significant amortisation of loan), and in some cases such evidence needs to be matched with no refinancing on other obligations. As for the minimum length of time before a cured NPA can be considered performing, the performance period varies from three to 12 months.

Exit from the restructured NPA category is also subject to various conditions, and in most cases it is not possible to upgrade an NPA immediately after the loan has been restructured. Only two countries allow for such an immediate upgrade, and in one of them this is conditional on objective evidence of the recovery in credit quality. In all other cases, a minimum number of payments is required, although this varies from a minimum of one to three payments, to at least six instalments, or a minimum of 12 months of timely instalments and unchanged credit classification (Chart 11).

Number of payments required prior to upgrading restructured NPAs — Chart 11



NPA measurement

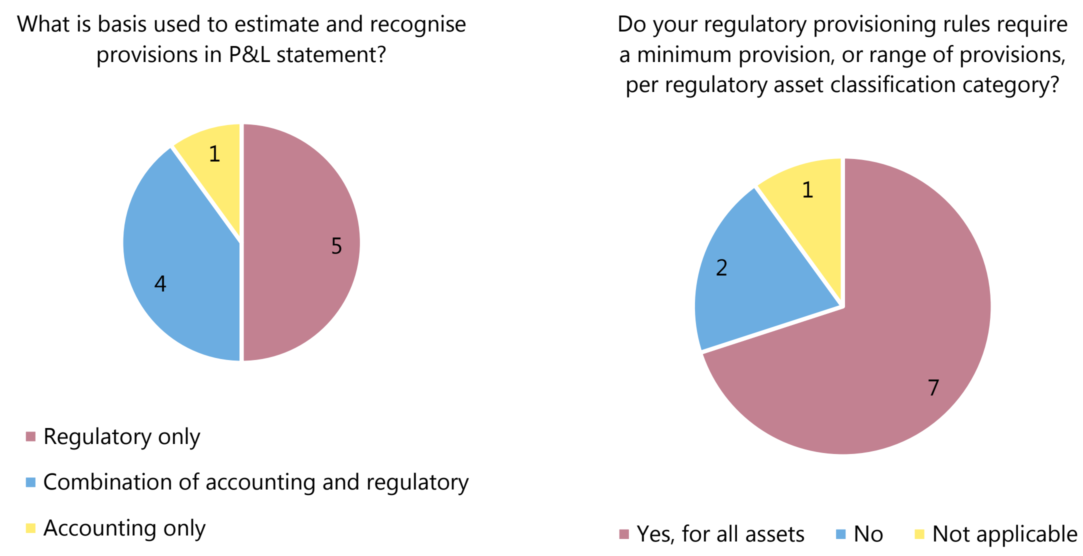
Provisioning framework

Almost all countries do not rely only on accounting rules to estimate and recognise loan loss provisions in the P&L. Excluding one case where loan loss provisions are set on the basis of accounting rules only,[84] most jurisdictions either use a combination of accounting and regulatory provisioning requirements (four) or follow regulator-imposed requirements (five) (Chart 12).

The introduction of IFRS 9 is not likely to change provisioning approaches. This is because only two countries expect to introduce IFRS 9 in full at the beginning of 2018, while continuing to use a combination of accounting and regulatory requirements for provisions. The other LAC countries either have not yet made conclusive plans to switch to IFRS, or will continue to use a regulatory only approach, based on local requirements.

Authorities that apply some variation of regulator-prescribed rules for purposes of recognising provisions in the P&L generally impose minimum provisioning requirements for *all* regulatory asset classification categories. The prescribed regulatory provisioning ranges vary across jurisdictions. These ranges vary mostly for the equivalent of Watch and Doubtful assets, while there is strong convergence for both the Substandard and Loss categories. In more than half of the sample countries, minimum provisions, or a range of provisions, are set in the regulation.

Treatment of provisions — Chart 12



Role of collateral in provisioning and treatment of foreclosed collateral

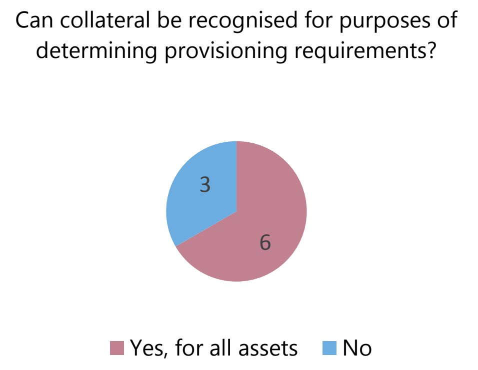
In more than half of the countries, collateral affects the level of provisions. While over half of the countries (six)[85] allow collateral to be considered for purposes of determining provisions on NPAs, a notable minority (three) do not allow any collateral to be recognised for purposes of determining provisions for all credit exposures (Chart 13).

[84] In this country, the prudential regulatory is also in charge of the local accounting standards. Another partial exception is one country with a significant share of the domestic banking sector owned by foreign-owned banks. In this country, while local provisioning requirements are set on the basis of domestic regulation, the consolidated accounts of foreign banks, including provisioning requirements, are prepared under IFRS rules.

[85] In one of these LAC countries, the value of collateral can be deducted only for some types of assets, ie mostly real estate loans.

Among those jurisdictions, most use a regulator-prescribed methodology for collateral valuation. Five out of the six countries that recognise collateral in determining provisioning levels follow a regulator-prescribed methodology. Under this approach, the appraised collateral value is used as a starting point and supervisor-specified haircuts are applied, based primarily on collateral type.

Role of collateral in provisioning — Chart 13



One country did not provide an answer.

Most jurisdictions have prescribed supervisory guidance on prudent collateral valuation standards. Almost all countries have issued minimum requirements for the valuation of collateral, and have recommended the use of haircuts, reference to market values for listed assets, cash flow analysis and third-party evaluations, with regular updates required in a number of cases.

Once collateral is repossessed by the bank, half of the surveyed jurisdictions impose minimum provisioning requirements. Once the collateral has been appropriated by the bank, it is subject to minimum provisioning requirements in half of the sample countries, while in the other half no minimum provisioning requirements are set. In jurisdictions where minimum provisions are required, it depends on the type of collateral, for instance on whether collateral is represented by movable or immovable property. For the latter, some countries require 100% of provisions for the value of the (part of the) collateral not sold within three to four years since the acquisition of the collateral, while for movable properties the requirement of the 100% provisioning is reached much faster, typically within the first year.

Supervisors also appear to regularly review collateral values as part on the on-site process. Seven of ten respondent jurisdictions specified that collateral values are regularly reviewed as part of on-site inspections, and gaps in the valuation of collateral are identified, approximately 60% of the authorities noted that they require a downward adjustment based on the regulator-specified collateral haircuts prescribed in regulation. This may be especially important for those cases where access to physical collateral can take a number of years. For instance, Table 9 shows the time required to access physical collateral, depending on the country or type of collateral, based on the information provided by survey respondents.

Estimated time needed to go through the legal system to access physical collateral (number of countries)

Table 9

Sector	1 year or less	1–3 years	3–5 years	5–8 years	Over 8 years
Residential real estate		6	2	1	
Commercial real estate		5	3		
Other corporate	1	5	3		
Motor vehicles	4	5			

The information in this table is incomplete: nine countries reported, and one did not report information on commercial real estate.

Treatment of accrued interest income on NPAs

Regulator-prescribed rules impose restrictions on a bank's ability to continue accruing interest income on an NPA. All jurisdictions in the surveyed LAC[86] countries require banks to suspend interest accrual on NPAs – in six countries, in all cases; in the others, under certain conditions. Nevertheless, the timing of when a loan gets placed on NPL status – and therefore when interest accruals stop – can vary across jurisdictions.

At the same time, there are some differences as to whether regulators also require banks to reverse *previously* accrued interest earned but not collected on an NPA. Half of the countries report requiring such a reversal, indicating that in cases where authorities require banks to stop accruing interest income on NPAs, they have not always required a symmetrical treatment for *previously* accrued but uncollected interest on NPAs.

Practices also diverge on the reporting of the line item "accrued interest earned but not collected" on the balance sheet. Some authorities require such assets to be reported separately from loans (as either "other assets" or "accrued interest receivable"), while others require banks to include the amount in the loan balance and yet others have not provided any regulatory guidance.

Supervisors also use on-site reviews to check the appropriateness of accrual of interest income on NPAs. In general, on-site inspections are used at least sometimes to conduct this type of review in seven of the 10 countries in the sample.

Loan write-offs

In over half of the jurisdictions, authorities have developed some guidance on the write-off of Loss category exposures or fully provisioned NPAs. Six of the LAC countries in the sample impose a time limit for write-offs after the asset has been designated as "unrecoverable". Time limits range from seven to 24 months, and their length may also depend on the original maturity of the loan.[87] In the other four countries, write-offs are determined by banks on a case by case basis. In some jurisdictions, such an approach may reflect legal implications of asset write-offs.[88]

86 All 10 surveyed jurisdictions in the LAC region require NPAs to be placed on non-accrual status if they meet the past-due threshold. However, six of these jurisdictions also place NPAs on non-accrual status if the NPA designation was driven by the more qualitative "inability to pay" criterion.

87 For instance, in one country the cutoff date for the write-off is 360 days for short-term loans and 720 days for long-term loans.

88 In some jurisdictions, the borrower's debt may be extinguished if the bank formally writes off the loan.

NPA identification and measurement practices in the United States

NPA identification

NPA definition

US regulators[89] do not have a statutory NPA definition. In the absence of an official definition, supervisory practice adopted as general market practice has been to consider as NPAs, the sum of: all non-accrual assets and all assets 90 days or more past due but still accruing interest (typically, loans held for investment) and real estate-owned. A loan is required to be placed on non-accrual status when payment in full of principal or interest is not expected or the asset is 90 days or more past due unless the asset is both "well secured" and "in the process of collection".[90]

Collateral is a consideration in determining whether an asset is placed in the non-accrual category. The exemption of loans that are both "well secured" and "in the process of collection" from the non-accrual category appears to suggest that collateral support is taken into consideration in the non-accrual designation. It should be noted, however, that assets that are 90 days or more past due but accruing interest would still be captured in the US's NPA definition, while assets that are less than 90 days past due but accruing interest would not be captured under this framework.

The role of asset classification frameworks in NPA identification

For supervisory risk assessments, regulatory asset classification rules are used as the primary mechanism to assess credit risk at regulated banks that are not using the advanced IRB approaches to credit risk capital measurement under the Basel framework. The US regulatory classification regime is based on a five-bucket system based on the Pass, Special Mention, Substandard, Doubtful and Loss categories. All asset classes, including foreclosed collateral and government securities, as a general principle are subject to the US regulatory asset classification system.

While there is no specific link between NPAs and the regulatory classification system, US authorities typically refer to the Substandard, Doubtful and Loss categories as "adversely classified assets". This is a broader term than the NPA concept and is used as a standard proxy to determine the aggregate level of credit risk at regulated entities – in combination with more specific indicators such as past-due loans, non-accrual loans and NPAs.

The usual entry point of "adversely classified assets" is the Substandard category. This bucket includes assets that contain well defined weaknesses, which, if not corrected, may lead to loss. In other words, an exposure can be placed in the Substandard category based on the "well defined weakness" criterion even if the loan is currently paying as agreed (such as a lack of credit support for full debt repayment or an inability to generate sufficient cash flow to service the debt even if not currently delinquent). The Doubtful and Loss categories are more severe than the Substandard designation and thus are expected to experience greater loss.

Past-due criteria are generally used to classify small-balance retail exposures. Due to the small-balance nature of these loans, it may not be feasible for banks and supervisors to review them on a

[89] US regulators are the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation.

[90] An asset is considered "well secured" if it is secured by collateral whose value is equal to or higher than the value of the loan and any unpaid accrued interest or the guarantee of a financially responsible party. An asset is "in the process of collection" if collection of the asset is proceeding in a timely manner through legal action or through collection efforts not involving legal action but which are expected to result in debt repayment or restoration to a performing loan in the near term.

credit by credit basis and therefore a uniform classification approach,[91]which is based on delinquency, is applied. This policy applies to retail credits that are extended to individuals for household, family and other personal expenditures and includes consumer loans and credit cards.

Past-due criteria are also used to classify some smaller-balance wholesale exposures, while larger, more complex exposures are evaluated based on qualitative factors. Certain smaller-balance wholesale exposures, such as small business loans, may be assessed based on delinquency due to resource constraints and the smaller-balance nature of these exposures; however, large-balance, complex exposures (eg, large commercial real estate loans) are generally assessed on a sample basis based on qualitative and quantitative considerations.

The Special Mention category is used as an early warning indicator of assets that might migrate to the Substandard category. Special Mention assets exhibit potential weaknesses (as opposed to "well defined weaknesses" for Substandard) that deserve bank management's close attention. In general, US regulators monitor both the volume of "adversely classified assets" and trends in Special Mention exposures to identify both known and prospective weaknesses in asset quality.

Treatment of multiple loans granted to the same borrower and NPA exit criteria

As a general principle, the US does not automatically require uniform regulatory treatment of multiple credit extensions granted to the same borrower. Thus, if one loan meets the criteria for non-accrual status, the bank is required to evaluate other loans granted to the same borrower to determine their status, based on the individual asset's collectability and repayment ability. A similar approach is followed for a group of connected borrowers belonging to the same group.

While there are no explicit regulatory requirements prescribed to exit the NPA category, US authorities have outlined criteria to exit non-accrual status, which is an important component of NPAs. Non-accrual assets can be restored to accrual status when: all past-due P&I is paid and the bank expects repayment of remaining P&I; ***or*** when the asset otherwise becomes well secured and in the process of collection.

NPA measurement

Provisioning framework

The US provisioning framework is based on applicable accounting standards. The starting point for the formulation of credit loss provisions is based on the US GAAP on accounting for impairment and loss contingencies, primarily the Accounting Standards Codification 450 (ASC 450) and Accounting Standards Codification 310 (ASC 310). In general, ASC 310 deals with loans individually evaluated for impairment and ASC 450 covers loss contingencies inherent in the rest of the loan portfolio.[92] Both of these estimates are factored into the allowance for loan and lease losses.

[91] In general, this policy specifies that open- and closed-end retail loans 90 days or more past due should be classified as Substandard, while closed-end retail loans 120 days or more past due and open-end retail loans 180 days or more past due should be classified Loss and charged off. Retail home mortgage loans that are 90 days or more past due and have an LTV of less than 60% are generally not classified based solely on delinquency. For open- and closed-end loans secured by real estate, an assessment of value should be made no later than 180 days past due, with any loan balance that is in excess of the property value – less costs to sell – classified as Loss and charged off.

[92] Under ASC 310, an individual loan is impaired when, based on current information, it is probable that a creditor will be unable to collect the amount due according to the terms of the loan agreement. All other loans, including loans that are individually evaluated but determined not to be impaired under ASC 310, should be included in a group of loans that is evaluated for impairment under ASC 450. ASC 450 requires the recognition of a provision when information as of the balance sheet reporting date suggests that it is probable and the loss can be reasonably estimated, even if the particular loans that are uncollectible may not be identifiable (but may be, if viewed on a collective basis).

Nevertheless, the application of accounting standards is augmented with regulatory guidance – based on the 2006 inter-agency policy statement on the allowance for loan and lease losses (ALLL) – although the guidance remains within the confines of US GAAP. Under the ALLL guidance, US regulators set expectations for the bank's Board and its senior management to maintain an adequate ALLL and to develop an appropriate ALLL methodology. The guidance also prompts banks to consider various qualitative factors in estimating credit losses, including, but not limited to, changes in: lending policies and procedures; international and domestic conditions; the experience of lending staff; the levels of credit concentrations; the volume and severity of adversely classified assets; the quality of collateral; and the quality of an institution's loan review system.

Provisions are recognised through the P&L. Supervisory guidance is still considered within the confines of US GAAP and thus, P&L recognition is considered appropriate.

Role of collateral in provisioning and treatment of foreclosed collateral

Following US GAAP rules, US regulators allow collateral to be considered in determining the amount of provisions required to absorb incurred and probable losses. In the US context, collateral is viewed as a loss mitigant but has no bearing on assessing a borrower's repayment capacity. Given the close linkages between provisioning levels and collateral values – particularly for NPAs when collateral becomes the primary repayment source – US regulators have issued detailed supervisory guidance on the prudent valuation of real estate collateral.

Supervisory expectations for the prudent valuation of real estate collateral are set out in the inter-agency appraisal and evaluation guidelines. In general, all loans secured by real estate in excess of USD 250,000 are subject to the inter-agency appraisal guidelines.[93] Among other things, the appraisal guidelines require an institution's board to establish an effective real estate appraisal and evaluation programme. The programme should address appraiser (and reviewer) independence, selection and ongoing monitoring criteria of appraisers, the criteria for the content and appropriate use of evaluations consistent with safe and sound practices, and criteria for reviewing and monitoring collateral values (ie methods, assumptions, data sources and conclusions).

Under their appraisal regulations, the US agencies have the authority to require an institution to obtain an appraisal or evaluation when there are safety and soundness concerns on an existing real estate secured credit. Therefore, an institution should be able to demonstrate that sufficient information is available to support the current market value of the collateral and the classification of a problem real estate credit. When such information is not available, a supervisor may direct an institution to obtain a new appraisal or evaluation in order to have sufficient information to understand the current market value of the collateral.

Once collateral is foreclosed upon by the bank ("foreclosed collateral"), it is subject to fair value guidelines under applicable accounting standards. On the date of acquisition, foreclosed real estate assets are required to be recorded at their "fair value",[94] less estimated costs to sell, based on the appraised value of the collateral. While foreclosed collateral is generally exempt from the US agencies' appraisal guidelines, the bank is still required to obtain an "appropriate evaluation" of the asset that is consistent with safe and sound practices.

93 Business loans with a transaction value of USD 1 million or less when the sale of, or rental income derived from, real estate is not the primary source of repayment are also exempt from this standard.

94 Fair value is the amount the creditor should reasonably expect to receive in an arm's length sale between a willing buyer and a willing seller.

Once established, the "fair value" becomes the cost of the foreclosed asset[95] and the ongoing measurement of the asset is based on the *lower* of the cost or its fair value. In effect, this requirement ensures that banks cannot recognise any gains in the P&L from appreciated foreclosed assets until the asset is actually sold.

While the US agencies do not impose any time-bound write-down requirements for foreclosed collateral, national banks are subject to maximum holding periods for foreclosed collateral. In general, national banks must dispose of foreclosed collateral within five years, unless an extension is granted by the national bank regulator.[96] Some US states require foreclosed assets to be written down on a scheduled basis or to be written off at the end of a specified period.

Treatment of accrued interest income on NPAs

US regulators have powers to place loans on non-accrual status[97] and once designated, banks are required to stop accruing interest income on all such assets and to *reverse* previously accrued but uncollected interest income. These dual requirements – to the extent that problem assets are placed in non-accrual status in a timely manner – increase the likelihood that both the net interest income line item and net income are not overstated. On the other hand, the timing of when a loan is placed on non-accrual status can vary across institutions because judgment is involved.

In cases where cash interest payments are received on a non-accrual asset, banks cannot automatically recognise such payments in the P&L statement. Cash interest payments received on an asset placed on non-accrual status can only be recognised in the P&L if the carrying value of the assets is deemed to be fully collectible. When sufficient doubt exists as to the collectability of the carrying value of the asset, banks are required to apply any cash payments received to reduce the recorded investment of the asset. Such a requirement – if appropriately applied – adds an additional layer of conservatism that empowers bank risk managers and supervisors to use cash interest payments to write down an asset's carrying value as opposed to booking interest income.

An asset can be restored to accrual status when the loan is no longer past due *and* the bank expects repayment of both the remaining principal and interest or when the loan otherwise becomes well secured and in the process of collection. It is possible for borrowers' financial condition to improve through a modification of lending terms. To guard against a premature exit from a non-accrual designation due solely to liberal debt restructurings, banks are required to maintain well supported documentation of the borrower's financial condition and prospects for principal and interest repayment under the new terms, including a sustained period of repayment of at least six months of cash payments.

Loan write-offs

In general, when a loan is classified as Loss under the US regulatory classification system, banks are required to promptly write off the asset. Loss assets are generally considered uncollectible and of such limited value that their designation as a bankable asset is no longer warranted. In general, Loss assets are required to be charged off within the period in which the loss was recognised (which generally means the loan should be written off within the same month or quarter it is identified as Loss).

[95] Any excess of the recorded amount of the loan over the recorded "fair value" of the foreclosed asset is recorded as a charge to the allowance for loan and lease losses (ie the excess reduces the provisions held and may or may not result in a provision expense depending upon the amount of provisions available to absorb such excess).

[96] The national bank regulator is the Office of the Comptroller of the Currency, which can grant multiple extensions which, collectively, cannot exceed an additional five years.

[97] Non-accrual loans typically trigger classification in at least the Substandard category or worse.