

# Overview of the Basel Capital Adequacy Framework

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## To cite this article:

Orobah Ali Barghouthi, Mohammed Bayyoud. Overview of the Basel Capital Adequacy Framework. *International Journal of Finance and Banking Research*. Vol. 2, No. 3, 2016, pp. 102-115. doi: 10.11648/j.ijfbr.20160203.15

**Received:** January 23, 2016; **Accepted:** May 17, 2016; **Published:** June 30, 2016

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**Abstract:** This paper examines Capital Adequacy Framework that specifies the approaches for quantifying the Risk-Weighted Assets (RWA) for credit risk, market risk and operational risk. The computation of the risk-weighted assets is consistent with Pillar 1 requirements set out by the Basel Committee on Banking Supervision (BCBS) and the Islamic Financial Services Board (IFSB) in their respective documents - "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" issued in June 2006 and the "Capital Adequacy Standard (CAS)" issued in December 2005. While the Bank believes that such customization could be justified, a pragmatic approach is adopted for implementation. Higher prudential requirements and risk management standards would be introduced gradually taking into consideration industry feedback during the consultation process.

**Keywords:** Basel Agreement, Capital Adequacy, Pillars 1

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## 1. Introduction

Risks are part of our life; each of us may lose his/her job, lose his/her capital in a certain investment, or the like of risks we face but still we go on. Similarly, banks face a wide range of risks when they play their role as a crucial financial mediator between savers and investors. Credit risks are among the most common ones besides the risks of settlements, exchange rates, and interest rates. The bank needs, therefore, a capital to manage and guarantee good work. While risk-taking is an individual responsibility of each bank, the existence of wise supervision by the central banks, as a control body on banks, is a prerequisite to guarantee risk management and avoid banks' failure.

Risks should not be taken by banks in a way that could harm the depositors' interests. For example, it is proved by experience that lending to the real estate sector should be dealt with carefully by banks since it implies risks no less than those implied in across borders loans. Not only is the capital adequacy a prerequisite to guarantee good banking work, but risk management adequacy and the application of good governance principles as well.

Among the most important traditional standards used by supervisory authorities to measure capital adequacy we have:

- Capital/deposits ratio standard

- Capital/assets ratio standard
- Risk-weighted capital standard

This standard is not new; it has used in America and Britain; it is not just a relationship between the regulatory capital and the assets weighted by different risk-weights; it faces the invisible and difficult to calculate risks through different risk measurement approaches. The relationship between the capital and the risky assets is a continuous one; the more risky assets exist the more capital is needed, i.e. capital is no longer the amount required to establish a project at the initiation of its activities, there is a continuous need for capital in parallel with the growth of risky assets.

Capital adequacy ratio is measured as the percentage of the regulatory capital to the risk-weighted on- and off-balance sheet plus the market and operational risks. The regulatory capital (called also the economic capital) is divided into tiers; the first one is the core capital that consists of: 1- underwritten and paid capital, 2- legal reserve, 3- optional reserve, 4-issuance premium, and 5- minority rights of subordinate companies in case their balance sheets are incorporated with the bank's balance sheet. The second capital tier consists of: 1- undeclared reserves. 2- evaluation differences of foreign currencies. 3- net clearance of the impact of IAS 39 application and the cumulative change in the fair value of the assets available for sale. 4- general

allocation of credit facilities. 5- Instruments of joint capital and debt characteristics such as preferred stocks. 6- Subordinated debts.

The investments in banks and subordinate financial firms, whose financial data are not merged with those of the bank, are subtracted from the capital.

Regarding the denominator used when calculating the capital adequacy ratio including the market risks, we calculate the assets and items on- and off-balance sheet to be weighted by credit risks, then we add to them the market and operational risks, so that when the assets are weighted by risks, we take into consideration the body with which the bank deals according to the standard rating developed by Basel Committee that includes five categories of weights (10%, 20%, 40%, 50%, 100%). The bank's level of development and complexity of its operations determine the approach used to calculate each of the market and the operational risks, as the Supervisory authority may rely on the bank's internal assessments in case it finds the bank ready for that, or may rely on external rating organizations' ratings, taken into consideration that the developing countries face a big problem in the absence of developed and reliable classification organizations to rate their risks, that makes the supervisory authorities focus on the necessity for banks to enhance the role of external auditor, and the necessity to have an internal competent auditor whose work is risk-based rather than inspection-based.

The supervisory authorities concentrated, as well, on the necessity to use institutional governance mechanisms in the banking work so that to have joint liability among all the bank's staff in order to avoid risks and reduce them to a minimum; the executive management is the owners' agent when it performs its work in line with the interests of depositors and all people participating in the bank. For this to be secured, transparency, accountability and disclosure of all bank-related data should be realized.

The introduction of capital adequacy standard in Syria is deemed possible, since the beginnings of the private banking sector in Syria give sound indicators on the possibility of banks to meet the capital requirements because the private banking sector in Syria is new, which makes benefiting from starting late an advantage. Furthermore, the wise licensing policy adopted by the Central Bank of Syria (CBoS) of licensing banks with good capital solvency, long banking work history and high-quality assets, makes it possible to meet the necessary requirements of the minimum capital adequacy.

Basel Accord is a group of principles made by Basel Committee on Banking Supervision that came up with recommendations concerning risk-based capital (credit, market, operations...) with the objective of ensuring that financial institutions have adequate capital to face their obligations and absorb unexpected losses.

Basel Accord 1 was issued in 1988 focusing on financial institutions' capital adequacy; it emphasized the necessity for institutions to have adequate capital to face expected risks in a way that guarantees that the institution will continue its

work and will not collapse. It included five ratings of risk levels (0%, 10%, 20%, 50%, and 100%).

Basel Accord 2 that should be totally applied by 2015 concentrated on 3 main areas<sup>1</sup>:

- Banks meet the minimum capital requirements to face the operation, market and credit risks.
- Continuous supervision and review of capital adequacy in order to make sure that banks meet and strengthen the risk-based capital requirements with a view to diminish banks' bankruptcy probabilities, on the basis that capital immunizes the bank against shocks that guarantees a continuation of trust in it and in the banking system. People's trust in the banking system' soundness and solidity is the basis of stability for the financial sector that is like a safety and security valve for the whole economy. Distinction should be made here among the capital tiers that are, according to Basel 2, three ones: the first enables the bank to cover the risks and keep operating; the second protects the depositors' rights in case the bank faces risks that may stop its work; the third (called the supplementary capital) includes the funds that the bank resorts to at contingency provided that they meet Basel requirements regarding the specifications of the funds the bank may resort to.
- The supervisory authority takes all the necessary measures, sets instructions and ratios that would ensure market control by means of obliging the banks to release data so that the market participants may develop a clear image of the bank's position, such as its capital, risks, profits, the soundness of its financial portfolio, its assets' types and the like of information the release of which realizes transparency for the public.

In general, Basel 2 is the second phase of Basel Accord 1 that includes recommendations on banking laws and rules, and that aims, in its final version to:

- ensure that capital is more risk sensitive;
- distinguish between credit risks and operation risks and evaluate them;
- try to distinguish between the economic capital and the regulatory capital; capital is the first line of defense when the bank faces risks.

According to the Revised Framework of Basel standards, the rules of banks' game have changed, so that the most important elements for good banking performance include determining the following<sup>2</sup>:

- The optimal level of risk models.
- The optimal level of capital levels.
- Realizing integration between the risk and the capital, and putting it in the framework of one strategy linked to bank performance measurement, and
- The shareholders rights.

The main objective of applying Basel 2 standards is to

<sup>1</sup>Banking risk (Joseph Yam, Chief executive, Hong Kong Monetary Authority, p.5.

<sup>2</sup>Compilation guideon financial soundness, IMF, Washington Dc, Appendix VIT glossary,p.17.

build up a secure, safe, efficient and wise banking system while taking into consideration that regardless of the caution and wisdom sought in the bank's work, they cannot eliminate the existence of risks in banking on the basis that any bank should take the risk in its work since otherwise it would not be a bank.

Though the public are not so familiar with the risks implied in banking, banks take the risk all the time when they play their role as an important financial mediator between the savers and the investors and their role in enhancing economic growth. Credit risks are among the most common risks, besides the risks of settlements, exchange rates, interest rates, reputation, liquidity, and legal risks...etc. For those risks, wisdom should be sought by banks when taking, managing and pricing risks in a suitable way rather than avoiding or hiding it.

In the context of banking work, some risks should occur, such as a bad loan, depreciated debt bonds as a result of excessive interest rates increase. Open currency positions imply book losses in case local currency exchange rate is supported. No matter what experience the bank has in risk assessment and management, the possibility of losses still exists; bad debts and their allocations remain items on the balance sheet of all banks<sup>3</sup>.

Accordingly, the bank needs a capital to manage and guarantee good work on one hand, and the bank's capital adequacy is a highly important item to meet the requirements of supervision that gives weight to the assets potential risks in order to link them to the bank's capital, on the other hand. In brief, the bank should have a capital that can cover the risks; this part of the capital is called (the economic or regulatory capital) since it is an important factor to guarantee that the bank is not going to fail in managing and its operations and keeping them on; that is exactly what we call the capital adequacy.

While taking and managing risks is considered the bank's individual responsibility, a wise supervision by central banks, as a control body on banks is a necessary condition, even if not sufficient, to guarantee risk management in order to avoid the bank's failure and the serious implications of that on the banking sector as a whole. Despite all that we have mentioned about the importance of risk-taking and risk-assessment, that should not be made in a way that harm the depositors' interests, the thing that we may consider the core of the revised version of Basel Accord that emphasizes the necessity of market control and follow-up and not being satisfied by the loan collaterals; a regular follow-up at short intervals, on one hand, and objective analysis and continuous follow-up of the economic sectors' performance alongside with some specific activities, on the other hand, requires the availability of specific supervision policies and a developed banking law that meets wise supervision requirements.

For example, it is proved by experience that lending the real estate sector should be dealt with carefully by banks

since it implies risks no less than those implied in across borders loans. Not only capital adequacy is a prerequisite to guarantee good banking work, but risk management adequacy as well; the application of good governance principles is of no less importance.

Thus, there should be bases for true and effective partnership between the banks and the central bank as a major supervisory authority whose importance is in no way underestimated by the existence of other forms of supervision or supervision bodies with powers in the banking field; though the economic policies' objectives are realized through the use of a harmonious and coherent package of financial and monetary policies, the independence of central banks is the necessary and sufficient condition to build up a stable banking and financial sector.

Realizing the requirements of advanced supervision - which adopts the latest international standards in the light of openness, the growing and complicated businesses and the diversified investment instruments- calls for a central bank that enjoys full powers. It is worth mentioning here that it is highly important to have sound banking and financial sectors in order to realize economic stability. Furthermore, it should be kept in mind that the ratio of the bad debts may be less than banks' expectations, but they cannot reach a null point even under an efficient, effective, secure and sound banking system alongside with wise supervision that operates according to the most recent international standards of supervision. No one can predict accidents and embezzlement can happen even under sound supervision (fraud may escape watchful eyes); misjudgments are part of our life for whatsoever reason (it is a matter of degree), but the important thing is not to destroy our trust in the banking system's credibility and honesty<sup>4</sup>.

## 2. Traditional Capital Adequacy Standard

### 2.1. Ratio of Capital to Deposits Standard

It is one of the most commonly used standards to measure capital adequacy. It has been widely used by American banks till early 1940s; they relinquished it in 1942 in the light of purchasing government bonds by banks and creating deposits for the purpose of funding the American military efforts in the World War II. This standard is based on controlling the risks arising from the increase of total deposits over a certain ratio to the capital. It is worth mentioning here that central banks adopted the 10% as a suitable capital adequacy measurement, i.e. deposits are equal to ten times the capital.

### 2.2. Ratio of Capital to Assets Standard (Leverage)

According to which banks are rated in five ratings; the book value, however, is the basis in calculating the leverage

3 Banking risk (Joseph Yam, Chief executive, Hong Kong Monetary Authority, p.13.

4New international standards for banks Capital Adequacy, 8 May 2003, p.37.

ratio, which is the basis in evaluating a bank's capital adequacy.

1. The leverage ratio  $> 5\%$ : the bank is well capitalized.
2. The leverage ratio  $\geq 4\%$ : the bank is adequately capitalized.
3. The leverage ratio  $< 4\%$ : under capitalization degree.
4. The leverage ratio  $< 3\%$ : the bank is not capitalized.
5. The leverage ratio  $\leq 2\%$ : the bank is in a critical situation regarding its capital composition.

If the leverage ratio comes to 1%, it becomes necessary for the supervisory authority to intervene to correct the situation although relying on the leverage as a capital adequacy measurement has several weaknesses:

1. Market value: the capital/assets ratio may be equal to 2, but it doesn't mean at the same time that the bank's capital is weak in case of having economic inflation.
2. Assets risks: taking the total assets in the leverage denominator doesn't count, even partially, the credit and interest rate risks that affect the assets value.
3. Off-balance sheet activities: according to the leverage ratio, banks are not supposed to keep a capital to face expected risks arising from inability to settle the bank's obligations generated by off-balance sheet activities.

### 2.3. Risk-Weighted Capital Standard<sup>5</sup>

In 1993, Basel Accord 1 included credit risks in the capital adequacy measurement; in 1998, the Accord was amended by adding market risks; in 2006, in the Revised Basel Capital Framework or Basel 2, operational risks were added to the capital requirements; credit risks assessment was increased compared with those defined in Basel Accord of 1993 alongside with distinguishing between credit risks of the different items of on- and off-balance sheet's assets when calculating the capital adequacy ratio, i.e. assets are weighted by risks according to specific ratios and weights defined in Basel 2.

That's for assets; and regarding the capital, distinction has been made in calculating capital adequacy ratio between two main tiers: the first is the core capital and the second is the supplementary or secondary capital. In addition to the two tiers, some supervisory authorities request the existence of a third tier as a supplementary capital to be used in contingencies.

For decades, banking supervision emphasized the necessity to undertake internal risk assessment and stressed that the bank's capital, liquidity and other financial resources are sufficient to face the types of risks it faces when performing its activities. Every day, we are vulnerable to any type of risks, but we still live and never give up trying to avoid them. The important thing is to identify and manage those risks in a way that protects our interests.

Though the concept of capital adequacy seems to be simple, it took years of development by highly specialized risk management experts. On the assets side of a bank's

balance sheet, there are the loans and other assets that the bank decides to own; each of them implies risks of different degrees; for example, a loan made to a small enterprise implies a higher degree of risk than that made to a stock company.

The main difference between Basel 1 principles and those of Basel 2 is the necessity for banks to have a capital to face a wider range of risks that are not confined to market and credit risks, but adds to them operational, interest rate, exchange rates and liquidity risks, as well as a wide range of risks the size of which is commensurate with the context, the type of banking operations and their technical levels, as well as the investment instruments diversity and their development level.

### 2.4. Basel Revised Capital Framework (Basel 2)<sup>6</sup>

This standard is not new; it had been used in America and Britain. It is not just a relationship between the regulatory capital and the assets weighted by different risks; an in-depth look at it would lead to the following:

- It faces the invisible and difficult to calculate risks through different risk measurement approaches, i.e. capital becomes like a protection cushion when the bank faces risks.
- Shareholders' funds are the basis in facing risks. If shareholders in banking benefit from depositors' funds, their contribution to the bank should be no less than the level that protects depositors' funds in the face of risks.
- The relationship between the capital and the risky assets is a continuous one. The more risky assets increase, the more capital is needed. That is to say the capital is no longer the specific amount required to establish a project at the beginning of its work; there is a continuous need for capital in parallel with the growth of risky assets.
- The major risks by which the assets are weighted are the credit, market and operational risks. On the level of countries, Basel standard distinguished between the weights used for assets risks; it gave the assets in which the debtor is an OECD member-state a risk weight of zero, whereas it may be up to 100% for other countries.
- As for the exchange rates risks, the standard distinguished between the weights of assets risks in local currencies and their equivalent in foreign currencies due to the risks implied in the exchange rates of foreign currencies. Regarding market risks; risks are calculated according to time contracts; a contract's value estimation according to the rate used when the ratio is calculated means the inclusion of market risks.
- The standard has not take into consideration the collaterals the banks get in return for the credit given, except in the case of real estate collaterals for residential properties; it gave them risk weights of 35% and 75% if the real estate is commercial, due to the

<sup>5</sup>Capital Adequacy ratios basic course on evaluating financial performance and portfolio risk, 2004, p15.

<sup>6</sup>Methods for calculating international Capital Adequacy ratios (update 1 Jan. 2006 ), p7.

liquid nature of the personal residence loans, which are securitized in the developed countries; also, they are easy to sell and insurance companies guarantee their settlement. The standard gave a zero risk weight for loans secured by cash assets.

- The standard takes the comprehensive capital concept on the basis that everything provided by shareholders and anything generated inside the bank is for their interest, provided that those funds can be used without barriers or reservations to face the losses before they reach creditors' funds. Therefore, the capital concept is not limited to the capital paid, reserves and retained profits, but also includes the general allocations, the undeclared reserves and the differences in the assessment of fixed assets, securities, and subordinated loans that the bank gets from its shareholders and the loans offered by others that have capital characteristics in terms of bearing risks.

### 3. Compliance Requirements with Revised Basel Capital Framework

#### 3.1. Bank Assets Types<sup>7</sup>

Resources of the funds available and their uses differ from an economic environment to another. If we take loans, as one of the most important bank assets, we find that the actual terms of those assets and the possibility of replacing them by other assets vary considerably. While the economic environment in some countries allows for selling parts of the loan portfolios, partially or totally, that cannot be made in other countries. Thus, if banks are to comply with Basel standard by changing their investment portfolios' components in order to possess less risky assets, that won't be attainable unless they encourage the debtors to settle their debts, which may increase real risks since debtors with high risks won't be able to settle their obligations, while clients with lower risks will do.

This applies as well to the situations of the countries where the credits got by clients are almost in the form of commercial papers possessed by the bank that can dispose of them and get their value in the money or the capital market; in this case, banks attain quick use of those types of assets to achieve balance.

The situation is almost the same for liquid assets; the different degrees of risk for those assets led to the application of different risk weights; the risks of governments overseas borrowing vary for the banks that possess their borrowing instruments (from 0% for the OECD governments to 100% for other countries). It is worth mentioning that some OECD member-states do not have sound economics such as Portugal, Ireland, and Turkey, which made the banks that possess instruments of governments other than those of the OECD bear an additional capital burden; the market

availability here is the major element that should be available to replace the common assets portfolio's components by each other.

#### 3.2. The Money Market Size and Its Various Instruments<sup>8</sup>

When there is a developed money market, there is a greater opportunity to possess liquid assets for suitable terms, which keeps banks away from difficult situations in case they try to change their financial portfolios' components in order to possess appropriate investments; some countries, developing ones in particular, may face the problem that the instruments used in the money market are insufficient, or unsuitable to rely on as liquidity assets in the banks and that generate suitable return, such as when the market lacks treasury notes or government bonds at different maturity date and suitable interest rates.

Accordingly, the banking system capability to adapt to the banking investment form, that implied that Basel standard is the optimal approach, depends, in the first place, on the extent of flexibility that money market has to provide suitable instruments that enable the bank to possess suitable assets.

### 4. Capital Market Depth and the Availability of Credit Instruments of Capital Nature

Since the capital elements are not confined to the core capital, but include as well the supplementary capital elements that include credit instruments of capital nature, such as the bonds that are convertible to stocks, the successful banks that make suitable returns can increase the supplementary capital elements if they apply the aforementioned ratio, without being originally committed to it, through getting the aforementioned credit instruments from the capital market, in case the current shareholders are reluctant to increase the capital paid, or in case the rates of increasing the risky assets are ascending ration that can't be followed except through the capital market and in the aforementioned way.

Anyway, if the capital market are not sufficiently deep and they do not all the necessary requirements to play properly its financing role to companies, it will be difficult to get external resources to increase the capital other than what the current shareholders have offered, which makes the financial market growth a major element governing the capacity of the banking system to comply with Basel standard.

The amended capital adequacy ratio that includes market risks = regulatory capital / assets and risk-weighted off-balance sheet items.

#### 4.1. First: Regulatory Capital<sup>9</sup>

<sup>7</sup>Banking, Governance and investment climate (south east asia economic report 2007), p. 12.

<sup>8</sup>Accounting framework and sectoral financial statements (financial soundness indicator compilation guide, 13 March 2007), p. 24.

<sup>9</sup>Basic findings of quantitative impact study (AyhanYuksel), year 2006, p.18.

Called also the economic capital, consists of:

a- Core (primary) capital (Tier 1); it consists of:

- Underwritten paid capital;
- Legal reserve;
- Optional reserve;
- Issuance premium (discount);
- Other provisions, including sometimes provisions for bad debts;
- Carried-forward profits (losses);
- Minority rights in subordinate companies.

Minus:

- Losses of the period;
- Cost of purchasing treasury stocks;
- Deficit in the allocations required from the bank;
- Goodwill.

b- Supplementary (secondary) capital (Tier2) it consists of<sup>10</sup>:

- Undeclared reserves
- Evaluation differences of foreign currencies.
- Net clearance of the impact of IAS 39 application and the cumulative change in the fair value of the assets available for sale.
- The general allocation of credit facilities
- Instruments that have joint capital and debt characteristics (preferred stocks)
- Subordinated debts: the subordinated debt installments are weighted by risk weights according to the time remaining for their maturity as follows: 0% for one year or less, 20% for more than one year and less than two, 40% for more than two years and less than three, 60% for more than 3 years and less than four, 80% for more than 4 years and less than five, and 100% for more than five years.

c- The supplementary capital (Tier 3)

d- Minus:

- Investments in subordinate banks and financial firms if their financial data are not incorporated.
- Investments in the capitals of other banks and financial firms.

According to the aforementioned, the regulatory capital taken into account in calculating the risk-weighted capital adequacy is equal to:  $(a + b + c + d)$ .

There are some capital-related remarks in the way of calculating the regulatory capital in the capital adequacy ratio:

- The total regulatory capital  $(a + b + c + d)$  should be no less than 8% of the value of the off-balance sheet assets and items that are weighted by risks and market risks.
- The core capital should be no less than 4% of the value of the off-balance sheet risk-weighted assets and items.
- The total supplementary capital should be no more than 100% of the core capital.
- The total subordinated debts should be no more than 50% of the core capital

- The total general allocation for facilities should be no more than 1.25% of the value of the off-balance sheet risk-weighted assets and items.
- The Carried-forward profits (losses) are counted in their net value.
- Net clearance resulted from the application of the IAS 39 for the first time on the financial assets available for sale and listed among the carried-forward profits and the cumulative change in the fair value of these assets is subject to a discount of 55% if it was positive, and it is totally subtracted if the net clearance was negative; the application of that continues till the impact of applying the accounting standard 39 of the Carried-forward profits item is over; then the balance of the cumulative change item in the fair value is discounted if it was positive at the same rate (55%) and the total balance of the item is subtracted if it was negative.
- The profits of the term are not counted in the regulatory capital and the losses of the term are subtracted from the core capital.
- The reserve of external bank branching is not counted in the reserves declared for the purpose of calculating the regulatory capital of the branches inside the country, but this reserve is counted for the purpose of calculating the regulatory capital of the bank as a whole.
- There are some items that are not considered when calculating the regulatory capital; they are<sup>11</sup>:
  - Delayed amounts of tax benefits whether they are generated by the first time application or in the subsequent years at a value that is equal to the Delayed tax assets/liabilities' net balance.
  - Any other earnings or reserves under restrictions provided that the subordinated debts are not secured by mortgaging any of the bank's assets, and the due date of the first installment of those debts is within no less than five years, so that to consider them in the supplementary capital; installments are weighted according to the time remaining till their maturity date.
  - Before being risk-weighted, investments in the subordinate banks and financial firms whose financial data are not incorporated will be deducted from the assets; the same for the investments in the capitals of other banks and financial firms.
  - If the capital adequacy ratio is less than 8%, the bank should resort to the supplementary capital (Tier3) to cover market risks according to the following conditions:
    1. The original maturity date should not be less than 2 years.
    2. It may not be paid before its maturity date unless upon an approval from the supervisory authority.
    3. It should be totally paid and not covered by any collateral.
    4. The supplementary capital of market risks should not

<sup>10</sup>Liquidity risk and contagion, RodigCifuentes (central banking publications 2006), p.12.

<sup>11</sup>Global banking regulations, Oct. 2005 (Michel Henry), p. 25.

exceed 250% of the remaining core capital (Tier1) after covering the credit risks regarding the market risks. The bank should cover 28.5% of those risks from Tier 1 of the capital.

5. Market risks are applied to the financial instruments kept for trading or that are available for sale whether they are on- or off-balance sheet.

#### 4.2. Second- Risk-Weighted Off-Balance Sheet Assets and Items

They consist of:

- a Cash, cash accounts and securities; the weights are as follows:

*Table 1. Risk-weighted off-balance sheet assets, the weights.*

Assets	Account(1)	Weight of risk degree 2	Risk-weighted assets (1*2) (3)
Cash and cash accounts			
Cash in the cashbox			
Cash at the central bank			
Local banks			
Cash at the banks and financial firms		20%	
Foreign banks			
Central banks of the OECD countries and other countries approved by the central bank		0%	
International development banks		20%	
Banks registered in the OECD countries and other countries approved by the central bank		20%	
Banks registered in other countries			
Accounts due within a year		20%	
Accounts due after a year		100%	
Total bank accounts			
Securities			
Local kept till maturity date			
Government financial instruments		0%	
Government secured financial instruments		0%	
Financial instruments not secured by government		100%	
Foreign kept till maturity date			
Issued or secured by OECD countries and other countries approved by the central bank			
Issued or secured by OECD countries banks		20%	
Other securities		100%	
Total securities			
Total cash and securities			
Note: applied on all local and foreign currencies			

- b Direct credit facilities and fixed and other assets.

*Table2. Direct credit facilities and fixed and other assets.*

Assets	Total account 1	Total allocation for a specific asset 2	Suspense interests and commissions 3	Cash insurances 4	Net value (1-2-3-4-5)	Weight of risk degree 6	Risk-weighted assets (5*6) 7
Locally given facilities:							
For the government or under its guarantee						0%	
Government and public sector organizations						10%	
Government and public sector organizations						50%	
Private sector							
Secured by central banks of OECD countries and other countries approved by the central bank						0%	
Secured by local banks, banks of OECD countries and other countries approved by the central bank						20%	
Secured by the Jordanian co. for loans guarantees						20%	
Facilities refunded by real estate mortgage co.						20%	
Secured by banks of other countries (less than a year)						20%	

Assets	Total account 1	Total allocation for a specific asset 2	Suspense interests and commissions 3	Cash insurances 4	Net value (1-2-3-4-5)	Weight of risk degree 6	Risk-weighted assets (5*6) 7
Secured by banks of other countries (more than a year)						100%	
Secured by government securities or by the government						0%	
by real estate collaterals						70%	
by other collaterals						100%	
Other clients						100%	
Fixed assets after deducting depreciation						100%	
Establishment costs						100%	
Checks and drawings purchased (receivable)(banks drawings)						20%	
Checks and drawings purchased (receivable) (individualsdrawings)						100%	
Other assets						100%	
Total							

## c Off-balance sheet items:

Table 3. Off-balance sheet items.

Item	Off-balance sheet items total account 1	Cash insurances 2	Net value (1-2-3)	Conversionco efficient 4	Risk degree 5	Weight of risk degree (5*4) 6	Risk-weighted off-balance sheet items (6*3) 7
Approved payment and collaterals							
Under government responsibility				100%	0%	0.0%	
Under the responsibility of government organizations (public sector)				100%	50%	50.0%	
Under the responsibility of local banks				100%	20%	20.0%	
Under the responsibility of banks of OECD countries and other countries approved by the central bank				100%	20%	20.0%	
Under the responsibility of banks of other countries (less than a year)				100%	20%	20.0%	
Under the responsibility of banks of other countries (more than a year)				100%	100%	100.0%	
Under the clients responsibility (private sector)				100%	100%	100.0%	
Performance, maintenance, and bidding bonds and the like							
Under the government responsibility				50%	0%	0%	
Under the responsibility of government organizations (public sector)				50%	50%	25%	
Under the responsibility of local banks				50%	20%	10%	
Under the responsibility of banks of OECD countries and other countries approved by the central bank				50%	20%	10%	
Under the responsibility of banks of other countries (less than a year)				50%	20%	10%	
Under the responsibility of banks of other countries (more than a year)				50%	100%	50%	



Item	Off-balance sheet items total account 1	Cash insurances 2	Net value (1-2-3)	Conversionco efficient 4	Risk degree 5	Weight of risk degree (5*4) 6	Risk-weighted off-balance sheet items (6*3) 7
Under the clients responsibility (private sector)				50%	100%	50%	
Credits							
Under the government responsibility				20%	0%	0%	
Under the responsibility of government organizations (public sector)					50%	10%	
Under the responsibility of local banks					20%	4%	
Under the responsibility of banks of OECD countries and other countries approved by the central bank					20%	4%	
Under the responsibility of banks of other countries (less than a year)					20%	4%	
Under the responsibility of banks of other countries (more than a year)					100%	20%	
Clients credits							
Outgoing					100%	20%	
Incoming (not supported)					0%	0%	
Incoming (supported)					20%	4%	
Other							
Agreements of sale and repurchase						100%	
Assets trading with retracting rights						100%	
Future assets purchase						100%	
Partially settled Securities and stocks						100%	
Facilities of coverage pledges						50%	
Supported and not drawn facilities whose original maturity dates are after more than one year						50%	
Supported and not drawn facilities whose original maturity dates are after more than one year with unconditionalrevocability right at any time						0%	
Foreign currency contracts for less than a year						1%	
Foreign currency contracts for more than a year						5%	
Interest contracts for less than a year						0%	
Interest contracts for more than a year						0.50%	
Total							

#### 4.3. Third- Financial Instruments Subject to Market Risks

- a Financial instruments subject to interest rate risks
- b Special risks

**Table 4.** Financial instruments subject to interest rate risks.

Instrument	Long positions(1)	Short positions (2)	Long positions + short positions (1+2) (3)	Weight (4)	Capital (3*4) (5)
Government securities or government secured ones				0%	
Securities with credit rating from an international co. listed in our instructions # 179/2000					
Due in 6 months				0.25%	
Due in 6-24 months				1%	
Due after 24 months				1.60%	
Other unrated securities				8%	
Total capital earmarked to face special interest rate risks					
Total of column 5					
Special market risks = total capital earmarked to face special risks x 12.5					

Capital adequacy ratio including market risks = Regulatory capital/(risk-weighted off-balance sheet assets and items + market risks).

Capital adequacy ratio may be calculated by using the core capital divided over the risk-weighted off-balance sheet assets and items in order to get a more precise indicator of the extent of the capital adequacy to face risks. The capital revised Basel Accord 2 determined (4%) as a minimum level for this ratio.

In case of using the regulatory capital in calculating the risk-based capital adequacy, the minimum level is 8% alongside with leaving margins for the supervisory authorities in the countries to determine the capital adequacy ratio at no more than 8% according to their circumstances and the situation of their banking systems.

## 5. New and Revised Basel 2 Objectives<sup>12</sup>

The main objective of Basel 2 is to encourage banks to follow typical risk management practices particularly in the field of credit risks, and to develop sophisticated capital adequacy measurements for the good of the inspectors and the market participants.

The three capital adequacy pillars include:

- Minimum level of capital requirements.
- The supervisory authority reviews the risk-based capital requirements on a continuous basis.
- Provide the public with more information on risks and capital adequacy with a view to control the market.

## 6. New Basel Accord Main Elements

### 6.1. First Pillar: There Are Two Ways to Evaluate Credit Risks

- The standardised approach that compares capital sensitivity to risks between internal assessment and external assessment, alongside with adopting the higher assessment of risks in case of differences between internal and external assessments. In line with the objectives of Basel Committee, it is planned to develop

capital requirements that are more related to real credit risks in the bank so that to have more capital is required when there is a low-quality financial portfolio, and less capital when there is a high-quality financial portfolio.

- The supervisory authority agrees that the banks that have the required competency undertake internal assessment of credit risks (Irb) using 4 indicators:

1. The possibility of debtor's failure within a year.
2. The expected failure's losses.
3. The expected failure's quantity.
4. Loan's maturity date.

The differences in credit risks assessments between internal assessment approach and the developed approach depend on how the indicators used in the internal assessment are measured, although the developed approach and the internal assessment approach depend on internal information from the bank regarding the credit risks the assets may face, and in the developed approach the indicators are determined by the bank while being subject to a continuous review by the supervisory authority.

As for internal assessment approach, the extent of relying on the indicators developed by the bank for credit risks calculation purposes depend on the capital used as a basis (core), and if the estimations concluded by the internal assessment are unreliable, a part of them can be used at least in assessing the capital sensitivity to risks. Therefore, it is important, before applying the internal assessment approach, that the supervisory authority checks the creditability of the internal assessment approach used in determining the internal rate of risks.

### 6.2. Second Pillar: Supervisory Review Process

The second pillar in the revised Basel framework lays the bases for the supervisory authority intervention in order to avoid any capital decrease. Basel Committee developed 4 principles in line with this objective:

1. Each bank undertakes internal assessment of its capital adequacy in the light of risks model.
2. The supervisors review the internal assessment done for the capital adequacy.
3. Though Basel Committee determined 8% as a minimum level for capital adequacy, banks are supposed to keep a regulatory capital exceeding the minimum level.
4. The supervisory authority may intervene at an early

<sup>12</sup>Consolidation Moody's outlook for banks in south east asia (Deborah Schuler, Senior Credit officer, 2007), p.32.

stage when it finds that the bank's capital is inadequate to face potential risks in order to keep the rights of all parties concerned such as the depositors and the shareholders.

It includes as well continuous review of the supervision process, not only to make sure that the bank has an adequate capital to face risks, but also to encourage banks to develop risk monitoring and management techniques whereas supervisors assess the approach used by the bank to estimate its needs to capital by means of intervening when necessary in order to establish bases of communication and dialogue between the banks and the supervisory authorities so that to enable the supervisory authorities to intervene when the bank faces difficulties to take critical correction procedures to diminish risks. The supervisory authority, in the context of its continuous review of the capital situation in the bank, relies on the following principles:

First: the bank should have clear practical procedures to estimate capital adequacy in line with their risk models alongside with adopting a clear strategy to keep the required capital levels that call for:

- Monitoring by the Board of Directors and the executive management.
- Sound capital assessment.
- Comprehensive risk assessment.
- Regular reporting.

Reviewing and insuring efficient internal auditing, since the bank's internal auditing [section] is the major section assigned to follow up the implementation of the Revised Basel Capital Framework by means of checking the data accuracy and reviewing the activities when the bank's capital situation is assessed. Therefore, the supervisory authority of the central bank focuses on the internal auditor's efficiency and assesses him/her taking into consideration:

- To which limit the external auditor depends on the outputs of the internal auditor.
- The quality of internal auditor's reports, and how their outputs are used by the executive management and the board of directors.
- The internal auditor's work must be risk-based rather than inspection-based<sup>13</sup>.
- Internal auditor's independency.

Reference should be made here to the fact that the importance of an internal auditor lies in the bank's dependency on him/her to conduct internal assessment resorted to by the banks when the government lacks qualified institutions to assess banks. Therefore, internal indicators are developed to assess capital adequacy and are ratified by the central bank and regularly reviewed, annually at least, by the internal auditor who is supposed to develop and follow up the assessment rules, determining their feasibility in terms of costs and return.

Second: the supervisory authority should make sure that the bank complies with the capital adequacy requirements

and take supervision procedures in case it doesn't.

Third: the supervisory authority expects banks to keep a capital that is higher than the minimum level stipulated in Basel 2.

Fourth: the supervisory authorities are keen to intervene at an early stage to avoid a capital diminution to a lower level than the minimum required one to face the risks and to take quick correction procedures if the bank is unable to re-correct the capital situation.

Under Pillar 2 of Basel 2, there are certain functions that the supervisory authority, and not only the banks, should fulfill on the basis that a sound supervision would mean a sound banking system that is a prerequisite for a sound economic environment and a progressive and developed economy capable to shoulder the development burdens and that plays a crucial role in enhancing the investors' trust and attracting capitals.

Thus, the supervisory authority should make its supervision policies based on international wise supervision principles in order to make sure that its policies are based on sound bases and to ensure that the banking sector realizes high degrees of efficiency whether on the level of providing the required credit for the economic activity or to expand it without disturbing the banking security levels. In this context and in response to Basel 2 requirements, Pillar 2 specifically, the supervisory authority should take a group of radical decisions even though they might be tough and painful to banks just like other financial decisions, in order to enhance the banking sector capacity to face the challenges in line with the developments in the international arena.

More specifically, the supervisory authority's follow-up of a bank's capital situation should be done according to specific and clear ratios and standards developed by the central bank to be used as a basis to standardize the supervision process in the bank's operations that directly or indirectly affect the capital situation.

Regardless of the international standards of supervision determined by Basel Committee in the first version and the second amended version, the central bank should develop, according to the distinctive nature of each country, special ratios for its banking system in line with the circumstances of the banking and financial sectors, the economic situation and the prevailing environment. The most important supervision policies include:

- Supervision policy in the field of foreign investments; it is a banking custom that each country determines the ratio of foreign investments of the financial resources available for the bank from deposits in order to guarantee that the bank fulfills its role in financing the economy of the host country.
- Develop controls for the formation of the required allocations that banks should keep as adequate reserves to protect their stability and the depositors' interests and to avoid the deterioration of the capital base.
- The supervision policy in the field of determining the fees and commissions that banks receive from their clients to protect citizens' interests and to guarantee that

<sup>13</sup>Measures governing Capital Adequacy ratio of commercial banks, 24 Feb. 2004 (Liuming Kang), p.57.

banks do not offer banking services at the expense of the banking work that the bank is established for.

- The supervision policy in controlling the relationship between the bank's capital and deposits in order to determine the facilities/deposits ratio to guarantee sensible balance between the bank's capital and its clients deposits, and to avoid excessive expansion in deposits without a parallel sensible increase in the capital.
- The supervision policy in the field of credit concentrations where the supervisory authority should determine the maximum level allowed for each debtor as a capital base percentage.
- Adopting a policy for the bank's dealers in order to determine a maximum level of the facilities allowed for them, so that they do not exceed a certain percentage of the bank's capital base, within the framework of the supervisory authority's policy to enhance the preventive supervision that aims at providing the largest possible number of borrowers from the bank's funds and reducing risk concentrations.
- Adopting a clear supervisory policy for friend or subordinate companies by determining the contribution rate allowed for the bank in those companies' capitals, and more clearly, to determine the bank's capital rate allowed for investment in the subordinate companies on one hand and its rate to the company's capital on the other hand. Some countries do not allow the bank's contribution rate to exceed 25% of the monetary value of the bank's net assets and 10% of the friend company's capital.
- The supervision policy regarding the volume of banks' investment in real estates, by means of determining a ratio of assets value (25% for example); in case of possessing a real estate as a collateral or to settle a debt, the supervisory authority should oblige the bank to dispose of it through selling it within a year time maximum, in order to prevent the risk implied in expanding this type of investment.
- The supervisory authority in the field of liquidity; in order to determine the liquidity rate that banks should keep with a view to secure continuous public trust in the banking system and avoid inability of the payments system to meet the public needs.
- The supervision policy regarding the bank's maintaining open currencies positions; the supervisory authority should determine a percentage for each currency in the capital base and a percentage that should not be exceeded by the total open positions of all currencies in order to avoid the risks of market, interest rate fluctuations, and the different currencies exchange rates.
- The supervision policy in the field of banking merger; the existence of small banks negatively affects production costs and marginal profits and consequently affects the bank's capacity to provide more options for the savers and the investors, and the limited capacity to develop the money and capital market. Banks' merger in

more stronger and bigger banking entities makes them more capable to assume risks, provide long term funding, develop new banking products, realize efficient and safety system of payments, and develop a market between banks and the capital market.

### 6.3. Third Pillar: Market Control

The supervisory authorities in the countries response to Basel standards in the field of market control requires developing the rules and requirements of disclosure and transparency in financial statements in the context of standardizing the supervision process; the supervisory authority should modernize the system of financial reports that banks submit to the central bank to make them consistent with the latest developments in the field of office banking supervision, in a way that guarantees a sound and creditable database that honestly and precisely reflects the reality of the banking sector. Banks provide the supervisory authority with all analytical ratios that help it determine at an early stage the risky positions in the bank's operations that provide a greater opportunity to deal with crises and avoid them. It should be kept in mind as well that the reporting system should be based on the IAS # 39 that is aims to guarantee full disclosure of all balance sheet's items, profits and losses, and cash flows in details, and that meets the balance of payments' requirements of data. Achieving an office reporting system that is in line with the international standards requires a sound and reliable database that reflects the banking reality and avoiding the adoption of wrong policies by decision makers that negatively affects the investors' attitude and weakens their trust in government's institutions.

Market control relies on the banks' disclosure by means of regular release of financial statements that should be accurate and credible in order to allow market participants to get familiar with what is important about the bank's activities, its assets types and quality and their implied risks in order to realize transparency in the banks' work to support financial stability. Market control is based on sufficient disclosure to the public, integrated with supervision efforts to ensure banks' attainment of sound risk management.

Banking supervision in this pillar is asked to develop a clear disclosure framework in which the first step is achieving disclosure among banks in a way that includes the following ratings:

- Financial performance
- Financial situation (capital tiers, solvency and liquidity)
- Setting risk management strategies and practices.
- Risk fields (credit, market, liquidity, operational, and legal risks)
- Accounting policies
- Basic information about the work, the institutional governance and management. This information should be subject to discussion between the banks supervision, investors and data users.

## 7. Reservations on Revised Capital Framework of Basel 2

- Accuracy of the rating adopted for the credit risk weights is not secured; for example, the risk weight a real estate mortgage loan is 75%, while it is 100% in commercial loans, supposing that those loans imply a greater risk than that of real estate mortgage loans, which pushes banks to deal with the assets whose risk weights are lower depriving the economy of the finance needed in commerce and leads to inflectional growth in the real estate sector.
- Giving commercial loans to the private sector the highest credit risks will make banks avoid this type of lending and go for other types of loans whose risks are lower; this deprives the business sector from the finance required and negatively affects the economic growth. More precisely, weighting the different types of commercial loans with similar risk weights, regardless of the credit rating of the borrowing body, will increase the risks the bank faces.
- Though market risks are weighted in the risk-based capital, Basel Framework doesn't include an approach to calculate foreign exchange risks, assets concentration risks and work risks.
- Neglecting the competitive situation, in case of applying a risk-based capital adequacy ratio for all banks and in all countries, regardless of the different tax and accounting systems applied in those countries. For example, each of Japan and the USA has accounting and tax systems and safety network rules that are totally different from one another.

## 8. Conclusion and Recommendation

Basel Committee is a consultative agency, whose resolutions have no legal or obligatory nature for non-member states. Therefore, the application of its resolutions is decided by banking supervisory authorities in each country. But it has been proved by experience that Basel Committee's resolutions do not take long to become internationally applied basic standards and, consequently, the countries not applying those standards are seen as having higher risks than others, which makes providing finance to these countries and dealing with their banks more difficult and expensive.

For the countries that want to adopt Basel Accord, Basel Committee intends to have the Revised Capital Framework applied by the end of 2006, but the so many complications in the advanced approaches necessitate delaying the implementation till 2007 for the advanced banks whose probability to have a systemic risk increase is big, whereas the developing countries' banks are not expected to be ready for applying the Revised Capital Framework of Basel 2 on the dates mentioned in Basel documents. But still there are 3 stages that the monetary authority should pass to implement Basel Accord 2:

First: Support and enhance supervision environment.

Second: Introduce the pillars of Basel 2 as a first step to apply them.

Third: Move from Basel 1 to Basel 2.

It is worth mentioning here that Basel Committee has not neglected the huge complexities some countries may face, particularly in the field of market risk assessment.

Though Basel 2 is originally intended to develop general standards for risk measurement and management, a question should be raised here: is Basel 2 the end of risk management and the last item to comply with.

Another question is related to the capacity of banks and the supervisory authorities to respond to the requirements of the Revised Capital Framework of Basel 2, due to the complexities it implies, since though the capital adequacy concept seems to be somehow simple, applying it requires efforts even for risk management experts and specialists. On the assets side of the balance sheet, there are the loans and other assets chosen by the bank that imply different degrees of risks; a loan to an SME, for example, implies a higher risk than that of a loan to a major company, though, according to Basel 2, bank supervision gives assets items different risk weights. Interest rate risks, for example, if the bank has credit bonds, become of lower value when the interest rate increases; risks of currency situations that are open for a long time become of a lower book value when the local currency's exchange rate goes up.

As for the implementation of Basel 2, it is expected to be applied by 2008 for the banks operating in international markets; other banks have full freedom to adopt it or to continue applying the instructions included in Basel 1 regarding the minimum level of Basel 1 requirements.

The main and ultimate Revised Basel Capital Framework's objective of determining a minimum level of capital adequacy is to develop and enhance the banks' risk management following the crisis experienced by the major banks in the 1970s and early 1980s due to:

- Rapid growth in risk implying assets (overseas loans).
- The impact of internal and external competition on marginal profits
- The inflation impact on banks' balance sheets

Based on this, risk management became subject to great interest around which the three Pillars of Basel 2 evolve. The first Pillar defined the capital requirements at 8% at least of risk-weighted capital adequacy as a prerequisite to face the bank's potential risks; the second and third Pillars -the supervisory review and the market control- are integrated with the first Pillar to realize capital adequacy and to reduce the risks a bank faces.

In this context and to achieve the supervisory review process, banking supervision should:

- Develop clear framework and standards; adopt a package of wise policies to standardize and control supervision.
- Set specific ratios and indicators as a comparison basis.
- Develop a clear and specific operational guide for banks to follow in order to meet the supervision requirements regarding banking risk management and to keep

adequate capital ratios to face them.

- The supervision should assess the credit rating of the organizations with which the bank deals.
- Integration between field and office supervision.
- Prepare regular reports to be discussed with the executive management and the Board of Directors.

The question we face here is that after all this presentation of Basel Framework including its strengths, weaknesses and implementation mechanisms, which is a very complicated process, Can Basel 2 be implemented, or is it an impossible mission? More specifically, is Basel applicable in Syria?

The beginnings of the private banking sector in Syria give strong indicators that Basel standards can be applied due to:

- The private banking sector in Syria is new, which makes benefiting from starting late an advantage that help apply Basel Committee' standards.
- The wise licensing policy adopted by the CBoS of licensing banks with good capital solvency, long history of banking work according to the good governance principle, high-quality assets and good banking reputation that gives an opportunity to reduce the reputation risks that are no less important than other ones.
- Even in the absence of internal credit assessment organizations in Syria, which are a prerequisite to know the risk weights given for each type of assets, internal assessment of risks can be relied on because there are developed banks that can do it.
- The CBoS is taking large strides towards applying Basel standards by means of preparing the institutional and legal environment and the qualified human resources to be integrated together to create the organizational environment required, not only to apply Basel standards but to match all international developments in the financial sector, as well.

Finally, despite the achievement of the Central Banks in complying with the international standards, there are still some very necessary requirements to apply Basel standards,

the most important of which include: activating the compliance circles at both the central bank and the other banks and concentrating on the internal auditor's function in the banks since if he/she is highly qualified, the steps towards achievements and modernity could be faster and more efficient.

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