

## **NEW CAPITAL RULES ACCORDING TO BASEL II**

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### **Abstract**

The Basel Committee on Banking Supervision (known as “the Basel Committee”) was established by the central-bank Governors of the group of ten countries at the end of 1974. In 1988 the Basel Committee on Banking Supervision decided to introduce a capital measurement system for a credit risk commonly referred to as the Basel Capital Accord (known as “Basel I”). Amendment to the Basel Capital Accord to incorporate market risks was issued by the Basel Committee on Banking Supervision, in 1996. The final version of the New Basel Capital Accord (known as “Basel II”), covered operational risk, was released in June 2004. The article, “New capital rules according to Basel II”, is devoted to the problem risks by credit financial institutions. The paper dedicated to the importance of risks, capital adequacy, risk measurement and risk management, and advantages and disadvantages of the new capital rules are described. The Czech National Bank, a central bank of the Czech Republic, defines the prudential framework for banking business and cooperates with banks to implement the New Basel Capital Accord too. The paper talks about trends and actual situation in accordance with the New Basel Capital Accord and some interesting things being related to the Czech Republic too.

**Key words:** Capital adequacy, Czech national bank, Basel Committee on Banking Supervision, Basel Capital Accord, New Basel Capital Accord, risk management.

**JEL classification:** G18.

### **Introduction**

A creditable and stable banking sector is one the basic preconditions for a functioning economy. But such stability is not guaranteed by market mechanisms alone. The activities of banks are governed by a number of injunctive regulations. We have to be aware that banking sector is somewhat different from other sectors. It is a specific area with specific banking products and services, with specific risks and management. Because of these the banking sector has to be regulated and supervised.

Regulators want to ensure that banks and other financial institutions have sufficient capital to keep them out of difficulty. Regulators try to protect depositors and also the wider economy. The reason is that the failure of a big bank has extensive knock-on effects. The risk of knock-on effects that have repercussions at the level of the entire financial sector is called systemic risk.

### **Objective and Methodology**

The aim of the paper is to give brief information on a theory of the Basel Capital Accord, and namely of the New Basel Capital Accord, issuing by the Basel Committee on Banking Supervision. The article points the moral that it is necessary and very important for each bank to measure, manage and monitor the banking risks. The attention is given to capital adequacy and basic changes in the risk management in accordance with Basel II and advantages and disadvantages that the new rules bring to banks.

The basic method of submitted article is the deduction. It is gone from common pieces of knowledge and theory to particulars.

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## Results

Banking Regulations have several goals: improving the safety of the banking sector, levelling the competitive playing field of banks through setting common benchmarks for all players, promoting sound business and supervisory practices. Regulations have a decisive impact on risk management. The regulatory framework sets up the constraints and guidelines that inspire risk management process of banks. Regulations promote better definition of risks, and create incentives for developing better methodologies for measuring risks.

In 1988, the Basel Committee on Banking Supervision<sup>1</sup> issued the Basel Capital Accord. This accord established minimum levels of capital in order to strengthen the soundness and stability of the banking system as a whole and create a more “level playing field” in competitive terms among internationally active banks.

Since 1988, the framework has been introduced in virtually all countries with internationally active banks. In 1999, the Basel Committee decided to replace the Basel Capital Accord with a more risk-sensitive agreement. The new framework is based on current risk management techniques.

### *Banking risks*

Banking risk is uncertainties resulting in adverse variations of profitability or in losses. There are a large number of risks in the banking sector. Most of them are well known. In connection with Basel II, the credit risk, market risk and of recent years operational risk too are very often discussed.

The first of all risks in terms of importance is credit risk. Credit risk is the risk of loss due to a deterioration of the credit standing of a borrower. We may not forget the view of the risk differs for the banking portfolio and the trading portfolio. Traditional measures of the credit quality of debts are ratings. We know the internal rating and external ratings. Internal ratings use bank, and external ratings are made by rating agencies Moody's, Standard & Poor's and so on. There are various types of ratings. Rating is ordinal measures of credit risk, but it is not sufficient to value credit risk. Because of that the portfolio models are used.

Market risk is the risk of adverse deviations of the mark-to-market value of the trading portfolio, due to market movements, during the period required to liquidate the transaction. The period of liquidation is critical to assess such adverse deviations. If it gets longer, so do the deviations from the current market value.

The last risk, we will talk about is operational risk. The New Basel Capital Accord defines operational risk as “The risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events”. Operational risk covers people's risk (it means human errors), processes risk (for example errors in the recording process of transactions), technical risk (model errors, the absence of adequate tools for measuring risks) and information technology risk (system failure).

### *Capital adequacy*

Capital adequacy exists for a long time and it is the main pillar of the regulations. The two most important capital adequacy requirements are those specified by the Basel Committee on Banking. The first implemented accord, known as Basel I, was focused on credit risk and set up the minimum required capital as a fixed percentage of assets weighted according to their nature in 1988. The range of regulations extended gradually later. A major step was the extension to market risk, with the 1996 Amendment. Basel II enhances the old credit risk regulations.

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<sup>1</sup> The Basel Committee was established in 1974 by supervisors of the Group of Ten (G10) countries.

Capital adequacy according to Basel I was defined as a single number that was the ratio of a bank's capital to its assets. There were two types of capital – tier 1 and tier 2. The requirement was that tier 1 was at least 8% of assets. Each class of asset has a weight of between zero and 100%. The weighted value is multiplied by the weight for that type of asset.

The Capital Accord is to be replaced by New Capital Accord. The new capital framework is based on three pillars: minimum capital requirements, a supervisory review process, and effective use of market discipline. With regard to minimum capital requirements, the Basel Committee set that a modified version of the actual Basel Capital Accord should remain the standardised approach. But there are possibilities for some banks to use internal credit ratings and portfolio models. And so a capital requirement of a bank can be in relation to its particular risk profile. It is also possible that the Accord's scope of application be extended, so that it fully captures the risks in a banking group.

### ***Basic characteristics of BASEL II***

Basel II is a regulatory capital adequacy framework, which will be implemented by all banks located in the EU countries and by all internationally active banks in non-EU G10 countries. The main objective of the framework is to improve security and soundness of the financial system. The new package is the set of consultative documents that describes recommended rule for enhancing credit risk measures, extending the scope of capital requirements to operational risk, providing various enhancements to the existing accord and detailing the supervision on market discipline pillars. The New Basel Accord provides a menu of options, extended coverage and more elaborate measures, in addition to descriptions of work in progress, with yet unsettled issues to be streamlined in the final package. The New capital accord contains three basic pillars:

#### ***1. Pillar – Minimum capital requirements***

The pillar contains minimum capital requirements for credit risk, market risk, and now also covers operational risk. The pillar offers a wider range of risk measurement approaches for determining capital requirements, including banks' own internal models.

Different options for credit risk are:

1. Standardised Approach (SA) – It is the simplest method. The risk weights are derived from ratings set by external credit assessment institutions or export credit agencies.
2. One of two internal ratings-bases (IRB)
  - ◆ Foundation IRB Approach (FIRB) – By the method bank uses own estimates of the probability of default of its client and banking supervisory authorities determine the other characteristics.
  - ◆ Advanced IRB approach (AIRB) – All the components are determined by banks.

Measurement methods for the market risk are unchanged, but there is change in the definition of the trading book and assessment of the capital requirement in the case of a small trading book.

Banks can use one of three basic methods for measurement of operational risk:

1. Basic indicator approach (BIA) – Calculation of the capital charge as a fixed percentage of the bank's net income.
2. Standardised approach (STA) – Calculation of the capital charge separately for each business line, as a fixed percentage.
3. Alternative standardised approach (ASA) – banking supervisory authority may allow bank to use another alternative indicator for commercial or retail banking business lines.
4. Advanced measurement approaches (AMA) – Banks are allowed to use their own various internal methods and models. The methods and models have to be approved by the supervisory authority.

Table 1 shows an overview of the methods for risk management in accordance with Basel II.

Table 1

The methods for risk management within Pillar 1

Type of risk	Methods		
CREDIT RISK	<u>Standardized Approach</u>	<u>Foundation Internal Rating Based Approach</u>	<u>Advanced Internal Rating Based Approach</u>
MARKET RISK	<u>Standardized Approach</u>	<u>Internal Models Approach</u>	
OPERATIONAL RISK	<u>Basic Indicator Approach</u>	<u>Standardized Approach</u>	<u>Advanced Measurement Approach</u>

### 2. Pillar – Supervisory review process

The second pillar is intended primarily on the process of assessment of each financial institution's capital adequacy by the banking supervision. Very important point is soundness and quality of the bank's management and control mechanisms. It is necessary for bank to have internal processes in place to assess so-called Capital Adequacy Assessment Process (known as CAAP). The absolute minimum of capital adequacy is still 8% of the value of risk-weighted assets.

### 3. Pillar – Market discipline

The third pillar is focused on the issue of transparency and information disclosure. Each bank has to disclose more detailed information about its activities (for example publication made about the methods used to calculate capital adequacy or own approaches to measure and control risks). All banks have to do the core disclosure requirements.

#### ***The Czech National Bank's approach***

Following part of the article is devoted to the Czech National Bank's approach and is worked out namely in terms of information recovering from the Czech National Bank and websites.

In the Czech Republic banking regulation and supervision are regulated by the Czech National Bank (known as "CNB"). The CNB defines the prudential framework for banking business<sup>1</sup>. Banks have to adhere to that framework. Regulations contain the terms and conditions of entry into the banking sector and setting prudential rules for specific areas of banking business. Czech National Bank Banking Supervision checks whether banks are adhering to those rules<sup>2</sup>.

The Czech Banking Association is a voluntary association of legal persons, which do business in banking and in nearly connected areas. One of the objects of its activity is to present and promote the common interest of its members in the Government and the Czech National Bank. The core part of the Czech Banking Association activities consists in an active involvement in the preparation of laws and lower legal provisions, securities, regulating banking supervision, capital market and so on<sup>3</sup>.

The CNB and the Czech Banking Association cooperate with banks to implement the New Basel Capital Accord.

New rules are also reflected in the re-casting of Directive 2000/12/EC<sup>4</sup> and Directive 93/6/EEC<sup>5</sup> (hereinafter referred to as the EC Directive). The Czech Republic – as European Union member

<sup>1</sup> Under Act No. 21/1992 Coll. on Banks, the Czech national bank is authorised to issue regulations.

<sup>2</sup> For more information see [www.cnb.cz](http://www.cnb.cz).

<sup>3</sup> For more information see [www.czech-ba.cz](http://www.czech-ba.cz).

<sup>4</sup> Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast version of Directive 2000/12/EC).

<sup>5</sup> Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast version of Directive 93/6/EC).

state – will have to implement. The CNB agrees with the proposed revisions to these Directives and supports and regards, namely, follows the elements<sup>1</sup>:

- ◆ Promoting safety and soundness in financial systems and enhancing competitive equality and international comparability among credit institutions and investment firms as a result of introducing the new rules.
- ◆ Implementation of the new rules on the date proposed in the Directive (January 1, 2007, whereas some advanced approaches will not be applied until January 1, 2008).
- ◆ Implementation on a solo and consolidated basis for all credit institutions, i.e. banks, electronic money institutions and credit unions, and for investment firms in the Czech Republic.
- ◆ An individual, more risk-sensitive approach tailored to the institution's risk profile.
- ◆ Flexibility as regards choice of method and the use of more sophisticated and accurate risk management methods for determining capital requirements.
- ◆ Timely preparation of the banking sector for implementation of the new rules, on which the CNB and the financial sector will need to work together (see below).
- ◆ Active co-operation at international level.
- ◆ An internationally uniform interpretation of the new.

CNB Banking Supervision has to prepare for a fundamental change in banking sector regulation in connection with Basel II. This will involve elaborating approaches that are as objective as possible, incorporating them into the Czech laws and regulations, and subsequently applying them in practice. It will also be necessary to establish a uniform interpretation of the EC Directive rules and requirements and to ensure sufficient transparency of procedures, especially where the supervisor has the option of taking an individual approach to banks (such as in risk profile assessment).

At the same time, banks must have the opportunity to adapt to the new methods sufficiently in advance. It is therefore vital for the CNB to work with the Czech Banking Association, with individual banks and with the Czech Chamber of Auditors in both the preparatory phase and the implementation phase. These objectives can only be achieved through active co-operation at international level as well.

The Czech Republic was involved in the preparation and implementation of Basel II – via its membership of the Core Principles Liaison Group (known as “CPLG”) and the CPLG Working Group on Capital. The CNB is also involved in the work of the relevant EU committees and working groups. In late 2001, the CNB prepared a questionnaire surveying banks' preparedness for introducing the new approaches for credit risk. The CNB has also addressed the issue of training and has organised several seminars on Basel II with internal and external instructors).

Now that the final version of Basel II is known and the texts of the EC Directives are mostly final, the Czech National Bank's most important tasks at present are as follows<sup>2</sup>:

- ◆ to implement the EC Directives into the Czech legislation and regulations,
- ◆ to enhance the awareness of both specialists and the general public (through presentations, seminars and publications in the press),
- ◆ to co-operate actively within the Joint Project of the CNB, the CBA and the CA CR,
- ◆ to enhance the skills of the Joint Project participants and prepare for the implementation of the new rules,
- ◆ to participate actively in the [QIS5 quantitative impact study](#) organised by the Basel Committee on Banking Supervision in cooperation with the CEBS (the study focuses on impact assessment and recalibration of Basel II and the EC Directive, as the case may be),

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<sup>1</sup> For more information see [www.cnb.cz](http://www.cnb.cz).

<sup>2</sup> For more information see [www.cnb.cz](http://www.cnb.cz).

- ◆ to develop cooperation with foreign supervisory authorities and, where possible, to conclude agreements on cooperation in respect of supervision of individual bank groups (especially with regard to "home/host issues" such as data validation and in the area of national discretion).

The time schedule for the implementation of the new rules also places considerable demands on supervisory authorities. Because the new regulations implementing the EC Directive have not been issued yet, banks are not to be permitted to calculate tier capital requirements using the current and future rules in parallel.

## Discussion

In articles, new or other public origins we can read very often that the New Capital Accord take up and amends the Basel Capital Accord. I take it that it could be relatively misleading formulization for unfamiliar people.

The Basel Capital Accord made the first imaginary step towards banking supervisions harmonization. For the first time we could hear of minimal capital adequacy for a credit risk and later for a market risk too. There was only one method of risk measurement methodologies.

The New Basel Capital Accord is focused on providing more sensitive and accurate risk measurement. It induces credit financial institutions to enhance their risk management abilities. Unlike Basel II, it gives more comprehensive approach and the flexible options for measuring risks and includes operational risk. For operational risk the first pillar offers a wider range of risk measurement methodologies, including banks' own internal models, qualifying criteria etc. I think it is necessary to cover up operational risk. But it is very hard to find the way of measurement and control of the risk.

The New Basel Capital Accord accordingly includes three pillars. The first pillar contains minimum capital requirements for a credit, market and operational risk. The second pillar covers supervisory review process, and the third one contains market discipline. For the second and third pillars we could not talk of taking up and amending the Basel Capital Accord.

Table 2 takes down important changes and basic differences between the Capital Accord and the New Capital Accord.

Table 2

Basic differences between the Capital Accord and the New Capital Accord

	Basel I	Basel II
1. Banking Supervision	Centred on capital adequacy	Three pillars of Banking Supervision
2. Capital requirements	For credit and markets risk	For credit, markets and operational risk
3. Setting capital requirements	One method only	More than one method
4. Risk weights (and height of capital requirements for a credit risk)	Dependence on client type and independence from endured risk	Dependence on riskiness of client (it is inferred from external rating by standardised method, and from internal rating by IRB methods)
5. Risk measurement methodologies – banks' own internal models and qualifying criteria	By market risk only	By market risk, credit and operational risk too
6. Administrative costs	Low costs	High costs
7. Motivation to risk management quality	Banks are not motivated	Banks are motivated to risk management quality, they can reach for lower capital requirements

The table shows there are significant differences between Basel I and Basel II. The New Basel Capital Accord is more emphasis on banks' own internal methodologies, supervisory review and market discipline. It is possible to tell advantages and disadvantages the New Basel Capital Accord.

The CNB and the Czech Banking Association have cooperated to implement Basel II. On May 21 2007, a new framework was published. The new framework comes into force on July 1 2007 and implements the New Capital Accord taking into account the EC Directives. In principle the CNB respects opinion of the Basel Committee on Banking Supervision, or more precisely European Commission.

Banks in the Czech Republic knew of the new rules preparation. They had enough information on the basic principles of Basel II and on-coming changes. Banking management has been trained by the CNB. Banks prepared their systems in advance. Because of the facts I think the new framework is not surprise to banks and will not be the cause of their difficulties. In this respect the new framework shall have no radical impact on banks. But on all accounts I have taken the view the Czech National Banking system will be more transparent and safer for depositors, stakeholders and banks too.

## Conclusion

Basel Capital Accord established a risk measurement framework with a minimum capital standard of 8% and 5 risk classes. This framework proved competent. Because of further development of financial markets, introduction of new financial products and emergence of sophisticated risk management techniques, Basel I leaved off performing its purpose and it was necessary to find out more sufficient framework.

Contribution of Basel II is more refined scale of risk classes, multiple options for calculation minimum capital requirements and introduction of a capital charge for operational risk.

Table 3

### Minimum capital ratio calculation

$\frac{\text{Total capital}}{\text{Risk-weighted assets for credit, operational and market risk}} \geq 8\%$
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Table 3 shows a basic minimum capital ratio calculation. An item "credit risk" is changed by Basel II, "operational risk" item is new, and items "total capital" and "8%" stand similar.

The other difference between Basel II and Basel I is three pillars approach for establishment of required capital:

Pillar 1 – minimum capital requirements (Calculation of risk weighed assets for credit risk, operational risk and market risk subject to strict minimum requirements);

Pillar 2 – supervisory review (A bank-wide, integrated risk governance model has to be introduced, with a more a more comprehensive supervisory review to assess alignment of the bank's capital with its risk profile);

Pillar 3 – Market discipline (More extensive disclosure requirements to provide more transparency to stakeholders with respect to a bank's risk profile).

The objective of the capital requirements is to have in place a comprehensive and risk-sensitive framework and to foster enhanced risk management amongst financial institutions. This will

maximise the effectiveness of the capital rules in ensuring continuing financial stability, maintaining confidence in financial institutions and protecting consumers.

The implementation of Basel II will accelerate convergence of supervisory practices. Basel II intended to facilitate the establishment of effective systems of management, especially in the area of credit and operational risk.

The CNB agrees with the proposed revisions to these Directives. The new rules should enhance risk management by credit institutions and investment firms and improve their capital coverage. It is possible to expect that the new framework will result in greater market transparency and bolster overall stability in financial markets.

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