



## **A Drain on Resources?**

The Impact of IFRS 9 on Banking  
Sector Regulatory Capital

November 2016

# Contents

1. In summary...	1
2. Drivers of rising impairment under IFRS 9	2
3. Impact on regulatory capital	3
4. Impact on Standardised banks	5
4.1 Capital resources	5
4.2 Capital requirements	6
4.3 Proposed changes to the Standardised Approach	6
5. Impact on IRB banks	7
5.1 Capital resources	8
5.2 Capital requirements	8
5.3 Proposed changes to the IRB Approach	8
6. Impact on stress testing and capital buffers	10
7. How banks should respond	11
8. Worked example	12

# 1. In summary...

**The scope of this paper applies to banks and building societies ("banks") that are prudentially supervised according to Basel Committee for Banking Supervision (BCBS) rules and prepare financial statements in accordance with International Financial Reporting Standards that include "IFRS 9 Financial Instruments".**

It is widely expected that IFRS 9 will increase the stock of credit impairment provisions. Four-fifths of banks expect their stock of retail and corporate impairment to rise, with one in six preparing for a 50% increase or more.<sup>2</sup> As a result, we expect many banks to suffer a decline in regulatory capital, with EBA Quantitative Impact Study (QIS) respondents expecting an average 79 basis point reduction in their Tier 1 ratio.

This paper describes the interaction between accounting credit impairment and regulatory capital, in which banks must be well versed to avoid an unexpected capital shortfall. This is particularly important given the challenging regulatory environment, as part of which automatic dividend caps are imposed on banks that fail to meet increasingly stringent capital requirements.

Rising impairment provisions invariably deplete the equity of banks that use the Standardised Approach to credit risk. The result will be similar for banks that use Internal Ratings Based (IRB) models, subject to the relationship between their stock of accounting impairment and Regulatory Expected Loss, which is a key component of their capital formula. On average, we expect Standardised banks to suffer twice the capital reduction of IRB peers.

Look more deeply, and it is clear that the capital impact will vary markedly between junctures in the economic cycle and banks' risk profiles. We expect a particularly wide range of impacts for IRB banks given the nuances associated with Regulatory Expected Loss. Furthermore, the new IFRS 9 standard is likely to weigh on banks' stress testing results and make the stress testing process more onerous in the short-term. However, as new processes become embedded across the industry, banks are likely to realise efficiency gains from the greater alignment between impairment modelling, stress testing and, potentially, IRB modelling.

As of November 2016, our two core recommendations to banks in this area are as follows:

- Prepare a fair and open assessment of potential IFRS 9 impacts, to provide prudential regulators with the facts to establish whether the impact could be significantly greater than currently modelled. In particular, banks should transpose all quantitative IFRS 9 assessments into a regulatory capital impact, bearing in mind that capital rules are a moving target; and
- Devote resource to integrating IFRS 9 into stress testing procedures, also potentially looking to exploit synergies with IRB modelling.

In October 2016, the BCBS published two papers to describe the interaction between IFRS 9 impairment and regulatory capital:

- A discussion paper<sup>3</sup> setting out long-term policy options, proposing changes to the Standardised and potentially IRB approaches to credit risk after moving to ECL provisioning; and
- A consultative document<sup>4</sup> proposing a transitional period in which banks can continue to use the current approach to provisioning for regulatory capital calculations.

These papers are positioned as the start of a discussion process with the industry. This means the much-craved period of stability of banks' capital treatment will be further delayed.

Banks must be well versed in the relationship between credit impairment and regulatory capital to avoid an unexpected capital shortfall.

<sup>1</sup> Regulation (EU) 575/2013, "Capital Requirements Regulation"

<sup>2</sup> Deloitte: "Sixth Global IFRS Banking Survey", May 2016

<sup>3</sup> BCBS, "Regulatory Treatment of Accounting Provisions: Discussion Document", October 2016

<sup>4</sup> Regulatory Treatment of Accounting Provisions: Interim Approach and Transitional Arrangements", October 2016

## 2. Drivers of rising impairment under IFRS 9

Banks must recognise credit impairment to reflect expected credit losses, and hold capital to protect against the unexpected.

Policymakers developed the impairment rules in IFRS 9 in response to the global financial crisis, which exposed the lack of foresight in banks' credit impairment estimates. Under the current IAS 39 "incurred loss" model, banks only recognise impairment due to objective evidence of a credit loss, principally loan arrears. This is now widely considered to be an unduly reactive approach.

Credit impairment provisioning, which should form the first layer of protection against losses, did not rise sharply enough to reflect the true extent of losses that would materialise from the crisis. This led to a perception of profit overstatement, with regulators and investors lacking credible data at a vital time.

Accordingly, IFRS 9 introduces a forward-looking view of credit quality, under which banks are required to recognise an impairment provision (and a corresponding impairment loss), prior to the occurrence of a loss event (e.g. becoming credit impaired or subject to default). This approach can result in an impairment provision even when the probability of loss is low.

We anticipate three specific drivers of higher impairment under IFRS 9.

First, banks must allocate all credit exposures to one of three "credit stages" (see Figure 1) which determine how impairment is calculated. Most notably, IFRS 9 requires banks to provide for the lifetime expected credit loss of exposures where there is a significant decline in creditworthiness but a loss event has yet to occur (those allocated to "Stage Two"). This should increase the impairment of long-tenor loans such as mortgages, to which banks may respond by strengthening underwriting or reviewing product terms.

Second, IFRS 9 requires firms to recognise expected credit losses on undrawn commitments, including committed revocable facilities. Estimates should reflect the tendency for customers to draw down on credit lines and the bank's ability to identify and to manage problem accounts. The treatment of revolving facilities is a well-established part of the capital requirements framework, but under IFRS 9 it may also drain the capital resources of credit card, overdraft and trade guarantee providers amongst others. This may encourage banks to manage undrawn credit lines more tightly.

Third, banks will need to develop forward-looking, probability-weighted loss estimates against a range of macroeconomic scenarios. We anticipate that banks will develop at least three scenarios: a "best estimate" of the future, a stressed case and a more optimistic forecast. The task of demonstrating that the subjectivity involved has not led to a material misstatement may prove to be a particular challenge. This approach should reflect the uneven distribution of losses that can arise in different economic scenarios.

IFRS 9 introduces a forward-looking view of credit quality, with banks expected to recognise credit impairment before a loss event.

**Figure 1: Summary of IFRS 9 credit stages**



### 3. Impact on regulatory capital

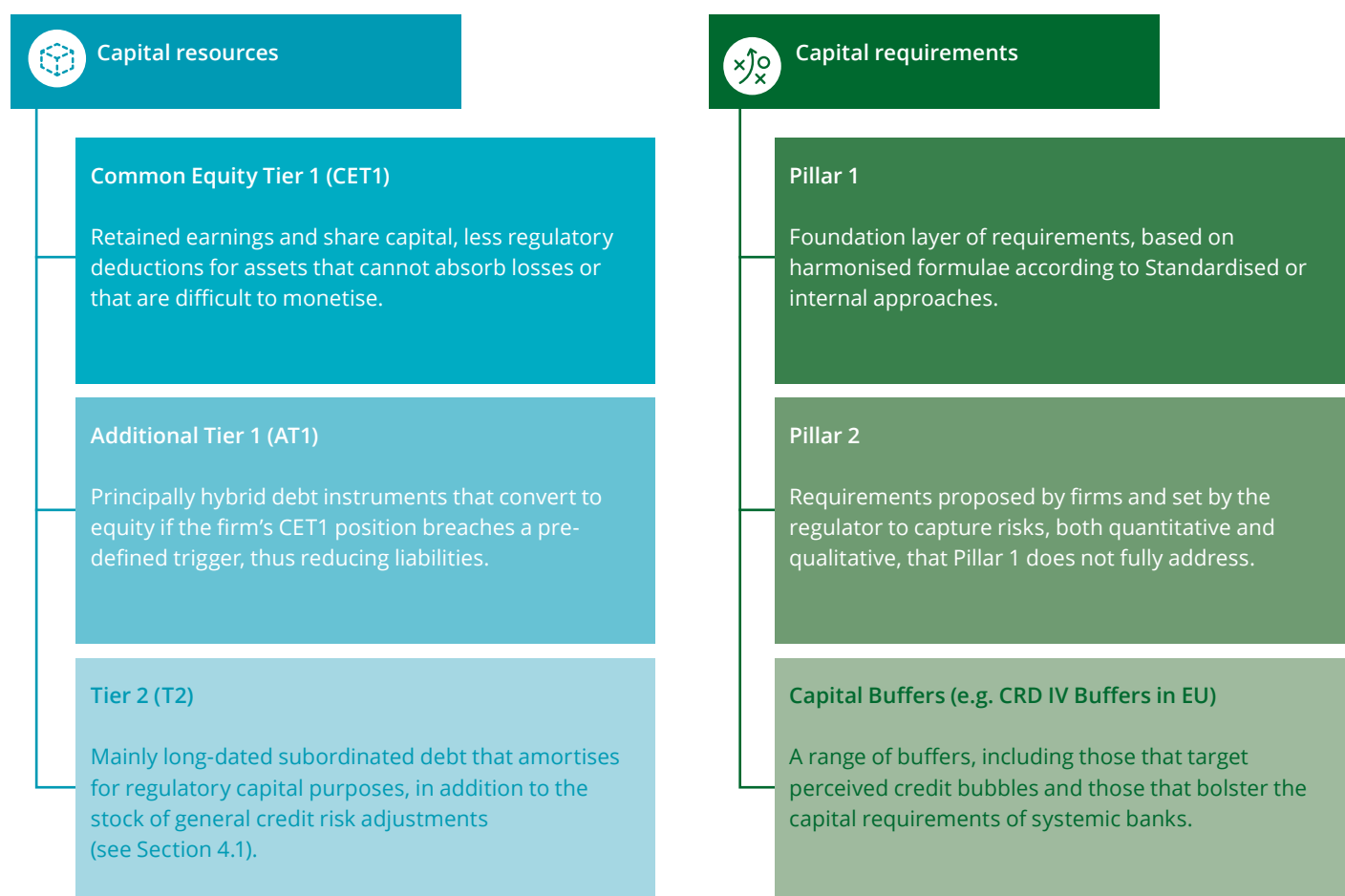
Deloitte estimates that the impact of IFRS 9 on Pillar 1 regulatory capital – banks’ “base” level of capital adequacy – will be twice as great for Standardised firms compared with those using IRB models. IRB banks do not get off lightly, however, as IFRS 9 may weaken stress testing results, thus pushing up “capital buffer” requirements. Overall, we expect a wide range of impacts across the industry.

Retained earnings are a key component of Common Equity Tier 1 (CET1) resources, the most loss-absorbent type of capital and that to which investors and regulators pay most attention. Retained earnings are driven by Profit After Tax and shareholder distributions. As such, additional impairment acts as a drag on capital resources.

This is important because banks must preserve a basic level of capital adequacy to pay dividends to shareholders and avoid being forced to take capital actions such as raising equity, deleveraging their balance sheet or transitioning to less risky and profitable activities. Specifically, the BCBS introduced the concept of Maximum Distributable Amounts, which restrict dividends for banks that breach capital buffers. These rules have been adopted by national and supranational bodies.

Meanwhile, the capital rulebook is becoming ever more stringent. Banks must meet several layers of capital requirements, including Pillar 2 guidance, which reflects the evolving stress testing regime and the impact of CRD IV Capital Buffers.

**Figure 2: Summary of the Basel regulatory capital framework**



The following figure outlines the impact of movements in accounting impairment on a bank's regulatory capital position, which is described in more detail during the remainder of this paper.

**Figure 3: Regulatory capital impact of rising impairment**

	Standardised Banks	IRB Banks
<b>CET1 Resources</b>	One-for-one depletion due to new credit risk adjustments (see Section 4.1), subject to tax effects	One-for-one depletion due to new credit risk adjustments, subject to tax effects and relationship between Credit Risk Adjustment stock and Regulatory Expected Loss
<b>T2 Resources</b>	One-for-one accretion for new <i>general</i> adjustments, subject to Standardised ceiling	One for one accretion for new credit risk adjustments, subject to IRB ceiling and relationship between Credit Risk Adjustment stock and Regulatory Expected Loss
<b>Capital Requirements*</b>	Reduction by new <i>specific</i> adjustments, multiplied by the relevant risk-weight and other regulatory adjustments**, all multiplied by 8%	<p>If asset is performing and/or bank uses F-IRB (i.e. no own estimates of exposure at default or loss given default): no impact on capital requirements.</p> <p>If asset is defaulted and bank uses A-IRB (i.e. own estimates of Exposure at Default (EAD) and Loss Given Default (LGD) at default and loss given default used): impact depends on relationship between credit risk adjustments, Expected Loss Best Estimate (<math>EL_{BE}</math>) and Regulatory LGD</p>

\* Impact on Pillar 1 requirements shown; Pillar 2 impact depends on firm-specific factors

\*\* Including credit risk mitigation and credit conversion factor adjustments

#### credit risk adjustments

These are the amount of specific and general loan loss impairment provision for credit risks that has been recognised in a bank's financial statements in accordance with their accounting framework.\*

\* Definition in the EU as per CRR Article 4.1.95

As of November 2016, we have no reason to believe that Brexit negotiations will affect the relationship between capital and impairment for UK banks. FRS 9 and BCBS standards are a global standard, which the UK continues to align with.



## 4. Impact on Standardised banks

Assessing the impact of rising impairment is more straightforward for banks that use the Standardised Approach, since these firms do not rely on internal estimates of Exposure at Default (EAD), Probability of Default (PD) or Loss Given Default (LGD) for regulatory capital purposes. This removes a layer of complexity compared with IRB banks, though some subjectivity in the interpretation of Standardised rules remains which the BCBS is striving to mitigate.

Note that IRB banks would do well to understand the impact on their Standardised counterparts, since the two credit risk capital approaches are founded on similar principles. In any case, all banks tend to use the Standardised Approach for at least a small portion of exposures.

The key takeaway for Standardised banks is that rising impairment invariably consumes their CET1 capital resources. Although BCBS rules allow for offsets in lower quality resources (i.e. Tier 2) and capital requirements, the net impact is always capital depletive.

### 4.1 Capital resources

Impairment charges reduce retained earnings and, by extension, CET1 resources. The relationship between impairment and capital resources may not be one-for-one, however, because profitable firms pay less corporation tax as impairment rises.

Basel capital rules distinguish between Specific credit risk adjustments and general credit risk adjustments<sup>5</sup>.

The former is a classification of impairment stock that reflects realised losses, while the latter captures “freely available provisions”. Importantly, banks may add some general adjustments back to Tier 2 capital because they do not arise from actual monetary losses (though inclusion in Tier 1 would contravene the “going concern” principle of this capital tier).

Some uncertainty remains around the definition of general credit risk adjustments. Banks take different approaches in practice and permission to recognise credit risk adjustments in Tier 2 capital may depend on supervisory discretion. The EBA has previously contended that “for the IFRS framework as it currently stands [pre-IFRS 9], no example for general adjustments can be given”. As set out in Section 1, the BCBS is expected to clarify the interaction between General and specific adjustments in due course.

Regardless of the potential for banks to add back capital in Tier 2, investors and policymakers tend to focus on Tier 1 resources, which rising impairment always depletes. For example, Tier 1 ratios form the basis of solvency indicators used by the Bank of England to set capital buffers<sup>6</sup>. Note also that the BCBS rules cap recognition of general adjustments in Tier 2 capital at 1.25% of Standardised risk-weighted assets.

There is not a one-to-one mapping between the BCBS definitions of credit risk adjustments (i.e. general versus specific adjustments) and the accounting impairment terminology typically used in banks, which typically relates to the process used to arrive at an impairment outcome (i.e. individual versus collective impairment).

**Figure 4: Matrix of BCBS credit risk adjustments and IAS 39 accounting impairment**

Accounting Classification (IAS 39)			
		Individual Impairment	Collective Impairment
BCBS Capital Classification	Specific Credit Risk Adjustments	Account has been assessed on an individual basis and an impairment is raised against an incurred credit loss. This includes: <ul style="list-style-type: none"> <li>• Impairment based on individual analysis of most likely Net Present Value of future cash flows for impaired assets (normally corporate portfolios); and</li> <li>• Modelled impairment for homogeneous asset pools with individual and measurable characteristics (e.g. loan-to-value at default).</li> </ul>	Credit loss has not yet been allocated to a customer (or account) by credit risk models. This includes: <ul style="list-style-type: none"> <li>• Collective impairment, typically modelled, for impaired assets (normally, but not exclusively, in retail portfolios); and</li> <li>• “Incurred but not reported” (IBNR) impairment, estimated using statistical or qualitative methods.</li> </ul>
	General Credit Risk Adjustments	Account has been assessed on an individual basis and becomes less creditworthy but no impairment event (including default) has been observed.	Macroeconomic or market conditions have led to a less creditworthy pool of assets, with impairment provisions freely available to absorb future specific credit losses.

<sup>5</sup> EBA Final Draft RTS: “Calculation of specific and general credit risk adjustments”, July 2013

<sup>6</sup> Bank of England: Financial Policy Committee “Core Indicators”

Note that we do not anticipate a clean mapping between *Figure 4* and IFRS 9 “credit stages”. Ostensibly, it makes sense that banks should reserve Stage Three for individual impairment since it captures actual loss events. But for practical reasons, many banks may build portfolio level loss models even if they perform stage allocation by customer. In short, banks’ individual accounting policies are likely to dictate impairment classification.

#### 4.2 Capital requirements

Standardised banks must remove specific adjustments from the exposure value on which capital requirements are calculated. The purpose is to calculate requirements for unexpected losses only, since impairment is intended to cover expected losses. This is a key principle of BCBS rules.

All else being equal, the capital impact of netting specific adjustments depends on the performing risk-weight of impaired assets. Intuitively, it makes sense that a higher risk-weight means a larger portion of capital requirements fall away as impairment rises.

On the other hand, banks normally classify assets with specific adjustments due to credit deterioration as “in default” for regulatory purposes. This is important because the non-impaired portion of a defaulted asset incurs a higher risk-weight than most performing assets.

According to BCBS, defaulted assets secured by collateral such as property or credit guarantees receive a 100% risk-weight, as do unsecured defaulted assets with sufficient impairment coverage (specifically, where specific adjustments are no less than 20% of the gross asset value). All other defaulted assets incur a 150% risk-weight. To put this in perspective, most performing mortgages are risk-weighted at 35% under the Standardised Approach, with top-rated corporates (AA-/AA3 or above) incurring a 20% risk-weight.

So the question of whether capital requirements rise or fall as an asset becomes impaired depends on which of the following has the greatest impact:

- Capital requirements falling due to banks netting specific adjustments from the exposure value before applying a risk-weight; or
- Capital requirements rising due to the non-impaired portion of a newly defaulted asset incurring a higher risk-weight.

If the emergence of IFRS 9 does not increase banks’ default stock (which in part depends on firms’ individual accounting policies) then capital requirements will fall alongside rising impairment. However, the consumption of capital resources will significantly outweigh any offset in requirements (excluding assets with exceptionally high risk-weights such as some securitisations and free deliveries, which the Standardised Approach risk-weights at 1,250%).

#### 4.3 Proposed changes to the Standardised Approach

In addition to improving transparency around Credit Risk Adjustment definitions, the BCBS has also posited a move to a regulatory Expected Loss (EL) framework for the Standardised Approach, though details are limited as of November 2016. Under such a framework, banks would calculate EL for Standardised exposures as a function of risk-weighted assets (as an example, the BCBS suggests a circa 0.5% EL rate for a 100% risk-weighted exposure).

Any Excess Expected Loss (EEL) compared with accounting impairment would be deducted from CET1 capital resources in response to the excessive variability in approaches to credit risk adjustments identified by the BCBS. Naturally, the result may be a fall in capital adequacy for banks with lower than average provision coverage, though with most banks expected to report significantly higher impairment under IFRS 9, the isolated impact of the BCBS proposal may in practice be limited.

Further changes to the Standardised Approach are also afoot in the form of BCBS proposals to revamp risk-weight rules.<sup>7</sup> The proposals advocate a more conservative capital treatment for some exposure types, notably specialist property lending, high loan-to-value residential lending and undrawn credit lines. Although there is no direct impact on banks’ impairment calculation, Standardised banks transitioning to IFRS 9 should bear in mind that, if policymakers adopt the proposals, they must risk-weight unsecured defaulted assets at 150%.

In addition, as described in *Section 5.3*, BCBS proposals to remove IRB permissions for low default portfolios may lead to a larger portion of banks’ capital requirements being calculated under the Standardised Approach. Note that BCBS proposals in respect of aligning credit risk adjustments and introducing a Standardised EL framework are in a consultative stage, which is due to close in January 2017. Any subsequent rulemaking is likely to take some months following the consultation.

The key takeaway for Standardised banks is that rising impairment invariably consumes their CET1 capital resources.

7. BCBS, “Revisions to the Standardised Approach for credit risk”, second consultative document, December 2015



## 5. Impact on IRB banks

The capital impact of IFRS 9 on IRB banks includes some additional nuances. Certainly, it is more dependent on firms' individual circumstances, and the relationship between impairment and regulatory LGD for defaulted stock in the eyes of prudential regulators.

IRB firms estimate (or are prescribed by regulators) the Exposure at Default (EAD), Probability of Default (PD) and Loss Given Default (LGD) of their assets. Accordingly, these banks can calculate the regulatory Expected Loss (EL) of their portfolio as  $EAD \times PD \times LGD$ . Assuming a static portfolio, this represents an estimate of the value of credit losses they can expect over a one-year horizon, calibrated to an economic downturn.

Capital requirements for IRB credit risk are calibrated to Unexpected Loss (UL) at a 99.9% confidence level under BCBS rules. That is, holding the ensuing level of capital should protect banks from insolvency in all but a one-in-1,000 event (subject to numerous assumptions such as a diversified portfolio and normally distributed PDs that fluctuate around a constant mean).

Under the IRB Approach, banks must hold capital equivalent to Regulatory UL less Regulatory EL (since the combination of accounting impairment and regulatory EL are structured to cover business as usual credit losses). In addition, IRB banks must deduct from capital resources any surplus Regulatory EL over impairment stock to reflect under-provisioning relative to regulatory rules. This is known as the Excess Expected Loss (EEL) deduction, which has a significant impact on some banks, particularly in benign economic conditions when the stock of impairment tends to be lower.

Banks normally calculate regulatory EL over a one-year horizon, reflecting regulators' historic comfort that this is sufficient for Pillar 1 capital planning. However, we expect that assets in "Stage Two" under IFRS 9 – those that have significantly deteriorated in credit quality but have not yet incurred a loss – will now be assessed for lifetime credit losses for accounting purposes.

**Figure 5: Relationship between IFRS 9 impairment and regulatory expected loss**

IFRS 9 Accounting impairment	Regulatory Expected Loss
<b>Neutrality:</b> The objective is to provide the market with an unbiased, probability-weighted view of future losses.	<b>Prudence:</b> The calculation of regulatory EL errs towards conservatism. For example, loss estimates are calibrated to an economic downturn, whilst regulators impose PD and LGD floors.
<b>Lifetime Losses:</b> Banks must calculate lifetime expected credit loss for assets in Stages Two and Three – that is, assets with significant credit deterioration and/or actual credit losses.	<b>One-Year Losses:</b> Banks typically calculate regulatory EL over a one-year horizon, except for assets that have incurred a credit loss.
<b>"Point-in Time" Modelling:</b> Banks will typically produce forward-looking, probability-weighted, unbiased loss estimates against discrete scenarios that do not necessarily correspond to a stylised economic cycle.	<b>"Through-the-Cycle" Modelling:</b> Many banks apply a through-the-cycle philosophy (or point-in-time plus buffer), using long-term averages to calculate PD. These banks may maintain an Excess Expected Loss (EEL) during an upturn, and a deficit in a downturn.
<b>EIR Based Discount Rate:</b> Banks are expected to discount future cash flows at the original Effective Interest Rate (EIR). The discount rate can be lower or higher than that used for calculating Regulatory EL.	<b>Stressed Risk Premium Based Discount Rate:</b> Banks typically use their cost of equity or funding as the discount rate for calculating Regulatory EL.

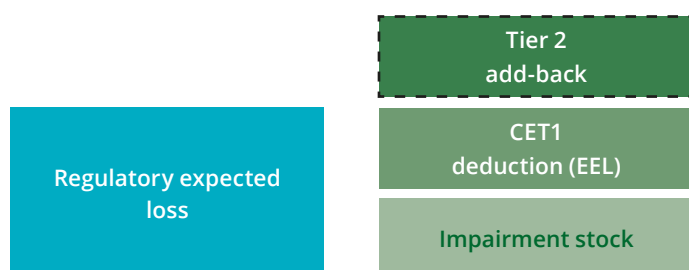
## 5.1 Capital resources

Accounting impairment reduces the CET1 resources of all banks, subject to Regulatory Expected Loss. In addition, IRB firms deduct Excess Expected Loss (EEL) from CET1, along with several other regulatory deductions (e.g. relating to deferred tax and intangible assets), which ensure capital resources are loss-absorbent. Many banks make an EEL deduction now and, if this continues, their capital adequacy may be unaffected by IFRS 9 because impairment is not the binding constraint.

On the other hand, firms with a surplus of impairments compared with Regulatory EL may add this amount back to Tier 2 capital. So the general picture is not necessarily one of capital depletion as impairment rises: more one of capital realignment.

Furthermore, higher impairment reduces profits so may yield tax benefits, while the EEL calculation uses a gross impairment figure, providing a further offset for some banks that are facing higher impairment. Note that the Tier 2 add-back is similar to Standardised rules that permit capital recognition of impairments, except: i) the IRB add-back must be made net of regulatory EL; ii) it applies to the entire impairment stock, not just general adjustments; and iii) it is stricter than the Standardised equivalent, limited to 0.6% of IRB risk-weighted assets.

**Figure 6: BCBS capital treatment of accounting impairment and regulatory expected loss**



For IRB firms, therefore, the capital impact of IFRS 9 depends heavily on the relationship between impairment and Regulatory EL, hence there is no “standard model” for a worked example. Banks with a significant Excess Expected Loss (EEL) may find that the transition to IFRS 9 does not affect capital resources. For other IRB banks, IFRS 9 could materially deplete capital adequacy. As outlined in *Figure 5*, surplus impairment – which increases the chance of IFRS 9 making an impact – is more likely in an economic downturn given that many banks estimate Regulatory EL on a “through-the-cycle” (or point-in-time plus buffer) and “downturn” basis.

## 5.2 Capital requirements

Contrary to the Standardised Approach, IRB banks do not deduct specific adjustments from the exposure value on which capital requirements for performing assets are calculated. The rationale is that the IRB formula sets requirements to UL less EL, with a key assumption being that the latter approximately corresponds to impairment stock.

Similarly to the Standardised Approach, accounting impairment does not directly affect the risk-weighting of performing exposures. Defaulted assets, however, are often afforded a lower IRB risk-weight than performing assets, which is logical given the reduction in capital resources as credit quality declines. Under Foundation IRB, defaulted assets receive a zero risk-weight.

Advanced IRB banks, meanwhile, only need to capitalise defaulted exposures if regulatory LGD exceeds the firm’s “best estimate of expected loss” ( $EL_{BE}$ ) for these assets.  $EL_{BE}$  broadly equates to impairment stock but is calculated inconsistently across the banking industry, with guidance on its relationship with IFRS 9 impairment awaiting confirmation from regulators.

All else being equal, a rise in impairment normally leads to lower IRB capital requirements, though this may not be true in the case of significant default migration. However, the net impact of higher impairment will often be capital depletive.

### 5.3 Proposed changes to the IRB Approach

The BCBS has indicated a move toward risk-weight floors for IRB banks, potentially in the region of 60-90% of Standardised risk-weights, albeit without concrete details as of November 2016.<sup>8</sup> The previous consultation paper on this topic stated that introducing floors would require a different regulatory capital treatment of impairment, specifically the alignment of the IRB and Standardised Approaches, such that EEL is no longer deducted from capital resources. All IRB banks, but particularly those with low average risk-weights that are most at risk of being affected by the floor, will be eager to engage with the rulemaking process.

Since it first mooted the idea of risk-weight floors relative to the Standardised Approach, the BCBS has also debated removing IRB permissions for data-poor, low default portfolios.<sup>9</sup> In March 2016, the Committee proposed discarding IRB for sovereign, large corporate, equity and specialised property lending exposures (though with a view to retaining the IRB “slotting” approach for the latter). This may lead to higher capital requirements depending on, inter alia, the current relationship between impairment and Regulatory EL for these portfolios.

If imposed, the changes would increase the portion of banks’ capital requirements driven by the Standardised Approach. On the other hand, however, the planned implementation of IFRS 9 may encourage more banks to apply to their regulators for IRB permissions given the potential synergies. Naturally, Standardised banks may look to leverage the skills and systems developed in response to IFRS 9 to build IRB models, incentivised by potential capital requirement reductions (which, although potentially large at present, may become less attractive if BCBS proposals are implemented).

In the UK, for example, the Bank of England has signalled a move towards widening the current population of IRB firms. In November 2015, for example, then Chief Executive of the PRA, Andrew Bailey, advised HM Treasury that the PRA was reviewing “whether its approach to internal model application could be made more proportionate for smaller banks and building societies.”

Furthermore, as described in Section 3.1, the BCBS has indicated it may work towards harmonisation of Credit Risk Adjustment definitions and remove the distinction between Specific and general adjustments. The latter proposal is unlikely to affect IRB banks’ capital adequacy since there is no current distinction between the two in IRB rules.

<sup>8</sup> BCBS, “Capital floors: the design of a framework based on standardised approaches”, December 2014

<sup>9</sup> BCBS, “Reducing variation in credit risk-weighted assets”, March 2016

## 6. Impact on stress testing and capital buffers

Stress testing is likely to become more analytically challenging, and may yield more pessimistic results, when IFRS 9 comes into force subject to any transitional arrangements adopted by regulators.

Likely rises in impairment volatility – potentially driven by the cliff effects of many exposures migrating to “Stage Two” and incurring lifetime ECL estimates – have the potential to increase firm-specific capital buffers that banks may absorb under an actual stress (e.g. Pillar 2 Capital Guidance in the EU). Firm-specific buffers reflect capital depletion over banks’ planning horizon. *Figure 7* illustrates the potential for additional impairment volatility under stress to increase this demand for capital.

The transition from IAS 39 to IFRS 9 (i.e. from the blue to the green line) causes CET1 ratios to fall (as the increased impairment charge reduces regulatory capital). Importantly, the quantum of capital depletion under stress also rises in this stylised example, leading to an increased demand for capital.

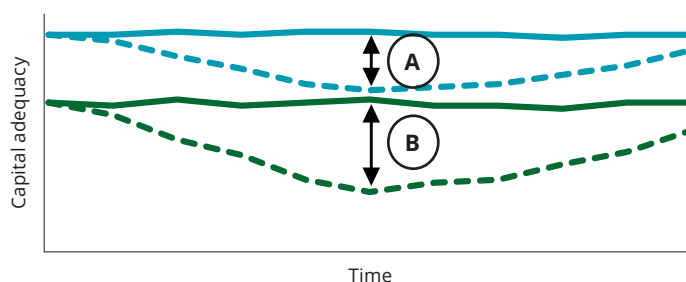
Furthermore, to remain strictly IFRS 9 compliant when performing a stress test, banks must generate “point-in-time” forecasts during the hypothetical stress scenario – thus a forecast of a forecast – which would need to be conservative to reflect the likely response of senior management, bank economists, credit risk teams and accountants to a genuine stress.

In the first instance, national regulators are expected to collect information about the impact of IFRS 9 on stress testing results in order to understand the outcome of forecasting relationships between stage migration and increased impairment rates, with the potential for pro-cyclicality a key focus area. This will place short-term pressures on banks that are already challenged to implement IFRS 9 on time.

Likely increases in impairment volatility may drive up capital buffers.

**Figure 7: Stylised example of the IFRS 9 impact on Capital Guidance**

Surplus CET1 Resources over Capital Requirements



**A** = Indicative Capital Guidance under IAS 39

**B** = Higher Capital Guidance under IFRS 9

— Forecast capital position (IAS 39)

- - - Stressed capital position (IAS 39)

— Forecast capital position (IFRS 9)

- - - Stressed capital position (IFRS 9)

It is not all bad news, however, since many banks will realise synergies between their approach to stress testing and IFRS 9 impairment as scenario-based modelling becomes the norm for banks of all sizes and business models. Already, many banks are carefully considering how to integrate IFRS 9 into capital planning and stress testing, ahead of confirmation as to when and how regulators will require them to do so.

## 7. How banks should respond

We make two core recommendations, in the context of regulatory capital adequacy, to banks that are transitioning to IFRS 9.

First, banks should prepare a fair and open assessment of potential IFRS 9 impacts (including potential sensitivities), to provide prudential regulators with the facts to establish whether the impact could be significantly greater than currently modelled. This should include consideration of operational and financial consequences.

The onus is on dual US GAAP and IFRS reporters to identify how the two-year gap between the effective dates could affect their interpretation and assumptions for prudential capital calculations during transition: based on the two differing ECL accounting standards: IFRS 9 and the US GAAP equivalent, Current Expected Credit Loss (CECL).

In particular, banks should transpose all quantitative IFRS 9 assessments into a regulatory capital impact, bearing in mind that capital rules are a moving target with various options on the table for regulators. Banks should assess whether potential regulatory changes would unduly penalise their business model.

Third, banks should devote resource to understand the impact of IFRS 9 on their stress testing results, which are a key driver of capital buffers. Where possible, banks should look to exploit synergies between IFRS 9 modelling, stress testing and IRB modelling. They should also bear in mind that some regulators have indicated a strategy to approve IRB permissions for more banks, which could ease capital requirements and encourage banks to develop a fuller understanding of their risk profile.

Banks should transpose all quantitative IFRS 9 assessments into a regulatory capital impact, bearing in mind that capital rules are a moving target.

## 8. Worked example – Impact of IFRS 9 on Standardised banks' capital adequacy

To illustrate the impact of rising impairment on Standardised banks' capital positions, we overlay two impairment charges onto the stylised capital position set out in *Figure 9*. The first is a lower incurred loss under IAS 39; the second a higher expected credit loss under IFRS 9. As described in Section 4, credit risk adjustments do not automatically align with IFRS 9 credit stages. The impact of IFRS 9 implementation may differ depending on the outcome of BCBS discussion and consultative papers (described in Section 1), for example if transitional provisions relating to IFRS 9 credit losses are ratified.

**Figure 8: Capital position pre-impairment charge**

Capital resources		Capital requirements	
Share Capital	100	Gross Performing Exposure	3,000
Retained Earnings	200	Average Risk-Weight	75%
<b>Common Equity Tier 1 Capital</b>	<b>300</b>	<b>Performing RWAs</b>	<b>2,250</b>
Subordinated Debt	60	Gross Defaulted Exposure	150
general credit risk adjustments	0	Net of specific adjustments	80
<b>Tier 2 Capital</b>	<b>60</b>	Average Risk-Weight	125%
<b>Total Capital</b>	<b>360</b>	<b>Defaulted RWAs</b>	<b>100</b>
		<b>Total Risk-Weighted Assets</b>	<b>2,350</b>

**Figure 9: Worked example assumptions**

Capital resources	IAS 39	IFRS 9
New impairment charge*	20	40
<i>Of which: Specific credit risk adjustments</i>	20	30
<i>Of which: general credit risk adjustments</i>	0	10

This scenario assumes no IBNR nor migration to default as a result of rising impairment

\* Impairment charge is defined as the period-on-period change in credit impairment stock

**Figure 10:**

Capital resources	
<b>CAPITAL RATIOS</b>	
<b>CET1 Ratio</b>	<b>12.8%</b>
<b>Total Capital Ratio*</b>	<b>15.3%</b>

\* CET1 Ratio equals CET1 capital resources divided by total risk-weighted assets.  
Total capital ratio equals total capital resources divided by total risk-weighted assets.



Figure 11: Capital resources post-impairment charge

Capital resources	Pre-charge	IAS 39	IFRS 9	Commentary
Share Capital	100	100	100	Retained earnings fall by total impairment, net of tax effects. This example assumes a profitable firm and a 20% corporate tax rate.
Retained Earnings	200	184	168	
<b>Common Equity Tier 1 Capital</b>	<b>300</b>	<b>284</b>	<b>268</b>	
Subordinated Debt	60	60	60	The IFRS 9 General Credit Risk Adjustment stock (in this example, a combination of Stage 1 and Stage 2 exposures which are not in arrears) falls below the regulatory cap, which is 1.25% of Standardised RWAs ( $2,313 \times 1.25\% \approx 29$ ).
general credit risk adjustments	0	0	10	
<b>Tier 2 Capital</b>	<b>60</b>	<b>60</b>	<b>70</b>	
<b>Total Capital</b>	<b>360</b>	<b>344</b>	<b>338</b>	The move from IAS 39 to IFRS 9 has a more pronounced impact on the CET1 Ratio due to the Tier 2 recognition of general adjustments.

Figure 12: Capital requirements post-impairment charge

Capital requirements	Gross	IAS 39	IFRS 9	Commentary
Gross Performing Exposure	3,000	3,000	3,000	No impact assuming no new default migrations under the regulatory definition.
Average Risk-Weight	75%	75%	75%	
<b>Performing RWAs</b>	<b>2,250</b>	<b>2,250</b>	<b>2,250</b>	
Gross Defaulted Exposure	150	150	150	specific adjustments are netted from gross exposure value before risk-weighting, resulting in a fall in RWAs.
Net of specific adjustments	80	60	50	
Average Risk-Weight	125%	125%	125%	
<b>Defaulted RWAs</b>	<b>100</b>	<b>75</b>	<b>63</b>	
<b>Total Risk-Weighted Assets</b>	<b>2,350</b>	<b>2,325</b>	<b>2,313</b>	Assuming no new default migrations, RWAs fall as the Specific Adjustment stock rises.

Figure 13: Capital resources post-impairment charge

Capital resources	Pre-charge	IAS 39	IFRS 9	Commentary
<b>CAPITAL RATIOS</b>				The move from IAS 39 to IFRS 9 has a more pronounced impact on the CET1 Ratio due to the Tier 2 recognition of general adjustments.
<b>CET1 Ratio</b>	<b>12.8%</b>	<b>12.2%</b>	<b>11.6%</b>	
<b>Total Capital Ratio</b>	<b>15.3%</b>	<b>14.8%</b>	<b>14.6%</b>	

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Designed and produced by The Creative Studio at Deloitte, London. J8296