Economic Commentaries

IFRS 9 – the new accounting standard for credit loss recognition

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IFRS 9 is a new accounting standard for financial instruments and introduces a new approach for recognising credit losses—the Expected Credit Loss (ECL) approach. Under IFRS 9, the recognition of expected credit losses shall be based on forward-looking macroeconomic conditions.

The transitional impact of IFRS 9 on regulatory capital ratios is estimated to be modest for the major four Swedish banks. In the long-run, IFRS 9 can help to improve banks' credit risk management and enhance transparency and the effectiveness of market discipline, which may eventually improve financial stability.

International Financial Reporting Standard (IFRS) 9,[2] which is effective from 1 January 2018, is a new accounting standard for financial instruments. It covers classification and measurement, impairment and hedge accounting. IFRS 9 introduces a forward-looking approach for recognising credit losses in the financial accounts—the Expected Credit Loss (ECL) approach,[3] which takes into account a broad range of information, including forward-looking macroeconomic conditions. This new forward-looking approach is in response to the criticism of the previous accounting standard, International Accounting Standard (IAS) 39, under which credit losses were only recognised if there was a clear sign of a credit event, i.e. default or delinquency in interest or principal payments. In other words, since IAS 39 only recognised incurred credit events, it was a backward-looking framework.

If implemented in a sound way by banks, IFRS 9 can contribute to improving banks' credit risk management, increasing transparency with regard to banks' asset quality and credit risks, and reducing pro-cyclicality through a more timely recognition of credit losses. This can help to mitigate the "too little, too late" shortcoming of IAS 39 and eventually improve financial stability.

This Economic Commentary focuses on IFRS 9 impairment rules and aims to describe what the ECL approach under IFRS 9 is, and how it is different from the incurred loss model under IAS 39. We also discuss the potential impact of IFRS 9 on banks, including the transitional effect on regulatory capital ratios, especially for Swedish banks, as well as potential long-run effects on financial stability. At transition, banks' provisions for credit losses are estimated to increase; the impact on regulatory capital ratios is estimated to be modest for the four major Swedish banks.[4]

A forward-looking impairment model—the ECL approach

Following the latest financial crisis, the G20 leaders[5] and the Basel Committee on Banking Supervision (BCBS) called on the International Accounting Standard setters (IASB and FASB) to develop a new approach to account for losses on lending. The motive was to avoid reporting credit losses "too little, too late". The incurred loss accounting approach under IAS 39, requires banks to recognise a credit loss on a loan only if there is objective evidence of a loss event occurring. This backward-looking approach implied that recognition of credit losses was too little and too slow. This delay in recognition of credit losses was identified as a weakness in IAS 39. The new standard IFRS 9 aims to solve this problem.

IFRS 9 is a principle-based standard and is comprised of three parts: (1) classification and measurement of financial assets; (2) a forward-looking impairment model - the ECL approach; (3) hedge accounting.[6] IFRS 9 applies to both financial and non-financial institutions but is particularly relevant for banks. As major issuers of loans, banks are most affected by IFRS 9's new impairment rules. In this Economic Commentary, we focus on the new impairment rules under IFRS 9.

Banks issue loans to households and corporates, and are exposed to credit risk of borrowers. If borrowers are unable to repay the loans and the fair value of the collateral is below its carrying amount, banks will face actual credit losses. To mitigate credit risk, banks are required to set aside an amount to absorb any expected losses on their lending. This amount set aside in the balance sheet is referred to as a loss provision.[7] Any adjustment to the balance of loss provisions due to an increase or decrease of the provision is reflected in a bank´s income statement as an impairment gain or loss, which impact the bank's earnings and capital.[8] The fundamental change IFRS 9 made on impairment loss recognition is that credit losses are recognised based on the estimated ECLs on a broad range of credit-relevant information, including forward-looking macroeconomic conditions (e.g. changes in GDP, unemployment rates, property prices, interest rates or commodity prices). A bank must on each reporting date reflect changes in the credit risk of financial instruments since initial recognition and update the loss provision.[9]

IFRS 9 introduces a three-stage approach for the measurement of ECLs of financial assets (e.g. loans): performing (stage 1), under-performing (stage 2), and impaired (stage 3). For performing assets, i.e. assets with no sign of deterioration in credit quality, banks should estimate the ECLs for the upcoming 12 months. For both under-performing and impaired assets, banks should estimate the ECLs for the lifetime of the credit. Moving an asset (e.g. a

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[5] (G20, 2009)

[6] IFRS 9 introduces a new classification model for financial assets that is more principle-based than under IAS 39. Financial assets are classified according to their contractual cash flow characteristics and the business models under which they are held. The new hedge accounting model has been more closely aligned with common internal risk management procedures.

[7] For example, Bank X has made 200 million SEK of loans to various households, and some of the borrowers will default. Bank X estimates that 1% of its loans, two million SEK, will probably never come back. This two million SEK estimate is Bank X's credit loss provision, and is recorded on the balance sheet. Loss provisions are revised on each reporting date, and an increase or decrease in the balance of loss reserves is called a loss provision.

[8] An increase in provision negatively affects earnings and equity which in turn impacts regulatory capital. The ECL approach is symmetrical meaning that in subsequent reporting periods, if the credit quality of the financial asset improves, the recognised provision is reverted.

[9] Financial instruments within the scope for IFRS 9 are those measured at amortised cost, financial debt instruments at fair value through other comprehensive income, lease receivables, loan commitments and financial guarantees.

loan) from stage 1 to stage 2 (or stage 3) is triggered by a "significant increase in credit risk" (SICR) after the asset was originated, as shown in Figure 1.[10]

What a SICR constitutes is not defined in IFRS 9 but is left to the bank management to define.[11] The size of the ECL, the credit loss provision, is determined by the credit risk estimated on the reporting date. If there is no significant increase in the credit risk of the asset since the initial recognition, the asset remains at stage 1, with a recognition of a 12-month ECL that is associated with the risk of default in the next 12 months. If there has been a significant increase in the credit risk of the asset, it should be moved to stage 2 and the ECL will in this stage be based on the estimated lifetime of the asset. For example, a loan which is 30 days past due, is in IFRS 9 presumed to have a SICR and therefore should be moved to stage 2.

Figure 1 Flowchart for stage shifting triggered by significant increase in credit risk
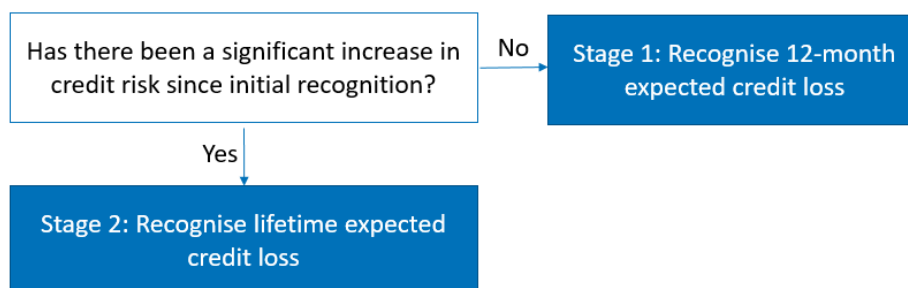

In practice, provisions are much higher in stage 2 than in stage 1, due to the longer horizon in the calculation of the expected value. This will imply a cliff-effect if an asset is moved from stage 1 to stage 2. As shown in Figure 2, the carried loss provision is at a low level in stage 1. However, when the asset is moved to stage 2 due to significant deterioration, the carried loss provision increases sharply at the shifting point. This is a main difference between the provisions recognised under IFRS 9 and IAS 39. The shift from stage 2 to stage 3 for an asset is triggered by a default[12] event under IFRS 9, which is in line with the loss recognition approach under IAS 39.

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[10] For example, Bank X originates a five-year loan of 10,000 SEK without amortization. The loan rate is 5% annually. So the effective interest rate is 5%. In the first reporting period, Bank X recognises a credit loss provision 200 SEK, which is equal to 12-month expected credit losses because there has not been a SICR in credit risk since initial recognition. In the second reporting period, Bank X determines that the credit risk on the loan has increased significantly. Therefore, Bank X recognises lifetime ECLs on the loan, which is estimated to be 2000 SEK.

[11] IFRS 9 suggests in paragraph 5.5.9 that SICR should be a function of movements in remaining lifetime probability of default (PD) as well as other qualitative factors. In practise banks use credit scoring, days past due, ratings, watch list, forbearance measures or forward-looking macroeconomic information to determine SICR.

[12] IFRS 9 does not define default, but requires banks to define default in a manner consistent with that used for internal credit risk management. IFRS 9 (paragraph B5.5.37) has a rebuttable presumption that default does not occur later than 90 days past due.

Figure 2 Development of provisions under IFRS 9 and IAS 39
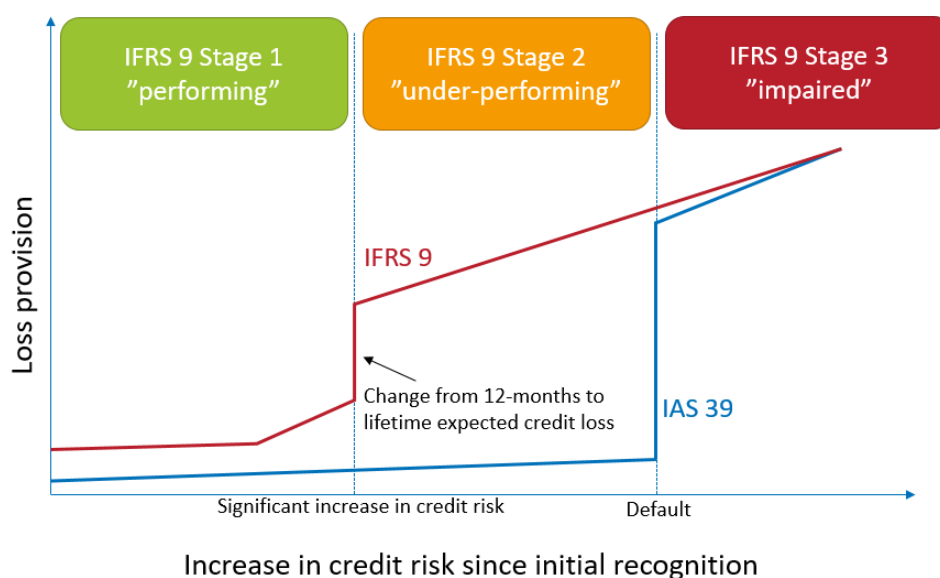
Moving from an incurred loss model to an expected loss model requires banks to forecast scenarios of macroeconomic conditions and assemble them into risk parameters in their ECL models. The forward-looking element of the ECL model will thus require considerable modelling efforts and management judgement as to how macroeconomic conditions affect provisions. This means that ECL modelling requires a high degree of management judgement when calculating ECLs, which is in line with how banks model their credit risk using internal models (IRB).[13] As a result, IFRS 9 requires banks to disclose their ECL modelling methods and management judgement on inputs and assumptions used, which provides useful information on a bank's asset quality and associated credit risk. This also entails that it will be more difficult to compare reported provisions of different banks. Also, IFRS 9 requires significant enhancements to a financial institution's data, systems, quantitative models and governance.

Effects of IFRS 9 on regulatory capital and financial stability

The transitional impact (the initial effect in 2018 when IFRS 9 is implemented) of the ECL model on banks' balance sheets is unclear. Banks are still working on the implementation of IFRS 9 and no precise figures have been produced so far. However, according to some studies conducted by supervisory institutions, analysts and auditing firms, the estimated transitional effect on CET1[14] ratio is around 45-50 basis points (bps). In the long-run, IFRS 9 may improve banks' credit risk management and internal pricing-setting processes, and reduce pro-cyclicality through a more timely recognition of credit losses and a greater level of transparency regarding banks' credit risk. This may eventually enhance financial stability.

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[13] Under the internal ratings-based (IRB) approach banks are allowed to use their own estimated risk parameters for the purpose of calculating regulatory capital.

[14] CET1 (Common Equity Tier 1) is the Tier 1 capital with a deduction for capital contributions and reserves that may be included in the capital base as Tier 1 capital in accordance with chapter 3, section 4 of the Capital Adequacy and Large Exposures Act (2006:1371). CET1 capital ratio is the CET1 capital in relation to the risk-weighted assets.

Transitional effect

The transition from IAS 39 to IFRS 9 is likely to produce a significant initial increase in provisions for many banks at implementation. If the provisions are very high, banks may need to increase their capital to fulfil the regulatory requirements.

Several recent studies (see appendix Table A2) carried out by supervisory authorities and private institutions have estimated the magnitude of the effects of IFRS 9 on provisions, CET1 and the total capital ratio. The estimated transitional effect on provisions is an increase between 13 and 25 per cent (see appendix Table A2). The total transitional effect of IFRS 9 on capital ratios is mainly driven by the ECL requirements through increased provisions.[15] Though those studies use different sample sizes with different coverage on banks in- and outside Europe, the estimated transitional impact on CET1 ratio is a decrease around 45-50 bps.[16] Also, the estimated transitional effect on the total capital ratio is a decrease by 31-35 bps, according to the studies by the European Banking Authority (EBA).[17]

However, the impact of IFRS 9 on provisions and regulatory capital ratios differs between banks. For example, banks with more non-performing loans that haven't been provisioned for will be most affected, according to existing studies. Given the uncertainty of the transitional impact and concentration of non-performing loans in some European countries, the EU Commission (2017) has introduced an optional 5-year phase-in period of the regulatory capital calculation under IFRS 9. The phase-in affects the bank's CET1 capital.[18] The phasing-in period will, according to the EU Commission, provide time for observing possible pro-cyclical effects of the revised credit loss approach, as well as to agree internationally upon a harmonized prudential treatment of the ECLs.[19]

Transitional effect varies depending on credit risk model and bank size
The impact of IFRS 9 on capital ratios may also vary among banks of different sizes and with different credit risk models. According to the report on results from the second EBA impact assessment (EBA 2017) of IFRS 9, the banks that estimated a relatively high total impact on regulatory capital from IFRS 9 are smaller banks using mainly the Standardized Approach (SA) for measuring credit risk. According to the EBA's estimation, the impact on CET1 ratio for smaller European banks is 78 bps, while the magnitude for large European banks is 33 bps. Similarly, the estimated impact on CET1 ratio for SA banks is 77 bps, while the magnitude for Internal Ratings Based (IRB) banks is 32 bps.

Smaller banks usually use the SA approach for measuring credit risk, which may result in a higher estimated impact on regulatory capital than the IRB approach. The same level of increase in accounting provisions has a bigger impact on CET1 capital for banks under the SA approach than that for banks under the IRB approach. The reason is that a shortfall in accounting provisions over regulatory expected loss under the IRB approach can absorb or

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[15] The impact on regulatory capital is mainly driven by the new ECL requirements, and to a lesser extent, by the classification and measurement requirements of IFRS 9.

[16] However, the existing studies listed in Table A2 have not taken into account the phase-in arrangement when estimating the transitional effect of IFRS 9 on regulatory capital ratios. The magnitude of the transitional impact of IFRS 9 on CET1 ratio may also be inaccurate because banks may have not disclosed sufficiently granular data on their balance sheets in order for analysts and supervisors to compute the provisions under IAS 39 and IFRS 9.

[17] EBA (2017).

[18] A bank is allowed to include in CET1 capital a portion of the increase in provision for a maximum of 5 years starting in 2018. The portion of provisions that can be included in CET1 capital should decrease over the transition period to zero. A bank decides themselves to apply the transitional rules and must inform the competent authority (i.e. Finansinspektionen in Sweden) accordingly. A bank must also publicly disclose information regarding the application of the phase-in and its effect on regulatory capital.

[19] The Basel Committee on Banking Supervision (BCBS) is currently looking at the prudential treatment of ECLs on regulatory capital.

partially absorb the impact of IFRS 9 on regulatory capital, which is not the case under the SA.[20] IFRS 9 is expected to increase accounting provisions, but the effect on CET1 capital of these higher provisions may be normally compensated by fewer deductions according to regulatory capital rules. [21] Therefore, the impact of IFRS 9 on regulatory capital ratios may be limited for many IRB banks.

Transitional effects of IFRS 9 on the four major Swedish banks
Based on the public information released by the big four Swedish banks in their Q4 2017 reports, the transitional effect of IFRS 9 is expected to be limited. The four major Swedish banks expect provisions to increase, but the effect on regulatory capital will be modest.

According to the study by Barclays (2017), the transitional effect of IFRS 9 on CET1 ratios for the four major Swedish banks is estimated to be negative; however, the magnitude is estimated to be 10-44 bps, which is smaller than the average impact of 50 bps on all the 27 banks in the study.[22] It is also important to point out that the estimated transitional effect on CET1 ratios mainly comes from recognising the lifetime expected losses of stage 2 loans (see Figure 2). The estimated transitional impact is thus quite small and should not entail any major capital challenges for the four major Swedish banks.

The moderate effect of IFRS 9 on the regulatory capital ratio for the four major Swedish banks is not unexpected. First of all, they have generally good profit margin and low non-performing loan rate, compared with many other European banks. Second, they use the IRB approach, which can help to absorb (at least partially) the impact of IFRS 9 on their regulatory capital. Also, the similarity between the IRB approach and the ECL model, together with good historical data record, can mitigate implementation challenges.

Long-run effects

IFRS 9 requires credit losses to be estimated based on macroeconomic scenarios and recognised at an earlier point in time, which may incentivize banks to reserve extra capital buffers in good times, with the purpose of preparing for potentially increasing provisions in case the macroeconomic indicators deteriorate. Also, an earlier recognition of credit losses may incentivize bank managers to adopt more prudent and less cyclical lending strategies and strengthen the monitoring on credit risk.[23] As a result, IFRS 9 may enhance financial stability in the long-run through helping banks to improve credit risk management.

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[20] For regulatory capital purposes banks using internal models currently calculate a 12-month expected loss. This regulatory expected loss calculation (IRB EL) is different from the accounting based expected loss (ECL). See the appendix for a description of the key differences between Basel IRB EL and IFRS 9 ECL.

[21] The impact for IRB banks will depend on the present level of accounting provisions compared to the regulatory expected losses. There are two possible cases—the "shortfall" case and the "excess" case. The "shortfall" case means that, if the accounting loss provision is lower than the regulatory expected losses, banks must deduct from CET1 capital the difference between the regulatory expected losses (higher) and the accounting provisions (lower) when calculating their capital ratios. This reduces a bank's available amount of CET1 capital, the highest quality of capital. This deduction from CET1 capital is to prevent insufficient levels of provisions from accounting standards. The "excess" case means that, if the accounting provision for credit losses is higher than the regulatory expected losses, when calculating their capital ratios, IRB banks can add the "excess" in provisioning back as Tier 2 capital. The impact on an IRB bank of an increase in accounting provisions due to the introduction of IFRS 9 will therefore depend on whether the bank is in a "shortfall" or in an "excess" case.

[22] Barclay (2017) hasn't taken into account the phase-in arrangement when estimating the transitional effect of IFRS 9 on regulatory capital ratios.

[23] ESRB (2017)

Effects of IFRS 9 on pro-cyclicality

In addition, IFRS 9 may improve financial stability through reducing pro-cyclicality.[24] Credit losses typically occur in downturns. The ECL approach, which reflects future macroeconomic conditions, implies that credit losses should be recognised when the first signs of an economic downturn arise. This means that banks recognise credit losses in a phase during which their earnings may still be high and they may be better able to shoulder losses. Also, an early credit loss recognition may improve transparency regarding asset quality and increase investors' trust in banks' accounting statements, which may mitigate market concerns on capital adequacy and reduce the cost of raising new equity during a downturn.[25]

However, IFRS 9 may reduce but not completely remove pro-cyclicality. As pointed out by the European Systemic Risk Board (ESRB), the ECL approach requires reacting to new information, which implies that IFRS 9 may have certain pro-cyclical effects due to the cyclical sensitivity of the risk parameters used for calculating ECLs. The new ECL approach requires banks to use a point-in-time (PIT) calculation of certain parameters. To calculate the ECL, banks need their own estimates of probability of default (PD) and loss given default (LGD) for non-defaulted exposures as inputs.[26] The use of the ECL model may result in higher volatility in the ECL amount recognised in profit or loss as provisions increase when economic conditions deteriorate and decrease when economic conditions improve.[27] As a result, if many banks face the pressure of expected losses and decreasing profitability simultaneously in an economic downturn, they may deleverage and reduce credit supply at the same time, which may exacerbate the downturn.

Possible impact on loan pricing

In the long-run, IFRS 9 may impact loan pricing. Ideally, loan rates should reflect potential credit losses over the lifetime of the contract and not be impacted by the accounting standard. However, IFRS 9 is likely to contribute to a sounder risk management culture and requires banks to take a forward-looking perspective. This implies that banks may charge higher prices for certain kind of loans as a compensation of future uncertainties because the provisions that are calculated under the ECL approach may increase substantially when macroeconomic conditions deteriorate. The loan rate adjustment may reflect the costs associated with implementing the ECL model, i.e. higher operating costs due to modelling, IT infrastructures and data gathering. It may also reflect a correction of past mispricing on credit risk due to excessive competitive pressure or ineffective risk management.[28] The extent to which the price adjustment may happen depends on the nature of the competition among banks in different business segments. For example, the loan rate increase is less likely to occur for mortgages than for other retail loans and loans to corporates.[29] Overall, as pointed out by ESRB (2017), the new ECL model, which requires banks to collect a broader set of data available for internal pricing-setting processes, may help banks with more accurate and more efficient pricing of loans.

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[24] Pro-cyclicality is defined, according to FSF (2009), as "the mutually reinforcing interactions through which the financial system can amplify business fluctuations and possibly cause or exacerbate financial instability".

[25] ESRB (2017)

[26] Please see the appendix for a description of the approaches—Point-in-Time (PIT), Through-the-Cycle (TTC), and a hybrid of these two approaches—that is used to estimate the regulatory PD.

[27] This is attributed by the cliff effect when transferring a loan between stage 1 and stage 2 and vice versa.

[28] ESRB (2017)

[29] Deloitte (2016), EBA (2016), Ernst &Young (2016)

Financial stability implications

The shift to an ECL model based on forward-looking information may improve banks' credit risk management and enhance transparency and the effectiveness of market discipline through providing more and better information on banks' asset quality and credit risks. This may eventually enhance financial stability.

Modest transitional impact on capital ratios, pro-cyclicality can be reduced but not completely removed
During the transitional period, one important question regarding financial stability is how much provisions will increase and in turn impact regulatory capital. According to the studies referred in this Economic Commentary, for the four major Swedish banks, the effect is expected to be modest and should have limited short-term impact. However, for some other European banks, the effect on regulatory capital ratios may be more significant. However, the transitional impact on financial stability is expected to be manageable due to the possibility for a bank to apply the European Commission's phase-in arrangement for regulatory capital. In the long-run, IFRS 9 may enhance financial stability through better transparency and a more timely recognition of credit losses in comparison with IAS 39. The counter-cyclical recognition of credit losses in good times when banks are still able to shoulder losses may reduce pro-cyclicality. However, due to the cyclical feature of the ECL approach, pro-cyclicality may not completely be removed. If banks underestimate risks and do not reserve enough capital in good times, they are still likely to be insolvent during an economic downturn. This may of course be detrimental to financial stability. Going forward, bank supervisors and market analysts will therefore need to closely scrutinize banks' provisions.

IFRS 9 to be used in stress testing
Stress testing is another area which is of importance for regulators. Conducting stress testing is a requirement as a way to see how economic shocks affect banks' capitalisation.[30] EBA has announced that the impact of IFRS 9 on stress testing will be implemented for the first time in 2018.[31] Conducting stress tests under IFRS 9 incorporating adverse scenarios will provide regulators with a better understanding on individual banks' behaviour and whether banks can absorb the early recognition of credit losses in a downturn. The use of stress testing under IFRS 9 could be an important tool for regulators to gauge the impact of worsening macroeconomic conditions on provisions and regulatory capital. This indicates whether banks have sufficient buffers and if any policy action is required.

Increased management judgement
IFRS 9 requires banks to identify the credit quality deterioration and forecast macroeconomic scenarios under ECL approach; therefore, banks' management judgement is increased under IFRS 9. Studies have shown that managerial discretion in provisioning is strongly linked to earnings management (income smoothing).[32] In the incurred loss model, a credit loss is based on a loss event. This makes it more difficult to manage earnings compared to the ECL model. As bank management may have a large degree of discretion in setting the loss provision

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[30] Supervisory authorities conduct stress testing to facilitate the Supervisory Review and Evaluation Process (SREP) in accordance with Directive 2013/36/EU.
[31] EBA (17 November 2017), see http://www.eba.europa.eu/-/eba-publishes-methodology-for-the-2018-eu-wide-stress-test.
[32] E.g., Peterson and Erick (2017)

under the ECL approach, it may present a challenge for regulators. This also means that it is more difficult to compare credit loss provisions among banks.

Summary
Overall, IFRS 9 can, if soundly implemented by banks, contribute to improve banks' credit risk management, increase transparency on banks' asset quality and credit risks, and reduce pro-cyclicality through a more timely recognition of credit losses. This can help to mitigate the "too little, too late" shortcoming of IAS 39 and eventually improve financial stability.

Appendix

Expected loss models – Key differences among CECL (FASB), ECL (IASB) and IRB EL (Basel)

According to the Basel Standards, banks using internal models (IRB banks) are required to calculate regulatory expected loss provisions (IRB EL). The IRB EL is a parameter in the calculation of a bank's regulatory capital. In accounting, with the introduction of IFRS 9, banks must calculate an expected loss (ECL) which is separate from the regulatory expected loss (the US will in 2020 implement an accounting expected loss model, called current expected credit loss (CECL), similar to ECL in IFRS 9). When calculating the regulatory capital, the IRB EL is compared with the accounting provisions where any shortfalls are deducted from CET1 capital. Any excess (i.e. accounting provisions that are higher than IRB EL) is included in Tier 2 capital. Given that provisions are expected to increase with the accounting ECL model compared to the incurred loss model (Deloitte, 2013), this may have an impact on regulatory capital where accounting provisions are added back to Tier 2 capital. This change could lead to policy challenges for regulators, should they find such addbacks inappropriate from a prudential perspective.

Many banks use the IRB approach and measure regulatory expected losses. For most banks, the IRB EL model is a starting point for their accounting expected loss models. However, some important differences exist, which means that banks must adjust their existing regulatory models to comply with the accounting standard. The models also have different objectives (prudential vs. neutral). For example, under the IRB EL, probability-of-default (PD) is estimated based on a 12-month time horizon through the economic cycle, and the loss-given-default (LGD) is calculated based on a downturn scenario. However, under the accounting ECL approach, PD is estimated based on a lifetime horizon at a specific point in time of an economic cycle, and LGD is calculated based on a neutral scenario.

Figure A1 Through-the-Cycle versus Point-in-Time probability of default
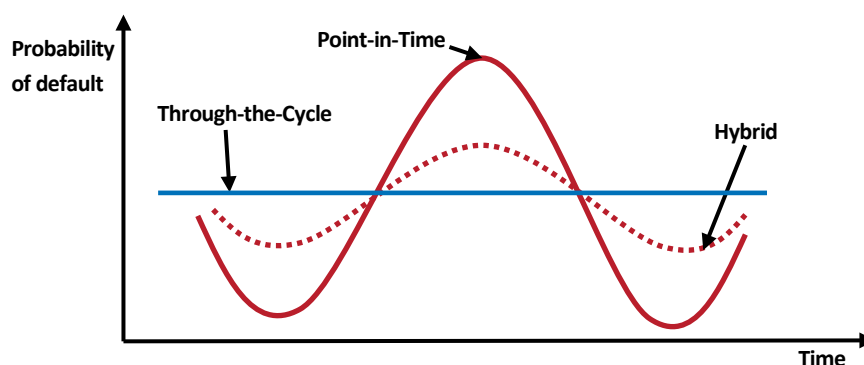
The estimation of PD can follow three different approaches: point-in-time (PIT), through-the-cycle (TTC), or a hybrid of these two approaches. The TTC methodology, which is commonly used in the IRB approach, focuses on a longer horizon and neutralises the effects of the current cyclical conditions, and results in more stable and less cyclical estimation of PD. IFRS 9 requires using the PIT approach, which assesses the borrower's PD over a relatively short

horizon and can therefore vary considerably over the business cycle.[33] As shown in Figure A1, the estimated PD using the PIT approach will be lower for many banks during a good time and higher during an economic downturn, compared with that using the TTC or hybrid approaches.

Table A1 shows the key differences in parameters among IFRS 9 ECL, CECL and IRB EL. Differences in parameters make it difficult to compare the models. For example, the economic cycle and the level of financial stress in the market would affect the outcome of each model.

Table A1: Key differences among IFRS 9 ECL, CECL and IRB EL

		IFRS 9 ECL	CECL	IRB EL
PD	Measurement period	12 months (stage 1) Lifetime (stage 2-3)	Lifetime	12 months
	Cyclicality	PIT including forward-looking information	PIT including forward-looking information	TTC (economic cycle)
LGD/EAD	Measurement	Neutral	Neutral	Downturn

There are also a few differences between the IFRS 9 ECL and the FASB CECL models.[34] The key difference is the time horizon used for assessing the expected losses. CECL uses lifetime ECL for all loans and does not differentiate by stages of credit quality. This will imply that provisions made under CECL are higher than those under IFRS 9 due to that stage 1 provisions in IFRS 9 are based on a 12-month horizon and not lifetime horizon. However, ultimately, the actual credit losses would be the same (see Figure A2).

Figure A2 Credit loss provisions under IFRS 9 (ECL) and FASB (CECL)

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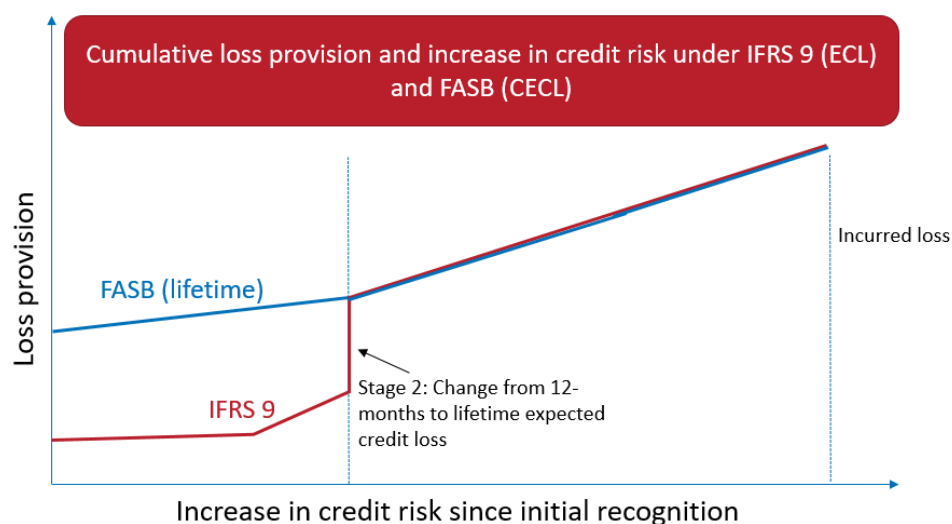
[33] IFRS 9 does not require the use of a PD/LDG approach to measure ECL and other approaches can be used. For example a loss rate approach.
[34] IFRS 9 ECL is implemented in 2018 and CECL in 2020 for the largest banks.

Studies on the transitional effect of IFRS 9

Table A2 Summary of existing studies on the transitional effect of IFRS 9 on provisions and capital ratios

Study	Region	Number of Banks	Effect on provisions	Effect on CET1 ratio	Effect on Total Capital ratio
Barclays (2017)	Europe	27	+17%	-50bps	-
Deloitte (2016)	Europe, the Middle East & Africa, Asia Pacific and the Americas	91	+25%	-50bps	-
EBA (2017)	Europe	49	+13%	-45bps	-35bps
Moody (2017)	Europe, the Middle East & Africa, Asia Pacific and the Americas	185	-	-50bps	-
ECB SSM (2017)	Europe	91	-	-50bps	-

Abbreviations

BCBS	Basel Committee on Banking Supervision
CECL	Current Expected Credit Loss
CET1	Common Equity Tier 1
EAD	Exposure At Default
EBA	European Banking Authority
ECB	European Central Bank
ECL	Expected Credit Loss
ESRB	European Systemic Risk Board
FASB	Financial Accounting Standards Board
GDP	Gross Domestic Product
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standard
IRB	internal ratings-based (internal models)
LGD	loss given default
NPL	non-performing loans
PD	probability of default
PIT	point-in-time
TTC	through-the-cycle

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