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Regulatory demands benefit market for non-performing loans

Overview

Table of Contents	
Overview	1
Definition of NPL	1
Secured versus unsecured non-performing loans and default vintage	3
Loan loss provision under IFRS 9 accounting	4
Regulatory risk parameters under Basel III/IV	5
Requirements on the data and estimation of LGD models	6
References	9
Disclaimer	9

This article describes the increased demands in the bank regulatory and accounting environment for non-performing loans (NPL). The requirements for more comprehensive data should benefit both banks and investors when trading NPL. We identify the main segments of NPL including unlikely to pay, forbearance, the default vintage, and the existence of eligible collateral from a bank supervisory perspective.

We aim to inform investors in the NPL market of recent developments in the treatment of NPL for banks and advances in data gathering and model building. Banks can use their extensive experience with models for loss given default (LGD) used in the calculation of regulatory capital charges and models for loan loss provisions to provide investors with additional insight regarding recovery expectations for NPL and thus can help overcome the information asymmetry between bank sellers and investors.

Definition of non-performing loans

The European Banking Authority (EBA) has issued a uniform definition of non-performing exposure (NPE) to overcome the problems arising from the existence of different definitions of the commonly used term non-performing loan (NPL). NPE are divided into the two key risk drivers, 90 days past due and unlikely to pay (UtP). We use the terms NPL and NPE synonymously. For most loans, an NPE is a defaulted loan under the Basel bank regulation framework and an impaired loan under international accounting rules (IFRS). The technical differences between these three concepts are explained in ECB (2017). NPE is the broadest category followed by Default and finally Impairment. Banks must always

report defaulted and impaired exposures as NPE. Non-performing exposures are those that satisfy either or both of the following criteria:

- a) Material exposures which are more than 90 days past-due;
- b) The debtor is assessed as unlikely to pay its credit obligations in full without realisation of collateral, regardless of the existence of any past-due amount or of the number of days past due.

The original Basel definition of default identified several indicators for unlikely to pay (UtP):

- a) the bank puts the credit obligation on non-accrued status;¹
- b) the bank makes a charge-off or account-specific provision resulting from a significant perceived decline in credit quality subsequent to the bank taking on the exposure;
- c) the bank sells the credit obligation at a material credit-related economic loss²;
- d) the bank consents to a distressed restructuring of the credit obligation where this is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement of principal, interest or (where relevant) fees;
- e) the bank has filed for the obligor's bankruptcy or a similar order in respect of the obligor's credit obligation to the bank; or
- f) the obligor has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of the credit obligation to the bank.

In addition to the 90 days past due and UtP categories of NPL, European banks must disclose loans subject to forbearance. Forbearance measures consist of concessions extended to any exposure towards a debtor facing or about to face difficulties in meeting its financial commitments. Hence, two conditions are required for forbearance, a concession by the bank which is caused by the debtor facing financial difficulties. Forborne exposures can be performing or non-performing. For instance, a financial obligation is unlikely-to-pay if the net present value reduction of the forbearance measure exceeds a materiality threshold of 1%. Watch-list exposures or exposures in IFRS 9 Stage 2 that have displayed characteristics of a recent increase in credit risk and which are subject to enhanced monitoring and review by the bank are not generally considered NPL.

Different jurisdictions continue to use definitions of NPL that differ from the Basel and EBA definition. For an overview covering many jurisdictions also outside Europe see Bholat et al. (2016).

¹ The accounting concept of non-accrual does not exist under the newer international accounting standards (IFRS) used in most jurisdictions, but does exist under US Generally Accepted Accounting Principles (US GAAP).

² Recently defined as a valuation haircut of more than 5%.

Secured versus unsecured non-performing loans and default vintage

The 2018 addendum to the NPL Guidance from the ECB (2017) specifies a requirement for new NPL created after April 1, 2018 to consider the length of time an exposure has been classified as non-performing (its vintage) as well as the collateral held. Banks need to determine which parts of NPL are to be deemed secured or unsecured. The ECB considers immovable properties and other eligible collateral or other forms of credit risk protection as security provided they fulfil the criteria of credit risk mitigation set out in the bank capital regulations (see Figure 1 for an overview).

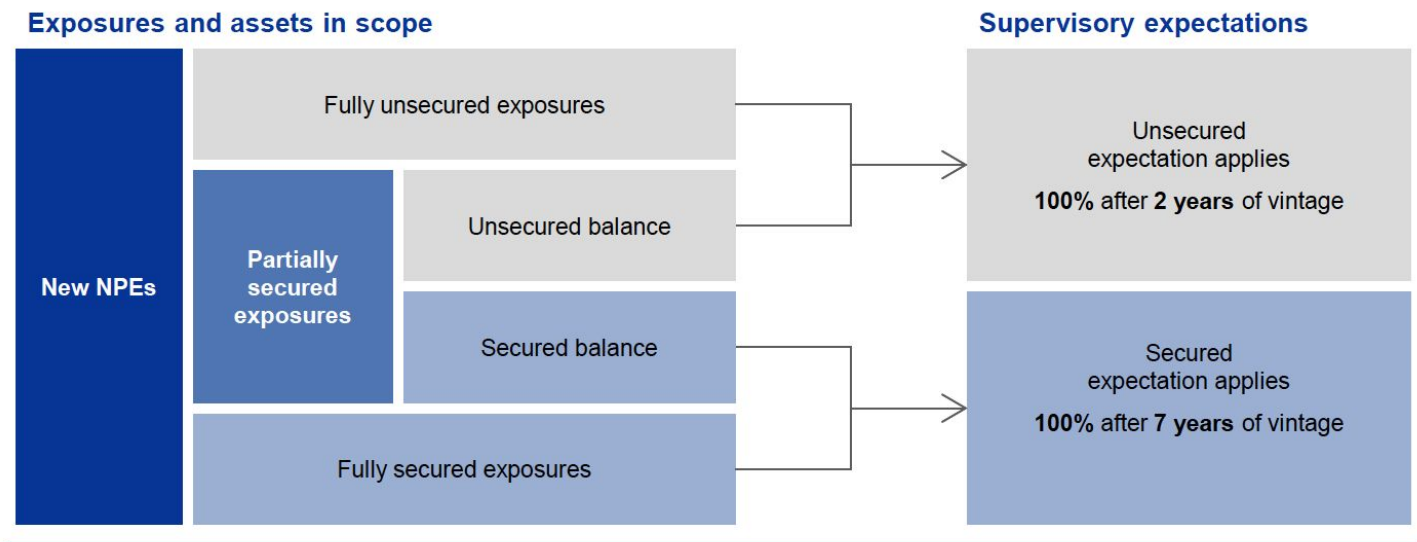
Figure 1: Credit risk mitigation techniques and methods, Part Three, Title II, Chapter 4, of the Capital Requirements Regulation

	Funded Credit Protection				Unfunded Credit Protection	Other Funded Credit Protection		
CRM Technique	Financial Collateral, on balance-sheet netting, and credit linked notes issued by the lending institution			Other eligible IRB Collateral	Guarantees & credit derivatives	Cash on deposit with, or CAIs held by, a third party institution and pledged to the lending institution	Life insurance policies pledged to the lending institution	Instruments issued by third party institution which will be purchased on request
CRM Method	Financial Collateral Simple Method (FCSM)	Financial Collateral Comprehensive Method (FCCM)	Financial Collateral Comprehensive Method for SFTs covered by Master Netting Agreement	Internal Models Approach for SFTs covered by Master Netting Agreement	Impact in LGD	Double Default Framework	Substitution Approach	Substitution Approach

Source: EBA (2018a)

Once the bank has established the value of its credit risk protection, the exposure should be regarded as split into the secured balance and the unsecured balance. For fully and partially secured exposures, banks are expected to review regularly the collateral value in line with the NPL Guidance (ECB 2017 and EBA 2018b), and to consider any changes in a timely manner in the context of the provisioning expectations. For unsecured exposures, banks are required to fully provision the exposure 2 years after default. For secured exposures, the prudential backstop provision amounts to 40% after three years, 55% after 4 years, 70% after 5 years, 85% after 6 years, and 100% after 7 years.

Figure 2: Blended approach for new NPEs in scope



Source: ECB (2018)

Loan loss provision under IFRS 9 accounting

The revised IFRS 9 framework came into action in 2018. It addresses the way banks value loans and other financial instruments that are not subject to 'mark-to-market' accounting. It requires entities to consider future events and forecasts in determining credit loss provisions and requires entities to place financial instruments into one of three distinct risk buckets. Under the preceding IAS 39 framework financial instruments were designated as impaired or unimpaired. Unimpaired instruments under IFRS 9 are now designated as either Performing (Stage 1) or Underperforming (Stage 2), whereas impaired or non-performing instruments are designated Stage 3.

For loans in Stage 1, provisions are required based on one year expected credit losses ($1y\ ECL = EAD * 1y\ PD * LGD$)³. Once a loan has experienced a significant increase in credit risk, it should be moved to Stage 2 with provisions calculated based on lifetime ECL including the lifetime probability of default. Estimated provisions for non-performing loans in Stage 3 are also based on lifetime losses.⁴

³ EAD stands for exposure at default, PD is the probability of default, and LGD the loss given default

⁴ Since Stage 3 loans are non-performing and defaulted by definition, Stage 3 provisions are generally higher than Stage 2 and approximately Stage 3 ECL equals $EAD * LGD$.

Regulatory risk parameters under Basel III/IV

Under Basel II-IV, banks are provided with a menu of approaches to calculate their credit risk capital requirements for unexpected losses. Many banks apply the simpler standardised approach, in which supervisors provide all the inputs for banks to calculate their regulatory capital requirements for all credit risk including non-performing loans. Under this approach, banks cannot use internal models to calculate regulatory capital requirements.

If supervisors allow a bank to use an internal ratings-based (IRB) approach, the bank can use its internal models to estimate credit risk capital requirements. There are two main IRB approaches: Foundation IRB (F-IRB) and Advanced IRB (A-IRB). Under A-IRB, banks have more discretion to estimate credit risk parameters than under F-IRB, though this discretion is subject to certain modelling constraints. Supervisors will typically grant approval for the IRB approaches only to the largest and most sophisticated banks, on the basis that they have the capacity to develop and maintain reliable models to measure credit risk.

In contrast, IFRS 9 provides a one-size fits all approach. It requires all banks to use their internal models to calculate expected credit losses. Hence since 2018, all banks subject to international accounting standards are required to use internal models to estimate expected credit losses under forward-looking scenarios, whereas before IFRS 9 only the more sophisticated larger banks would develop internal models to quantify credit losses.

While IFRS 9 does not prescribe the use of a loss given default (LGD) parameter for the determination of ECL, many banks use LGD as well as EAD and PD known from the Basel framework to estimate expected credit losses ($ECL = EAD \cdot PD \cdot LGD$). Whereas IFRS 9 ECL need to be unbiased estimates and calculated based on all available information using forward looking scenarios (also known as point-in-time), Basel risk parameters are required to be conservative and through-the-cycle.

EBA (2018b) lays out the guidelines for the estimation of PD and LGD risk parameters applicable from January 2021. Banks should estimate their own LGDs based on their own loss and recovery experience, as it is reflected in historical data on defaulted exposures. Banks may supplement their own historical data on defaulted exposures with external data. Banks should not derive their LGD estimates only from the market prices of financial instruments, including, but they may use this information to supplement their own historical data. The methods used in the LGD estimation should be consistent with the collection and recovery policies adopted by the institution and should consider possible recovery scenarios as well as potential differences in the legal environment in relevant jurisdictions.

Requirements on the data and estimation of LGD models

The requirements on data used for LGD estimation will increase significantly. The reference data set used by banks to calibrate LGD models should contain at least the following information (EBA 2018b, cf 109):

- a. obligor-related, transaction-related and institution-related risk characteristics as well as external factors that are potential risk drivers at the relevant reference dates [..];
- b. moment (date) of default;
- c. all default triggers that have occurred, including both past due events and unlikeliness to pay events, even after the identification of default; in the case of exposures subject to distressed restructuring the amount by which the financial obligation has diminished calculated in accordance with the EBA Guidelines on the definition of default;
- d. the outstanding amount of the exposure at the moment of default including principal, interest and fees;
- e. the amounts and timing of the additional drawings after default;
- f. the amounts and timing of write-offs;
- g. the values of collaterals associated with the exposure and, where applicable, the type of valuation (such as market value or mortgage lending value as defined in points (74) and (76) of Article 4(1) of Regulation (EU) No 575/2013), date of valuation, a flag of whether the collateral has been sold and the sale price;
- h. information on any dependence between the risk of the obligor and the risk of the collateral or collateral provider;
- i. the types, amounts and maturities of unfunded credit protection including the specification and credit quality of the protection provider;
- j. the amounts, timing and sources of recoveries;
- k. the amounts, timing and sources of direct costs associated with recovery processes;
- l. a clear identification of the type of termination of the recovery process;
- m. where applicable, currency mismatches between two or more of the following elements: the currency unit used by the institution for financial statements, the underlying obligation, any funded or unfunded credit protection and any cash flows from the liquidation of the obligor's assets; [and the]
- n. amount of realised loss.

Any sale of credit obligations should be included in the LGD estimation in a manner appropriate to the LGD estimation methodology considering all the following conditions (EBA 2018b, 119):

- a. where institutions regularly sell credit obligations as part of their recovery processes, they should appropriately reflect the observations related to credit obligations subject to the sale in the model development process;
- b. where institutions do not regularly sell credit obligations as part of their recovery processes and the allocation of the part of the price related to collaterals is too burdensome to make or too unreliable, they may decide not to take these observations into account in the process of model development;
- c. institutions should not treat recoveries from the sales of the secured credit obligations as recoveries realised without the use of collaterals unless they can demonstrate that the recoveries related to these collaterals are immaterial;
- d. in any case institutions should include all observations, including the sales of credit obligations, in the calculation of long-run average LGD.

Institutions should identify and analyse potential risk drivers that are relevant to their specific circumstances and to the specific characteristics of the type of exposures covered by the rating system. Potential risk drivers analysed by institutions should include the following (EBA 2018b, 121):

- a. transaction-related risk characteristics, including type of product, type of collateral, geographical location of the collateral, unfunded credit protection, seniority, Loan-to-Value ratio (LTV), exposure size, seasoning, and recovery procedures;
- b. obligor-related risk characteristics, including, where applicable, size, capital structure, geographical region, industrial sector, and line of business;
- c. institution-related factors, including internal organisation and internal governance, relevant events such as mergers, and the existence of specific entities within the group dedicated to recoveries;
- d. external factors, including interest rates, legal framework and other factors influencing the expected length of the recovery process.

For the calculation of economic loss, banks should discount all recoveries, costs and additional drawings after the moment of default using an annual discount rate composed of a primary interbank offered rate applicable at the moment of default increased by an add-on of 5%-points. For this purpose, the primary interbank offered rate should be considered the 3-month EURIBOR or a comparable liquid interest rate in the currency of the exposure (EBA 2018b, 143).

A-IRB banks should assign an Economic Loss Best Estimate (ELBE) and an LGD in-default estimate to each defaulted exposure for their regulatory capital calculations. For the ELBE and LGD in-default estimation, institutions should analyse the potential risk drivers referred to in paragraph 121 not only until the moment of default but also after the date of default and up to the date of termination of the recovery process. Institutions should analyse also other potential risk drivers that might become relevant after the date of default, including the expected length of the recovery process and the status

of the recovery process. Institutions should use the values of risk drivers as well as the values of collateral to the adequate reference dates.

Contrary to the LGD, the ELBE should not contain any margin of conservatism. Banks should consider economic factors in their ELBE estimates, including macroeconomic and credit factors, relevant for the type of exposures under consideration. Banks may use specific credit risk adjustments as ELBE estimates.

For considering the possible adverse change in economic conditions during the expected length of the recovery processes the LGD in-default should reflect at least downturn conditions, where the estimates of LGD in-default that are appropriate for an economic downturn are more conservative than the long-run average LGD for defaulted exposures.

Relevance of Regulatory Disclosure for the Valuation and Trading of NPL

This article has summarized the regulatory and accounting requirements regarding the treatment and reporting of NPL by European banks. Investors who want to value and acquire NPL must project future recovery cash flows for a net present value analysis. For that investors rely on the information provided by the seller and their own experience with working out NPL. Banks who improve their data for internal model building will be in a better position to provide relevant and comprehensive data to investors on NPL portfolios offered for sale.

Unfortunately, there is a lack of detailed public information about bank loan recoveries creating a barrier to entry for new investors in the NPL market. Sellers of NPL should provide investors with historical collection cash flows on the asset offered. The EBA NPL transaction data template specifies a table for historical collection cash flows. However, for newly defaulted loans no historical collection data will be available and for well-seasoned loans that have been in default for more than three years only three years of historical collections are required by EBA. In addition, the loans for sale may have been selected according to their historical collection characteristics and may not be representative for other loans in the same asset class.

In all these cases, investors will benefit from data covering a broader universe of NPL than those offered for sale. We highlight that bank regulatory disclosures especially the risk parameters LGD, LGD in-default, as well as IFRS 9 stage 3 loan loss provisions (LLP) and coverage ratios can provide high-level benchmark data of expected recoveries. The reported risk parameters will not be a useful proxy for fair market value as banks are not required to discount recovery cash flows for LGD or LLP at the current market rate. However, in the current low interest rate environment, the risk parameters can serve as a useful benchmark value for undiscounted expected ultimate recoveries, a key component in the valuation of NPL. Bank sellers can choose to disclose not just their risk estimates but also the underlying reference data sets from which the risk parameters are derived. For instance, the

anonymized loan loss data of Global Credit Data (www.globalcreditdata.org) pooled from a large number of major internal banks could help investors to better understand wholesale loan recovery cash flows.

For more detail on the use of loan-level data for the valuation of NPL please refer to our dedicated methodology paper NPL Markets (2019a). Bespoke loan and collateral data tapes including detailed recovery cash flows can be standardized and mapped to the EBA NPL data template by the data mapping tool provided by NPL Markets. The collection and use of historical recovery cash flow data is described further in NPL Markets (2019b).

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