Measuring the procyclicality of impairment accounting regimes: a comparison between IFRS 9 and US GAAP

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We compare the cyclical behaviour of various credit impairment accounting regimes, namely IAS 39, IFRS 9 and US GAAP. We model the impact of credit impairments on the Profit and Loss (P&L) account under all three regimes. Our results suggest that although IFRS 9 is less procyclical than the previous regulation (IAS 39), it is more procyclical than US GAAP because it merely requests to provision the expected loss of one year under Stage 1 (initial category). Instead, since US GAAP prescribes that lifetime expected losses are fully provisioned at inception, the amount of new loans originated is negatively correlated with realized losses. This leads to relatively higher (lower) provisions during the upswing (downswing) phase of the financial cycle. Nevertheless, the lower procyclicality of US GAAP seems to come at cost of a large increase in provisions.

In the early years of the 21st century, the accounting of financial assets was still guided by International Accounting Standard (IAS) 39, which prescribed the use of the incurred loss model for the recognition of credit losses in the profit and loss (P&L) account. As such, if there was objective evidence that an impairment loss on a loan had been incurred, its amount needed to be calculated, although losses expected because of future events were not recognized. Following the financial crisis of the late 2000s, concerns were raised about this method. More concretely, recognizing losses on a financial asset after they had been incurred was widely criticized for being "too little, too late". In parallel, procyclicality in banks' financial soundness and credit supply is a well-known issue with many roots, such as the tendency to make a more lenient assessment of risk in good times than in bad ones, the amplification of shocks led by varying collateral valuations and deterioration in managerial ability.
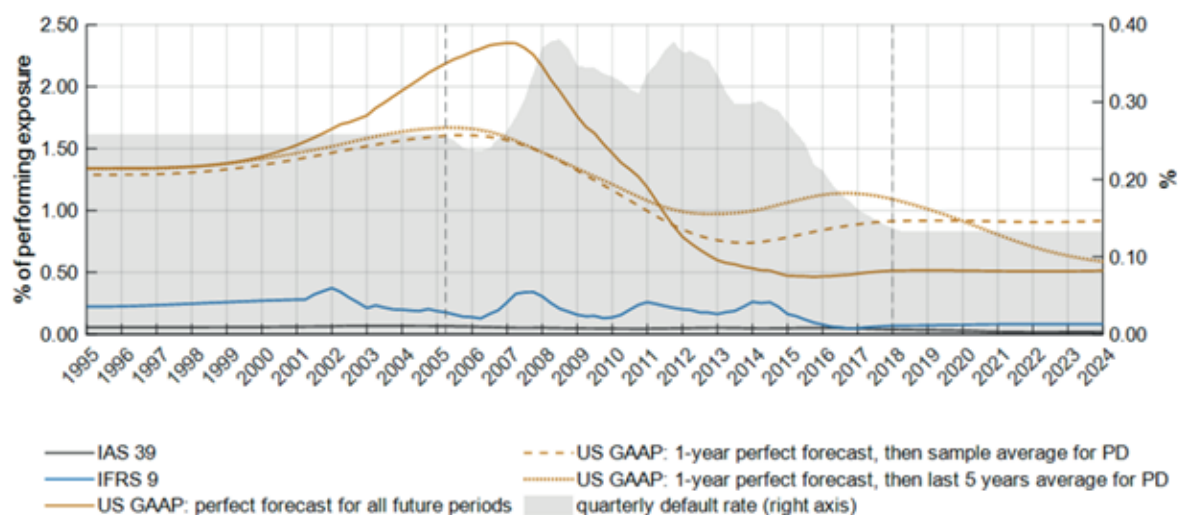
In response to such concerns, the G20 issued a clear mandate to reform international prudential and accounting standards, endorsing the Financial Stability Forum's report on addressing procyclicality in the financial system (FSF, 2009). The document recommended replacing the incurred loss method of provisioning with a more forward-looking expected loss approach using statistical information to identify probable future losses. The result was the publication of International Financial Reporting Standards 9 (IFRS 9). According to the new rules, a financial institution needs to recognize the expected loss for any financial asset.

The degree to which the expected credit loss (henceforth, ECL) has to be recognized depends, however, on the severity of credit quality deterioration. At origination or purchase of the asset, and as long as the condition for classification into other stages does not subsist, the value correction has to account for the expected loss for the following 12 months (Stage 1). However, if there has been a significant increase in the risk of the financial instrument from inception (Stage 2) or default (Stage 3), the institution will recognize the expected loss for the full expected lifetime. Conversely, US GAAP accounting standards follow the Current Expected Credit Loss (CECL) approach and try to prevent under-provisioning by immediately recognizing, at the moment of origination or purchase of any asset, the full amount of credit losses expected over the assets' foreseeable lifetime.

This paper contributes to the literature that aims at establishing whether forward-looking accounting standards are actually more procyclical. There is a lack of consensus among the research conducted to date on this issue. Earlier work as well as policymakers agreed on the fact that forward-looking provisioning would reduce procyclicality; some examples are Balla and McKenna (2009), Laeven and Majnoni (2003) or Wezel *et al.* (2012). More recent contributions, however, point in the opposite direction: Abad and Suárez (2017) find that under the two forward-looking accounting standards, the impact of an exogenous increase in substandard loans on P&L and capital is greater

Figure 1

SIMULATION EXERCISE: STOCK OF PROVISIONS

IAS 39
IFRS 9
US GAAP: perfect forecast for all future periods
US GAAP: 1-year perfect forecast, then sample average for PD
US GAAP: 1-year perfect forecast, then last 5 years average for PD
quarterly default rate (right axis)

than under the incurred loss approach (with the IFRS 9 impact being the greatest). They conclude, therefore, that forward-looking approaches may amplify the effect of an unexpected increase in risk, since they concentrate the impact of future losses on P&L at the beginning of a contractionary phase of the credit cycle, possibly determining negative feedback effects on credit supply just as economic conditions start to worsen.

In this paper, we will focus exclusively on the dynamics of P&L impact under the three different accounting standards (IAS 39, IFRS 9 or US GAAP) with a simulated mortgage portfolio. In the context of this paper, procyclicality is defined as the correlation with the contemporaneous evolution of credit quality, proxied by realised losses; however, it can also be defined in terms of correlation with macroeconomic variables, usually with GDP.

We propose an exercise which simulates provisions and losses under different regimes for a fictional portfolio composed only of mortgages with 20-year maturity over the years 2006-2018. Average default rates for mortgages are estimated from the Italian central credit register (Centrale dei Rischi, CR). In this dataset, however, it is not

possible to separately identify multiple exposures toward the same subject nor the contractual maturity of mortgages at origination, which makes it difficult to estimate the relationship between default rates and loan age. We therefore obtain the latter using data from the European Data Warehouse (EDW), composed of more than 9 million European loans that are part of residential mortgage-backed securities (RMBS). Data on new loans for house purchases in Italy is extracted from the MFI Interest Rate Statistics (MIR), available at the European Central Bank. In our simulation exercise, in each period new loans are originated for a normalized amount that tracks the historical series of new loans for house purchases.

We model the impact of credit impairments on P&L using the different accounting regimes under various assumptions on how financial institutions incorporate information in the expectation for lifetime losses. As expected, provisions under IFRS 9 forecast realized losses approximately one year in advance (Figure 1), with the provisions for loans in Stage 1 accounting for the greatest share of the impact on P&L: provisions for Stage 2 loans do not have a significant effect. The impact on P&L under IFRS 9, therefore, appears less procyclical than under the previous regime (IAS 39,

where it just coincided with realized losses), but still likely to hit financial institutions when a contractionary phase of the credit or business cycle has already started. Provisions under US GAAP appear to be less cyclical then those required under IFRS 9 under all the scenarios considered. The lower procyclicality of US GAAP, however, comes at the cost of holding a larger stock of provisions at all times. In contrast with Abad and Suárez (2017), we find that forward-looking impairment accounting systems may allow to build up provisions in advance, smoothing out the impact of losses.

Our results suggest that, in order to reduce the cyclicality of impairments, it is preferable to use an accounting method that takes into consideration the expected loss of credit portfolios over the entire lifetime of the asset, i.e., the approach followed by US GAAP. In the latter case, since for each loan provisions made at the origination date account for its lifetime expected credit loss (ECL), overall provisions tend to increase with the flow of newly originated loans, ceteris paribus. Given that origination is negatively correlated with default rates, two opposite effects influence the dynamics of provisions. While a higher new loan origination rate tends to increase provisions during credit cycle's boom phases (and vice versa during crises), it is also possible that lifetime ECL is underestimated during credit booms, leading to insufficient provisioning at inception and subsequent adjustments in the provisions held for loans originated in previous periods. Thus, the degree of cyclicality of the impact on P&L under the US GAAP framework, and how it compares with IFRS 9, cannot be disentangled beforehand but depends on which effect is empirically stronger.

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