BIS II

Argentina • Brasil • Chile • México

CONVENTION FOR DISCUSSING THE IMPACT OF BASEL II IN THE REGION

Financial Institutions

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Summary

The entering into force of the New Basel Capital Accord (BIS II) is intended to promote a stable financial system through the adequate capitalization of institutions and a leveling out of the competitive playing field.

BIS II affords great importance to comprehensive risk management. Far from being a new formula for calculating regulatory capital (more in tune with the reality of the risks managed), the New Accord invests the institutions themselves with greater responsibilities, encouraging them to use the most advanced techniques in the management and control processes relating to all risks incurred.

Progress in risk management at an institution is a necessity. BIS II clearly indicates the strategic objectives to be accomplished, although the path to their achievement requires an increased effort by all areas involved at each organization.

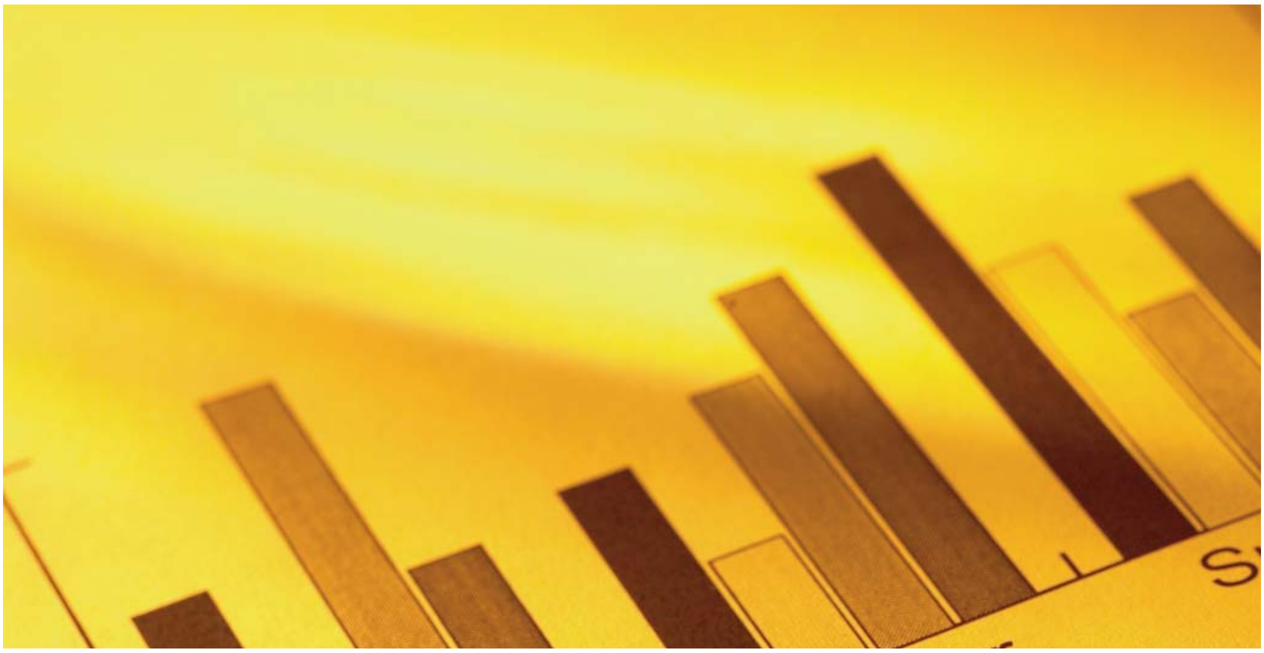
Within this context, Management Solutions, an International Consultancy Services Firm, has considered it necessary to hold a Convention of experts on the matter to allow the sharing of its vision of the impacts of Basel II.

Organized from a regional perspective, the Convention was held last month in four venues: Mexico City, Sao Paulo, Santiago de Chile, and Buenos Aires. The opinions of national supervisors, the main (domestic and international) financial institutions and independent experts were heard in all of these, making it the one framework for sharing experiences on the Impacts of Basel II in terms of risk management at Financial Institutions.

The purpose of this document is to summarize the main matters addressed throughout the referred Convention, covering such aspects as the advantages posed by this new norm for management models, sharing current experiences in implementation processes, and analyzing how the role of the supervising authority will be modified.


Mexico
Mexico City
22-04-08
Brazil
Sao Paulo
29-04-08
Chile
Santiago de Chile
15-04-08
Argentina
Buenos Aires
15-04-08

Introduction



Background

Origins

The perception of risk has existed since the beginning of time. Mankind has always tried to cast away such perceptions by delegating or sharing risks.

In 20 B.C., the Hammurabi Code in Babylonia already established the sharing of losses from (naval) working accidents and commercial losses. Later, with the Greek Rhodes law or the Roman Mutuum contract (mutual credit), some progress was achieved along these lines. In the first century, the bulk loan was established, whereby a ship owner received cash before the ship sailed and returned it upon its arrival at port, with interest, but such money would be kept if the ship did not arrive.

These precedents have a characteristic in common: cash venture capital, equivalent to the maximum loss.

Probability

A key element for the progress in the theory of risk lies in probability. The origin of the wheel seems to be found in Babylonia (thirty-fifth century B.C.) and the roulette wheel along with it; dice initially showed up in Egypt (twenty-seventh century B.C.), with cards appearing later during the fifteenth century, all key elements in understanding the concept of probability.

It is not until the sixteenth century that Pierre de Fermat and Blaise Pascal established the theory of probabilities during an exchange of letters, when assessing the price of the risk being assumed by a friend in common.

During the seventeenth century, gambling houses implemented a fundamental advance in the theory of risk by introducing a distinction between Cash Capital and Gambling Capital (cash + probability): everyone must bet against the house and the house has no need to cover the sum of the capitals of the gamblers.

Insurance

Pierre de Fermat and Blaise Pascal did not formalize the concept of economic capital. Its origin lies in insurance and, more specifically at Lloyds. During the seventeenth century, this institution was a famous tavern that brought in a fashionable beverage (coffee), and where its patrons, to quench their gambling fever, would bet on the success in the arrival of the coffee ships. The ship owners took advantage of this situation by betting against their own ships, to thus somehow insure the arrival of their cargo.

A few years later, after the London fire, Jacob Bernoulli established the law of large numbers: frequency tends asymptotically to probability when cases approach infinity (e.g. heads/tails).

Early in the eighteenth century, Abraham de Moivre established the Central Limit Theorem in 1734[(1)] and Daniel Bernoulli (nephew of Jacob), formulated the classic Theory of risk in 1738, introducing the concept of confidence level in normal distributions and proposing convolution processes.

Later, in the nineteenth century, Filip Lundberg simplified convolution and introduced the concepts of frequency and intensity (severity) in a compound Poisson variable.

Bruno de Finetti, now in the twentieth century, closed the circle by relating capital to price plus a safety coefficient (shared risk).

ALM

London goldsmiths of the seventeenth century introduced the concept of fractional reserve (liquidity risk) when lending part of the gold they kept and playing with the terms of the loans.

This concept is later embraced by certain banks (the Riskbank of Sweden and the Bank of England).

In parallel, Isaac Newton and Gottfried Leibnitz established differential calculations (the use of derivatives).

In the twentieth century, Frederick Mackaulay and Frank Redington introduced the concepts of duration and convexity, and along with these concepts, that of immunization:

Immunization: Same Duration, Convexity of Assets > Convexity of Liabilities

Market and Credit

The origins of modern statistics lie in the nineteenth century, with the introduction of the concepts of correlation and regression between variables made by Francis Galton.

Harry Markowitz and William Sharpe later established the theory of portfolios (assets immunized by other assets).

In the twentieth century, Fisher Black, Myron Scholes and Robert Merton established the formula for the valuation of options (two equations with three unknowns) and introduce the concept of portfolio replication (setting up risk-asset portfolios that are risk free for a given period of time).

Regulation

In the view of the foregoing, it would seem logical to think that there would be a need to establish certain minimum standards to ensure adequate capital levels in the financial system.

In 1913, the Federal Reserve established certain minimum capital requirements.

In 1930, the Bank for International Settlements is created in Basel.

The capital accords known as BIS I and BIS II were developed under that framework.

[(1)]The sum of a large number of binomials with probability P, results in a Normal distribution with expected value NxP and variance NxPxQ (such that Q=1-P).

Basel II (BIS II)

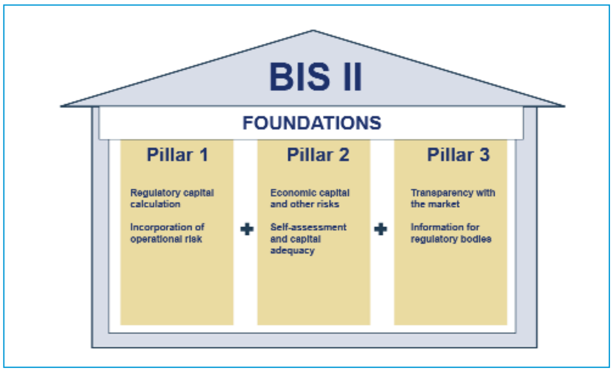
EThe new Basel capital accord II (BIS II) seeks to strengthen the stability of financial systems through the adequate capitalization of institutions and a leveling out of the playing field.

BIS II is intended to replace the previous capital accord, BIS I, which was issued in 1988 and which, in general terms, established the requirement of maintaining a minimum capital equal to 8% of the overall risk assumed. This capital, called "regulatory" capital, seeks to ensure banks' solvency from potential losses due to credit, exchange and market risk not covered by provisions.

Without a doubt, BIS I has helped to strengthen the international standards for determining capital requirements. However, BIS II represents a significant qualitative leap from the previous standard by:

- Enabling the complete coverage of the risks currently faced by the financial industry.
- Incorporating risks not considered by BIS I.
- Establishing a method for capital calculation that is more sensitive to the aforementioned risks.
- Reducing the gap between regulatory and economic capital requirements.

Additionally, all of this has been done while preserving the principle of capital neutrality, i.e., preserving the current capitalization levels of the financial system.



What is BIS?

Its three pillars make BIS II an immensely valuable tool for improving our current management models:

PILLAR 1

The first pillar refers to a method for calculating the regulatory capital necessary to adequately cover credit risk, market risk and operational risk. Application of this pillar encourages the use of the most advanced risk measurement techniques. The new regulation allows for two calculation methods for measuring credit risk:

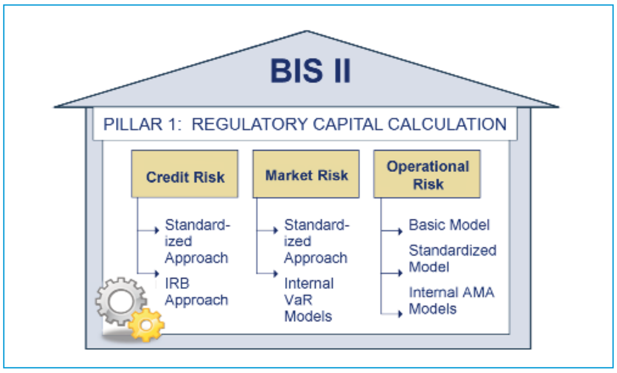
- The standardized approach.
- The IRB (*Internal Ratings Based*) approach, in the case of using internal rating/scoring data to obtain the risk parameters (PD, LGD, and EAD).

In terms of market risk, Pillar 1 does not add anything new to the 1996 Basel 1 Amendment. Therefore:

- The "standardized" approach is used.
- Subject to supervisor approval - "internal models" based on value-at-risk (VaR) may be used.

Finally, Pillar 1 includes the new concept of calculating own capital consumption relating to operational risk. This risk can be measured using:

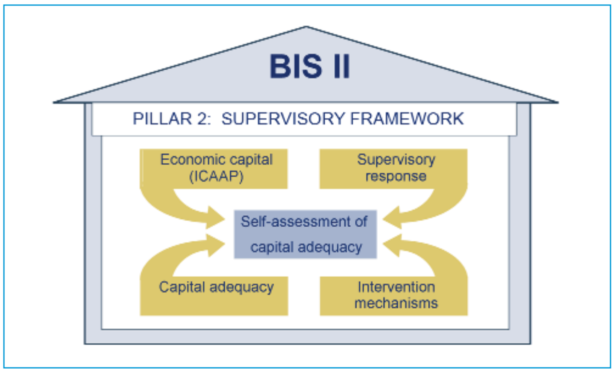
- A "basic" or "standardized" approach such as a percentage of annual income.
- An internal (AMA) approach based on operational loss models.



PILLAR 2

The second pillar of BIS II deals with the new role granted to the market regulating bodies. It gives greater authority to supervisors while increasing the capacity of institutions with an “economic capital" model properly incorporating all their risks to assess their own capital adequacy.

Therefore, Pillar 2 promotes a more effective relationship model among all the different players with the use of assessment mechanisms that are better adapted to each financial institution’s capital requirements according to their individual risk profiles.

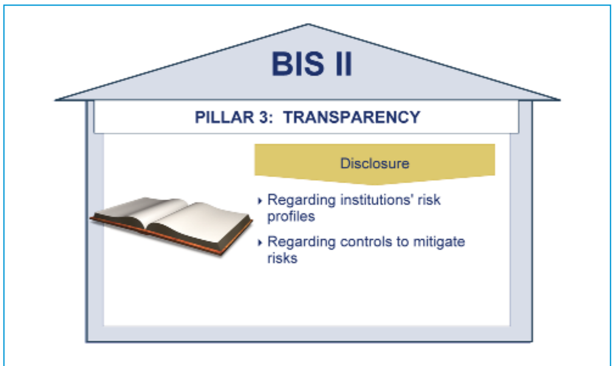


PILLAR 3
The third and final pillar seeks to enhance disclosure to third parties.

Looking toward the market, Pillar 3 requires institutions to provide clear information on their risk profiles as well as the actions and controls implemented to mitigate the risks they assume.

The request for regulatory information is also adapted to the new self-assessment possibilities granted, to ensure proper system supervision.

Without a doubt, this enhanced transparency will enable institutions to leverage the good practices developed in the framework of comprehensive risk management, and strengthen the stability of their market links.



Implications of BIS II for Financial Institutions

BIS II is not just a mere update of the regulatory capital calculation method. It is a true method for achieving a "comprehensive risk management model".

Indeed, those institutions that have implemented BIS II in their processes and systems will be at a competitive advantage in the market:

- In having a more dynamic, reliable and objective approach for making decisions on accepting or rejecting transactions.
- In being able to calculate the profitability of their transactions and portfolios based on the risk incurred (RAROC models) and to determine a reference price for transactions (pricing).
- In being able to more efficiently allocate capital.
- And even — in certain cases, and always subject to supervisor approval — in being able to generate regulatory capital savings and improve income.

Most important, however, BIS II enables institutions to be fully aware of the level and nature of certain risks that are not being measured in the most adequate manner today.

Now, implementing BIS II in an institution is not an easy task, and requires a veritable change in culture. In fact, in those countries where BIS II is binding, regulatory bodies are requiring institutions to truly integrate the model into their overall risk management and control structures.

Therefore, effectively achieving such an implementation implies an ambitious, large-scale effort and the active participation of senior management and the different areas and departments affected.

In general terms, it will require:

- Adaptation of internal organizational structures.
- Redesign of all risk management process.
- A serious effort to develop and implement mathematical models.
- A significant investment in information systems and risk management tools.

Objectives of the Regional Convention on the Impacts of BIS II

In this context, Management Solutions has considered it convenient to gather a select group of specialists to share their vision on the impact of Basel II from their perspective as regulators, global institutions, local banks and independent experts.

Development of the Convention

During the month of April 2008, Management Solutions, in partnership with Spain's Risk Management Club, organized the Basel II Impact Convention for the Latin American Region.

This event, called the "Regional Convention on the Impact of Basel II on the management of Financial Institutions," took place at the four major financial headquarters in the Latin American area:

- Santiago de Chile (15/04/2008)
- Buenos Aires (15/04/2008)
- Mexico City (22/04/2008)
- Sao Paulo (29/04/2008)

The Convention was attended by regulators, global institutions, local banks and independent experts, who shared their views and expertise in this area.

The Convention featured a high standard of speakers and participants and was very well accepted in the Region.

This section portrays in close detail the developments during the four sessions of the Convention.


BIS II
Chile • México
BIS II

Development of the Convention

Santiago de Chile

Introduction

The Santiago de Chile Convention took place on Tuesday, 15 April. This Session, developed in collaboration with Chile's Association of Banks and Financial Institutions, featured the following panel of speakers:

Mr. Alejandro Alarcón (General Manager of Chile's Association of Banks and Financial Institutions)

Mr. Gustavo Arriagada (Superintendent of the Chilean Superintendency of Banks and Financial Institutions)

Mr. Adolfo Pajares (Director for Internal Control and Capital Standards and Global Head of the Basel II Project at Santander Group)

Mr. Manuel Méndez (Chairman of the BBVA Foundation for Microfinance)

Mr. Guillermo Sabater (Financial Controller, Banco Santander Chile)

Mr. Eduardo de las Heras (Corporate Risk Manager, BancoEstado)

Mr. Mario Chamorro (General Manager, Corpbanca)

Mr. Julio Henríquez (Risk Control Manager, Corpbanca)

Mr. Ricardo Martínez (Risk Control Manager, Banco Security)

Mr. Alfonso Serrano-Suñer (CEO Management Solutions and a Director of Spain's Risk Management Club)

Mr. Ignacio Layo (Partner for Banking, Management Solutions)

Mr. José Luis Carazo (Partner for the Integrated Risk Management Practice, Management Solutions)

Discussion panel of representatives from Chile's financial institutions

Figure 1. Conditions required for successful implementation

- Deep and solvent banking system
- Ample compliance with the Core Principles for Effective Banking Supervision
- Gradual implementation
- Calibration of final proposal based on Impact Analyses
- Joint action and discussions with the banking industry
- Modifications to the General Banking Law to enable use of standard approaches and models

Mr. Gustavo Arriagada (Superintendent of the Chilean Superintendency of Banks and Financial Institutions)

Summary of Lectures

The Superintendent of Banks and Financial Institutions (SBIF) began his speech with an overview of the situation of the banking system in Chile. Accordingly, he emphasized the strength and solvency of the industry, judging from the evolution of bank penetration and credit levels, issuance ratings and efficiency, performance and capital sufficiency analyses.

In this context, the SBIF detailed the initiatives that have been carried out alongside the Central Bank and the Association of Banks and Financial Institutions (ABIF) to guide efforts towards the implementation of Basel II. The SBIF and the Central Bank jointly defined the road map and supplementary documents establishing the phases and target dates for the process, and the SBIF and ABIF set up a task force to prepare the effective implementation of the methodologies and processes associated to BIS II.

The SBIF proposes two stages in the adoption of Basel II approaches, with the purpose of achieving a gradual implementation of these: the first stage would include an assessment of the standard credit risk model, the standard and internal models for market risk, and the alternative standard for operational risk; the second stage would feature an evolution towards IRB models for credit risk and AMA models for operational risk. Also, in 2009 the new provisions system based on expected losses will enter into force.

In order to assess the impact of Basel II on the solvency of financial institutions, the SBIF plans to carry out quantitative impact studies (first and second semester of 2008) so that it may evaluate the adaptations to the text of BIS II that may be required owing to the peculiarities of the Chilean market.

Additionally and at the same time, Chile's General Bank Act needs to be substantially amended to be able to allow the policies enacted by BIS II. The amendment proposal and subsequent submission to the National Congress will be done jointly by SBIF and the Central Bank.

In turn, the ABIF went deeper into the need for closer ties with the SBIF in order to arrive at a joint definition of the requirements that are to be met in the practical application of the principles of BIS II, since there are still very relevant areas that need to be addressed: risk mitigation, off balance sheet exposure, use of external ratings, treatment of operational risk, etc.

The ABIF stressed the opportunity and at the same time the challenge that BIS II represents for Chile's banking system and their satisfaction with the progress made by the Association as a coordinator to enable the implementation of Basel II.

Mr. Alejandro Alarcón (General Manager of Chile's Association of Banks and Financial Institutions)

Mr. Adolfo Pajares (Director for Internal Control and Capital Standards and Global Head of the Basel II Project at Santander Group)

Figure 2. BIS II for an International Financial Group

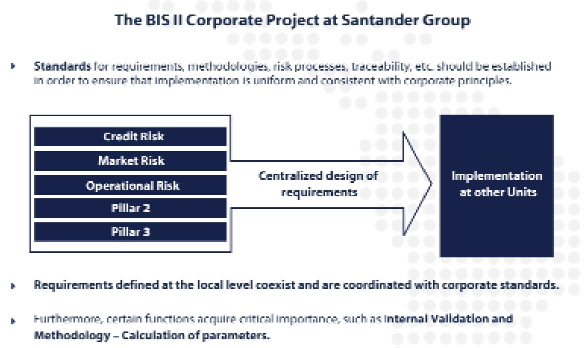
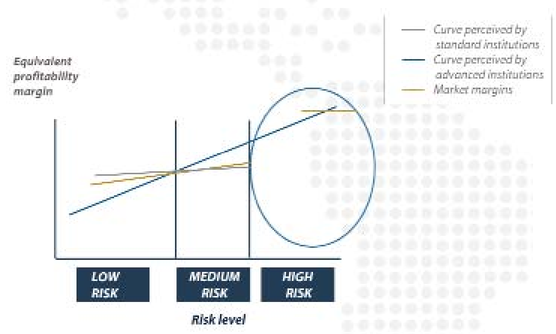


Figure 3. Risk-based price differentiation makes it possible to enter unserviced segments



Management Solutions geared its intervention towards the anticipation of the quantitative impact that will presumably result from application of the standard and IRB models for the calculation of regulatory capital in Latin America (estimates), comparing them to the European case (where data are known) and it described the practical aspects of the implementation of an integrated risk management model[(1)].

The presentation delivered by Santander Group reviewed in detail the challenges faced by international banking groups in their evolution towards the implementation of BIS II, stressing the need to coordinate the different velocities resulting from the various degrees of evolution of the Units involved in the project. According to Santander Group, the keys to success in such an ambitious project are leveraging of corporate functions and head office services, with support from the regulators (home-host coordination), and the encouragement of a culture of risk (Figure 2).

Carrying on with global groups, BBVA's Foundation for Microfinance emphasized the big step forward represented by Pillar 2 in the field of bank management, although they acknowledged how difficult it was to make it converge with Pillar 1 given that asymmetries between regulatory and management parameters were still evident. They likewise stressed that the application of price differentials according to risk makes it possible to penetrate previously underserviced segments (Figure 3).

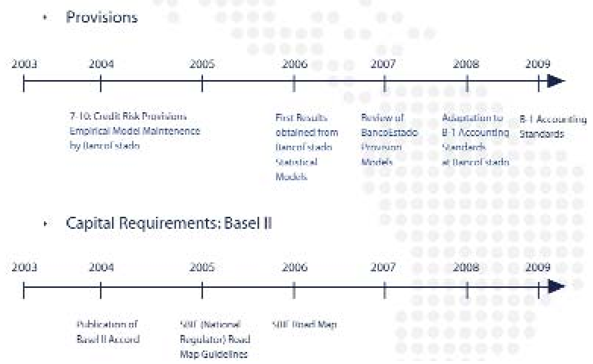
Furthermore, BBVA described the usefulness of microfinance as an efficient device to foster the development of nations and communities subject to social risk, to reduce poverty and inequality, although the traditional banking approach cannot be used to implement it.

As far as local banks are concerned, Santander Chile, BancoEstado, Corpbanca and Banco Security shared their experience in the implementation of BIS II. These institutions presented different ways of approaching the new risk management framework, but in all of these cases there arises as a core development the establishment of a powerful governance model supported by Senior Management, the design of a Master Plan to rationalize efforts, and the fostering of a culture of risk within organizations.

Regarding specific activities, BancoEstado emphasized its experience with statistical models for the calculation of provisions and how they have used these as leverage for the

[(1)] For details, please refer to the Annex

Figure 4. Internal development vs Requirements




Mr. Manuel Méndez (Chairman of the BBVA Foundation for Microfinance)

Figure 5. Key success factors

- Management Support
- Leveraging corporate experience
- Long-term vision
- Single core for assets
- Emphathy and effective communication with the Regulator
- Cooperation with the Regulator
- Prudential regulation
- Proactive approach
- Development of skills and competencies
- Employee training
- Use of Information Technology – Computer Systems
- Resource allocation

Figure 6. What can be used from AMA models?

What can be used from AMA models?

- Enables recording and maintenance of material losses for any business line
- Enables maintenance of internal loss data integrity
- Enables systematic loss analysis
- Source database for performing a large amount of KRI calculations
- Makes it possible to build a solid foundation for a future transition to AMA

subsequent evolution towards calculations of regulatory and economic capital (Figure 4).

Corpbanca stressed the need to generate a single view of risk at the Bank by means of the implementation of an ongoing training plan (Figure 5).

Last of all, Banco Security gave a monographic report on operational risk, describing the “Developed Standard” approach defined by the Bank, which requires a combination of the alternative standard model for the calculation of regulatory capital and the application of qualitative and quantitative methods pertaining to AMA models (Figure 6).

Conclusions

The "Regional Convention on the Impact of Basel II on the management of Financial Institutions" held in Chile concluded that the country is advancing in an orderly manner towards the establishment of a legal and regulatory framework that will allow the full development of the principles proposed by BIS II. At the same time, it became apparent that the institutions taking part in the local market are aware of the strategic opportunities generated by BIS II, clearly favoring its effective implementation.

Development of the Convention
Buenos Aires

Mr. Eugenio Rogero González (General Manager for Risk at BBVA Banco Francés)

Introduction

The Buenos Aires Convention took place on Tuesday, 15 April. This Session featured the following speakers:

Ms. Verónica Balzarotti (Economic Research Manager of the Banco Central de la República Argentina)

Mr. Alfredo Roisenzvit (Supervision Coordination Manager of the Superintendency of Financial and Exchange Institutions)

Mr. Patxi Barceló (Solvency Risk Manager and Head of the Basel II Project at the Santander Group Risk Department)

Mr. Eugenio Rogero González (General Manager for Risk at BBVA Banco Francés)

Mr. Jorge Edgardo Thomas (General Manager for Risk at Santander Rio)

Mr. Juan Carlos L'Afflitto (Credit Risk Manager of Banco Galicia)

Mr. Héctor Guedes (Managing Director, Banco Sáenz)

Mr. Sergio Moya (Treasurer, Banco Columbia)

Mr. Jorge Serenelli (Partner, Management Solutions Argentina)

Mr. Hernán Enríquez (Director for the Risk Practice, Management Solutions Argentina)

Figure 1. The Regulators' view.
The principles of the B2 spirit

"The burden is on the bank to satisfy its supervisor"
paragraph 417

"Banks must have applied sufficient legal review to verify this and have a well founded legal basis to reach this conclusion…and face such further review as necessary to ensure continuing applicability"
paragraph 118

"It is not the Committee's intention to dictate the form or operational detail of banks' risk management policies and practices. Each supervisor will develop detailed review procedures to ensure that banks' systems and controls are adequate…"
paragraph 389

Figure 3. Incorporating the cost of risk into value metrics and incentivesincentives

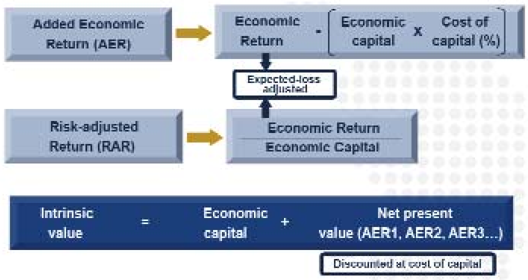


Figure 2. BIS II for an international financial group

- Distribution of tasks between the parent and local entities, based on the following premises:
  - **Corporate commitment** for compliance and coordination at the global level.
  - **Standardization** of policies and global tasks.
  - **Centralized development of systems arquitecture.**
  - Interpretation of regulations and coordination with **supervisors.**
  - Intense effort over a short period of time: focus on the management of **relevant countries and gradual roll-out,** involving high-level supervision, for other entities).

Figure 4. Impact of Basel II on Risk Management

Summary of Lectures

The Central Bank of the Republic of Argentina (BCRA) stated its perspective of the adaptation of Basel II to the local market reality and the objective sought by the "Road Map" issued a few months back by such Institution. The importance of Basel II from a management viewpoint was stressed at all times, not from the perspective of the potential impact on capital figures. Along these lines, the relevance of Pillar II was stressed in relation to Pillar I requirements in terms of the implementation of Basel II in Argentina. Reference was also made to the recent Operating Risk regulations issued by the BCRA and to the "Best Practices" approach sought to be implemented for the management of this risk (Figure 2).

Global groups shared their experiences relating to the implementation of BIS II at multinational organizations.

Santander Group specifically stated its firm will to adapt to Basel II beyond regulatory requirements. It presented the work performed over the last years by the Institution, and stressed the organizational and technological changes that have occurred internally to meet both regulatory and management requirements. It also presented the Roll-Out plan for the Group over the coming years so that all countries may be in line with advanced Basel II models (Figure 2).

Grupo BBVA in turn explained its comprehensive risk management scheme, where the added benefit per client / transaction is the main deciding factor at all stages of the internal risk process of the Institution, such as the acceptance of transactions, their follow up, the prices determined and even the payments to the various business units (Figure 3). It went on to explain the technological complexity implied by the adaptation to Basel II for an international financial group.

Management Solutions explained its views on how the process of gradual adaptation to Basel II should be implemented in Argentina, obtained through the experiences gained at markets that have already started down the critical road a few years back. Along these lines, it stated that the main pillars of this adaptation process are the development of internal models, databases, management processes and the direct involvement of senior management in each and every one of the critical points of adapting to Basel II (Figure 4). It further provided general figures for the potential impact on own resources of the application of the various approaches toward capital calculation.

During the afternoon hours, various speakers shared the experiences of Argentinean institutions.

Specifically, Santander Río expressed how it has been adapting global requirements to the local reality, gradually and under a

Figure 5. Implications of Convergence towards BIS II.Action Plan to achieve advanced IRB status

Where we are heading ...

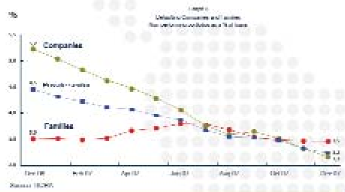
- **2008 – 2009:**
  - Expand the information relevant for analyzing inputs into existing PD modules
- **2010: (Central Bank will require Bis II- Simplified Standardized Approach to Credit Risk)**
  - Validate all PD models for the various Bank portfolios
  - Initiate the documentation validation process with the host and home regulators
  - Ensure that PD feedback is used in the Bank's risk decisions
- **2011:**
  - Initiate construction of LGD models
  - Analyze EAD mitigants
- **2012 – 2013:**
  - Validation of LGD models and entry into operation of the entire project
- **2014:**
  - Approval and monitoring of the advanced IRB model by the Host and Home Supervisors

Figure 7. Conclusions on internal model implementation

- The driving force for this process is based on achievement of the following objectives:
  - Process automation to reduce costs and lead times
  - Centralization of the Credit Policies that shape the Bank's Risk Profile
  - Risk assessment standardization
  - Differential Pricing based on Risk
- Long and ongoing process which is customized to fit each Bank's circumstances
- Project Leadership requires a Significant Effort to cause the Organization to gain Certainty of the Benefits of this Management Model

Figure 6. Is Risk quality improving?

THE NPL RATIO IMPROVES THANKS TO VOLUME AND TO THE CORPORATE PORTFOLIO



- Risk quality has improved significantly over the past year. However, this is due to an improvement in the non performing loan ratio of Corporate clients and to the effect of growth portfolios.
- The NPL ratio for Consumer loans remained stable in 2007.

Figure 8. Securitization objectives

Among the asset **securitization objectives**, the following are particularly worthy of note:

- **Reduce capital requirements**
  Direct impact on Solvency Ratio calculation.
- **Balance sheet management**
  Possibility of converting illiquid assets into liquid assets which can be traded on secondary markets.
- **Raise finance and obtain liquidity**
  Use of non-traditional finance-raising methods providing immediate liquidity.
- **Asset-liability matching**
  Alternative instrument for removing or minimizing the time mis-matches between assets and liabilities on the Bank's balance sheet.

framework of centralized coordination. Along these lines, it explained the progress obtained and the items pending in each critical segment of the bank's portfolio: Retail, Small and Mid-size Enterprises, Companies and Corporations. It finally set out the details of the possible road map that the Bank plans to use over the next few years, facing the adaptation of advanced models (Figure 5).

BBVA Banco Francés in turn referred to the internal progress achieved in terms of the local implementation of Basel II and the challenges of the next few years in matters of internal models and technological environment necessary for full adaptation to Basel II. At the same time, it presented graphs with the evolution of retail portfolio volume in the country, of related default data (Figure 6) , and of the coverage by currently-existing provisions, concluding the analysis with a comparative scheme of the current provisions to the scheme of expected losses.

Banco Galicia explained its process of implementation of internal models, comparing the evolution achieved by the Institution in relation to the evolution seen worldwide. It also stated that more than complying with a regulation, the Institution assumed as a basic objective the achievement of improvements in terms of management (Figure 7), relating to the reduction of costs and times, the centralization of decisions, the standardization of risk measurement methods and pricing according to the risk inherent in each operation.

Banco Saenz commented on how securitization could prove to be a useful tool in terms of credit and liquidity management, and capital optimization. It also explained how Basel II assesses its impact as a risk reduction technique, allowing the reduction of the allocated capital in accordance with the risk transfer typology implied in the operation (Figure 8).

Banco Columbia described the general lines relating to the management of structural balance sheet risk, with an emphasis on liquidity, interest rate and foreign exchange rate risks (Figure 9). After discussing the main objectives sought by an efficient management of such risks, it stated which should be the bases that should be addressed by such efforts. In this respect, it stressed the importance of having defined, well-documented procedures in relation to such risks, supported by a scheme of automated reports involving the generation of deterministic and stochastic scenarios for the key variables in terms of Structural Balance Sheet Risk Management.

Mr. Alfredo Roisenzvit (Supervision Coordination Manager of the Superintendency of Financial and Exchange Institutions)

Mr. Patxi Barceló (Solvency Risk Manager and Head of the Basel II Project at the Santander Group Risk Department)

Figure 9. Asset/Liability Management

What is ALM...

"Maximizing long-term risk adjusted return for shareholders"

1. Interest Rate Risk Management
- Enables management of the economic impact of market interest rate changes on the balance sheet
- Increase shareholder value by maximizing financial returns for a particular level of risk (NIM)
- Preserve future income by protecting the Bank's market value (BMV)

2. Interest Rate Risk – Fund Transfer Pricing
- Isolate Interest Rate Risk at business units
- Transfer risk where it can be efficiently managed

3. Liquidity Management
- Ensure that the Bank is in a position to face its obligations under any market circumstances

Ms. Verónica Balzarotti (Economic Research Manager of the Banco Central de la República Argentina)

Conclusions

The "Regional convention on the impacts of Basel II on Financial Institutions" held in Argentina was scheduled right on time considering the initiatives that have been recently taken by the Central Bank of the Republic of Argentina along these lines. It may be concluded that local institutions are aware of the effort required to fully adapt to Basel II, and welcome the advantages entailed from a management viewpoint. The critical path is long and complex, but both the Regulator and the major Banks in the industry are convinced of the need to take this path and are indeed doing so, alongside other international markets.

Development of the Convention

Mexico City

Mr. Jesús Benítez Martínez (Chief Supervisor of Risks, CNBV)

Introduction

The Mexico City Convention took place on Tuesday, 22 April. This Session featured the following speakers:

Mr. Patricio Bustamante Martínez (Vice President of CNBV and Head of Basel II Implementation)
Mr. Jesús Benítez Martínez (Chief Supervisor of Risks, CNBV)
Mr. Heleodoro Ruiz Santos (Coordinator of the Basel II Committee of the Association of Mexican Banks and General Manager for Credit Risk Management at Banorte)
Mr. Javier Peralta (General Manager for Risk, Santander Group)
Mr. Javier Hernández (Corporate Director of Global Risk Management, BBVA Group)
Mr. Andrés Corona Juárez (Integrated Risk Management Unit Manager, BBVA Bancomer)
Mr. Guillermo Villagómez Castro (Risk Monitoring and Control Manager, BBVA Bancomer)
Mr. José Carlos Ávila Benito (General Manager for Risk, Banco Santander México)
Mr. Manuel Cortés Brizuela (Executive Director of the Technical Risks Unit, Banco Santander Mexico)
Mr. Leonardo Jorge Granados Islas (Internal Credit Risk Models Manager, Banorte)
Ms. Ana Cecilia Reyes Esparza (Director of Risk Management, Banco Ve por Más and Subcommittee Coordinator)
Mr. Alfonso Serrano-Suñer (CEO Management Solutions and a Director of Spain's Risk Management Club)
Mr. Fernando Castiñeiras (Partner for Banking, Management Solutions)
Mr. José Luis Carazo (Partner for the Integrated Risk Management Practice, Management Solutions)
Mr. Efrain Morales (Director, Management Solutions Mexico)

Mr. Patricio Bustamante Martínez (Vice President of CNBV and Head of Basel II Implementation)

Mr. Heleodoro Ruiz Santos (Coordinator of the Basel II Committee of the Association of Mexican Banks and General Manager for Credit Risk Management at Banorte)

Figure 1. Total Capitalization Index by Banking Group

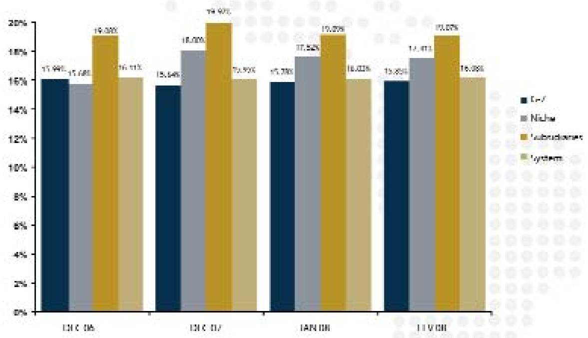


Figure 2. Organizational implications of BIS II for the riskmanagement function of an International Financial Group

Summary of Lectures

The Comisión Nacional Bancaria y de Valores *(National Banking and Securities Commission)* explained the process of regulatory adaptation that it has implemented to apply the standardized method and advanced models (initial setup over a three-year timeframe) for the calculation of credit risk capital, the standardized method (towards the use of internal models) for the calculation of market risk capital and the basic indicator method (towards the use of standardized models) for the calculation of operational risk capital. The Commission explained that an important objective of the process had been to ensure that the parameters proposed by BIS II relate to the actual credit risk in Mexico (Figure 1)

A further objective worthy of mention had been to create incentives at the Institutions to evolve towards risk measurement based on internal models integrated in management, and ultimately making the BIS II Accord possible in the Mexican financial system within reasonable time and conditions. In this sense, it should be stressed that the Comisión has got ahead of other jurisdictions (including some European ones) in publishing the regulatory framework for implementation of Basel II, and in its execution (first report in January 2008).

Finally, the Comisión Nacional Bancaria y de Valores explained the process designed for the approval of Internal Models (IRB) for the calculation of capital requirements for Credit Risk, with a detail of its various stages, and a threefold end objective: establishing a framework of incentives for the use of internal models, attaining a requirement that better reflects the risks assumed, and aligning the institutions in capital management, stressing the necessary efforts implied by this entire process.

The Association of Banks of Mexico listed the challenges and opportunities existing in terms of the changes in capital requirements and the influence that the stability of the financial system has on the economic development of a country. Referring to Mexico specifically, it stated that BIS II encouraged the development of the banking sector, allowing the transfer of such benefits to its clients, recognizing their credit capacity and, ultimately, fostering a more efficient banking practice, all inuring to a greater stability and development.

Additionally, the global groups shared their experiences in terms of the implementation of BIS II at multinational organizations.

Specifically, Santander Group stressed that the comprehensive risk management approach derived from the New Accord is critical in modern banking, to the point that adaptation to the principles of BIS II would have occurred within the Group

Figure 3. BIS II as a tool for management improvement

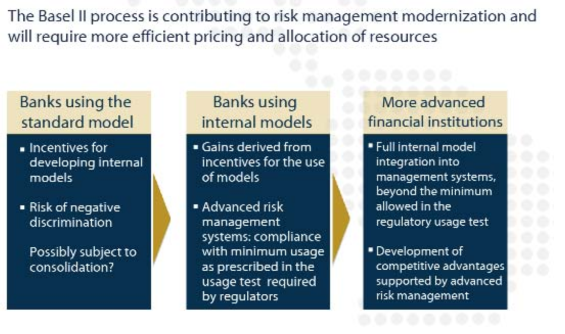


Figure 5. Standardization of Internal Rating Methodologies

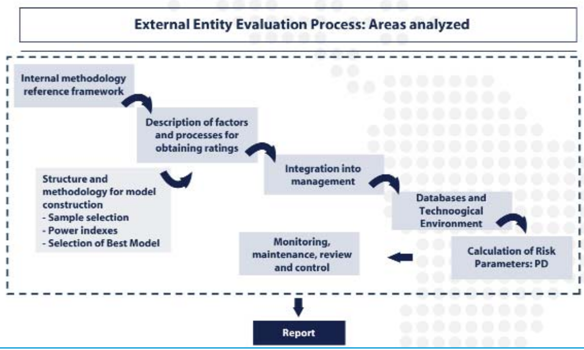


Figure 4. Developments- Work Structure

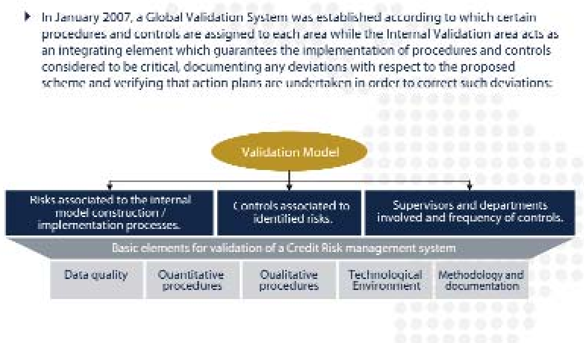
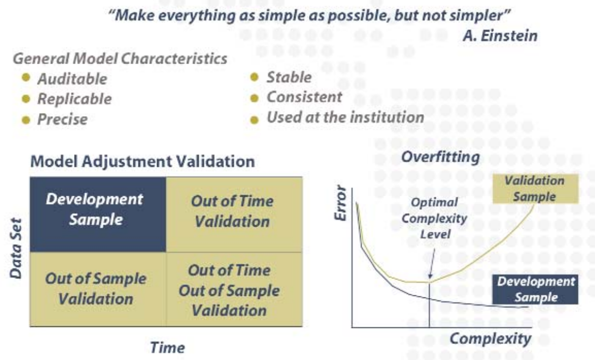


Figure 6. Models



regardless, even if BIS II had not existed. The Group also indicated that BIS II entailed a series of internal impacts with organizational implications (Figure 2).

BBVA Group in turn held that BIS II supported its economic risk capital scheme, used in pricing and in the efficient allocation of funds (Figure 3). BIS II has therefore meant a necessary investment in models, infrastructure and culture for the Group. Along these lines, the latest financial crises have merely confirmed the importance of BIS II and of such key aspects as transparency, liquidity and the quality of inputs in the estimation of parameters. With a view to the future, it is necessary to travel further down the road to BIS II and achieve a greater alignment between provisions and capital.

Management Solutions sustained that the process of adaptation to Basel II must be seen as an opportunity within a world environment characterized by rising default rates, liquidity crises and a plummeting real estate sector. The adaptation is nonetheless costly and complex, which is why Management Solutions presented a practical approach to the process. The first step of this approach must be a comprehensive and structured Master Plan, sizing the efforts and envisaging all the critical aspects of BIS II: organization, internal models, data, processes and tools, capital and RAROC, and consider project management aspects, among others.

During the afternoon hours, various speakers shared the experiences of Mexican institutions.

Specifically, BBVA Bancomer informed of its experiences during the process of certification of internal models, stressing the keys to success: commitment of senior management to provide resources; implementation plan based on available data, technological platform and internal validation organization; and, finally, coordination through proper project management. BBVA Bancomer also delved further into the Internal Validation function, expressly required by the New BIS II Accord and of key importance in the process of adaptation. In the Bank's opinion, this unit must perform an independent validation of compliance with minimum BIS II requirements and internal procedures, and of the proper functioning of internal models and their use in management (Figure 4).

Santander Mexico in turn referred to the documentation serving as a basis for the request for approval of internal models by the regulator, stressing that the Parent's experience with its regulator will enable them to build on synergies with the documentation to be delivered to the local supervisor, at all times recognizing the particulars of each case. Later, Santander Mexico also cited as a relevant experience the standardization of its internal rating methods to determine credit reserves. This standardization sets the bases for the request for advanced

Discussion panel of representatives from Mexico's financial institutions

Mr. Javier Hernández (Corporate Director of Global Risk Management, BBVA Group)

Mr. Javier Peralta (General Manager for Risk, Santander Group)

internal BIS II models, stressing internal and external validation as indispensable factors in such process (Figure 5).

Banorte explained its process of implementation of internal models, stressing that such models must be auditable, replicable, stable, consistent, precise, and used in credit granting and in the allocation of risk, reserves and capital (Figure 6). If the implementation process is successful, the models will generate value by optimizing capital, managing risk through differentiated pricing policies, and improving the return on risk-adjusted capital, the credit image of the institution and its access to financing.

Regarding operational risk, Banco Ve por Más stressed that such risk was more related to persons, processes and systems than to the Bank's level of income (current scope of reference within the regulatory framework). It nonetheless uncovered that the industry is still far from having internal models for this type of risk, stressing that the current international practice had centered the efforts on the capture of quality information on the number of events and the associated loss, without neglecting the necessary investment in technology and training. Finally, the Bank stressed that the institutions are striving to incorporate better corporate governance and internal control practices to reduce operational risk.

Conclusions

The "Regional convention on the impacts of Basel II on Financial Institutions" held in Mexico concluded that the country is in a consolidated position to advance in internal models within the framework of BIS II. This is possible both thanks to the efforts of the regulator, establishing the legal basis with regulations already in place and information reports already underway, and to the consensus among local and corporate institutions in terms of BIS II not being merely a regulatory requirement, but a strategic opportunity for comprehensive risk management. Along these lines, all participants are aware that adaptation to BIS II is a long process, requiring both effort and investment, but believe that it represents the future for those wishing to be competitive in the country's financial industry.

Development of the Convention

Sao Paulo

Introduction

The Sao Paulo Convention took place on Tuesday, 29 April. This Session featured the following speakers:

Mr. Carlos Donizeti Macedo Maia (Deputy Manager of the Department for Supervision of Bank and Bank Conglomerates, Brazil Central Bank)

Mr. Juan Andrés Yanes (Deputy General Manager for Risk, Santander Group)

Mr. Vasco Maria Castro Orey (General Manager for Risk, Caixa Geral de Depósitos Group)

Mr. Óscar Rodríguez (Vice President of Credit and Market Risk, Banco Santander Brazil)

Mr. Wilson Luiz Matar (Executive Superintendent of Credit Risk Information, Banco Santander Brazil)

Mr. Carlos Alfredo Vianna (Executive Superintendent of Capital Management, Banco Real)

Mr. Alexandre Carneiro Cerqueira (Credit Risk Manager, Banco do Brasil)

Mr. Rodrigo Couto (Superintendent of Consolidated Risk, Banco Itaú Holding)

Mr. Humberto Mota (Executive Superintendent of Intervention and Compliance, Banco BGN)

Mr. Alfonso Serrano-Suñer (CEO Management Solutions and a Director of Spain’s Risk Management Club)

Mr. Denis Nakazawa (Integrated Risk Management Manager, Management Solutions Brazil)

Mr. Marcos Izena (Director, Management Solutions Brazil)

Mr. Carlos Donizeti Macedo Maia (Deputy Manager of the Department for Supervision of Bank and Bank Conglomerates, Brazil Central Bank)

Figure 1. Project Structure

Basel II Program

- Structured to comprise 3 projects, one for each stage:
  - **Phase I – "Structuring":** 2005 to 2007 (2008) – coordinated by Denor, with an emphasis on regulatory proposals.
  - **Phase II – Application:** 2009 to 2010 – emphasis on advanced approaches, both for regulatory and supervisory purposes.
  - **Phase III – "Validation":** 2011 to 2012 – emphasis on internal model use approval.

Figure 2: Background. Principles on Risk

The Risk Culture at Santander is characerized by its independence and its consistency with business strategies

Corporate Risk Culture	Risk Principles
▪ A Division reporting to the 3rd Vicepresident ▪ Two Global Divisions ▪ The 3rd Vicepresident chairs the Delegate Risk Committee, which: • Establishes the Group's Risk Policy • Defines risk tolerance / appetite • Supervises the assumed risk profile on an ongoing basis • Supervises projects concerning methodologies and tools to improve risk management and control within the Group	▪ **Independence** ▪ Global scope: all factors encompass all businesses and geographies ▪ Collegiate decisions ▪ Low-medium risk profile ▪ Various tools and measures: Internal Ratings, RORAC, Economic Capital, VaR, Stress testing, Scenario Analysis

Figure 3. Historical data concerns

Where is data stored? How is data stored?

Summary of Presentations

The Brazilian Central Bank presented its program for adapting to the recommendations of BIS II in Brazil, indicating the stages that have already been completed in the country and those that are still in the implementation stage. Additionally, it exposed the structure adopted by the Central Bank to follow up on the entire program. It also commented on the next steps until 2012, with a specific focus on the development and standardization of internal risk models at Institutions (Figure 1). The regulator stressed the need to pay special attention to the implementation of capital self-assessment processes (ICAAP).

In turn, global financial groups commented on their experiences in the process of adaptation to the new capital requirement framework.

Santander Group displayed its progress toward a comprehensive risk management culture, an essential requirement for the recommendations of Basel II to be effectively implemented and, thus, to be able to reap the benefits inherent in the new model. Therefore, the fact that the implementation of the New Accord goes beyond complying with the requirements of the regulator was emphasized and, in this sense, the Group noted that proper implementation requires changes in the organization, and therefore calls for strong involvement on the part of Senior Management (Figure2). Lastly, as a global group, it stressed the importance of properly combining the requirements of the Bank of Spain with those of the regulators of the various countries where they conduct business.

Caixa Geral de Depósitos Group presented a particular vision of how the New Accord brought an opportunity for overall improvement at such organization. It stated the main difficulties faced, such as the identification and organization of the information necessary to attend to the requirements established in the framework of the agreement. Along these lines, it indicated that the implementation of a Risks Datamart was key in the achievement of the objectives defined, as it greatly facilitated the subsequent development of the scoring and rating models (Figure 3).

Management Solutions stressed the importance of preparing a Master Plan which would define all the steps and initiatives necessary for effective implementation of BIS requirements. The Firm provided details of the essential areas to be covered by the Master Plan to make it easier for the various areas involved to be aligned with the set targets.

Figure 4. Issues regarding project implementation

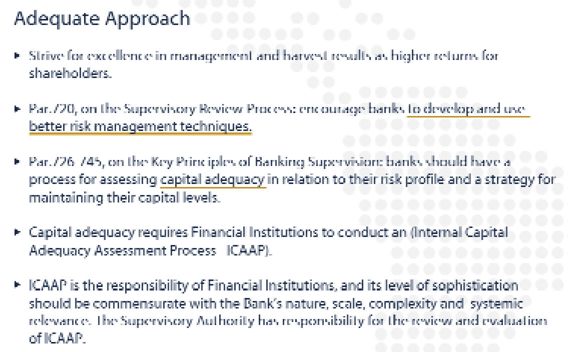


Figure 6: Basel II implementation phases

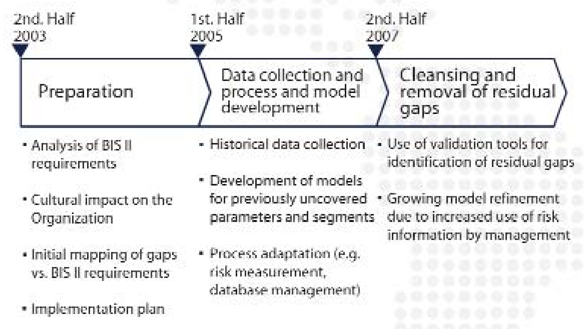
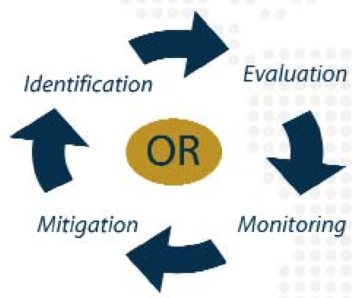


Figure 5: Current and future challenges

Figure 7: Operational Risk Management



The second part of the event featured a round-table discussion with the participation of various financial institutions from Brazil, which provided an overview of the degree of progress made at their respective Institutions in terms of adaptation to the New Capital Accord, and of the challenges they currently face.

Banco Santander Brazil presented what it considered were its main challenges in the implementation of Basel II in Brazil. Thus, the definition of what must be the historical data to be accumulated seems to be quite a complex matter, considering the high volatility of the Brazilian market. Based on this, the definition of the methodology of the models to be developed (through-the-cycle versus point-in-time) could prove to be a true dilemma, as each typology presents specific limitations in each scenario considered. It also mentioned the effect of mark-to-market in assets and guarantees as a relevant issue in capital management, inasmuch as the devaluation of an asset offered in guarantee may imply considerable impacts on the subsequent results of the recovery processes, increasing the volatility of the balance sheet and the income statement. Another problem noted was the complexity in the definition of portfolio segmentation, as a result of the peculiarity of the products offered in the Brazilian market. Finally, it commented on the impacts on the Credit Risk model that must be considered in the adoption of the new capital framework.

Banco Real also commented on its experiences in relation to the process of adaptation of BIS II. As a main point of attention, it stressed the need for the strategic alignment of the organization as a firm guarantee for the success of the project. It also indicated that key activities, such as the design and construction of databases, the development of models and the creation of a work team are merely the tip of the iceberg, since there are many other initiatives for the proper implementation of the adaptation process, such as, for instance, redesigning products for capital optimization, preparing client-associated PD rating models, adjusting credit granting and follow-up policies and aligning with provision policies and expected losses, among others. It further stressed the apparent difficulty of Pillar 3, inasmuch as it is understood that the process of communication with the market is not merely a disclosure of the information accumulated from Pillars 1 and 2. As a conclusion, it cited the discipline in the performance of the project as a key success factor, particularly in terms of the accurate definition of scope, budget, calendar, sizing of resources and senior management participation (Figure4).

Banco do Brasil referred to the organizational and cultural impacts of BIS II implementation at an institution of their size. It first presented the structure responsible for the management and leadership of the project that, in practice, interfaces with several areas and is equipped with several follow-up committees.

Discussion panel of representatives from Brazil's financial institutions

Mr. Vasco Maria Castro Orey (General Manager for Risk, Caixa Geral de Depósitos Group)

Mr. Juan Andrés Yanes (Deputy General Manager for Risk, Santander Group)

It also stressed the need to disseminate, throughout the entire organization, a culture seeking to combine business management with regulatory requirements (Figure 5). As lessons learned, it agreed with other institutions that the adoption of the New Model goes beyond the risk area and involves the entire organization, and the backing of senior management is essential for its proper accomplishment. Additionally, it also referred to information structuring and a corporate culture as key success factors.

Banco Itaú Holding stressed that its own internal culture, based on discipline, on analytical rigor and on value creation, led the organization through a process of natural adaptation to the evolution of risk management in the Group. It presented the steps followed by the Institution in the process of adaptation and the existing task forces (Figure 6). As main challenges faced, it cited the quantitative and qualitative complexity in risk assessment, the representativeness of historical data and how to manage the large number of initiatives derived from the adaptation process.

Banco BGN finally addressed operational risk management under the application of the BIS II. Along these lines, it stressed the need to conduct a structured process of operational risk identification, assessment, follow-up and mitigation (Figure 7), and aspects relating to bases of loss, deficiency reports, tests of controls, dissemination of policies and contingency plans. The structured implementation of operational risk management has contributed, according to BGN, to improving control of the risk itself, to optimizing costs, to increasing efficiency, and to better prioritization of controls. As a summary of the steps required for the implementation of operational risk management, the Bank listed as main requirements external support, the choice of data collection tools, the definition of common risk concepts, and the performance of a general diagnostic of risks and the mapping of the associated processes.

Conclusions

The "Regional convention on the impacts of Basel II on Financial Institutions" highlighted, as its main conclusion, the need for the full support of Senior Management in order to successfully adapt to the Accord. The culture of the organization is a factor that cannot be overlooked, as is the compilation of historical information in accordance with the reality of the Brazilian market. Another item stressed was that the New Capital Accord is not merely a regulatory requirement, but also a strategic opportunity to adopt an integrated risk management process within the institutions. Along these lines, it was made clear that the process is long, complex and costly, but will allow for significant improvements in risk management, which will in turn provide competitive advantages in the marketplace.

Final considerations

After holding the four rounds that the Convention was divided into, it has become evident that Latin American institutions are beginning to make progress towards internal models, in spite of their awareness of the substantial challenges entailed by adaptation to Basel II.

Institutions are thus advancing in the compliance with Pillar 1 regulatory requirements under Basel II, and are beginning to implement some provisioning models based on internal models, requiring a significant effort to adapt their management frameworks, information systems and current risk management circuits.

In any case, it is seen that the process of adapting to the regulation has not yet concluded and there is still a great deal of work ahead, mainly based on two axes:

1. Adaptation to regulations being issued by the various regulators (capital and reserves).

2. Orientation of tools towards management, in a manner that allows for the active management of the risk appetite of institutions, where increasing the use of the internal models in the management of such institutions acquires enhanced importance.

Additionally, all participating institutions and independent experts considered that Basel II implies progress in the convergence between regulation and management and that, accordingly, institutions tending toward it are reaping substantial improvements in their risk management and, consequently, are acquiring a competitive advantage with respect to others.

In any case, this is a strategic decision that each institution must make, especially in the light of the new macroeconomic and financial market environment, with the direct involvement of the institutions' Senior Management.

Finally, the most advanced institutions attending the rounds addressed the complexity of the project, stressing as a first step to be taken the preparation of a Master Plan for Adaptation to Basel II, prioritizing the tasks to be performed, their duration and the resources that are to be involved in their performance.


BIS II
Argentina • Brasil • Chile • México
CONVENCIÓN
IMPACTOS DE BASILEA II
EN LA REGIÓN
Abril 2008

Appendix

Comprehensive Risk Management: A practical approach *(by Management Solutions)*

Mr. Alfonso Serrano-Suñer (CEO Management Solutions and a Director of Spain's Risk Management Club)

Mr. Jorge Serenelli (Partner, Management Solutions Argentina)

Introduction

Based on our experience in the development and implementation of BIS II in Financial Institutions, we have considered it appropriate to include this appendix, which provides an "executive overview" of the major impacts to be assessed in a project of this nature.

Key impacts

- Organizational and other general matters
- Need for models
- Investment in data and technological infrastructure
- Improvement of risk management circuits and processes
- Capital management and RAROC
- Assessment of other risks

As will be observed, the task planning and resource allocation required to move toward Basil II is a complex process which should be previously defined in an Implementation or Master Plan.

Organizational and Other General Aspects

Basel II entails structural changes at Institutions (Figure 1):

Organizational Implications

- Senior Management commitment
- Redesign of risk functions
- Creation or reinforcement of certain functions. In particular: Risk Control, Internal Validation, Internal Audit

Managerial Implications

- Need of a cultural change: Basel II training plans for the entire organization
- Comprehensive (all types of risk) and global (Parent and subsidiaries) risk management
- Documentation efforts: methods, processes, etc.
- Internal validation and test of use.

Regulatory Implications

- New regulatory reporting requirements
- Supervision of Internal Models by the Regulator (Road Map)
- Evaluation of capital sufficiency and planning (Pillar2).

Figure 1. Impact on management. General matters

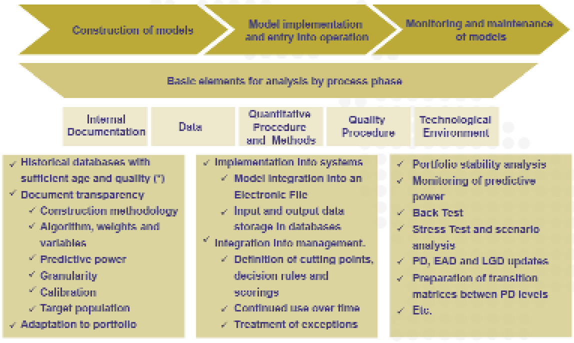


Figure 3. Impact on management. Data

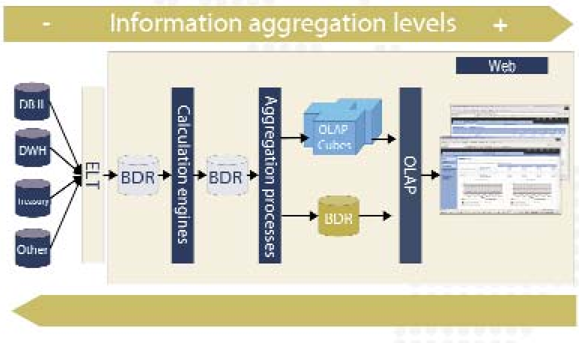


Figure 2. Impact on management. Internal models

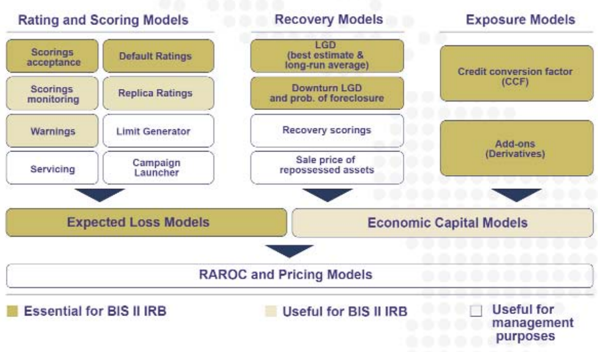


Figure 4. Impact on management. Capital and RAROC

$$RAROC = \frac{\text{Results} - \text{Expected Loss}}{\text{Capital}}$$

E.g.: loan amount = 100,000, maturity = 1 year without collateral

Characteristics	Rating A	Rating BBB	Rating BB
Amount	100,000	100,000	100,000
Income	296	755	1,829
Return (margin)	0.30%	0.76%	1.83%
Prob. default	0.06%	0.27%	1.24%
Severity	45%	45%	45%
Expected loss	27	123	557
IRBAv (%)	1.79%	4.24%	8.47%
IRBAv (amount)	1,789	4,244	8,465
Target RAROC	15%	15%	15%

Internal Models

Internal models and their monitoring are among the main challenges of Basel II (Figure 2).

Model Development

- Internal Models:
  - PD (*scoring*, *rating*)
  - LGD
  - CCF
  - Provisions
  - Capital

Validation and Monitoring:

- Monitoring of Models:
  - Measuring performance
  - Integration within management
- Need for an Internal Validation function

Requirements imposed by the Regulator:

- Correct use of methods
- Prudent assumptions
- Representative portfolio
- Traceability
- Comprehensive documentation.

Data and Technology Infrastructure

Models need a large amount of (historical and quality) information to operate adequately. In this respect, Institutions have to carry out significant efforts to gather and structure the information. And regulators pay much attention, during the processes for the approval of internal models, to reviewing data (Figure 3).

Institutions are advancing in different areas:

- Improvement or creation of specific applications:
  - Guarantees
  - Proposals
  - Default
  - Other
- Development and implementation of Risk Reporting Models:
  - Organization of information in a consistent, structured and exploitable manner.
  - Support for Standardized and IRB models, regulatory, economic and RAROC capital.
- Development of robust information storage technology infrastructures:
  - Mass volumes of information
  - Demanding data quality
  - Minimum 5-year historical depth

Mr. José Luis Carazo (Partner for the Integrated Risk Management Practice, Management Solutions)

Mr. Hernán Enríquez (Director for the Risk Practice, Management Solutions Argentina)

Risk Management Processes

The implementation of Internal Models will allow a greater efficiency to be attained in risk management processes.

Admission, monitoring and retrieval

- Greater standardization of the granting process.
- Incorporation of risk quality to attributions.
- Strengthening of monitoring: warning systems, monitoring ratings and action plans.
- Integration of internal models in recovery processes and policies.

Risk Scorecard

- Integration of the relevant risk indicators (exposure, capital consumption, default and expected loss, RAROC, etc.) for decision-making by Senior Management.

Risk Model and Policy Managers

- Single, centralized system for:
  - Defining and implementing risk policies.
  - Bringing models into production.
  - Generating model performance reports.

Capital and RAROC

The final challenge is managing risk - return on capital (Figure4).

Capital

- Evolution by steps:
  - Standard Capital
  - IRB Pillar 1 Capital
  - IRB Pillar 2 Capital
  - Economic Capital

RAROC

- Managing according to Risk Adjusted Return on Capital::
  - Definition of goals and limits
  - Segmenting of business portfolio based on RAROC.
- Need of implementing improvements in the analytic performance systems of Institutions (transfer prices, costs, etc.).

PRICING

- Progressive establishment of risk adjusted prices.
- Cultural change in the market.

Other Risks

Pillar 2 considers other risks beyond the credit, market and operational risks:.

Pillar 1 IRB Risks

- Credit
- Market
- Operational

Concentration Risk

- Credit concentration risk:
  - Name concentration
  - Industry concentration
  - Geographic concentration

Other Pillar 2 Risks

- Structural balance sheet risk
- Business risk
- Liquidity
- Reputational
- Etc.

In short, the incorporation of other risks by means of internal models is linked to the concept of Economic Capital.

Mr. Denis Nakazawa (Integrated Risk Management Manager, Management Solutions Brazil)

Mr. Efrain Morales (Director, Management Solutions Mexico)

Basel II Master Plan

In summary, Basel II is a complex project that must first take the form of a comprehensive and structured Implementation or Adaptation Plan such as to allow institutions to embark on the process of compliance with BIS II.

To put together the Master Plan, first there needs to be a thoughrough Diagnosis of the Present Situation enabling an analysis of all of the aspects in the current situation:

- Organization of the risk function
- Models
- Data
- Processes
- Etc.

In this way the tasks that need to be done in order to comply with BIS II may be identified.

Next the Master Plan should be prepared, by setting priorities and allocating responsibilities, estimating times (initial and final dates) and necessary resources (profiles and associated costs).

Additionally, the Master Plan enables the control and monitoring of the implementation by the Committees involved in the Project and by Senior Management.

Conclusions

Advantages and Challenges of Basel II

Basel II, especially the approaches based on Internal Models, poses challenges that are offset by a number of advantages.

- Major Benefits:
  - Integrated, objective and consistent risk management.
  - Greater agility, reliability and objectivity in decision-making.
  - Improved efficiency in risk processes and circuits (cost-savings).
  - Performance measuring according to RAROC models.
  - Use of portfolio management models.
  - Additionally, the possibility of obtaining possible regulatory capital savings and improved results (greater in IRB).

- Major Challenges:
  - Cultural (training) and organizational changes.
  - Construction, implementation and monitoring of internal models.
  - Redefinition of processes and circuits.
  - Technology: Information systems, quality data and calculation engines.
  - In short, resources and investments are needed.

Summary of the major tasks in the "Road Map" towards Basel II:

1. Preparing the Master Plan for adapting to Basel II.
2. Reinforcing the Risk functions and resources in the organization.
3. Advancing in the process of adapting to the regulations.
4. Designing and implementing a Risk Reporting Model.
5. Developing and implementing internal models in the relevant portfolios.
6. Advancing in the capital evaluation process (Pillar 2).

Glossary

AMA	Advanced measurement approaches for operational risk. The regulatory capital requirement shall be equal to the risk measurement generated by the bank's internal system for calculating operational risk using the applicable quantitative and qualitative criteria. To access AMA, institutions must fulfill a number of requirements and be authorized by the supervisory authority.
Basel	The Basel Capital Accord, enacted in 1988 by the Basel Committee. A framework for measuring capital and defining adequate minimum capital standards for international banks.
Basel II	New Basel Capital Accord. Published in June 2004 in a document on the International Convergence of Capital Measurement and Capital Standards.
Capital requirement (K)	K = 8% RWA. In IRB it is calculated using a formula that measures the maximum level of loss that may occur at an institution with a confidence level of 99.9%. The formula is an estimate based on the theoretical distribution of the credit losses in a loan portfolio. To obtain the assets weighted by their risk level this formula is applied: K x 12.5 x EAD.
Correlation (R)	This shows the diversification of the financial assets portfolio. It is part of the IRB capital requirement calculation formula.
Credit Risk	The possibility that a credit institution may incur losses as a result of a breach of contractual obligations by the counterparties with which the institution liaises.The New Capital Accord considers the measuring and treatment of credit risk.
EAD	Exposure at default. It has an 'off balance sheet' component (commitments, etc.) which requires certain assumptions to be made. For instance, it could be said that for credit facility, EAD is equal to the amount drawn down + CCF x available credit amount, where CCF is the credit conversion factor.
EL	Expected loss. It is equal to PD x LGD x EAD. The Committee expects banks to cover the EL by means of provisions (owing to their foreseeable nature) and it establishes the possibility of taking excess provisions to Tier 2, and shortages may be deducted from Tier 1 and 2 equally. Expected losses are treated as a cost in the income statement.
Exchange Rate Risk	Investors holding a net long position in a foreign currency risk an appreciation of their domestic currency; conversely, holding a net short position in a foreign currency carries the risk of depreciation of the domestic currency. The measuring and treatment of this risk are considered in the New Capital Accord.
FCRC	Financial and Commodities Risk Consulting
Financial and Commodities Risk	The means for transforming risk components into risk-weighted assets and hence into capital requirements.
Gross return on capital (RAROC)	(Risk Adjusted Return on Risk Adjusted Capital). The quotient between the Risk Adjusted Margin (Return) and the Risk Adjusted Capital.

IRB Advanced method for estimating regulatory capital based on internal rating models and the calculation of the risk variables for which banks must estimate the PD, LGD, EAD and the maturity. To gain access institutions must fulfill a number of requirements and they must be authorized by thesupervisory authority.

LGD Loss given default. It is equal to (1-Recovery Rate). According to BIS II paragraph 468 it must be calculated so as to reflect economic downturn conditions where necessary, i.e. the economic cycle must be taken into account.

Liquidity risk The possibility of incurring losses due to non-access to sufficient liquid funds to meet payment obligations.

LTV Loan-to-value. Used for collateralized loans, mainly mortgage loans.

Market risk It arises from the possibility of incurring loss owing to adverse movements in the price of marketable financial instruments in one's possession. This is associated to the trading portfolio.

Maturity adjustment It is part of the formula for calculating the IRB capital requirement, capturing the greater risk of long-term operations versus short-term operations. This adjustment depends on the average collection term of the credit instrument.

NT New Technologies

Operational Risk The possibility of incurring loss as a result of processes, systems, inadequate technical equipment or failures in same, or due to external events.The measuring and treatment of this risk are considered in the New Capital Accord.

PD/LGD Method for calculating risk-weighted assets for equity exposures not held in the trading book. LGD is fixed and PD is estimated in order to then obtain the risk weighted assets.

PD Probability of default

Rating Tools These are quantitative systems, that is, statistically-based models that aim to predict the probability of a company defaulting on the obligations contracted by virtue of a credit operation. They include all data collection and information technology methods, processes, controls and systems enabling the evaluation of credit risk, the allocation of internal risk ratings and the quantification of default and loss estimates.

RBA Ratings-based approach method applied to securitization exposures. Assets are weighted by their risk level, the amount of the position being multiplied by the relevant risk weightings according to ad hoc tables. The risk weights depend on: the external rating or an available inferred rating; whether the credit rating is considered long-term or short-term; the concentration of the underlying pool and the seniority of the position. This method is to be used by investment banks that have been authorized to apply IRB and which do not have a specific IRB treatment for the type of asset underlying the securitization. The method shall be applied to securitization exposures that are rated or those for which a rating may be inferred.

RBC Retail Business Consulting

Risk weighting For each position on which SA and IRB are used, RWA=RW x EAD, where RW is the risk weighting.

Risk weighted assets Risk weighted assets=12.5 x Capital requirement. Risk weighted assets are calculated by multiplying the capital requirements for market risk and operational risk and the operational risk by 12.5 and adding to the resulting figure the sum of the credit risk weighted assets.

Tier 1 Capital Regulatory capital (the numerator of the solvency ratio) has two main components. Tier 1 is of the highest quality and it includes common stockholders' equity, disclosed reserves and preferred stock, among other items. It consists of the various headings classified as basic resources, being items that are fully available for the coverage of any possible losses.

Tier 2 Capital The lower quality items within regulatory capital. It includes subordinated debt and asset revaluation reserves, among other items. It consists of headings with restricted availability for the coverage of any possible losses. Tier 2 Capital is subject to a maximum of 100% of the Tier 1 Capital.

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Management Solutions would like to thank all speakers and participants in the Convention for discussing the impact of Basel II in the Region for their generosity, effort and commitment.

Their ample experience and the quality of the presentations delivered were key to the success of the Convention and, consequently, to the dissemination of knowledge on an area as significant as comprehensive risk management at financial institutions.

Our goal is to exceed our customers' expectations and to become close partners

Management Solutions is an international consultancy firm focusing on providing business, risk, financial, organizational and process-related advice, both in respect of functional components and in the implementation of related technologies.

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