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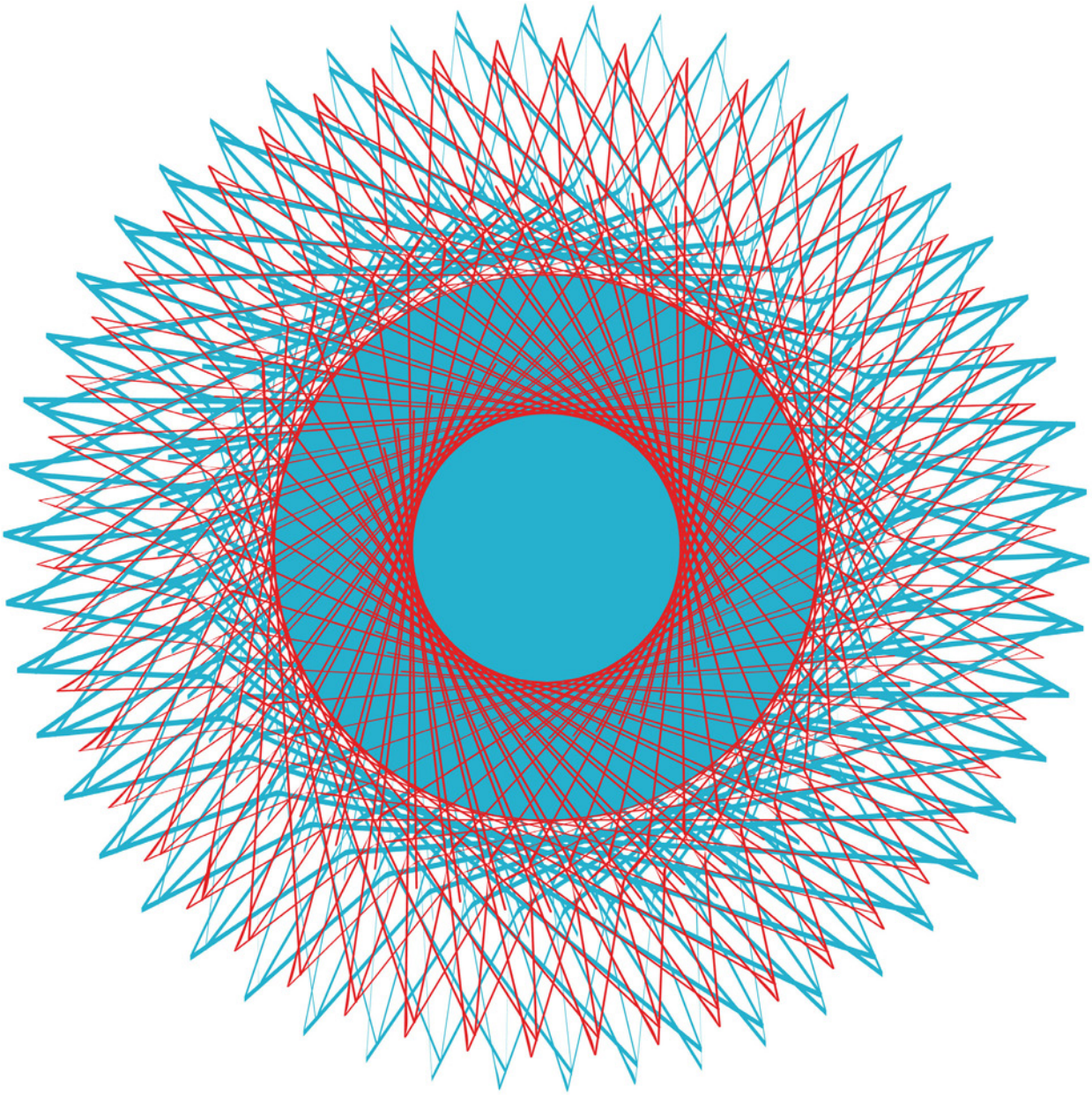

How is IFRS9 expected to impact capital adequacy ratios of Maltese banks?

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Risk Advisory - Banking

Risk Advisory

A paper describing the interaction between IFRS 9 credit impairment and regulatory capital of Maltese banks

This paper has been adapted from a Deloitte UK paper entitled "A drain on resources? The impact of IFRS9 on banking sector regulatory capital"

Contents

1. In summary...

It is widely expected that IFRS 9 will increase the stock of credit impairment provisions. The results of a Deloitte Global IFRS9 survey report that a majority of respondents from smaller banks anticipate their stock of retail and corporate impairment to rise, As a result, we expect many banks to suffer a decline in regulatory capital, with EBA Quantitative Impact Study (QIS) respondents expecting an average 59 basis point reduction in their Tier 1 ratio and a 45 basis point reduction for the total capital 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 total impact on capital requirements is mainly driven by the impairment requirements and, to a lesser extent, by the classification and measurement requirements of IFRS 9.

Banks using the Standardised Approach (SA) for measuring credit risk tend to have a higher estimated impact on own funds from IFRS 9 impairment requirements compared to the estimated impact for banks using the Internal Rating-Based (IRB) approach due to the current prudential treatment of provisions. According to this treatment, the shortfall of accounting provisions over regulatory expected losses under the IRB approach will absorb or partially absorb the impact of IFRS 9 on own funds, which is not the case under SA.

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.

Our two core recommendations to banks to anticipate the impact of IFRS9 on regulatory capital 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 resources to integrating IFRS 9 into stress testing procedures, also potentially looking to exploit synergies with IRB modelling.

The Banking Committee on Banking Supervision (BCBS) published two papers to describe the interaction between IFRS 9 impairment and regulatory capital:

- A discussion paper[1] 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 paper[2] proposing a transitional period in which banks can continue to use the current approach to provisioning for regulatory capital calculations.

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

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.

1. BCBS, "Regulatory Treatment of Accounting Provisions: Discussion Document", October 2016
2. Regulatory Treatment of Accounting Provisions: Interim Approach and Transitional Arrangements", March 2017

2. Drivers of rising impairment under IFRS 9

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

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.

Therefore, 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.

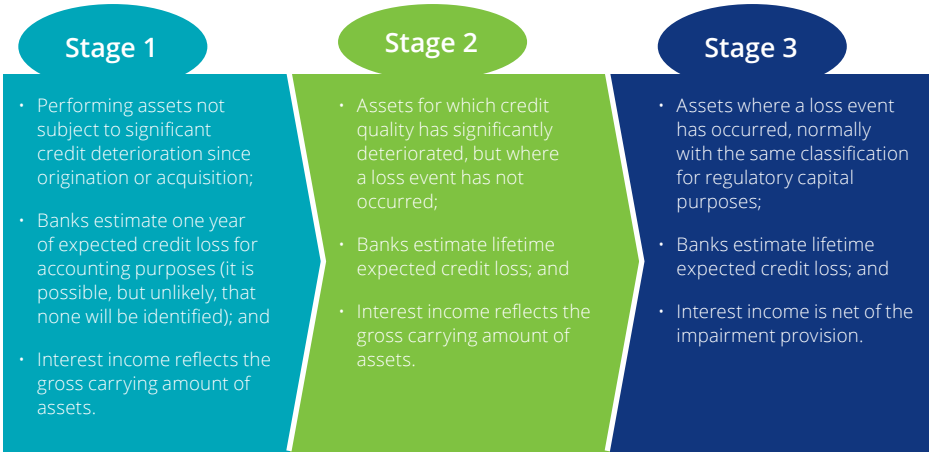
We anticipate three specific drivers of higher impairment under IFRS 9.

1. 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.

2. 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.

3. Third, banks will need to develop forward-looking, probability- weighted loss estimates against a range of macroeconomic scenarios. 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.

Figure 1: Summary of IFRS 9 credit stages



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

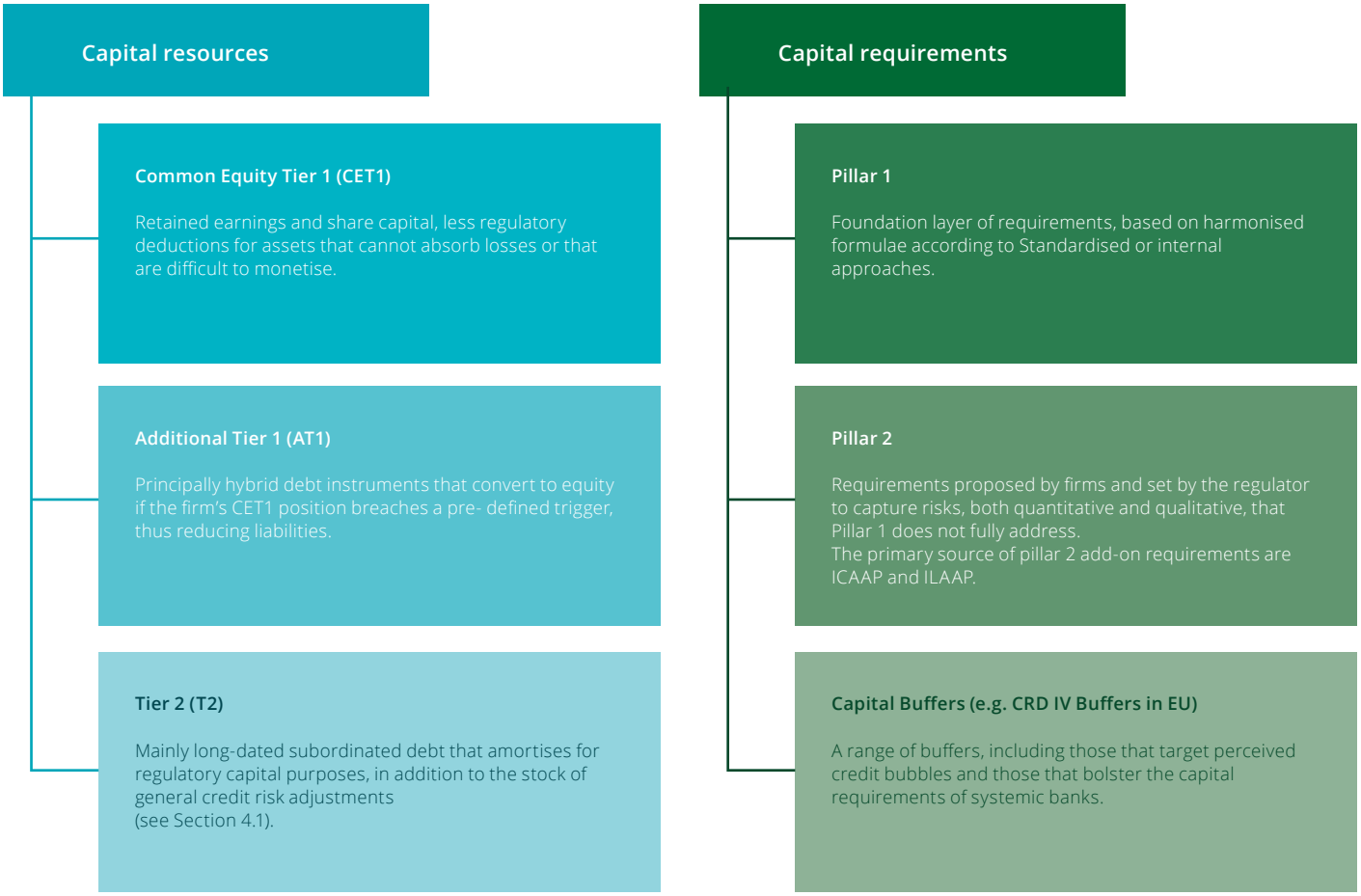
3. Impact on regulatory capital

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 restricts 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 through the remainder of this paper.

Figure 3: Regulatory capital impact of rising impairment

	Standardised Banks	IRB Banks
CET1 Resources	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
T2 Resources	One-for-one accretion for new general 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
Capital Requirements*	Reduction by new specific adjustments, multiplied by the relevant risk-weight and other regulatory adjustments**, all multiplied by 8%	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. 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 (ELBE) and Regulatory LGD

* 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**

4. Impact on Standardised banks

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[3].

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". 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. 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) 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.

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: • Impairment based on individual analysis of most likely Net Present Value of future cash flows for impaired assets (normally corporate portfolios); and • Modelled impairment for homogeneous asset pools with individual and measurable characteristics (e.g. loan-to-value at default).	Credit loss has not yet been allocated to a customer (or account) by credit risk models. This includes: • Collective impairment, typically modelled, for impaired assets (normally, but not exclusively, in retail portfolios); and • "Incurred but not reported" (IBNR) impairment, estimated using statistical or qualitative methods.
	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.

3. EBA Final Draft RTS: "Calculation of specific and general credit risk adjustments", July 2013

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 March 2017. 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.[4] 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%.

4. BCBS, "Revisions to the Standardised Approach for credit risk", second consultative document, December 2015

5. 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 5* 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.

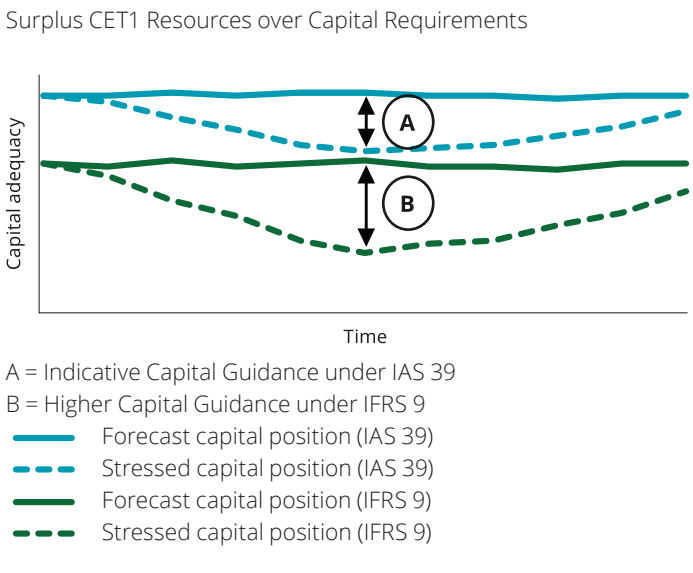
Furthermore, to remain strictly IFRS 9 compliant when performing a stress test, banks must generate "point-in-time" forecasts during the hypothetical stress scenario – thus a forecast of a forecast – which would need to be conservative to reflect the likely response of senior management, bank economists,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

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.

> Likely increases in impairment volatility may drive up capital buffers.

Figure 5: Stylised example of the IFRS 9 impact on Capital Guidance



6. How banks should respond

We make the following 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.

- 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.

7. 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 7*. 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 6: Capital position pre-impairment charge

Capital resources	
Share capital	100
Retained earnings	200
Common Equity Tier 1 Capital	**300**
Subordinated debt	60
General credit risk adjustments	0
Tier 2 Capital	**60**
Total Capital	**360**

Capital requirements	
Gross Performing Exposure	3,000
Average Risk-Weight	75%
Performing RWAs	**2,250**
Gross Defaulted Exposure	150
Net of specific adjustments	80
Average Risk-Weight	125%
Defaulted RWAs	**100**
Total Risk-Weighted Assets	**2,350**

Figure 7: Worked example assumptions

Capital resources	IAS39	IFRS 9
New impairment charge*	20	40
Of which: Specific credit risk adjustments	20	30
Of which: General credit risk adjustments	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 8:

Capital resources	
Capital ratios	
CET1 ratio	**12.8%**
Total Capital Ratio*	**15.3%**

* 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 9: Capital resources post-impairment charge

Capital resources	Pre-charge	IAS39	IFRS9	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	
Common Equity Tier 1 Capital	**300**	**284**	**268**	
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 × 1.25% ≈ 29).
General credit risk adjustments	0	0	10	
Tier 2 Capital	**60**	**60**	**70**	
Total Capital	**360**	**344**	**338**	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 10: Capital requirements post-impairment charge

Capital requirements	Gross	IAS39	IFRS9	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%	
Performing RWAs	**2,250**	**2,250**	**2,250**	
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%	
Defaulted RWAs	**100**	**75**	**63**	
Total Risk-Weighted Assets	**2,350**	**2,350**	**2,350**	Assuming no new default migrations, RWAs fall as the Specific Adjustment stock rises.

Figure 11: Capital resources post-impairment charge

Capital resources	Pre-charge	IAS39	IFRS9	Commentary
Capital ratios				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.
CET1 ratio	12.8%	12.2%	11.6%	
Total Capital Ratio*	**15.3%**	**14.8%**	**14.6%**	

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