

*Bankarski rizik 44*

# UBLAŽAVANJE IZLOŽENOSTI - PRISTUPI I PRIZNATI INSTRUMENTI (5)

dr Vesna Matić

Udruženje banaka Srbije  
vesna.matic@ubs-asb.com

## Rezime

Razvoj funkcije upravljanja rizicima u bankama, kao i alata kojima se banka služi u tom procesu, imao je snažnu podršku i oslonac u međunarodnim standardima koji su ne samo preporučili pristupe za kalkulaciju ekonomskog kapitala, već su dali i kvalitativno novi tretman instrumentima za ublažavanje izloženosti rizicima (Bazelski Sporazum II). Lepeza podobnih instrumenata za ublažavanje izloženosti u okviru preporučenih pristupa za njihov tretman, postaje bitan element kalkulacije ekonomskog kapitala, kako u odnosu na pojedine vrste rizika, tako i u odnosu na agregatnu izloženost.

**Ključne reči:** ublažavanje izloženosti, kreditni rizik, Pristup baziran na internim rejtinzima (Internal Ratings Based Approach - IRB Approach), podobni instrumenti, finansijski kolaterali, herkat

**JEL:** G18, G32



UDC 005.334:336.71

*expert  
article**Banking Risk 44*

# RISK EXPOSURE MITIGATION - APPROACHES AND RECOGNISED INSTRUMENTS (5)

Vesna Matic PhD

Association of Serbian Banks  
vesna.matic@ubs-asb.com**Summary**

The risk management function development in banks, along with the development of tools that banks can use throughout this process, has had the strong support in international standards, not only in the recommended approaches for calculating economic capital requirements, but also in the qualitatively new treatment of risk exposure mitigation instruments (Basel Accord II). The array of eligible instruments for exposure mitigation under the recommended approaches for their treatment becomes the essential element of economic capital requirements calculation, both in relation to certain types of risk, and in relation to aggregate exposure.

**Key words:** risk exposure mitigation, credit risk, Internal Ratings Based Approach (IRB), eligible instruments, Standardized Approach, financial collaterals, hair-cut

**JEL:** G18 G32

Paper received: 13.01.2015

Approved for publishing: 14.01.2015



## Ublažavanje izloženosti kreditnom riziku - podobni instrumenti priznati u pristupma baziranim na internim rejtinzima - finansijski kolaterali

Za svaku izloženost banke prema suverenima, bankama i privrednom sektoru, okvir Bazelskog komiteta za *Pristup zasnovan na internim rejtinzima banke - osnovni pristup* za kalkulaciju ekonomskog kapitala, poznaje četiri komponente rizika: verovatnoću neizvršenja obaveza od strane dužnika (Probability of default - PD), veličinu gubitka pri nezvršenju (Loss given default - LGD), veličinu izloženosti pri neizvršenju (Exposure at default - EAD) i ročnost (Maturity - M).

*Veličina gubitka pri nezvršenju (Loss given default - LGD)* je druga komponenta kreditnog rizika koja se, iako prepoznaje tip dužnika, pre svega procenjuje u odnosu na vrstu poslovne transakcije. Imajući u vidu nizak nivo konzistentnosti između banaka kada je u pitanju procena ove komponente rizika, Komitet je za osnovni IRB pristup predložio jednostavnu kategorizaciju izloženosti za potraživanja koja nisu obezbeđena, ili su obezbeđena nepriznatim kolateralima - za starija potraživanja LGD je 45%, a za subordinirana 75%.

Banke koje budu ispunile kvalifikacione standarde za *Viši pristup zasnovan na internim rejtinzima banke*, procenjivaće veličinu gubitka pri neizvršenju primenom sopstvene metodologije.

Važan korektivni faktor kod procene veličine gubitka pri neizvršenju su podobni kolaterali priznati u okviru IRB pristupa, pod kojima Bazelski sporazum II podrazumeva:

- *finansijske kolaterale*, koji su već priznati kao podobni u Standardizovanom pristupu (gotovina, depozitni certifikati, zlato, dužničke hartije raznih emitenata uz određene uslove i dr), ali i
- *druge priznate kolaterale* (rezidencijalna i komercijalna imovina, potraživanja, druga fizička aktiva pod određenim uslovima i dr).

Poseban kvalitet i novina koju donosi Bazelski sporazum II kada su u pitanju kolaterali, je obaveza banaka da paralelno koriguju promenu obe vrednosti - osnovne izloženosti i vrednosti bilo kog kolaterala uzetog kao podršku osnovnoj izloženosti, sa

mogućim budućim promenama vrednosti oba parametra, izazvanim kretanjima na tržištu. Komitet u Bazelskom dokumentu predlaže tehniku herkata za korekciju obe vrednosti, i to: standardni kontrolorski herkat za osnovni IRB pristup i herkat procenjen od strane banke za viši IRB pristup.

*Banke koje primenjuju osnovni IRB pristup* efekte podobnih finansijskih kolaterala na izračunavanje efektivne veličine gubitka pri neizvršenju računaju na sledeći način:

$$LGD^* = LGD \times (E^* / E)$$

gde je:

LGD starija neobezbeđena izloženost pre priznavanja kolaterala (45%)

E je sadašnja vrednost izloženosti i

E\* je vrednost izloženosti posle ublažavanja rizika primenom Složenog pristupa instrumentima za ublažavanje izloženosti u okviru Standardizovanog pristupa (vidi Bankarstvo br 3/2014, Ekoleks, Bankarski rizik 41). Ovaj koncept se koristi samo za kalkulaciju efektivne veličine gubitka pri neizvršenju (LGD\*). Banke moraju da nastave da kalkulišu veličinu izloženosti pri neizvršenju (EAD) bez uzimanja u obzir prisustva bilo kog kolaterala, dok se drugačije ne odredi.

Supervizori mogu dozvoliti banakama koje primenjuju *viši IRB pristup* kalkulaciji ekonomskog kapitala da koriste sopstvenu procenu LGD za izloženosti prema korporacijama, suverenima i bankama. LGD mora da se izmeri kao procenat gubitka od ukupne izloženosti pri neizvršenju (EAD). Banke podobne za viši IRB pristup koje nisu u mogućnosti da ispune ovaj dodatni minimum zahteva, moraju da primene pristup koji važi za LGD u osnovnom IRB pristupu.

Efekat ublažavanja kreditne izloženosti u odnosu na fizička lica, banke podobne za IRB pristupe (osnovni i viši) kalkulišu same, ali ove izloženosti posmatraju i mere na nivou pulova.

## Literatura / References

1. Basel Committee on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards, A revised Framework, Comprehensive Version*, Bank for international Settlements, June 2006, www.bis.org

## Credit risk exposure mitigation-eligible instruments recognised under internal ratings based approach-financial collaterals

Basel Committee *Internal Ratings Based Approach* frame for economic capital charges calculation (IRB approach) - *foundation approach*, recognizes four risk components for each corporate, sovereign and bank exposure: Probability of default (PD), Loss given default (LGD), Exposure at default (EAD) and Maturity (M).

*Loss given default - LGD* is the second credit risk component which is estimated relating to the type of business transaction, although it recognizes the type of the borrower, too. Regarding the low level of consistency between banks when it comes to the estimation of this credit risk component, the Committee has proposed a simple categorization of exposures for the claims which are unsecured, or are collateralized by non-eligible instruments - for senior claims LGD will be assigned as 45%, and for subordinated claims 75%.

The banks that meet qualification standards for the *advanced IRB approaches* will estimate the loss given default by their own methodology.

Important corrective factor of loss given defaults are eligible collaterals, recognized under the IRB approach, as follows:

- Financial collaterals, which have already been recognized as eligible under the Standardized approach (cash, certificates of deposits, gold, debt securities issued by different issuers under specified conditions etc.), and
- Other recognized collaterals (residential and commercial real estate, receivables, other physical assets under specified conditions etc.).

When it comes to collaterals, the special quality and innovation introduced by the Basel Accord II, is the obligation of a bank to adjust both the amount of the exposure to the

counterparty and the value of any collateral received in support of that counterparty with the possible future fluctuations in the value of either, occasioned by market movements. The Committee proposes the technique of „hair-cut“ for both value adjustments in the Basel Accord II - i. e. standard supervisory hair-cut under the foundation IRB approach and the bank's own hair-cut estimates under the advanced IRB approach.

Banks that implement *foundation IRB approach* calculate the effects of eligible financial collaterals on the effective loss given default (LGD\*) as follows:

$$LGD^* = LGD \times (E^* / E)$$

where:

LGD is that of the senior unsecured exposure before recognition of the collateral (45%)

E is current value of the exposure and

E\* is the exposure value after risk mitigation by implementing the Comprehensive Approach to credit risk mitigations under the Standardized approach (see Bankarstvo issue No. 3, Ekoleks, Banking risk 41). This concept is only used to calculate LGD\*. Banks must continue to calculate EAD without taking into account the presence of any collateral, unless otherwise specified.

Banks that implement *advanced IRB approach* for economic capital charges calculation may be permitted to use their own internal estimates of LGD for corporates, sovereigns and bank exposures. LGD must be measured as the loss given default as a percentage of the EAD. Banks eligible for the advanced IRB approach that are unable to meet these additional minimum requirements must utilize the foundation LGD treatment described above.

The credit risk mitigation effects regarding the retail banking operations are calculated by banks eligible for IRB approaches (foundation and advanced) on their own, but these exposures should be observed and measured at the level of pools.