The Bank Regulation in Argentina
- a Comparative Study of 1990 and 2003

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TABLE OF CONTENTS

1 INTRODUCTION .......................................................................................................................... 1
   1.1 PROBLEM DISCUSSION ........................................................................................................... 1
   1.2 PURPOSE ................................................................................................................................. 3
   1.3 LIMITATIONS .......................................................................................................................... 3

2 METHODOLOGY .......................................................................................................................... 4
   2.1 QUANTITATIVE AND QUALITATIVE METHOD ......................................................................... 4
   2.2 COLLECTION OF DATA AND CHOICE OF THEORETICAL APPROACH ................................. 4
   2.3 CRITICISM OF THE METHOD AND THE USE OF SOURCES .................................................. 5

3 FRAME OF REFERENCE ............................................................................................................... 7
   3.1 THE STRUCTURE-CONDUCT-PERFORMANCE MODEL ......................................................... 7
   3.2 APPLICATION OF THE THEORETICAL APPROACH .............................................................. 9
       3.2.1 BASIC CONDITIONS .................................................................................................... 10
       3.2.2 MARKET STRUCTURE ............................................................................................. 12
       3.2.3 PERFORMANCE ......................................................................................................... 15
       3.2.4 GOVERNMENT POLICY ........................................................................................... 17

4 BANK REGULATION IN ARGENTINA ....................................................................................... 21
   4.1 SUMMARY OF THE BANK REGULATION IN 1990 AND 2003 .............................................. 21
   4.2 BANK REGULATION IN 1990 ............................................................................................... 22
       4.2.1 THE ROLE OF THE BCRA ......................................................................................... 23
       4.2.2 PROTECTIVE REGULATION ..................................................................................... 23
       4.2.3 PRUDENTIAL REGULATION .................................................................................. 24
       4.2.4 COMPETITION POLICY .......................................................................................... 24
       4.2.5 BANK SUPERVISION ............................................................................................... 24
   4.3 BANK REGULATION IN 2003 ............................................................................................... 25
       4.3.1 THE ROLE OF THE BCRA ......................................................................................... 25
       4.3.2 PROTECTIVE REGULATION ..................................................................................... 26
       4.3.3 PRUDENTIAL REGULATION .................................................................................. 27
       4.3.4 COMPETITION POLICY .......................................................................................... 28
       4.3.5 BANK SUPERVISION ............................................................................................... 28

5 THE BANK MARKET IN ARGENTINA ......................................................................................... 31
   5.1 BASIC CONDITIONS OF THE BANK SECTOR ...................................................................... 31
       5.1.1 SUPPLY AND DEMAND ........................................................................................... 31
       5.1.2 UNCERTAINTY CAUSED BY MACROECONOMIC POLICIES ...................................... 33
       5.1.3 ASYMMETRIC INFORMATION AND UNCERTAINTY ................................................ 33
   5.2 MARKET STRUCTURE ............................................................................................................ 34
       5.2.1 MARKET CONCENTRATION ....................................................................................... 34
       5.2.2 ENTRY BARRIERS AND ECONOMIES OF SCALE ....................................................... 35
       5.2.3 OWNERSHIP .............................................................................................................. 36
# Table of Contents

5.3 PERFORMANCE ........................................................................................................................... 37
  5.3.1 RETURNS ............................................................................................................................... 37
  5.3.2 SERVICE QUALITY ............................................................................................................... 37
  5.3.3 MARKET POWER .................................................................................................................. 38

6 ANALYSIS ........................................................................................................................................ 40
  6.1 RETURNS ..................................................................................................................................... 40
    6.1.1 PROTECTIVE REGULATION .......................................................................................... 40
    6.1.2 PRUDENTIAL REGULATION ......................................................................................... 40
    6.1.3 COMPETITION POLICY ............................................................................................... 43
    6.1.4 GOVERNMENT POLICY ............................................................................................... 43
  6.2 SERVICE QUALITY ..................................................................................................................... 44
    6.2.1 PROTECTIVE REGULATION .......................................................................................... 45
    6.2.2 PRUDENTIAL REGULATION ......................................................................................... 45
    6.2.3 COMPETITION POLICY ............................................................................................... 47
    6.2.4 GOVERNMENT POLICY ............................................................................................... 48
  6.3 MARKET POWER ........................................................................................................................ 49
    6.3.1 PROTECTIVE REGULATION .......................................................................................... 49
    6.3.2 PRUDENTIAL REGULATION ......................................................................................... 50
    6.3.3 COMPETITION POLICY ............................................................................................... 51
    6.3.4 GOVERNMENT POLICY ............................................................................................... 52
  6.4 CONCLUDING REMARKS .......................................................................................................... 54

7 REFERENCES ..................................................................................................................................... 55

8 APPENDIX ....................................................................................................................................... 58
Abstract

**Background:** The Argentine bank sector suffered from inefficiency and high operative costs throughout the 1990s, as well as a low confidence mainly due to uncertainty about future government policies caused by inconsistent government policies. The Argentine bank regulation underwent several changes between 1990 and 2003 to improve the performance within the market and increase the overall confidence for the Argentine bank system. The Central Bank was given a new role and made independent, capital requirements were introduced and the Supervision of the bank sector was changed.

**Purpose:** The purpose of this thesis is to make a comparative study of the bank regulation in 1990 and the bank regulation in 2003 in Argentina, in order to analyse how the bank regulation has affected the performance of the bank market.

**Method:** To reach the purpose of the report a qualitative method has been conducted, using secondary data, mainly collected in Argentina.

**Results:** The overall conclusion is that the bank regulation in 2003 has improved the performance within the bank sector. The efficiency of the banks has increased, although the results within the sector are still low. The service quality has increased through better communication, higher credibility and security. There is a tendency of increased market power for foreign banks and large national banks, although there are still few signs of banks having substantial market power.
1 Introduction

1.1 Problem discussion
During the 1980s the financial market in Argentina was characterised by fiscal disequilibrium and inconsistent macroeconomic policies and the Argentine monetary policies were used for short-term aims. There was a political pressure on the Central Bank (from here on called the BCRA) to finance provincial and central government expenses and the majority of the assets of the BCRA was given in loans to the provincial banks. This type of monetary management led to a bank sector suffering from two hyperinflations during the 1980s. In 1989 the monthly inflation rate went from 78 % in May to 114 % in June and close to 200 % in July. To establish financial viability, stabilise the inflation and strengthen the outside world’s faith in the Argentine banking system, the regulation of the Argentine banking system underwent several changes during the 1990s.

Thus, in 1991 Argentina established the Convertibility Plan, which meant pegging the exchange rate at 1 US dollar to 10 000 Australs and a new Central Bank Charter was sanctioned in 1992, which specified the responsibilities and the objectives of the BCRA to be able to reach price stability and a sound financial system. These laws represented two fundamental changes of the Argentine bank regulation. The BCRA was given the role as a Currency Board and the role as a lender of last resort and the independence of the Central Bank eliminated the political pressure to finance fiscal and banking deficits. The Convertibility Plan and the independence of the BCRA strengthened the outside world’s faith in the Argentine banking system and led to a huge inflow of foreign capital.

The bank sector was significantly strengthened, but the financial crisis in Mexico in 1995, also known as the Tequila crisis, indicated that regulation and supervision of the Argentine bank sector needed to be strengthened substantially. The Tequila crisis created distrust for Latin American countries in general and many foreign depositors withdrew their capital from...

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2 Banco Central de la República de Argentina.
5 The Convertibility Plan referred to “australes”, the Argentine currency until 1991. A few months after the implementation of the Convertibility Plan, the currency was, however, replaced by the “peso”.
7 Tavarone M. (1997)
the Argentine bank sector. The absence of a deposit insurance system decreased the incentives to keep their deposits within the sector and eventually led to the reestablishment of a deposit insurance system. Many banks were bankrupted in Argentina after the Mexican crisis because of severe insolvency problems and the importance of elevated levels of liquidity and capital became obvious. A new system to calculate capital requirements was implemented, called the CAMELS system. The response to the Tequila crisis, allowing weak banks to close, and the strengthening of regulatory efforts to promote market discipline once again strengthened the confidence for the Argentine banking system. The presence of major international banks allowed Argentina to better withstand severe external shocks caused by the crises in Asia in 1997, Russia in 1998, and in Brazil in 1999.8

In 2001 the Argentine banking system once again faced insolvency problems and the uncertainty of the government’s capacity to maintain the Convertibility Plan grew stronger. Due to this uncertainty the confidence of the banking system fell, which led to a significant decrease of bank deposits. During 2001 the system lost 20% of its deposits and to avoid a bank panic the government introduced restrictions limiting the withdrawals of the depositors. This government intervention led to a traumatic political transition. In 2002 the internal and external debt was defaulted. The government was forced to abandon the Convertibility Plan and devalue the peso and an economic crisis was inevitable.9 The bank regulation in 2003 was characterized by an independent Central Bank, capital requirements and a new institution to supervise the bank regulation.

Financial instability has struck industrialized as well as emerging countries equally frequently in the last twenty years, although it usually has a more devastating affect in the latter. Policymakers throughout the world are seeking answers to what causes financial instability and what can be done to prevent it. Bank regulation is one way for the government to try to influence the results within the financial market and Central Banks play a crucial role in the process.10

The Argentine bank regulation underwent several changes between 1990 and 2003. The Central Bank was given a new role and made independent, capital requirements were

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10 Mishkin, F. (1997), p.82.
introduced and the supervision of the bank sector was changed. These are only a few of the important reforms implemented during this decade. Questions arise, such as, how did the bank regulation in 1990 differ from the bank regulation in 2003 in Argentina? Which main characteristics did each system have and what consequences did it have on the performance on the bank market in Argentina? How did external economic crisis affect the performance of the bank sector during the 1990s?

1.2 Purpose
The purpose of this thesis is to make a comparative study of the bank regulation in 1990 and the bank regulation in 2003 in Argentina, in order to analyse how the bank regulation affected the performance of the bank market.

1.3 Limitations
The study focuses on a few selected parameters within the bank market. Which these parameters are and why they are considered the most relevant ones is presented in the frame of reference and the analysis of the report includes the results of these parameters. Other financial institutions, such as insurance companies and investment banks, are not included in the study.
2 Methodology

In this chapter the methodological perspective of the report is presented to give the reader an understanding of what method is used and how the collection and the revision of the data in the report have been followed through. Additionally, criticisms of the method and the sources are discussed.

2.1 Quantitative and Qualitative Method

There are two main types of methods on which a study can be based: a quantitative method or a qualitative method. A quantitative method, aims to statistically describe and clarify a chosen subject and the data is obtained through a strictly structured and standardised collection. The qualitative method, on the other hand, tries to give a profound and complete understanding of the subject studied and the collection of data is less standardised and more flexible than the one used in a quantitative study. Since the qualitative method to a greater extent uses words to explain a phenomenon instead of numbers, it gives the author more space for interpretations.\textsuperscript{11}

When analysing the regulation of a bank sector, analysts commonly use a quantitative method through regression analysis based on statistics of relevant variables. This study is, however, mainly based on a qualitative method to make a comparative study of the Argentine bank regulation in 1990 and in 2003. The choice of method is based on the fact that the problem of bank regulation in developing countries generally is complex and strongly affected by volatile political decisions and trustworthiness from the outside world. Some statistics are included in the study, but are only used as a compliment to the qualitative method.

2.2 Collection of Data and Choice of Theoretical Approach

The collection of data for this study is based on secondary material and has mainly been carried out in Buenos Aires, Argentina, during a six month period. To get a pre-understanding about the subject, several persons with knowledge about the phenomenon was contacted. Informal conversations were carried out to give suggestions on where to search for, e.g. previous investigations, books and articles and give simplified explanations about the subject. Reports published by investigators at leading universities in Argentina, as well as the United States and the United Kingdom have been used. Furthermore, investigations from international institutions (such as the World Bank) together with information from institutions

and organisation in Argentina (such as CEFI D-AR and CESPA, see appendix, page 57) have been used as sources for the empirical findings of this report.

Since the purpose of this thesis is to analyse how bank regulation affects the performance on the bank market in Argentina by making a comparative study, I have chosen to use a modified version of the SCP model (see chapter 3, Frame of reference). The SCP model gives an overall view of the bank market and tries to explain the complex connection between several variables connected to the phenomenon. To limit the study and give a simplified explanation of the phenomenon I chose to use only a few variables within the bank market and further exclude the behaviour (conduct) of the banks. This does not imply that the variables excluded, e.g. the behaviour of banks, has no affect on the performance on the bank market, but given the purpose of the report, is not as relevant as, e.g. the structure of the bank market. The choice of variables used in this report is not obvious and taking the aim of the report into account, it would be possible to include more variables. I have based the choice of variables given my knowledge about the subject and given commonly used variables in previous investigations and do moreover, try to explain the choice of variables in chapter 3, Frame of reference. Since I mean that the behaviour of the BCRA has been of great importance for the performance within the market, I have also chosen to use the quantity theory of money to include the perspective of monetary policies.

Finally, I would like to add a short explanation of why the years 1990 and 2003 are considered to be suitable years to include in the study. Since Argentina went through a reformation of the bank regulation during the 1990s, including several important changes, it is of interest to use the bank regulation of this year in this comparative study. In the late 1990s several of the most important reforms were implemented and the purpose of the report includes how the bank regulation affected the performance within the bank market in Argentina. The year 2001 was a crucial year for the Argentine banking system and I choose to compare the bank regulation in 1990 to the bank regulation of 2003, which makes it possible to include the effects of the most important reforms (implemented in the late 1990s) together with the distortion of the financial crisis in 2001.

2.3 Criticism of the Method and the use of Sources
The modified version of the SCP model used in the report can be criticised in a similar way as the original version of the model. The use of the model strongly simplifies all the steps in the
model and several details are being left out. It is, however, impossible to include all the details of any market and especially with parameters such as, time and resources, limiting the study. Moreover, an investigation including too many variables makes it difficult to complete an analysis of a market and give the reader an easily understandable description of the situation. The quantity theory of money may also be subject to critics for its simplified version of the reality. I do, however, choose to use the simple version of the theory to see a trend and a pattern possible to use in the analysis of the report. Once again time and resources limit my possibility to extend the analysis further.

The fact that the collection of data and use of sources in this report all come from secondary data, mainly gathered in Argentina includes several problems. First of all, when using secondary data it is important to take into consideration the source of the data and for whom the data has been written. Secondly, Argentina is a developing country, with problems such as corruption, unorganised institutions and financial limitations. I am aware of the risk that these problems may have affected material being published about the subject and have therefore tried to use several sources independent of each other to limit the problem of unreliable information.
3 Frame of Reference

This chapter includes the theoretical approach used to reach the purpose of the report. Initially the original SCP model from the theories of industrial organisation is presented. Thereafter, my own modified model of the SCP hypothesis is introduced, working through each step of the model.

3.1 The Structure-Conduct-Performance model

The SCP paradigm was introduced in 1939 by E. Mason and was the first approach using microeconomic analyses within the theory of industrial organisation. The SCP hypothesis divides a market into different stages: First, there are basic conditions within the market, such as consumer demand and technology. The second step represents the structure of the market, such as the number of buyers and sellers, while the third step, conduct, explains the behaviour of the firms. The last step of the model includes the success of an industry in producing benefits for consumers, the performance of the market, including variables such as price, product efficiency and quality. An additional parameter, interacting in all four steps of the model, is the government policy. The model explains that the performance on a market depends on the conduct of the different actors within the sector. Moreover, the conduct of the actors depends on the structure of the market, which in turn depends on the basic conditions within the sector (see figure 3.1, page 8). The connection between the different parameters is, however, complex. For example, the number of buyers and sellers within a market is affected by the government regulation, which in turn may be affected by the different economic actors. Further, an entry barrier implemented by the government policy may lead to a monopolistic market, changing the behaviour of the firms through production of substitutes, changing the consumer demand.12

The SCP model has been criticised for being more descriptive than analytic and to focus on the relationship between structure and not so much on the measurement of performance.13 Furthermore, some critics mean that the model includes too many variables, which make it difficult to complete an analysis of a market with the SCP model.

13 ibid, p.260.
Figure 3.1: The Structure-Conduct-Performance model

3.2 Application of the Theoretical Approach

The original SCP hypothesis focuses on any market in general and includes several variables for manufacturing firms in each step. To make the model more applicable for the analysis of a bank sector, I choose to modify the original model and use variables more connected to the bank sector (see figure 3.2, page 10). The purpose of this report is to make a comparative study of the bank regulation in 1990 and the bank regulation in 2003 in Argentina, in order to analyse how bank regulation affects the performance of the bank market. To be able to reach this purpose, I focus on the structure and the regulation of the bank market in Argentina in 1990 and 2003. Less attention is paid to the basic conditions of each period, although I believe it important to include in the model, to give the reader an understanding of how the basic conditions could be interpreted within a bank market. Variables I consider unnecessary for my report are excluded and to make it clear for the reader why certain variables are included, I briefly explain my thoughts affecting my choice of each variable.

The behaviour (conduct) of the banks is a step of the SCP model, explaining how banks act on the market, e.g. their advertising and pricing behaviour. Furthermore, it is worth mentioning that the conduct of banks may affect how and why certain bank regulations are implemented, but given the purpose of the report, I choose to exclude this step. This does, however, not mean that it has no importance to the bank sector and the results within the market, but that to include it in the analysis would imply a thorough research of bank behaviour and make the extent of the work much more complicated and time consuming. The “conduct box” simply represents a “black box”, which neither is included in the model, nor in the analysis.

The new figure of my modified SCP model is presented on the next page to give the reader a better understanding of the nature of the model and the structure of the following part of the chapter, explaining the model. I start by presenting important aspects of the basic conditions within a bank market, followed by the variables chosen to explain the structure of the bank market. Thereafter, a presentation is given of how I choose to measure bank performance, together with an explanation of each variable. Finally, the “government policy box” is worked through, including three different types of bank regulation, the role of the Central Bank, bank supervision and monetary policies.
3.2.1 Basic Conditions
The basic conditions of a market can include several variables depending on a specific market. Below I explain a few of these differences and present which variables I focus on, representing supply and demand of the bank market. Further, an introduction is given to the problem of asymmetric information and uncertainty within the bank sector, which I consider to be a fundamental problem within a bank sector and therefore a part of the basic conditions.

Supply and Demand
Since, there is a difference between outputs and inputs of banks and outputs and inputs of manufacturing firms, I focus on slightly different aspects (in comparison to the original SCP model), concerning the supply and demand within the bank sector. On the supply side in the model a manufacturing firm uses labour and capital to produce goods, while a bank use labour and capital (especially debt capital) to produce services. I use deposits to classify input and the service produced (e.g. loan granting) to represent the output. Some characteristics of the quality of the service are confidence and security of a bank (see further the section Service
Quality). Since the provision of a bank service often requires direct contact with the depositor (or the borrower), the location of the bank (and thereby the distribution of the bank services) is important and also affects the supply of bank services\(^\text{14}\).

The demand side is represented by the demand of services from economic actors within the sector, such as capital demand from the private and public sectors. Empirical studies show that switching costs are important in the deposit market and that the demand is likely to be characterized by bank loyalty.\(^\text{15}\) The service quality (such as confidence and security) is of importance for the demand.

Asymmetric Information and Uncertainty

Asymmetric information between lenders and borrowers is an important obstacle of reaching an efficient functioning within the bank sector. An individual interested in taking a loan to complete a project usually have more information about the risk related to the project than the bank does. The existence of asymmetric information problems gives the government an important role to regulate and supervise the system.\(^\text{16}\) Another example of asymmetric information is when a depositor is to decide in which bank to deposit the money. In this case the bank has more information about e.g. its risk management and its solvency than the depositor does. Regulations that encourage information production can be imposed to decrease this asymmetric information problem. One way for the government to do this is to implement a regulation demanding each bank to publish monthly reports about their risk management, solvency, results etc.

Uncertainty is another variable included in the basic conditions of the model, since I mean that this variable is especially important within the bank sector, affecting both the trust of depositors and the willingness of consumers to borrow money. Uncertainty can increase with e.g. a bankruptcy or a recession, but in emerging markets the most common variable is the uncertainty about the future government policies\(^\text{17}\). A government continuously changing its policies creates a general distrust among banks and depositors and an uncertainty about future policies. In an economic unstable situation a government may e.g. promise not to devaluate

\(^\text{15}\) ibid. p.8.
the currency to calm down worried depositors and avoid a bank run\textsuperscript{18}. If they later break this promise, by devaluing, a general distrust and an uncertainty about future government regulations is created. This in turn, makes it difficult for the government in a similar situation in the future, since there is an uncertainty about the trustworthiness of their promises.

3.2.2 Market Structure
The market structure within the bank sector is explained through market concentration, entry barriers and economies of scale. An additional variable included in the model is the level of different kinds of ownership within the market. I mean that the ownership of banks has a significant effect on the performance within the bank sector, affecting e.g. productivity and strategic behaviour.

\textit{Market Concentration}
Market concentration is a typical variable used to explain the market structure of a specific sector also within the bank sector. One of the most commonly used parameters is the so called four-firm concentration ratio, C\textsubscript{4}, which include the market share of the four largest firms within a sector. An extended version of the same measurement is the C\textsubscript{8} ratio, including the market shares of the eight largest firms within a market. The higher these ratios are the higher the market concentration\textsuperscript{19}.

An alternative way to calculate market concentration is by using the Herfindahl-Hirschman Index (HHI) function. This function includes the sum of the squared market share of each firm within a market. The HHI can give a number between zero and 10 000, where 10 000 means total monopoly and a total market share and a number close to zero signifies a highly competitive market\textsuperscript{20}.

Using the concentration measurements is, however, connected to two main problems. The first problem concerns the fact that there are several factors influencing the number of sellers on a market. The level of profitability may affect the number of sellers choosing to enter a market. In a market with low profitability fewer actors may choose to enter the market, which in turn means that profit is an endogenous variable and influence the market concentration. To

\textsuperscript{18} A bank run is a panic response which occurs in a situation in which a large number of depositors at a bank rush to withdraw their money at the same time, usually because of rumours the bank is in financial trouble.
\textsuperscript{20} \url{http://economics.about.com/library/glossary}, 29\textsuperscript{th} of June 2005.
avoid this problem, exogenous variables should be used, meaning that the structure affects profits, but not vice versa. It is better to use an exogenous barrier to entry to measure the structure, than the number of firms on the market. The second problem includes the problem of identifying the market. Many concentration measures do not identify the market correctly, excluding important variables that affect the pricing of a product. When using market concentration as a predictor of performance within a market it is important that all relevant variables are included in the market definition.\textsuperscript{21}

The efficient-structure hypothesis states that there is a positive relationship between concentration and profits within a market, by improved management and production technologies and thereby reduced costs. Moreover, it states that more efficient firms gain larger market shares, which leads to a stronger concentration of the market.\textsuperscript{22}

**Entry barriers and Economies of scale**

The ability of firms to enter a market is one of the most important variables determining the performance within a market.\textsuperscript{23} Since I believe this to apply for the bank sector as well, this variable is also included in the model. Some entry barriers are created by protective government regulation, such as a direct barrier to entry. Another way for the government to create barriers to entry is through its prudential regulation with e.g. capital and reserve requirements. Other entry barriers are those created by economies of scale or strategic behaviour of the banks within the market. In models of bank behaviour economies of scale can be characterised by reserve holding or product differentiation advantages e.g. a reputation of solvency. An extent ATM system can also represent a barrier to entry, given that other banks do not have access to use already existing ATM systems.\textsuperscript{24}

**Ownership**

There are three main kinds of ownership included in this report: state owned, private owned and foreign owned. In the following text some characteristics of the three are presented.

Concerning state owned banks a common feature of many countries’ bank systems, especially in emerging markets, is the government using state owned banks to finance public deficit.

Instead of shutting down banks with poor performance the Central Bank acts as a lender of last resort. Furthermore, the lack of profit motive for state owned banks means that their incentives to manage risk properly decrease. Political interference in public banks may result in excessive employment, lack of investments and poor defined objectives of the management of the bank. The result is therefore often that state owned banks are less profitable than private owned banks, affecting the performance of the market.\textsuperscript{25}

Privately owned banks have more incentives to solve moral hazard problems than state owned banks and do not have the same political pressure to finance fiscal and banking deficits. Moreover, privately owned banks do not have the problem of a government imposing multiple or changing objectives and do not suffer the same pressure from political interests, which makes it easier for them to improve their profitability. The private banks have better risk management and are less likely to lend money to the borrowers who will promote a higher growth.\textsuperscript{26}

Foreign owned banks can be seen as a kind of private ownership and therefore has similar characteristics to privately owned banks. There are however several differences. Foreign owned banks tend to be large banks with market shares on the international market within different countries. Their parent companies are usually situated in another country and variables affecting their decision making are usually more connected to the international market (or the home market of the bank) than for the national market. A foreign bank evaluates the bank market within a country before they decide to enter or not. If entering a market, it can do so by starting up a new bank or by buying one of the banks already existing on the market. Foreign banks entering a bank market in an emerging country usually have a higher level of technology, which often results in a higher efficiency of the bank. One problem with foreign banks is that they do not have the same expertise knowledge of the market about e.g. the history of small borrowers. Additionally, they do not have the same interest in the specific country as a national bank may have, knowing that they can flee the country in the case of a crisis.

\textsuperscript{26} ibid.
3.2.3 Performance
As mentioned earlier, the Structure-Conduct-Performance model tries to show that there is a connection between the performance and the structure of a market. Measuring the performance of a market is complicated and there are several ways to deal with this problem. In this modified model I use returns of the banks as one measurement, since it gives an idea of the profitability of the banks. Service quality is also used as a measurement of the performance since it is a way to measure the result of the production within the bank market. Finally, market power, allows an analysis of the banks’ possibilities to control the market.

Returns
A measurement of performance commonly being used is the rates of return. Joe Bain (1951) investigated the connection between rates of return and the market structure. His conclusion after empirical studies was that markets with higher concentration and barriers to entry have higher profits. His results were, however, criticised and studies by Salinger (1984) only find a weak relationship between rates of return, concentration and entry barriers. There are primarily two different measurements of the rate of the returns: the return on assets (ROA) and the return on equity (ROE), both being indicators of profitability. The (ROA), sometimes called “return on investment”, is calculated by dividing the net income by total average assets. The ROE is the profitability related to the capital base and calculated by dividing the net income with equity (capital).

The rate of returns of a bank is affected by the productive efficiency, which can be divided into cost efficiency and profit efficiency. If the costs per unit of output are reduced (for a given set of output quantity and input prices) the cost efficiency is improved. Costs per unit may be decreased by increasing e.g. scale efficiency. Profit efficiency is raised if better combination of inputs and outputs are being used.

Service Quality
Financial products are easily copied and consequently hard to differentiate. Therefore many banks use the service quality to differentiate their product. Access, communication, understanding the customer, credibility and security are only a few dimensions of service quality with a complex relationship between each other.

If it is easy to get access to a bank office the service quality could be interpreted as better. The availability can be seen as even more important in developing countries, since both the supply and access to Internet banks services usually are limited. If it is difficult to get access to a bank there is a risk that the consumers choose not to deposit the money in a bank. Another aspect of access is the possibility to be granted loans.

Communication between producers and consumers within a market can lower the problem of asymmetric information. To implement a regulation forcing each bank to publish a monthly report of their economic situation can be seen as one way to increase the communication between bankers and depositors (or borrowers). Moreover, individual communication with each consumer can strengthen the relationship between a bank and the depositor, which brings us to the importance of understanding the customer.

Since a bank offers the depositors (or borrowers) a service (the possibility to deposit money or borrow money) instead of a good it is of importance to focus on the relationship between the bank and the consumer. Understanding the need and the specific situation of a borrower can strengthen the credibility and the security experienced by the borrower.

Finally, the risk level is an additional quality dimension and a bank’s solvency is often used as a measurement of stability and closely connected to the risk level. A bank system with stability and solvent banks increases the service quality by giving the depositor (or borrower) an indirect security.

*Market Power*

Market power is another measurement of the performance on a market. It is, however, complicated to measure market power accurately. A general definition of market power is a firm that is able to charge a price above its marginal cost (the price in a market with perfect competition). Nevertheless, it is difficult to measure a firm’s marginal cost, which makes this method complicated to use. An alternative way to measure a firm’s ability to exercise market power is to use the price elasticity of the demand:

\[(p-MC) / p = -1 / \varepsilon\]

where \(p\) is price, \(MC\) is marginal cost and \(\varepsilon\) is the elasticity of demand. High elasticity of demand means a low market power. Since the data necessary to calculate the elasticity of
demand often is unavailable, a third method to approximate a firm’s market power is to define a market and then calculate the market share. A high market share may suggest a high level of market power if entry barriers exist and there is a high possibility to charge a price higher than marginal cost.  

3.2.4 Government Policy

Similar to the original SCP model I argue that government regulation is an important variable of the model affecting the bank market. I do, however, call the box “government policy” instead of “government regulation”, since I mean that it is not just the bank regulation of the government, but also different government decisions and monetary policies that affect the structure and performance of the bank market. For example, rules implying enforcement for banks to regularly present economic reports to the public can decrease the problem of asymmetric information (mentioned earlier) and thereby affect the basic conditions. On the other hand, government policy, such as a decision to promote privatisation of the bank sector (although it is not a regulation), I mean affects both the structure and the performance of the bank market. A higher amount of private banks may for example lead to higher efficiency of the banks. Furthermore, the monetary policies of the government and the Central Bank have an important influence on the bank sector. For example, a decision to print more money leads to an increase in money supply within the market, affecting the whole sector in different ways. The government policy box in the model is, however, partly divided into two sections, since it is worth mentioning that the last three variables not necessarily have to do with government policy. There can be complex connections between the variables and with e.g. an independent Central Bank it can be argued that the variable “monetary policies” is not a part of the “government policy” box.

Some of the basic reasons for a government to implement bank regulation are to avoid instabilities, liquidity shortages and bank runs. Bank regulation can be divided into three different types; protective regulation, prudential regulation and competition policy, all presented below. At the end of this section the role of the Central Bank and bank supervision, as well as monetary policies are included, since I consider it to have a crucial influence on the implementation of the regulation and supervision and the bank sector as a whole.

**Protective Regulation**

The purpose of protective regulation is to avoid default and protect the depositors from losing their deposits in the case of e.g. a bankruptcy. This may be done by giving the Central Bank the power to act as a lender of last resort to provide liquidity to troubled banks or by introducing a public insurance deposit system.\(^{32}\) There is, however, a trade-off with protective regulation, since a lender of last resort policy or a deposit insurance system may create moral hazard problems. The incentives for banks to act riskier may increase. Knowing that the Central Bank will prevent a financial crisis may decrease the banks incentives to act less risky and a bank can e.g. increase the deposit rate to compete with other banks.\(^{33}\)

**Prudential Regulation**

Prudential regulation aims to prevent bankruptcies and crisis within the bank sector. Capital requirements, liquidity rules and entry requirements are some of the most used parameters within prudential regulations. By increased credibility and safety to depositors, capital requirements may be a tool to prevent bank runs. It can, however, have the opposite effect. With capital requirements banks cannot as easily signal quality in the market and their incentives to create inside equity to monitor loans may decrease, which could lead to an increased bank failure risk.\(^{34}\)

**Competition Policy**

Competition policy is used to affect the competition within the bank market and may consist in price regulations, antitrust laws or barrier to entry for foreign actors. A price regulation could be ceiling the rates on deposits to try to force the banks to compete with quality instead of prices.\(^{35}\) Antitrust laws aim to control the competition between firms and limit their market power, discouraging monopolistic practices.\(^{36}\) Antitrust laws are usually stricter in goods markets than within bank markets, because too much competition may lead to greater risk-taking.\(^{37}\)

**The role of a Central Bank and Bank Supervision**

For the functioning of a good regulatory framework an existing supervisory agency, usually called the Superintendence, is necessary. The aim of the Superintendence should be to

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\(^{34}\) ibid.


\(^{36}\) Lipsey et. al. (1999), p.282.

supervise the banks, controlling their compliance of existing laws and regulations. The supervision should stop undesirable bank activities and close down banks that do not have sufficient net worth. It is important that both the bank regulator and the bank supervisor have sufficient independence from the political process. A politically independent Central Bank playing the supervisory role is one way to try to achieve this. Another way is to give the role to a bank regulatory authority that is independent of the government.\textsuperscript{38}

\textbf{Monetary Policies}

Monetary policies are included in the model, since I argue that they play an indirect role in my analysis of the way bank regulation affects the performance within the bank market in Argentina. There are several ways a government can use monetary policies. In this paper the discussion is, however, simplified and focuses on the government’s role to control the money supply. To control the money supply is a way for the government to try to control the stability of the price level within the economy and thereby control the inflation. The relationship between the quantity of money and the level of prices can be explained by the quantity theory of money, briefly presented below.

\textit{The Quantity Theory of Money}

The quantity theory of money states that there is a direct relationship between the quantity of money in an economy and the level of prices and is explained by the following equation:

\[ MV = PT, \]

where \( M \) is the money supply, \( V \) is the velocity of circulation (the number of times money changes hands), \( P \) is the price level and \( T \) is the volume of transactions of goods and services. The theory assumes that \( V \) and \( T \) are constant, that \( M \) is exogenous and that the direction of the causation runs from left (\( MV \)) to right (\( PT \)). This in turn, means that an increase in money supply will lead to a proportionate increase in the price level. Since inflation is the percentage rate at which the price level raise, this means that an increase in the money supply will also lead to an increase in the inflation.\textsuperscript{39}

\textsuperscript{38} Mishkin, F. (1997), p.82.
The monetary policies have an indirect affect of the whole modified SCP model (similar to the asymmetric information) and thereby also the performance within the bank market. In the short run, a higher price level means that each individual can consume less goods and services. This in turn, may lead to a decrease of the willingness to invest and thereby a decrease of the willingness to loan money. The result is a lower demand (see the “basic condition” box in the modified SCP model), which in turn affects the results of the banks and thereby the performance. Consequently, including monetary policies makes it possible to explain certain results of the performance measurements, which otherwise would be left unexplained.

In the following two chapters the modified version of the SCP model is used as a skeleton of the presentation of the empirical findings. First the bank regulation in Argentina in 1990 and 2003 are presented and the same variables will be used as presented in the “government policy” box. Both the variables “bank supervision” and “the role of the Central Bank” are included in these sections, although they are not actually regulations of the banks. Thereafter, chapter 5 (also based on each box from the modified SCP model), includes a presentation of the basic conditions, the structure and the performance of the bank market during the 1990s.
4 Bank Regulation in Argentina

Since the bank regulation in Argentina in 1990 and 2003 is both complicated and complex a brief summarising text is used as an introduction to the presentation, together with a table summarising the similarities and differences between the two. Thereafter, the regulation of 1990 is presented in more detail, followed by the regulation of 2003. In both these sections some information not directly being part of the regulation of each year is included to give a better understanding about the existing regulation. Throughout the chapter the variables from the modified SCP model are the skeleton of the presentation. Only the reforms and regulations being most relevant to reach the purpose of the report are included. Furthermore, the regulations and reforms included are to some extend simplified to avoid unnecessary details, complicating the overall understanding of the situation.

4.1 Summary of the Bank Regulation in 1990 and 2003

The bank regulation in 1990 differed substantially from the bank regulation in 2003 (see table 4.1, page 22). During the 1990s the regulatory framework underwent several fundamental changes and the bank sector was liberalised. The protective regulation in 1990 mainly differed from the one in 2003 by including a deposit insurance system and a limited lender of last resort for the BCRA. Furthermore, the prudential regulation was strengthened after 1990, including both capital requirements in accordance to the Basel Agreement (see details below) and liquidity requirements in 2003. The competition policy in 2003 did not include direct entry barriers for foreign actors, as in 1990, but strengthened reserve requirements and capital requirements existed, which both can be seen as types of barriers to entry. Concerning the bank supervision the strongest difference between the one in 1990 and the one in 2003 was that the supervision of 2003 was based on a BASIC system (see details in the section BASIC system), including both regulatory and market discipline. Finally, the role of the Central Bank in 2003 differed from the one in 1990, partly through independence from the legislative and executive powers.
### Bank regulation in Argentina

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protective regulation</strong></td>
<td>Deposit insurance system</td>
<td>Limited deposit insurance system</td>
</tr>
<tr>
<td></td>
<td>BCRA unlimited role as a lender of last resort</td>
<td>BCRA limited role as a lender of last resort</td>
</tr>
<tr>
<td><strong>Prudential regulation</strong></td>
<td>Nonexistent capital requirements</td>
<td>Capital requirements, connected to the risk level and the CAMEL system</td>
</tr>
<tr>
<td></td>
<td>Reserve requirements used on deposits</td>
<td>Liquidity requirements used on all liabilities</td>
</tr>
<tr>
<td></td>
<td>Partly &quot;financial repression&quot;</td>
<td>Liberalised financial sector</td>
</tr>
<tr>
<td><strong>Competition policy</strong></td>
<td>Limited entry for foreign actors</td>
<td>Free entry for foreign actors</td>
</tr>
<tr>
<td></td>
<td>Restriction to open new branches of domestic banks</td>
<td>No restriction to open new branches of domestic banks</td>
</tr>
<tr>
<td><strong>Bank Supervision</strong></td>
<td>Traditional control mechanisms, influenced by political decisions (with structural regulations)</td>
<td>BASIC system, including both regulatory and market discipline (with prudential regulations)</td>
</tr>
<tr>
<td><strong>The role of the Central Bank</strong></td>
<td>BCRA controlled by the legislative and executive powers</td>
<td>Independence of the BCRA</td>
</tr>
</tbody>
</table>

*Table 4.1: Summary of the bank regulation in 1990 and 2003.*

### 4.2 Bank Regulation in 1990

During the mid 1980s, when the risk of an international bank crisis grew stronger, an international committee was formed, which resulted in the Basel Agreement of 1988. This Agreement contained international standards and guidelines about bank regulation and constituted the base of a revision of the national regulation of the national banks in Argentina. It was gradually incorporated into the national laws of Argentina, even if it in 1990 not yet had a strong influence. Argentina went through decades of high inflation and financial difficulties and was struck hard by two hyperinflations in 1989 and 1990. The bank sector
suffered from ineffective regulation and supervision.\textsuperscript{40} Through the BCRA the Argentine government had a strong influence on the evolution of the domestic financial system.

Ever since 1957 the government strictly regulated the bank sector, but a slow process of financial liberalisation started in 1977. The bank regulation prior to the implementation of the New Bank Charter in 1992 has been called by many economists a “financial repression” with a government strictly controlling the bank sector and using the Central Bank as a tool for government policy.

4.2.1 The role of the BCRA
As mentioned above, in 1990 the powers and attributions of the BCRA were ruled by the old Bank Charter\textsuperscript{41} and the main role of the BCRA was to organise and coordinate the monetary policies.\textsuperscript{42} The BCRA was not independent from the executive and legislative power and was used as a tool for financing public deficit. The BCRA played an important role in the monetary policies, which in general were used for short-term aims. Credit was either allocated to the public sector or through public intervention to specific projects in the private sector.\textsuperscript{43} The government financed its deficits through money printing by the BCRA, which led to several episodes of inflationary crisis.\textsuperscript{44} In 1989 the yearly inflation rate reached 5000 % and even if it sank in 1990 the level was still over 1000 %.\textsuperscript{45} One of the main reasons for these hyperinflations was the BCRA financing public deficit through money printing and thereby increasing the money supply.

4.2.2 Protective Regulation
The regulation of 1990 included an insurance deposit system covering national currency, but not foreign deposits.\textsuperscript{46} Moreover, the BCRA had an unlimited role as a lender of last resort and as already mentioned, permitted the BCRA to finance national and provincial banks as well as government spending.\textsuperscript{47}

\textsuperscript{40}Del Pino Suárez, E.M. (2003), p.7.
\textsuperscript{41}The old Bank Charter was the law that ruled the powers and attributions of the BCRA prior to the New Bank Charter implemented in 1992.
\textsuperscript{45}www.monografias.com, 29\textsuperscript{th} of June of 2005
\textsuperscript{47}Braessas, H., Naughton, A. (1997), p.86.
4.2.3 Prudential Regulation

In 1990 the incorporation of the prudential regulation, suggested in the Basel Agreement of 1988 had merely begun in Argentina and was not yet incorporated in the law. It was a new concept, which was not a part of the regulation of 1990. Reserve requirements, however existed, set on a 24% level, which was relatively high in comparison to 15% in Chile and 6% in Brazil the same year. Capital requirements connected to the risk level were not introduced until after 1990.  

4.2.4 Competition Policy

In 1957 the BCRA was given the right to fix the maximum and minimum interest rates the banks had to pay for different types of deposits. Furthermore, it was allowed to determine maximum and minimum interest rates the banks would get for different types of loans. This strict regulation, however, led to frequently higher inflation rates than nominal interest rates resulting in negative real interest rates and with a law implemented in 1977 these restrictions were weakened. The new focus of the law reduced the negative value of the interest rates in real terms, but presented highly elevated costs of the banking system and led to unstable interest rates in general. The entry of foreign actors to the Argentine bank market was limited in the regulation of 1990 and there was a restriction to open new branches of domestic banks.  

4.2.5 Bank Supervision

One of the objectives of the Superintendence in the old Bank Charter was to supervise the liquidity and functioning of the financial system. The Superintendence was a part of the BCRA which was continuously involved in its work. The purpose was to avoid drastic solutions and minimise the social and economic costs of bankrupted banks. This led to severe costs for the economy and sometimes unacceptable situations from a technical point of view, when banks with negative net worth were allowed to continue for several years without intervention. The work of the Superintendence was costly and inefficient closely connected to political decisions, through the BCRA (which was strongly influenced by the politicians, because of its dependency of the executive and legislative powers).

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The supervision was focused on three areas: Inspection, Control and Authorisation based on structural controls of the system (through prohibitions and direct interventions). After an unstable economy during the 80s, ending with two hyperinflations the policymakers started to realise that to reach price stability and create a sound financial system it was time to define the monetary responsibilities and financial politics. At the end of 1990 the process to reform the work of the Superintendence started, which was included in the New Bank Charter in 1992.51

4.3 Bank Regulation in 2003

Similar to other emerging market countries the Argentine banking sector was liberalised in the 1990s and the regulation of 2003 is a result of a number of reforms during the 1990s. After decades of high inflation Argentina started a bank regulatory reform and the government policy promoted among other things: privatization of provincial banks, financial liberalisation, free entry and a limited safety net support. The countries’ bank reforms are said to be one of the most radical attempts to improve a banking system.52 Two revolutionary changes within the banking system were the establishment of the Convertibility Plan53 and the independence of the BCRA.

4.3.1 The role of the BCRA

The hyperinflations of 1989 and 1990 forced the government to take actions in order to establish financial viability and stabilise the inflation.54 In 1991 the Convertibility Plan was implemented, and the main role of the BCRA was to exchange dollars for Australs to maintain a fixed exchange rate. In 1991 the inflation rate sank to 84 % and between 1995 and 2000 the level was around 1 %. With the Convertibility Plan the BCRA lost more or less all possibilities to use monetary policies, but managed to control the inflation level. The Convertibility Plan was abandoned in 2001, which meant a regained possibility for the BCRA to use monetary policies. Moreover a New Central Bank Charter55 was sanctioned in 1992, which made the BCRA independent from the legislative and executive powers.56 It was no longer possible to finance provincial and central government expenses with money from the BCRA. This limited the government’s ability to use the BCRA as a tool for financing public

53 The Convertibility Plan was ruled by the Convertibility Law No.23928 established April 1st in 1991.
55 La nueva Carta Orgánica del Banco Central de la República Argentina Law no.24.144.
deficit through money printing. In 2003 the powers and attributions of the BCRA were still ruled by the New Bank Charter.

4.3.2 Protective Regulation

With the New Charter the insurance deposit system was abandoned and policymakers were hoping to eliminate moral hazard problems caused by the old system. In the mid 1990s the authorities, however, had to review their decision about abandoning the deposit insurance system. In 1995 Mexico experienced an economic crisis, called the Tequila crisis, which struck hard on Latin American countries in general and Argentina in particular. Between January and March 1995 the deposits within the Argentine banks system fell 16% and the BCRA had to support several small banks with liquidity problems because of deposit withdrawals. The confidence and trust of both investors and depositors fell drastically and to regain confidence from the depositors the deposit insurance system was readopted through the creation of the Fund of Insurance Deposits (El Fondo de Garantía de Depósitos, Law no.24.485).

After the sanction of this law the deposits begun to return to the Argentine bank system. The new system was, however, limited to give security to depositors, but at the same time avoid moral hazard problems and only covered deposits for less than 90 days up to 10 000 pesos and deposits for more than 90 days up to 20 000 pesos. The fund was administrated and managed by SEDESA (Seguro de Depósitos Sociedad Anónima) and the responsibility of the depositors was limited to this deposit guarantee fund.

The role of the BCRA as a lender of last resort was discretionary and not mandatory in the regulation framework of 2003. The law stated that the BCRA “will be able to” act as a lender of last resort, which meant that it was not obliged to do it. Moreover, the law from 1992 limited the lender of last resort role of the BCRA to put an end to the money printing of the BCRA and the aiding of seriously troubled banks. Earlier these insolvent institutions received deposits from the public and with a bankruptcy the BCRA had to pay these deposits because of the old deposit insurance system.

4.3.3 Prudential Regulation
In 1991 the implementation of capital requirements was the first step of Argentina towards a prudential regulation in accordance with the Basel Agreement. Argentina was the country that implemented the strictest version of the Basel Agreement (higher than all the other Latin American countries). The economic crisis in 2001 led to several devastating consequences for the bank sector, as well as the economy as a whole in Argentina and the BCRA was forced to lessen the strict prudential regulation in an attempt to solve these problems.

Capital Requirements
In September 1991 capital requirements were implemented. There was a minimum requirement independent of the bank assets combined with a variable requirement, reflecting the different risks connected to the assets. General principles from the Basel Agreement in 1988 (see appendix, page 57) were used and there are three different types of risks connected to the regulation; default risk, interest rate risk and market risk.

Default Risk
The capital requirements related to the default risk were implemented in 1992 and only went through small changes during the 1990s. Initially a minimum of 3% of assets at risk was the standard required, which increased gradually during several years until it reached 11.5% in 1995, exceeding the recommended percentage of the Basel Agreement on 8%.

Interest rate Risk
Capital requirements connected to the interest rate were introduced in 1999. Capital requirements for credit risk meant that the interest rate charged on each loan was used as a signal of credit risk and required that capital rose accordingly.

Market Risk
The capital requirements associated to the market risk was calculated through the variation of the value of the net assets and the liabilities according to their market values and was implemented in 1996.

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60 See Appendix, p.57 for a brief explanation of the Basel Agreement.
63 ibid.
In 1996 Argentina was one of the first countries to implement capital requirements based on the version of the Basel market risk capital requirements. Higher risk weights were calculated via a “value at risk formula” and the BCRA published the volatilities used to calculate these risks every month. In each bank’s capital requirement was affected by its CAMELS rating (see the section CAMELS system, page 29) and banks with poor CAMELS ratings faced a higher requirement.

**Reserve Requirement system**

After the Tequila crisis in 1995 there was a reform of the reserve requirement system. The former reserve requirements, which only had been placed on deposits, were replaced with a “liquidity requirement”. The liquidity requirements were used on almost all liabilities with rates depending on the maturity of each liability and were required regardless of the type of liability (sight deposit, time deposit, bond etc.). The BCRA manifested that the objective of this replacement was to protect the liquidity of the system in general and the focus was not on the liquidity of each individual bank. One of the lessons after the crisis in 1995 was that it was important with a high level of liquid assets within the system for it to keep stability in the case of low access to external capital or a fast reduction of liquidity. The reserve requirements decreased significantly during the 1990s and in 2000 it was only 4% compared to 12% in Brazil and 5% in Chile.

**4.3.4 Competition Policy**

The competition between banks increased after the implementation of the New Charter, as restrictions on the entry of foreign banks and the opening of new branches of domestic banks were removed.

**4.3.5 Bank Supervision**

The role of the Superintendence in 2003 was to supervise the compliance of the bank rules and analyse its effects on the financial system, to eventually propose modifications improving

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67 Capital requirements = 11.5*w*X*K+MR+IR, where capital requirements is a % of assets at risk, w is the average bank Basle risk weight for default risk, X is the average interest rate factor, K is the CAMELS factor, MR is the market risk capital requirement and IR is the interest rate risk capital requirement. (Calomiris, C., Powell, A. (2000), p.15).
the rules to reach the objectives of the supervision. In comparison to the structural supervision in 1990 the new bank supervision was supposed to promote competition and efficiency within the bank sector and at the same time force the banks to relate its capital with the risk level of the assets (through prudential regulation).

**BASIC system**

In the late 1990s the government realised that the supervision of banks should be based on both the Superintendence and the market. With the BASIC system the traditional control mechanisms were combined with the market discipline and the idea was that both market and regulatory discipline are imperfect and should complement each other. B stands for the obligation of each bank to issue 2% of its deposits as subordinated liability each year. A stands for external auditing, assuring that the information given from banks represent the actual situation in Argentina. S refers to the supervision from the Superintendence and its use of the CAMELS system (see below). Further, the letter I symbolises the importance of relevant and trustworthy information when supervising the bank system. The Superintendence in Argentina publishes e.g. summaries of bank balance sheet and details of loans and provision of each bank on a monthly basis. Finally, the letter C represents credit rating which is supposed to provide more information to depositors about the banks solvency. Each bank must obtain a credit rating from an authorised rating agency.

**CAMELS system**

As mentioned above, banks started to be supervised under a CAMELS system in Argentina. Initially the system was called CAMEL (Capital, Assets, Management, Earnings and Liabilities), but was later extended with an “S”, standing for Sensitivity. This extension aimed to incorporate the sensitivity of the market risks. Each aspect of the CAMELS was supervised and given a grade from 1 to 5. The final qualification reflected the situation of each bank, giving a signal of how each bank administrated its capital and financial risks.

In Argentina legal protection of supervisors is weak and the possibility for Superintendence to intervene is low as long as the bank is formally complying with regulations. This means that

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75 Damill, M, Salvatore, N, Simpson L. (2003), p.27.
there is a risk that the Superintendence cannot close a bank or force it to take corrective action even if they know that the bank is facing serious problems.\textsuperscript{76}

5 The Bank Market in Argentina

In this chapter relevant empirical findings about the bank market in Argentina are presented that will be used to reach the purpose of the thesis. Initially, explanations of the basic conditions and the market structure of the bank sector in Argentina are made. Finally, the actual performance within the bank market is worked through covering data and information within the timeframe of 1990 and 2003. At the end of the chapter the characteristics of the evolution of the bank sector is summarised in a table. Also in this chapter the variables from the modified SCP model are used as a skeleton of the presentation.

5.1 Basic Conditions of the Bank Sector

During the 1990s the Argentine financial system experienced a significant growth thanks to low interest rates and a large amount of external capital inflows. The large inflow of foreign capital and a reformation of the regulatory framework also contributed to strengthen the confidence of the system, which led to an expansion of the bank activity. The deposits were multiplied nine times from 1991 to December 2000. During the same period the amount of total loans grew seven times. Despite this growth the total bank assets only represented 45% of GNP at the end of 2002 in comparison with 170% in Chile during the same period and 130% in Brazil. In 1997 the regulatory framework of the bank sector in Argentina was considered one of the strictest in the world and the second best in a ranking of the regulatory systems of the emerging countries.77

5.1.1 Supply and Demand

As described in the theoretical framework the measurement of supply in this report is based on bank deposits and services (e.g. loan granting), where deposits represent the input and services represent the output. Observing the development of the last decade gives evidence of an initial increase, followed by a decrease of the deposits of the banking system in Argentina. In spite of that, the deposits represented 10.1% of GDP in 1991 while it reached a level of 27% in 2000.78 As mentioned earlier, the Tequila crisis had a negative effect on the Argentine economy, creating a general distrust of all Latin-American countries and leading to massive withdrawals of foreign capital in Argentina. Further, the country risk79 of Argentina increased, which also led to big deposit withdrawals of the bank clients.80 Only during the

79 The risk associated with operating in, trading with, or holding the assets issued by, a particular country.
first months after the Tequila crisis the deposits fell with 8000 million pesos and led to severe liquidity problems for the Argentine banks.\textsuperscript{81} The Asian and Russian crises at the end of the 1990s worsened the situation additionally and led to further reversal on capital inflows in Argentina.\textsuperscript{82}

In the third quarter of 1998 an unchained recession started, leading to a negative inflow of foreign capital with the Argentine crisis in 2001.\textsuperscript{83} That year the deposits fell 28\% between February and November and the country risk raised from 534 points in March 2000, to 3 340 points in November 2001. The recession became deeper and the capital flight worsened, which eventually led to the government introducing a partial bank deposit freeze (the so called “corralito”\textsuperscript{84}) in December 2001. The devaluation of the peso was inevitable and reached at some points 300 \%. The banks kept losing deposits until mid 2002, but in August the same year the deposits began and kept increasing until 2003.\textsuperscript{85}

The services can be said to have decreased as well, with increased liquidity problems and a decrease in granting of loans. Many Argentines preferred to put their money in the mattress instead of investing it in stocks or deposit it in a bank. The net lending did, however, start to increase in the mid 2003.\textsuperscript{86}

The demand side, on the other hand is (according to the modified SCP model) connected to the credit given to the private and the public sector. Examining the data during the 1990s gives the result of the credit to the private sector being much higher than the credit to the public sector, although in 1991 the public credit was 10 \% of the private, while in 2000 that number reached 20 \%.\textsuperscript{87} The demand of credit decreased after the crisis in 2001, mostly because of uncertainty and low confidence. One of the effects was a growing informal sector of the economy and a strong preference to hold cash from the Argentineans.\textsuperscript{88}

\textsuperscript{81} Braessas, H, Naughton, A. (1997), p.130.
\textsuperscript{83} ibid.
\textsuperscript{84} See further explanation in Appendix, p.57.
\textsuperscript{86} ibid. p.22.
\textsuperscript{88} Damill, M., Salvatore, N., Simpson L. (2003), p.79.
5.1.2 Uncertainty caused by Macroeconomic Policies

In 2001 the Argentine banking system faced insolvency problems and the uncertainty of the government’s capacity to maintain the Convertibility Plan (implemented in 1992 fixing the Argentine currency to the dollar) grew stronger. Due to this uncertainty the confidence of the banking system fell, which as mentioned above led to a significant decrease of bank deposits. During 2001 the system lost 20% of its deposits and to avoid a bank panic, the government introduced restrictions limiting the withdrawals of the depositors (such as “el corralito”, also mentioned above). This government intervention led to a traumatic political transition and in 2002 the internal and external debt was defaulted. The government was forced to abandon the Convertibility Plan and devaluate the peso and an economic crisis was inevitable. After the devaluation of the peso the government introduced another set of regulations affecting the bank sector. One of these regulations was an asymmetric “pesofication” of bank assets, which meant that the banks were forced to convert their loans in dollar into pesos, with the exchange rate 1 to 1. At the same time, the bank deposits in dollar were converted into pesos with the exchange rate 1.4 pesos per dollar.89

The set of regulations implemented by the government in late 2001 and early 2002 led to devastating consequences for the bank sector in Argentina. Both the external and the internal confidence for the Argentine banking system were low and the system suffered from inefficiency.90

5.1.3 Asymmetric Information and Uncertainty

Problems with asymmetric information decreased and the transparency increased with the implementation of the BASIC system that obligated all banks to write monthly reports about their assets, liabilities, loans etc. Furthermore, a lot of information were available free of charge on the BCRA’s website91. The quality as well as quantity and availability of the information were allowed to increase with the auditing process (from the BASIC system mentioned above) that tried to ensure the validity of all published information. The auditing firms received harsh criticism in Argentina during the 80s and the 90s, but the BCRA tried to solve the problem by setting up a list of qualified bank auditors and the auditor may be removed from the list if not accomplishing different requisites. Moreover, the BCRA supervised the auditing process and implemented strict guidelines on minimum auditing

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89 Comité Latinoamericano de Asuntos Financieros (2002)
90 ibid.
requirements. The Superintendence published summarized bank balance sheet, principal regulatory ratios and had a database covering almost every loan in the financial system. This made it possible for anyone to view the amount of debt an individual or a company had and whether debt was performing or not. Some of the main objectives of this policy were to encourage transparency and increase the will of borrowers to pay debts.  

Even if the asymmetric information problem decreased in general, it is worth mentioning that it increased in the case of lost expertise knowledge through foreign banks entering the market (see section 5.3.3 Service Quality).

5.2 Market Structure
The market structure of the bank sector in Argentina changed radically between 1990 and 2003. A privatisation process of provincial banks led to a decrease in public banks, the market concentration increased especially for large national and foreign banks and although the direct entry barriers were eliminated, capital requirements and reserve requirements still existed as barriers to entry.

5.2.1 Market Concentration
When deposits started coming back to the banking system, after the Tequila crisis, many Argentines chose to turn to the big banks for which they felt more confidence and trust. Moreover, many banks were forced to close because of insolvency which led to bankruptcy. The bank concentration of the 10 largest banks increased the last decade and represented 78.9% of the total deposits of the system in 2002 in comparison to 59% in 1995 (see box below). In spite of that the Herfindahl-Hirschman Index was 600 in 1999 which is still far below 1800, which is considered the indicator of concentrated markets.

<table>
<thead>
<tr>
<th>Concentration of the bank system: 1995-2002</th>
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<tr>
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<tr>
<td>The 10 largest banks' participation of the total system in %</td>
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Moreover, a large amount of the deposits moved from national banks to foreign banks. In 1995 the national banks held 82.9% of the total deposits, while the foreign banks only held 17.1%. In 2001 these numbers represented 48.6% for national banks and 51.4% for foreign banks (see box below), which meant that the foreign banks held more than half of the total assets of the banks sector in Argentina.\footnote{Wierzba, G., Golla, J. (2005), p. 21.}

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign banks</th>
<th>National banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>17.1</td>
<td>82.9</td>
</tr>
<tr>
<td>2001</td>
<td>51.4</td>
<td>48.6</td>
</tr>
</tbody>
</table>


Between 1994 and 1999 the total number of banks decreased from 168 to 92 (the public banks from 33 to 16 and the private banks from 135 to 76). The foreign banks held 45% of the system’s deposits in 1999 and their loans represented 46% of the total amount of loans. In 2003 these numbers were still elevated.\footnote{Damill, M, Salvatore, N, Simpson L. (2003), p. 25.}

5.2.2 Entry barriers and Economies of scale
The direct entry barrier for the bank sector was eliminated in 1992, which opened up the market. Other variables which could be seen as barriers to entry were however strengthened (such as reserve and capital requirements). A simultaneous increase in both size and concentration of the banks during the 1990s it is possible to see a tendency of increased economies of scale for already existing banks, which may be interpreted as an entry barrier. Moreover, large banks with e.g. extended ATM networks and an elevated technological level, combined with a general distrust of the public made it more difficult for new banks to enter the market. An additional factor affecting the entry barriers of banks was the technological innovation. Foreign banks entering the bank market in Argentina brought with them technological innovation that soon spread throughout the system. For large foreign banks the entry barrier could be seen as lower than for national banks, with the elimination of the direct entry barrier created through government regulation. Additionally, the public had stronger confidence for foreign banks, which might have made it easier for them to attract deposits.
The implementation of capital requirements in the bank regulation after 1992 could however be seen as a kind of entry barrier affecting all kinds of banks regardless of kind of ownership.

The general troubled bank sector in Argentina and its low profitability was, however, a fact that decreased the incentives for both national and foreign banks to enter the market. Economies of scale have improved to a certain level with larger banks, but are not unlimited as larger banks are usually more complex and costly to manage.\textsuperscript{96}

5.2.3 Ownership

In Argentina during the 1990s the publicly owned provincial banks performed poorly in terms of portfolio, quality, income and return on assets. There were, however, several aspects reducing the incentives to privatise these poorly performing banks. First of all, the provincial governments used provincial banks to finance their deficit and secondly they had lending policies extending credit to borrowers that did not meet private banks’ criteria. In 1994 public provincial banks accounted for almost one third of all banking sector employees. Moreover, their poor management led to a large volume of non performing loans.\textsuperscript{97}

After the Tequila crisis in Mexico in 1995 various financial institutions were suspended or forced to close. Nervous depositors withdrew deposits, which struck hard on, in particular, the small public provincial banks. It was necessary for these insolvent banks to find a way to recapitalise. The privatisation process of national banks started in 1992, but met resistance, especially from the provincial governments who still used the banks to finance public costs, between 1991 and 1994. After the crisis several of these banks did, however, have severe liquidity problems and with no help from the BCRA as a lender of last resort the need and will grew stronger to increase the privatisation within the bank sector. A loan from the IDB (Inter American Development Bank) of 750 million dollars and another from the World Bank of 500 millions were given to a fund (el Fondo Fiduciario para la Privatización de Bancos), which aim was to help financing the privatisation.\textsuperscript{98} In 1993 there were 34 public banks (28 of them provincial), while in 2001 they only represented 11 (7 of them provincial).

When comparing public and private banks between 1993 and 2000 it is clear that the private banks always have fewer employees and less branches, which could be seen as an indicator of

\textsuperscript{97} Canavese, P., (2002), pp.2.
efficiency. Looking at other indicators to measure efficiency (e.g. financial expenditure, output over assets, output over employees), however, it is not clear that all private banks performed better than the public banks.  

Furthermore the free entrance to the bank market led to an increased level of foreign owned banks. Between 1992 and 1999 the number of foreign banks went from 31 to 48, although this number decreased after the economic crisis in 2001.

5.3 Performance
This section works through the statistics, data and tendencies of the different performance variables from the modified SCP model. These variables are later used as a tool in the analysis of how bank regulation affects the performance within the bank sector of Argentina.

5.3.1 Returns
The ROA (return on assets) registered a level of 1.3 in 1997 but decreased continuously up until 2003 when it registered a negative ROA. The reformation of the bank regulation increased the operative efficiency, although it still registered a low level of profitability in comparison to other Latin American countries. Additionally, the average operative costs of the system sank from 9.26% of the assets in 1993 to 5.56% in 2000, which was still a high number in comparison to other countries: In 1997 the number was 6.44 in Argentina, while the United States, Chile and England only reached the levels 3.6, 3.4 and 2.1. Also the ROE (return on equity) sank each year from 1997 to 2003, when it registered a level of -22.7%. The low returns were especially registered in the public banks, but also in national private banks and foreign banks. The largest private national banks tended to have better returns than other banks.

5.3.2 Service Quality
The quality of a bank product can, as mentioned in the theoretical framework, be measured by variables such as access, communication, understanding the customer and risk.

102 Damill, M, Salvatore, N, Simpson L. (2003), p. 44.
104 Damill, M, Salvatore, N, Simpson L. (2003), p. 44.
Access
Regarding the access, the geographical concentration of the bank sector increased during the 1990s, especially concentrated within the capital and the province of Buenos Aires. The increase of foreign banks was one of the factors that led to a lower concentration in the rural areas of Argentina. In these areas (in general the poorest areas of the country) the banks had higher market power, because of less competition than in the big cities.

Communication
Concerning the communication several attempts were made to improve the communication between the banks and the customers. All banks were obligated to give daily, monthly and yearly reports about their situation. The increasing concentration of the bank sector often led to a loss of personnel with expertise knowledge about local and regional areas through replacement of new personnel.

Understanding the customer
The understanding of the customer, especially in the case of the small and medium sized companies, decreased because of lost knowledge (e.g. knowledge about the economic histories of each company). This led to an increase of asymmetric information, which could be seen as an increase in the transaction costs. Additionally, the small banks (local and regional) tended to have a greater proportion of loans to the small and medium sized companies than the foreign banks and the loans to them decreased during the late 1990s.105

Risk
The risk factor connected to the bank sector is highly related to the solvency of the banks. The insolvency risk of the Argentine banks has decreased significantly through mergers and privatisation during the 1990s.106

5.3.3 Market Power
As mentioned earlier, banks produce services instead of products, reason why they focus on service quality to differentiate themselves from other banks. Once a bank has established confidence of depositors and borrowers they feel security (one of the measurements of service quality) and thereby have little interest to change bank, suggesting a low elasticity of demand. This, in turn, would show on a relatively high market power of the banks in Argentina that succeed in differentiating themselves by improving service quality.

Further, the low confidence for the bank sector from the public created a tendency for depositors to move towards the large banks, which offered a higher level of confidence and thereby enjoyed a larger market power, through the higher confidence. Furthermore, since market power often is closely connected to market share the statistics of increased market share for the larger banks give a tendency of an increase in the market power of the large national banks and the foreign banks during the 1990s.

<table>
<thead>
<tr>
<th>Evolution of the bank sector in Argentina from 1990 to 2003</th>
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</thead>
<tbody>
<tr>
<td><strong>Basic conditions</strong></td>
</tr>
<tr>
<td>Supply and Demand</td>
</tr>
<tr>
<td>An overall increase of deposits and services, but a decrease after 1995 and 2001.</td>
</tr>
<tr>
<td>An overall increase of credit, but a decrease after 1995 and 2001.</td>
</tr>
<tr>
<td>Asymmetric Information</td>
</tr>
<tr>
<td>Decrease of asymmetric information with the BASIC system. Increase by lost expertise knowledge about local and regional areas.</td>
</tr>
<tr>
<td>Uncertainty</td>
</tr>
<tr>
<td>Uncertainty caused by government policy lowered by the implementation of the Convertibility Plan, but increased after 2001, as a result of government policies.</td>
</tr>
<tr>
<td><strong>Market structure</strong></td>
</tr>
<tr>
<td>Market Concentration</td>
</tr>
<tr>
<td>The concentration of the bank market increased for large national banks and foreign banks, but was still relatively low.</td>
</tr>
<tr>
<td>Entry barriers and Economies of scale</td>
</tr>
<tr>
<td>Overall decreased entry barriers and a tendency of increase in economies of scale.</td>
</tr>
<tr>
<td>Ownership</td>
</tr>
<tr>
<td>The number of private banks relatively increased as well as the number of foreign owned banks.</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
</tr>
<tr>
<td>Returns</td>
</tr>
<tr>
<td>In general low levels of rates of returns. Decreased operative cost between 1990 and 2003.</td>
</tr>
<tr>
<td>Service Quality</td>
</tr>
<tr>
<td>An increase in the geographical concentration, decrease in understanding of the customer and the insolvency risk.</td>
</tr>
<tr>
<td>Market Power</td>
</tr>
<tr>
<td>Increase in market power of large national banks and foreign banks.</td>
</tr>
</tbody>
</table>

*Table 5.1: Summary of the evolution of the bank sector between 1990 and 2003.*
6 Analysis
As mentioned in the frame of reference the links between the variables in the SCP model are very complex. The purpose of this thesis is to make a comparative study of the bank regulation in 1990 and the bank regulation in 2003 in Argentina, in order to analyse how the bank regulation has affected the performance of the bank market. Because of the complex relationship between the variables it is, however, necessary to include the basic conditions, the market structure as well as monetary policies and the role of the Central Bank to deepen the analysis and come to more reliable conclusions. The skeleton of the analysis is based on the variables from the modified SCP model, representing different ways to measure the performance within the bank market. Each variable is connected to the three types of regulation; protective regulation, prudential regulation and competition policy. At the end of the chapter the results of the report are summed up in the concluding remarks.

6.1 Returns
The bank regulation in 2003 seems to have promoted better results in the long run by increasing incentives to improve efficiency and by decreasing the operative costs (even if they were relatively high in comparison with other Latin American countries). The empirical findings, however, show that the rates of returns of the bank sector in general decreased continuously during the late 1990s up until 2003.

6.1.1 Protective Regulation
The protective regulation in 2003 resulted in lower moral hazard problems which increased the chances of improving the bank results. With decreased costs for the BCRA the general results within the sector improved. Deposit insurance system was a factor supposed to increase the confidence of the depositors, but was unfortunately not enough after the crisis in 2001. Fewer unprofitable banks in 2003 further suggested better results within the bank sector.

Moral hazard behaviour
The BCRA’s role as a lender of last resort, as in 1990, can be seen as a type of insurance system for banks, increasing their moral hazard behaviour. It gave them less incentive to improve their risk management and with a bad risk management (leading to e.g. non performing loans), increasing the costs, the probability of improving cost efficiency decreased. With the knowledge that the BCRA would act as a lender of last resort in 1990, it
was not as important to try to avoid non performing loans, since the banks knew they would be “saved”. This led to banks granting loans also to borrowers with low trustworthiness, increasing the risk of non performing loans. Consequently, the overall perspectives of improved efficiency and improved result seemed poor.

In 2003 it was, however, more important to avoid non-performing loans, since the BCRA had a limited role as a lender of last resort. With stronger incentives to avoid non-performing loans the chance of improved returns for the banks increased.

**Increased costs**

It can further be argued that increased costs for the BCRA in 1990 augmented the risk of a troubled BCRA, which in a long run would affect the whole bank system and increase the fragility. The situation got complicated in 1990 mainly because of the combination of a deposit insurance system and the role of the BCRA as a lender of last resort. The reason was that the BCRA had to pay “double” in the case of trying to help a troubled bank with liquidity, which later was bankrupted and the BCRA had to pay once more, but this time to the depositors, because of the deposit insurance system. Moreover, helping unprofitable and insolvent banks instead of letting them close decreased the overall results of the bank sector. The limited deposit insurance system and the limited role for the BCRA as a lender of last resort in 2003 was a way for the BCRA to improve the overall results of the banks and at the same time decrease its own costs.

**Deposit flight**

It was partly thanks to the deposit insurance system (even if limited) that the deposits returned to the bank system after the Tequila crisis in 1995. This in turn affected the performance by increasing the possibilities of improving the results of the banks. A deposit insurance system aimed to protect the depositors from losing their deposits in the case of bankruptcy and in Argentina this protection seemed to have played an important role. The existence of a deposit insurance system reduced the risk of the depositors to suffer a loss and was a way to create security and confidence of the depositors within the system. Empirical evidence shows that an abolishment of a deposit insurance system not necessarily leads to a fall in deposits, but that it makes the bank sector much more vulnerable to difficult situations. The decision to abolish the deposit insurance system in 1992 initially had little effect. It was first in a vulnerable situation such as during the Tequila crisis in 1995 when the deposits fell drastically.
Data shows that deposits did start to come back to the system after the reestablishment of the limited deposit insurance system. The drastic fall of deposits within the bank sector in 1995 could be seen as a result of the abolishment of the deposit insurance system in combination with an international crisis affecting the country. This decrease, in turn, created insolvency problems for several banks (especially small banks), worsening their results.

The economic crisis in 2001 later worsened the situation for the banks in Argentina. Despite the limited deposit insurance system deposits fell once more drastically with foreign banks fleeing the country and depositors wanting to withdraw their money. This shows that even with a deposit insurance system it is impossible to keep confidence high when so many outside factors affect the situation.

**Unprofitable banks**
Keeping alive unprofitable banks was a contributing factor to an unstable bank sector in 1990. If a large part of the market consists of unprofitable banks it leads to lower rates of returns in general. The protective regulation in 2003 most likely improved the situation for the banks in comparison to the protective regulation in 1990 by eliminating the role of the BCRA as a lender of last resort, keeping alive unprofitable banks. In 2003 the BCRA had the possibility to analyse each case and decide if it was wise to aid the bank or not. Looking at the statistics of the decrease in number of banks suggest that this change did lead to more banks closing because of insolvency problems and low profitability. This, in turn, would lead to a higher profitability within the sector and fewer, but solvent banks.

6.1.2  Prudential Regulation
To adopt the international standards and guidelines from the Basel Agreements connected to the capital requirements was a way to create safer banks acting less risky, but also made it more difficult for banks to generate income and improve their results. It can, however, be argued that the regulation improved the overall results of the bank sector by forcing each bank to focus more on product and cost efficiency in the long run.

**Capital requirements**
In 1990 no capital requirements existed and when they were introduced in 1992 they were initially low, but increased continuously until 1995 when a level of 11.5 % was reached. The capital requirements affect the profitability of a bank and in 2003 the capital requirements were connected to different types of risks affecting the return rates in several ways. The
capital requirements connected to the default risk meant that banks with higher asset value faced a higher capital requirement. Furthermore, the capital requirement connected to the interest rates charged on each loan diminished the possibility to grant riskier loans and earn more by charging a higher interest rate.

To connect the capital requirements to the CAMELS system created incentives for each bank to improve several variables connected to their results, such as assets, management and earnings. Because of the CAMELS system the possibilities to get involved in high risk operations decreased, forcing them to improve their risk management. The strict capital requirements made it more difficult for insolvent banks to survive (especially with no BCRA acting as a lender of last resort) and less insolvent banks increased the overall return rates of the bank sector, but because of high competition the levels were still low.

6.1.3 Competition Policy

The increased competition through the elimination of entry barriers seems to have decreased the profits of the bank sector in general, but increased the efficiency.

*Increased competition*

The elimination of entry barriers initially led to a stronger competition between banks and the stronger competition led to lower levels of profits and lower results. Increased competition made it more important for the banks to try to maximise efficiency to try to survive among the other banks. The operative costs did sink within the sector, suggesting a higher efficiency, while the statistics of the ROE and ROA give evidence of worsened results.

*Higher market concentration*

In the mid 1990s the concentration level of the market increased as a result of unprofitable and insolvent banks being forced to close. The number of large foreign owned banks also augmented in Argentina, resulting in a higher level of technology, making it easier for foreign banks to increase both cost efficiency and profit efficiency.

6.1.4 Government policy

By encouraging privatisation of public banks the level of efficiency within the system increased, as well as the chances of improving the results of the banks in the long run. The government policies implemented after the economic crisis in 2001 strongly affected the results within the bank sector negatively and the bank supervision decreased the level of unprofitable banks.
Privatisation
One example explaining this is the government encouraging privatisation of public banks in the late 1990s, which seems to have led to an improved level of efficiency in Argentina. Although the results were still low in 2003, the private domestic banks registered the best rates of returns, followed by the private foreign banks. The public private banks were the least efficient, probably because private banks had more incentives to maximise efficiency. Restoring profit motives led to increased efficiency and competition. Furthermore, private ownership ended low profitable operations through politicised lending.

Increased costs
The inconsistent government polices before the economic crisis in 2001 increased the uncertainty about future government policies, leading to massive withdrawals of deposits. Moreover, the costs for all banks additionally increased and the confidence of the sector was destroyed after the abolishment of the Convertibility Plan in 2001. Moreover, the government adopted several questionable policies, such as the “asymmetric pesofication” and the “corralito” that resulted in severe losses for the banks and negative results for many of them.

Bank Supervision
Thanks to the BASIC system in combination with a BCRA with a limited role as a lender of last resort it was easier for the Superintendence to close unprofitable banks with negative results. It can be argued that the implementation of the BASIC system made it more difficult for each bank to increase the levels of returns, but it increased the overall efficiency within the system and decreased the level of unprofitable banks.

6.2 Service Quality
The overall service quality within the bank sector depended on the incentives created for the banks, which were affected by the bank regulation in 1990 and in 2003. In different ways the variables measuring service quality (access, communication, understanding the customer, credibility and security) shows how the bank regulation affected the performance within the bank sector. In general the bank regulation in 2003 seems to have increased the service quality through better communication, credibility and security. The service quality decreased for rural depositors and borrowers though, by e.g. lower access and understanding of the customers.
6.2.1 Protective Regulation
The protective regulation of 2003 increased the service quality in general, by diminishing the moral hazard problems and decreasing the level of insolvent banks.

*Moral hazard problems*
The unlimited deposit insurance system in 1990 led to a lower service quality, through increased moral hazard problems of bank behaviour and thereby a higher level of risk taking. Banks knowing that their depositors were insured had more incentives to get involved in riskier operations with a chance of higher profits, since the depositors would not lose their money in the case of failure. To delimit the deposit insurance system, as in the regulation of 2003, was a way to decrease these problems of moral hazard behaviour and increase the service quality within the bank sector.

*Insolvent banks*
The fact that the BCRA bailed out insolvent banks in 1990 created a generally unstable bank sector and decreased the service quality through a higher risk level connected to their insolvency. The limited role of the BCRA as a lender of last resort in 2003 reduced the number of insolvent banks, suggesting improved service quality, since it was complicated for seriously insolvent bank to concentrate on developing the aspects of their service quality.

The unlimited deposit insurance system in 1990 reduced the importance for depositors to find a trustworthy and safe bank and additionally lowered the incentives for the banks to improve service quality variables. It also increased the possibility for insolvent banks to attract depositors leading to a higher risk that the BCRA eventually would have to be responsible for insolvent banks not being able to give the depositors their money.

 Keeping alive troubled banks through a BCRA acting as a lender of last resort could be regarded as way to try to keep the level of access by not closing bank offices in small towns. This improved the service quality for the depositors and borrowers from the rural areas, but most likely created larger costs than benefits for the bank sector in general.

6.2.2 Prudential Regulation
The prudential regulation in 2003 gives evidence of having increased the service quality through capital requirements connected to the CAMELS system, signalling lower risk and
higher security. The percentage of the reserve requirements was lower in 2003, but instead placed on virtually all liabilities and still signalled security as in 1990.

**Capital Requirements**

The implementation of a capital requirement system based on the general principles of the Basel Agreement and connected to different risks aimed to improve risk management of the banks and thereby improved the service quality through a higher credibility and security of the banks in general within the bank sector. The three different types of risks (default risk, interest rate risk and market risk) each in its way affected the service quality.

The fact that the capital requirement connected to the default risk was put on a relatively high level (11.5%, which was higher than the recommended level of the Basel Agreement of 8%) shows sign of a strong willingness of the legislation to reduce moral hazard problems, but can also be said to complicate the situation of the banks having to fulfil such high requirements. The weight measure related to the level of interest rate charged on each loan can be criticised since it made credit from small banks less attractive. Higher interest rates do not necessarily mean that the capital is connected to a higher risk, but can also be a sign of high administrative costs or a result from a less competitive context. To have a capital requirement connected to the market risk were probably especially important in Argentina, given the volatility of both international capital and demand of domestic financial assets during the periods of economic crisis. The market risk played an important role by affecting incentives and actions of virtually all actors within the market.

**CAMELS system**

In 2003 the capital requirements were connected to the risk level, through the CAMELS system. This system allowed the requirements to differ depending on each banks situation (e.g. capital and management) and reflected the risks assumed and the performance of a bank’s operations. Forcing the banks to follow capital requirements was a way to control the general risk taking within the sector. It affected the incentives of a bank to get involved in an operation with a relatively high risk, since it eventually would lead to higher capital requirements. The CAMELS system was another way for the policy makers to try to control the behaviour of the actors within the bank sector.

Through the CAMELS system banks were penalized for excessive risk taking and non complying banks were not encouraged to increase asset risk, since it would lead to higher
costs. The financial markets, however, made it easy for banks to make large bets quickly, which meant that a sound bank could be driven into insolvency fast from involvements in high risk operations. Focusing on risk management was a way to avoid such situations. The probability of insolvency was decreased by changing bank risk taking behaviour, but at the same time the opportunities to diversify asset portfolios were deprived. The CAMELS system increased both the communication between the banks and the depositors and the security level. By aiming to decrease the risk level (e.g. increasing the costs of risky loan granting) the access for rural depositors and borrowers decreased.

**Reserve requirements**
The lower percentage of reserve requirements in 2003 (although placed on virtually all liabilities) in comparison to 1990 gave the depositors a somewhat lower security signal knowing that each bank had a lower minimum level of reserves. The reserve requirements were, however, combined with the capital requirements, which together made it more difficult for insolvent banks to survive, increasing service quality since insolvent banks had disastrous results with increased moral hazard behaviour. The reserve requirements still signalled security in 2003 and helped keeping the service quality.

**6.2.3 Competition Policy**
The competition policy in 2003 increased the service quality in general, but seems to have decreased service quality for rural depositors and borrowers though e.g. lower access and lower understanding of the customer.

**Geographical concentration**
The elimination of direct entry barriers led to increased competition, which in turn led to fewer banks and a geographical concentration. This geographical concentration meant lower capital access to rural producers, since they no longer had the same possibilities to be granted loans. This reduction of access because of geographical concentration in the urban areas resulted in a lower service quality for the rural depositors and borrowers.

**Increased competition**
The increased competition also resulted in stronger incentives to improve the service quality to try to avoid loosing depositors to other banks with higher service quality. There is also a chance that increased competition eventually will drive the banks to reach more and poorer rural clients with more and better services. The increased competition also forced the banks to improve their efficiency and lower their costs. At the same time the danger exists that
increased competition leads to increased risk taking of banks trying to increase profitability by getting involved in riskier operations.

**Increase of foreign banks**
The fact that more foreign banks entered the market did not only increase the competition, but also the technological level, since they brought with them elevated technology from their home markets. The elevated technological level was an improvement of the service quality. Moreover, a higher level of foreign banks improved the ability of the depositors to move their funds from weak national banks to stronger foreign banks, punishing weak banks and encouraging better bank management. In this competition between foreign and national banks the large national banks had an important advantage with extended ATM networks. The entrance of large foreign banks also had the opposite effect of increasing the service quality through a lower risk level, since they were solvent banks with high reputation.

The higher level of foreign banks also decreased the service quality since the foreign banks in general had less understanding and knowledge about e.g. the rural producers. The foreign banks also had fewer incentives to improve access for the rural depositors and borrowers, since it did not improve their profitability.

### 6.2.4 Government policy
Giving the BCRA independence from the political process was a sign of decreased uncertainty about future monetary policies. A higher level of privatisation in general benefited the depositors and borrowers, but may have decreased the service quality for rural depositors and borrowers. Furthermore, the supervision system in 2003 can be said to have decreased the problems of asymmetric information.

**Independence of the BCRA**
A Central Bank, which is not independent from the executive and legislative powers, makes it very risky to have a Central Bank with an unlimited role as a lender of last resort. Evidence shows that the BCRA had an active role in the monetary policies in 1990 with the government using the BCRA as a tool for its financial and monetary policies. Financing troubled banks through money printing increased the money supply in the economy, leading to extremely high inflation rates. High inflation is hurtful for a bank system decreasing the confidence and creating instability. Depositors and borrowers with a low level of trust for the bank system and fear of hyperinflations lowers their security and thereby the service quality. The BCRA’s
limited role as a lender of last resort in combination with the government’s lower role in the monetary policies in 2003 were both signs of increased service quality, since it limited the problems of uncertainty about government policies.

**Privatisation**
Encouraging the privatisation of publicly owned banks during the late 1990s did, as mentioned earlier, increased the efficiency of the bank sector. Since private banks have more incentives to increase efficiency and profitability, there is a risk that a higher level of privately owned banks lead to a lower level of rural banks since the profitability is lower in rural areas than in urban areas. Consequently, it could be argued that this would lead to a decreased access to financial services by rural depositors and borrowers and thereby, for them, a decrease in service quality. In general terms the increased efficiency through a higher level of private banks benefited the depositors and borrowers.

**Supervision**
The BASIC system was a way for the government to combine a traditional control mechanism with the market discipline and make them complement each other. With external auditing the Superintendence could be surer that information they received from banks were accurate.

Fewer problems with asymmetric information helped to decrease the uncertainty of the public, but their general confidence and uncertainty about the bank sector continued to be low, because of the government policies implemented either to try to avoid a crisis or to try to improve the situation after a crisis. From the point of view of the banks, their possibilities to evaluate a potential borrower were improved, which made it easier for them to avoid borrowers with high risk level of not performing its debts.

### 6.3 Market Power
To measure the market power of different banks is difficult, but the empirical findings show a tendency of increased market power (although still low in comparison to other Latin American countries) of large national banks and foreign banks, through e.g. differentiation of their service quality.

#### 6.3.1 Protective Regulation
The protective regulation in 2003 seems to have led to a slightly higher market power through a higher market share in combination with the capital requirements as a barrier to entry.
Market concentration
The BCRA’s limited role as a lender of last resort during the 1990s meant that troubled banks with severe insolvency problems were not bailed out, which was a contributing factor leading to a lower number of banks in comparison to 1990. A lower number of banks most certainly led to a higher level of concentration of the market in 2003, since the depositors did not have as many banks to choose between. A higher concentrated market means a larger market share for the banks where deposits were concentrated. Given the existing entry barrier, capital requirements, this can be a sign of a stronger market power for the surviving big national banks, as well as the foreign banks.

6.3.2 Prudential Regulation

The prudential regulation in 2003 gave the large foreign owned banks, as well as the national banks higher market power than in 1990. The capital requirements were a form of entry barrier (although reduced through the reserve requirements) and its connection to the CAMELS system helped signalling good service quality.

Capital requirements
The high level of capital requirements was a contributing factor in the process of the concentration of the market. The requirements forced banks to bankruptcy or increased the incentives of mergers and absorptions, since it decreased their possibilities to improve their profitability. This in turn implied a higher market power for foreign owned banks in 2003 in view of the fact that they had parent companies that easier could comply with the capital requirements.

CAMELS system
The implementation of the CAMELS system, using it in the supervision of the banks, could be seen as a parameter increasing the confidence of the public and increasing the incentives for depositors to place their money in the Argentine bank system. It gave a signal of each bank’s way to administrate its capital and financial risk and also revealed their management, earnings and liabilities. This meant that depositors and borrowers were given better information about the situation and risk taking of each bank, which made it easier for them to make decision, such as where to deposit their money. A bank with high risk taking could mean a greater risk of non-performed loans and thereby greater risk of insolvency, which in the long run might lead to bankruptcy and the loss of the money of the depositor. The CAMELS system gave the depositor a chance to see this risk and thereby avoid unnecessary
risk taking by choosing a bank with lower risk taking. Banks with lower risk taking thereby increased their market power by better security and their advantage over banks with bad risk management.

**Reserve requirements**

In 1990 reserve requirements existed only on deposits in comparison to the liquidity requirements in 2003 used on virtually all liabilities. In that sense the reserve requirements were strengthened, but at the same time a significant decrease of the reserve requirements was registered when the rate went from 24% in 1990 to 4% at the beginning of the 21st century. The lower requirements on liquidity in 2003 in comparison to 1990 was in contrast to the implementation of capital requirements probably a factor facilitating the survival of small banks and at the same time lowering the entry barriers connected to the reserve requirements.

6.3.3 Competition Policy

Opening up the market, by eliminating the entry barrier for foreign actors and local branches and increasing the competition, eventually gave the large foreign banks and the large national banks an increased market power.

**Market Concentration**

Since the direct entry barrier was eliminated, foreign banks started to enter the market. In 1995 foreign banks held 17.1% of the total deposits of the system and in 2001 this number represented 51.4% and was still high in 2003. Given all other things unchanged an opening up of the market should have increased the number of banks in Argentina. This was, however, not the case and could be explained by e.g. too many insolvent banks in the early 1990s being kept alive by the BCRA with an unlimited role as a lender of last resort. Furthermore, the decrease of banks in the mid 1990s could be explained by an extreme reduction of bank deposits (because of the Tequila crisis), leading many banks to bankruptcy or mergers and absorptions. Finally it is important to remember that several barriers to entry existed, such as capital requirements, existing ATM networks and other economies of scale for large banks, which made it harder for new banks to enter the market. Another factor decreasing the incentives for new banks to enter the market was the generally low trust from both the outside and the national actors within the market combined with low profitability.
Technological level
As previously mentioned the elimination of entry barriers resulted in a higher level of foreign owned banks. Their higher technological level gave them an advantage since it allowed them to differentiate themselves from the national banks.

6.3.4 Government policy
The government policy affects the bank sector in both positive and negative ways. Comparing e.g. the bank supervision in 1990 with the one in 2003 implies that the banks that could easier signal high quality through the BASIC system were enjoying a higher market power. Still, despite of giving the BCRA independence from the legislative and executive powers, the bank sector in Argentina suffered from low confidence in 2003.

Bank Supervision
There have been various attempts to strengthen the bank supervision throughout the 1990s and the implementation of the BASIC system is one example of this. The general liberalisation process throughout Latin America and international standards defined in e.g. the Basel Agreement affected Argentina and the new bank supervision was supposed to promote competition and efficiency within the sector. Thanks to the BASIC system it was easier for the BCRA to close unprofitable and insolvent banks in 2003 than it was in 1990 with no BASIC system and a BCRA with the role as a lender of last resort. Furthermore, the BASIC system was signalling a sort of quality level of each bank, differentiating the “good” banks from the “bad” banks.

Independence of the BCRA
As shown from the empirical evidence in this report the BCRA in 1990 was strongly affected by the political process, which had devastating effects on the bank market. The BCRA was used for monetary policies and the main problem was that with a non autonomous BCRA the monetary policies were strongly affected by the political process. Letting the Central Bank use monetary policies as a tool to reach stable inflation may be favourable, but if the Central Bank is not independent it may have devastating results such as the hyperinflations in 1989 in Argentina. Misusing the BCRA decreased the confidence within the market, as well as the outside world’s. Inconsistent government politics in itself created distrust and uncertainty and the fact that the BCRA was used as a tool in the implementation of these inconsistent politics further increased it. The role of a Central Bank is one of the most important ones within a bank sector and it is of great importance to give it independence from the political process,
which was done in 1992. It is, however, worth mentioning that in a country like Argentina, suffering from high levels of corruption, this level of independence may be questioned. As long as the government, as well as the BCRA are connected to corruption the confidence of the bank system will continue to be depressed.
6.4 Concluding remarks

Since the connection between the different variables of the SCP model is complex and complicated it is difficult to know for certain which effect each bank regulation has had on the performance within the bank market in Argentina. It can nevertheless be asserted that the bank regulation in 2003 in general has improved the overall performance within the bank sector. Before the economic crisis in Argentina one of the most important results of the bank regulation was a higher confidence for the bank sector, affecting both the returns and the service quality of the banks. Unfortunately, the confidence of the bank sector was low in 2003 mainly because of inconsistent government policies, suggesting that an accurate bank regulation is not enough to achieve desired objects. Regardless of the accuracy of beliefs, financial systems become unstable if depositors believe them unstable.

Despite a tendency of increased market power of large national as well as foreign banks in Argentina the level of concentration of the market is still relatively low in comparison to other Latin American countries and there are few signs of any banks having substantial market power. Additionally, the efficiency within the system have increased, presumably as a result of the implementation of the bank regulation still valid in 2003, in combination with the privatisation of inefficient public banks, ameliorating both the results and the service quality within the bank sector. Moreover, the bank regulation in 2003 decreased the problems with asymmetric information and led to a higher level of technology.

The bank system in Argentina still suffered from inefficiency and negative results in 2003, but the question remains if that mainly was a result of inappropriate bank regulation or rather a result of inconsistent government policy.
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8 Appendix

Basel Agreement As a consequence of serious problems on the financial international markets the Basel Committee was created in the 1970s. Its purpose was to analyse bank regulation and supervision and create general standards and guidelines. Its conclusions did not have legal force and each country was free to adopt and modify the standards and guidelines to suit their individual situation. This was a way to stimulate a common focus and standards without forcing countries to adopt the norms. In 1988 the members\textsuperscript{107} of the Basel Committee reached an agreement, called the Basel Agreement (which was modified throughout the 1990s and later called Basel\textsuperscript{+}) that since then has been incorporated not only in the member countries, but practically all other countries with banks interacting on the international financial market.\textsuperscript{108}

BASIC system The BASIC system is a control system of the banks based on both the traditional control mechanism and the market discipline. The system is based on five areas: Bonds, Auditing, Supervision, Information, Credit rating.

BCRA The BCRA is the Central Bank of Argentina and stands for Banco Central de la República Argentina.

CEFID-AR CEFID-AR is an investigation centre of Economics and Finance in Argentina and stands for Centro de Economía y Finanzas para el Desarrollo de la Argentina.

\textsuperscript{107} Belgium, Canada, Germany, Italy, Japan, Luxemburg, Holland, Sweden, Switzerland, the United Kingdom and the United States.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tr>
<td>CAMELS system</td>
<td>The CAMELS system is a system used to control how banks administrate its capital and financial risks. Each bank is given a CAMELS grade, based on the evaluation of Capital, Assets, Management, Earnings, Liabilities and Sensitivity. This grade later partly determines each bank's capital requirements.</td>
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<tr>
<td>CESPA</td>
<td>CESPA is a centre of studies about the situation and perspectives of Argentina and means Centro de Estudios de la Situación y Perspectivas de la Argentina.</td>
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<tr>
<td>Convertibility Plan</td>
<td>The Convertibility Plan was a program based on the law implemented in Argentina in 1991, which meant pegging the exchange rate at 1 US dollar to 10,000 Australs.</td>
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<td>Corralito</td>
<td>In early December 2001 the government imposed a freeze, called the “corralito” in an attempt to avoid a run on bank deposits and the devaluation of the currency. The deposit freeze was a desperate measure to prevent a complete meltdown of the banking system.¹⁰⁹</td>
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<tr>
<td>Superintendence</td>
<td>The Superintendence is the institution which supervise the functioning of the bank system</td>
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