

THE CHALLENGES OF THE IFRS IN THE CONTEXT OF CALCULATING BASEL CAPITAL REQUIREMENTS

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ABSTRACT

The financial crisis in recent years has led corporations and supervisory bodies to tighten existing regulations. In the banking world the Basel Committee was set up, establishing the Basel I, II and III standards and regulations. Following these changes, standard 39 (IAS 39), dealing among other things with impairment, saw considerable development due to the difference of methodologies, and took its final form in 2014 under the name IFRS 9, to be implemented in the next years. By means of these topics I wish to highlight the difficulties and challenges the mandatory IFRS transition poses to Hungarian banks.

JEL codes: G21, G28

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1. INTRODUCTION

In recent years much has been said about changes in accounting regulations which not only affect the accounting of banks but also trigger considerable changes with respect to risk in the years to come. *Magyar Közlöny* (12 June 2015) was the first to publish Government Decree No. 1387/2015 of 12 June 2015, which set out “the national application of International Financial Reporting Standards for individual reporting purposes.” In the first section the Government Decree approves the use of the IFRSs and in the second it sets out a timeline and the affected institutions. Application of the standards in credit institutions is optional from 1 January 2016 and mandatory after 1 January 2017. Significantly, banks are required to apply the IFRS 9 as an impairment loss methodology from 1 January 2018 onwards; however, the legislator has given no exemption from the one-year transitional application of IAS 39, making the implementation of both accounting standards mandatory.

The transition will involve several changes in the accounting of banks applying these standards. The impairment losses recognised by Hungarian accounting rules are likely to be lower than those generated by the methodologies described

in international regulations. This increase will, in turn, affect financial results in the following years, which is why the chapter dealing with impairment loss is the most urgent part of the standard. Hungarian institutions can also count on an increase in capital requirement in the initial years, following the expiry of Basel III transitional rules and the introduction of the IFRS. Previous studies about transition experiences have forecast an increase of impairment loss and return volatility. In addition to all of the above-mentioned changes, the short deadline for the introduction of the new standards is also a problem. This poses less of a challenge to large banks with foreign parent companies. They would not be new to reporting on the basis of the IFRS. Due to their sensitivity to risk they largely apply an IRB methodology and possess internal statistical models. Also, there are credit institutions reporting according to the US GAAP, which is help in introducing the IAS 39. Not to mention the fact that the introduction of such rules in foreign-owned subsidiary is centralised. Naturally this too has its problems, for example if the applicable methodology is inconsistent with national law. However, few have dealt with the issue of how regulatory changes of this magnitude will affect smaller financial institutions. This is not negligible, given that on the basis of the Hungarian National Bank's 2014 edition of the *Golden Book*, at market asset value, these issues may affect 15–20% of the market (MNB, 2014).

On the whole, enormous challenges await these institutions. I believe the regulations impose immense burdens on both small and large banks. Initially they need to introduce the loss model according to the IAS 39, then migrate to the IFRS 9 expected-loss model. Naturally there are transitional arrangements half way between the two methodologies, which cover both, but even so there are considerable difficulties and significant costs involved, payable by the implementing institutions. This study is offers a comprehensive overview of these issues and costs.

2. OVERVIEW OF METHODOLOGIES

2.1. Credit risk capital requirement methodologies

This chapter will present Basel II credit risk calculation methods on the basis of *Banki tőke megfelelési kézikönyv* Capital Adequacy Handbook of Banks by *Márton Radnai* and *Dzsamila Vonnák*, as well as the Capital requirements regulation (Regulation (EU) No 575/2013; CRR) currently in force. Currently banks have the choice between 1 + 2 methodologies. The standard method is employed chiefly by small, less risk-sensitive banks. The Foundation and Advanced IRB approaches are used by banks that have the capacity to develop adequate mod-

els of their own and require more subtle measurement due to higher risk sensitivity. All three methods are designed to determine capital requirement. In every case this is achieved under different regulatory frameworks; however, the basic principle is the same, that is, the capital requirement of credit risk is the product of risk weight, adjusted exposure and the Cook ratio (8%).

The standard method is the simplest, oldest and also the most regulated of the three. It has its roots in Basel I, with the blocks of risk expanded and every parameter well defined in the regulation. The latter is typically one of the shortcomings of the method because calculations do not reveal actual risks (Szöke, 2002, p. 15.). The procedure according to this method consists of three steps. First the adjusted exposure is calculated, for which it is necessary to establish the nature of the debts and the effects of risk mitigation measures whose weight is determined by the regulation. The next step is client segmentation. Individual transactions, such as exposure to the population, have to be assigned to the exposure classes set out in the regulation. (Article 112, Section 1, Chapter 2, Title II, Part Three of Regulation (EU) No 575/2013.) Where, based on the properties of the exposure, a transaction might be assigned to more than one class, the regulation requires the use of priority rules.¹ In the standard method the third step of establishing capital requirement involves determining riskiness and risk weight. Nationally recognised credit rating organisations assign individual transactions to Credit Quality Steps (CQS) based on their classification. Typically, these include balance-sheet, off-balance-sheet and unrated items, which are evaluated in different ways. The regulation sets out the weighting for balance-sheet and off-balance-sheet items; as a rule of thumb, a 100% risk weighting is applied to unrated items (Article 111, Section 1, Chapter 2, Title II, Part Three of Regulation (EU) No 575/2013.).

The internal ratings-based (IRB) approach is considerably more complex compared to the standard method, and its application is an advantage in the introduction of the IFRSs. It is the first initiative supporting the idea that in more developed and more risk-sensitive banks the use of their own methodologies can better determine the extent of risk and the capital required to address those risks. However, the regulation requires the control and approval of the models by the supervisory authority (MÉRŐ, 2002, p. 31.) The calculation methodology can be divided into two main processes. First, similarly to the second step of the standard method, clients need to be segmented. In the IRB there a considerably fewer segments in the regulation. Belonging to a particular exposure class is an important weight factor when calculating the risk-weighted value. The next step

¹ Default exposures are always first in order, followed by mortgage exposures, and all others are at the same level, since overlaps are not common (RADNAI-VONNÁK, 2010, p. 55.).

in the process is the identification of default transactions. The definition can be found in the literature, including in *Paulovics's* article 2005 “LGD modellezés elméletben és gyakorlatban” LGD modelling in theory and practice, which says that the model considers the following two events of default:

- where it is likely that an obligor is unlikely to pay in full (fees, capital and interest); or
- where the obligor’s past due is more than 90 days on any material credit obligation (*Paulovics, 2005, p. 64.*).

The definition was expanded as regulations changed, reaching its final form in 2013, in Article 178 of the CRR. The parameters involved are probability of default, loss given default, exposure at default and maturity. The Foundation and Advanced IRB approaches differ in terms of the calculation methodology of these factors. In the Foundation IRB approach an institution will estimate probability of default and for the other variables use the values set out in the regulation. In the Advanced IRB approach all of variables are determined by the institution’s own model.

Table 1
Risk parameters in the Foundation and Advanced IRB approaches

	Foundation IRB	Advanced IRB
Probability of default (%)	own estimation	
Loss given default (%)	45; 75	
Credit conversion factor (%)	0; 20; 50; 75; 100	own estimation
Maturity (year)	2.5; 0.5	

Source: Márton Radnai – Dzsamila Vonnák (2010): *Banki tőkeemfelelési kézikönyv* [Capital Adequacy Handbook of Banks] (the above calculation is by the author).

Different methodologies can be employed for the estimation of all three. Probability of default (hereinafter PD) is defined in the CRR as “the probability of default of a counterparty over a one year period” (Article 4, Title I, Part One of Regulation (EU) No 575/2013.) Much has been written in the literature about the estimation of PD by means of various methods. The majority of Hungarian banks employ statistical models in their calculations. These have been presented in the articles of *Kristóf* (2008) and *Madar* (2008), and a book by *Virág-Kristóf-Fiáth-Varsányi* (2013). The CRR defines loss given default (hereinafter LGD) as “the ratio of the loss on an exposure due to the default of a counterparty to the amount outstanding at default” (Article 4, Title I, Part One of Regulation (EU) No 575/2013.) Bank transactions can be divided in two in respect of this

parameter. For retail clients they apply vintage-type models to estimate LGD, while in other credit transactions they use so-called workout LGD (Roóbb, 2005). The third factor is exposure at default (hereinafter EAD) is the bank's claim at the time a client defaults. In this respect there is a distinction between balance-sheet items and off-balance-sheet items. In balance-sheet items EAD equals the carrying amount of the loan. Consequently, off-balance-sheet items (e.g. credit facility, guarantees, guarantee facility, provision facility) are a bigger problem. The variable used in the calculation, the credit conversion factor (hereinafter CCF) is defined in the regulation as "the ratio of the currently undrawn amount of a commitment that could be drawn and that would therefore be outstanding at default to the currently undrawn amount of the commitment" (Article 4, Title I, Part One of Regulation (EU) No 575/2013). In estimating this parameter the modeller compares the amount drawn down in the moment of default and at a certain time before, and how it changed.

2.2. Accounting regulations

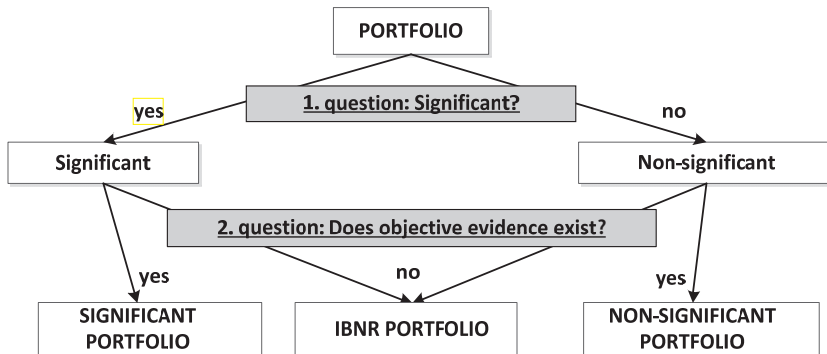
The globalisation of companies in recent decades has had a significant effect on accounting regulations. By crossing the borders of their countries for trade and later investment, companies have forced the regulatory environment to keep pace. They have had to deal with the problem of failing to understand each other. Reports produced according to different principles could only be compared at high costs. This led to the idea of introducing international accounting standards.

The calculation of impairment loss features in the IAS 39 standard as an incurred loss. The regulation defines a considerably broader area. "The objective of this standard is to establish principles for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items" (Annex, IAS 39(1), Commission Regulation (EC) No 1126/2008, p. 270.). According the standard, an impairment loss is the amount by which the carrying amount of an asset exceeds its recoverable amount. This loss is recognised where there is straightforward, objective evidence for its existence. Different evaluation rules apply to loans and claims, and tradeable capital and tax instruments. The standard does not set out such requirements for financial instruments charged against results measured at fair value.

The evaluation process can be divided into two. First, the significant limit to be considered in transactions has to be established, as well as the objective evidence. By establishing a materiality threshold the portfolio is divided into two parts. Each group is next examined for objective evidence of loss in the individual transactions. These would include, as defined by the standard, events of

significant financial difficulties, the cessation of the conditions of the contract, breach of contract etc. (Annex, IAS 39 (59)–(62), Commission Regulation (EC) No. 1126/2008, pp. 283–284.). This classification establishes the methodology to be used in individual portfolios for determining clients’ incurred losses.

Figure 1
Portfolio breakdown methodology based on the IAS 39



Source: Árpád Balázs – Ágnes Tardos (2006): A kapcsolat: a Basel II. és az IFRS (nemzetközi pénzügyi beszámolási standardok) összefüggései [The connection: how Basel II and the IFRS are related (the above figure is by the author)].

It can be seen from the figure how accounting for impairment loss is achieved in three distinctive groups. In the course of individual assessment an institution will examine the extent to which the carrying amount – in this case the amortised cost (hereinafter AC) of a transaction differs from the recoverable amount. The regulation uses the effective interest method for determining the AC. The calculation must take into consideration the following factors:

- contractual terms of the financial instrument (for example, prepayment);
- it shall not consider future credit losses;
- it includes all fees and points paid or received between parties, that are an integral part of the effective interest rate;
- transaction costs, and all other premiums or discounts.
- (Annex, IAS 39 (9), Definitions relating to recognition and measurement, Commission Regulation (EC) No. 1126/2008, p. 274.).

The above-mentioned difference is the loss incurred in a transaction. In the other two cases the standard applies a portfolio-based evaluation. The concept of “incurred but not reported” (hereinafter IBNR) is unique to the regulation. It indicates transactions with incurred but not reported loss. Interpreting this

can reveal expected loss. The other portfolio-based group includes items that not individually significant. Identical factors in the calculation methodology include the value of loans and historical loss rate which is the product of default probability and loss given default. The difference between the two products of multiplication is the time of loss. This is calculated as the difference between the occurrence and detection of a loss.

The premises of evaluation remained unchallenged for a long time; however, development of the Basel measures and the losses incurred in 2008 led to the development of new standards. The process of development and simplification were divided into three phases; first the classification and measurement of financial assets and financial liabilities, second the determination of loss impairment model, and third the hedge accounting. This article will discuss the second in more detail.

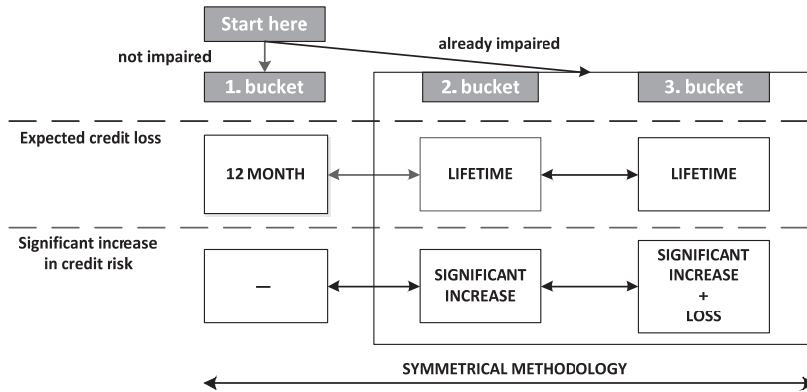
The main difference and development between the two standards was that while the IAS 39 calculated incurred loss, the IFRS 9 broke with that and switched to the methodology of expected loss as set out in Basel II. According to the standard, a loss might present itself in two forms in a transaction. Both are based on events of expected loss, only there is difference in duration. In the first, estimation is made for the 12 months after the anniversary date; in the second for the full lifetime. In the methodology the definition of increase in credit risk and credit default are crucial with respect to impairment allowance. In both cases the regulation only contains guidelines. Default needs to be correlated with the interpretation already used in internal credit risk management; however, the 90-day term is forecast to be shortened. Another important concept in the standard is significant increase in credit risk. Determining it crucially needs to take into consideration the increase of default risk since its initial appearance in the transaction. Actual change is not necessarily the only explanation of the increase of risk. Where the probability of default does not decrease over time, it can equally mean an increase in credit risk, except in the case of bullet transactions. Qualification changes also need to be given consideration. The performance of a loan is greatly influenced by the economic environment and any changes thereto. Consequently, it is worth keeping tabs on macroeconomic changes and the client's results and business plan (IASB, 2014).

These key factors need to be prudently determined with respect to expected loss, because in this methodology impairment needs to be calculated for every transaction. The question is how much? The standard makes life easier for institutions applying it in that the model is symmetrical, that is carry-forward and carry-back are permitted provided that the conditions of deterioration subside and the original state returns. This logic is presented in the three stages or "buckets". The boundary between the first and second stages is determined by

default probability, and the boundary between the second and the third stages by the event of objective evidence. Expected loss is determined with the help of the following formula:

$$\text{expected loss} = PD_{\text{during 12 months or lifetime}} \times LGD \times EAD$$

Figure 2
Impairment model in the IFRS 9



Source: EY 2014: Impairment of financial instruments under IFRS 9 (the above figure is by the author).

On the whole it can be said that all methodologies require thorough understanding and detailed knowledge, and their introduction requires a prolonged period of time. Below I will present the differences and similarities between Basel and international accounting regulations, and discuss the challenges that come with the introduction of the latter.

3. DIFFERENCES AND SIMILARITIES

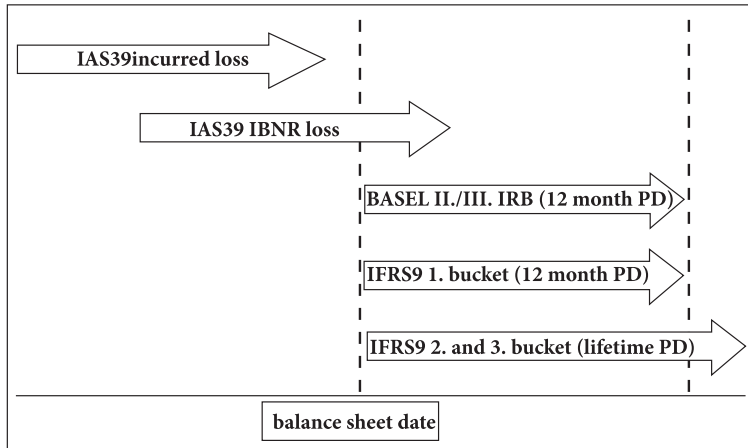
The presentation of the methods used to determine credit risk capital requirement I set out to describe the standard method in the Basel regulations. This calculation method deviates from accounting regulations. Almost every step in the calculation process set out in the regulation. It does not really allow for individual decisions, it does not take the time value of money into consideration and it quantifies capital requirement on the basis of an algorithm based on empirical evidence. It has no bearing whatsoever on accounting impairment allowance. It was used until Hungarian accounting rules were being applied; however, credit institution transition raises countless methodological issues. These chiefly concern the methodologies applied by credit institutions which,

for one reason or another, did not have the opportunity to migrate to the internal method but are now required to develop similarly developed models themselves. Seldom dealt with in the literature, this issue will be explored in detail in this article, with a focus on the key points of prior evaluation.

It is easy to discover connections, synergies and contradictions between the internal estimation of capital requirement and the above presented international accounting regulations. I believe that in the near future the main challenge for banks applying the IRB approach is to a greater extent a lack of exemption from the IAS 39, as well as the advantages and disadvantages of similarities and difference between the methodologies. Relatively little has been written about this in the literature, and various international organisations gave discussed the issues at conferences and workshops. The documents of earlier implementation processes contain useful guidance; however, they are seldom published. The first questions were asked at the time Basel II was published. International institutions doubted that loss incurred on the basis of the international accounting system could be harmonised with the expected loss model in capital requirement. Many years ago *Árpád Balázs* and *Ágnes Tardos* discussed the issue in *Hitelintézeteti Szemle*, concluding that the IAS 39 imposed an additional financial burden on credit institutions transitioning to the IRB approach in 2006, and constituted a step backwards in relation to the previous models. Also, the cost of introducing the Basel II guidelines considerably impedes application of the methodology due to differences in methodology. The world has since then changed and the 2008 crisis brought home to the regulatory environment that the application of two methodologies is impractical. The incurred loss model does not reflect expected losses and systematically underestimates the outcomes of a default event. The biggest difference, however, is between the objectives of the IRB and the IAS 39. The primary objective of the IFRS is to straightforwardly express expected losses until the balance sheet date. By contrast, the Basel regulations seek to “ensure that the creditor should hold enough capital and reserves to cover its expected losses and any possible unexpected losses in the next 12 months” (*Balázs–Tardos*, 2006, p. 49.). Later on the two definitions somewhat transformed, but the difference in concept remained. While the Basel Committee’s concept maintained that impairment and provisions can give an accurate estimation of a banks expected losses, the accounting methodology only counted straightforwardly provable losses in this category. An attempt to address this discrepancy was made in the form of incurred but not reported loss in the IAS 39. On the whole, however, it can be established that the two models have not been adequately combined. This led to the IFRS 9 which is also based on expected loss. As regards the methodology, it can be said that not only does it approximate the extent of expected loss, but is also

expected to exceed it as calculated under the IRB approach, because it allows not only for 12-month losses but also for the full lifetime (*Sulyok, 2012, slide 31*).

Figure 3
Impairment allowance timeline in the three methodologies



Source: Deloitte (2013): Basel A-IRB vs. IAS39/IFRS9 – Incurred or expected loss concept? (the above figure is by the author).

Differences aside, there are also similarities between the objectives. Both models examine at portfolio level the risks of individually insignificant credit, and also both set up these homogeneous groups on the basis of credit-risk characteristics. Similarities include both the IRB and the IFRSs requiring a formidable amount of information. In the first the modelling requires quality historical data, and the accounting models require the same for discounting, individual impairment calculation and grouping. Later years did not see a change of approach either in this respect, so accounting regulations included it in the new standard.

It is worth making comparisons of factors. There are certain factors based on which the applicable methodologies be easily distinguished. For my evaluation I have used two analyses recently produced by the World Bank and Deloitte², as well as the conclusions of my own studies.

I believe that, almost in every case, the Basel regulations to impose stricter conditions on institutions. For default probability the IRB estimates default expected to occur in the next 12 months. In most cases it is calculated by means of

² World Bank (2010), Deloitte (2013), slide 19–21.

statistical methods based on a long-term average. Legislation requires models to be based on data and experience of the past 5 years, and that when the IRB is implemented, relevant data covering a period covering 2 years has to be used (Article 180, Sub-Section 2, Section 6, Chapter 3, Title II, Part Three of Regulation (EU) No 575/2013). The main difference compared to the two accounting standards is that in calculating capital requirement there is a specific definition for the meaning of “default” whereas in the other two cases there are guidelines only.

In the incurred loss model of the IAS 39, individual impairment does not use the formula of expected loss, while the IBNR and portfolio-based estimations (for insignificant credits) do use it. Using the presentation published by Deloitte 2013, the PD in this case is estimated in loss identification period horizon, and the PD reflects the portfolio quality in the nearest future. This also means that the estimation of the PD parameter uses a shorter history of data. This leads to the conclusion that while the IRB is based on through-the-cycle (hereinafter TTC) calibration, the IAS 39 requires point-in-time (hereinafter PIT) estimates. The IFRS 9 is different from both. On account of the distinction between 12-month and full-life expected loss, it estimates PD on short and middle-term horizons. The standard requires PIT estimates, and TTC estimates are not permitted. Full-life probability is calculated and modelled by means of transition matrix multiplication. This approach requires that calculation should not only be based on client data, but also, additional macroeconomic conditions need to be incorporated.

The most notable differences between the three approaches relate to loss given default. The estimation parameters of loss given default include discount rates, which have an important role with respect to the carrying amount. Based on market experience, LGD in the Basel approach is an economic loss concept. It includes direct and indirect collection costs. Losses are discounted to the point of default using an entity’s cost of capital / funding cost. Basel requires estimation of the present value of expected future cash flows. The model requires the use of 5–7-year observations periods, longer than LGD. There is a requirement to estimate downturn³ LGD corresponding to the conditions of economic recession. Basel also imposes limitations regarding usage of certain types of collateral (Article 181, Sub-Section 2, Section 6, Chapter 3, Title II, Part Three of Regulation (EU) No 575/2013).

On the basis of the summary of Deloitte (2013), the IAS 39 differs from the above in almost every respect. LGD may take into account direct collection costs only, such as estimation costs. Recoveries are discounted using effective

³ Downturn indicator: “this indicator takes into consideration effects resulting from the cyclic changes of economic conditions” (TAJTI 2011 p. 73.)

interest rate (EIR) from the moment of default. In terms of other features, the standard is more permissive. It is possible to estimate the LGD parameter using a shorter history of data. Other conclusions in connection with individual collaterals are established empirically. There is no requirement to estimate downturn LGD and there are no restrictions regarding the types of collaterals included. It can be established that, as confirmed by the material of World Bank 2010, the results produced by the two models are not identical. The IFRS 9 accomplished some important changes in the process. Estimation of LGD takes a completely different approach. Regulatory LGDs can be the basis for LGD estimation. According to the newsletter of KPMG (2012), it allows the use of a discount rate between, and including, the risk-free rate and the effective interest rate. This too requires model a spanning several periods, with an allowance of lifetime expected losses, and which is valid when taking collaterals into account.

Calculation of EAD is essentially the same for all three approaches. The EAD is calculated as the sum of the value of off-balance-sheet items multiplied by credit conversion factor (hereinafter CCF) and the carrying amount of balance-sheet items. In the Basel regulations it is the estimation of the CCF that introduces all future expectations to the value of EAD. Basel too requires estimation of downturn CCF as well as the use of an observation period for LGD of 5–7 years (Article 182, Sub-Section 2, Section 6, Chapter 3, Title II, Part Three of Regulation (EU) No 575/2013). The IAS 39 departs from the estimation methodology in that the multiplication factor is calculated from expected future events. Also, the CCF reflects current market conditions and there is no requirement to estimate downturn CCF. As for the other factors, the IFRS 9 applies a different logic. Impairment requires time-dependent estimation of the EAD, considering, amount other things, prepayment (Deloitte, 2013, slide 21).

4. DIFFICULTIES OF IMPLEMENTATION

In light of the Basel regulations, there are two approaches to implementation problems. On the Hungarian financial markets there are smaller banks that use a standard method to calculate credit risk capital requirement. In their case implementation is more time-consuming and many of them have been granted an exemption from the one-year deadline of introducing of the IAS 39. The other group includes larger institutions that have a parent bank and which are already using the own-model IRB method. In their case the interim period and the parallel implementation of international accounting regulations pose the greatest challenge.

In terms of timing, both small and large banks have a difficult period ahead of them. Implementation requires a lot of working hours, development and new resources. Generally, financial institutions are required to develop adequate specifications with respect to a standard that nobody really knows very well. Concurrently, in the interest of prudential operation, they are required to overhaul their entire policy systems. That affects internal rules and protocols, in particular impairment instructions, bank processes – all of which requires substantial resources in terms of risk management, accounting and IT (KPMG, 2014). Small banks are also likely to struggle to cope with a lack of know-how and support. Typically, they would seek external advice or recruit a significant number of new staff in the near future. Both scenarios are costly.

However, cost increase does not end with the recruitment of new staff. All of the banks are required to have an IT system to support the new accounting rules. In larger institutions that would be less of a problem. Typically, these banks use data warehouses and have integrated management systems. Possibly their parent banks will provide the software; however, the use and implementation of these all too often fail to take Hungarian supervisory expectations into account. Exacerbating their situation is the fact that software supporting the IFRS 9 is not enough; it also has to be able to cope with calculating loss under the IAS 39. Very few software are able to deal with both, and companies typically focus on calculating under the IAS 39. This begs the question whether the chosen IT system will be able to support processes in the future? Smaller institutions face even more complex problems. More often than not, small banks do not use data warehouses and not always do they have closed management systems either. That can make life hard in that they do not necessarily possess adequately stored historical data sets, which are essential to the development of models. Deciding to create data sets in the future would require an inordinate amount of working hours, especially since they might have to process the data sets of past and current transactions for each contract. Consequently, they require a considerably wider-ranging and more time- and money-consuming preparation period prior to implementation. Also, they need to consider the use of an external advisory service, which, expensive as it can be, can considerably help effective implementation.

Transformation and development of the management system in connection with the transitioning to the IFRS is not only important for IT reasons. The transition requires great efforts also in terms of developing data sets. One of the greatest challenges the introduction of the IFRS 9 presents to small banks using the standard method is the development of modelling databases. These institutions do not have large-enough portfolios. The problem can be remedied by purchasing external databases. Fortunately this does not affect larger banks

already using models and the IRB approach. Their models need to be reconsidered, which will be discussed in more detail in the methodological summary. The calculation of amortised cost is a novelty for most banks. In small banks that only comes up when calculating impairment in the third bucket of the IFRS 9; however, institutions required to implement the IAS 39 will have to deal with it in the near future. To determine amortised cost, the system needs to be able to provide specific information about transaction fees and commissions. That is often difficult to achieve because such data are connected to other data, like bonus schemes dependent on interests. Cash flows and expectations of the future related to the original contracts need also to be available. A lot of banks use daily evaluations in their management systems, and as a result, gauging these data for foreign-currency loans is not an easy matter. Smaller institutions are unable to retrospectively retrieve historical data sets from their system, and only have value-date reporting. Consequently, they might be forced to engage in time-consuming data collection in the implementation period. In every institution, defining the EIR is a methodological and data-set issue. The bank has to decide on a calculation methodology if this data is not available as stored data. Subsequently calculated EIR will often be flawed; for example, if the internal rate of return is used in the calculations, the sensitivities of the function need to be given consideration. The difference between the two accounting regulations is that while the IAS 39 typically uses risk parameters for short periods, the IFRS 9 requires a broader set of data. Evaluation not only requires past data, but also forward-looking parameters such as prepayment, transaction data and macroeconomic information. Banks are required to determine and use these in their modelling and defining process.

The definitions of the key concepts are the most sensitive variables in the IFRS 9. They affect the extent of impairment, and it is left entirely to the implementing institution to pick the criteria to be applied to the indicative data. With respect to modelling impairment, the segmentation of the portfolio poses a general challenge in developing homogeneous groups for evaluation. Time horizon has a crucial role in future modelling. These institutions were never required to develop full-life model variables, making this a new challenge altogether. Another novelty is the forward-looking modelling technique required by the standard. Generally speaking, estimating prepayment probability and including macroeconomic indicators in the evaluation process require considerable knowledge and are time consuming. In many cases the standard implicitly assumes that qualification categories are straightforwardly connected to PD; however, that is not the case in smaller institutions. For them, developing the IFRS 9 buckets poses a difficulty on account of the few qualification categories. In small banks, LGD and EAD modelling are chiefly hindered by a lack of data, lack

of knowledge and experience. In practice, modelling and documenting these factors is considerably rarer than with PD. Consequently, the calculation of PD will often involve the use of own models; however, due to the reasons above, an external advisory service is likely to assist the institutions implementing the standard in developing the other two factors. In the future, if these institutions plan to apply the capital model, Basel II requires that they should be based on considerable historical data. For PD that is 3–5 years; for LDG and EAD introduction must be preceded by a 5–7-year period. It can be established that there are considerable differences in most indicators among institutions applying the IRB approach. As regards PD, estimations for different intervals can be a problem, as well as the development of a definition for default under Basel. They are required to introduce a term consistent with an already existing definition. The IFRS 9 introduces macro indicators into calculations, not often used before. In the case of LGD, the various different discount rates, collaterals and evaluation approaches can cause problems. EAD can be an issue in the calculation of LGD, and the slightly different logic of the IFRS 9 can also pose a considerable challenge in implementation.

5. SUMMARY

On the whole it can be said that the upcoming period will not be an easy one for credit institutions. Large and small banks face the challenges imposed by the regulators, such as the mandatory transitional implementation of the IAS 39. The short deadline aside, they have a lot of work to do. In terms of methodology the situation is less complicated for large banks, due to the IRB approach they apply in the methodology of calculating capital requirement and to their developed IT systems. Small banks are now required to take these measures. The development process that awaits them is expected to be a serious challenge in terms of both cost and complexity.

Preliminary experience, previous implementations and completed estimations allow for conclusions to be drawn regarding the extent of impairment to be expected in the next few years. In the case of the IAS 39, to be applied in the transitional period, banks are expecting that in individual evaluation there will not be a considerable difference between current and future impairment allowance. The same is believed for clients with an exposure lower than the materiality threshold. It is thought that portfolio-based estimation will not considerably change the value. However, accounting for incurred but not reported loss causes much concern. On the basis of preliminary assessment it can be established that impairment is expected to increase to the greatest extent in this category. The

cause of the problem is the loss identification period as well as the fact that these are transactions which, under current legislation, do not carry an obligation to recognise loss. It follows then that provisions need to be made for the entire sub-portfolio, compared to the previous period. In some banks this will result in higher growth in the transition year, and there will be banks where it will affect growth to a lesser extent. No such straightforward expectations can be said for the IFRS 9. The third bucket is clearly linked to the individual transactions of the IAS 39 and no major change can be expected. However, in the other two cases it is not possible to predict changes in impairment loss in three years time merely on the basis of the buckets. In this case transactions will be divided according to the criteria of default and significant credit risk increase, and the results of these will determine the amount of the allowance. Well-defined limits will increase or reduce the extent of impairment. On the whole, a higher-than-current value is expected.

I believe, however, that changes should not always be seen as a negative thing. Although this article deals with the challenges facing credit institutions in the implementation of the new standards, I think that we should not only focus on the near future. On the whole, the two standards constitute a consistent system enabling comparable performance in the future. The methodology of calculating impairment will be the same in all banks, and thanks to mandatory reporting, we will know how those indicators were determined and what principles the banks follow. Currently not all institutions follow this practice. However, the changes have a lot more to offer. It will take banks currently applying the standard method out of their comfort zone and start on a new path due to the amount of data required by the IFRS. In the future, when their historical data sets will have been available for 5–7 years and their models have been transformed on the basis of the experience of large banks, they can migrate to the use of the IRB approach. That will contribute to the development of their risk management strategies and improve their consciousness, which, in turn, can considerably improve their profitability.

On the whole I believe that the application of the international accounting standard will launch a development process in the financial sector, which will create a balance in measuring performance and the applied methodologies. The next 3–4 years can be expected to be a great challenge for all credit institutions. Based on the difficulties discussed in this article, it is possible that due to the complexity of the IFRS 9, the transitional period granted for small banks will be extended to the larger banks. By means of that decision the regulator would allow enough time for all institutions to become familiar with, and implement, the methodology.

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LEGISLATION

- Government Decree No. 1387/2015 of 12 June 2015 on the national application of international financial reporting standards for individual reporting
replaces Government Decree No. 196/2007 of 30 July 2007 on the management and capital requirement of credit risk
- Government Decree No. 250/2000 of 24 December 2000 on the annual reporting and accounting obligation of credit institutions and financial enterprises
- Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012
- Commission Regulation (EC) No 1126/2008 of 3 November 2008 adopting certain international accounting standards in accordance with Regulation (EC), Annex: International Accounting Standards – IAS 39 International Accounting Standard – Financial instruments: recognition and measurement, pp. 270–323.