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IMPACT OF ASSET CLASSIFICATION AND PROVISIONING REGULATIONS ON BANKS' CREDIT POLICY: INTERNATIONAL COMPARISON

Abstract

The distribution of the non-performing loan ratio across countries is correlated with changes in real GDP. However, the coverage of non-performing loans by provisions does not exhibit similar regularities. Provisioning ratio is strongly influenced by national regulators. This is why a survey on the tightness of asset classification and provisioning regulations was conducted in seven countries of New Europe. The survey has shown that Croatia has the strictest regulations in two areas: (1) the calculation of loan loss provisions on the basis of the present value of cash flows has largely been replaced by the calculation based on the number of days in default (which has pushed criteria of collateral values to the background); (2) the calculation of loan loss provisions in case of loan restructuring depends on whether only a loan is restructured or overall debtor's business operations are being restructured, while the possibility of loan reclassification to better categories does not fully reflect on the possible restoration of a debtor's financial soundness. The question remains open as to the correlation between tight regulation and banks' credit activity. This is particularly important regarding financial restructuring of debtors with a positive operating cash flow after restructuring.

It is reasonable to assume that classifications and provisioning for the purpose of preserving banking system soundness must be stricter in a system with poor institutions. On the other hand, excessive strictness may further hinder the restructuring process which is already difficult because of the poor institutional framework. Finding a right regulatory balance is a difficult task in such circumstances.

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INTRODUCTION

When questions are posed on whether there are enough loans, what are lending terms and conditions and is there room for interest rate reduction, the answers depend on the point of view: creditors point to problems with demand and institutional environment, while debtors and potential debtors point to rigidity of creditors and claim that creditors fail to offer more favourable lending conditions. Financial policy makers most often accept the latter point of view.

Assessment is further complicated by the fact that economic research rarely offers unambiguous conclusions about the situation in the credit market. In the most comprehensive study so far on the credit market in the CESEE, Everaert *et al.* (2015) find very complex relations between credit supply and demand. They conclude that at any given moment factors are active on both sides of the market, and their relationship changes over time and varies across countries. Authors believe that constraints on the supply side of the credit market in the CESEE grew stronger as the crisis neared its end.

Accumulation of non-performing loans certainly represents a drain on banks' capital and limits their ability to lend and compete. Škarica (2013) found that changes in real GDP explain most of the variations in the non-performing loan ratio (NPLR). Some of the changes in the NPLR over time and differences across countries may also be explained by the rates of inflation and unemployment (both increase the NPLR). Although one cannot determine the cause and effect relationship based on this explanation, it may reasonably be assumed that growth, inflation and unemployment cause changes in the NPLR, while the NPLR does not explain growth, inflation and unemployment (or may explain only a minor portion of their variations). From this point of view, exogenous demand factors predominantly explain credit growth.

This conclusion is indirectly supported by Bogdan, Deskar Škrbić and Šonje (2014). The authors investigated the role of international capital inflows to the banking system during the crisis. They found that the initial crisis shock (2008/2009) spilled over to the CESEE through the international trade channel (real shock). Not only was there no initial financial shock, but banks in most countries retained or even increased their credit exposure at the onset of the crisis. Earlier research also confirmed that finding (Brezigar-Masten *et al.*, 2010).

This result points to major differences in the mechanisms of crisis emergence and propagation after 2008 between developed countries and European developing countries. In the former countries, the crisis emerged (or intensified strongly) in the financial sector and spilled over to the real sector. In the latter countries, the crisis spilled over via real channels of international trade and foreign direct investment, while the banking sector in the first years of the crisis acted as a buffer and not as a crisis amplifier.

These conclusions describe rather well the development in the 2008-2011 period. However, the question remains open as to the direction of influences after 2012.

Europe was then hit by the second wave of recession, accompanied by financial instability that culminated at the European periphery. The banks were put under pressure of increasingly stricter regulations of capital requirements, while the duration and deepening of the crisis exacerbated problems of over-indebted debtors against the background of very poor institutions dealing with the issues of deleveraging and bankruptcy. The problem was particularly pronounced in Croatia because of the crisis duration and weak institutions. For example, the Croatian Consumer Bankruptcy Act entered into force as late as 1 January 2016. Between autumn 2012 and 2015, excessive corporate indebtedness was regulated by controversial pre-bankruptcy settlement – processes conducted outside courts, with direct influence of politics and administration under poor creditor protection.

Also after 2012, amendments were made to the key provisions of prudential regulations on capital requirements, asset classification and loan loss provisioning rules (value adjustments)[1]. The introduction of new Basle III regulations did not cause any problems for Croatian banks as they already had high capital ratios. However, new and stricter rules on asset classification and provisioning adopted in 2013 introduced major departures from the previous practice. Though GDP decreased much more in 2012 than in 2013 (–2.2% vs –1.1%), total costs of value adjustments and provisions for banks went up from HRK 3.8bn in 2012 to a high HRK 6.2bn in 2013.

A question remains of whether and how did regulatory changes affect banks' credit policies. One cannot expect firm statistical evidence in view of the short time series and difficulties in measuring regulatory variables. Even very detailed research into the characteristics of the credit market and financial constraints on corporate performance do not provide clear, unambiguous conclusions (Kukavčić and Šonje, 2014, 2016)[2]. In general, financial constraints on corporate performance in Croatia culminated at the beginning of the crisis in 2009 and then gradually abated. For the most part, perceived corporate financial constraints were determined by the interest rate changes. Moreover, companies that registered growth of orders have faced higher financial constraints on average. This implies that companies which are lacking in terms of size and/or high capitalisation and/or profitability, i.e. companies without financial stability, are probably facing constraints to growth and business development even when their cash flow is positive (Kukavčić and Šonje, 2016). In such circumstances, one cannot exclude the option that the institutional framework, including banking regulation, indirectly influences slow restructuring and growth of financially constrained companies.

There are many complexly interrelated factors that affect credit activity. No research so far has adequately measured the impact of banking regulations, so it is close to impossible to determine the exact impact of regulation on credit. This is why the central part of this research is an attempt to present regulatory differences in the area of asset classification and provisioning in order to shed some light on regulatory

[1] These terms are used as synonyms in this paper.
[2] HUB Analyses no. 49, 50 and 55, www.hub.hr (section Analyses and Publications).

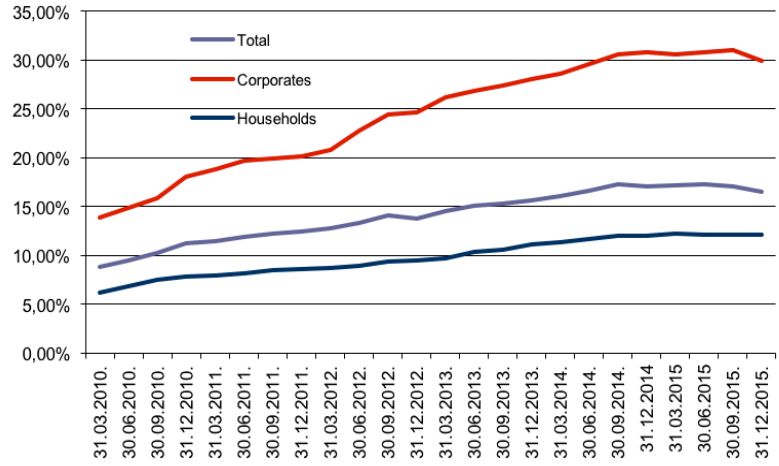
variations across countries. Though an international survey was used to examine regulatory differences, they could not be measured precisely enough to obtain a single index or number. Still, the survey which included seven Central European countries (the Czech Republic, Hungary, Latvia, Romania, Slovakia, Slovenia and Croatia) describes a degree of similarities and differences relative to the regulatory benchmark which the ECB and EBA applied in late 2014 in the Asset Quality Review (AQR).

The first chapter contains statistical data on key variables – the NPLR and the coverage of non-performing loans by provisions. The second chapter discusses asset classification and provisioning regulations, presenting the survey results which illustrate regulatory differences. The third chapter discusses the possible links between regulations and banks' credit policy, without ambition to provide a final assessment. The single purpose is to rekindle such discussions on the firmest possible grounds.

I DATA AND DESCRIPTIVE STATISTICS

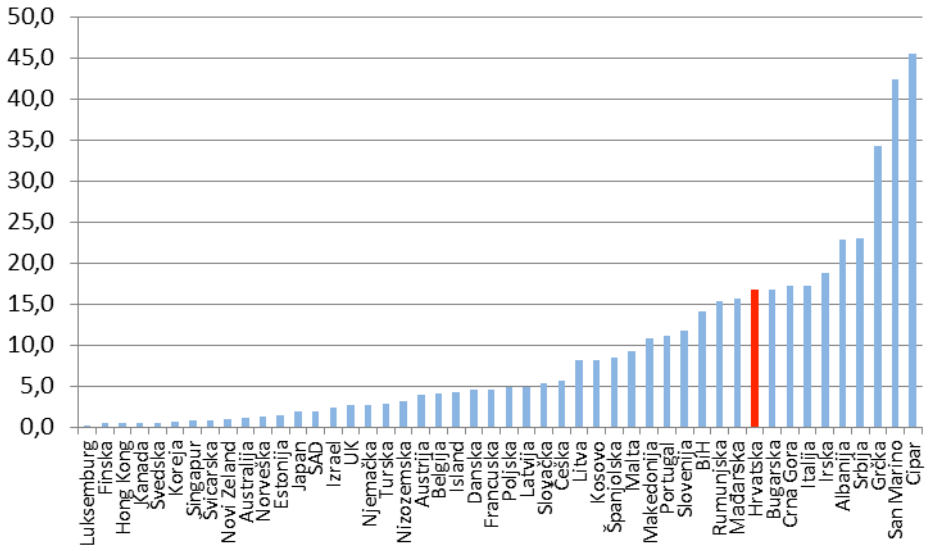
Throughout the entire crisis period after 2008, the non-performing loan ratio (NPLR) in Croatia exhibited, as expected, an almost linear upward trend. It came to a halt in 2014 and 2015 (Figure 1). With a NPLR over 15%, Croatia is among the worse positioned countries – between Bulgaria and Montenegro, and Hungary and Romania (Figure 2). Such position in the international comparison may be due to a number of factors: similar changes in economic activities that may be associated with common geographical factors (e.g. problems of major trading partners that are common to these countries), as well as institutional problems that are common to post-socialist economies (e.g. weak creditor protection). In any case, the cumulative fall in GDP relative to the last pre-crisis year (2008) proved to be an important determinant of the NPLR (Figure 3). This is confirmed by the findings of most research papers on NPL determinants (Škarica, 2013).

Figure 1: Non-performing loan ratio (NPLR) in Croatia 2010-2015



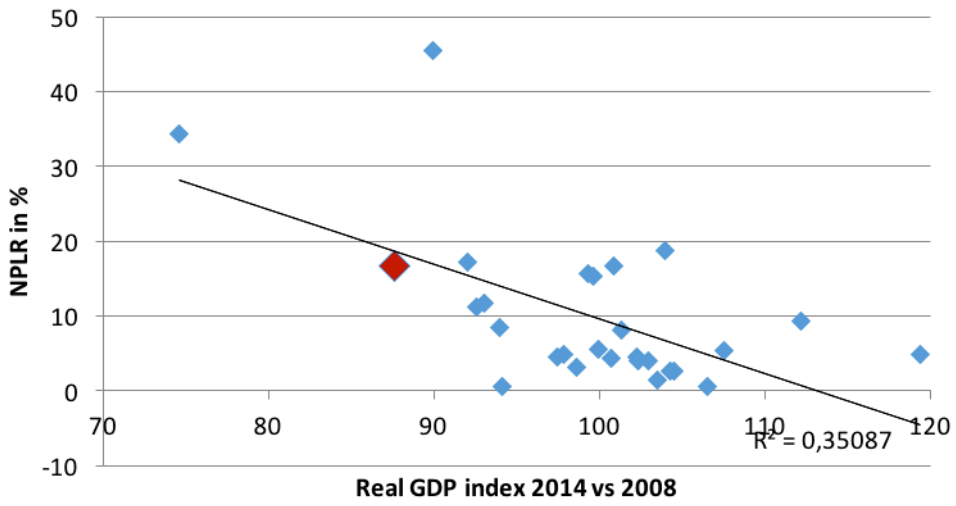
Sources: HUB Pregled 4/2015 and CNB.

Figure 2: International comparison of NPLRs, in %



Sources: HUB Pregled 4/2015 and IMF, *Financial Soundness Indicators.*

Figure 3: NPLR vs the real GDP 2014/2008 index



Sources: IMF, *Financial Soundness Indicators* and Eurostat, own calculation.

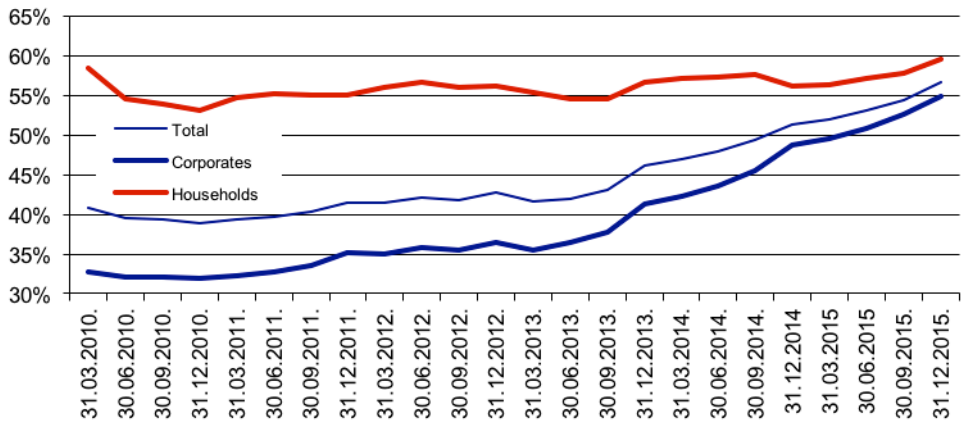
Figure 3 comprises only EU and EEA[3] member states, so as to avoid excessive institutional differences among the sample countries. This is relevant for drawing conclusions about the distance of the data for Croatia (larger red square) from the regression line showing a close linear correlation (0.6) between changes in GDP and NPLR. Croatia almost lies on the line, which means that the NPLR corresponds to expectations in view of the cumulative drop in real GDP from 2009 to 2014 (–12.4%).

[3] The European Economic Area includes also Iceland, Norway and Switzerland.

One should also note that the correlation between economic activity and NPLR explains the stabilisation of the ratio in Croatia in 2014 – 2015 (Figure 1), as the crisis bottomed out in 2014.

The next key indicator is the coverage of non-performing loans by loan loss provisions (hereinafter: coverage, Figure 4). The coverage dropped at the onset of the crisis due to the fall in the provisioning ratio of the household portfolio. This was not a problem thanks to the high coverage level, smooth changes in the NPLR and the large share of high quality collateral (real estate) in the household portfolio. However, the corporate portfolio coverage grew mildly in 2011, remained at around 35% until 2013, but then the ratio started growing after the implementation of the new *Decision on the classification of assets and off-balance sheet liabilities of credit institutions* (Official Gazette 41A/2014) and has grown ever since. The coverage of the non-performing corporate loan portfolio has converged to the much higher coverage of non-performing household loans, in the zone of relatively high 55% - 60%.

Figure 4: Coverage of non-performing loans by loan loss provisions

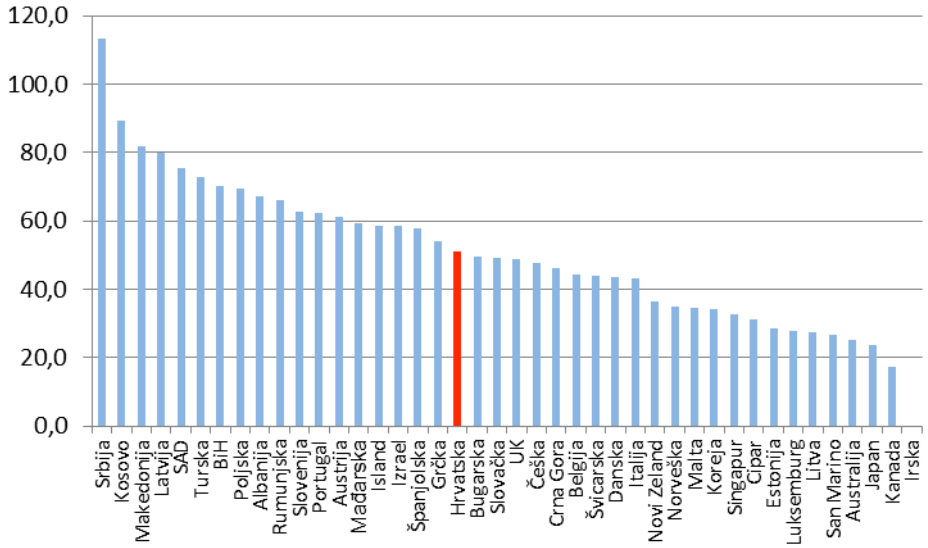


Sources: HUB Pregled 4/2015 and CNB.

The regulatory change of 2013 played a key role in shifting Croatia to the left in Figure 5, which shows an international comparison of the coverage. Croatia is now close to the average for countries in the sample, while in 2013, with the coverage of around 42%, it was more to the right, near Italy. However, it is difficult to say where a country should be in terms of provisioning to NPLs ratio. Figure 6 compares the NPL coverage by provisions with the real GDP index. The logic of the comparison relies on the assumption that, in addition to the rise in the NPLR, the average quality of NPLs deteriorates during crisis. Hence a deeper crisis should imply a higher coverage. However, this correlation is not visible in Figure 6: the correlation coefficient does

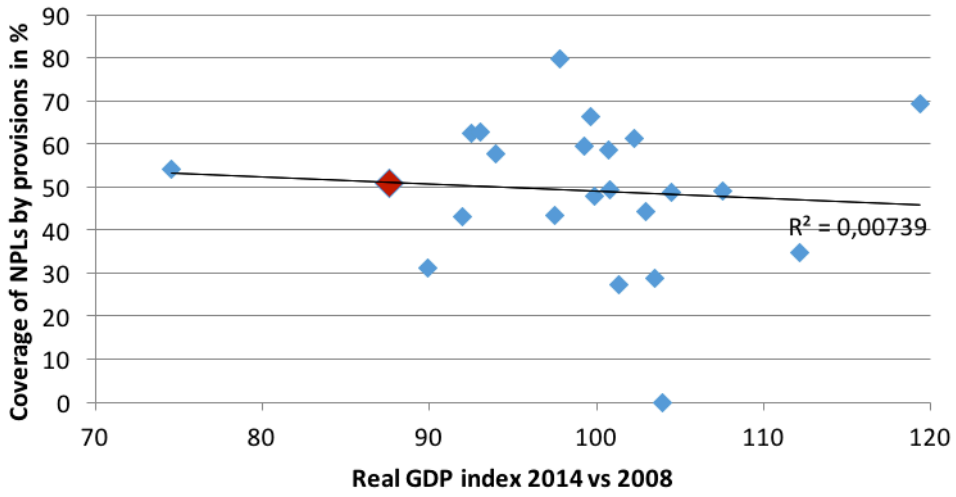
not differ from zero. The assumption that the NPL coverage by provisions follows the increase in the NPLR when a crisis deepens does not hold.[4]

Figure 5: NPL coverage by loan loss provisions – international comparison (in %)



Source: IMF, *Financial Soundness Indicators.*

Figure 6: NPL coverage by provisions vs the real GDP 2014/2008 index



Sources: IMF, *Financial Soundness Indicators* and Eurostat, own calculation.

The absence of the correlation between economic activity and coverage (and between the NPLR and coverage) shows that international comparisons of the coverage ratio cannot serve as the orientation benchmark for prudential policy in the area of asset classification and provisioning. Insignificance of the average

[4] The correlation coefficient does not differ from zero even when the coverage is directly compared with the NPLR instead of real GDP.

international coverage (high unexplained portion of cross country distribution of coverage ratios) presents a puzzle. The puzzle can be partly explained by the remaining differences among the countries with regard to asset classification and provisioning regulations. Although international standards are formally applicable everywhere, their partial imprecision and differences in the motives of regulators have created a situation where many countries, like Croatia, use regulators' decisions to complement or completely replace accounting standards by prudential rules.

Regulators' motives to intervene in the freedom of banks in the application of international standards are extremely complex. Without the ambition to analyse them in detail (which goes beyond the scope of this paper), the text below describes briefly the three main types of regulatory motives.

1. **Overly cautious regulator**. A regulator which has a pessimistic / short-term perspective and highly values current solvency of regulated entities in crisis conditions to the detriment of a possible contribution to counter-cyclical relaxation of credit policies (whose efficiency may be questioned for a number of reasons) will be prone to excessive caution and aggressively require additional provisions, probably above the optimum level. Such regulatory attitude may be endogenous – triggered by objective institutional weaknesses. For example, it may be associated with a finding on very weak institutions that regulate the restructuring of overly-indebted debtors (weak creditor protection) or a finding about poor risk management capacities of banks. Such regulator may also be stimulated by the belief that banks have an infinite time perspective in which any risk of excessive provisioning has no real impact on credit policies (because bankers with a long-term time horizon should be indifferent regarding various timing of recording provisions – excessive provisions will be released in the future as extraordinary income).

2. **Optimistic regulator**. A regulator which has an optimistic / long-term perspective and highly values a possible contribution to counter-cyclical relaxation of credit policies potentially to the detriment of current capital adequacy in crisis conditions may be expected to provide greater freedom to banks and to trust that management prudence, good corporate governance, internal control mechanisms and best practices, as defined in international accounting standards, will ensure an optimum level of provisions for NPLs. It may be expected that regulators will be more prone to an optimistic *modus operandi* if they are satisfied with the quality of owners and managers in the banking system (not worried about the information asymmetry arising from the principal-agent problem) and the solvency level/bank capitalisation.

3. **Overly relaxed regulator**. An optimistic regulator may easily turn into an overly relaxed regulator if not politically independent and/or if the regulator, based on a theory or research, believes that a relaxed prudential policy would *cause* economic recovery and improve the loan portfolio quality. Similar to the optimistic regulator, this hinges on the premise that the

regulator does not expect market failure associated with the principal-agent problem (is satisfied with the quality of owners and bank managers) and is satisfied with the distance relative to the minimum capital adequacy of major banks (and believes that any errors in the pursuit of financial policy would not cause an excessive drop in the capital adequacy). Also, it is highly likely that an overly relaxed regulator would be an optimist regarding the functioning of institutions that address the problem of debtor's over-indebtedness.

Therefore, the regulator's attitude depends on economic and institutional circumstances of the market in which it operates, as the regulator does not control all parameters that influence the outcomes (e.g. the government, court practice, foreign regulations, situation in foreign markets that spills over to the domestic market, etc). In any case, it is extremely difficult – on the verge of impossible – to design and assess empirically a model that would, in addition to the standard problem of separating the demand and supply factors in the credit market, also solve the problem of modelling the described regulator's behaviour, including factors that affect regulator's behaviour as well as relationships that describe the feedback effect of regulator's decisions on the credit market. In the absence of such a comprehensive model, the text below analyses in detail the problem of asset classification and provisioning. As the NPL coverage by provisions disperses randomly relative to the NPLR and changes in real GDP, a question arises about specific differences in regulations which may affect statistical data on the NPLRs and coverage.

II ASSET CLASSIFICATION AND PROVISIONING

A survey of risk management experts is based on seven case studies. Cases describe seven different business situations in a creditor-debtor relationship. Examples refer to corporate loans. The reasons for focusing on corporate loans are based on a well-known fact that regulatory differences in asset classification and provisioning are much smaller with regard to household loans. The complete text of the survey is attached as appendix to this paper.

Table 1 summarises the main features of the examples – case studies. Cases differ according to the type of collateral, delay in payment of obligations to creditors, method of collateral realisation and method of covering the debt from the present value of expected cash flows (DCF from regular operations or collateral realisation). Particularly interesting are examples 6 and 7 which describe situations of debt restructuring (rescheduling). Several questions are related to details on regulatory framework, about which more is provided in the remainder of this section.

Table 1 Summary overview of seven examples – case studies

	Current payment delay	Collateral instruments	Payment delay in the last 2 yrs except current delay	Collateral realisation	DCF
Example 1	95 days	NO (promissory notes, bills of exchange)	NO	NO	DCF from regular operations covers the loan in full
Example 2	120 days	YES (real estate)	NO	NO	DCF from regular operations covers the loan in full
Example 3	1y and 4 m	YES (real estate)	YES	YES, only promissory notes and bills of exchange	Loan not covered by DCF from regular operations but by the sale of collateral
Example 4	2yrs and 4 m	YES (real estate)	YES	YES, foreclosure	Loan not covered by DCF from regular operations but by the sale of collateral
Example 5	3yrs and 4 m		ALL ELSE THE SAME AS IN EXAMPLE 4		
Example 6	120 days	YES (real estate, LTV 50%)	NO	NO, loan is rescheduled	Covers the loan in full
Example 7	THE SAME AS IN EXAMPLE 6, EXCEPT THAT THE LOAN IS 35% PROVISIONED AND THE DEBTOR HAS FOR 13 MONTHS AFTER RESTRUCTURING SERVICED ALL NEW OBLIGATIONS AND SOME OF THE EARLIER OBLIGATIONS DUE, DCF FROM REGULAR OPERATIONS COVERS THE LOAN IN FULL				

The survey was presented for the first time to banking associations at the meeting of associations from V6 countries (Poland, Czech Republic, Slovakia, Hungary, Slovenia and Croatia). The meeting was held in Croatia in June 2015, after communicating the project concept to a dozen banking associations in countries of New Europe in early 2015. After the initial presentation, the survey was in late June 2015 forwarded, by means of banking associations, to risk experts in ten countries – Estonia, Lithuania, Latvia, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Romania and Bulgaria. According to the instructions in the appendix, associations were free to choose whether to fill in the questionnaire themselves (if they employed risk experts) or distribute the questionnaire to one or several member banks. We relied on the assumption that banking associations would be interested in providing high quality answers as they were promised to receive in return an analysis and comparative overview by country. The responses were received from the Czech Republic, Hungary, Latvia, Romania, Slovakia and Slovenia. Adding to this that the survey was also filled in for Croatia and according to the criteria used in the ECB/EBA Asset

Quality Review (AQR) of October and November 2014, comparisons were made for a total of eight regulatory frameworks.

A detailed overview of the questions and answers is provided in the Excel file attached as appendix to this paper. The text below provides a brief overview of the results with comments. Readers who are not interested in details by examples may continue reading from chapter 3, which provides a summary overview of results and concluding remarks.

Example 1

A debtor is 95 days past due on a material amount of debt. The bank has no other collateral, except debtor's promissory notes and bills of exchange. The debtor has not had any problems in loan repayment over the last two years. The bank has not exercised debtor's promissory notes because it assesses that the payment delay is caused by debtor's temporary liquidity problems and expects the due amount to be settled soon. Based on an estimate of the client's future operating cash flows, the bank establishes that the present value of estimated future cash flows (hereinafter referred to as: DCF) covers the loan in full.

a) Material amount of due debt

A regulatory definition of a material amount of due debt exists in the following countries: Croatia, where a material amount represents the total amount of debtor's overdue liabilities larger than HRK 1,750 (around EUR 230), but banks may set a lower threshold in their internal policies; the Czech Republic, where the material amount is EUR 100 for retail exposures and EUR 1,000 for other exposures; Slovakia EUR 250; Slovenia EUR 50,000 or 2% of total exposure to the debtor (whichever is the lower). Hungary, Latvia and Romania have no specific definition of a material amount of due debt, and any amount is considered material.

Definitions of a material amount of due debt may influence asset classification and the level of necessary loan loss provisions as the payment delay of more than 90 days of the amount lower than the defined material amount is not considered an occurrence of delinquency. Therefore, it is evident that in some countries exposures would be considered delinquent (in default) and classified as non-performing exposures (NPEs) when only a small portion (amount) of exposure is past due, while in some countries they would be classified under NPEs only when they exceed a material amount, which is in the countries observed defined in a broad range from EUR 100 to as much as EUR 50,000 (Slovenia). It should be noted that classification of an exposure under NPEs in some countries does not necessarily entail loan loss provisions for such exposures, of which more details below.

In view of differences in the definitions of a material amount of due debt, which affect the differences in asset classification and provisioning in some countries, as well as the calculation of capital requirements, the EBA is making efforts to provide a

uniform definition of a material amount.[5] The survey responses suggest that differences in regulations are not sufficiently significant to explain differences across countries, except in Slovenia, which has the most relaxed regulations, as the threshold of EUR 50,000 or 2% of exposure allows that significant delays do not lead to asset reclassification.

b) *The method of calculating future cash flows when collection is expected from a debtor's regular operations*[6]

None of the countries prescribed precisely the method of calculating cash flows from regular operations. Instead, credit institutions may freely define the method in internal policies. The AQR methodology is more precise in this regard than the national methodologies as it defines the method (formulae) for the calculation of cash flows from regular operations. As definition of the methods was left to credit institutions in the surveyed countries, it is impossible to assess what is the actual effect on loan loss provisions in individual countries relative to the AQR methodology or in a cross-country comparison. Although one may rely on the idea that the application of best practices prevents large differences among countries, it cannot be disregarded that this factor may explain some of the differences among classification and provisioning in the countries observed.

c) *Making loan loss provisions*

Loan loss provisions need not be made in the surveyed countries if the present value of estimated future cash flows ensures full recoverability of a loan on the basis of accurate assumptions of the bank for calculating discounted cash flows. Only Slovakia stated that this issue is not defined precisely and that a loan would probably be restructured before it is past due for more than 95 days. This indicates that in some countries there are incentives for very quick loan restructuring / rescheduling, as soon as the first signs of payment difficulties arise (please find more details towards the end of the survey results). Nevertheless, one may conclude that regulations are fairly similar in the observed countries and compliant with the AQR methodology.

d) *Interest income is treated differently than principal where loan loss provisions should be made (e.g. loan loss provisions for interest receivables amount to 100% regardless of the percentage of provisions applied to the principal)*

[5] According to the most recent draft Regulatory Technical Standards (Consultation Paper on Draft Regulatory Technical Standards on materiality threshold of credit obligation past due under Article 178 of Regulation (EU) 575/2013 (EBA/CP/2014/32) 31/10/2014), a material amount of due debt shall be the sum of all amounts owed by the obligor that are past due more than 90 days (or 180 days in the countries that so prescribe), which breaches the absolute threshold of EUR 200 for retail exposures and EUR 500 for other exposures or breaches the relative threshold of 2% of the total amount of exposure to the obligor (absolute or relative threshold is applied, depending on which is breached the first).

[6] The ECB Asset Quality Review Phase 2 Manual of March 2014 prescribes the going concern approach, or alternatively, banks may be allowed to apply their own internal policies.

Interest income is treated differently only in Croatia. Interest income is otherwise not treated differently from principal in making loan loss provisions, i.e. the same percentage is applied to both principal and interest. In Croatia, a 100% loan loss provision of receivables based on interest income is made in case of reclassification from risk category A to non-performing loan categories (B or C) and is subsequently reported off-balance sheet and may not be recognised as interest income in the profit and loss account until collection. The different treatment of provisions for interest income in Croatia relative to the other countries may result in lower interest income of Croatian credit institutions in some reporting periods before interest income collection and the higher level of the non-performing loan coverage by provisions.

e) Do provisions have to be made for reclassified loans or loan loss provisions are not necessary for such loans

The EBA Simplified Approach and some national regulations allow that provisions are not made for some reclassified loans.[7] The survey showed that in Croatia, Hungary and Slovakia reclassified loans may be defined as those for which loan loss provisions are made. Latvia and Slovenia use definitions that are equivalent to the AQR methodology, while in Romania a national method is used that is similar to the AQR methodology.[8]

Different definitions of NPEs lead to different reporting on the ratio of NPLs in total loans and the indicator of the loan loss provision coverage ratio by country, so that these indicators are not entirely comparable. This could be one of the reasons why the coverage ratio is randomly distributed among the countries when compared with the NPLR and real GDP.[9]

Example 2

A debtor is 120 days past due on a material amount of debt. The debtor has not had any problems in loan repayment over the last two years. The bank has not exercised debtor's promissory notes (or any other collateral instrument) because it assesses that the payment delay is caused by debtor's temporary liquidity problems and expects the due amount to be settled soon. Collateral instruments (in addition to promissory notes) include residential real estate in the capital city, owned by the company owner (LTV 35%) and DCF from those collateral instruments alone covers the loan in full.

[7] The survey questions clearly show that this question does not relate to unidentified losses.
[8] No precise answer to this question was received from the Czech Republic.
[9] The EBA is making efforts to provide a uniform definition of a NPE which would enable a comparison of loan quality indicators – the latest publication was *EBA Final Draft Implementing Technical Standards On Supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013 (EBA/ITS/2013/03/rev1 24/07/2014).*

a) Loan loss provisions

In this example, loan loss provisions should be made only in Croatia, in the amount of at least 10% of the principal and 100% for interest income (as the payment delay is more than 90 days), although no legal actions for collection have been taken (at least exercise of the promissory notes) and regardless of the fact that DCF from regular operations covers the loan in full.[10] Croatian regulations are also stricter than the AQR methodology.

Example 3

A debtor has difficulties in loan repayment. The current delay in loan repayment is 1 year and 4 months and foreclosure has not yet been initiated. The bank has exercised promissory notes and a certain amount has been collected. It was expected that the situation would be solved so the bank has not yet initiated foreclosure of real estate serving as collateral. However, the expected solution has become increasingly less likely. The bank decides to initiate foreclosure after all (at the moment of loan appraisal and calculation of loan loss provisions, foreclosure has not yet been initiated). DCF from the expected sale of the pledged real estate covers the loan in full. The real estate comprises business premises in the centre of the capital city.

a) Minimum frequency of market valuation of the real estate serving as collateral

Croatia, the Czech Republic, Latvia and Slovenia apply the provisions of Article 208 of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR). Under these provisions, credit institutions monitor the value of the property, at a minimum once a year for commercial immovable property and once every three years for residential real estate. Credit institutions may use statistical methods to monitor the value of the property; if such monitoring indicates that the value of the property may have declined materially relative to general market prices, a review of property valuation is carried out by a valuer who possesses the necessary qualifications (who is independent from the credit decision process). It is precisely prescribed that for exposures exceeding EUR 3 million (in Croatia HRK 20 million) or 5% of the own funds of a credit institution, the property valuation is to be reviewed at least every three years.

Romanian experts stated that property valuation is reviewed every year for residential real estate and every three years for other immovable property. Slovakian experts stated that this matter is not prescribed and that credit institutions are free to decide, but most of them prescribe frequency of revaluation at least once a year for commercial immovable property and once every three years for residential real

[10] Applied is Article 15, paragraph (4) of the *Decision on the classification of assets and off-balance sheet liabilities of credit institutions* (Official Gazette 41A/2014).

estate, i.e. the same as Article 208 of CRR. Hungarian experts stated that there are no specific regulations regarding this issue, with the exception of project financing which requires regular external valuations; in practice, annual reviews are required, which can be carried out internally, but which also have to be internally prescribed and documented in detail.

The AQR methodology prescribes that a review of the real property value must be made by independent external valuers for all immovable property whose valuations are older than a year. However, if there were available valuations made by independent internal valuers (who are not involved in the credit decision process, but may be connected to the credit institution), a review of valuations is made by external valuers for a portion of such portfolio. For the rest of the portfolio, internal valuations are indexed (adjusted) by a certain percentage of the established difference between external and internal valuations.

The AQR methodology is more demanding in this regard or at least more precise than in the surveyed countries.

b) Minimum periods in which collection from real estate collateral may be expected and haircuts applied when receipts from sales of collateral is included in DCF

Minimum haircuts are prescribed in Croatia (elaborated according to particular real estate categories), which should be applied to reduce the estimated value of immovable property, while minimum collection periods are prescribed by individual real estate categories which are used to calculate discounted cash flows (banks should internally prescribe higher haircuts and longer collection periods if their practice and experience so require). In Slovenia, the prescribed minimum period for collection based on foreclosure is longer than elsewhere (4 years) but haircuts applied to the estimated value of the property are not prescribed, and are instead defined by credit institutions in their internal policies. In other countries, credit institutions are free to define these procedures in internal policies. Under the ACQ methodology, these parameters should be suggested by independent external valuers.

There are signs that Croatian (and Slovenian) regulations are stricter than the rest. It is, however, impossible to assess whether the regulations are strict or just more precise, which in the final run does not cause essential differences in asset classification and provisioning.

c) Making loan loss provisions

In this example, provisions have to be made only in Croatia, in the amount of 20% of the principal and 100% for interest income as the loan is past due for more than 1 year and 90 days and no eligible collateral instruments have been exercised (foreclosure of real estate serving as collateral), although discounted cash flows cover the loan in full. This provision is also stricter than the AQR methodology.

Example 4

A debtor is past due on a loan for 2 years and 4 months. The bank has initiated foreclosure of collateral (business premises in the centre of the capital city), but because of the length of the liquidation procedure run by a court (or an agency), the bank is yet unable to take over and/or sell the property. DCF from the expected sale of the pledged real estate covers the loan in full.

a) Making loan loss provisions

In this example, provisions have to be made only in Croatia, in the amount of 30% of the principal and 100% for interest income as the loan is past due for more than 2 years and 90 days, regardless of exercising adequate collateral instruments (foreclosure of real estate serving as collateral) and regardless of the fact that discounted cash flows cover the loan in full. This regulation is also stricter than the AQR methodology.

Example 5

The same as the previous example, but the payment delay is 3 years and 4 months and a public auction has been scheduled to take place in 2 months.

a) Making loan loss provisions

In this example, provisions have to be made only in Croatia, in the amount of 40% of the principal and 100% for interest income as the loan is past due for more than 3 years and 90 days, regardless of exercising adequate collateral instruments (foreclosure of real estate serving as collateral) and regardless of the fact that discounted cash flows cover the loan in full because after the loan is past due for more than 2 years and 90 days, provisions must be increased by additional 5% after each additional 180-day period. These provisions are also stricter than the AQR methodology.

Example 6

The bank has granted a debtor a long-term, 3-year loan payable in 12 quarterly instalments (principal and interest). Collateral for the loan are business premises in the centre of the capital city (readily marketable). LTV is 50%. After having serviced the loan regularly for 2 years, the debtor faces liquidity problems and the payment delay is 120 days (4 months). Following a detailed analysis of the debtor's financial situation, the bank assesses that liquidity problems are only temporary and, in agreement with the client, carries out the loan restructuring (which is not part of the overall restructuring of the debtor's business operations or financial position). Under the restructuring, the repayment period for outstanding instalments is extended to 2 years (a total of 8 quarterly instalments). Amounts of quarterly

instalments have thus been reduced, in accordance with estimated future operating cash flows, which show that the client will be able to service regularly the loan with reduced instalments. Hence, the calculations show that DCF from the debtor's regular operations covers the loan in full.

a) Making loan loss provisions

In this example, loan loss provisions have to be made only in Croatia, in the amount of 1% of the principal and 100% for interest income as a restructured loan that was prior to restructuring classified into risk category A (no loan loss provisions) must be classified into risk sub-category B-1 or worse (with loan loss provisions of at least 1% of the principal). Exceptionally, the loan may continue to be graded A and without loan loss provisions, provided that the following conditions are met: (a) liabilities are expected to be settled within the contracted time limits, (b) the debtor's financial position is based on reliable cash flows, (c) the calculation of discounted cash flows covers the loan, (d) the loan is adequately secured, and (e) the restructuring of the loan is part of the overall restructuring of the debtor's business operations or financial position (the above example does not meet this last condition). Therefore, loan loss provisions should be made for such loan.[11] This provision is also stricter than the AQR methodology.

Where after the loan restructuring a material amount of the debt is settled after a delay of, for example, 65 days and the loan is thereafter repaid as scheduled (and all the above conditions (a) to (d) continue to be met), only in Croatia would the application of the same provision require that loan loss provisions be made (unless the restructuring is part of the overall restructuring of the debtor's business operations).

b) Choice of the effective interest rate for the calculation of DCF / loan loss provisions

Assuming that a variable interest rate has been contracted and the interest rate on a restructured loan is higher, the new effective interest rate would be applied in Slovenia and Romania, while the originally contracted interest rate before restructuring would be applied in Croatia, the Czech Republic, Hungary, Latvia and Slovakia. These differences influence the coverage ratios as they affect the percentage of loan loss provisions. However, due to ambiguities related to the interpretation of best practice standards, it is difficult to assess what is realistic. [12]

[11] Article 24, paragraph (7) of the Decision on the classification of assets.

[12] Under International Financial Reporting Standards (AG 84, IAS 39), if, in case of a debtor's financial difficulties, the lending terms and conditions, concerning the level and time limits for repayment, are modified, the initial rate must be used for discounting. However, a new effective interest rate is used where the initial contract provides for a variable interest rate or where the originally contracted interest rate was changed by a subsequent annex to the contract. The surveyed countries apply different explanations for this combination of a restructured loan with a variable interest rate because they use a different interpretation of the international standard. In any case, a higher EIR leads to higher loan loss provisions.

Example 7

The bank has approved loan restructuring to a debtor experiencing loan repayment difficulties, but the restructuring has not been part of the overall restructuring of the debtor's business operations (other creditors of the debtor have not approved restructuring of their claims). The bank has made loan loss provisions of 35% for the restructured loan. The debtor has serviced the loan regularly for 13 months (repaying more than the amount which was past due at the moment of restructuring) and its financial situation improved. According to the bank's estimate, DCF from the debtor's regular operations covers the loan in full.

a) Making loan loss provisions

In this example, loan loss provisions continue to be applied to the loan only in Croatia as the Decision[13] prescribes that a restructured loan may be classified at a 12-month interval into a risk category/sub-category involving a lower degree of credit risk if it is regularly repaid, if cash flows are reliable and if (which is not the case in this example) the loan restructuring is part of the overall restructuring of the debtor's business operations or financial position. In this example, the loan must remain in the same risk sub-category (B-2), so loan loss provisions may at most be reduced from the current 35% to 30.01% (the latter is the minimum for sub-category B-2). These provisions are also stricter than the AQR methodology.

b) Impact of the overall restructuring of the debtor's business operations

Only in Croatia and Slovenia regulations make a distinction between loan restructuring and the overall restructuring of the debtor's business operations. In Slovenia, a *Master Restructuring Agreement* is signed at the time of restructuring and loan loss provisions may then be reduced by 80%, and reduced further 12 months after that. In Croatia, a restructured loan that is part of the overall restructuring of the debtor's business operations or financial position may in this case be classified into a risk category/sub-category involving a lower degree of credit risk, i.e. from B-2 to B-1, for which loan loss provisions range from 1% to 30% of the principal, but not into risk category A without loan loss provisions, as classification to a risk category involving a lower degree of risk is possible only at a 12-month interval. Where the restructuring is not part of the overall restructuring of the debtor's business operations, the loan may not be classified into a risk category involving a lower degree of risk at a 12-month interval but remains in the same risk category until repayment. Croatian and Slovenian regulations are in this regard stricter than the AQR methodology, but Croatian regulations are stricter than Slovenian.

[13] Article 24, paragraph (5) of the Decision on the classification of assets.

III CONCLUDING REMARKS

An overview of the results of regulatory comparisons given in Table 2 shows that relative restrictiveness of Croatian regulations is evident in two important areas:

- the calculation of loan loss provisions on the basis of the present value of cash flows has largely been replaced by the calculation based on the number of days in default (which has pushed collateral values to the background and implied full provisioning of interest income);

- the calculation of loan loss provisions in case of loan restructuring depends on whether only a loan is restructured or overall debtor's business operations are being restructured, where Croatian regulations limit the speed of moving the restructured loan to better categories (even in case of a successful restructuring of the overall business operations) to a 12-month interval for each improvement in the category (at least 3 years from B-3 to A) or until repayment if the restructuring is not part of the overall restructuring of the debtor's business operations.

The key question is whether these regulatory provisions have limited corporate loan growth in recent years? There is still no exact answer to this question. Neither this analysis can provide the answer as there is no structural model that would provide a satisfactory explanation of supply and demand factors in the credit market and complex relationships between regulators and market players. However, an informed speculation about the answer may be provided by theoretical and empirical considerations.

Theoretical considerations should start from a model of optimum bank behaviour. In theory, the threat of excessive provisions should not affect credit decisions. If banks have sufficient capital, and managements have sufficiently long time horizons, decisions will be made on the basis of expected future cash flows. Reduced current accounting profit and increased future accounting profit (due to excessive current provisions and their later release in the form of extraordinary income) will not affect their decisions. However, the risk of limited duration of management contracts, asymmetric information (the principal-agent problem), introduction of capital restrictions by international groups and associated increases in the cost of capital[14] may in reality cause a momentary impact of a stricter provisioning policy on decisions on new loans. The problem may be particularly pronounced in cases when banks lend support to companies being deleveraged and restructured. Poorly-capitalised and still unprofitable companies having a positive cash flow are probably faced with serious financial constraints, and there are no signs that pre-bankruptcy settlements have reduced their financial problems (Kukavčić and Šonje, 2016). Hence, one may speculate that strict regulations in conjunction with weak creditor protection discourage banks from participating in debtors' restructuring.

[14] The cost of capital for a bank may grow together with the increase in country risk (owners demand a higher return to compensate for higher risk), and country risk may depend on frequency and type of regulatory changes.

Table 2: Summary overview of results – with indications of the most important departures for Croatian regulations

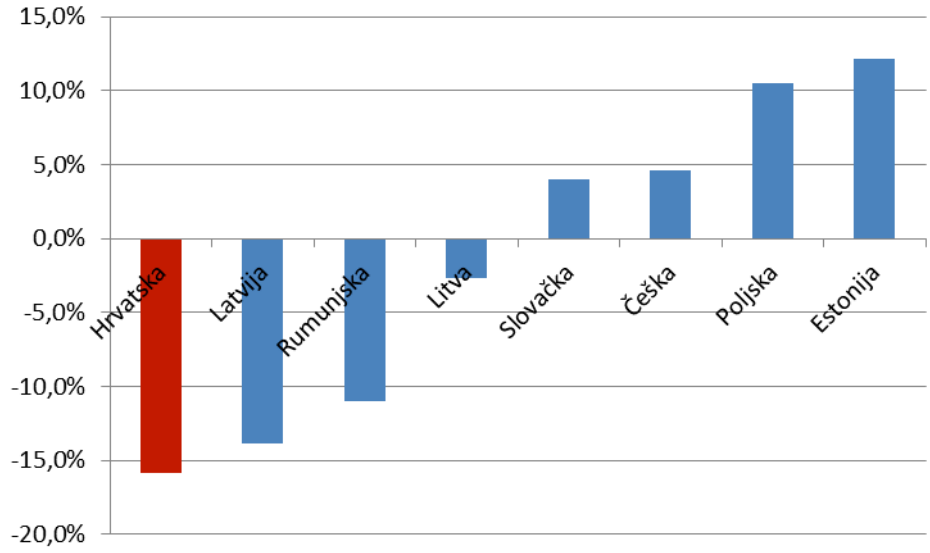
	Current payment delay	Collateral instruments	Payment delay in the last 2 yrs	Collateral realisation	DCF	Regulatory departure that indicates relative restrictiveness of Croatian regulations	Regulatory departure that indicates relative relaxation of Croatian regulations
Example 1	95 days	NO (promissory notes, bills of exchange)	NO	NO	Covers the loan in full	1. 100% provisions for interest income, regardless of the percentage applied to the principal. 2. Provisions have to be made for each loan classified under B	
Example 2	120 days	YES (real estate)	NO	NO	Covers the loan from the sale of collateral	Provisions have to be made only in Croatia, in the amount of **10%** of the exposure (for the principal, item (1) of Example 1 is applied to interest)	
Example 3	1 y and 4 m	YES (real estate)	YES	YES, only promissory notes and bills of exchange	Covered, not by DCF from regular operations but by the sale of collateral	Provisions have to be made only in Croatia, in the amount of **20%** of the exposure (for the principal, item (1) of Example 1 is applied to interest)	AQR methodology is stricter with regard to the frequency of collateral valuation (this is true for all countries, not only Croatia)
Example 4	2 yrs and 4 m	YES (real estate)	YES	YES, foreclosure	Covered, not by DCF from regular operations but by the sale of collateral	Provisions have to be made only in Croatia, in the amount of **30%** of the exposure (for the principal, item (1) of Example 1 is applied to interest)	
Example 5	3 yrs and 4 m	ALL ELSE THE SAME AS IN EXAMPLE 4				Provisions have to be made only in Croatia, in the amount of 4**0%** of the exposure (to interest the same applies as above); Croatia is specific because additional 5% has to be set aside each 180 days when a delay is longer than 2 yrs and 90 days	
Example 6	120 days	YES (real estate, LTV 50%)	NO	NO, loan is rescheduled	Covers the loan in full	Only in Croatia a restructured loan may not remain in category A, unless it is a part of the overall restructuring of business operations	
Example 7	THE SAME AS IN EXAMPLE 6, EXCEPT THAT THE LOAN IS 35% PROVISIONED AND THE DEBTOR HAS FOR 13 MONTHS AFTER RESTRUCTURING SERVICED ALL NEW OBLIGATIONS AND SOME OF THE EARLIER OBLIGATIONS DUE, DCF FROM REGULAR OPERATIONS COVERS THE LOAN IN FULL					Only Croatia and Slovenia make a distinction between loan restructuring and overall restructuring, but in case of overall restructuring Slovenia provides a faster return to category A	

According to this view, weak creditor protection is exogenous. Strict prudential rules are endogenous – determined by exogenous creditor protection rules – so their relaxation per se would not bring solution to the problem.

Empirical considerations should start from the finding observed in a number of various research papers, which was mentioned in the introductory part: in developed countries, the crisis emerged (or intensified strongly) in the financial sector and spilled over to the real sector. On the other hand, in European developing countries, including Croatia, the crisis spilled across borders via real channels of international trade and foreign direct investment, while the banking sector, at least in the first years of the crisis, acted as a buffer and not as a crisis amplifier. These conclusions describe fairly accurately the developments in the period from 2008 to 2011. However, the question about the relations and influences after 2012 remains open.

When observing developments in corporate loans in similar countries (Figure 7)[15] from September 2012 to September 2015, Croatia is at the rear of the group, with a cumulative decrease in corporate loans of around 15%. This result is expected in view of the prolonged recession in Croatia; if one compares developments in corporate loans with GDP developments[16] in approximately the same period, one may notice data dispersion (Figure 8). Dispersion is such that a comparison of developments in corporate loans and real GDP has no statistical significance. However, it is very interesting as it shows very different experiences of individual countries in the past three years.

Figure 7: Nominal growth in corporate loans, 9/2012 –9/2015

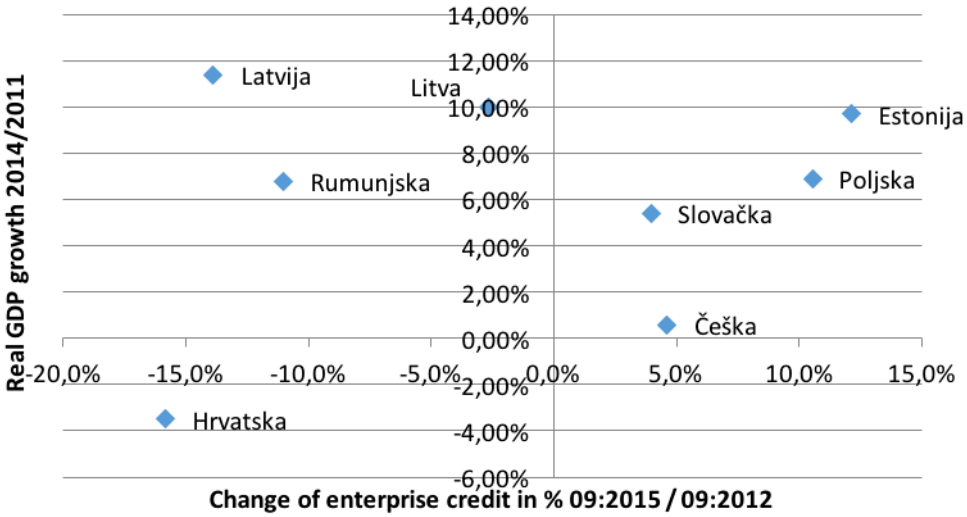


[15] The figure does not include the countries that have, due to problems with banks, recorded major breaks in the developments of credit aggregates for the past three years (Bulgaria, Hungary and Slovenia).

[16] Only corporate loans are observed as the greatest regulatory differences occur in that segment. The growth rate of corporate loans (September 2012 – September 2015) is compared with real GDP growth in 2012 – 2014.

Source: ECB Statistical Data Warehouse.

Figure 8: Growth in corporate loans vs real GDP growth, 2012 – 2015



Sources: ECB Statistical Data Warehouse and Eurostat, own calculation.

Latvia, Lithuania and Romania stand apart from other countries of New Europe as they have managed to grow relatively fast since 2012 with a more or less pronounced contraction in loans. This phenomenon is known as creditless growth. However, the Czech Republic, Slovakia, Poland and Estonia positioned themselves logically in the space of loans vs growth – there are visible signs of a positive correlation.

In view of its financial history, structure of the economy and nature of economic development, Croatia is probably in the same line of positive correlation between loans and growth. Transition to the zone of creditless growth is probably possible at lower degrees of development, in a very competitive regulatory framework with a relatively cheap labour, which together attract foreign direct investment, so that equity (direct) investment flows and subsequent intra-company cross-border financing compensate for the lack of standard bank loans. In such countries regulatory impact can probably be neglected to some extent. Estonia, Poland, Slovakia and the Czech Republic are already sophisticated economies, in which significant long term creditless growth could be hardly achieved.

It is obvious that this type of presentation cannot be viewed as confirmation of either a supply-side causality (loans trigger growth) or a demand-side causality (growth boosts loan demand). However, in an informed speculation or discussion, it may be pointed out that the importance of the relationship between credit and growth in Croatia cannot be denied. The Croatian financial sector and companies have reached a level of development at which they are closely intertwined, so that a development such as in Lithuania, Latvia or Romania is hard to imagine in Croatia, while the over-indebtedness problem of companies (particularly those that have a positive cash flow

before debt repayments) has probably become a problem of a systemic nature. Regulations on asset classification and provisioning in such conditions are probably a very active factor in solving that problem, which very likely has effects on economic growth (Klein, 2013).

The strictness of Croatian regulations, which has been identified in this paper in comparison with similar countries, reflects on the one hand the weaknesses of the overall institutional framework for addressing corporate over-indebtedness and insolvency. It is reasonable to assume that classifications and provisioning for the purpose of preserving banking system soundness should be stricter in a system with poor institutions for protection of creditors. On the other hand, excessive strictness may further hinder the restructuring which is already difficult because of the poor institutional framework which is outside the competence of the banking regulator, mainly related to the judicial system. Finding a right balance is an extremely difficult task in such circumstances.

REFERENCES

Bogdan, Ž., M. Deskar Škrbić and V. Šonje (2014): International Capital Flows and Economic Growth in CESEE: A Structural Break in the Great Recession. FEB Working Paper Series. Paper No. 14-04.

Decision on the classification of assets and off-balance sheet liabilities of credit institutions (Official Gazette 41A/2014).

EBA, various technical standards.

Everaert, G. *et al.* (2015): *Does Supply or Demand Drive the Credit Cycle? Evidence from Central, Eastern and Southeastern Europe*. IMF Working Paper WP/15/15.

Guo, K. and V. Stepanyan (2011): *Determinants of Bank Credit in Emerging Market Economies*. IMF Working Paper WP/11/51.

Klein, N. (2013): *Non-performing Loans in CESEE: Determinants and Impact on Macroeconomic Performance*. IMF Working Paper WP/13/72.

Kukavčić, J. and V. Šonje (2014a): *Problem of Identification of Credit Crunch: Do the Banks Recognize a Healthy Demand for Credit?* CBA Analysis no 49. Zagreb: CBA.

Kukavčić, J. and V. Šonje (2014b): *Are Good Companies Facing Financial Constraints in the Crisis?* CBA Analyses no 50. Zagreb: CBA.

Kukavčić, J. and V. Šonje (2016): *Suočavaju li se i dobra poduzeća s financijskim ograničenjima II.* CBA Analyses no. 55 (*mimeo*). Zagreb: CBA.

Messai, A. S. and F. Jouini (2013): *Micro and macro determinants of non-performing loans*. International Journal of Economics and Financial Issues, Vol. 3(4): 852-860.

Škarica, B. (2013): Determinants of Non-Performing Loans in Central and Eastern European Countries. Faculty of Economics Zagreb. Working Paper 13-07.

APPENDIX: QUESTIONNAIRE
[Original responses and results by countries as well as a summary presentation of detailed results are attached in a separate Excel file *Comparative table.xls,* which is also attached to this paper]

CROATIAN BANKING ASSOCIATION

Survey of Bank Associations in Central and South-Eastern Europe

International comparison of strictness of asset classification and provisioning regulations

June 2015

Introduction

Regulations governing asset classification and provisioning for non-performing loans are subject to frequent changes and differ across countries. These differences impair the comparability of non-performing loan ratios (NPLRs) and loss provision coverage ratios.

In addition to the traditional application of international accounting standards and national prudential regulations, ECB's methodological standards applied in the AQR have been in use as of the last quarter of 2014.

The purpose of this survey is to assess regulatory differences currently existing in individual Central and South-Eastern European countries. The results of this survey analysis will be published in the English language and delivered to all bank associations that respond to the survey.

The survey is directed towards banking associations in 11 countries of New Europe (Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bulgaria and Romania). This means that one filled-in questionnaire is expected per country. Banking associations should not send this questionnaire to all banks or the majority of banks.

There is no preferred method for collecting answers to the questionnaire. If a banking association has a risk group, consulting the risk group on the method of collection is recommended. The questionnaire may be filled in during the risk group meeting. Alternatively, the banking association or the risk group may choose one or two experienced risk managers with deep knowledge of local regulations on asset classification and loan loss provisions, to fill in the questionnaire.

The survey does not cover small loan portfolios that are assessed collectively. The survey refers exclusively to assets whose quality is assessed on an individual basis.

The survey is based on examples. It includes seven examples, i.e. seven different business cases of companies experiencing loan repayment difficulties. Several specific questions about the regulatory treatment may be found below each example. Further below is a description of the way current regulations in Croatia would treat that particular case and a description of the way in which the ECB's methodology (implemented in the AQR) regulates the asset classification and provisioning in the presented case.

The reason why questions are accompanied with a description of the Croatian National Bank's and ECB's methodology is twofold. First, it will provide guidance to a person or persons completing the questionnaire. Second, it will help in answering the last question at the bottom of each business case. Once a survey participant examines a business case, answers the specific questions regarding that case and reviews a description of CNB's regulations and the ECB's methodology, he/she will answer the last question which reads as follows:

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight (bold) or

mark (in colour) the chosen assessment. If assessment is not possible, please leave a blank.

1	2	3	4	5

Completed questionnaires are to be delivered to Mr Zoran Bohaček, Managing Director of the Croatian Banking Association, at the following email address: zoran@hub.hr. Questionnaires may be submitted in Word format, but preferably they should be converted and delivered in PDF format.

Participants are kindly requested to submit the completed questionnaires by 31 July 2015. If this cannot be done during July and/or if there are any questions and/or comments and/or additional explanations are needed, please send your queries and comments to the above email address as soon as possible. We will respond to them and in this case the delivery date is extended to 15 September 2015.

The survey is compiled in such a way that any experienced risk manager (credit risk director, member of a bank's management board responsible for risks, and the like) with fair knowledge of local regulations could, according to estimates, fill it in within approximately one hour.

The first four questions are the general part of the survey and refer to the time of completing the questionnaire, etc. The answers provided in that part will not be published; they are for internal purposes only.

General part

Country:

Date or period of filling in the questionnaire:

Person(s) involved:

Contact person name (if more than 1 person was involved):

Contact email address:

Add optional information (e.g. institution etc.):

You will be provided with the results of the study no later than 120 days upon receipt of your questionnaire. All personal data contained in this form will be kept secret.

Business case questionnaire

Example 1

A debtor is 95 days past due on a material amount of debt. The bank has no other collateral, except debtor's promissory notes and bills of exchange. The debtor has not had any problems in loan repayment over the last two years. The bank has not exercised debtor's promissory notes because it assesses that the payment delay is caused by debtor's temporary liquidity problems and expects the due amount to be settled soon. Based on an estimate of the client's future operating cash flows, the bank establishes that the present value of estimated future cash flows (hereinafter referred to as: DCF) covers the loan in full.

Questions (after reading and before answering the questions, please see the overview of the regulations of the Croatian National Bank and the ECB below the questions):

a) Do regulations applied to banks in your country define what is considered to be a material amount of debt in default for the purpose of the process of establishing loan losses? Please describe.

Answer:

b) Do regulations in your country prescribe the method of calculating future cash flows from an asset when collection is expected from a debtor's regular operations (e.g. in the manner in which it is laid down in the ECB's Asset Quality Review Phase 2 Manual of March 2014 under the going concern approach) or are banks allowed to determine this method in their internal policies? If regulations exist, please describe the calculation method.

Answer:

c) In this specific example, would loan loss provisions have to be made for such a loan under regulations in your country? If loan loss provisions would have to be made, is there a minimum percentage that the bank would have to apply to this loan according to regulations?

Answer:

d) Do regulations in your country prescribe that for loans for which loan loss provisions have to be made, receivables based on interest income are treated differently from the loan principal (e.g. that loan loss provisions for receivables based on interest income amount to 100% regardless of the percentage to be applied to the principal)?

Answer:

e) Under regulations in your country, is an exposure classified as non-performing exposure (NPE) simultaneously an exposure for which loan loss provisions are made or loan loss provisions do not have to be made for such an exposure (e.g. as under the EBA Simplified Approach NPE definition)? Please describe.

Answer:

CNB Decision on the classification of assets and off-balance sheet liabilities of credit institutions

a) According to Article 18(9), a material amount of debt in default (after which counting of the days past due starts) implies debtor's overdue liabilities larger than HRK 1,750.00 (approx. 230 €).
b) The method of calculating cash flows from a debtor's regular operations is not prescribed; it is to be laid down in banks' internal policies.
c) According to Article 18(3) to (5), a loan which is not secured by eligible collateral instruments and in relation to which a delinquency occurs (past due for more than 90 days) can remain in risk category A provided that debtor's cash flows are reliable and ensure full recoverability. If cash flows are not reliable (there is no definition of reliable cash flows), depending on the number of days past due (90-180 days), loan loss provisions are made in the amount of at least 1%.
d) According to Article 19(3), a 100% loan loss provision of receivables based on interest income is made (in case of reclassification from risk category A to B or C) and is subsequently reported off-balance sheet as excluded interest income, which may be recorded as income only upon collection (and not when accrued).
e) In Croatia, non-performing exposures (NPE) are risk categories B and C, i.e. exposures for which loan loss provisions are made.

AQR

a) The ECB used definitions of a material amount of debt in default prescribed in individual countries.
b) The method of calculating operating cash flows is prescribed under the going concern approach (approach where debtor's operating cash flows are expected, in contrast to the gone concern approach where operating cash flows are no longer expected, and the collateral is expected to be exercised). The calculation is prescribed in section 4.6.2 of the Manual:
    - PV of operating CF (present value of operating cash flows) = CF x M (multiple);
    - CF (one-year) = EBITDA + CF adjustments (income tax expense + required CAPEX x essential dividends) + sustainability adjustments (e.g. low provision flow, low funded pension scheme contribution etc);
    - M = 12 for infrastructure; 10 for utilities; 6 for other exposures; unless it is established that another M should be applied in a particular market;
    - for the going concern approach, the total amount for allocation (AA), which is then allocated to all creditor banks (and possibly to cover negative working capital and net tax liability), is defined as: AA = PV operating CF + CF non-pledged cash + CF non-pledged assets. When this is allocated, for an individual loan an amount covering that loan (CF Value) is obtained, which may include CF from collateral that is not central to cash flow generation (such as business premises where the debtor carries out business), and the formula is as follows: Recoverable Amount = CF Value + Recoverable Amount from Collateral that is not central to CF generation.
c) *As DCF covers the loan, loan loss provisions may remain at 0%*.
d) The method of making loan loss provisions for interest income is not specified, it is assumed that it is adjusted to the method otherwise applied in a particular country.
e) The AQR is based on the EBA Simplified Approach NPE definition under which NPE, in addition to exposures for which loan loss provisions are made, also implies exposures which are more than 90 days past due or where the debtor is assessed as unlikely to pay its obligations in full without realisation of collateral (regardless of the existence of any past-due amount).Therefore, the definition of NPE is broader because NPE may include exposures for which no loan loss provisions are made (as DCF covers the exposure).

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Important note (optional): we understand that, in this case, your opinion on comparison with the ECB's methodology may be blurred (indecisive case) if there is no local regulation. If so, please provide comment below: (a) on which question (a, b, c, d or e) are you indecisive; (b) how do you assess comparison of local practice with the Croatian regulator's practice described above.

Comment (optional):

Example 2

A debtor is 120 days past due on a material amount of debt. The debtor has not had any problems in loan repayment over the last two years. The bank has not exercised debtor's promissory notes (or any other collateral instrument) because it assesses that the payment delay is caused by debtor's temporary liquidity problems and expects the due amount to be settled soon. Collateral instruments (in addition to promissory notes) include residential real estate in the capital city, owned by the company owner (LTV 35%) and DCF from those collateral instruments alone covers the loan in full.

a) In this specific example, would loan loss provisions have to be made for such a loan under regulations in your country? If loan loss provisions would have to be made, is there a minimum percentage that the bank would have to apply to this loan according to regulations?

Answer:

CNB Decision – According to Article 15(4), an asset is secured by eligible collateral instruments and is past due for 120 days, and no legal action for the collection of receivables has been taken (exercising a promissory note), so that loan loss provisions are made in the amount of at least 10% of the principal (100% for interest income).

AQR – As DCF covers the loan, loan loss provisions may remain at 0%.

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Example 3

A debtor has difficulties in loan repayment. The current delay in loan repayment is 1 year and 4 months and foreclosure has not yet been initiated. The bank has exercised promissory notes and a certain amount has been collected. It was expected that the situation would be solved so the bank has not yet initiated foreclosure of real estate serving as collateral. However, the expected solution has become increasingly less likely. The bank decides to initiate foreclosure after all (at the moment of loan appraisal and calculation of loan loss provisions, foreclosure has not yet been initiated). DCF from the expected sale of the pledged real estate covers the loan in full. The real estate comprises business premises in the centre of the capital city.

a) Do regulations in your country prescribe how old a market valuation of the real estate serving as collateral may be, which is used for the purpose of calculating loan loss provisions for the loan, i.e. how often does the market valuation of the real estate have to be reviewed for the purpose of calculating loan loss provisions for the loan?

Answer:

b) Is the method of calculating DCF from the realisation of real estate collateral prescribed? More precisely, are the minimum periods in which collection from specific types of real estate may be expected prescribed (see in the CNB Decision the provisions under which the sale in this specific example should not be expected in less than 2 years); are specific haircuts on the estimated value of the collateral prescribed, etc? Please describe.

Answer:

c) In this specific example, would loan loss provisions have to be made for such a loan under regulations in your country? If loan loss provisions would have to be made, is there a minimum percentage that the bank would have to apply to this loan according to regulations?

Answer:

CNB Decision

a) According to Article 37(9) and (10), a bank shall continuously monitor the value of real estate accepted as collateral, at a minimum once every year for commercial real estate and once every three years for residential real estate. Statistical methods may be used to monitor the value of the property (by individual types of real estate) and if it is established that the value of the property may have declined materially, the property valuation needs to be reviewed. In their internal policies, banks have to define what they consider a material decline in prices. Exceptionally, for assets exceeding HRK 20 million or 5% of the bank's own funds (whichever is the lower), the real estate valuation must be reviewed at least once every three years.
b) Appendix 1 of the CNB Decision prescribes the minimum haircuts and minimum collection periods that may be applied in the calculation of DCF (under Article 37(2) and (3), a bank shall apply higher haircuts if its practice so requires). The haircut for residential buildings is 10%, and the minimum collection period is 2 years (which means that in the calculation of DCF the bank may not assume faster collection unless there is a written arrangement or another material evidence of prospects for faster collection).
c) According to Article 15(4), an asset is secured by eligible collateral instruments and is past due for more than 1 year from the occurrence of delinquency (>1 year and 90 days), and no eligible collateral instruments have been exercised – so that loan loss provisions are made in the amount of at least 20% of the principal (100% for interest income).

AQR

a) Under this procedure, new valuations by independent external valuers are made if existing valuations were older than 1 year. If internal independent valuations by the bank were available – new valuations were made by external independent valuers for a part of the portfolio and compared with internal independent valuations, and other valuations were indexed (adjusted) by a certain percentage of the established difference between internal and external valuations.
b) Haircuts and collection periods were suggested by independent external valuers.
c) As DCF covers the loan, loan loss provisions may remain at 0%.

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Example 4

A debtor is past due on a loan for 2 years and 4 months. The bank has initiated foreclosure of collateral (business premises in the centre of the capital city), but because of the length of the liquidation procedure run by a court (or an agency), the bank is yet unable to take over and/or sell the property. DCF from the expected sale of the pledged real estate covers the loan in full.

a) In this specific example, would loan loss provisions have to be made for such a loan under regulations in your country? If loan loss provisions would have to be made, is there a minimum percentage that the bank would have to apply to this loan according to regulations?

Answer:

CNB Decision – According to Article 15(5), if an asset is secured by eligible collateral instruments and is past due for more than 2 years from the occurrence of delinquency (>2 years and 90 days) regardless of exercising collateral instruments loan loss provisions are made in the amount of at least 30% of the principal (100% for interest income).

AQR – As DCF covers the loan, loan loss provisions may remain at 0%.

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Example 5

The same as the previous example, but the payment delay is 3 years and 4 months and a public auction has been scheduled to take place in 2 months.

a) In this specific example, would loan loss provisions have to be made for such a loan under regulations in your country? If loan loss provisions would have to be made, is there a minimum percentage that the bank would have to apply to this loan according to regulations?

Answer:

CNB Decision – According to Article 15(5), an asset is secured by eligible collateral instruments and is past due for more than 2 years from the occurrence of delinquency (>2 years and 90 days), regardless of exercising collateral instruments, so that loan loss provisions are made in the amount of at least 30% of the principal (100% for interest income). The bank must increase it by 5% of receivables based on the loan principal after each additional 180-day period – in this example the minimum is 40% of the principal.

AQR – As DCF covers the loan, loan loss provisions may remain at 0%.

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Example 6

The bank has granted a debtor a long-term, 3-year loan payable in 12 quarterly instalments (principal and interest). Collateral for the loan are business premises in the centre of the capital city (readily marketable). LTV is 50%. After having serviced the loan regularly for 2 years, the debtor faces liquidity problems and the payment delay is 120 days (4 months). Following a detailed analysis of the debtor's financial situation, the bank assesses that liquidity problems are only temporary and, in agreement with the client, carries out the loan restructuring (which is not part of the overall restructuring of the debtor's business operations or financial position). Under the restructuring, the repayment period for outstanding instalments is extended to 2 years (a total of 8 quarterly instalments). Amounts of quarterly instalments have thus been reduced, in accordance with estimated future operating cash flows, which show that the client will be able to service regularly the loan with reduced instalments. Hence, the calculations show that DCF from the debtor's regular operations covers the loan in full.

a) Under regulations in your country, may the restructured loan in this specific example remain without loan loss provisions (loan loss provisions of 0%)?

Answer:

b) If the answer to the previous question is yes, where after the loan restructuring a material amount of the debt is settled after a delay of 65 days and the loan is thereafter repaid as scheduled (and if calculations show that DCF covers the loan in full), may the loan in this specific example remain without loan loss provisions under regulations in your country?

Answer:

c) If a variable interest rate has been contracted in this specific example (before and after the restructuring) and if the effective interest rate was 7.0% before the restructuring and 7.5% after the restructuring, what effective interest rate would you use to calculate loan loss provisions for the restructured loan?

Answer:

CNB Decision

a) According to Article 24(2) and (6), a restructured loan that was prior to restructuring classified into risk category A must be classified into risk sub-category B-1 or worse. Exceptionally, the loan may continue to be graded A, provided that: (1) liabilities are expected to be settled within the contracted time limits, (2) the debtor's financial position is expected to be based on reliable cash flows, (3) DCF covers the loan, (4) collateral is adequate, and (5) the restructuring of the loan is part of the overall restructuring of the debtor's business operations or financial position (the above example does not meet this last condition) – so the risk category should be B-1 or worse (loan loss provisions of 1% of the principal).
b) If the condition that the restructuring is part of the overall restructuring of business operations is met, the loan could be graded A, but as soon as payments become past due for more than 60 days, it should be reclassified into sub-category B-1 or worse (Article 24(7)).
c) The effective interest rate used to discount cash flows (Article 20 of the Decision = IAS 39, AG 84) – if, in case of a debtor's financial difficulties, the lending terms and conditions, concerning the level and time limits for repayment, are modified, the initial rate must be used for discounting. A new effective interest rate is used where the initial contract provides for a variable interest rate or where the originally contracted interest rate was changed by a subsequent annex to the contract. – In its responses to bank questions of 18 June 2014 (question 1849), the CNB explained that a new effective interest rate cannot be applied in case of a debtor's financial difficulties, regardless of whether a variable interest rate has been contracted, as this would not be a change caused by the regular implementation of bank policies.

AQR

a) As DCF covers the loan, loan loss provisions may remain at 0%.
b) The same as a).
c) With regard to the effective interest rate, reference is made to IAS 39, AG 84, but without a detailed explanation.

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Example 7

The bank has approved loan restructuring to a debtor experiencing loan repayment difficulties, but the restructuring has not been part of the overall restructuring of the debtor's business operations (other creditors of the debtor have not approved restructuring of their claims). The bank has made loan loss provisions of 35% for the restructured loan. The debtor has serviced the loan regularly for 13 months (repaying more than the amount which was past due at the moment of restructuring) and its financial situation improved. According to the bank's estimate, DCF from the debtor's regular operations covers the loan in full.

a) Under regulations in your country, may loan loss provisions for this specific restructured loan be reduced or fully reversed after 13 months?

Answer:

b) If the loan restructuring approved by the bank was part of the overall restructuring of the debtor's business operations, would that have an impact on loan loss provisions (would it result in larger or smaller loan loss provisions compared with those stated in the answer to the previous question)?

Answer:

CNB Decision

a) According to Article 24(5), a restructured loan may be classified at a 12-month-interval into a risk category/sub-category involving a lower degree of credit risk if it is regularly repaid, if cash flows are reliable and if (which is not the case in this example) the loan restructuring is part of the overall restructuring of the debtor’s business operations or financial position – in this example, the loan must remain in the same risk sub-category (B-2), so loan loss provisions may be reduced from the current 35% to 30.01% (the latter is the minimum for sub-category B-2).

b) The loan could be classified into a risk category/sub-category involving a lower degree of credit risk, i.e. from B-2 to B-1, for which loan loss provisions range from 1% to 30%, but not into risk category A.

AQR

a) As DCF covers the loan, loan loss provisions may be 0%.
b) The fact of whether the loan restructuring approved by the bank was part of the overall restructuring of the debtor's business operations has no direct impact on loan loss provisions, so the answer is the same as under a).

Given the specifics of this business case, please provide your qualitative expert assessment of regulation in your country versus the ECB's methodology which was implemented in the AQR, using scale 1-5 (where 1 means your country's regulation is much more relaxed than the ECB's methodology; 2 means it is somewhat more relaxed; 3 means it is basically the same; 4 means it is somewhat stricter; and 5 means it is much more strict than the ECB's methodology applied in the AQR). Please highlight or mark the preferred assessment:

1	2	3	4	5

Final Question

A. Can you briefly describe the most significant amendments to loan classification and provisioning regulations in your country since 2010 (timing and content of change)?

Answer:

Thank you!