NPLMARKETS

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Impact of the Prudential Backstop on Bank's Balance Sheet

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Overview

Whilst the COVID-19 pandemic is dominating all NPL related news, it's easy to forget about impending new regulation concerning Non-Performing Loans (NPL). From 2021 new measures that set minimum capital coverage requirements for NPL across Europe will come into place. Known as the Prudential Backstop, these regulations are designed to incentivise banks to remove NPL sitting on their balance sheets.

In this paper we will demonstrate the impact of the Prudential Backstop on capital consumption for unsecured bank loan exposures using a case study. In addition, we illustrate that the Prudential Backstop makes it more interesting for banks to dispose of NPL positions.

How NPL affect the bank's balance sheet

The Global Financial Crisis (GFC) taught us that a rapid increase in bad loans can have very detrimental and potentially terminal effects upon banks. High NPL tie up bank capital that could otherwise be used to increase lending, reduce bank profitability, and raise funding costs, thereby dampening credit supply[1]. Based on the IMF COVID-19 macroeconomic forecasts, the NPL ratios for many countries are likely to increase to their 2015 peak[2], and we expect that banks will experience similar challenges to the ones faced in 2009.

Regulatory framework

The Basel framework distinguishes between Internal Ratings Based (IRB) banks and Standardised (SA) banks. All banks have to hold loan loss provisions against their exposures. The Basel II framework

[1] https://www.imf.org/external/pubs/ft/sdn/2015/sdn1519.pdf
[2] Forecasting NPL ratios after COVID, Heppe, 2020

defines "total eligible provisions" under the IRB approach as the sum of all provisions (e.g. specific provisions, partial write-offs[3], portfolio-specific general provisions such as country risk provisions or general provisions) that are attributed to exposures treated under the IRB approach. Under the IRB approach, all exposures are measured gross of specific provisions and partial write-offs. Thus, neither specific provisions, partial write-offs nor general provisions are deducted from the exposure at default (EAD), which IRB banks use to calculate their risk weighted assets[4].

Under the recent IFRS 9 account framework all loans require provisions based on expected credit losses, with NPL attracting the lion's share. Provisions equal the expected losses on the exposure, but prudential regulation requires banks also to account for unexpected losses. These unexpected losses are captured with the Core Tier 1 (CT1) capital requirements through the risk weighted assets (RWA) on the loan. For performing loans the RWA is determined through the supervisory formula with Probability of Default (PD), Loss Given Default (LGD) and maturity as the main parameters. For calculating the RWA of NPL under the IRB approach banks only need the LGD and Expected Loss Best Estimate (ELBE).

The standardised approach distinguishes between General Provisions (GP) and Specific Provisions (SP) to account for expected losses. Further the exposures are net of specific provisions (Basel II paragraph 52) and gross of general provisions. The required additional CT1 capital is calculated based on the RWA of the net EAD. The Risk Weight (RW) is 100% if the provisions are no less than 20% of the unsecured part of the exposure value and 150% otherwise.

Accounting Framework

During the GFC the incurred credit loss approach was still applicable and losses were only accounted for when they materialized. Given the rapid increase in losses during the GFC, the provisions were deemed "too little and too late". As a result new accounting standards were introduced. IFRS 9 entered into force on 1 January 2018. Its most significant development is the change from an incurred credit loss to an expected credit loss (ECL) approach. The United States also introduced an expected loss based approach to loan loss provision called Current Expected Credit Losses to improve the general accounting principles.

The Prudential Backstop: new regulation for NPL

Since 2015 banks have made a significant effort to decrease their stockpile of NPL, which has resulted in a decline from a 6% NPL ratio in 2015 to 2.7% in 2019 across Europe. In June 2019 the Chair of the Supervisory Board of the ECB, Andrea Enria, however hinted on new measures during his speech in

[3] EBA Single Rulebook
[4] https://www.bis.org/bcbs/publ/d385.pdf

Frankfurt by stating *"So, is the problem solving itself? No, it is not. Policy initiatives have played, and will continue to play, a key role in pushing banks to clean up their balance sheets."*

Whilst the stock of NPL declined by more than 50%, the average coverage ratio only increased slightly from 43.6% to 44.4% in that same period. Both EU legislators and the European Central Bank (ECB) have continued to increase pressure to address the NPL issue by implementing new prudential and supervisory backstops for NPL in 2019. The aim of the reform is to ensure that banks set aside sufficient own resources for when loans become and remain non-performing and to create appropriate incentives to avoid the accumulation of NPL on the balance sheet. To facilitate a smooth transition towards the new Prudential Backstop, the new rules should not be applied to exposures originated before 26 April 2019 and will be effective per January 2021. The main change is the introduction of minimum coverage levels for NPL under the Pillar 1 bank capital framework. In Table 1 we see the minimum coverage levels for unsecured and secured loan categories.

Minimum coverage level (in %)									
After year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Unsecured	0	35	100						
Secured by other CRR eligible collateral	0	0	25	35	55	80	100		
Secured by immovable collateral	0	0	25	35	55	70	80	85	100

Table 1: NPL Prudential Backstop

We compare the minimum coverage with the current level of provisions in different countries and observe significant differences between countries. Figure 1 shows that some countries in Central and Eastern Europe have well above 60% coverage versus only 25.5% in the Netherlands. Some of the differences can be explained by a different asset class mix and risk profiles. It is expected that the introduction of the Prudential Backstop will increase these percentages significantly. However it's not clear if the countries that currently have relatively low provisioning will also see the sharpest increase as they generally have quick workouts for their NPL, hence the floor for unsecured loans could be largely irrelevant after 3 years.

COVID-19 will increase NPL materially, hence the treatment of NPL will become even more relevant going forward. The elevated coverage due to the Prudential Backstop should lower the bank's book value of NPL which should make it easier to sell these exposures to investors or transfer to a bad bank vehicle where available.

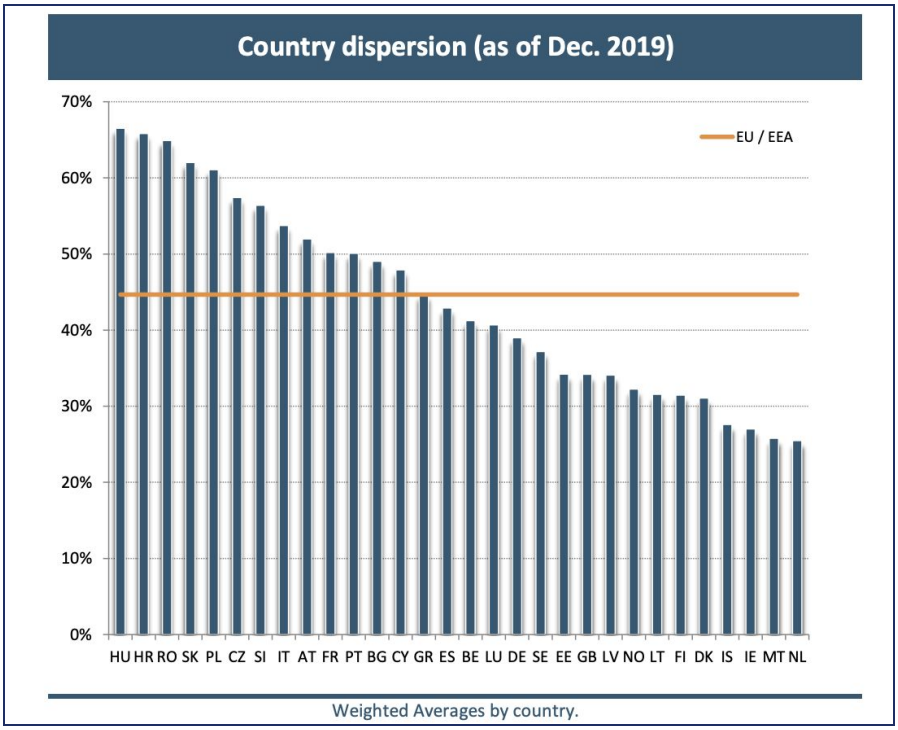

Figure 1: Coverage ratios in December 2019 per country

Other regulatory developments for NPL: Basel IV and TRIM

Whilst the focus of this article is the impact of the Prudential Backstop on the bank balance sheet, we should also mention the relevance of Basel IV and TRIM for NPL. Since Basel II and the introduction of the IRB approach many banks rely heavily on their internal models. Banks are allowed to estimate the parameters needed for calculating RWA and ultimately regulatory capital. More recently, however, the internal models from banks are subject to increased scrutiny and criticism. Supervisors are concerned that internal models are inconsistent across institutions and juristions. Both the Targeted Review Internal Models (TRIM) as well as Basel IV are a response to these concerns. With the TRIM project the ECB has been conducting thorough on-site inspections on bank's models. With Basel IV banks are also less flexible in applying their own risk parameters. Basel IV introduces new input floors for PD and LGD and also replaces certain internal parameters with fixed parameters.

The estimated impact of Basel IV on RWA in Europe is predicted to range between 5% and 73%. As shown in Figure 2, jurisdictions with currently typically low LGD's are expected to show the highest increase. This is mainly due to the introduction of the LGD floors. For TRIM we have seen risk weight

add-ons vary between 0% and 20%, but it's likely that those numbers will reduce when banks update and improve their models.

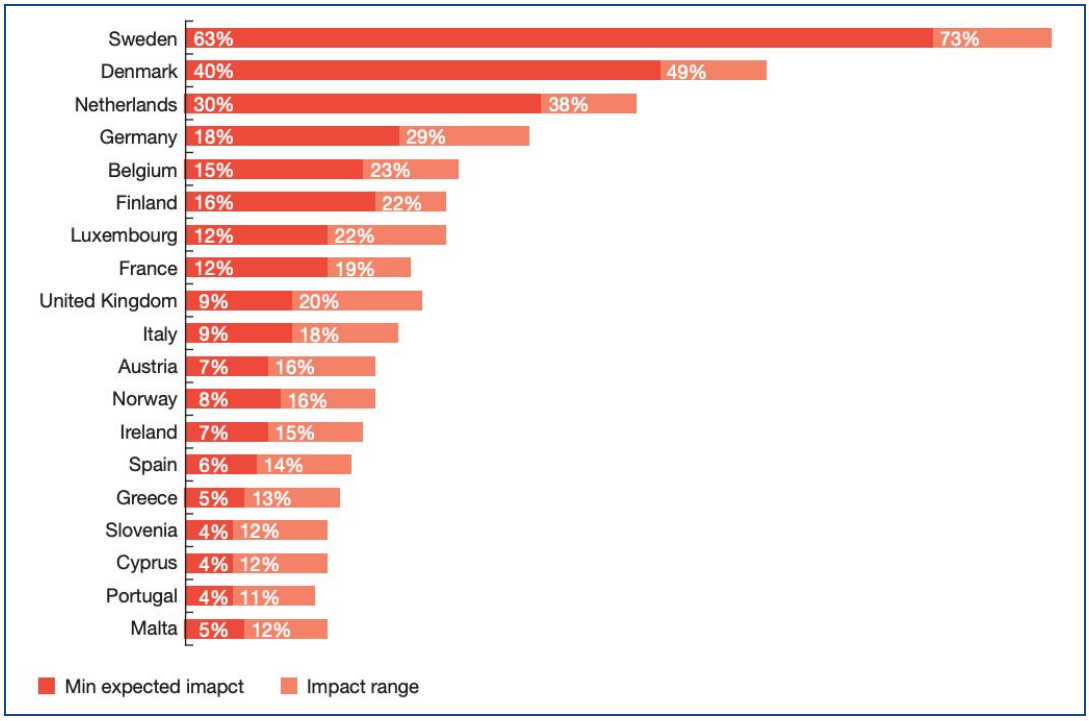

Figure 2: Expected Basel IV RWA impact

Effect of regulatory changes on NPL transactions

As the growth of bank NPL disposals has increased significantly in southern European countries, so has the demand from investors searching for yield. The supply before the COVID-19 lockdown met with strong investor demand and pricing has become the main area of focus and the key breaking point in any transaction.

The methodology that banks use to value distressed loans is materially different from NPL investors. The IFRS 9 loan loss provision for NPL (Stage 3) is built on the lifetime expected credit loss based on recovery cash flows discounted at the effective interest rate. Investors, however, demand a higher rate of return, which partly reflects the higher uncertainty of the future cash flows and partly reflects their lower financial leverage compared to banks and higher cost of capital. In addition, banks expense the indirect costs of managing NPL in each accounting period in which they occur, whereas investors deduct these costs from the purchase price upfront. Hence, the market for NPL is challenged by substantial differences between the net book value (NBV) and available market prices from investors.

The difference is exaggerated by the fact that the effective interest rate does not reflect the true cost of capital of holding the NPL for the bank[5].

Regulatory pressure in the form of the Prudential Backstop and other measures should help to close this pricing gap. With the help of a simplified case study we want to illustrate the impact of the Prudential Backstop on the capital consumption of loans on the balance sheet of the bank. We estimate a fair market value using our valuation tools and calculate the break-even price for the bank.

Input Assumptions	
Gross Book Value	€100m
Year of Default	2019
Type Loan	Unsecured
Expected Remaining Recovery	25%
Weighted Average Life	4 yrs
LGD	80%
Loan Loss Provisions	75%

Table 2: Example portfolio characteristics

In Table 2 the Expected Remaining Recovery is assumed to be used by the bank to amortize the Gross Book Value and by the investor to estimate the market value. The Weighted Average Life represents the cash flow weighted expected timing of recoveries. Further, the LGD and Loan Loss Provisions are used for the bank's capital calculations.

Market valuation

Using the assumptions in Table 2 above and several additional assumptions (e.g. geographic location, borrower age, employment type, etc.) that do not affect the regulatory capital impact of the transaction, we calculate a market valuation as shown in Table 3 (below). In this example, the price range should be between 22 and 14% of Gross Book Value if we use the investment criteria for a hypothetical investor based on an internal rate of return equal to 10%.

Scenario	Baseline	Optimal	Adverse	Sev. Adverse
Unsecured Recoveries	26.0%	30.0%	22.0%	18.0%
NPV	20.3%	22.3%	16.6%	13.8%

Table 3: Estimated market valuations in different macroeconomic scenarios. Numbers are expressed as a percentage of Gross Book Value.

[5] NPL Markets - How to value a bank loan in crisis Heppe, 2020

Bank valuation without Prudential Backstop

We assume the bank owning this portfolio is subject to the IRB approach. For defaulted exposures under this regime the risk weight is calculated as:

RW(Default IRB) = (Loss Given Default - Expected Loss Best Estimate) * 1250%.

For this portfolio we assume that the ELBE is equal to the loan loss provision. The risk weight of this portfolio amounts to 62.5%[6] with RWA of €62.5m. Based on a 12% target CT1 ratio the total CT1 amount allocated by the bank equals €7.5m and a total capital coverage of €82.5m[7].

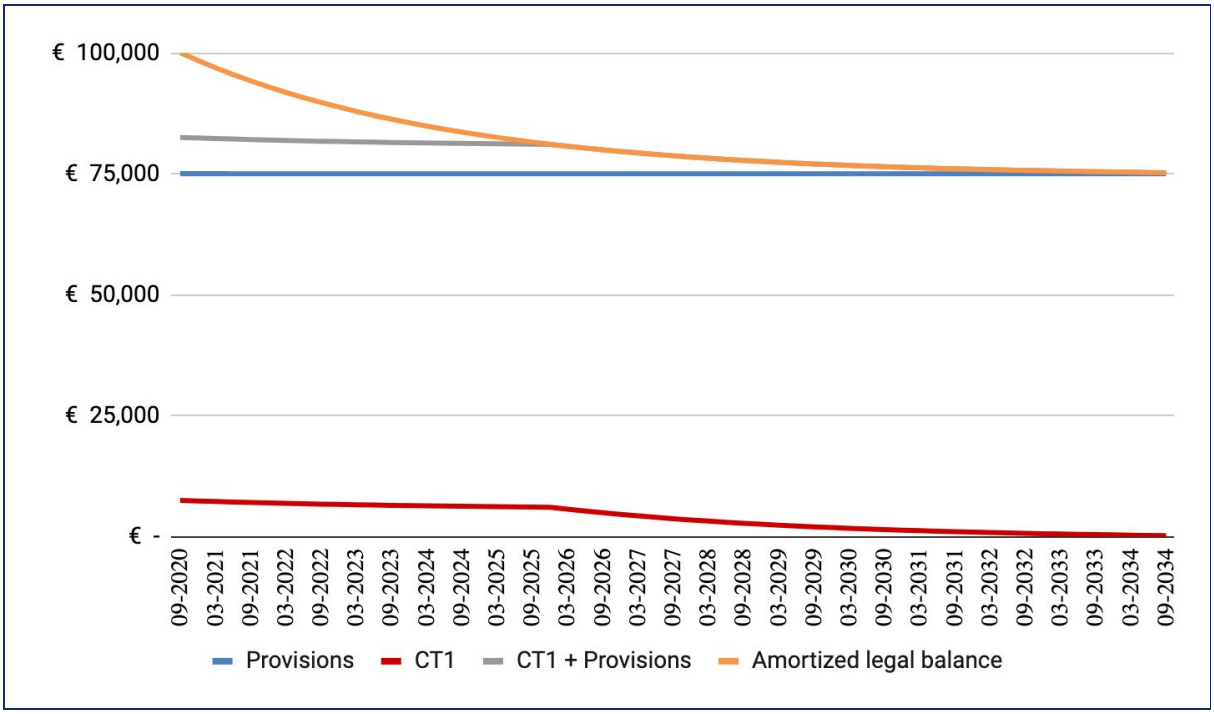

Chart 1: Capital and Provisions versus GBV

In Chart 1 we present how the different amounts evolve over time. The loan amortises to roughly 75% of the original amount based on the assumed recoveries. For simplicity we assume that the provisions stay at 75% throughout the lifetime of the loan which results in a sharper decline in CT1 after 5 years as the loan reaches 100% coverage.

[6] (80% - 75%) * 1,250%
[7] Total Coverage = Provisions + CT1 = €75 + €7.5 = €82.5m

By selling this portfolio the bank would save the future capital expenses that sum up to €2.4m discounted at the 10% hurdle rate with an expected time to resolution of 4 years. The break even sale price for the bank should be:

Bank Break-even Price = Net Book Value - Discounted Capital Expenses
- Discounted Workout Cost - Funding Cost

Here, we disregard any potential savings from workout and funding costs. For this transaction the break-even price for the bank would be €22.6m (22.6% of GBV)[8].

Impact of the Prudential Backstop on the transaction

We calculate the impact of the Prudential Backstop on unsecured NPL for this specific example. As the portfolio is provisioned for 75%, the Prudential Backstop minimum coverage level requirement will only have an impact three years after default.

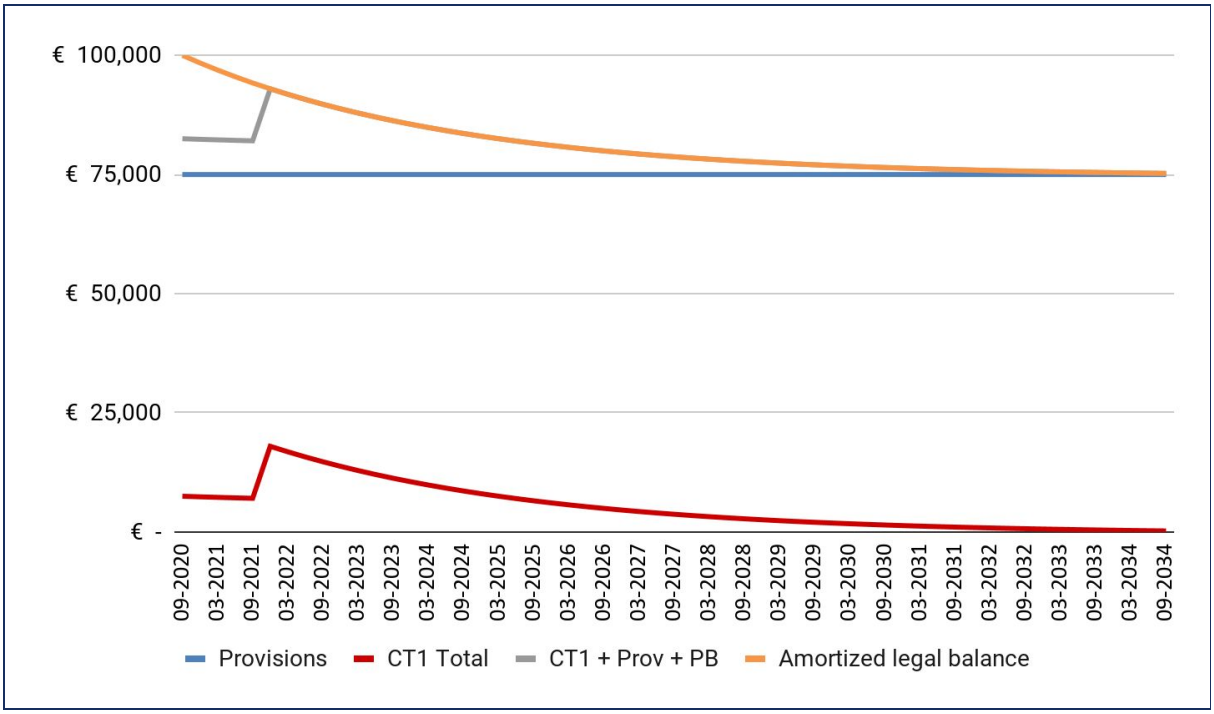

Chart 2: Capital after Prudential Backstop and Provisions versus GBV

[8] NBV - Capital Gain = €25m - €2.4m

By comparing Chart 2 with Chart 1 the impact of the Prudential Backstop becomes clear. Obviously this capital increase has an effect on the break-even price for the bank. In this example the additional discounted capital expense related to the Prudential Backstop equals €1.5m. This means an increase of discounted capital expense due to the Prudential Backstop of over 60%[9]. As a consequence, the break-even price declines from €22.4m to €20.8m, which could be enough to close the pricing gap between buyer and seller.

Conclusion

Since the GFC banks have been incentivised by regulatory pressure combined with positive economic conditions to reduce the amount of NPL on their balance sheets, whether through securitizations or direct disposals to investors. However, the COVID-19 pandemic is now establishing the macroeconomic conditions for a rapid return to the NPL ratios seen in 2015 for many countries. The Prudential Backstop will set minimum capital requirements for exposures that defaulted after April 2019, increasing regulatory pressure at a time when economic conditions are deteriorating. Whilst short-term uncertainty has so far placed many of the 2020 Q1 & Q2 pipeline of NPL transactions on hold, banks now face significant pressure to clean up their balance sheets and many are expected to increase NPL disposals in the medium to long-term.

The Prudential Backstop is expected to support the market for NPL. The pricing gap that has derailed many transactions in the past becomes less constraining to a bank that experiences a rapidly increasing capital consumption from its stock of NPL. This is clear from our case study, where the discounted 4 year capital consumption increases from €2.4 million to €3.9 million when the Prudential Backstop is taken into account. The Prudential Backstop remains on the agenda to be implemented in January 2021. However, it is possible that further COVID-19 measures will be announced and may impact the implementation. Given the expected pile up of new NPL after the developing recession it will be important for banks to implement a reliable methodology to quickly and effectively offboard their NPL.

[9] Increase from 2.4m to 3.9m (62% increase)

About NPL Markets

NPL Markets is an innovative marketplace for illiquid loan trading, operating throughout Europe, that is based upon four pillars: Data preparation, Marketplace execution and investor reach, Valuation, and Reporting. NPL Markets helps sellers of NPL to prepare and standardize transaction data and select the optimal transaction portfolio based on balance sheet impact. Our platform also supports investors with deal screening and initial valuation with online revaluation and reporting tools.

With the help of its proprietary data mapping and transformation tool NPL Markets helps financial institutions to map their data to the data formats defined by EBA for NPL transactions, EBA for the valuation in resolution, and by ESMA for securitisation disclosures. Once standardized and validated the loan-level data can be uploaded to the NPL Markets valuation tool to conduct a detailed discounted cash flow analysis using pre-populated pricing parameters in different macroeconomic scenarios across all major asset classes.

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