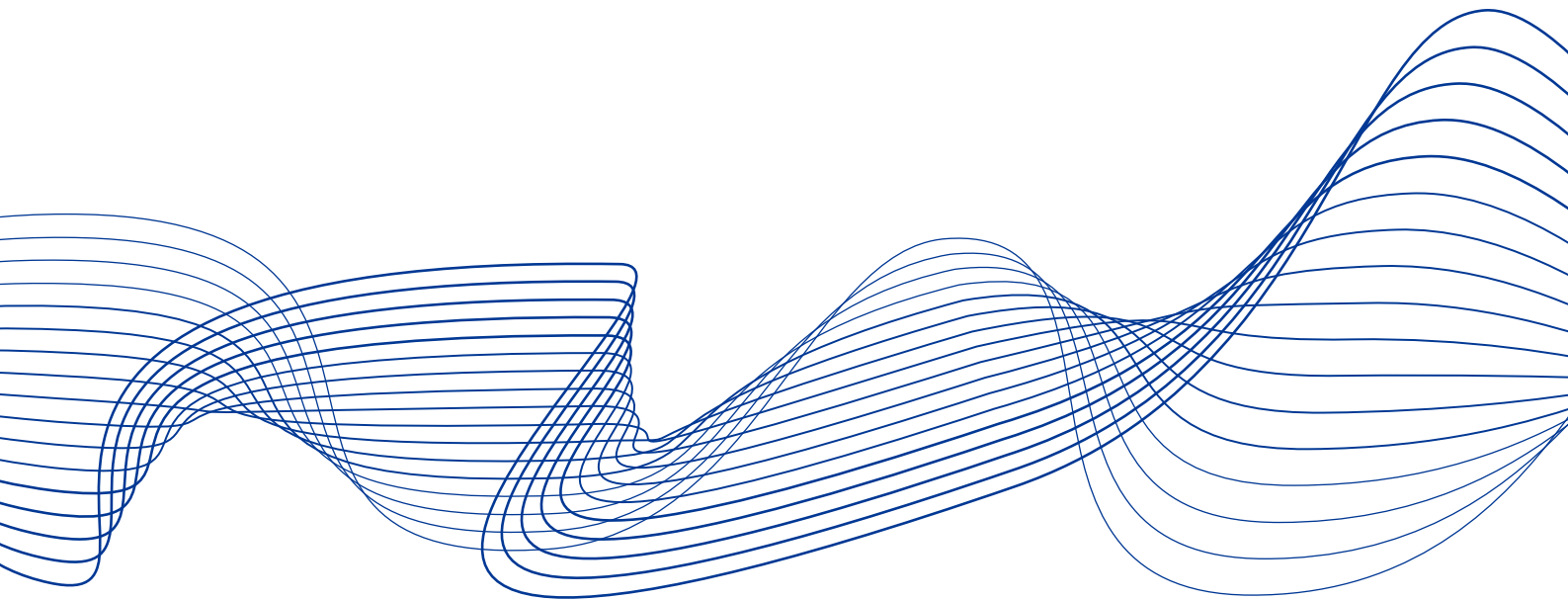


**Expected credit loss
approaches in Europe and
the United States:
differences from a
financial stability perspective**

January 2019



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Executive summary

In the aftermath of the global financial crisis, the leaders of the G20 urged accounting standard setters to reconsider the incurred loss model by analysing alternative approaches to recognising and measuring loan losses that incorporate a broader range of available credit information. In response to that request, accounting standard setters began developing expected credit loss (ECL) models which take account of a broad set of credit and macroeconomic information and have a more forward-looking nature. As a result of that work, the International Accounting Standards Board (IASB) issued International Financial Reporting Standard 9 (IFRS 9) in July 2014, which introduces an ECL approach, while the Financial Accounting Standards Board (FASB) issued Accounting Standards Codification (ASC) 326, which introduces the current expected credit loss (CECL) approach, in June 2016.

The ECL and CECL approaches¹ differ in several respects. The main difference is the fact that while the CECL approach mandates the calculation of lifetime expected credit losses for all financial assets under its scope since their inception, the ECL approach in IFRS 9 introduces a dual credit loss measurement approach whereby the loss allowance is measured at an amount equal to either the 12-month expected credit losses² for those financial assets classified in stage 1 or the lifetime expected credit losses for those assets classified in stages 2 (financial assets with a “significant increase in credit risk”) and 3 (“impaired financial assets”). Among the many other differences, it is worth referring to the consideration of financial assets at fair value through other comprehensive income (excluded in CECL) and to the treatment of loan commitments (more prudent in ECL).

When it comes to accounting for expected credit losses, one of the key aspects is the fact that the price of a loan when it is granted should already reflect the credit risk of the borrower at that moment, assuming the loan is adequately priced. Consequently, introducing compulsory loss allowances at the time of the loan’s inception could lead to a form of “double-counting” of expected credit losses. While the existence of such double-counting explains, at least partially, the decision of the IASB to define three stages in the ECL approach, public documentation suggests that the FASB may have considered other arguments when defining its CECL approach (Financial Accounting Standards Board, 2012 and 2016; American Bankers Association, 2013). First, a single-measurement approach to the calculation of expected credit losses throughout the life of a loan may have been considered easier to implement from an operational perspective, particularly for smaller and less sophisticated institutions. Second, the FASB has a long tradition of adopting a prudential approach in some of its accounting standards, and that has already been internalised by users and preparers of financial statements in the United States. Finally, the FASB’s decision to require lifetime expected losses on loan recognition (and, as a result, the more accurate measurement of the total amount of expected credit losses) could have been influenced indirectly by the moral hazard revealed by the global financial crisis, which was associated with the originate-to-distribute business model that was pursued by a number of US banks.

¹ The approaches set out in IFRS 9 and ASC 326 are both ECL in nature. However, for ease of reference, the approach set out in IFRS 9 will be referred to as “ECL”, whereas the term “CECL” will be used to refer to the approach set out in ASC 326.

² Intended as the credit losses that are expected to arise from default events in the following 12 months.



The purpose of this report is not to discuss the relative merits of IFRS 9 and ASC 326, nor to rank the two approaches or question the adoption of IFRS 9 in the EU. The objective of this report is instead to raise awareness of the potential consequences, from a financial stability perspective, of the fundamental differences between them, given that this could affect the way that banks provide credit to the real economy, manage their credit risk and compete in global markets, with the potential to bring about unintended consequences. With that in mind, the following considerations should be noted:

- Before considering financial stability as such, it is worth noting that the IASB and the FASB have differing views as regards the conceptual basis for accounting for credit losses, as well as the importance to be attributed to the practical implementation of accounting standards. In this sense, it could be argued that the ECL approach in IFRS 9 more accurately reflects the evolution of credit risk, limiting the double-counting of expected credit losses already priced in at the time of the initial recognition of a loan. The CECL approach, on the other hand, could be regarded as facilitating practical implementation by reporting entities, even if that increases the double-counting of expected credit losses at the time of loans' inception.
- In terms of cyclical behaviour, the limited literature available – including industry studies and academic studies such as Abad and Suárez (2017) and Krüger et al. (2018) – seems to show that the CECL approach may lead to higher impairment charges in normal times, while the ECL approach would have a larger impact at the time of the onset of a crisis (to the extent that the downturn is not anticipated well in advance). Consequently, lending to the real economy over a full cycle in those market segments where US and European banks compete directly may be affected by the differences between the expected impairment charges required by the ECL and CECL approaches. Under the ECL approach, lending in normal times could be less constrained by expected impairment charges – a fact which, if coupled with poor risk management practices, could incentivise lending to less sound borrowers. In a crisis, the impairment requirements in the CECL approach could again make new lending more costly than under the ECL approach (even for the soundest of borrowers); on the other hand, the impact of impairment charges on existing loans would be lower under the CECL approach than it would be under the ECL approach owing to the effect of migrating from stage 1 to stage 2 in the latter.
- Third, differences between the ECL and CECL approaches could also reflect differences between the EU and the United States in terms of banks' business models and sources of financing for the real economy. In this regard, while the application of a lifetime expected credit loss approach to European banks could in principle be regarded as sounder, proper consideration should be given to its potential implications for the real economy in the long term, given the decisive role that bank lending plays for households and non-financial corporations in Europe.
- A further consideration relates to the impact of those two different expected credit loss approaches in market segments where US and European banks compete directly (such as lending to large corporations and, to a lesser extent, investment banking). In principle, the analysis of the cyclical behaviour of the two approaches would tend to signal a relative advantage for EU banks, since they would face lower impairment requirements from their lending in good times (see, for example, McKinsey, 2017). Consequently, the lending conditions offered by banks may be different under the two approaches in order to better



reflect the expected evolution of impairment charges over the cycle: both the pricing and the volume of lending may be susceptible to change on these grounds. The extent of these theoretical effects will depend on the level of competition in the relevant market segment, on the market power of ECL and CECL adopters separately, and on individual banks' reactions to moves by direct competitors (whether they have scope, for example, to reduce the price of lending if other banks do so).

A more timely recognition of credit losses, combined with envisaged improvements to banks' credit risk management, is expected to make a significant contribution to financial stability. In practice, nonetheless, this assumption largely depends on the extent to which models can anticipate downturns and the borrowers which will be more severely affected by them (in line with the findings of Grünberger, 2012), which in turn generates modelling risk. In this regard, back-testing of models, even if not explicitly required by the standards, can be a powerful way of assessing and improving their predictive power. Furthermore, in the case of the ECL approach, the application of the concept of a "significant increase in credit risk" is important to ensure that the financial stability benefits of the expected credit loss approach are effectively reaped. Given a range of possible definitions for a "significant increase in credit risk", higher (i.e. less conservative) thresholds would lead to lower impairment charges in normal times and, as a result, higher charges in anticipation of downturns. Consequently, excessively high thresholds could hamper the early recognition of credit losses (which is something that IFRS 9 attempts to achieve). In contrast, lower (i.e. more conservative) thresholds could result in double-counting of expected credit losses that are already reflected in the fair value of the loan at the time of its inception, with possible side effects on the availability of credit and banks' profitability. It is therefore important that banks use appropriate criteria in determining that threshold in order to ensure a timely determination as to whether there has been a significant increase in credit risk following the initial recognition of a loan and, more generally, ensure that banks are able to properly adjust to the existing macroeconomic conditions at any time, strengthening financial stability.

Keywords: expected credit losses, financial stability, IFRS 9, CECL, procyclicality.

JEL codes: G21, M41, G28.



1 Introduction

In line with the mandate issued by the G20, the world's two main accounting standard setters (the IASB and the FASB) have designed expected credit loss models for financial assets. In the aftermath of the global financial crisis, the leaders of the G20 urged accounting standard setters to develop impairment models which would take account of a broad set of credit and macroeconomic information and would have a more forward-looking nature. As a result, the IASB issued IFRS 9 in July 2014, which introduces an ECL approach, while the FASB issued ASC 326, which introduces the CECL approach, in June 2016. IFRS 9 was adopted in the EU in November 2016³ and entered into force on 1 January 2018; ASC 326 is expected to come into force on 15 December 2019 for SEC filers and on 15 December 2020 for other institutions.

In July 2017, the ESRB issued a report on the financial stability implications of IFRS 9 (in response to a request by the European Parliament). That report described the ECL model set out in IFRS 9 and provided a – mostly qualitative – assessment of its impact from a financial stability perspective. It contained a high-level reference to the equivalent accounting standard in place in the United States, but did not provide detailed analysis of the possible financial stability consequences of the coexistence of two different accounting standards for expected credit losses.

The purpose of this report is to look in greater detail at the differences between the expected credit loss approaches set out in IFRS 9 and ASC 326.⁴ Drawing on the mandate given to the Exploratory Group on Accounting Developments and Financial Stability by the ESRB General Board, this report describes the main differences between the two approaches, looks at the considerations underpinning the decisions of the two standard setters and, also on the basis of recent academic studies, tries to assess the extent to which these differences can affect banks' financial performance measures, including capital ratios (see Section 2). Section 3 discusses these differences from a financial stability perspective.

It is important to keep in mind that this report should by no means be regarded as an attempt to rank the two approaches or question the adoption of IFRS 9 in the EU. There would be no sense in trying to rank these accounting standards, given the complexity and all the various nuances of the two approaches. The report adopts a descriptive approach in this regard, without any intention to identify one standard as better suited to financial stability than the other. Instead, the report focuses on identifying the potential financial stability implications of implementing two different accounting standards in the United States and the EU.

³ See **IFRS 9**.

⁴ Consequently, the report does not discuss the differences between IFRS 9 and equivalent national accounting standards, nor the way in which IFRS 9 and ASC 326 interact with prudential capital requirements.



2 Understanding the differences between the expected credit loss approaches in Europe and the United States

While the IASB and the FASB initially considered working together in response to the G20's request, they decided to go their separate ways in 2012. They realised that convergence was not possible, mainly for the following two reasons (see Section 2.2 for more details): (i) the existing practices set out in the US GAAP and the IFRS as regards accounting for credit losses were different, and those differing practices had a strong influence on stakeholders' perceptions; and (ii) prudential regulators in the United States have historically had greater influence in terms of determining loss allowances for financial reporting purposes. Differences between the business models typically employed by European and US banks may also have contributed to the decision to develop two different approaches.

This section discusses the main differences between the ECL approach in IFRS 9 and the CECL approach in ASC 326 from a qualitative point of view and offers some quantitative evidence of those differences. While a number of studies have looked at the differences between the ECL and CECL approaches (see Deloitte, 2016; Moody's Analytics, 2016; Pricewaterhouse Coopers, 2017), quantitative evidence on the extent of those differences is limited. The following subsections will cover these issues, as well as taking a more detailed look at the reasons why these approaches were selected by the IASB and the FASB. Understanding the motivations that led those two accounting standard setters to establish their respective models is important in order to have a more educated discussion regarding the potential financial stability impact of implementing two different expected credit loss approaches.

2.1 Qualitative description of the main differences

The main difference between the ECL approach and the CECL approach lies in the time horizon used for calculating expected credit losses for those financial assets included in stage 1 under IFRS 9.⁵ While the CECL approach requires the calculation of lifetime expected credit losses for financial assets in its scope since the inception of the loan, the ECL approach in IFRS 9 introduces a dual credit-loss measurement approach where the loss allowance is measured at an amount equal to either the 12-month expected credit losses⁶ for those financial assets classified in stage 1 or the lifetime expected credit losses for those classified in stages 2 (financial assets with a "significant increase in credit risk") and 3 ("impaired financial assets"). In conclusion, all other things being equal, the main difference between the two approaches would affect those financial assets which have not experienced a significant increase in credit risk and are classified under stage 1 in the ECL approach.

⁵ For a brief description of the ECL approach in IFRS 9, see, for example, European Systemic Risk Board (2017).

⁶ Defined as the credit losses expected to arise from default events in the subsequent 12 months.



A second important difference between ECL and CECL refers to whether financial assets at fair value through other comprehensive income are included in their respective scope or not. According to IFRS 9, financial assets at fair value through other comprehensive income (typically, debt securities previously classified as available-for-sale under IAS 39) are also subject to the ECL approach. Meanwhile, these assets are excluded from the CECL approach, unless they have experienced a decline in fair value below their amortised cost which is due to the credit risk. In that case, an impairment charge relating to credit losses must be recognised through an allowance for an amount limited to the (negative) difference between the fair value and the amortised cost of that instrument.

Loan commitments are also treated differently under the ECL and CECL approaches.

According to the latter, the recognition of an allowance for expected credit losses beyond the point at which a loan commitment may be unconditionally cancelled by the issuer is not allowed, irrespective of whether the entity has ever exercised its cancellation right or not. By contrast, under IFRS 9 an entity should measure expected credit losses over the period that the entity is exposed to credit risk, and to the extent that expected credit losses are not mitigated by credit risk management actions such as the reduction or removal of undrawn limits. For financial assets that contain both a loan and an undrawn commitment component such as revolving credit facilities, the period over which expected credit losses are measured can extend beyond the maximum contractual period under ECL.

In addition to these differences, the two approaches differ in a number of other respects, some of which are briefly described in Table 1. In this context, it needs to be highlighted that some of the differences between the US and international accounting standards are not new – they already existed under previous incurred credit loss models.⁷ A description of more specific differences, related to the probability-weighted outcomes of the models, or the treatment of collateral and guarantees can be found, together with a discussion of the broader differences, in Deloitte (2016), Moody's Analytics (2016), and Pricewaterhouse Coopers (2017).

⁷ For example, the accrual of interest income for loans past due more than 90 days.



Table 1

Other differences between the ECL and the CECL approaches

	ECL (IFRS 9)	CECL (US-GAAP)
Accrual of interest income	Under IFRS 9, for loans classified as stage 3 (credit-impaired), the interest rate must take into account the expected credit loss (i.e. must be applied to the amount of the loan net of provisions, as opposed to stage 1 and 2 where the interest rate is applied to the gross amount of the loan).	Under US CECL, the existing interest income recognition method for loans is on a gross basis and non-accrual practices are allowed. Indeed, in the US banking prudential framework, loans which are past due more than 90 days are not allowed to accrue any interest income. ⁸
Troubled borrowers	The concept of a troubled debt restructuring does not exist in IFRS 9. Therefore, in these cases banks must assess whether the renegotiation can lead to the derecognition of the original financial asset and the recognition of a new asset, depending on the nature of the changes to the original contractual terms.	Under CECL, a concession provided to a troubled borrower is treated as a continuation of the original lending agreement. In this case, the reporting entity should reflect certain concessions (such as interest rate concessions) in its CECL estimate. Besides, the period over which credit losses are estimated should consider extensions associated with reasonably expected troubled debt restructurings.
Purchased credit impaired assets	An entity must recognise the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance. Impairment gains are recognised as a direct adjustment to the gross carrying amount.	The amortised cost at acquisition (i.e. purchase price) of these financial assets and the allowance for loan losses should be increased by the amount of lifetime expected credit losses at acquisition.
Collective evaluation	The ECL allows, but does not require, collective evaluation of credit losses when similar characteristics exist. However, when no reasonable information on individual basis is available, collective evaluation is mandatory.	CECL requires collective evaluation of credit losses when similar risk characteristics exist.
Time value of money	To calculate expected credit losses, cash flows are discounted using the effective interest rate determined at initial recognition. The time value of money is then explicitly reflected in these calculations.	Several methods are accepted for the calculation of expected credit losses, discounted cash flows being one of them. Other accepted methods (such as loss-rate methods, roll-rate methods, or probability-of-default methods) implicitly consider the time value of money.
Forward-looking information	Reporting entities should consider reasonable and supportable information, including forward-looking information, in their impairment assessments. IFRS 9 requires evaluating a range of possible outcomes when determining an unbiased and probability-weighted amount for impairment charges.	It is explicitly allowed to revert to historical loss information for periods where the reporting entity is unable to develop reasonable and supportable forecasts. The use of the most likely scenario in the computation of impairment charges is accepted.

Sources: own elaboration.

Recent surveys by the industry identify common effects but also different impacts of the ECL and CECL approaches on banks. According to a survey by McKinsey (2017) which covered banks applying ECL, CECL or both approaches⁹, around half of the responding banks are expecting an improvement in their risk management practices as a result of the implementation of expected credit loss approaches to the recognition of credit losses. The same survey reveals that changes in lending conditions are more likely expected among CECL adopters than in banks

⁸ Exceptions would be loans which are fully collateralised and in the process of collection, which are allowed to accrue interest.

⁹ Some large international banks, with presence in the United States and in Europe, will most likely be required to prepare financial statements under both CECL and ECL approaches. Among the 51 banks covered in the survey, 49% of them apply IFRS 9 only, 28% CECL only, and 24% apply both standards.

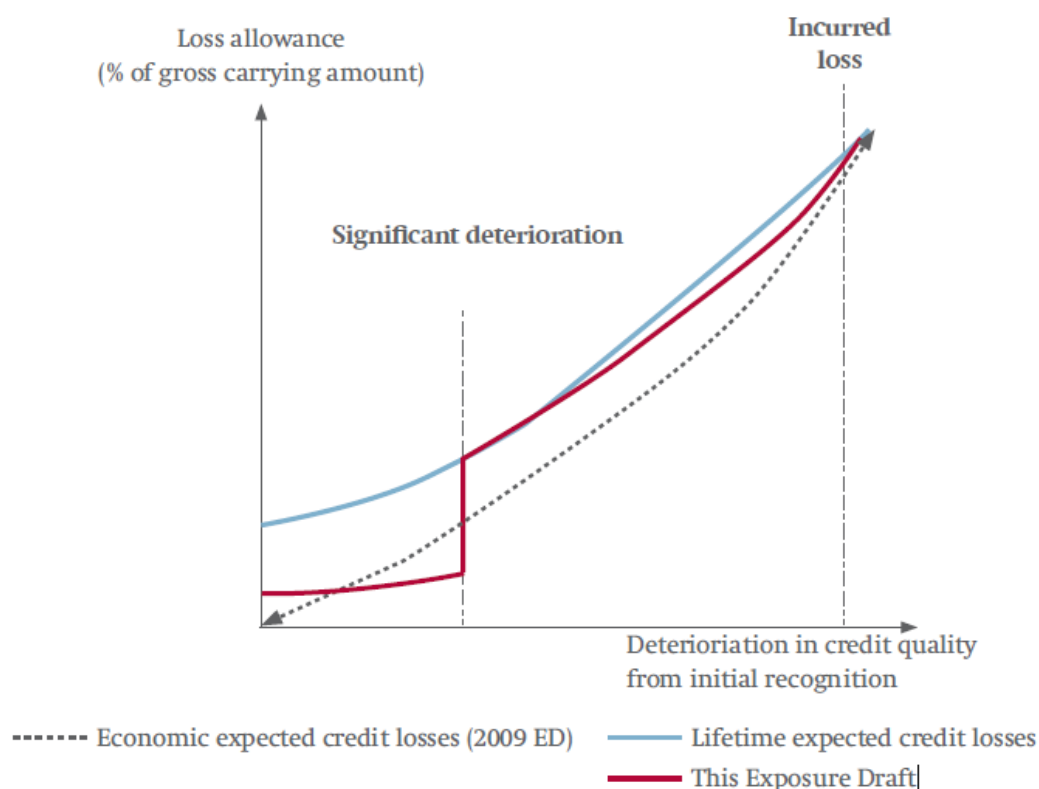


applying the ECL approach in IFRS 9. Interestingly, when asked about the level playing field and the coexistence of the two different accounting standards, none of the responding banks identifies CECL adopters as having an advantage in comparison with ECL adopters, while 15% of the respondents expect that ECL adopters will be benefited vis-à-vis CECL adopters.

2.2 Motivation for the different approaches by the IASB and the FASB

The decision of the IASB and the FASB to adopt different approaches for expected credit losses was taken after weighing up a series of practical and theoretical considerations. The development process of IFRS 9 and ASC 326 issuance involved a series of interactions with stakeholders. Both standards were discussed extensively by the IASB and the FASB, and the final decisions were motivated by a number of structural facts too, which may explain why the approaches differ. These considerations are briefly described in the following paragraphs.

Chart 1
Expected loss model in IFRS 9 and economic expected losses



Sources: International Accounting Standards Board (2013a).

First, when reflecting on the alternatives for the accounting for expected credit losses, it is important to consider possible “double-counting” at loan inception. As discussed by Borio and Lowe (2001), if a loan is adequately priced at inception, it should already reflect the credit risk of the borrower at that stage. That means that the economic expected losses in Chart 1 are zero at



the moment of initial recognition (dotted line when the x-axis crosses the y-axis).¹⁰ Therefore, introducing compulsory loss allowances at the time of the loan's inception could lead to “double-counting” of expected credit losses (red line at initial recognition in Chart 1), unless the loan has been mispriced.¹¹ In other words, the fair value of the loan at origination should already reflect the expected credit losses and it is important not to disregard the economic link between the pricing of a financial instrument and its credit quality (International Accounting Standards Board, 2013b).

These considerations could, at least partially, explain the decision of the IASB to define three stages in the ECL approach, while the FASB may have considered other arguments to settle on their CECL approach. “Double-counting” of expected credit losses at inception was acknowledged by the IASB (International Accounting Standards Board, 2014) and it explains its decision to consider at inception only credit losses within a one-year horizon when no significant increase in credit risk has occurred.¹² However, the academic literature has signalled that, in some circumstances, competition can call into question whether the pricing of expected credit losses is adequate at loan origination (Greenbaum et al., 1989; Sharpe, 1990; Degryse and Ongena, 2005). Other possible solutions, like dynamic provisioning or the use of expected credit-adjusted cash flows discounted at the original credit-adjusted effective interest rate, were dismissed by the IASB, mainly due to their complexity and likely implementation difficulties. In the United States, the argument of “double-counting” of expected credit losses did not dominate the discussions held at the FASB, where the historically stronger interaction between prudential regulation and loss allowances paired with operational considerations were instead predominant (Financial Accounting Standards Board, 2012 and 2016).¹³

Actually, there is a long tradition of the FASB taking a prudential approach in some of their accounting standards and this has already been internalised by users and preparers of financial statements in the United States. For example, the American Bankers Association (2013), in a comment letter on the exposure draft of IFRS 9, noted that “[...] the strict 12 month expected credit loss measurement for Stage 1 loans does not appear to have a theoretical basis, and it may result in lower allowance balances for some portfolios than U.S. banks believe are prudent [...]”. Nevertheless, it is worth noting that ASC 326 was approved with the dissenting opinions of two FASB members that disagreed with the requirement of recognising a lifetime ECL at origination (Financial Accounting Standards Board, 2016). In particular, these two FASB members pointed out that the CECL “does not faithfully reflect the economics of lending activities” and “would result in a balance sheet presentation that reflects the credit risk twice (in the price paid and in the allowance).” They also highlighted that “[...] the incremental loss that would be recognized is not based on the economics of the transaction but rather on a prudential desire to have a higher level of loan loss reserves”.

¹⁰ In principle, the initial carrying amount of a loan must include all contractual cash flows discounted by a rate that reflects credit risk as well as the time value of money. Therefore, it should take into account the expected losses priced into the loan.

¹¹ From an accounting point of view, it can be argued that, if the mispricing was evident at initial recognition, it would be captured through the requirement that a financial instrument has to be initially measured at fair value.

¹² From a certain point of view, stage 1 provisions can be interpreted as a proxy for the credit spread priced into the original contract (i.e., a proxy for what the IASB proposed in its first exposure draft for ECL, to adjust the interest income by the amount representing expected credit losses).

¹³ For example, paragraph BC11 of Financial Accounting Standards Board (2012) states that “[...] stakeholders continued to express significant concerns about the operability, auditability, and understandability of the three-bucket impairment model”.



Besides, a single measurement approach for calculating expected credit losses throughout the life of a loan may have been considered more practical to implement. The requirements in the ECL model in IFRS 9 are more elaborate and can make the model more difficult to implement in practice, particularly for smaller and less sophisticated institutions. Among other things, the ECL model in IFRS 9 requires banks to account for expected credit losses and for interest income differently, depending on the stage to which an individual loan is allocated. On the other hand, the use of a single common methodology to compute expected credit losses, irrespective of the evolution of credit risk, and the derived practical considerations (to reduce operational complexity) may explain why the CECL model was adopted in the United States.¹⁴

Lastly, particular characteristics of the business models pursued by some US banks may also explain the approach chosen by the FASB. Whereas European banks generally follow an originate-to-hold approach to the loans held in their balance sheet until maturity, there are US banks which also follow a business model of originate-to-distribute, where loans typically do not remain in the balance sheet of the bank until their maturity, but are sold to a third party. In this regard, credit risk is borne by banks under the originate-to-hold model, whereas it is distributed to third parties in the case of the originate-to-distribute model. These loans are typically measured at fair value through profit or loss, so they are not subject to the impairment requirements in the CECL approach. However, the choice made by the FASB to require lifetime expected losses on loan recognition (and, as a result, the more accurate measurement of the total amount of expected credit losses) could have indirectly been influenced by the moral hazard, revealed by the global financial crisis, associated with the originate-to-distribute business model. Indeed, FASB deliberations gave considerable importance to providing accurate information on the total amount of expected credit losses of a given loan, in particular in the case of purchased impaired financial assets (Financial Accounting Standards Board, 2016).

The originate-to-distribute business model has been found in the academic literature to create moral hazard for banks in relation to credit risk. In such business models, banks do not bear credit risk of the loan until maturity, but instead transfer it to a third party (see Gorton and Pennacchi, 1995, for a theoretical approach to the implications of loan sales for credit risk). In these circumstances, moral hazard arises because banks will not ultimately need to assume future credit losses, and so they tend to grant loans to riskier borrowers.¹⁵ Several papers in the academic literature have found a direct link between the originate-to-distribute model and the mortgage crisis which led to the global financial crisis in 2007 (Rosen, 2010; Purnanandam, 2011; Bord and Santos, 2012).

Differences are found in the structure of the aggregated balance sheet of US and European banks, and non-financial corporations (Table 2). On average terms, loans make up a smaller share of the total balance sheet assets for US banks than for EU banks, while debt securities play a greater role for US banks. Even in the case of US savings institutions, whose business model is directly linked to the provision of credit to the real economy, loans and advances represent circa

¹⁴ All banks in the United States will be applying the CECL approach, including more than 5,000 banks with total assets below USD 10 billion.

¹⁵ This is particularly relevant in the case of loans related to real estate, which are normally sold off to government-sponsored entities (Freddie Mac and Fanny Mae). Requiring the lifetime CECL approach is especially well-suited to prevent a situation where banks incur excessive risk, which could potentially materialise in the long term, and in the meantime sell the loans to the government-sponsored entities.



60% of total assets. From the borrowers' perspective, bank loans are the most important source of funding for European non-financial corporates, while US non-financial corporates typically rely on issuances of corporate debt (Chart 2). Indeed, bond markets in Europe tend to be more widely used by financial corporations than by non-financial corporations, contrary to the trend found in the United States (Chart 3).

Table 2

Structure of the asset side of the balance sheet of US and EU banks (end-2016, percentage over total assets)

	US	EU	
Cash and due from banks	10.79	6.35	Cash, cash balances at central banks and other demand deposits
Net loans and leases	54.73	61.83	Loans and advances
Investment securities (except equities)	20.94	14.01	Debt securities
Equity securities	0.27	2.30	Equity instruments
Other assets	13.27	15.51	Other assets
Total assets	100	100	Total assets

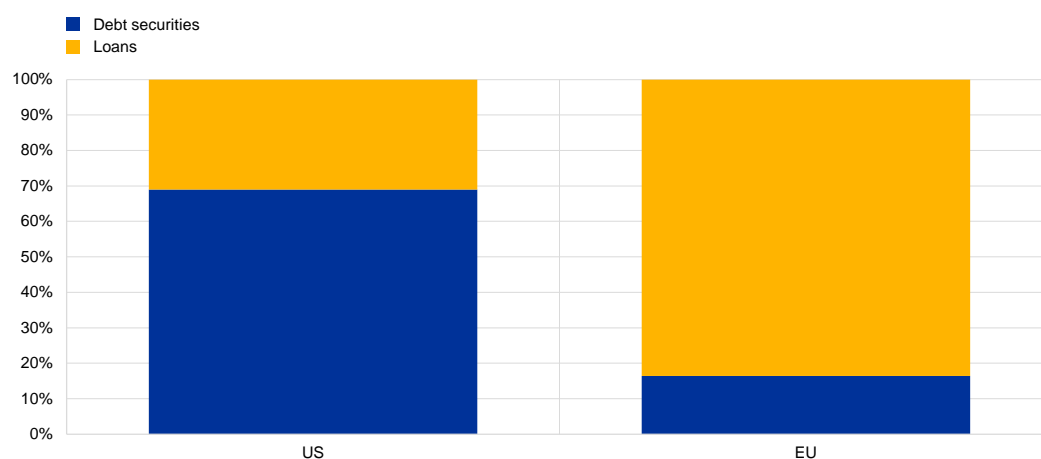
Sources: FDIC, ECB and ESRB Secretariat calculations.

Notes: Data for US banks comprise both commercial banks and saving institutions. Data for EU banks are extracted from the Consolidated Banking Data and comprise all domestic and stand-alone banks in the EU, irrespective of the accounting standards applied by them.

Chart 2

Funding mix of US and EU non-financial corporations

(percentage over loans and debt securities)



Sources: Federal Reserve Board, Eurostat, Haver Analytics and ESRB Secretariat calculations.

Notes: Data for the US taken from flow of funds, covering non-financial corporate business, for the period Q3-2017. Data for the EU taken from the annual financial accounts for the period Q4-2016.

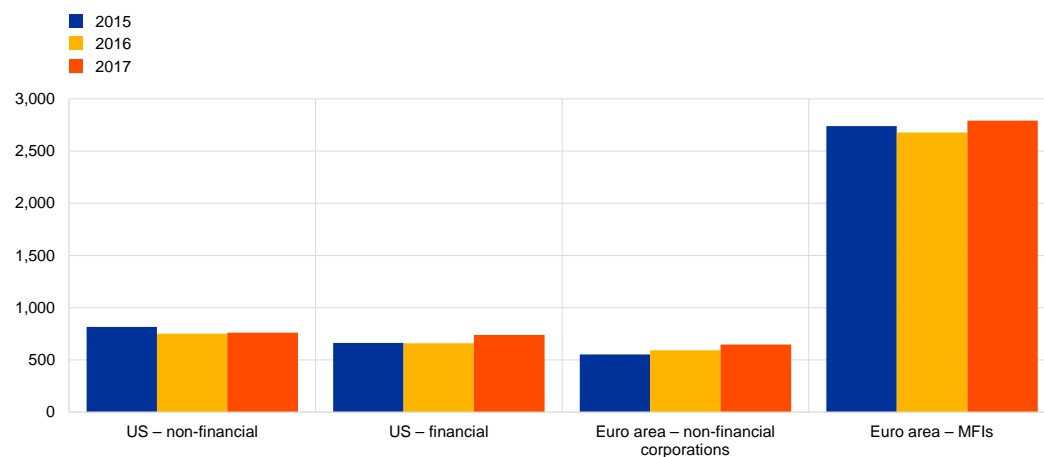


Expected credit loss approaches in Europe and the United States: differences from a financial stability perspective

Chart 3

New issuances of debt securities (bonds) by sector

(EUR billions)



Sources: Securities Data Company, Board of Governors of the Federal Reserve System, ECB and ESRB Secretariat calculations.

Notes: Data for the US cover issuances of bonds by industry groups, as reported to table 1.46 of the Federal Reserve Board. Euro area data refer to gross issuances of debt securities other than shares, as reported to the ECB.

2.3 Summary of related literature

In order to gauge the extent to which coexisting standards might be significant for financial stability, it is important to first understand the way the different approaches may affect banks' performance (and ultimately their capital ratios) as well as their behaviour. Due to the lack of historical data on banks' balance sheets under the ECL and CECL approaches¹⁶, it is not possible to examine the impacts directly. In this regard, the high amount of discretion allowed in both approaches (i.e. modelling assumptions, criteria for a significant increase in credit risk, etc.) implies that any attempt to model balance sheets under the new expected credit loss paradigm must be read as a way to conceptually assess their implications, rather than as a firm and accurate estimate of their impact. Besides, changes in banks' capital management practices which will likely occur under the new paradigm should also be considered when assessing the impact of the new ECL and CECL approaches. Under these important caveats, there are recent limited studies that attempt to quantify how the different features of the two approaches affect performance measures indirectly. These papers typically approach this task by creating models to replicate the behaviour of impaired loans during a financial cycle or by running a counterfactual analysis. This subsection discusses the results of four key papers.

The model developed by Abad and Suárez (2017) shows that impairment charges, in comparison with the ECL approach in IFRS 9, are larger under a lifetime credit losses approach in the steady state but less severe at the onset of a crisis. According to their model specification, it is possible to compare the behaviour of the ECL approach in IFRS 9 with that of a

¹⁶ As mentioned above, IFRS 9 came into force on 1 January 2018 and the CECL will be first applied on 15 December 2019.



lifetime expected credit loss approach, which can be considered equivalent to the CECL. In the steady state, Abad and Suárez (2017) show that the impairment charges under CECL exceed those under IFRS 9, as a percentage of total loans. However, when there is a deterioration in the macroeconomic environment and the economy enters a downturn, the increase in impairment allowances, the impact on the profit or loss account, the impact on regulatory capital, and the probabilities of recapitalisation needs are larger under the ECL approach than under a lifetime expected credit losses approach.¹⁷ This is due to the fact that under the ECL approach, the increase in impairment allowances is affected by two factors: the poorer macroeconomic conditions which affect the ECL amounts for all assets, and the shift from stage 1 (one-year expected credit losses) to stage 2 (lifetime expected credit losses) of those exposures that have experienced a significant increase in credit risk.

In line with the results of Abad and Suárez (2017), the counterfactual analysis of the approaches in IFRS 9 and in ASC 326 in Krüger et al. (2018) finds higher impairment charges under the former approach in downturns. Krüger et al. (2018) undertake a counterfactual analysis by applying the ECL and the CECL approaches over a portfolio of US bonds between 1991 and 2013. They find that while in normal times the CECL approach leads to larger impairment losses and has a higher impact on regulatory capital, the ECL approach behaves more procyclically as it leads to a larger impact on regulatory capital in downturns (including in the global financial crisis). In general terms, they conclude that banks are very likely to be required to raise capital due to the expected credit loss approaches in both IFRS 9 and ASC 326. They also argue that a higher (i.e. less conservative) threshold of a significant increase in credit risk would raise provisioning needs in downturns and, therefore, should be viewed critically by regulators and supervisors. In other words, it could be argued that a sound implementation of the standard and a conservative calibration of the threshold for a significant increase in credit risk could mitigate any potential procyclical implications stemming from the application of the ECL approach.

Grünberger (2012) uses a rating migration model to demonstrate that lifetime expected credit losses and the ECL approach in IFRS 9 do not remove cyclicity of accounting income or credit supply. The main reason for this, in principle counterintuitive, outcome is that banks cannot reliably predict future rating migrations, so expected credit losses cannot anticipate downturns well in advance. He also finds that the two expected loss approaches make accounting income more volatile, although the differences are not large in economic terms. He concludes by stating that reliable long-term predictions of future rating migrations would make lifetime loss provisioning less volatile and decouple, partially, accounting income from the business cycle, with smaller effects than those seen in the ECL approach. In any case, forecasting future reliable migrations remains a sizable challenge, where judgement by banks management is required.

Lastly, Chae et al. (2018) show how different modelling decisions can significantly change the recognition of credit losses over the cycle. A common feature of the ECL and CECL approaches is the requirement to use models to calculate expected credit losses which incorporate macroeconomic information. Therefore, the models designed by each individual bank will be of great importance in determining the credit losses to be recognised in each period. Focusing only on the CECL approach, Chae et al. (2018) analyse how one modelling decision, specifically the

¹⁷ These results are obtained under a certain specification of the residual maturity of the stage 1 loans and the impact of their non-significant credit deterioration.



expected path of house prices, can make the final result of the model (i.e. the amount of credit losses to be recognised in each period) substantially different, affecting the temporal distribution of the losses over the cycle. They conclude that modelling decisions will need to be taken into account when comparing the disclosures of credit losses by different banks in the system. Differences disclosed in the amount of credit losses may not only stem from the different asset quality of the underlying credit portfolios, but may also be the result of modelling decisions taken by each bank.



3 Financial stability considerations

When discussing the financial stability implications of the differences between the expected credit loss approaches in Europe and the United States, it is important to consider them in broad terms. While the purpose of this report is not to discuss the relative merits of IFRS 9 and ASC 326, the fact that they exhibit fundamental differences may have consequences from a financial stability perspective. It may affect the way banks provide credit to the real economy, manage their credit risk, and compete in global markets, with the potential to bring about unintended consequences. These consequences may not require immediate policy actions, but it is nonetheless important for macroprudential authorities to be aware of them and of the several trade-offs usually embedded in them. Any discussion in this regard must take into account the different features of the two standards (as outlined in Section 2) and their intended and unintended consequences, as well as the different business models and banking structures in Europe and in the United States (as summarised in Table 2, and Charts 2 and 3 in Section 2).

Before considering financial stability as such, it is worth noting that the IASB and the FASB have different views on the conceptual bases as to how to account for credit losses as well as on the weight to be given to practical implementation of the accounting standards. In this sense, it could be argued that the ECL approach in IFRS 9 more accurately reflects the evolution of credit risk, as it follows the evolution of credit risk over time (with the importance attached to the concept of “significant increase in credit risk”) and limits the “double-counting” of expected credit losses at the initial recognition of a loan which are already reflected in the interest rate applied (under the assumption that the price for credit risk is adequately set). However, the three-stage approach and the related requirements may introduce a certain degree of complexity in its practical application. The CECL approach, on the other hand, which requires lifetime estimations of credit losses throughout the life of a loan, could be found to favour the practical implementation by reporting entities, even if it disregards the economic link between the pricing of a loan and its credit quality.

First, in terms of cyclical behaviour, the existing limited academic studies show that the CECL approach may lead to higher impairment charges in normal times, while the ECL approach would have a larger impact at the onset of the crisis. Following intuition (Table 3)¹⁸ and as evidenced by the related literature (e.g. Abad and Suárez, 2017; Krüger et al., 2018), impairment charges are expected to be higher under the CECL than under the ECL approach in normal times.¹⁹ That means that US banks may be subject to stricter accounting standards in that phase of the cycle, while EU banks could extend lending in those times at a lower cost in terms of recognition of losses related to credit risk. In downturns, though, the change in impairment charges would be higher for the ECL approach, implying that, at the onset of a crisis, EU banks could

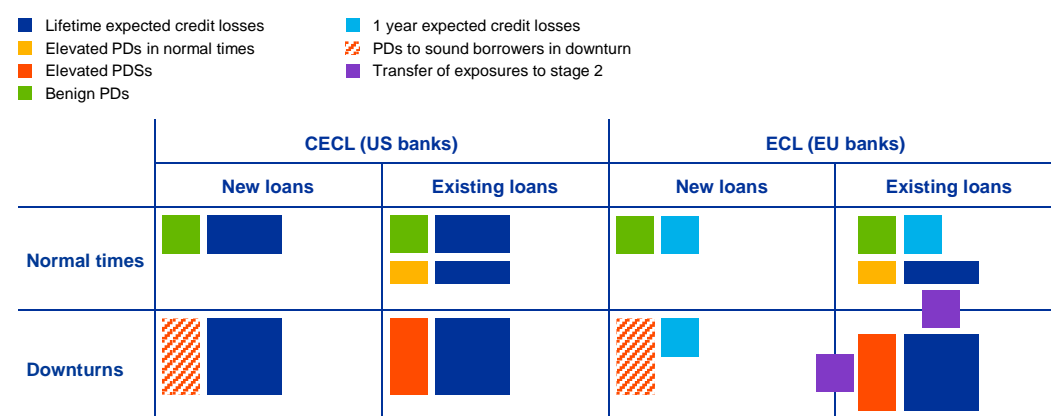
¹⁸ Table 3 attempts to schematically show the size of impairment charges under the two approaches over the cycle through the combined size of the squares representing the PDs and the horizon for the computation of expected credit losses. For simplicity reasons, it assumes that credit exposures with high PDs are possible in normal times, but in a downturn all credit exposures (except new loans) are under elevated PDs. For the ECL, it implies that all credit exposures are reclassified to stages 2 and 3 in the ECL and that, at a certain time within the downturn, the new loans are also reclassified to stage 2. Purple squares try to represent this situation, which can take place in normal times (if the downturn is sufficiently anticipated by ECL models) or closer to the downturn.

¹⁹ This statement assumes the same maturity of exposures under the CECL and ECL approaches. On the other hand, a lower average effective portfolio maturity for US banks due to the originate-to-distribute business model would lower the total amount of impairment charges in normal times.



experience a more acute deterioration of their profit and loss account (and potentially of their regulatory capital) in comparison with their US peers if banks' models are not able to anticipate the economic downturn well in advance.

Table 3
Schematic view of the expected size of impairment charges over the cycle under ECL and CECL approaches assuming the same average portfolio maturity



Sources: own elaboration.

Notes: New loans in a downturn are expected to be sufficiently sound as to not be immediately impaired; in other words, new loans granted in a downturn are expected to be allocated in stage 1 under the ECL approach, as they would be in normal times. This is reflected in the patterned fill of the red rectangles in the respective columns and in the subsequent transfer of certain exposures to stage 2 under the ECL approach (violet boxes).

Related to the above, lending to the real economy over a full cycle may be affected by the differences in impairment charges according to the ECL and the CECL approaches. It could be argued that the higher impairment charges required by the CECL approach at loan inception could have a negative impact on lending decisions of US banks (higher impairment charges would increase the associated capital requirements and affect the overall lending costs and risk appetite of banks as well as their underwriting standards).²⁰ However, this may not necessarily be perceived as negative to the extent that it leads to a more prudent allocation of credit and if there are other channels of funding for riskier investments available (e.g. bond markets).²¹ Under the ECL approach, lending in normal times could instead be less constrained by impairment charges, a fact which, where coupled with poor risk management practices, could incentivise lending to less sound borrowers.²² In a crisis, the impairment requirements in the CECL approach could again make new lending more costly than under the ECL approach, including for the group of soundest borrowers; on the other hand, the impact of impairment charges on existing loans under CECL would be lower than under the ECL approach due to the effects of migration from stage 1 to stage 2 in the latter

²⁰ As noted above, this could be mitigated by the lower average effective portfolio maturity for US banks due to the originate-to-distribute business model.

²¹ This impact can be partially mitigated by the low probabilities of default which are expected to be generated in normal times.

²² On the other hand, it could also be argued that the higher impairment charges under CECL may incentivise lending to riskier borrowers due to higher interest rates applied to these loans.



approach. The net effect of the impairment requirements under the CECL and the ECL approaches on lending to the real economy remains to be seen.²³

Second, differences between the ECL and CECL approaches could be also reflecting differences in banks' business models and in the sources of financing for the real economy that exist between the EU and the United States. The IASB, as a global accounting standard-setter, may have taken as a basis the originate-to-hold business model, ensuring a neutral stance of accounting standards. The choice of the FASB to instead require lifetime expected losses upon loan recognition (and, as a result, the more accurate measurement of the total amount of expected credit losses) could have been indirectly influenced by the moral hazard associated with the originate-to-distribute business model of some large US banks which the global financial crisis revealed. That would explain, for example, the importance attributed by the FASB to the consideration of the total expected credit losses of a given loan in order not to provide banks with incentives to riskier lending (Financial Accounting Standards Board, 2012 and 2016). Considering the range of business models followed by EU and US banks, both approaches could be seen as well equipped to respond to the different challenges posed by them in terms of management of credit risk. In this regard, while the application of a lifetime expected credit loss approach to European banks could in principle be perceived as sounder, proper considerations should be given to its potential implications for the real economy in the long term, given the decisive role of bank lending for households and non-financial corporations in Europe.²⁴

A third consideration refers to the impact of the two different ECL approaches on those market segments where US and European banks compete directly, such as lending to large corporations and investment banking. In general terms, retail lending (households and small corporates) takes place mostly via domestic banks, suggesting that the presence of US banks in European markets, and vice versa, is expected to be rather limited.²⁵ That would imply that the existence of two different approaches for the accounting of expected credit losses should not put banks in one jurisdiction at a significant competitive disadvantage in comparison with banks in the other jurisdiction for those business segments. The case for lending to large corporates (comprising syndicated loans) and, to a lesser degree, for investment banking could be different.²⁶ Particularly in the segment of lending to large corporations, direct competition between European and US banks is expected to be more significant with the result that the two different ECL approaches could affect their competitive position. In principle, the analysis of the cyclical behaviour of the two approaches would tend to signal a limited advantage of EU banks in good times, where they would face lower impairment requirements from their lending (in line with the results in McKinsey, 2017).²⁷

²³ However, please note that the considerations discussed are highly dependent on particular conditions such as the severity of the crisis, the current macroeconomic environment, the level of preparedness to anticipate a crisis, the timing of anticipation, etc.

²⁴ In such scenario, the cost of providing credit to the real economy would increase due to the higher impairment requirements. That would, of course, depend on whether banks translate the higher impairment requirements into their lending conditions (interest rates and collateral requirement).

²⁵ For instance, according to data from the Bank of International Settlements, the total claims of euro area banks, on an ultimate risk basis, against non-financial private counterparts in the US amounted to EUR 134 billion (Q3-2017).

²⁶ See Goodhart and Schoenmaker (2016) for a description of how investment banks are present in EU countries.

²⁷ Some international banks may be required to apply both ECL and CECL approaches within their group, since they may have subsidiaries in both the US and the EU. The behaviour of these individual banks may provide useful insights into how ECL and CECL adopters may interact in the future.



The extent to which the differences between the ECL and CECL approaches can impact financial stability by inducing changes in lending conditions is unknown at present. Lending conditions offered by banks applying the ECL and CECL approaches may react differently to the expected evolution of impairment charges over the cycle. Both pricing and volume of lending may be susceptible to change on these grounds. The importance of these theoretical impacts would depend on the degree of competition in the particular market segment (being more pronounced in case of perfect competition), on the market power of ECL and CECL adopters separately, and on the reaction of individual banks to moves by direct competitors (whether they have any scope, for example, to reduce price of lending if other banks do so).

In terms of behavioural responses from banks, they will be confronted with important trade-offs. Considering constant sources of funding, CECL adopters may decide not to lose market share in comparison with their ECL competitors and offer the same lending conditions as them, irrespective of the higher provisions required by the CECL approach, with potential temporarily detrimental effects on their profitability. Alternatively, CECL adopters may tighten their lending conditions to factor in the higher level of provisions, a move which could imply the loss of market share among them. However, changes in market share should not per se represent a risk to financial stability unless the institution gaining market share lacks capabilities and resources to monitor, assess and respond to the additional risks.

The extent to which the ECL and CECL models can anticipate a downturn is crucial for achieving their intended objectives. Expected credit loss approaches should address the flaws in the incurred loss approach (“too little, too late”). A more timely recognition of credit losses together with the expected improvements in banks’ credit risk management are expected to significantly contribute to financial stability.²⁸ In practice, however, this assumption largely depends on the degree to which models can anticipate downturns and on the borrowers which will be more severely affected by them (in line with the findings by Grünberger, 2012). Anticipating the downturn well in advance should allow banks to start increasing their credit loss allowances before the turn in the macroeconomic conditions. The more the downturn can be anticipated, the less procyclically both approaches will behave at the onset of the crisis. Related to this, the ECL and CECL approaches are expected to generate modelling risk^{29, 30}. In this regard, backtesting of models, even if not explicitly required in the standards, can be a powerful tool to assess and improve their predictive power.

In the case of IFRS 9, the application of the concept of a “significant increase of credit risk” is of the essence to ensure that the financial stability benefits are effectively reaped. Under IFRS 9, banks can exercise a certain degree of discretion in the application of the “significant increase in credit risk” criterion, which marks the transfer of assets from stage 1 to stage 2. Given a range of possible definitions for the “significant increase in credit risk”, higher (i.e. less

²⁸ The introduction of expected credit loss approaches should lead to a higher awareness of credit risk within banks, thus improving credit risk management. Expected outcomes are: (i) more sound lending behaviours displayed by banks, and (ii) a more tailored assessment of the credit risk of a given portfolio, with more active involvement in those cases where credit risk has increased (e.g. when exposures are transferred to stage 2 in the ECL approach).

²⁹ Modelling risk can be defined as the risk resulting from using insufficiently accurate models or from using models which generate unexpected outcomes in stressed conditions.

³⁰ Although some of the characteristics of the CECL approach would tend to signal lower modelling risk as compared with the ECL approach, given the higher possibilities in the former to apply simplifications, it is not possible to quantify, compare and rank modelling risk between the two approaches.



conservative) thresholds would lead to lower impairment charges in normal times and higher charges in anticipation of downturns. Consequently, too high thresholds could hamper the early recognition of credit losses, which IFRS 9 attempts to achieve. Lower (i.e. more conservative) thresholds could result in “double-counting” of expected credit losses that are already reflected in the fair value of the loan at inception, with possible side effects on credit availability and banks’ profitability. It is therefore important that banks use appropriate criteria in determining that threshold in order to ensure a timely determination as to whether there has been a significant increase in credit risk subsequent to the initial recognition of a loan, and, more generally, ensure that banks are able to properly adjust to the existing macroeconomic conditions at any time³¹, strengthening financial stability in general. To this end, it is important to closely monitor and ensure a consistent implementation of the new accounting standards.

³¹ That would also include the situations where there is an improvement in credit risk, which should be reflected in reclassifications from stage 2 to stage 1, and from stage 3 to stage 2. However, collecting evidence about an improvement in credit risk conditions typically takes more time than in the case of a deterioration in credit risk.



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