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## BASEL II

- the revised capital accord and its effect on  
loan finance from a borrower's perspective

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# Summary

This thesis is about the risk management of banks and how changes in regulatory capital charges can affect a borrower in the Swedish capital market. The thesis takes the perspective of a borrower but also explains how banks are affected by changes in regulatory capital requirements. The main focus is on changes in a borrower's situation and each of the parts in this presentation is intended to include various aspects of these changes.

Basel II, or the *International Convergence of Capital Measurement and Capital Standards: A Revised Framework* was released in June 2004. It is meant to be fully implemented at the end of 2006. The effects of the new capital accord will be substantial and some of its effects on capital markets are probably appearing much earlier than the implementation date. The subject of this thesis is therefore highly relevant today even if the actual implementation is a few years away. Basel II is the new framework regulating how banks should calculate their capital in relation to their exposures. A bank's capital is a safety cushion in the event of a counterparty defaulting on its commitment to pay interest or principal upon maturity.

Basel II provides banks with a more accurate instrument for the measurement of risk than the first capital accord, Basel I, did. The first capital accord was issued in 1988 as a response to the increase in credit risk at the time. Basel I contained much less detail than Basel II, a fact that helped the first framework's international adoption and implementation process. For a borrower with good credit rating the first framework could be disadvantageous since corporate lending in Basel I is connected with the same regulatory risk weight regardless of the financial status of the borrower. This is not a reflection of the real risk involved and Basel II seeks to rectify such inaccuracies and adds the much-needed details that Basel I lacked.

Besides adding the needed details for risk calculation the revised framework provides guidance for the supervision of banks through a new supervisory review process resting upon four key principles. The revised framework also promotes financial stability through increased market transparency and disclosure.

Basel II will provide banks with an opportunity to use new models for the calculation of risk. The essence of risk management lies within the estimation of the risk of a counterparty failing on its obligations. If the risks were known and could be exactly calculated then banks would know precisely what amount of capital to keep as a buffer. It is, however, impossible to know the exact risk involved in a certain situation since there could be many factors behind a default. Each borrower is specific and the circumstances are never the same in two situations. The risks can derive from market fluctuations, or other reasons not easily foreseeable. What is

also important to have in mind is that keeping capital as a buffer in case of a counterparty defaulting is expensive for banks, which will want as much return as possible on their funds through lending or investment activities.

The best way to deal with this problem of risk uncertainty is to use all parameters possible and try to calculate the risk related to a certain exposure as accurately as possible. Basel II is intended to provide the banks with an instrument to perform these calculations.

The new risk models will divide the banks along a spectrum with the banks allowed to use the most complex and sophisticated models at one end and the banks only allowed to use a standard model similar to the one in Basel I at the other. The standard model in Basel II is similar to the model in Basel I but with some significant changes. It is therefore easier to estimate the effects of the standard model compared to the more advanced ones.

The new advanced risk models are not intended to jeopardize the financial system and soundness will be ensured through the national financial supervisory authorities which are given a much more defined role in the banking markets with Basel II. The Swedish Financial Supervisory Authority is both attaining the role as approver of the banks seeking to use the more advanced internal ratings based approaches in Basel II together with the role as provider of some of the risk estimates used for the calculation of risks in Basel II. This role could affect the impartiality of the FI since it will be working much closer to the banks and since it possesses the power to increase capital charges of a bank if its judgement of the bank's risks related to its capital does not give a satisfactory image of the banks ability to control a crisis.

Basel II also imposes new capital requirements on banks regarding operational risk, which is the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events. This new requirement could affect a borrower in a number of ways since banks in the end will want to pass on the costs related to the operational risk capital charge to the borrowers even if the capital charge is not related to the borrowers but with the banks and their activities.

Some borrowers will see lower capital charges connected with their borrowing with Basel II and others will face higher credit prices since their capital charges will go up. When capital charges for certain lending goes up banks will want to make sure through their loan agreements that they are reimbursed by the borrowers. I have therefore examined one of the standard loan agreements, used frequently in international syndicated lending to investment grade rated companies, and the possible Basel II related changes to the increased cost clauses in that agreement.

The final draft of a loan agreement is much related to the negotiations between the borrower and the bank and negotiation will be a key element determining which party that will bear the Basel II related costs. The final

changes to the agreement examined here will most likely be drafted to protect the banks against the increased costs that Basel II could bring about for certain categories of lending.

One trend that is likely to repeat itself is the trend first seen after Basel I was implemented. When banks became able to predict the costs related to regulatory capital it became market practice to exclude Basel I related costs from the increased cost clauses. The exclusion of Basel I related costs from the increased cost clause meant that the banks did not have the right to be reimbursed if the costs for the loan increased due to an increase in regulatory capital. When banks are able to predict the practical impact of Basel II, these costs will probably be excluded from the increased cost clauses since the price of the loan is set with Basel II related costs taken into consideration.

The general conclusion to be drawn is that borrowers with high credit ratings and strong financial positions will probably be the winners after the implementation of the revised framework. Large banks will probably invest in the complex risk models and measurement systems and will most likely see lower capital charges on highly rated credits and thus benefit from an allocation of capital towards such credits. It is however difficult to assess the outcome of the advanced risk models since every bank could adopt its specific model with specific results for each individual borrower. Although the risk models are more advanced they are not intended to have a negative effect on the overall financial soundness. The intentions are that the total amount of regulatory capital is to be sustained after Basel II implementation. There will, however, be some winners among the banks gaining from lower capital charges than with Basel I.

For borrowers the fundamental difference between Basel I and the new framework in Basel II is that borrowing costs will to a much greater extent depend on a specific borrower's financial status. Lending to a poorly rated company, which in fact is a riskier counterparty for a bank, will be connected with higher capital charges than lending to a highly rated borrower. This means that the real counterparty risk will be taken into consideration in a better way than was possible under Basel I.

# Preface

This thesis will form the end of my studies at the Faculty of Law at Lund University. The four years of law studies has been a lot of work sometimes but I will remember them as indeed an exciting time with many new friends and a lot of fun and adventures. The semester I spent in London was indeed of great value to me and I will probably remember it as the highlight of my years as a student.

I must thank my tutor Lars Gorton for his assistance in advising this work and also Zoran Stambolovski at Mannheimer Swartling Law Firm who have been nothing but helpful despite his full calendar. I also thank Olof Girhammar, law student at Stockholm University, for useful discussions on the subject and the material.

To the friends I have studied with over these four years I owe a lot of gratitude. Finally I thank Caroline.

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# Abbreviations

ACT	Association of Corporate Treasurers
AIRB	Advanced Internal Ratings Based (approach)
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CAD 3	The proposed Risk Based Capital Directive (Capital Adequacy Directive)
CRM	Credit Risk Mitigants
FI	Finansinspektionen (the Swedish Financial Supervisory Authority)
FIRB	Foundation Internal Ratings Based (approach)
GDP	Gross Domestic Product
IMF	International Monetary Fund
IRB	Internal Ratings Based (approach)
LMA	Loan Market Association
PWC	PriceWaterhouseCoopers
SME	Small/Medium Size Entities



# 1 Introduction

## 1.1 Introduction

This is a master thesis written at the Faculty of Law at Lund University. The material I have used is legal in that aspect that it is rules trying to regulate certain aspects of the financial system such as banks and their capital. Many of the rules are however based on substantial macroeconomic analysis of financial markets and their participants and this of course affects the nature of this work. Understanding of the economic reasoning underlying the rules regulating banks is crucial to this presentation.

The Basel Committee on Banking Supervision<sup>1</sup> released in June 2004 the revised framework, Basel II, regarding capital adequacy demands on banks. The first framework, Basel I, was released in 1988 and it was much less detailed than its successor. Even though the documents issued by the Basel Committee can best be described as “soft law” binding only on a voluntary basis, they have become widely recognised as a standard throughout the financial world and have indeed had a great effect on the international financial systems.

The Basel II framework has been adopted by the European Commission with almost no changes in the proposed Capital Adequacy Directive<sup>2</sup>, which will be implemented in the member countries through national legislation.<sup>3</sup> This means that the Basel II framework will become binding in Sweden in a near future and the subject is therefore highly relevant.

The aim of this thesis is to analyse what effect the revised capital adequacy framework, Basel II, will have on loan finance for a Swedish company. There will be many effects and it is a vast task to predict all of them. The analysing section is therefore a mere attempt to indicate what factors that will play a role in the change of the price of capital for a Swedish borrower with a strong rating after the Basel II implementation.

Since the framework is not in place one can only speculate, with more or less accuracy, what the actual effects will be. One thing is certain though,

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<sup>1</sup> The Basel Committee on Banking Supervision is a committee of banking supervisory authorities that was established by the central bank governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, where its permanent Secretariat is located; See *International Convergence of Capital Measurement and Capital Standards: A Revised Framework* (Below cited as Basel II) p. 1 n. 1.

<sup>2</sup> The proposed directive, and also the Basel II document, is planned to come into force and be implemented on the December 31, 2006.

<sup>3</sup> The European Parliament is expected to approve of the proposed CAD 3 directive during 2005.

the revised framework will bring about substantial changes in the financial world and hopefully this work points towards some of them.

The reason for the relatively long implementation period, the framework is not intended to be in place until the beginning of 2007, is firstly that the framework brings about substantial changes which will require banks and other financial entities to make large investments and structural changes in their ways of doing business. Secondly, some of the provisions in the new framework require certain amounts of historical data from banks about their customers so that the new risk calculations can be adequately performed.

As with many calculations in financial mathematics, the risk calculations in Basel II are based on historical data. They take into account the history of the borrower to determine what the risk is of that borrower not fulfilling its obligation to repay the loan. Since history is not always repeating itself, these calculations are not perfect but they may be the best solution available. History has proven finance formulas, which on their face appear to be faultless, to be inadequate in times of unusual market volatility<sup>4</sup> and it should be stressed that even the most accurate risk calculations of borrower default will come across unpredictable situations.

The national financial supervisory authorities are given a new role in the Basel II framework which is interesting to reflect upon. I have therefore dedicated a section in this work to explain what this new role will be and what potential problems Basel II can cause for the Swedish financial supervisory authority.

What I have tried my best to include in this thesis is something that at least I have seen too little of in the course of the law education. That is actual clauses from actual contracts used in practice. To me a theoretical discussion without practical connections has its limitations. Hopefully I have managed to make this work somewhat practical by referring to the changes that Basel II will bring about to one of the major loan agreements used in international finance issued by the Loan Market Association.<sup>5</sup>

## 1.2 Purpose and Delimitations

The purpose of this thesis is to examine the Basel II document from the perspective of a corporate borrower and to review what practical implications the revised framework is likely to bring about. The new rules will impose new costs and it is interesting to see who will bear these costs in the end. There will be changes related to these costs in the Loan Market

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<sup>4</sup> As was seen in the late 1990s with the financial crisis in Russia and Asia and the failure of the heavy leveraged LTCM hedge fund. Long Term Capital Management (LTCM) was a short term hedge fund, managed by some of the worlds top finance practitioners and noble prize winning scholars, that failed in the end of 1998. The failure shook the financial world and gave proof of what can happen without transparency and sound financial management.

<sup>5</sup> The LMA agreement I have used is the *multicurrency revolving facility agreement* intended for syndicated loans with an investment grade rated borrower.

Association agreement which is a commonly used agreement between borrowers and banks. The increased cost clauses in that agreement are likely to be revised and I will include some of the proposed changes below. What the final writing of the clauses will be depends on the outcome of the negotiations between the Association of Corporate Treasurers and the Loan Market Association.<sup>6</sup>

The main focus of this work will be on larger corporations with investment grade rating or better. I will however mention effects on other entities as well since the new framework will make a substantial difference to them as well.

Much has been written about the technical aspect and complex calculations of the Basel II framework but these are too complex to include in this presentation and they are not needed for the understanding of the material below. The mathematics behind portfolio theories and the many simulations of Basel II applied to different portfolios<sup>7</sup> are out of the scope of this presentation.

Basel II will have world-wide effects but this work is limited to the European markets and particularly the Swedish market.

## **1.3 Method and Material**

The method I have used is common legal method which means reviewing statutes, preparatory work and articles written on the subject. I have chosen English as the language for this presentation since the subject in itself is of an international character and since the material I have used is mainly written in English. The terminology used in finance in general and in the Basel Committee documents in particular is not easily translated into Swedish. The written material on the potential effects of the Basel II proposal is rather limited considering the unique changes it will bring about.

To make the section about the Basel II effects on the supervisory authority more complete and to fully understand how Basel II will affect the financial supervisor in Sweden I have interviewed Percy Bargholtz, who is an advisor of the financial supervisory authority.

Much of the material used for this presentation is based on economical analysis and this affects the result of this examination. The traditional legal method, described above, of analysing legal issues must therefore be combined with an understanding of the economics of banking business and a bank's capital.

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<sup>6</sup> I am grateful for the material I have received on this matter from Zoran Stambolovski, partner at Mannheimer Swartling Law firm, specialising in banking and finance.

<sup>7</sup> For further reading regarding portfolio theories and the Basel II document see among others, Kupiec, Paul H., *The New Basel Capital Accord: The Devil Is in the (Calibration) Details*, IMF Working Paper, August 2001, WP/01/113, ([www.imf.org](http://www.imf.org)).

## 1.4 Disposition

Following the first introductory section, the second section introduces the nature of banking business and why there is a need for bank regulation. I will also introduce the revised framework, Basel II, and how it differs from the framework already in place, Basel I. The revised framework is substantially different from the first framework. The main differences in Basel II compared to Basel I, lie within the new calculation of credit risk together with the new capital charge for operational risk, the new supervisory review process, and market transparency rules. It is vital to understand these differences to be able to analyse their possible effects.

The third section comprises an analysis of the Swedish Financial Supervisory Authority (FI) and its new role in the banking market. The FI plays a new and important role in the implementation and maintenance of the Basel II framework. The FI supervisory process in Basel II will affect capital charges but it is not sure to what extent and what practical effects the FI will introduce. Borrowers will be more or less affected by the actions of the FI under the new Basel II rules depending on how the FI acts under its new position.

In the fourth section I will outline the proposed changes, resulting from Basel II, to the increased cost clauses in a standard setting loan agreement issued by the Loan Market Association. Basel II will give rise to significant costs and it is likely that banks will try to impose these costs on borrowers when possible. Basel II will have an effect on loans already advanced since capital charges for certain categories of lending will change with Basel II. It is therefore interesting to examine if the banks have the right to be reimbursed under the increased cost clause as it stands today or if there is a need for a revised clause dealing with Basel II separately. I have included in this section an analysis of the increased cost clause as it stands today and the new propositions.

In the fifth section I will outline some key effects on the Swedish capital markets. I will also present some opinions on this matter here from the Swedish markets together with the comprehensive report on Basel II effects on the European capital markets, performed at the request of the European Commission by PriceWaterHouseCoopers.

In the sixth and last section I will try to give a complete and coherent analysis of the effects of Basel II for a Swedish corporation with investment grade rating or better. The analysis will also include alternative ways of meeting capital adequacy demands by using credit risk mitigants (CRM). The main question that I will try to answer is what will happen to credit prices after the implementation of Basel II.

The analysis will be both of a legal and economic character with a macro-perspective to provide a picture, as accurate and complete as possible, of the potential developments.

## 2 Banking Business and the Basel Capital Accords

### 2.1 The Characteristics of Banking Business and Why Banks are Special

The banking sector has during the last decades undergone significant changes. The classic functions of a bank, deposit taking and loan making, have increased in scale and scope and many banks have been more or less forced into other financial sectors, such as financial trading activities due to increasing competition from non-banking entities and narrowing profit spreads. Banks are today often involved in more or less risky investment activities to increase their profit.

The reason why banks are regulated would be that banks have a certain position in society, banks have certain functions other industries cannot provide and the purpose of regulation is to safeguard these vital functions.

Since their development, banks have been an important part of the economic growth in society. The nature of banking has traditionally been to take deposits from those who have a surplus of funds and then channel the surplus to those who have a fund deficit.<sup>8</sup> This intermediary function has over history been the very essence of banking. The banking business is also characterized by the fact that money is fungible property. The customer to a bank deposits funds with the bank and expects to get the same amount back on demand, not the exact same bills that was deposited.<sup>9</sup>

As long as the funds deposited with the bank are to a significant extent harmonized with a reserve held by the bank there seems to be nothing strange about this business. This is however not the fact since holding cash, or highly liquid assets comparable to cash, as a reserve in case of large withdrawals is expensive and therefore, from a profit making perspective, the least a bank wants to do.<sup>10</sup> What instead is the practice of banks is to lend most of the deposited money to other entities, or other banks, and only keep a fraction of the deposits as a reserve to manage the normal

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<sup>8</sup> A bank must undertake both these activities to be a bank. The reason for taking deposits and making loans is off course not beneficial, the bank will earn money through the spread between the lower interest rate paid to the depositor and the higher interest rate charged with the borrower. Other classic activities of banking has been discounting bills and notes, conducting safe deposit functions, buying and selling currencies, effecting transfers between accounts and collecting and clearing negotiable instruments, see Effros, *Central Banks in the Age of Standardization*, 1999, (Regulation of Financial Markets LLM class handout ) p. 2, 3.

<sup>9</sup> As opposed to bailment where a depositor is to receive the identical thing back at the end of the term, see Samuelsson, Nordhaus, *Economics*, 13<sup>th</sup> Ed, McGraw-Hill, p. 234.

<sup>10</sup> Banks often keep more than 10 % of total deposits as reserve, see Samuelsson, Nordhaus, p. 236.

withdrawals. This fractional reserve system is a workable and profitable construction for banks since most depositors are not likely to withdraw their deposits all at once. The complications when the unforeseen event of massive simultaneous withdrawals in fact takes place could have devastating results.<sup>11</sup>

It has been said that “banks create money”.<sup>12</sup> A result of the fractional reserve system is that the total amount of deposits will exceed the amount of reserves held with the bank. A good metaphor of this activity is that banks “create” money and this is a key economic function of banking.<sup>13</sup> Traditionally banks have also been highly leveraged<sup>14</sup> and lowly capitalized compared to other industries.<sup>15</sup>

What is further interesting about banking business is that the depositors can withdraw their deposits on demand, whenever they choose, but the bank has committed to its borrowers for a set term since the loans often are wholesale loans financing productive investments. This problem is in academic writing referred to as maturity mismatch, a mismatch that is the inevitable result of financing medium to long term lending commitments with short term borrowing, which is what banks do when they accept deposits on demand and use them for making long term loans. The maturity mismatch between the short term liquid liabilities and the long term more or less illiquid assets<sup>16</sup> makes the banking business fragile in its structure.<sup>17</sup>

The banking business is of a first come first served nature which means that the depositor who “knocks on the door first”, demanding withdrawal, will also be the one who is paid first. This first come first served approach, together with the fact that banking business is a fractional reserve system, results in the fact that a bank will be at any time unable to fulfil all of its obligations of paying the depositors. This inability accentuates the fragility of the banking business.<sup>18</sup>

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<sup>11</sup> Banking crisis that has occurred in most part of the world at some point have devastating effects both economically and socially on society, see section 2 below.

<sup>12</sup> See Samuelsson, Nordhaus, p. 233.

<sup>13</sup> For details on “the multiple expansion of bank deposits” which turns one deposited cash dollar into ten dollars of bank money, see Samuelsson, Nordhaus, p. 236.

<sup>14</sup> Leverage, or UK gearing, is the ratio of debt compared to equity.

<sup>15</sup> Lastra describes the low capitalization as both a “cause” and “consequence” of regulation, see Lastra *Central Banking and Banking Regulation*, LSE Financial Markets Group, 1996, p. 81.

<sup>16</sup> The loans granted by banks are difficult to value since the factors affecting the value, such as the borrower’s financial condition, market volatility etc, are constantly changing. There is also an information asymmetry problem related to bank loans since lenders have problems in assessing the quality of a potential borrower, the adverse selection problem. Lenders also face moral hazard problems in monitoring and controlling the borrower, see Murton, *Bank Intermediation, Bank Runs, and Deposit Insurance*, FDIC Banking Review, Spring/Summer 1988, p. 2.

<sup>17</sup> See Lastra, p. 81.

<sup>18</sup> See Lastra, p. 82.

The obvious complication that a bank is unable to fulfil all of its obligations at any given time creates insecurity for the depositors as they know that if trouble arrives for the bank they will not all be paid. The depositors will therefore, as a protective measure, withdraw all of their funds as quickly as possible even if there is only a slight chance that their bank is in trouble. There will be what is referred to as a bank run, which is nothing more than, from a depositor's point of view, a logical reaction to the way the banking business is structured.<sup>19</sup> The bank will in the case of a bank run try to sell off its liquid assets, and if that is insufficient the bank will be forced to sell its illiquid assets. The illiquid assets, consisting of loans granted to borrowers based on the economic situation of that specific borrower, are in their nature more difficult to sell since they were never intended to be traded on a secondary market and the result of this is that the loans would have to be sold at discount prices, "the fire sale", which quickly gives a bank, which faces a bank run, a problem not relating to its liquidity but to a problem far more serious, its solvency. The value of the bank as an operating entity will quickly diminish as a result of the fire sale, and the bank run will be costly due to the discounting of the illiquid assets.<sup>20</sup>

The answer to why banks are special from other industries lies within the characteristics outlined above. Banks take deposits from the public, which have a strong interest in the financial soundness of banks, and banks are important to economic growth as they are financial intermediaries facilitating productive investments. The information asymmetry is of greater relevance in the banking business than in other industries<sup>21</sup> since it is difficult for consumers of banking services to assess the creditworthiness of a bank and also to understand what risks are involved in certain banking strategies. Banks suffer from maturity mismatch between liabilities and assets<sup>22</sup>, a mismatch that together with the fractional reserve system makes banks fragile. Banks are lowly capitalized and have developed into being engaged in riskier activities as a result of the narrowing profit spreads. *Goodhart* also points out that banks are different from other industries since systemic risk, when bank problems becomes contagious, is not a threat to non-financial entities. It is not likely that the crisis and eventual failure of one company within a certain sector would also affect other companies in that sector to the extent that they also will fail. Banks also have an important payment function in society and a crisis in the banking sector is likely to disrupt this essential function.<sup>23</sup>

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<sup>19</sup> See Lastra, p. 82.

<sup>20</sup> For a detailed analysis of the social cost of bank runs, see Friedman, Schwartz, *The Great Contraction 1929-1933*.

<sup>21</sup> There must be some information asymmetry otherwise there would be no point in seeing a doctor, or a lawyer for that matter.

<sup>22</sup> Lastra points out that the mismatch between assets and liabilities is a problem not only to banks, though banks face this problem more acute, see Lastra, p 81.

<sup>23</sup> See Goodhart, p. 11.

## 2.2 The Purpose of Bank Regulation

History has shown that governments tend to show great interest in the banking business and often deem it necessary to impose regulation on banks to ensure their functions in society. The regulatory progress has always been more productive in the aftermath of a banking crisis, when the fragility of the banking structure is most obvious.<sup>24</sup> The regulatory situation varies in different countries and as a result so does the reasons behind regulation.<sup>25</sup>

The positive effects of sound banking is of great importance to financial stability and economic wellbeing. The history of bank failures might be the most important factor to why banks are more regulated than non-banking entities.<sup>26</sup> Over time banking crises have had severe effects on society and to protect society from economic adversity and to satisfy the public outcry for actions following a crisis, governments have taken upon them to impose regulation on banks to ensure that their normal functions are not disrupted. The satisfaction of the public outcry must be seen as a political reason for regulation.

The problem of contagion is a strong reason for the regulation of banks. A bank run on a troubled bank could also affect sound banks since depositors overall confidence in the banking system may quickly diminish.<sup>27</sup> The risk of this contagion could lead in a worst case scenario to the collapse of the whole banking system in a country and it has been an historical task for governments to protect society from systemic collapse. The intention is not to protect depositors from the default of a single institution but to minimize the risk of collapse of the entire system.<sup>28</sup> Regulators want to safeguard confidence in the banking business and the effects of regulation could very well be an increase in confidence.<sup>29</sup> The systemic risk that the banking business faces is separated from other risks, such as credit risk, market risk, interest rate risk, operational risk etc. Most other industries are not facing a systemic risk since the failure of one company within a specific sector is not likely to undermine other companies in that sector.<sup>30</sup> Banking crises throughout history has given empirical evidence of that the systemic risk if it becomes reality can cost the economy greatly.<sup>31</sup>

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<sup>24</sup> See Cranston, Ross, *The Principles of Banking Law*, 2<sup>nd</sup> Ed, Oxford University Press, 2002, p. 65.

<sup>25</sup> In the US there have been attempts to channel bank credit into socially desirable directions through regulation such as the Community Reinvestment Act (CRA), see Lastra, p. 76; see also Cranston, p. 67.

<sup>26</sup> The effects of a bank crisis were painfully shown in the recent financial crisis in Argentina.

<sup>27</sup> There will be a flight to cash, see Cranston, p. 67.

<sup>28</sup> See Cranston, p. 66.

<sup>29</sup> It is argued that regulation could also cause moral hazard problems since customers of banks are less likely to investigate for themselves the policies of their banks and instead rely on that regulation makes investigation pointless.

<sup>30</sup> See Cranston, p. 67.

<sup>31</sup> The cost could be as much as 15-20% of GDP, see Cranston, p. 66.



Banks are linked to each other through inter-bank deposits and through the payment system, which in certain situations has made banks exposed to and highly dependent of each others financial status.<sup>32</sup> The systemic contagion could thus derive out of three factors, the public perception of that if one bank fails so will the other, the inter-bank deposits, and the inter-bank clearing and payment linkages.

What regulators also want to ensure is that banks are not being used for fraud, money laundering, or terrorism financing.<sup>33</sup> Such activities need to be minimized as far as possible to make the market run smoothly. The non-disclosing nature of banking, with secrecy rules, could lead to a higher risk of fraudulent behaviour in the banking business than in the non-banking business.<sup>34</sup>

The key purposes of bank regulation seem to be relating to a number of different areas. The basic reason is to protect depositors since they have to become creditors of the bank in order to do business, and most people need to undertake bank business to some extent.<sup>35</sup> There is a need for regulators to protect the consumers and in this aspect the need for regulation is stronger in retail than in wholesale banking.<sup>36</sup> The best way to protect depositors would be to ensure that they have confidence in the system, which could be done through the encouragement of good bank management and by providing confidence in the form of lender of last resort, often the central bank in a country, or deposit insurance provided by the government. What everyone wants is a safe and sound banking system that can maintain monetary and financial stability in the system. There are also political reasons for regulation as mentioned above and they vary with the country involved. A key issue for bank regulation to achieve is to provide a stable framework for making payments. The regulation must also prevent the occurrence of and limit the effect of negative externalities ascribed to a bank failure, such as bank runs, contagion and systemic risk. It is also important to create a regulatory framework that stimulates competition and efficiency of the banking business.<sup>37</sup> The cost of regulation could be defended with the argument that even if systemic collapse is a low probability occurrence, the costs and damages if it in fact would happen, could be very significant.<sup>38</sup>

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<sup>32</sup> The inter-bank exposures have decreased after the introduction of derivatives, see Cranston, p. 67.

<sup>33</sup> See Cranston, p. 68-74.

<sup>34</sup> See Lastra, p. 70.

<sup>35</sup> This contrasts with other industries, see Spong, p. 6.

<sup>36</sup> See Llewellyn, *The Economic Rationale for Financial Regulation*, FSA Occasional Paper in Financial Regulation, 1999, p. 41.

<sup>37</sup> See Spong, p. 7.

<sup>38</sup> Goodhart suggests the cost of regulation to be viewed as in insurance premium against the adversities related to systemic failure, see Goodhart p 9.

## 2.3 Basel I, the First Accord (1988)

The first capital accord, referred to as Basel I, was issued in 1988. Basel I was intended for internationally active banks and was issued as a response to the significant increase at the time in credit risk in the financial markets and risks resulting from off-balance sheet activities.<sup>39</sup>

Basel I introduced the fundamental 8 % requirement, which stated that banks should keep 8 % of the sum of its risk-weighted assets as a capital reserve.<sup>40</sup> The first accord was of a general character, a fact that helped the adoption process world-wide and gave Basel I substantial recognition but at the same time a fact that meant that Basel I lacked certain important aspects. There was an almost instant need for revision due to this lack of detail. Basel I mainly concerned credit risk, which is the risk of a borrower defaulting on its obligations, but through the market risk amendment of 1996, market risk was included in the first accord.<sup>41</sup> Basel I lacked certain criteria for risk measurement and was considered non-capable of actually capturing the risks involved in corporate lending.<sup>42</sup> In Basel I, as an example of the lack of detail, corporate lending was weighted at 100 % indifferent of the financial status and rating of the borrower. This is not a reflection of the real risk involved and for borrowers with strong rating this is a most disadvantageous rule.

## 2.4 Basel II, the Revised Accord (2004)

The Basel Committee issued in June 2004 the revised framework on capital adequacy, Basel II.<sup>43</sup> The new capital accord is a much more complex and detailed framework than Basel I. The reason behind the new capital charges in Basel II is partly that the financial system has undergone key changes since the first accord was issued and partly because Basel I lacked certain aspects for accurately measuring risk such as a means of considering credit rating of a corporate borrower. The main capital charge of 8 % still stands as pivotal rule in Basel II but the calculations and risk-weight numbers have undergone a great deal of revision.<sup>44</sup>

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<sup>39</sup> See Taylor, Andrew, *What is Basel II and why has it got three pillars?* Butterworths Journal of International Banking and Financial Law – April 2004, Volume 19, no. 4, p. 123.

<sup>40</sup> The risk weighted assets being the total exposures divided into categories with different risk weights with which the categories are multiplied with, for instance corporate exposure is in Basel I weighted at 100 % not taking the credit rating of the specific company into consideration. “Blue chip” credits such as IBM is in Basel I considered to be just as risky as any company credit, a consideration which undisputedly is a strong simplification of the real risk involved.

<sup>41</sup> See the 1996 Amendment to the Capital Accord to incorporate Market Risks, issued by the BCBS.

<sup>42</sup> See Petch, Tolek, *Capitalising on Basel II*, The Treasurer, June 2004, p. 47.

<sup>43</sup> The full name is the *International Convergence of Capital Measurement and Capital Standards: A Revised Framework*, June 2004.

<sup>44</sup> See Basel II, p. 12.

The purpose of the detailed calculations set out in Basel II is to create a more risk sensitive framework that more accurately measures the risk connected with a certain exposure. The purpose is also to strengthen the soundness and stability of the international banking system without making capital adequacy regulation a source of inequality among internationally active banks.<sup>45</sup>

It is also important to state the Basel II framework is not intended to lower the total amount of regulatory capital held by banks even if certain banks will face increasing capital charges after the new framework has been implemented.<sup>46</sup>

The issuance of the revised framework has been an on going process over the last decade. To ensure that all important pieces were included the Basel Committee performed Quantitative Impact Studies (QIS 1-3) and issued Consultation Papers (CP 1-3) to give countries and financial authorities and organisations the opportunity to contribute to the revision of the capital adequacy framework.<sup>47</sup>

It should be stressed that Basel II imposes minimum requirements on internationally active banks, which are free to hold any ratio of capital they deem appropriate as long as the 8 % is complied with.<sup>48</sup> Most large international banks normally hold a capital buffer well exceeding the 8 % minimum.<sup>49</sup>

## **2.5 The Structure of the Revised Framework – Adequate Capitalisation through Three Pillars**

The Basel II document consists of three pillars. Pillar 1 aligns the minimum capital adequacy demands related to credit-, market- and operational-risk. The fundamental requirement of 8 % of the sum of the total risk-weighted assets is still in place but the calculations and parameters are revised a great deal.<sup>50</sup> The requirement to keep capital to cover operational risk is a new input compared to Basel I.

Pillar 2 contains the supervisory review process and discusses key principles of supervisory review, risk management guidance and

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<sup>45</sup> See Basel II, p. 2.

<sup>46</sup> See Basel II, p. 4.

<sup>47</sup> See *Consultative Document – Overview of The New Basel Capital Accord*, Issued for comment by 31 July 2003, April 2003, and see also *Quantitative Impact Study 3 – Overview of Global Results*, May 2003.

<sup>48</sup> See Basel II, p. 3.

<sup>49</sup> See Lind, Göran, *Basel II – nytt regelverk för bankkapital*, Penning- och valutapolitik 2005:2, p. 10.

<sup>50</sup> See Basel II, p. 12.

supervisory transparency and accountability.<sup>51</sup> The second pillar sets out that the banks should first make their judgement of the risks and the capital needed to cover them, and then the supervisory authority should make its judgement to evaluate if the bank has an appropriate level of capital and if not impose an increase in the examined bank's regulatory capital. The supervisory authority should in its assessment consider all risks that banks are exposed to, not only credit, market and operational risk, and make a complete examination.

Pillar 3 contains rules on the improvement of market discipline through transparency. The new rules gives the banks to some extent more freedom to internally evaluate and calculate the capital needed and this increases the need for transparency. The second and third pillar represent innovative additions to capital supervision that reinforce the first pillar.

The second and third pillar could have some effect on corporate finance but the main impact will come from pillar 1 in general and from the new calculations of credit risk in particular.<sup>52</sup>

The rules in the first pillar relating to capital requirements for credit risk are divided into three models. These are the standard approach, the foundation internal ratings based (FIRB) approach and the advanced internal ratings based approach (AIRB). The standard approach is not much different from the Basel I rules and it states that the bank shall use the external credit ratings available in the markets to determine the risk weight of its exposures. Basel I weighted all corporate exposures at 100 %. This is not the case with the standard approach in Basel II. Below is a model of the risk weights related to credit ratings in the standardised model for corporate lending in Basel II. The Foundation and Advanced IRB models are dealt with below. There are also three models for the calculation of operational risk capital, also outlined below.

Another change that comes with Basel II is that the capital cost of a loan for the borrower will vary over the term of the loan. For the standardised banks the cost will vary with the credit rating. For IRB banks the cost will be determined by their internal assessments.

Corporate lending risk weights are in Basel II related to the credit rating of a borrower if the bank uses the standardised approach. Depending on the rating the risk weight could be 20 % for the highest rated borrower to 150 % for borrowers with poor rating. Unrated borrowers will be weighted at 100 % which may seem strange considering that poorly rated companies are weighted at 150 % but this can be explained by the fact that relatively few corporate borrowers in Europe have an external rating.<sup>53</sup>

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<sup>51</sup> See Basel II, p. 158.

<sup>52</sup> See Capps, Andrew, *Getting to the Core*, The Treasurer, September 2003, p. 33.

<sup>53</sup> See Petch, Tolek, *Capitalising on Basel II*, The Treasurer, June 2004, p. 47.

Below is an outline of the models in the Basel II document related to credit and operational risk as set out in pillar 1 together with the standardised approach risk weight for corporate exposure:

**A. Pillar 1 – Credit Risk**

1. Standardised Approach (*reliance on external rating*)
2. Foundation IRB Approach (*banks use own internal assessment*)
3. Advanced IRB Approach (*banks use own internal assessment*)

**B. Pillar 1 – Operational Risk**

1. Basic Indicator Approach
2. Standardised Approach
3. Advanced Measurement Approaches

**C. Risk Weight for Corporate Exposure (Pillar 1 – credit risk)**

Standardised Approach

<i>Investment grade rating</i>	{	AAA to AA-	20%
		<b>A+ to A-</b>	<b>50%</b>
(Standard & Poor's)		<b>BBB+ to BB-</b>	<b>100%</b>
		Below BB-	150%
		Unrated	100%

## 2.6 The Standardised Approach

A bank using the standardised approach will rely on external credit ratings to determine its regulatory capital. The external ratings used in the Basel II document is the ratings methodology used by Standard & Poor's.<sup>54</sup> This is however only an example and other rating institutes methodologies can be used as well. Each specific category of lending has its specific set of risk weights depending on the nature of the lending.

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<sup>54</sup> See Basel II, p. 15 n. 13.

## 2.7 The FIRB and AIRB Approach<sup>55</sup>

The risk evaluation by banks could in Basel II either be based on standardised credit ratings offered by rating agencies (the standardised approach) or on banks own estimate and calculation of risk, the internal ratings based approach (IRB approach)<sup>56</sup>.

There are two different IRB models, the Foundation IRB (FIRB) and the Advanced IRB (AIRB). Which model a bank is allowed to use is determined by the national supervisory authorities.<sup>57</sup> In Sweden this authorisation will be performed by the Swedish Financial Supervisory Authority (Finansinspektionen, FI). A bank using the AIRB model is allowed to base its risk measurement calculations on more own information than a bank using the FIRB model. The IRB authorisation of banks will be undertaken on an individual basis but will to a large extent be an evaluation by the supervisory authority of the applying bank to see if the bank has an internal rating system and a risk measurement model that provides a satisfactory and relevant consideration of counterparty risk.<sup>58</sup>

The IRB rules are separated into three categories.<sup>59</sup> The first category gives the components that are part of the risk calculation. The risk components are:

<b>PD</b>	probability of default (estimate of the counterparty risk)
<b>LGD</b>	loss given default (what will the loss be)
<b>EAD</b>	exposure at default (how much of the loan is drawn down)
<b>M</b>	effective maturity (what is the term of the credit)
<b>S</b>	size of the company (annual turnover)

An IRB institute must report the models that have been used to the national financial supervisory authority and provide historical data that motivates the values used in the risk calculations.

The second category gives the banks the method on how to transfer the risk components for specific exposures into risk weighted assets. The third category contains minimum requirements that banks have to meet if the IRB model is to be applied to a certain asset category.

The fundamental rule is that the capital requirement for the exposure will increase if the values of the risk components increase. The FIRB institute

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<sup>55</sup> This section is simplified and the mathematics and technical details are left aside. These models are included in the first pillar under the credit risk calculation models.

<sup>56</sup> The Swedish term for the IRB model adopted by the Swedish Financial Supervisory Authority is *Intern Riskklassificeringsmetod* (IRK).

<sup>57</sup> One aspect of the new role of the supervisory authorities.

<sup>58</sup> This is the BCBS description of the minimum requirements a bank has to fulfil to be allowed to act as an IRB institute, see BCBS third consultative paper (CP3).

<sup>59</sup> See Basel II, p. 55.

will provide its own estimates of PD but estimates of the other risk components will be provided by the supervisory authority (FI).<sup>60</sup>

The AIRB institute will provide its own estimates on all risk components. To be allowed to act as an AIRB institute a bank must satisfy all the requirements set out in the Basel II document. The bank must for instance provide the supervisory authority with 5 years of historical data for PD estimates and 7 years historical data for the other risk components to motivate the estimates.<sup>61</sup>

The risk weight will be performed at an individual basis and will vary with the specific risk measurement system of the AIRB bank involved. AIRB institutes are offered a possibility to choose a position that best suits their expectations, ambitions and risk appetite. There are indications suggesting that historical internal data with a bank gives a better foundation to predict a future default than external data.<sup>62</sup>

If an institute using the standardised approach would be under lower capital requirements than it would have been using the IRB approach the supervisory authority will demand the institute to increase its regulatory capital. The board of executives and the governing persons of the organization will be required to have full understanding and insight in the models for which the institute seeks approval. There shall also be a formal disclosure policy approved by the board of directors.<sup>63</sup> The disclosure requirements will allow market participants to access vital pieces of information on capital, risk exposures, risk assessment procedures and the capital adequacy of the institute.<sup>64</sup> The disclosure is even more important when the bank uses an internal model for risk calculations. The disclosure should be consistent with how senior management and the board of directors assess and manage the risks of the bank.<sup>65</sup> The supervisory authority could require banks to disclose information under soundness and safety grounds and supervisors could make some or all of the information publicly available.<sup>66</sup>

Basel II is creating incentives for banks to invest in sophisticated risk management models which could lower capital charges for certain types of credits. The revised framework allows the consideration of more parameters than was possible in Basel I.

The basic rule is that banks should keep a reserve of capital equivalent to 8 % of the risk-weighted assets even if the calculations are made based on

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<sup>60</sup> Another aspect defining the new role of the FI.

<sup>61</sup> The PWC report states that banks with asset portfolios with little experience of default, (big companies with good rating) could face initial difficulties providing the historical data, see the PWC report 2004, p. 40.

<sup>62</sup> See Balans 5/2004.

<sup>63</sup> See Basel II, p. 177.

<sup>64</sup> See Basel II, p. 175.

<sup>65</sup> See Basel II, p. 175.

<sup>66</sup> See Basel II, p. 175.

completely revised risk measurement models. The 8 % requirement includes all categories of lending and not only corporate lending.

The new calculations of the risk-weighted portfolio could however create incentives for banks to make changes in their asset portfolios. According to Basel I corporate exposure should be weighed at 100 % not considering the rating of the corporation.

This approximation does not reflect the actual risk and Basel I did on some occasions give rise to arbitrage strategies from banks seeking to allocate capital to sub-investment grade companies, thereby receiving higher return on capital without increasing capital charges.<sup>67</sup> Basel II seeks to rectify this type of behaviour. This is done in Basel II by setting higher capital demands on lower quality assets and lower demands on high quality assets. Basel II creates a more risk-differentiated portfolio, which in a better way reflects the real credit risk involved.

Basel II will also allow banks to consider collateral to a greater extent than was possible with the first framework. In the Basel II document this technique of lowering capital charges are described as credit risk mitigants (CRM) and they could be of relevance to certain borrowers. The CRMs are dealt with below and in the analysis.

## **2.8 Standard or IRB Approach – a Race for the Banks**

It is of great relevance to all banks to try and become as advanced and sophisticated in their risk measurement as possible since the AIRB institutes are likely to benefit from lower capital charges and thus higher margins on their lending than standard institutes. It is clear that not all banks or financial institutes will be able to make the investments to be able to use the IRB models and even fewer will be allowed to use AIRB models.

At the time of writing, all of the major Swedish banks have sought the approval of the FI to act as an IRB institute, which means that they seek to use internal models for the measurement risk.<sup>68</sup> The FI accepts such applications from July 1 2005. If the banks are approved of by the FI they will be allowed to use the IRB models starting 2007.

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<sup>67</sup> See Taylor, Andrew, *What is Basel II and why has it got three pillars?* Butterworths Journal of International Banking and Financial Law – April 2004, Volume 19, no. 4, p. 124.

<sup>68</sup> The major Swedish banks are Svenska Handelsbanken, SEB, Föreningssparbanken, and Nordea together with other credit institutes such as SBAB, Länsförsäkringar Bank, Landshypotek and Svensk Exportkredit. These institutes are approximately paying €2 miljon for the approval process, see *FI granskar bankernas riskbedömningar*, 10 August 2005.



The guidelines for the approval process are not yet complete and the FI will seek guidance for the approval process in the new directive, CAD3<sup>69</sup>, and in the already issued guidelines by the Basel Committee. There could be a potential problem if the final draft of the proposed directive and the guidelines has undergone changes that are not included in the working material used by the FI today. The banks will pay for the approval process, which is likely to be a thorough and expensive one and it is important that the approval process is standardised at an early stage. The practical obstacles of providing 5 and 7 years of historical data depending on the risk component will initially be limited to three years to make the obstacle comprehensible.<sup>70</sup>

## 2.9 Adequate Capital Ratio as a Safety Cushion

The capital ratio is the relationship between the bank's capital<sup>71</sup> and its lending.<sup>72</sup> Regulatory capital and the concept of capital adequacy is an external control imposed on banks by bank supervisors. The basic idea behind making banks hold an adequate capital ratio is the idea of ensuring stability in the financial system by requiring banks and other credit institutes to hold a minimum reserve of capital to cover their exposures and to prevent problems as those outlined above in section 2.1 and 2.2. The capital adequacy rules could simplified be said to be a safety measure seeking to ensure that banks keep a buffer of capital related to their lending and do not put "all eggs in one basket". Large high-risk exposures without sufficient capital back up can cause instability in the system in the event of a default with a borrower.

Another reason why banks should keep a buffer of capital is the minimisation of moral hazard problems with increased risk taking by the owner of the bank in case of a crisis.<sup>73</sup>

The technical aspect of regulatory capital is based on the division of exposures into categories. The categories could be retail, corporate, commercial real estate etc. depending on the banks activities. Each category is given a risk weight intended to illustrate its default probability.

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<sup>69</sup> In some articles and also in some publications by the FI the new directive CAD3 is referred to as Basel II which may seem confusing.

<sup>70</sup> Interview Percy Bargholtz.

<sup>71</sup> The definition of capital relates here to not only share capital, see section 2.10 for the Basel definition of capital.

<sup>72</sup> See Valdez, Stephen, *An Introduction to Global Financial Markets*, 4<sup>th</sup> Ed., 2003, p. 30 (below cited as Valdez).

<sup>73</sup> See prop. 2002/03:139, p. 265. Moral hazard can be described as an incentives related issue which in practice is seen when owners of a bank is involved in excessive risk taking since they have nothing to loose themselves. There are no incentives for the reduction of risk.

The banks assets are weighted according to the risk of the counterparty defaulting. In a simplified example, normal bank loans are weighted at 100 %, cash are weighted at 0 % and collateralised lending has a weight of 50 %. The capital ratio is calculated by adding the total sum of the assets after they have each been multiplied with the risk weight numbers. The minimum requirement, introduced in Basel I, is that banks must keep capital equal to 8 % of its risk weighted assets.

Risk weightings are not applied only to on-balance sheet assets but also to off-balance sheet items that involve risk such as loan guarantees, standby letters of credit, documentary credits and financial derivatives.<sup>74</sup>

## 2.10 The Basel Definition of Capital<sup>75</sup>

As mentioned above a bank's capital is the safety cushion in the event of a borrower defaulting, which all banks will experience at some point. A bank must rely on its capital being sufficient to cover possible defaults. It is therefore important to regulate what assets banks are allowed to hold as capital and to what proportion. From a regulatory perspective it is eligible that banks keep as liquid capital as possible, such as cash or gold. This is not the most profitable scenario for the banks and their capital will in practice consist of other types of assets.

The Basel Committee has agreed, not without much debate, on a definition of capital where Tier 1 capital (the *best* capital) consists of shareholder's equity, retained profits and non-cumulative perpetual preference shares. Tier 2 capital consist of cumulative preference shares, revaluation reserves, undisclosed reserves, subordinated term debt with maturity in excess of 5 years.<sup>76</sup> Tier 3 capital is unsecured subordinated debt with a remaining maturity of more than 2 years.<sup>77</sup>

A bank must keep a certain proportion of tier 1 capital compared to tier 2 and 3 capital. There is no definition of eligible capital, that is what the appropriate proportion of each tier is, but the Basel Committee is working on such a definition.<sup>78</sup>

## 2.11 The Risks that need to be considered

Banks are exposed to a number of risks. These risks are the probability of an unwanted event occurring.<sup>79</sup> Risk management can be said to be one of the

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<sup>74</sup> See Valdez, p. 32.

<sup>75</sup> This definition was outlined in Basel I.

<sup>76</sup> See Valdez, p. 31.

<sup>77</sup> The definition of Tier 3 capital came with the Amendment to the Capital Accord to Incorporate Market Risks, Basel Committee on Banking Supervision, January 1996, modified September 1997 (cited as the Market Risk Amendment).

<sup>78</sup> See Basel II, p. 4.

<sup>79</sup> See SOU 1998:160, p. 193.

key functions that has made banks such an important part of the financial markets. As intermediaries banks can undertake transactions at a relatively low cost and at the same time banks have advantages in handling certain types of risk. These risks are especially complex risks related to activities and assets where customers have an information deficit.<sup>80</sup>

The capital buffer mentioned above is held to cover certain risks. The risks can be divided into financial risks such as credit, market, and liquidity risks.<sup>81</sup> *Credit risk* is the risk of a borrower defaulting on its obligation thereby causing a loss or an increased cost with the bank. *Market risk* is the risk of market volatility causing losses because the market price of a certain asset falls. The most important market risk is interest rate risk since most banks' assets are sensitive to fluctuations in interest rates.<sup>82</sup>

Operational risks can best be described as a collective name of all other non-financial risks.<sup>83</sup> Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.<sup>84</sup>

A loss for a bank could derive out of any or from all these risks and it is therefore important that they are each considered. The above mentioned risk categories could be divided into further categories, such as legal, reputational and foreign exchange risks.

## 2.12 Credit Ratings and Their Role in the Markets

There are a number of different institutes in the financial markets who makes business by rating companies and credits. The aim is to provide the financial markets with an independent and objective image of the companies and credits. Credit ratings are a valuable tool in the capital markets for the evaluation and assessment of credit risk.<sup>85</sup> The ratings are performed on an independent and objective basis and they are the current opinions by the financial rating agencies not representing statement of facts. Nevertheless ratings are of vital importance for companies and their cost of financing.

Banks will when pricing a loan to a company evaluate the rating of the company if the company has an external rating. The most important rating agencies are Standard & Poor's, Fitch and Moody's.<sup>86</sup>

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<sup>80</sup> See SOU 1998:160, p. 192.

<sup>81</sup> See SOU 1998:160, p. 193.

<sup>82</sup> See SOU 1998:160, p. 193.

<sup>83</sup> The definitions in this section are taken from the proposition 2002/2003:139, *Reformerade regler för bank- och finansieringsrörelse*, p. 169.

<sup>84</sup> See Basel II, p. 137.

<sup>85</sup> See the *Standard & Poor's Rating Services Code of Practice and Procedures*, September 2004, p. 1.

<sup>86</sup> See Valdez, p. 114.

Standards & Poor's base their ratings on likelihood of default, nature and provision of the obligation and the protection afforded to and relative position of, the obligation in the event of bankruptcy, reorganisation, or other arrangement under the laws of bankruptcy and other laws affecting creditor's rights.<sup>87</sup> It is important to understand the credit ratings role in the markets when reviewing the Basel II document.

The risk ratings of Standard & Poor's range from AAA (triple A), which is the best risk, to D, which means a company in default or expected to default.<sup>88</sup> There is also a narrower assessment with plus and minus added to the initial grade. There is an invisible line separating companies worth investing in from companies with a higher risk and therefore not an equally preferable investment. This line goes below the BBB grade and companies acting with BBB grade or better are said to be companies with investment grade rating. The line is of crucial importance for the cost of finance. The higher the grade the lower the rate of interest.<sup>89</sup>

## 2.13 Implementation Issues

The provisions in Basel II has been adopted by the European Commission and has resulted in the proposal (COM [2004] 486 final)<sup>90</sup> which will change the directives 2000/12/EG and 93/6/EEG.<sup>91</sup> The proposal is expected to be approved by the European Parliament during 2005. The intention is that the rules in the new directive shall be fully implemented in Sweden through national legislation not later than 2006/2007.<sup>92</sup>

Basel II will therefore become binding upon all members of the European Union through the third Capital Adequacy Directive (CAD3) and national legislation.

The CAD 3 directive will not only be applicable to all banks within the European Union but to all credit institutions and securities firms. There is an obvious risk of discrepancies between the Basel II document and the result of the implementations in the individual member states.<sup>93</sup>

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<sup>87</sup> See Valdez, p.115.

<sup>88</sup> The complete set of grades is AAA, AA, A, BBB, BB, B, CCC, CC, C, C1, D (not including the plus and minus).

<sup>89</sup> See Valdez, p. 115.

<sup>90</sup> The proposal was put forward on July 14 2004. It is referred to as CAD 3.

<sup>91</sup> These two directives from 2000 and 1993 can be said to represent the provisions in Basel I.

<sup>92</sup> See Lagrådsremiss, *Granskning av metoder för att mäta kreditrisk och operativ risk*, 23 March 2005.

<sup>93</sup> This is not a specific Basel II problem but since the level of technicalities in Basel II is relatively high the risk of discrepancies could be higher than normal.

## 2.14 Credit Risk Mitigants

One substantial difference provided by the new framework is the possibility for banks to consider credit risk mitigants (CRM) in order to lower capital charges for certain exposures. These risk mitigants can consist of financial and physical collateral, guarantees and financial derivatives.<sup>94</sup> In principle, the only collateral that was recognised by Basel I was cash or government securities.<sup>95</sup> A company can in Basel II lower its capital cost by reducing the lending banks capital charges by for example providing a guarantee from a parent company if the rating of the parent is A- or above.<sup>96</sup>

The credit risk mitigants could affect the price of capital for a Swedish company with unused collateral since a bank will be able to consider these to lower capital charges. The credit risk mitigants makes it possible for banks to use lower values on the risk components which means lower capital charges. Standardised institutes and FIRB institutes (which are not allowed to use own estimates of LGD) will use either the simple approach or the comprehensive approach to calculate the effect of collateral on the capital charge for a certain exposure.<sup>97</sup> The comprehensive approach takes into consideration market volatility, which the simple approach does not. This allows the bank to adjust its exposure continuously.

AIRB institutes consider collateral as part of the internal process and provide estimates themselves on the effect of collateral on LGD values. This means that the effect of collateral for a company's cost of finance will depend on the type of bank involved. The value used for loss given default will be lower if there is collateral connected with the exposure since the bank can realise this collateral if the borrower defaults.

The usage of these various CRM techniques are subject to banks meeting minimum legal requirements and the banks' ability to demonstrate a robust risk management process. It is possible that the new CRM techniques are only providing minimal impact for banks using the Standardised or FIRB approach whereas AIRB banks could see some regulatory capital relief being gained.<sup>98</sup>

## 2.15 Swedish Statutes on Capital Adequacy

The Swedish statutes regulating banks and credit institutes are found in:

- Lag (2004:297) om bank- och finansieringsrörelse
- Förordning (2004:329) om bank- och finansieringsrörelse

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<sup>94</sup> See Basel II, p. 71.

<sup>95</sup> Both being highly liquid, extremely low-risk assets.

<sup>96</sup> See Petch, Tolek, Capitalising on Basel II, The Treasurer, June 2004, p. 47.

<sup>97</sup> See Basel II, p. 29.

<sup>98</sup> See Karaolis, Christopher, Basel II: The New Accord, The Treasurer, May 2003, p. 53.

- Lag (1994:2004) om kapitaltäckning och stora exponeringar för kreditinstitut och värdepappersbolag
- Förordning (2000:669) om kapitaltäckning och stora exponeringar för kreditinstitut och värdepappersbolag

The Swedish Supervisory Authority also publishes complementing directions and advice to the financial statutes.<sup>99</sup>

The requirements in the first framework Basel I, are represented in these rules and directions. The revision will be performed through national legislation in the member states in the European Union once the proposed CAD3 directive has been approved of by the European Parliament.

A recent Swedish statute regulating banks and other financial institutes entered into force on the July 1, 2004. This statute have not taken the Basel II provisions into consideration. In the preparatory work to the Lag (2004:297) om Bank- och Finansieringsrörelse the legislator recognises the greatly revised capital framework in Basel II and the need for a revision of the Swedish capital adequacy rules to implement Basel II.<sup>100</sup>

The chapter in the statute dealing with banks and their business operation is of a general character.<sup>101</sup> It primarily states that banks should have control over their risks and exposures and that they should keep capital to ensure soundness in the financial system. The generality of the chapter is probably related to the fact that the detailed framework in Basel II was on its way when the statute was issued.

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<sup>99</sup> These are available from [www.fi.se](http://www.fi.se) under Finansinspektionens författningssamling.

<sup>100</sup> See Prop 2002/2003:139, p. 268.

<sup>101</sup> See Lag (2004:297) om bank och finansieringsrörelse, chapter 6 §§ 1-7.

# 3 Basel II and the Supervisory Authority

## 3.1 The Supervisor of the Financial System

The Swedish Financial Supervisory Authority (FI, Finansinspektionen) is a public authority that issues permits, for banks and companies offering financial services in Sweden, and supervises and monitors these banks and companies to ensure financial stability and soundness.<sup>102</sup> Risk management and mandatory capital requirements are both major areas for the FI.

## 3.2 The New Role for the FI after Basel II Implementation

The supervisory review process in Basel II rests upon four key principles. The first principle is that banks should have a process for assessing overall capital in relation to their risk profile and strategy. The second principle is that the supervisors should review and evaluate internal capital adequacy assessments and take appropriate action if they are not satisfied with the result of this assessment. The third principle is that supervisors should expect banks to operate above the minimum regulatory requirements and the supervisor should have the ability to require banks to hold capital in excess of the minimum. The fourth principle is that supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required and should require rapid remedial action if capital levels is not maintained or restored.<sup>103</sup>

The Swedish statute 2004:297 chapter 13 regulates the supervision of banks and credit institutes by the FI. The FI supervision extends to making sure that credit institutes operating in Sweden follows the rules in the 2004:297 statute and any other directions or advises given by the supervisory authority.<sup>104</sup> The FI shall also supervise the board of directors and the governing parts of the banks and credit institutes.<sup>105</sup> The FI can at its sole discretion undertake an examination of a bank or credit institute.<sup>106</sup> If a bank or credit institute has set aside the rules the FI shall intervene and if the breach is serious the FI can revoke the permit of the bank or credit institute.<sup>107</sup>

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<sup>102</sup> See *Finansinspektionen - who we are and what we do*, 2004, p. 2.

<sup>103</sup> See Basel II, pillar 2, the four key principles, pp. 159-165.

<sup>104</sup> See § 2 chapter 13 of lag 2004:293 om bank och finansieringsrörelse.

<sup>105</sup> See § 3 chapter 13 of lag 2004:293 om bank och finansieringsrörelse.

<sup>106</sup> See § 4 chapter 13 of lag 2004:293 om bank och finansieringsrörelse.

<sup>107</sup> See § 1 chapter 15 of lag 2004:293 om bank och finansieringsrörelse.

Since the 2004:293 statute have not taken Basel II into consideration the supervisory process must be revised to include the Basel II standards.

The first main task for the FI in Basel II will be the approval process, where the FI shall approve of the banks applying to use the IRB models. The second main task for the FI will be that the FI shall provide some of the estimates of certain risk components to the FIRB institutes.

According to the second pillar of Basel II, the FI shall monitor the banks' risks, the risk management and capital and make a judgement if the capital is sufficient related to the risks.<sup>108</sup> The FI is also given the mandate to lay down the appropriate level of capital for an institute not able to show a satisfactory capital ratio.

The third pillar has the purpose of improving transparency and this affects the FI. Transparency could be a way of self-regulation of the markets by forcing the financial institutes to provide the market with the necessary information so that the counterparties can evaluate them better than they can today.

The FI will because of this see drastic changes in its methods of supervision. It is essential that the supervisory authorities seek to harmonise their methods with other financial authorities when implementing Basel II to avoid differences in the international supervision.<sup>109</sup>

There has been some concern from banks that the second pillar with the consolidated judgement of capital and risk by the supervisory authority could lead to an automatic regulatory capital increase not related to the risk of a specific bank. The FI strongly rejects any such rumours about an automatic capital addition in pillar 2.<sup>110</sup>

The judgement by the supervisor under pillar 2 could though lead to an increase in capital charges since the supervisor must consider interest rate risk, rumour risk, concentration risk etc. All these risks are hard to approximate and that is the reason why they are dealt with under pillar 2, which does not contain as exact calculations as the first pillar. Even if such risks are hard to estimate, the supervisory authority is supposed to be able to do just that.

Even if pillar 2 is not resulting in an automatic increase in regulatory capital, the FI will implement the framework with the Basel Committee opinion in mind, which is that all internationally active large banks should keep a

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<sup>108</sup> See Kerstin af Jochnick, *Finansinspektionens tillsyn i ett Basel II-perspektiv*, 17 February 2004, p. 2.

<sup>109</sup> See Kerstin af Jochnick, *Finansinspektionens tillsyn i ett Basel II-perspektiv*, 17 February 2004, p. 5.

<sup>110</sup> Kerstin af Jochnick, *Finansinspektionens tillsyn i ett Basel II-perspektiv*, 17 February 2004, p. 6.



capital reserve well over the 8 % minimum.<sup>111</sup> There is an obvious risk of an automatic increase in regulatory capital since the FI might want to ensure that the 8 % are well complied with.

The FI will have an own judgement process, called SEP or Supervisory Evaluation Process, which includes a review of the banks corporate governance, its risk management and organisation.

### 3.3 Supervisory Responsibility after Approval

It is the FI that will handle the application of banks to use IRB models and the question is then what the responsibility of the FI is in the event of an approved bank failing.

This is a complex question with no clear answer but the first thing to notice is the standpoint of the FI itself, which is that there will be no responsibility for the FI after the approval of the IRB banks. The FI points out that the ultimate responsibility must be on the banks but recognises at the same time that it is important that the FI and the banks have an open discussion and regular contacts.<sup>112</sup> Supervisory responsibility has been a heavily debated issue after major international financial scandals in the recent decade. Enormous amounts of money have been embezzled and the question of who is responsible has always been debated in the aftermath of a scandal.

At the time of writing, a landmark case on supervisory responsibility is being processed in the English courts. The case is referred to as BCCI or Three Rivers<sup>113</sup> and it addresses the question of supervisory responsibility for the Bank of England in its failure to intervene at an early stage to prevent the activities of the fraudulent Bank of Commerce and Credit International, BCCI, which operated mainly from London.<sup>114</sup>

The plaintiffs, the liquidators of the BCCI representing the interests of the depositors, argues that the Bank of England is liable on the grounds of committed misfeasance. This would mean that the Bank of England acted knowingly or recklessly in its treatment of BCCI which was allowed to act through its London branch unsupervised for over a decade. The result of this lack of supervision caused losses for depositors.

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<sup>111</sup> See Kerstin af Jochnick, *Finansinspektionens tillsyn i ett Basel II-perspektiv*, 17 February 2004, p. 7.

<sup>112</sup> See Kerstin af Jochnick, Percy Bargholtz, *Finansinspektionen klarar r g ngen mot bankerna*, Published in Dagens Industri on August 30, 2004.

<sup>113</sup> The name Three Rivers comes from a small local council in the north of London, see *Three Rivers District Council and Others v. Governor and Company of The Bank of England*.

<sup>114</sup> The opening statements of this massive case were the longest ever to be held in English courts and they lasted for over 6 months, see <http://news.bbc.co.uk/1/hi/business/4085720.stm>.

The case does not automatically apply to the situation of the FI giving its approval to an IRB bank. It is though interesting to reflect upon the responsibility for the FI and to what extent the Swedish depositors can rely on the FI supervisory approval process. It could be argued that the FI should be ultimately responsible if depositors suffer losses after the liquidation of a IRB bank related to fraud within the bank. There is no other authority involved in the approval process and it is most important that the FI examines the bank seeking to use the IRB models thoroughly. A thorough examination of the applying bank would be ensured if the FI was ultimately responsible. This responsibility could then also be a cornerstone in the new supervisory review process which is introduced in Basel II.

The problem of supervisory responsibility is greater in countries with more international banks such as in the UK and especially London. The Swedish market is smaller and the banks seeking to use the IRB models in Sweden are well-known banks and credit institutes.

There has been some debate about the new role of the FI and how the fact that it will act in a much closer relationship with the banks, especially the IRB banks, with the new Basel II supervision. There has been some concern that this could affect the impartiality of the FI since the distance between the FI and the banks is narrowed.<sup>115</sup> FI is given room for wide discretion in its decision-making in Basel II, especially under the second pillar. The FI states however that the capital adequacy judgement made under pillar 2 must be made with great precaution and capital charges should not be increased without good ground.

### **3.4 Interview with Percy Bargholtz, Advisor at the FI**

The interview with *Percy Bargholtz*, advisor at the FI, resulted in the section below.

*Bargholtz* recognises that there could be a few problems related to the approval process by the FI if the working material used by the FI today differs from the guidelines that will be provided together with the CAD 3 directive. The banks will pay for the approval process and costs are likely to be high and it is important that the process runs smoothly and is performed on the basis of the same guidelines for all applicants.

There are different opinions throughout Europe about the how frequently the supervisory authorities should assess a banks financial status and activities. Some authorities are of the opinion that every six months is sufficient while others think that assessments should be made every quarter.

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<sup>115</sup> See Kerstin af Jochnick, Percy Bargholtz, *Finansinspektionen klarar rågången mot bankerna*, Dagens Industri, August 30, 2004.

There could be a risk that the new risk calculation models could increase the economic cycles. It is an inevitable effect of the new more risk-sensitive system in Basel II that individual banks' capital charges can fluctuate more related to changes in the business situation.<sup>116</sup> There has been some concern about this potential problem of enhanced fluctuations in the business cycle. *Bargholtz* thinks that this is a theoretical problem and that the practical effect could be another.

The FIRB model is more advanced than the standard model but it is still rather standardised since banks are only allowed to provide its own estimate of PD, which is only one out of many risk components. Banks will probably be eager to move on to the AIRB model according to *Bargholtz*.

An interesting problem for the FI could be the strict principle of public access, which applies to authorities in Sweden.<sup>117</sup> If the FI gives a bank a warning or some other reprimand, that document would be a public document available to every citizen. A document of this kind by the supervisory authority could include sensitive information and public knowledge of such information could have severe effects on stock prices and on the credibility of the banks. *Bargholtz* mentions that this probably will not be a problem for the supervisors which could keep certain sensitive information secret from the public if there was a risk of negative effects with the bank.

One solution is if the reprimand is public but the reasons for it is kept secret. In one of the first draft proposals of Basel II it said that a reprimand by the supervisory authority should be kept secret which made the FI a bit worried considering the principle of public access. This was later changed and the problem is no longer addressed in Basel II.

The operational risks will according to *Bargholtz* probably be 12 % which is pretty far from the 20 % which was the original intention in Basel II. This means that of the 8 % held in total, 12 % must be related to operational risk.

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<sup>116</sup> See *Riskmätning och kapitalkrav II, En lägesrapport om arbetet med nya kapitaltäkningsregler*, FI Report, 22 October, 2002, p. 19.

<sup>117</sup> The Swedish term for the principle of public access is "offentlighetsprincipen".

# 4 Basel II Related Changes in the LMA Agreement

## 4.1 The Loan Market Association Agreement

What I have focused on here is the *multicurrency revolving facility agreement*.<sup>118</sup> The agreement is recommended to use with borrowers with investment grade rating. If the borrower is sub-investment grade or is unrated there are other LMA agreements more suitable.

The agreement I have focused on below is used widely in international syndicated lending. A syndicated loan is a transaction where two or more banks take on a large commitment together, each bank with a separate proportion of the exposure. The reason for syndicating a loan is often that the amount of the loan is too large for one bank to take on. Regulatory requirements and risk minimisation could be two reasons why it is preferable to share large exposures between a syndicate of banks.<sup>119</sup>

Loan finance is a main component of corporate finance in most countries. Loan finance contracts are often drafted on the basis of some of the standard agreements available. Standard contracts reduce costs and make the negotiation process more effective.<sup>120</sup>

The Loan Market Association has issued standard forms for syndicated loan agreements with international recognition.<sup>121</sup> The LMA was founded in 1996 “as a response to market conditions and the perceived willingness on the part of the banking community to bring greater clarity, efficiency and liquidity to the relatively under-developed secondary market that existed at the time, and to enable more efficient loan portfolio management”.<sup>122</sup>

The initial aims of the LMA was to standardise and simplify the sale of loan assets, establish a market standard for settlement procedures, establish codes of practice for market activity, establish a loan value mechanism and persuade borrowers, banks and other market participants of the merits of a more structured and liquid loan market.<sup>123</sup>

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<sup>118</sup> The clauses in the *term facility* are basically the same as in the *revolving facility*.

<sup>119</sup> See Wood, Philip R., *Law and Practice of International Finance, International Loans, Bonds and Securities Regulation*, Sweet&Maxwell, London 1995, p. 178.

<sup>120</sup> The effects of standard contracts could also be that certain provisions are more difficult to negotiate for borrowers since they become market standard provisions which banks are reluctant to change.

<sup>121</sup> See the Loan Market Association Multicurrency Revolving Facility Agreement, 2004 version, used frequently in the syndicated loan market.

<sup>122</sup> See [www.loan-market-assoc.com/Public/lma\\_abou.asp?Display=Origins](http://www.loan-market-assoc.com/Public/lma_abou.asp?Display=Origins).

<sup>123</sup> See [www.loan-market-assoc.com/Public/lma\\_abou.asp?Display=Origins](http://www.loan-market-assoc.com/Public/lma_abou.asp?Display=Origins).

The LMA agreements are designed to balance the interests of borrowers and lenders. A standard loan agreement often forms the starting point of negotiations between a bank and a borrower. Different transactions naturally calls for different agreements but the importance of the LMA agreements as efficiency providers and cost reducers is not to be underestimated.

## 4.2 Increased Costs

Increased regulatory requirements could also mean increased credit prices. If a loan agreement is signed and the bank is forced under regulation to hold more capital related to the signed agreement the bank's profit of this loan transaction will fall.

Most loan agreements are likely to include a clause regulating the event of increased costs with the bank. A bank naturally will try to pass on such costs to the borrower and protect itself against changes in regulatory requirements.

The purpose of an increased cost clause is that if there is a change in the cost to the lender of making the facility available or funding the loan during the course of the agreement then the borrower must make payments to the lender to put it in a position as if no such change had occurred.<sup>124</sup>

The increased cost clause is designed to catch changes such as Basel II, which affects the risk weighting of a bank's assets and the price of lending.

A borrower might find that a bank wants to increase the cost of its borrowing if the bank's credit assessment means that the borrower's risk weighting is more than 100 %. When Basel II has been implemented, banks could incorporate specific Basel II pricing into the provisions of the loan agreement since they would have a better view of the actual costs. Until then banks will have to rely on previous general increased costs clauses.

The credit rating of a borrower could change over the duration of the loan agreement. If the credit rating of the borrower goes down, the price of the loan will be higher for the bank due to higher capital charges and this cost is likely to be passed on from the bank to the borrower. From a borrower's perspective, it would be preferable to draft the loan agreement so that this effect will work as a claw back clause. If the rating goes up and capital charges drop, the borrower would want the bank to lower the price of the loan and pass on the decrease of the credit price.

The LMA has not yet published its final writing of the new increased cost clause but it has become practice to exclude Basel II effects from the

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<sup>124</sup> See Clifford Chance, *An introduction to loan finance*, Treasurer's Companion – Capital Markets and Funding, p. 77.

increased cost clause.<sup>125</sup> This would mean that the banks are not protected from any additional costs caused by regulation such as Basel II. The final writing from the LMA is however not issued but it is reasonable to expect the clause will seek to pass over increased cost related to Basel II from the banks to the borrowers either through an increased cost clause not excluding Basel II costs or through a higher price of the loan.

An interesting question will arise when loans are syndicated and a number of banks are involved. If they are all IRB institutes they are likely to have different regulatory costs because of their different applications of Basel II. How this problem is solved in practice is difficult to assess.

Basel II also introduces capital requirements for operational risk, which is the risk of loss related to internal failures with a bank. This operational risk, and thus the capital charge related to it, will be greater for larger banks with substantial investment activity, where the risk of internal faults are greater. A corporate would want to make sure that a bank with high capital charges related to operational risk will pay for this not by raising the margin on the loan to the corporate, which is a possible solution for the bank. It will be important for borrowers to protect themselves against this.

It is also possible to imagine a bank using the standardised approach lending to a sub-investment grade borrower and then adopting the IRB model thus increasing the capital charge for the sub-investment grade exposures. It is not unlikely that a borrower in this type of situation will object to paying the additional costs caused by the fact that the bank has adopted a new risk model.

The key words defining the outcome in practice will be negotiation and good drafting.

The main changes that Basel II will impose on syndicated lending is firstly that the price of the loan will vary over the life of a loan facility since the credit rating of a borrower will be reflected in the price of the loan. Secondly it will be of vital importance which of the risk models the lending bank has adopted, the standardised approach or one of the two IRB models. Thirdly a syndicated loan could be affected if a bank changes its approach during the life of the facility or if it makes changes to the risk models adopted under the advanced IRB approach.<sup>126</sup>

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<sup>125</sup> This according to Zoran Stambolovski, partner at Mannheimer Swartling Law Firm, specialising in banking and finance.

<sup>126</sup> Such as changes to the risk components, see Supplement to: *A Guide to the Loan Market Association Documentation for Borrowers*, LMA Agreement revision August 2005: Major operational disruption, and Basel II costs; The Association of Corporate Treasurers August 2005, p. 6 (below cited as Supplement to the ACT Guide).

## 4.3 Increased Cost Indemnification and Reduced Cost Claw Back

The new framework will provide the banks with an instrument more accurately identifying and measuring risk. AIRB institutes are given more room to measure the risk using their own internal systems but with a closer supervision from the national financial supervisory authority. AIRB institutes can price the risk of a certain exposure more precisely than before and can take into account the specific financial status and rating of a corporate when entering into a loan agreement. If the credit rating of borrower goes down the bank will probably have to raise its regulatory capital for the exposure and the borrower will have to pay for this according to the increased cost clause.

With the new risk sensitive framework in place a borrower would have a fair claim of a price reduction if its rating goes up. A bank can make an argument against such a proposal from a borrower when negotiating the agreement. Even if capital charges are likely to drop when the borrowers rating goes up, banks can argue that it is difficult to calculate the precise amount of the reduction in cost.<sup>127</sup> In practice the problem has in some syndicates been solved with a clause stating that those Basel II costs *reasonably foreseeable at signing* are excluded from the increased cost clause.<sup>128</sup>

When the rating goes down the exposure becomes from a capital adequacy perspective less risky and the bank needs not to hold the same amount of capital to cover the exposure but it is difficult to accurately give this reduction in regulatory capital effect on the price of the loan.

It would be of interest to draft a proposal of a claw back clause making the price changes beneficial for both parties and not just the bank. The bank could also gain against competitors and get more business in the form of corporate lending if accepting such a clause with certain customers.<sup>129</sup>

Another scenario where a claw back clause would be appropriate is if the bank enters into a loan agreement with a highly rated company and the company's rating goes down after a while. The bank will require the company to indemnify the bank for this change in regulatory capital. If the rating then goes up to the same level as it was when the loan agreement was first entered into then a claw back clause could ensure that the price of the loan becomes the same as it was when the agreement was signed.<sup>130</sup>

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<sup>127</sup> See Supplement to the ACT Guide, August 2005, p. 9.

<sup>128</sup> See Supplement to the ACT Guide, August 2005, p. 9.

<sup>129</sup> Perhaps only with companies with investment grade (Standard & Poor's).

<sup>130</sup> See S J Berwin, *Basel II: The Impact on the Margin*, p. 3, which also points to the interesting fact that Basel I when it first was issued was included in the increased cost clauses but was excluded from the clauses once it had been taken into account in the pricing of the loan transactions.

It has though not been the traditional purpose of the increased cost clauses to deal with reduced costs and it could therefore be appropriate to draft an entirely new clause dealing with this matter.<sup>131</sup>

The basic rule in the increased cost clause is that a borrower should indemnify the bank if the bank faces increased costs related to regulatory capital charges. Market practice seems however to be that Basel II costs are excluded from the increased cost clauses which means that borrowers need not to indemnify banks for such costs.<sup>132</sup> The same behaviour was seen when the first capital adequacy framework, Basel I, was implemented in 1988. The reason for this is that when banks begin to be able to predict the impact of Basel II in relation to an individual borrower the banks can then on the basis of this prediction set a price which is to apply over the duration of the loan. Banks can allow an exclusion of Basel II related cost in the increased cost clause since they can predict how Basel II will affect a specific borrower and set the price of the loan thereafter.<sup>133</sup> If the changes related to Basel II implementation can be predicted banks will no longer need a safety precaution such as the increased cost clause.

There would be difficulties connected with the above proposed claw back clause if Basel II costs are entirely excluded from the increased cost clause. A claw back clause enabling a borrower to claw back any reduced cost related to lower capital charges for a bank would be in practice impossible to include for a bank if the Basel II costs are excluded from the increased cost clause. Banks will not allow the borrower to gain from lower capital charges if the bank will not be indemnified if capital charges increase.

A borrower could raise arguments against an increased cost clause not excluding Basel II costs if the lending bank changes its method of calculating its capital. It is not the intention of the increased cost clause, outlined in the section below, that a bank that changes its regulatory capital calculation models should be indemnified by a borrower if the bank suffers increased costs from this action.

Borrowers should also see to it that they do not have to indemnify a bank if the financial supervisory authority increases that banks capital related to operational risk, which cannot be classified as a form of financial risk, such as credit risk or market risk. Operational risk is concerned with systems, procedures and personnel failures.<sup>134</sup>

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<sup>131</sup> See Supplement to the ACT Guide, August 2005, p. 7.

<sup>132</sup> See Supplement to the ACT Guide, August 2005, p. 8.

<sup>133</sup> See Supplement to the ACT Guide, August 2005, p. 8.

<sup>134</sup> See G.A. Walker, *International Banking Regulation*, Law Policy and Practice, Kluwer Law International, 2001, p. 582.



## 4.4 The Clauses and the New Proposal

In the 2004 LMA revolving facility<sup>135</sup> the writing of the increased cost clause is:

### 14.1 Increased costs

- (a) Subject to Clause 14.3 (*Exceptions*) the Company shall, within three Business Days of a demand by the Agent, pay for the account of a Finance Party the amount of any Increased Costs incurred by that Finance Party or any of its Affiliates as a result of (i) the introduction of or any change in (or in the interpretation, administration or application of) any law or regulation or (ii) compliance with any law or regulation made after the date of this Agreement.
- (b) In this Agreement “**Increased Costs**” means:
  - (i) a reduction in the rate of return from the Facility or on a Finance Party’s (or its Affiliate’s) overall capital;
  - (ii) an additional or increased cost; or
  - (iii) a reduction of any amount due and payable under any Finance Document,

which is incurred or suffered by a Finance Party or any of its Affiliates to the extent that it is attributable to that Finance Party having entered into its Commitment or funding or performing its obligations under any Finance Document.

### 14.2 Increased cost claims

- (a) A Finance Party intending to make a claim pursuant to Clause 14.1 (*Increased costs*) shall notify the Agent of the event of giving rise to the claim, following which the Agent shall promptly notify the Company.
- (b) Each Finance Party shall, as soon as practicable after demand by the Agent, provide a certificate confirming the amount of its Increased Costs.

### 14.3 Exceptions

- (a) Clause 14.1 (Increased costs) does not apply to the extent any Increased Cost is:
  - (i) attributable to a Tax Deduction required by law to be made by an Obligor;
  - (ii) compensated for by Clause 13.3 (*Tax indemnity*) (or would have been compensated for under Clause 13.3 (*Tax indemnity*) but was not so compensated solely because any of the exclusions in paragraph (b) of Clause 13.3 (*Tax indemnity*) applied);

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<sup>135</sup> Understanding the basic structure of syndicated lending is required to understand the meaning of the clause. Agent is a reference to the agent bank and Finance Party is a reference to the member banks of the syndicate or the agent bank or the arranging bank.

- (iii) compensated for by Mandatory Cost; or
  - (iv) attributable to the wilful breach by the relevant Finance Party or its Affiliates of any law or regulation.
- (b) In this Clause 14.3, a reference to a “**Tax Deduction**” has the same meaning given to the term in Clause 13.1 (*Definitions*).

## 4.5 Comments on the Present Writing

Under the above clause, which is the present writing, banks should be protected from Basel II changes. The first section states that the borrower should within three business days, after demand by the agent bank, pay any increased costs incurred by a member of the syndicate if the increased cost is a result of the introduction of any law or regulation.

The second section, 14.1 (b), states that the increased cost is a cost which is incurred by a finance party and which is attributable to that finance party having entered into the loan agreement. If a bank has to raise its capital charges due to an increase in operational risk this could not be said to be attributable to the bank having entered into the loan agreement. Operational risk is connected with the bank and its activities and the risk of internal faults and not connected with a certain type of lending.

## 4.6 ACT Increased Cost Proposals

The Association of Corporate Treasurers<sup>136</sup> (ACT) has suggested the following writing for the increased cost clause:<sup>137</sup>

### 14.1 Increased costs

- (a) Subject to Clause 14.3 (*Exceptions*) the Company shall, within three Business Days of a demand by the Agent, pay for the account of a Finance Party the amount of any Increased Costs incurred by that Finance Party or any of its Affiliates as a result of (i) the introduction of or any change in (or in the interpretation, administration or application **by any governmental or regulatory authority** of) any law or regulation or (ii) compliance with any law or regulation made after the date of this Agreement.
- (b) In this Agreement “**Increased Costs**” means:
  - (i) a reduction in the rate of return from the Facility or on a Finance Party’s (or its Affiliate’s) overall capital;
  - (ii) an additional or increased cost; or

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<sup>136</sup> Established in 1979 the ACT is an organisation for professionals in corporate finance, risk and cash management operating in the international marketplace. The ACT promotes study and best practice in finance and treasury management; see [www.treasurer.org](http://www.treasurer.org).

<sup>137</sup> Changes are marked **bold and underlined**.

- (iii) a reduction of any amount due and payable under any Finance Document,

which is incurred or suffered by a Finance Party or any of its Affiliates to the extent that it is attributable to that Finance Party having entered into its Commitment or funding or performing its obligations under any Finance Document.

#### 14.2 Increased cost claims

- (a) A Finance Party intending to make a claim pursuant to Clause 14.1 (*Increased costs*) shall notify the Agent of the event of giving rise to the claim, following which the Agent shall promptly notify the Company.
- (b) Each Finance Party shall, as soon as practicable after demand by the Agent, provide a certificate confirming the amount of its Increased Costs.

#### 14.3 Exceptions

- (a) Clause 14.1 (Increased costs) does not apply to the extent any Increased Cost is:
  - (i) attributable to a Tax Deduction required by law to be made by an Obligor;
  - (ii) compensated for by Clause 13.3 (*Tax indemnity*) (or would have been compensated for under Clause 13.3 (*Tax indemnity*) but was not so compensated solely because any of the exclusions in paragraph (b) of Clause 13.3 (*Tax indemnity*) applied);
  - (iii) compensated for by Mandatory Cost;~~or~~
  - (iv) attributable to the wilful breach by the relevant Finance Party or its Affiliates of any law or regulation; or
  - (v) attributable to the application of or compliance with the International Convergence of Capital Measurement Standards published by the Basel Committee on Banking Supervision in June 2004 (“Basel II”), or any implementation or transposition thereof, whether by an EC Directive of the FSA Integrated Prudential Sourcebook or other law or regulation, including (without limitation) any Increased Cost attributable to Pillar 2 (The Supervisory Review Process) of Basel II or to any change by a Finance Party from one method of calculating capital adequacy to another.
- (b) In this Clause 14.3, a reference to a “Tax Deduction” has the same meaning given to the term in Clause 13.1 (*Definitions*).

In the suggested clause above the costs attributable to Basel II are excluded from the Increased Cost clause in the exceptions part. This would mean that any increased costs with banks attributable to Basel II is not payable by the borrower. A bank would allow such an exception if it can predict Basel II effects and set the price of the loan on the basis of this prediction. It is difficult to state which party that should bear the increased costs related to Basel II. Costs related to operational risk are connected with the bank and

its organisation and should therefore not be paid by the borrower. Other costs that are connected with the financial status and rating of the borrower are from an objective perspective, if there is such a perspective, best paid by the borrower. The risk of any increased costs related to Basel II after its implementation is probably best borne by the banks but this could depend on the status of the parties involved.

Another suggestion for the writing of the exceptions clause by the ACT is found below. This suggestion basically has the same meaning as the suggestion above but with a different writing.

#### 14.3 Exceptions

The Company need not make any payment for an Increased Cost to the extent that the Increased Cost is:

- compensated for under another Clause or would have been but for an exception to that Clause;
- a tax on the overall net income of a Finance Party or any of its Affiliates;
- attributable to a Finance Party or its Affiliate wilfully failing to comply with any law or regulation; or
- attributable to the implementation or application of or compliance with the "International Convergence of Capital Measurement and Capital Standards, a Revised Framework" published by the Basel Committee on Banking Supervision in June 2004 in the form existing on the date of this Agreement (Basel II) or any other law or regulation which implements Basel II (whether such implementation, application or compliance is by a government regulator, Finance Party or any of its Affiliates).

## 4.7 The ACT view on the LMA Increased Cost Clause<sup>138</sup>

ACT recognises in its comment on the LMA agreement that the increased cost clause is a key clause affecting the cost of the loan and it is therefore of great importance to the borrower.<sup>139</sup>

It has been mentioned above that the capital cost of a syndicated loan will not be the same over the life of the loan as it was in Basel I and the cost will not be the same for all banks, for the same type of lending, as was also the case with the first framework where each specific category of lending attracted the same risk weight regardless of the banks ability to control the risks. The cost of a loan will in Basel II vary with the financial status and rating of the borrower over the time of the loan.

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<sup>138</sup> The comments on the LMA increased cost clause and the ACT view on the Basel II impact on borrowers can be found under section 14 in the Association of Corporate Treasurers – *A Guide to the Loan Market Association Documentation for Borrowers* (below cited as ACT Guide).

<sup>139</sup> See ACT Guide, p. 14.

The essence of the increased cost clause is that the banks want to be indemnified if their costs for a loan increase. The ACT recognises the LMA increased cost clause as market standard but states that “the Borrower need not feel constrained in challenging it at various points.”<sup>140</sup>

The ACT states that banks are likely to focus on their increased cost clauses at an early stage of the Basel II implementation to ensure that they cover Basel II related costs. A bank would then be entitled to recover such costs if it can show that it has suffered the increased costs because of a change in law or regulation after the loan agreement is signed and if the increased cost is attributable to the specific loan agreement.<sup>141</sup>

ACT states that costs related to higher capital charges when a borrowers credit rating falls would be recoverable from the increased cost clause as it stands today.<sup>142</sup> The argument from borrowers could though be that the clause does not include Basel II related costs since banks should be able to anticipate the capital charges for a specific borrower. Borrowers could therefore expect this anticipation to be reflected in the margin of the loan at the time of signing.<sup>143</sup>

Another thing for borrowers to be aware of is the charge for operational risk which a bank might seek to recover from the borrowers through an increased cost clause. The increased cost clause covers however only costs which are attributable to the facility in question and not costs which are not related to the risk of default with the borrower.<sup>144</sup>

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<sup>140</sup> See ACT Guide, p. 32.

<sup>141</sup> See ACT Guide, p. 33.

<sup>142</sup> See ACT Guide, p. 33.

<sup>143</sup> See ACT Guide, p. 33.

<sup>144</sup> See ACT Guide, p. 33.

# 5 Basel II Effects on Swedish Capital Market

## 5.1 Impact on Borrowing Costs

The impact on borrowing costs will mainly depend on two things. Firstly the risk weight assigned to the exposure and secondly the bank's cost of capital or required return on capital. Risk weights will vary with different combinations of PD and LGD but could be as high as 625 % for banks using IRB models.<sup>145</sup> This is of course in extreme cases but it is nevertheless a possible outcome of the new calculations.

The factors affecting the assigned risk weight includes the lending banks used approach, if the corporate can be treated as a retail exposure for capital purposes by the lending bank<sup>146</sup>, the turnover of the company, the estimated probability of default, the maturity of the company, the estimated loss given default and the potential exposure at default.

## 5.2 Opinions on Basel II Effects

There have been some opinions on Basel II effects, both positive and negative and below I shall refer to a few of them. Jan Forsell/Per Lönnqvist (KPMG) believe that Basel II is a better instrument for the control of risk than its predecessor was. This will help the banks assessing where they make their money and they could therefore, in a better way, set the correct price of a credit.<sup>147</sup> Banks not able to invest in the sufficient systems will be left with lower quality credits.

The effect of the risk-based pricing will lead to a raise in capital charges for bad credits and a drop in capital charges for good credits. Lower rated companies or financially unstable communities will look outside the normal capital market where prices are likely to be too high for these actors. Venture capitalists<sup>148</sup> will perhaps benefit from this. The IRB banks will have advantages over the Standardised institutes. The trend in the banking industry of consolidation could be hastened with the Basel II framework if there is a trend of IRB institutes acquiring the institutes not managing the costs of the Basel II adjustments.

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<sup>145</sup> This extreme example could occur for a BB- rated company banking with a bank using the IRB model. In the first accord the risk weight for corporate lending could not exceed 100 %, see Capps, Andrew, *Getting to the Core*, The Treasurer, September 2003, p. 34; see also Karaolis, Christopher, *Basel II: The New Accord*, The Treasurer, May 2003, p. 52.

<sup>146</sup> Some SME lending can be classified as retail if their annual turnover is below a given level, see Capps, Andrew, *Getting to the Core*, The Treasurer, September 2003, p. 34.

<sup>147</sup> See Balans 5/2004, p. 26.

<sup>148</sup> The Swedish term for venture capital is "riskkapital".

The return of the capital that is untied with the lower capital charges will probably have an effect on interest rates and on credit volume in total.<sup>149</sup>

Kristina Persson, second head of the Swedish Central Bank (Riksbanken), believes that SME<sup>150</sup> will benefit from the Basel II framework and that their possibilities to obtain loans will increase. The revised framework will give the banks incentives to price credit risk through a better analysis and judgement of the risk.

The Director General of the Swedish Financial Supervisory Authority, Ingrid Bonde, believes that Basel II will lead to banks increasing their risks in the mortgage markets. The rules are not in force until the beginning of 2007 but banks are likely to take out the effects of the rules in advance. When lending becomes cheaper it is likely to increase in volume.

Svenska Handelsbanken has in a press release from May 2004 stated that it will see both positive and negative effects from Basel II. The new framework is though likely to drastically improve the banks primary capital situation. The bank believes that it can free primary capital after Basel II implementation since much of the banks lending is asset backed lending which in Basel II will draw much less capital than in Basel I.

### **5.3 The PriceWaterHouseCoopers Report<sup>151</sup>**

The Commission has published a report on the financial and macroeconomic effects of Basel II on the European market performed by the accounting firm PWC in 2004. The report focuses on among other things on the allocation of capital and the cost of financing for small to medium size entities (SME). The conclusion of the report is that SME will not see negative effects in general of Basel II. Certain types of credit institutes could see negative effects though, leasing and factoring companies are mentioned,<sup>152</sup> and the implementation process will not be without pains. Regarding regulatory capital charges the report concludes that the overall charges will decrease after implementation and that this over time could have a marginal positive effect on GDP.

The high reliance in European SME on external finance in the form of bank loans makes the question on what effect Basel II will have on corporate finance an important one. The report predicts that the capital charges in

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<sup>149</sup> The Commission estimates that capital charges will decrease by approximately 5 % or € 90 billion, see Balans 5/2004, p. 26.

<sup>150</sup> Small to medium size entities, defined according to four factors: number of employees, annual turnover, balance sheet total and independence, see PWC Report, p. 90.

<sup>151</sup> See MARKT/2003/02/F: *Study on the financial and macroeconomic consequences of the draft proposed new capital requirements for banks and investment firms in the EU*, Final Report, 8 April 2004 (cited as PWC Report).

<sup>152</sup> See PWC Report, p. 97.

Sweden will decrease with about 5 % in total.<sup>153</sup> The AIRB banks will probably see more of this decrease. Theoretically, this reduction could benefit the borrowers. Those institutes that will be able to lower regulatory capital and at the same time keeping prices at a constant level will have a competitive advantage. Leasing and factoring companies will probably be worse off than other credit institutes since they are likely not to be allowed to use any of the IRB models. The general conclusion of the report is that it will not be more difficult or more expensive for European companies to find external financing after the Basel II implementation. Deviations could though exist in particular cases.

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<sup>153</sup> See Balans 5/2004, p. 26.



## **6 Analysis and Concluding Remarks**

### **6.1 Effects on the Cost of Finance for a Swedish Borrower with Investment Grade Rating**

It will most likely be the large banks and credit institutes in Sweden that will be allowed to act as IRB institutes. These banks are best equipped and qualified and their internal rating systems are adequate and effective enough to meet the IRB requirements. It is mainly the rules in pillar 1 that will have an effect on the cost of finance.

One conclusion that can be drawn is that the AIRB institutes will face lower capital charges related to their corporate lending than before. It is however impossible to know what estimates the AIRB banks will use and it is therefore difficult to evaluate where capital prices will go.

Banks lending to corporate customers are most likely to adopt an IRB approach.<sup>154</sup> There will be pressure for banks to adopt as advanced approach as possible since these models benefit from lower capital charges compared to the capital charges for similar risks under the standardised model. A bank with a portfolio consisting mainly of good quality lending will want to adopt an IRB model and will thereby have to adopt the IRB model for its entire portfolio.

The price of a loan, that is what the borrower will pay, consists of the bank's costs for funding plus the margin. The banks cost of funding is the rates in the inter-bank markets.

Companies with investment grade rating will often seek financing from larger banks in the form of syndicated loans. These larger banks will most certainly make the time and money consuming investment in becoming an IRB institute (either Foundation or Advanced). The value of the risk components which the IRB institute to some extent provides itself will determine the capital needed to cover the exposure and by that the price of the loan.

Capital charges for certain credits with specific financial institutes<sup>155</sup> could increase but it is unlikely that investment grade rated companies will see a negative effect with the Basel II application.

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<sup>154</sup> See Capps, Andrew, Getting to the Core, The Treasurer, September 2003, p. 34.

<sup>155</sup> Factoring and leasing companies are mentioned in the PWC report but also other smaller credit institutes could see a negative effect of Basel II, see the PWC report p. 97.

If the bank involved uses the Standardised Approach, smaller institutes not able to invest in becoming an IRB institute, the capital charge for a loan to a BBB+ rated company will be higher than for a loan to an A- rated company.<sup>156</sup>

In the first framework, Basel I, every corporate exposure was weighed at 100 % so the only news is for the A- rated company to which lending is connected with lower capital charges.

In theory, this does not have to result in higher financing costs for the BBB+ rated company, the exposure is still weighed at 100 %. For the bank, it will however be more profitable to lend to the A- rated company since capital charges are only 50 % compared to the 100 % for the BBB+ exposure. This could affect the allocation of capital.

The conclusion here is that it will from a capital adequacy perspective be preferable to lend to a A- rated company compared to a BBB+ rated one even if both are rated investment grade.

It is difficult to assess the adjustments in the price of capital for the companies banking with IRB institutes. The internal risk measurement models will determine the capital charges and perhaps will the external ratings become less important over time even if external ratings are likely to be a part of the initial assessment of a potential borrower's financial situation and will be part of the IRB institutes risk measurement models. If the company has had a long relationship with the bank, there will probably exist enough historical data to allow the bank to make an internal judgement. The rating agencies could therefore experience new competition.<sup>157</sup>

The key question related to the price of capital will be how the new risk profiles and capital structures of the banks will appear as they prepare for the revised framework to enter into force. Banks are not likely to await the implementation of the rules but will instead probably try to gain the benefits of the revised framework as early as possible. As mentioned above the FI accepts IRB applications from July 1, 2005.

One likely scenario is that IRB institutes will increase its assets of good quality. That means strong companies with high rating to which lending will become cheaper since the capital charges are lower. There are of course other factors affecting the price of capital such as interest rates in general and a number of other factors. It is therefore not certain that credit prices will be lower than they are today with very low interest rates and cheap borrowing.

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<sup>156</sup> See the risk weight model illustrated above, A- 50 % and BBB+ 100 %.

<sup>157</sup> See Hashagen, Jörg, *Basel II: a worldwide challenge for banking*, The Banking Yearbook 2004, 15<sup>th</sup> Ed., p. 25.

The new capital charges include now also operational risk and the implementation of the new framework is connected with substantial costs for banks which will probably be passed on to the borrowers.

Banks and other credit institutes will start to sort credit risks according to sophisticated complex models with a much closer supervision by the FI. Companies with low rating and unrated companies will probably face a more expensive existence in the loan markets. Other potentially negatively affected categories are communities with weak financial status.<sup>158</sup> The potential winners will be large companies with high rating.

The advantage of the AIRB institutes is that they can offer a more differentiated price setting. This can cause troubles for the standardised banks which may get stuck with bad credits.<sup>159</sup> This can result in a scenario where the financial institutes least suitable to handle bad credits are stuck with just those, since they cannot compete with the IRB banks for the good credits.

Smaller companies will probably have to approach the standardised institutes for financing. It is difficult to say if the price of capital will increase for these firms but it is clear that the standardised banks will have a higher margin on loans to companies with better rating which is the fundamental purpose of Basel II. The risk of a certain exposure should be reflected in the capital charge.

To summarise the factors outlined above affecting the price of finance for a Swedish company it can first be said that the models used by the bank involved will have a crucial effect.

The changes in capital structures and risk profiles of the new IRB institutes, advanced and foundation, will affect the credit price for a borrower greatly. It is also important to keep in mind that banks will become more risk sensitive with Basel II. It will therefore also be vital what the financial status and rating of the company is.

Collateral such as financial and physical collateral, guarantees and financial derivatives will play a greater part as banks can consider it to a greater extent than was possible in Basel I and use it to lower the capital charges.

The new requirement to keep capital for operational risk is another factor affecting the price of capital. The substantial costs of implementing the new framework will also have an effect on capital prices.<sup>160</sup> Basel II will not only affect the loan finance markets, other markets will also see extensive changes and off course this will affect banks allocation of capital since the banks will want as much capital invested in the most profitable markets.

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<sup>158</sup> See Basel II, Balans 3/2004, p. 7.

<sup>159</sup> See Balans 3/2004, p. 7.

<sup>160</sup> One article estimates the cost of implementation for all countries to be about €5.7 billion for the period 2002-2006, see Balans 5/2004, p. 26.

It is also likely that banks using the IRB models will be more sensitive to the economic cycle than the standardised banks. The IRB banks using internal assessments will probably increase their capital charges regardless of the borrower's situation during an economic downturn.

Market examinations, such as the one performed by PWC, have concluded that it will not be more difficult for SME companies to find financing but there must still be a risk of an increased allocation of capital to highly rated companies at the banks using the IRB models. This could lead to an increased diversification of the market and to situations where highly rated companies can use their enhanced position to lower their funding costs even further through financial solutions such as swap contracts and similar.

If the factors outlined above are of an uncertain character one conclusion is certain. Low-risk borrowers can expect better pricing and high-risk borrowers are likely to see higher credit prices. The definite impact on credit prices and the development of the market lies however within the new internal risk calculations of the most sophisticated banks which can use the new capital adequacy framework to its full potential.

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## **Interview**

Percy Bargholtz, advisor at the Swedish Financial Supervisory Authority, interviewed July 11, 2005 (prepared and executed together with Olof Girhammar, Student at the Faculty of Law, Stockholm University).