

Prudential Regulation and Supervision for Agricultural Finance



Agricultural Finance Revisited



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Financial intermediation involves someone else handling one's money. Many issues are involved here. First, and perhaps most obviously, there is the issue of trust and security, and the means of enforcing this. Second, there is the matter of institutional viability and reputation. Third, cost issues have to be faced. Fourth, in this mini-list, is the issue of sharing of responsibility for the regulation process between those actors in the immediate vicinity of the deposit accepting institution, and authorities from regional or central bodies, or the government itself.

The importance of these issues is matched with the difficulty of designing and implementing suitable measures. In this book, the author, Michael Fiebig, takes a pragmatic approach, and makes extensive use of example material drawn from a variety of institutional types in a number of developing countries.

FAO and GTZ hope that this volume will be a useful adjunct to the literature on strengthening the provision of affordable and sustainable rural financial intermediaries.

The full list of volumes in the series is given below.

1. Agricultural Finance Revisited: Why?
2. Agricultural Finance: Getting the Policies Right
3. Better Practices for Agricultural Lending
4. Sources of Funds for Agricultural Lending
5. Prudential Regulation and Supervision for Agricultural Finance
6. Enhancing Farmer's Financial Management Skills.

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ABBREVIATIONS

ABI	The Agricultural Bank of Iran
ACCION	ACCION International
AIRAC	Asociación de Instituciones Rurales de Ahorro y Crédito, Inc.
BAAC	Bank for Agriculture and Agricultural Cooperatives, Thailand
BancoSol	Banco Solidario, SA, Bolivia
BPR	Bank Perkreditan Rakyat
BRI	Bank Rakyat Indonesia
CAF	Corporación Andina de Fomento
CAMEL	Capital Adequacy, Asset Quality, Management, Earnings and Liquidity Management
CAR	Capital to Asset Ratios
CARD	CARD Bank of the Philippines
CARE	CARE Philippines
CGAP	Consultative Group to Assist the Poorest
FAO	Food and Agriculture Organization of the United Nations
FENACOAC	The Federation of Savings and Credit Cooperatives, Guatemala
FFP	Fondos Financieros Privados
FINCA	Fundación Integral Campesina
FODESIF	Fondo de Desarrollo del Sistema Financiero
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IDB	Interamerican Development Bank
IPCA	Inspectoría y Protectoría de Cooperativas de Ahorro y Crédito de Honduras
MFI	Microfinance Institution
MFRC	Microfinance Regulatory Council of South Africa
MIS	Management Information System
MSE	Micro- and Small Enterprises
NAFIBO	Nacional Financiera Boliviana

NGO	Non Governmental Organization
OECD	Organization for Economic Cooperation and Development
PARMEC	Projet d'Appui à la Réglementation des Mutuelles d'Epargne et de Crédit
PEARLS	Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity, and Signs of growth
PFF	Private Financial Funds
ROSCA	Rotating Savings and Credit Associations
USAID	United States Agency for International Development
WOCCU	World Council of Credit Unions

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Introduction

Prudential regulation and supervision are currently among the most talked about topics in development finance and major issues in financial sector reform around the world. Regulatory issues have been a continuous discussion for the traditional banking sector. However within the microfinance discourse it is relatively new. At the same time, a number of developing countries have recently revised or are revising their framework of regulation and supervision to cater to small financial intermediaries. In addition these adjustments are devised to facilitate the entry of larger existing intermediaries into the provision of financial services to poorer segments of the population. Much of the comment focuses narrowly on the details of facilitation of small sized, short term loans to poor people (microcredit). As represented in the AFR series, most microcredit approaches significantly exclude rural smallholders who concentrate their income generating activities in the agricultural sector. This publication seeks to broaden this subject.

The other AFR publications have dwelled upon technological challenges on the institutional level plus the comprehensive policies relevant to agricultural finance. This edition will target the framework of prudential regulation and supervision conducive for the development of rural financial markets that include agricultural producers, specifically small farmers.

The key question posed in this publication is:

“Does the provision of financial services to rural farm households require a specific prudential regulatory and supervisory setting to prosper? If so, what adjustments need to be made in order to facilitate this provision with a conducive prudential regulatory environment?”

In Chapter 1, an analytical framework is presented for the study. First, the terms regulation and supervision are defined. Then, rationales and principles of prudential regulation and supervision are furnished before the variety of regulatory and supervisory institutions are described. Finally, the structure and characteristics of a regulatory policy-making process are outlined and the specific risk profile of agricultural finance is analysed. Chapter 2 focuses on an in-depth discussion of the defini-

tions of triggers for *external* regulation. The costs and benefits of external regulation and supervision from the perspective of a financial institution involved in agricultural lending are analysed among different levels of external regulation, analyses in detail principles and rules of outside direction of agricultural finance and options for supervisors alongside oversight of external regulation.

Next Chapter 3 pertains to internal regulation and supervision concentrating on owner and management issues. It addresses possible interfaces between external supervision and internal regulation. Chapter 4 concentrates on self-regulation and self-supervision. Self-regulation is seen as standards defined by an apex body with regulatory (and eventually supervisory) powers by financial institutions. Chapter 5 analyses the regulatory and supervisory functions of different funding sources, which impact on agricultural lenders' decision-making. Finally, Chapter 6 summarizes the results of the preceding chapters and synthesizes an answer to the key question. Throughout these chapters, empirical examples illustrate, underline and support the argumentation of the author for adjustments of regulation and supervision to the characteristics of agricultural finance.

1 An Analytical Framework for Regulation and Supervision of Agricultural Finance

1.1 A CLARIFICATION OF TERMS

The term *regulation* refers to a distinct set of rules that structures the actions of market participants according to clear principles. This set of rules is established by a regulatory institution, which in the area of financial markets can be a legislative body, a central bank, or financial market participants. Regulation includes not only legal aspects and self-set performance standards, but also “*invisible institutions*” (Arrow, 1974) such as behavioural norm systems and patterns founded in a socio-cultural setting. When investigating prudential regulation, one should bear this view in mind and not adhere too closely to written laws alone. More narrowly, prudential regulation of financial institutions refers to the structuring of financial institutions’ actions according to a collection of rules and norms. The thrust of this study is the control mechanisms installed by various actors with diverse sets of rules, criteria and norms that influence financial institutions’ actions and their outcomes.

Supervision, as a next step “*gives meaning to regulation*” (Rock and Otero, 1997). At first it is necessary to collect information on the degree of compliance with the rules to support enforcement. This information needs to be processed and connected to possible sanctioning mechanisms to be able to enforce the rules. All these activities are carried out by one institution or by a group of supervisory institutions. These are not necessarily the same institutions as the regulators. There actually exist good reasons for separating these functions. For example in such a common scenario, when the national parliament decides on the establishment of a new banking law, a superintendency is assigned to oversee compliance. The superintendency may issue more specific regulations on the basis of the law, at the same time delegating some of the supervisory tasks to a private company. This would mirror segregation of legislative and executive duties.

Prudential regulation can be summarized as the “What”, supervision as the “Who” and the “How” of the structuring of financial institutions’ actions.

1.2 RATIONALE FOR PRUDENTIAL REGULATION AND SUPERVISION

In this section the rationale behind prudential regulation and supervision shall be analysed. Generally, commercial fund providers, shareholders and depositors clearly have an interest in monitoring what happens to their funds. However, difficulties arise for this monitoring, which form the basic argument for what is called “external” prudential regulation and supervision carried out by public institutions.

Savers, other commercial funding providers and owners entrust their money to financial institutions and delegate the task of investing the money wisely. Financial institutions have thus been described as “*delegated monitors*” (Diamond, 1984). However, while owners usually install information and control mechanisms for their investment, savers know very little about a financial institution’s business conduct. Information gathering is difficult and costly, especially for small savers. The monitoring of the use of these funds has the characteristics of a public good, which leads to a suboptimal solution if only left to market forces (Chaves and Gonzalez-Vega, 1992). It opens the possibility for owners and management of a financial institution to behave opportunistically and take excessive risks. Their profit participation has no limits, while losses are only paid up to their capital share. Against this background, **depositor protection** is introduced as the most important overall aim of prudential regulation and supervision.

Many countries have experienced bank runs where depositors line up before weak and endangered banks to withdraw all their savings before the institution is closed down. These bank runs emerge from asymmetric information distribution between savers and financial institutions. Depositors cannot differentiate between temporary liquidity and severe solvency problems due to difficulties in assessing the solvency of a financial institution. Thus, once a significant number of depositors withdraw their savings a chain reaction may destabilize the whole financial system through liquidity drainage. This is another major reason for prudential regulation and supervision, which can be translated into the regulatory aim of achieving **safety and soundness** of the financial system.

A third reason for external regulation, which is not always mentioned, is the assurance of a **competitive market structure**. This touches on the

“safety and soundness” argument, but takes it a step further. A well-functioning financial system provides important capital allocation contributions as well as payment transfer services to the real economy. A stable financial system is based on financial institutions striving for efficiency while competing for their customers. Clients on the savings and the loan side of financial intermediaries profit from this competition through well-priced, well-customized products. However, as pointed out earlier, financial intermediation involves complicated asymmetric information situations, where savers are not able to monitor satisfactorily what financial institutions are doing with their money. Pyramid schemes, which finance high interest rates on deposits by mobilizing new deposits, are a drastic example of where a free market situation can lead. This potentially impedes trust in the entire financial system. The building of a competitive market structure remains an objective of regulation and supervision.

1.3 PRINCIPLES OF PRUDENTIAL REGULATION AND SUPERVISION

“What makes prudential regulation prudent?” To answer this question it is necessary to outline regulatory principles, which have emerged in academic and practical discussions on regulatory issues¹.

Competitive neutrality

Regulation should allow for a *level playing field*. This means that there should not be different rules for different institutions for explicit issues due to aspects that are not material to the subject. Fair competition between financial institutions is the objective. However, this does not imply that all regulatory rules should be the same for all types of financial institutions. For example, governance issues and size considerations may limit the risk taking capacity of a small financial entity.

Efficiency

Regulation should ensure allocative, operational and dynamic efficiency of financial institutions. Allocative efficiency refers to an optimal appropriation of financial resources. Operational efficiency is employed to minimize transaction costs in financial intermediation. Dynamic effi-

¹ See Chaves and Gonzalez-Vega (1992), Jansson (1997) and Staschen (1999)

ciency refers to the adaptability of a financial institution to changing environments.

Subsidiarity and incentive structures

Regulation should fit into incentive structures for owners, managers and clients of financial institutions. These actors, together with external regulators should complement each other. External regulation should only take over the roles that other regulatory sources of market participants and owners cannot assume.

Cost-benefit analysis

Regulations should be reviewed from a cost-benefit perspective. As every single transaction cannot be monitored, overregulation can hamper innovation. An optimum balance between control and the market should be the goal.

Dynamic perspective and financial deepening

Although small financial institutions may be costly to regulate and supervise, financial deepening combined with the development of a competitive market structure that spreads across various financial services, sectors, client groups and geographic regions should be taken into account. A dynamic or prospective approach may incorporate small but growing financial institutions earlier than a static approach to regulation. Still, it must be acknowledged that regulation alone will not suffice to develop a new market niche. Instead, the driving force for innovation primarily lies with the management and owners of the financial institutions.

Government prudential regulation and social mission

Keeping an institution consistent with its original mission and objectives, including social goals, is generally a concern to boards and government. Prudential regulation (“external”) should not consider social mission issues. It should not set inappropriate rules and regulations, which unnecessarily retard innovation and alter market outreach. Similarly, it should not treat a risky endeavour involving poor and/or rural and/or agricultural clients differently than a risky endeavour involving an urban trader.

1.4 REGULATORS

Four actor categories can be identified when looking at the participants that influence financial institution's decision-making and impact on the outcomes of these decisions. For the topic of prudential regulation and supervision, it is useful to have these different actors in mind to be able to assign their roles²:

The first most commonly applied source of regulation is external regulation, which is originated through legal norms, enacted by governments, ministries and parliaments. These legal norms can be scattered over a variety of laws, including banking laws, cooperative acts and land reform laws. External regulation also includes the norms and regulations inaugurated by specialized supervisory agencies and central banks to differentiate and detail the unspecified terms and voids left by the relevant laws.

A second set of sources of regulation is owners and managers of financial institutions. Owners hold shares or are members of financial institutions. By commercial law and/or on a contractual basis they are the prime governors of financial institutions' actions. Individuals, private sector companies or the government can be owners of an agricultural lender. NGOs are a specific type of institution, where owner identification is usually difficult because the equity providers do not receive voting rights of any kind. Instead, many NGOs are governed by boards, which have been installed by some other entity or group of persons. Boards can even be self-nominated. Owners usually delegate substantial parts of their governance and daily authority to managers, whom they monitor through boards and member/shareholder assemblies on a regular basis. Ideally they install an internal control system to monitor management's actions. Managers put into practice an internal governance structure and an internal hierarchy within the financial institution.

² Van Greuning *et al.*, (1998) define seven players in this context, namely Boards of Directors, management, external auditors, internal auditors, external commercial fund providers, the public and government regulators. Both, internal and external auditors serve various of the other actors as agents and cannot be considered sources of regulation on their own. In addition, the public is defined as clients or as represented by government, NGOs or other pressure groups via the external regulatory policy-making process and thereby not as a direct source of *prudential* regulation.

Owners and managers, as generally agreed, are the persons primarily responsible for success and failure of financial institutions.

Financial institutions can engage agents to carry out specific tasks. When a group of financial institutions finds a joint apex institution to accomplish definite regulatory tasks, it belongs to the third regulatory source group, self-regulation. This concept is well-known from cooperative movements all over the world, which are members of federations. These federations collect member institutions' data and carry out auditing services among a wide range of other services.

A fourth source of regulation can be illustrated. The different sources of funds, argued elsewhere in the AFR series (see Giehler, 1999), provide a diverse set of incentives to financial institutions. For the purposes of this publication, differentiation is made between governments and donors wholesale financial institutions, commercial fund providers and depositors. These four subsets of actors impact the action and conduct of financial institutions in significantly different ways .

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The four regulatory groups of actors interact. Depositors usually prefer externally regulated entities to non-regulated ones due to a perception of increased safety. Commercial fund providers may prefer regulated entities as well and use the data disclosed by bank supervisors, rating agencies, auditors and other entities for their investment decisions. External regulators usually interact with the other groups of actors, for example by requiring certain owner characteristics and internal governance structures.

All four regulatory actors exploit their competitive advantages in governing a financial institution's action. It is important not to expect too much from just one regulatory source. For instance, external regulation cannot substitute for good owner and management control of a financial institution's action.

1.5 SUPERVISORS

Supervisors are the institutions that monitor the fulfilment of the regulations set by the four actors. These may or may not be the same insti-

tutions as the regulators. Additionally, combinations of multiple supervisors and supplementary institutions may be put into place. These supplementary institutions include external auditing firms, which contribute to superintendency work. Another example is former self-regulatory and self-supervisory institutions that have discretionary power as delegated supervisor of legally established prudential rules.

Generally, supervisors require incentives to administer the rules and regulations. They also need to have accurate and timely information, possess the capacity to process the information collected and be able to act once deviations from the regulations have been identified (sanctioning power). Table 1 summarizes four requirements for every potential supervisor.

Among the regulators defined by funding sources, owners, depositors and commercial fund providers do have their own capital at stake. This gives them a strong interest in supervising the financial institution with which they have entrusted their money. Donors and government usually have a much weaker incentive for supervision, as they provide public sector/taxpayers' money. Self-regulatory/supervisory institutions may be involved in potential conflicts of interests, as their owners are the very institutions they have to sanction. Supervisors of external regulation (external supervisors) are often part of the public service and thus derive their incentives to supervise from their mandate including political and normative pressures.

Information availability is a basic issue for all supervisors. In this area, external and internal auditors play a major role. Sufficient capacity to process the information obtained is an issue for every actor. In the case of agricultural finance, special skills and technical knowledge are required.

1.6 REGULATORY POLICY-MAKING PROCESS

There is no best solution for regulating rural financial intermediaries. Solutions need to be adjusted to the exceptional institutional landscape in a country and should be a result of a continuing policy-making process that involves all relevant actors.

Table 1
Supervisors and requirements for adequate supervision

	Incentives to monitor	Availability of information	Processing to capacity	Sanctioning power
External supervisors	By decree / public administration	Collected from external auditing sources, on-site and off-site supervisory measures	Knowledge and adequate resources required	By decree / legal powers laid down in laws/decrees
Delegated supervisors	By decree / public administration, remuneration from supervised institution or central bank/ superintendent, monetary responsibility for decisions made	Needs to be collected by on-site and off-site supervisory measures	Knowledge and adequate resources required	Delegation from external regulator/ external supervisor
Owners	Capital at stake, profit distribution, possibly: reputation at stake	External and internally audited financial statements, management information systems	Depending on capacity of owners	Voting rights in shareholder companies
Management	Remuneration (e.g. performance based), reputation at stake	Management information systems, internal auditing	Depending on qualification of management	Hire and fire, procedures installed by owners
Self-regulatory and self-supervisory institutions	Control by members / affiliates of self-regulatory institution.	Needs to be collected by on-site and off-site supervisory measures	Knowledge and adequate resources required, may involve conflicts of interests	Usually weak: depending on discretionary powers given by member institutions / affiliates on a contractual basis
Donors and governments	Limited, objectives usually social and not financial	More or less regular on-site visits and off-site reporting requirements	Limited, with little standardization e.g. in the area of microfinance	Withdrawal of support
Commercial fund providers	Money at stake	Usually difficult to obtain, relying on external audits and on-site visits	Usually high due to investment interest and more money potentially at stake	"Get money back", dialogue
Depositors	Money at stake	Usually difficult to obtain	Limited: depositors have problems of identifying 'good' deposit-takers	"Get money back"

In the process of defining and selecting the role and extent of external regulation, it must be certain that subjects of external supervision can-

not be the predominant designers. Safety and soundness considerations as reflections of the interests of depositors and society as a whole have to be weighed against propositions of the financial institutions themselves.

Prime decision-makers usually are central banks and bank supervision authorities, Ministries of Finance and parliament. In many countries, a distinction between legislative (policy makers/regulators) and executive institutions (supervisors) has proven successful. There are additional stakeholders usually involved in such a policy formulation process. These include supervisory institutions as well as financial institutions themselves, financial and non-wholesale financial institution, donors, the general public and possibly client groups.

As Coffey has underlined, “*the essence of successful policy making is that it captures the views of all the stakeholders in the delivery of the policy, backed up by relevant analyses of key data.*” (Coffey, 1998). A mutual learning process is a key part of the policy making process, if new institutions are to be included or adjustments made to sustain precise financial technology developments.

There is a danger of ‘getting lost’ in the regulatory process when stakeholders who pursue their own interests are able to dominate it. Table 2, assembles an overview of objectives which may be followed by the actors in the regulatory policy making process.

The table does not imply that in every country context the actors follow these listed objectives. Instead, it offers a range of possibilities, where certain motivations may dominate in some cases. Note that the regulatory policy-making process is a process of balancing diverse sets of objectives. In this process, governments as well as supervisory institutions are not simply agents of public interest, but follow a variety of objectives. Indeed, in the discussion of regulation for microfinance it has been put forth repeatedly that donors are the driving force in the process of including new financial intermediaries in the external regulatory frameworks in some countries. Also, as Christen and Rosenberg (2000) stress, governments thinking about introducing new regulation aim at a rather vague “*Doing something about microfinance*”.

Table 2
Actors in the regulatory policy-making process

Actors	Objectives
Financial Institutions	<ul style="list-style-type: none"> • License for deposit mobilization • Access to government, donor, and wholesale financial institution resources • Positive signal to depositors and commercial fund providers • Promotion and proliferation of financial services • Legitimization as being part of the formal financial sector
Government	<ul style="list-style-type: none"> • Safety and soundness of the financial system • Protection of the payment system • Protection of depositors • Control and influence over financial sector activities • Response to donor requests
Supervisory institutions	<ul style="list-style-type: none"> • See government • Maintenance of a manageable workload
Donors	<ul style="list-style-type: none"> • Standards that will strengthen financial institutions • Promotion and integration of new actors and new financial services into the financial system
Commercial fund providers	<ul style="list-style-type: none"> • Safe, sound and profitable institutions • Early warning signals that can trigger commercial fund providers' timely exit
Depositors/Clients	<ul style="list-style-type: none"> • Safety of deposits • Increased access to financial services • Acceptance as valuable clients to formal financial institutions

Source: Based on Valenzuela and Young (1999)

1.7 THE SPECIFIC RISK PROFILE OF AGRICULTURAL LENDING

Generally, risk categories to be applied in rural financial intermediation should not differ from other financial intermediation. Instead, the risks

should be identified on a component and consolidated basis to identify an evident risk profile. There exist numerous sets of risk categories where it is possible to identify quite clearly the pertinent risks in rural financial intermediation and agricultural lending³.

The following risk categories in agricultural lending institutions are distinguished: credit risk, which is related directly to the agricultural lending business; liquidity risk which is related to the intermediation between liabilities and assets; management risks along with ownership risks related to the particular governance structure; management capacities and staff quality of an agricultural lender.

- **Credit risk** is a central exposure category in agricultural lending. This risk category includes credit loss risk, interest rate risk, and foreign exchange risk. These subcategories can be identified on an individual and on a portfolio level. Credit loss risks in agricultural lending are characterized by covariance and contingencies prevalent in the agricultural sector;
- **Liquidity and interest rate risks** originate from liabilities and liability matching in maturity with the assets of a financial institution. These include sources of funds, balance sheet structure risks and subsidy dependence risks (which refers to the possibility of losing access to subsidies);
- **Management and operational risks** pertain to the capability of an agricultural lender to manage the discrete risks and costs of rural financial intermediation, the existence of adequate internal control systems that prevent fraud and mismanagement, implementation of adequate management information systems and maintenance of operational independence from external intrusion (again refers to possible subsidy dependence);
- **Ownership risks** indicate the repercussions that owner characteristics can have on the previous risk categories. They refer to the existence of owners with deep pockets who effectively install mechanisms to control and supervise management and staff. Ownership risk is high if these systems do not exist or do not work properly.

³ Hanning and Braun (1999) use the same risk classification.

This risk category also touches on the role of quasi-owners such as donors and governments involved in socially oriented initiatives.

Table 3
Specific risk profile of agricultural lending portfolios

RISK CATEGORY	Relevance for agricultural lenders
Credit risk	<ul style="list-style-type: none"> • High degree of sector concentration increases risk of correlated defaults (portfolio concentration risk) • Besides behavioural risks, external risks play a particularly important role in default risk • If short term lending for working capital is in the portfolio, high turnover may increase relevance of default risk (credit loss risk) • Contract enforcement difficulties exist especially in rural contexts (legal risk) • Loan recovery is affected by customer identification difficulties especially in rural contexts (address risk)
Liquidity and interest rate risk	<ul style="list-style-type: none"> • Seasonal and contingency risks of increased loan demand combined with decreased deposit base • Flexibility of loan interest rates, danger of political intervention (interest rate risk) • Possible state intervention in interest rate policy • Subsidy dependence encompasses irregularities of donor money flows, donor funding possibly subject to exchange rate fluctuations, possible withdrawal of public funds • Higher interest rate risks in longer term lending
Management and operational risk	<ul style="list-style-type: none"> • Due to absence of collateral, the evaluation of repayment capacity and willingness becomes more relevant, leading to higher management requirements (which includes the adequate evaluation of agricultural sector risks) • Requirement of knowledge in the agricultural sector for appropriate risk management • Decentralized rural institutions imply specific internal control and fraud risks due to dispersion of responsibilities • Donor funding sources may hamper appropriate risk management, impact on prudence of loan making and branching decisions
Governance risk	<ul style="list-style-type: none"> • Depending on institutional type: NGOs face high, agricultural development banks substantial, and co-operatives significant governance risks

The complete goal for regulated entities that are involved with the agricultural sectors is to be a safe, stable and profitable financial institution.

On the regulatory level it appears likely that necessary adaptations will refer to details rather than to global issues. However, the supervision process faces serious challenges in rural areas and with agricultural lending portfolios.

Agricultural lending can be done by a variety of institutions that do not necessarily focus exclusively on agricultural producers. This happens in practice. In fact, a prudent approach towards dealing with the unique risks of agricultural loans is the diversification of the portfolio, for instance including financing for non-farmers, trade activities, consumption credit etc. (cf. Klein *et al.*, 1999).

Emphasis will be made on factors of agricultural lending *portfolios* instead of agricultural lending institutions. Where appropriate, important characteristics of NGOs, savings and credit cooperatives, public development banks, savings banks as well as commercial banks and other institutional types will also be highlighted.

2 External Regulation and Supervision

Much of the debate on prudential regulation and supervision centres exclusively on external regulation. External regulation, as defined here, acts with the power of the law and usually involves specialized public institutions, such as central banks and specialized supervisory agencies, in addition to courts, as supervisors to ensure that the established norms are followed by the financial institutions.

This chapter will first take a look at the triggers for the involvement of external regulation in regulating and supervising financial intermediation. Second the costs of regulation will be considered followed by different framework designs of external regulation. The legal framework for prudential regulation usually includes many types of legal instruments that jointly create a system of external regulation. Following this, principles and specific rules that usually form part of external regulation will be examined. The analyses will weigh their relevance or irrelevance within the context of rural financial intermediation, particularly of the provision of financial services to small agricultural producers. These rules are divided into preventive and protective instruments referring to their entry point before or after the incidence of severe financial problems of a financial institution. In the third subsection, supervision enters the picture. Appropriate supervisors need to fulfil bona fide mandates to work effectively. They require valuable partners for conducting their tasks.

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2.1 TRIGGERS FOR THE INVOLVEMENT OF EXTERNAL REGULATION

Different characteristics of financial institutions trigger different forms of regulation. The most common triggers of external regulation are funding sources and size considerations. Additional triggers are cost-benefit and supervisory capacity considerations.

Funding sources

Van Greuning *et al.*, (1998) proposes an approach towards defining regulatory need, which is oriented at the funding sources of a financial institution. In their view, regulatory need can be defined by the extent to

which funding sources together with owners can and should supervise the financial institutions' use of their money. It is a common to externally regulate all financial institutions that take deposits from the public.

Table 4
Funding sources as triggers for external regulation

Type of financial institution	Potential reasons for external regulation	Form of regulation required
Institutions with funds from donors	Quasi-monopolistic credit markets (which may lead to persistent inefficiencies and fraudulent behaviour on the part of financial institutions), insufficient information of donors, opportunistic behaviour of institutions	None/only voluntary in self-regulatory institution
Institutions with commercial loans or securities	Fund mobilization through commercial papers, large-scale deposit certificates etc.	Registration as corporate entity, authorization from securities and stock exchange agency
Institutions, which mobilize funds from members	Deposit-taking from member-clients	Registration with Cooperative Authority, under banking or other law (or with private rating agency)
Institutions, which mobilize funds from the general public	Deposit-taking from public with danger of illiquidity (runs) and opportunistic behaviour	Registration and compliance with general or institution-specific banking law

Source: Adapted from Van Greuning *et al.*, (1998)

Size

Another factor in determining the role of external regulation is institutional size. It may be argued, that the regulation and supervision of small financial entities in general is too costly and does not provide a substantial benefit to the overall financial system, as its meaning relative

to systemic stability is rather small. This consideration has to be balanced against the risk that the failure of even a single small financial intermediary in rural areas may lead to long lasting distrust in the financial sector and may substantially hamper savings mobilization efforts.

At the same time, even though the total amount of deposits involved may not be large, the relative importance of the small savings for clientele in lower income strata means that crises affect their accounts more substantially than larger depositors. Small informal financial service providers such as Rotating Savings and Credit Associations (RoSCAs) should remain outside external regulation as long as their potential threat to the financial system and the serviced individuals remains low.

Cost and capacity issues

Important factors to external regulatory and supervisory involvement are cost-benefit as well as capacity considerations of the potential supervisors. Regulation does not make sense without enforcement, and enforcement will not take place without adequate supervision. This implies that once supervision is too costly or infeasible technically, this type of regulation should be avoided. Cost aspects are analysed in more detail in the following section, and in Section 2.5.

Supervisory capacity is another important issue to be taken into account. If there are not enough qualified supervisors, even detailed and appropriate regulation cannot be implemented. Restrictions on supervisory capacity in the medium term can form an important justification against widening the focal point of regulation and supervision.

Size of market niche and existence of best practices

Informality provides valuable opportunities for innovation. Indigenous informal financial institutions (moneylenders, RoSCAs, savings clubs etc.) have used this informality all over the world in the area of micro-finance technology. NGOs have also benefited from their innovative freedom from relevant external regulation. From this perspective it is advisable to specify the external regulatory and supervisory framework only once a critical mass of actors have ventured into a new type of financial business. As Valenzuela and Young stated, “*Establishing regulations for a market that has yet to exist can have the effect of stifling*

the very market one wishes to create” (1999). This is especially the case for lending to small farmers, where documented successful experience is few and far between and discussants are far away from defining best practices for lending technology (see Klein *et al.*, 1999).

Within the analytical framework of four different sources of regulation, defining external regulatory need is part of the decision of allocating specific roles and tasks to these regulatory sources. Upfront it has to be clear that the prime responsibility of managing risks involved in serving a particular client market and more generally in managing a financial institution in a sustainable manner resides with the apparatus of internal governance. International experience has shown, that causes of crisis in financial intermediaries largely occur due to lack of adequate policies, administrative and internal control systems, apart from external shocks (cf. Rosales, 1999; Hawkins and Turner, 1999).

This, however, does not imply that external regulation should step aside and let the free market, namely the owners of a financial institution regulate intermediaries exclusively. Instead as the internal structuring of the institutions primarily and directly determines quality decision-making, implies that it is a key area for external regulatory requirements.

External regulation can and should require strong internal regulation mechanisms. These include measures of ensuring owner control over the institution, as well as instruments applied on the part of the management of the institution for monitoring and acting upon staff performance in various sectors. Examples are competent boards of directors, strong management information systems and good risk management tools.

Tiered approaches

Within tiered approaches, different institutional categories are reflected in different regulatory layers. Tiered approaches have been proposed for the regulation of microfinance operations in Uganda and Zambia. Box 1 presents the policy recommendations issued by Bank of Uganda as an example. If observed in a static perspective, the different institutional types are defined as regulatory frameworks adjusted to specific institutional types. In a dynamic perspective they provide stepping stones in a

Box 1
The Proposed Tiered Approach in Uganda

Bank of Uganda has actively participated in the current regulatory process of revising the Financial Institutions Statute and discussions on integrating into the financial sector new entities. As of July 1999, it has proposed to include the microfinance sector into the financial sector under a tiered framework. This tiered framework is meant to reflect the concept of microfinance as a line of business, and allow a diverse range of institutions to become involved in credit provision to the low-income population of Uganda.

The proposed framework comprises four institutional categories:

- a) Commercial banks. For these institutions specific regulations for micro financing will be provided.
- b) Credit institutions. This is an already existing category of smaller financial institutions that concentrate on the provision of loans, but also do have the possibility of deposit-taking. They are not allowed to operate checking accounts. For these institutions, specific regulations will be applicable as well.
- c) Microfinance Deposit-taking Institutions (MDIs). This is a special category for new financial institutions, which will comprise a lower minimum capital and capital adequacy and liquidity requirements geared at specialized institutions.
- d) Credit-only NGOs, other non-deposit-taking institutions as well as very small member-based organizations (e.g. RoSCAs).

The categories a), b) and c) are proposed to be regulated under a special law, installing Bank of Uganda as a supervisory institution. Category d) institutions will be left outside external regulation and shall rely on voluntary self-regulation.

Source: Bank of Uganda (1999)

potential institutional development. This does not automatically imply a uniform development path for new financial institutions, but it provides opportunities to graduate to higher regulatory levels.

Also, tiered approaches already are in operation in some countries for savings and credit cooperatives. In Latin America Bolivia, Colombia, Costa Rica, and Ecuador provide different regulatory and supervisory settings for open and closed savings and credit cooperatives as well as cooperative banks. (Hübenthal and Gattelet, 1998).

Credit-only institutions

Table 5 summarizes the pros and cons put forward for the external regulation of credit-only institutions⁴.

Table 5

Pros and Cons of regulating credit-only institutions

Pros	Cons
<ul style="list-style-type: none">• Fulfilling a developmental promotion role: setting standards• Preparation phase for institutions to become deposit-takers• Exerting control over otherwise not sufficiently controlled entities	<ul style="list-style-type: none">• High costs of supervision• Lack of capacity on the part of supervisors• Primary focus should be on the more risky financial institutions: deposit-takers• Governments, donors, and financial apexes can and should safeguard their investments themselves• Higher risk financial institutions compensate investors with higher interest rates, and thus have an incentive to limit the risks involved• Danger of overregulation

The previous chapters have outlined that the predominant rationales for external regulation of financial institutions are the implications of the deposit-taking business. Proponents of external regulation of credit-only institutions put forward in many countries (finance companies for example) are also regulated. These firms deal with institutional commercial fund providers and capital markets as their major funding sources. Others accentuate setting standards for a new market segment helps fulfil a market development component of regulation. It would help ensure confidence by future depositors and investors. It may also be seen as a preparation phase, through which formerly unregulated entities have to pull out, until being fully regulated, supervised and granted full deposit-taking permission. Exerting control over lending practices is another reason offered for regulating credit-only institutions. This is

⁴ In the context of this discussion, however, the terminology is not uniformly used, with some discussants defining as *regulation* all legal norms relevant to financial institutions (e.g. Meagher Mwiinga 1999), and others referring to prudential regulation as in our terms external sources only (e.g. Vogel *et al.*, 1999).

applies for example, for controls promoted in the name of consumer protection.

However, a rather practical argument against the regulation of credit-only institutions is the high costs of the actual supervision process, and the limited capacities of external supervisors in many developing countries. Often it is simply not feasible to incorporate these institutions, and a prudent decision-making process with focus on opportunity costs and on regulatory need leads to concentration on the more risky or vulnerable group of deposit-taking financial institutions⁵.

As Rosales (1999) suggests, once regulation and supervision of small entities becomes too costly, external regulation can at least ensure appropriate information flows to owners, depositors and commercial fund providers by enforcing uniform accounting standards and the quality control of their application through qualified external auditors.

2.2 COSTS AND BENEFITS OF EXTERNAL REGULATION

The benefits external regulators intend to achieve by regulating financial institutions have been outlined. To compare costs and benefits of regulation, the costs of supervising external regulation need to be clearly identified. External regulation in itself has low costs, most of which are sunk costs of the introduction of new regulations. Supervision, which follows regulation however, is an expensive endeavour, and the more thoroughly it is implemented, the higher are the costs.

Costs and benefit considerations have to be made on the side of financial institutions as well. Table 6 summarizes the major cost components, which provide the basis for an informal financial institution deciding to transform into a regulated entity.

⁵ In this context, it is important to reiterate that the point is *prudential* regulation. There is no doubt, that also credit-only institutions need to be embedded in a appropriate legal framework for financial transactions, which ensures sufficient contract enforcement powers to lending institutions.

Table 6

Costs and benefits of external regulation and supervision for a financial institution

Costs	Benefits
<ul style="list-style-type: none"> • Increased administrative costs (staff, paperwork, management information systems, security) • Reporting requirements produce regular and heavy workload • Increased internal bureaucracy; boards, internal auditors etc., as well as preparation of required manuals • Flexibility and speed of responses to market developments decrease • Minimum reserve requirements soak liquidity • Stricter provisioning may affect reported performance⁶ • Fees to be paid to the supervisor 	<ul style="list-style-type: none"> • Increased prestige and credibility • Possible access to deposits as sources of funds from the public • Access to other funding sources (financial apexes, financial markets) • Administrative and procedural rigor: fraud prevention • Organizational business culture potentially increases efficiency • Access to new and relevant information through credit information bureaux • Increased job security for staff in a formalized institution
<p>Source: Compiled from Valenzuela and Young (1999) and Ramirez (1999)</p>	

It is important to bear in mind that while financial institutions do benefit from an appropriate external regulatory regime, there is not much evidence that the existence of a regulatory jurisdiction makes institutions stronger and less prone to external (or internal fraud) shocks. Discussants on banking regulation generally agree the major role of ensuring safety, soundness and profitability of a financial institution remains with managers and owners.

Recent studies in Bolivia have revealed that the process of formalization incurred substantial costs for the Private Financial Funds (cf. Wiedmaier-Pfister and Monje, 1999). On average, establishing a Private Financial Fund in Bolivia costs above US\$ 700 000, excluding costs that

⁶ The relevance of this cost category depends on the preregulatory provisioning of the financial institution. For example in the case of CARD Bank of the Philippines, provisioning requirements after transformation into a regulated entity were more lax than the internal regulations followed by CARD (Campion and White, 1999). Also, it has to be clear that the concept of provisioning aims at anticipating probable losses on specific assets. If these losses do not materialize, the earlier provisioning is offset by the earnings from interest and principal repayment. As a result, profits are only temporarily depressed by stricter provisioning requirements.

were difficult to measure, such as training and staff development, opportunity costs of the formalization process as well as the implicit costs of a mandatory reserve requirement.

Who covers the costs of external supervision? Compliance costs are directly met by financial institutions, but who funds the supervisor for his on-going supervision? This is solved differently across countries. Solutions range from a full coverage of supervisory costs funded by public budgets to coverage of large parts of the costs by the financial institutions themselves. In the Bolivian system a substantial part of the burden of ongoing costs is covered through a few relating to the asset-size of the individual financial institutions. In a number of other countries, it is argued that the provision of a public good should be financed through public budgets.

2.3 LEGAL FRAMEWORK FOR EXTERNAL REGULATION

External regulation can take different forms. It usually consists of different layers comprising laws, regulations, statutory notes and circulars. Some countries have one single general banking law, which tries to assemble all regulations, but still in most countries the operational issues are left to statutory notes, circulars or even simply the routine decisions of the supervisory institution. As an example, the study by Meagher and Mwiinga (1999) on the Zambian laws affecting the provision of micro-finance by financial institutions comprises ten different Acts governing financial institutions directly or indirectly. In Bolivia, the circulars and notes of the *Superintendencia de Bancos* that regulate Private Financial Funds (FFP) are numerous.

General banking law vs. special laws

External regulatory norms are often scattered across disparate acts and laws. Some institutional classifications are usually dealt with in a general banking law, while others operate under specific laws. The rationale of this division is that different institutional types for different purposes and products with different governance set-ups are allowed and regulated.

Many agricultural development banks operate under Land Reform Acts or other fixed purpose regulatory settings, whose stipulations vary considerably from the regulations for other financial institutions⁷. They are mostly also supervised by institutions outside commercial bank supervision, such as Ministries of Agriculture or Finance. Box 2 provides an example from Thailand, where recently the Bank for Agriculture and Agricultural Cooperatives (BAAC), as part of the financial sector restructuring following the recent East Asian financial crisis, has switched from a designated regulatory framework towards the general banking regulatory framework.

On the basis of one of the key principles of regulation described in Section 2.3, namely the establishment of level playing fields, non-differential treatment of development banks and other financial intermediaries if conducting the same business is advocated.

Savings and credit cooperatives also operate under discrete laws in most countries. A survey of the governing laws throughout the world has shown while these are specific cooperative laws, most nations do not have corresponding regulations for those cooperatives involved in financial intermediation (cf. WOCCU, 1993). As an example, the Honduran cooperative law sets the minimum capital at US\$ 140 uniformly for agricultural production, marketing, and savings and credit cooperatives. In addition, many savings and credit cooperatives are being supervised by a specialized cooperative institution, often a registrar of cooperatives. In many cases, the institutions lack financial sector knowledge and restrict their supervisory operations to auditing matters.

For agricultural development banks as for savings and credit cooperatives, the detailed regulatory framework in most cases also results in detailed supervisory institutions distinct from the banking supervisor.

Levels of regulation, flexibility and innovation

It is important to distinguish the different levels of external regulation, as they entail a divergent scope for revision and adoption. The regulations analysed in the following sections are not always required at the

⁷ Examples include e.g. Agricultural Bank of Sudan, Agricultural Credit Corporation in Jordan, Agricultural Development Bank Nepal, Agricultural Development Bank Pakistan, and Bank Pertanian Malaysia.

Box 2
From Special Law to General Banking Law Regulation:
The Case of BAAC Thailand

The Bank for Agriculture and Agricultural Cooperatives (BAAC) is an agricultural development bank, known worldwide for its success in providing financial services to rural smallholders throughout Thailand. Up to 1999, it has operated under a special law, which has put it under the surveillance of the Ministry of Finance. Recently, a shift towards the general banking supervision of Bank of Thailand has taken place. Currently, the institution is in a transition phase, which is expected to induce very high costs due to the need to review the provisioning of loans. BAAC used a provisioning system in the past that reached a full provisioning of a delinquent loan after 10 years only, sequentially writing off 10% of the loan principal in every year of delinquency. The general banking rules however require loans to be written off starting at 10% for a delinquency of 30 days. While consultations are still underway, substantial losses and subsequently capital reduction are expected.

same legal level. The allocation of these rules differs from country to country. Some may lay down explicit qualification requirements in the general banking law. Others may place these requirements on the level of the superintendency's circulars.

Where and in what form these rules are prescribed is not an arbitrary issue. Instead, prescribing in detail regulatory requirements in a law may seriously hamper flexibility and innovation. As Christen and Rosenberg (2000) remark, regulation always includes to some degree “model building”, which may restrict organizational and technological innovation⁸. Changing laws usually takes a lot of time. In the course of introducing reform, the contents originally intended may get lost or even reversed in the policy-making and legislative process. Laws are usually passed by parliaments. Circulars and statutory notes in contrast are issued by central banks and specialized supervisory agencies themselves. Changing administrative circulars usually is simpler and quicker if proven necessary.

⁸ As an example, many commentators have quoted the West African PARMEC law (cf. Berenbach and Churchill, 1998; Valenzuela and Young, 1999). The regulations stipulated by this law leave little flexibility for institutional forms. It also sets restrictive interest rate caps for the financial institutions, which hinder the profitability of the provision of small loans especially in rural areas.

2.4 REQUIREMENTS OF EXTERNAL REGULATION AND THEIR IMPLICATIONS FOR AGRICULTURAL LENDING

Now it is time to examine pre-crisis (preventive) and post-crisis (protective) measures usually taken by external regulators. Preventive regulation will be featured since post-crisis regulatory measures warrants independent study in a much more comprehensive framework of concepts and practices of bank restructuring. Throughout the analysis, the details and requirements of agricultural lending will be highlighted. Also, potential areas of restrictive regulation will be delineated.

2.4.1 Preventive Regulation: Entry Requirements

Clear and appropriate definition of the entry requirements help assure that only financially healthy institutions join the marketplace. Financial institutions with flawed governance and organizational structures, staff quality, portfolio quality or other deficiencies should not enter the market. This is one of the most powerful preventive measures an external regulator can stipulate.

Minimum capital requirements

Minimum capital requirements for financial institutions are set to ensure that sufficient capital is available to absorb financial shocks. Capital requirements also should be designed to shield the institution from becoming a captive of bad debtors. Also, minimum capital requirements are a commitment of the owners' own risk resources which may be lost in the event of that the bank makes bad loans.

Minimum capital requirements vary substantially from country to country. Lately, proposals to lower minimum capital requirements have been entertained for small financial institutions involved in microfinance. Low entry capital proposals for institutions that target microfinance operations range worldwide from US\$25 000 to US\$250 000.

Concentration at the lower end and lower entry requirements are found in Africa and South-East Asia (Valenzuela and Young 1999).

Considerations in this regard should balance the necessity to provide for strong owners with substantial capital at stake as well as a safety net for

the financial business of the institution on the one hand, and a non-restrictive entry opportunity on the other. In the context of agricultural lending it is important to bear in mind that for innovative lending, which extends the limits of traditional formal financial intermediation, a strong equity base should be required. Very low entry capital requirements are unlikely to create strong enough institutions that can weather external shocks and business downturns. Very low entry barriers can also potentially overburden the supervisory institution with a myriad of small institutions (see Section 2.5.5 on costs of supervision).

As an example, there are 2 420 People's Credit Banks (Bank Perkreditan Rakyat, BPR) in Indonesia today, out of which many have difficulties in competing with commercial banks in their rural, periurban and urban target areas. This has resulted in substantial 37% non-performing loans in the loan portfolio of these institutions. In order to provide a disincentive for the establishment of new BPRs, minimum capital requirements have recently been increased from US\$7 100 to US\$71 000 (Bank Indonesia/GTZ, 1999).

Owners

Ownership requirements are intended to promote strong owners. They are to provide that all owners operate in the best interests of the institution (mission compatibility), and second, that members of governing bodies make all efforts to be fully informed about the institution's activities and performance (internal regulation).

In financial institutions that specialize in new or niche market segments, such as microfinance or agricultural lending, one success factor are leaders that provide a clear vision of serving this yet untapped target markets prudentially. Owners need to be in full support of such a strategic vision. Not only do good owners bring a good financial background but also prove to have an unclouded strategic concept for the institution. The absence of owners committed to financial performance, or a majority of socially oriented owners who intend to stress outreach at the expense of sustainability may prove dangerous.

In Bolivia, natural persons are required as at least minority shareholders. The transformation of a group of NGOs into a joint Private Financial Fund has recently been delayed by one and a half years, as there were no owners other than the NGOs. Honduras fully requires

natural persons as shareholders of financial institutions. In Uganda, natural or institutional owners have to be of Ugandan nationality. Kenyan banking regulations limit the ownership percentage of a single investor to 25% unless it is a commercial bank.

Governance structure and institutional type

Many regulators require a formal financial intermediary to be a shareholding company in order to ensure owners with capital at stake and an incentive for active monitoring. In addition, savings and credit cooperatives with members holding shares are usually permitted. Apart from these, governmental intermediaries are often allowed to operate without own capital resources apart from retained earnings. However, some governments have converted for example agricultural development banks into shareholding companies, where government holds a majority share.

The requirement of transformation into a shareholding company may pose a serious challenge for NGOs. NGOs do not have real (holding capital) owners and are mostly management driven. They do not possess equity conforming to capital with voting rights. Their institutional capital consists of retained earnings and donor grants. Problems for NGOs in transforming into a formal financial entity are described in detail elsewhere (see Campiong and White, 1999). This case will not be analysed here, as they do not pertain to agricultural lenders.

Feasibility studies

To assess the suitability of the new entrant into the formal financial market, customarily a detailed feasibility study is required. Detailed institutional information and a comprehensive business plan are components. Also, these studies are usually part of the initial evaluation of the financial institution. By designing these feasibility studies, they demonstrate the capability to plan strategically. Box 3 summarizes the requirements for feasibility studies of Private Financial Funds (FPF) in Bolivia.

For agricultural lenders similar to financial institutions targeting other sectors, feasibility studies should include a clear strategy for attending this market segment. On-site, external supervisors will have to check technologies and management techniques as well as prior experience, which ensure an appropriate cost and risk management of an agricultural loan portfolio. The supervisors will be in a position to be able to

Box 3
Comprehensive Feasibility Studies as Entry Requirement in Bolivia

In Bolivia, a new regulatory framework for small financial institutions (*Fondos Financieros Privados* FFP = Private Financial Funds) was introduced in 1993. While the first microfinance institution to become regulated, BancoSol, operates under a normal banking license, other former NGOs are now converting into FFPs.

To become a licensed FFP, a detailed economic feasibility study has to be carried out and submitted to the Superintendency of Banks. The Superintendency then embarks on off-site and on-site evaluation of the study submitted. The feasibility study is expected to comprise sections on the economic, legal and political environment, the financial system, the market segments targeted, the expected economic impact of financial service provision to these segments and the competition expected. It must include a description of the financial products demanded by the targeted market segment as well as the financial products to be provided, the prior institutional experience, the designated shareholders, organizational structure and management's qualification. In addition, information on management information systems and the physical security situation must be provided. Finally, financial projections that reflect the above aspects must be presented.

Once the feasibility study satisfies these criteria, it is cross-checked on-site by the Superintendency's bank examiners. Depending on the adjustments needed and requirements set by the bank examiner's team, the process of licensing has taken up to two years. In most cases, donors have financially and technically supported the preparation of these comprehensive feasibility studies.

Source: Evaluation manual of the SBEF, 1999

judge qualitatively whether the applicant institution is prepared for serving this market segment with its specific risk profile.

2.4.2 Preventive Regulation: Ongoing Requirements

Typically, banking regulation puts into place a set of requirements that constitutes a set of external regulatory rules (see Table 7).

Capital to asset ratios and loan portfolio classification

Capital to asset ratios are a key instrument of banking regulation throughout the world. The rationale behind this instrument is based on the argument that assets need to be sufficiently backed by a financial institution's equity in order to be able to cushion the risks of loss. Risks that are determinable such as reductions in the value of assets in the loan portfolio are to be covered by specific and general loan loss provision.

Capital requirements address unpredictable changes in the economic or competitive environment⁹.

Table 7
Ongoing requirements in banking regulation

On-going requirements	
<ul style="list-style-type: none"> • Capital to asset ratios (CAR) • Loan portfolio classification • Liquidity management • Credit risk management requirements, e.g. limits on portfolio concentration and lending restrictions • Provisioning and write-off policies • Product restrictions 	<ul style="list-style-type: none"> • Credit bureau requirements • Product restrictions • Branching regulations • Internal control requirements • Qualification requirements • Reporting requirements • Change notifications

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Putting substantial amounts of equity investments at the disposal of the financial institution's asset and liability management capabilities, helps ensure strong owners, that are interested in the profitability and efficiency of the institution. Thus, an optimum relation between capital and asset should ensure the safety of the financial intermediation process, while at the same time it should not impose excessive costs on the financial institution¹⁰.

The recommendations of the Basle Accord in 1988 have specified a capital-to-weighted-assets ratio of 8% for this purpose. Assets are weighted according to their relative risks. And capital is divided into two different tiers, reflecting their loss risk cushion capabilities. Asset qualifications range from 0 to 100%, with cash ranging at 0, mortgage secured loans at 50% and fixed assets and real estate as well as all remaining loans at 100%¹¹.

⁹ For a discussion of capital definitions and capital adequacy requirements see Barltrop and McNaughton (1992). For an in-depth discussion of the 1988 Basle Accord's details see e.g. Dewatripont and Tirole (1994).

¹⁰ Due to the leverage effect, higher capital-to-asset ratios decrease the profitability of capital.

¹¹ An intensive discussion of the 1988 Basle Accord is underway. (see Basle Committee, 1999).

The other side of the coin is the definition of capital. The Basle Accord defined two tiers of capital, namely core capital (Tier One) and supplementary capital (Tier Two). Tier Two capital cannot exceed Tier One capital, and long term subordinated debt as well as shares optionally redeemable by the issuer cannot exceed half of Tier One capital. This hierarchy reflects the degree to which capital is explicit and permanent.

The definition of capital becomes difficult in case of heavy donor involvement. Is it advisable to account for donor grants as capital? One of the basic considerations behind the capital-to-asset-ratio is to ensure that sufficient capital is available to cushion the risks from the asset side of a financial institution's balance sheet. But heavy capital involvement also ensures that owners whose capital is at stake keep strong control over the business. Donors, however, are rather lenient owners, that usually do not have, or do not process in an adequate and timely manner first-hand information provided to them. Accordingly, donor grants should be valued at a lower ratio than other capital sources. The same applies to equity provided by governments directly or through state guarantees.

Generally, the validity of reported capital relies considerably on accurate provisioning. As an example, in agricultural development banks the amount of equity is often heavily overstated or misleading, since many banks do not account for loan loss provisions in a proper manner.

The institutional form of savings and credit cooperatives poses specific obstacles in calculating capital. Member shares are redeemable, and the extraction of shares by many members can potentially become a threat to the equity base. Accordingly, the World Council of Credit Unions (WOCCU) recommends that only institutional capital is taken into account when calculating capital adequacy (Richardson, 2000). Institutional capital is the part of retained earnings of earlier years that is not redeemable.

Financial institutions with a loan portfolio concentrated in the agricultural sector can quickly accumulate arrears in bad agricultural years. Especially, if agricultural producers concentrate on the same lines of products, or the volatility of yields of the different products is interrelated, arrears may be accompanied by a decrease in deposit base. In this

circumstance, having a strong capital position at the outset is essential for the financial institution to be able to absorb liquidity shortfalls and possibly access fresh borrowing from other financial institutions, government, donors or commercial fund providers.

But how can the capital-to-asset-ratio be adjusted to the conditions of agricultural finance in developing countries? For developing countries a higher capital adequacy rate than 8% has been proposed to cushion the specific risks of narrow and volatile financial systems and for microfinance providers in particular to buffer the danger of rapidly deteriorating short term credit portfolios (see Jansson 1997; Berenbach and Churchill 1997).

However, when looking at changing regulatory regimes in this regard, it is important to look at the three options for adjusting capital-to-asset-ratios to high-risk environments (overall financial system, macroeconomic environment or the sectoral concentration of loan portfolios). First, the overall ratio can be set higher. Second, one can adjust the risk weighting of those assets that carry a higher degree of risk. Third, one can adjust the capital definition¹².

Loans to agricultural producers may be generally classified as higher risk, requiring a higher degree of capital coverage. One could classify these at a percentage of above 100% in the asset qualification for the capital-to-asset ratio. Automatically, for these parts of the loan portfolio, a higher capital coverage would be required. The following examples demonstrate the effects of such a differentiation in comparing the resulting minimum capital requirements of a diversified and a highly specialized agricultural lender.

¹² The Basle recommendations of 1988 followed the second path by differentiating between loans to OECD and non-OECD public sector entities in risk weighting, taking into account the instability of financial systems and macroeconomic situation of non-OECD countries. In the recent Consultative Paper of the Basle Committee on a reform of the capital adequacy framework, a sophistication of these risk weightings is proposed (Basle Committee 1999). One of the proposals is to utilize market rating agencies for the valuation of asset risks. Another proposal is to allow for the flexible setting of capital-to-asset-ratios by supervisory agencies based on their qualitative evaluation of methods and techniques applied as well as other characteristics of the financial institution. These new proposals are based on the experience with the Basle Accord's guidelines as being in some cases counterproductive and too inflexible.

Example 1: Diversified agricultural lender				Example 2: More specialized agricultural lender			
Assets	Risk Weight	Asset Value	Weighted Asset Value	Assets	Risk Weight	Asset Value	Weighted Asset Value
Cash	0%	100	0	Cash	0%	100	0
Regular Loans	125%	1 000	1 000	Regular Loans	100%	1 000	1 000
Housing Loans	70%	1 000	700	Housing Loans	70%	0	0
Agricultural Loans	125%	1 000	1 250	Agricultural Loans	125%	2 000	2 500
Total			2 950	Total			3 500
Minimum capital adequacy required (8% of 2 950) would be 236.				Minimum capital adequacy required (8% of 3 500) would be 280.			

The process of classification in practice may prove complex. Taking into account the fungibility of money in farm households with a diversified income structure including non-farm economic activities there may not be a clear-cut definition of agricultural loans. A phenomenon of structural arbitrage might occur with financial institutions by declaring agricultural loans as financing the off-farm activities of a farm household. This would then imply switching the classification and risk weighting from above 100% to 100%¹³.

Another option to be considered would be the risk-weighting of loan portfolio assets according to past repayment performance. One could require a higher degree of capital coverage for institutions with continuously greater delinquency rates. In Argentina, interest rates and underlying guarantees are used to classify the loan portfolio (see Box 4).

The result of assigning agricultural loans to a higher risk category would result in an increase in costs of agricultural lending, as it decreases the possible financial leverage of a financial institution. While this may

¹³ Kane defines the term “structural arbitrage” as follows: “*Structural arbitrage occurs when a firm improves its regulatory climate by substituting new or differently regulated products, processes, and organizational forms for existing ones*” (Kane 1988).

appear not desirable from a developmental perspective, the risk-based view of a regulator may deem this appropriate.

Box 4
Differentiated Risk Weighting: The Case of Argentina

Argentine bank regulators have developed a complex system of calculating risk weights of loan portfolios. Minimum capital requirements for a loan depend on the overall rating of the bank from the Central Bank, one risk factor based on the interest rate applied, another risk factor based on the underlying guarantee and a leverage coefficient of 0.115 (above Basle requirements of 0.08). The interest rate risk factor ranges from 1.00 to 6.00, reflecting the assumption, that higher interest rates imply higher risks. The risk factor for guarantees distinguishes five categories, which are grouped according to possibility of loan amount recovery.

Sources: Schreiner (1999), Jansson (1997)

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Generally it has to be borne in mind that a differentiated risk category system may within theoretical considerations provide better solutions to the challenges of adequate capital coverage of risk lending. Reality may look different. The process of classification creates additional costs, which have to be weighed against the benefits of differentiation. Also, these regulations form part of the agenda of supervisors, and may enlarge their workload (and thus costs) substantially. Decisions on this topic will have to be made on a case-by-case basis after an in-depth analysis of costs and benefits (see Section 2.5.5).

Liquidity management

Liquidity problems are often early signals of bank failure. Many bank regulators ask for various liquidity ratios of supervised institutions to monitor assets. To meet cash and withdrawal needs of the clients, commercial banks usually have to maintain minimum liquid assets. These liquid assets normally comprise between 5 and 10% of total deposit liabilities in cash and bank deposits, along with another 10 to 15% of treasury bills, short term government securities or other assets which can be readily sold (cf. Sheng 1990).

Financial institutions that mobilize savings and lend in rural contexts face very particular liquidity issues. Regions dominated by agricultural

production face seasonal cash flow fluctuations. They face covariate climate risks and seasonality effects that impact on a financial intermediary lending together with savings business. A broad coverage of diverse regions and/or access to a liquidity pool can help mitigate these liquidity risks. In any case, a sophisticated liquidity management system needs to be in place to prompt due action on the part of senior management. In addition, agricultural lenders that hold a substantial exposure to foreign exchange risks due to international refinancing should be required to keep higher liquidity levels.

These factors indicate that banks with substantial agricultural loan portfolios may need higher liquidity ratios. Access to interregional liquidity pools and sufficient refinancing opportunities in cases of liquidity crunches are of utmost importance for agricultural lenders. These arrangements may either be formalized as stand-by agreements or made on an ad hoc basis based on trust affiliations to other financial entities, national and international apexes as well as (possibly) donors. This qualitative aspect has strong implications for supervision, which should assess not only static liquidity ratios, but also prospective opportunities for accessing liquidity.

Credit risk management

Documentation and collateral requirements are part of requiring appropriate credit risk management in financial institutions. In rural financial markets, collateral in many cases may be successfully substituted or complemented with co-signing, group joint liability arrangements and/or the pledging of non-traditional banking collateral such as movable assets. In a static way, the appropriateness of credit risk is reflected in the repayment performance of a loan portfolio as well as portfolio-at-risk calculations. However, the capacity to manage agricultural lending methodologies requires management qualifications and capacities as well as sophisticated management information systems.

Qualitative evaluations of credit risk management systems, however, are very seldom required and in place. Sector expertise is usually required for attending certain client markets. Agricultural lending is one such case. Again, a qualitative assessment of active credit risk management capabilities requires supervisors who are directly familiar with agricultural lending.

Most developing countries allow banks to determine how loans are allocated across sectors. In some, however, priority groups (small entrepreneurs) and/or priority sectors are subject to prescribed minimum lending requirements (India, Colombia, South Korea, and Venezuela). Lending restrictions at times restrict the extent to which financial institutions can lend to specific sectors. While it can be argued that sectoral diversification is one of the key risk management tools for successful agricultural lenders (cf. Klein *et al.*, 1999); setting fixed percentages by an external regulator seems neither necessary nor opportune. As an example, a 20% portion of the loan portfolio concentrated in loans to producers of one single product only faces considerably higher and covariant default risk, than a 20% portion of agricultural loans to well diversified clients with income from various agricultural products as well as non-agricultural sources. Rather, financial institutions themselves should decide on the extent of their involvement in the agricultural sector. Supervisors of external regulation should rather monitor and evaluate the effectiveness of a particular institution's risk management system.

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In many countries, insider lending or lending to staff members and owners of a financial institution is restricted. This is an important part of limiting the opportunity for fraud and corruption within a financial institution. Also, the loan amount that can be lent to a single client is often restricted to encourage portfolio diversification. Both issues however are not specific to agricultural lending.

Among many nations, banking laws specify a maximum percentage of unsecured loans expressed in traditional bank collateral. If this percentage is exceeded, loans must be fully provisioned. As smaller agricultural loans may well be awarded on the basis of character-assessments and collateral substitutes, this can pose severe restrictions on the extent formal intermediaries can provide these loans. It appears advisable to make adjustments accordingly. This path has been taken for example by the Bolivian authorities, which have recently introduced the expanded term "appropriately guaranteed" for loans, which includes non-traditional collateral.

Provisioning and write-off policies

Provisioning requirements are designed to ensure that the real value of a loan portfolio is reflected in the balance sheet. This implies that an

appropriate part of the loan amount and interest outstanding is written-off when recovery is improbable. While general risks of banking are to be covered by capital adequacy, provisions should cover specific risks of identified potential losses

Apart from individual loan provisioning, many countries require a global provisioning of usually 1-3%, which is supposed to reflect the residual credit risk remaining even for healthy portfolios.

Loan provisioning is usually based on factors such as collateral values, guarantees, repayment track record and days past due. Some regulators have defined different loan categories, with resulting differentiated provisioning requirements. As an example, Table 8 lists provisioning requirements for two of the loan categories relevant for agricultural loans in Bolivia.

The specific provisions for microcredits in Bolivia are based on the consideration that these usually do not involve physical collateral or traditional bank collateral, which can be easily enforced legally. Microcredit decisions are usually based on character, group solidarity or cosigning of guarantors and past repayment history. As case-by-case loan reviews are impractical and too costly for a myriad of small loans, and management discretion should be limited to ensure uniform classification, standardized procedures for portfolio provisioning are proposed (see Berenbach and Churchill, 1997). Such standardized procedures are applied in the previously mentioned Bolivian case¹⁴.

In collateral-based lending it may appear more appropriate to use only the amount of the loan not covered by the collateral as a basis for provisioning. However, in weak legal environments, lack of enforcement possibilities or lengthy legal processes towards collateral realization substantially decrease the actual net present value of collateral pledged. In most developing countries collateral fulfils more an incentive and

¹⁴ For a more in-depth discussion of the Bolivian case see Fiebig (2000). Generally it should be noted that delinquency rates are influenced heavily by the rescheduling policies of financial institutions. If loans become overdue, for example as a result of a bad harvest, and are rescheduled or refinanced quickly, delinquency rates may not reflect underlying default risk.

hostage function than providing a substitute for loan repayment (Hawkins and Turner, 1999).¹⁵

Table 8
Loan Categories in Bolivia

Categories	Definition for "commercial credit"	Definition for microcredit	Provisions (principal)
Categories	Payment in order, repayment capacity for overall loans to all creditor sufficient	Payment late up to 5 days	1%
Normal	Payments late to at least one creditor which affects repayment capacity	Payment late 6-30 days	5%
Potential problems	Financial weaknesses which could influence repayment capacity for loans to creditors	Payment late 31-60 days or reprogrammed loans	20%
Deficient	Difficult financial situation with insufficient cash flow to satisfy creditors in due time	Payment late 61-90 days or loans reprogrammed twice	50%
Questionable Lost	Insolvency of debtor	Payment late more than 90 days or loans reprogrammed more than twice	100%

The category of commercial loans is a residual loan category for all loans that do not fall under the specific categories for e.g. hypothecary credit, consumption credit and microcredit regulations. A commercial loan needs to be re-evaluated every six months according to qualitative risk categories. This category requires substantial documentation of every single loan, which makes it an option if the loan portfolio consists of a large amount of small loans with unconventional collateral.

Source: Circular of Superintendency, SB/291/99, June 1999

¹⁵ It still remains open to further investigation whether lending to groups as opposed to lending to individuals generally requires a differential treatment as regards risk evaluation and provisioning.

For agricultural loans, which usually have longer terms than microcredit and often have lump sum repayment installments, the provisioning according to the days past due of the latest repayment is obviously inappropriate. For example, a two-year loan to a farmer, with a lump sum repayment at the end of the period requires an evaluation before the amount becomes overdue. Also, late payment of loans for agricultural production may well be due to a belated harvest season, an argument urban traders cannot put forward. The default risk in agriculture is not necessarily altered by a few days of lateness. Laxness in agricultural lending is not advocated, but a certain degree of flexibility on the part of the lender is required to deal with the external shocks characteristic of the agricultural sector. As a result, a differential treatment of longer term and production or investment oriented credit as opposed to short term working capital loans should be considered.

Product restrictions

Many countries use restrictions on the range of products offered as a measure to reduce vulnerability of financial institutions. Often, where a specific regulatory framework for small financial intermediaries has been created, these entities cannot mobilize deposits from the public right from the start. Others, such as savings and credit cooperatives are not allowed to mobilize savings from non-members at all or, in some cases, unless they subscribe to central bank supervision.

For agricultural lenders it has to be ensured that a diversity of financial products does not lead to an accumulation of risks. An approach, which limits the exposure of financial institutions to few financial products with a uniform risk profile, appears to be prudent. In the Bolivian example, Private Financial Funds (PFF) are not allowed to offer credit cards or foreign exchange services. Microcredit operations are expected to be higher risk and vulnerable business, with very definite requirements as regards policies and procedures of a Private Financial Fund (PFF).

As part of change notification requirements, offering new products often requires a separate license from the supervisory institution. Requiring detailed and well-founded feasibility studies (including demand estimations) for operating new products appears to be a prudent approach to balance flexibility and diversification of products offered with the addi-

tional risks involved in introducing new and unfamiliar product lines. It can however impose excessive paperwork, which stifles innovation.

Credit information bureaus

Credit information bureaus operate as an information source for lenders' loan appraisal. In many developed countries, the provision of information on the loan portfolio is a regulatory requirement. Often, also a cross-check with this database is prescribed for loan appraisal procedures.

In rural contexts, meagre or inconsistent national identification systems may pose a serious problem to the effectiveness of this regulatory instrument. Borrowers may then easily use different names to avoid documentation of their past repayment behaviour. In addition, if non-formal competitors, such as NGOs, work in the same areas, identification of multiple borrowing becomes difficult. While incorporation of non-regulated institutions appears desirable, the assurance of uniform loan documentation and classification systems as well as the willingness of the non-formal competitors to reveal their full portfolio may represent severe restrictions.

Branching

In many countries, specialized supervisory agencies' approval is necessary prior to opening a new branch. Sometimes hours of operation are also set. The background of these regulations is to establish a competitive level playing field. However, these regulations may prove limiting if branches are required to be opened on a full-time basis, or in any case need to be in a solidly constructed building. Mobile banking units and part-time branches are important tools to decrease the operational costs implied by rural financial intermediation.

The requirement of full branches may increase potential costs to extremes where formal intermediaries find the opening of a new branch not cost-covering in due time. But branching regulations can also be an important part of limiting risks. The requirements of a well-prepared market analysis and feasibility study, specifically on costs may help ensure that branching is carried out on a prudent basis.

Branching regulations may include a restriction to certain geographic areas. For example, the Indonesian and the Philippine Rural Banks are

confined to a municipality or subdistrict. The Municipal Savings Banks in Peru have also long been restricted to operating in one municipality only. Reasons for this are, again, the restriction of competition between institutions of this type and a strong bond to a specific region's population. However, this may severely restrict the opportunities for portfolio diversification and lead to a greater sensitivity to external shocks. Diversified agricultural lending may prove difficult under these circumstances.

The requirements of **internal auditing and risk identification mechanisms** and **staff qualification** will be handled in Section 3.3.

Loan documentation requirements

In many cases, external regulation specifies the documents each loan folder should contain. In agricultural lending, and more generally in rural lending as in microfinance the documentation required often proves excessive and/or irrelevant. In these specific financial businesses, prudent loan decisions are much more oriented at a character based assessment, or they even leave most of the loan decisions to self-selecting joint liability groups. Often, this is a major regulatory challenge for microfinance and rural finance.¹⁶

A specific loan documentation requirement, which may prove difficult for rural financial institutions to meet, is a national identification number for all customers. Rural borrowers may not have this identification, and the application for these numbers may be lengthy, and only available in the far away major cities.

Reporting requirements

Reporting requirements are the foundation for supervision. Usually, these requirements comprise topics and sets of data to be provided on a daily, weekly, monthly or yearly basis. Reports on loan portfolios are often required on a loan by loan basis. For institutions with a high number of small loans in their portfolios, this reporting requirement can be burdensome unless full computerization of loan operations and a direct electronic data connection to the supervisory institution is available.

¹⁶ This issue is not discussed here in extenso, as others have well documented the problems various financial institutions have faced with these circumstance (see e.g. Berenbach and Churchill, 1999).

In rural areas, reporting portfolio status or other data to the supervisory agency on a daily basis is expensive if not impossible. Lack of infrastructure, i.e. roads, telephones and computers on the one hand may make daily reporting difficult. Manual operations additionally increase problems in reporting with high frequency.

There are different ways of tackling this problem. One can be the relaxation of centralized reporting requirements with delegation of data collection to the financial institution itself. External supervisors could then check consolidated data and, on a random on-site basis, the internal reporting to financial institutions' regional offices. Also, reporting requirements may well be tiered according to size of the loan and type of loan, triggering a more detailed reporting of larger loans and loans granted e.g. without traditional collateral.¹⁷

Change notification requirements

Change notification requirements are providing external supervisors with important information on relevant changes in the regulated financial institution. Key areas of notification usually are ownership, governance structure, top management, computer systems and the introduction of new products. Agricultural lenders do not pose specific issues for these requirements.

2.4.3 Protective Regulation

Protective regulation refers to rules and regulations that address post-crisis situations. Protective measures complement preventive measures in order to address potential moral hazard on the part of regulated financial institutions. They comprise deposit insurance schemes, access to a lender of last resort, as well as the formalized process of bank restructuring and reform.

Deposit insurance

Deposit insurance schemes ensure that depositors' claims will still be served once a financial institution has gone bankrupt. This reflects the

¹⁷ In Bolivia, this is a key entry point for donor support of formal rural financial intermediation. As of August 1999, various donors supported the venturing of Private Financial Funds (PFF) into rural areas by providing grants for the computer and telecommunications equipment needed for regular, partly daily reporting to the superintendency.

prime regulatory aim of protecting depositors. Deposit insurance schemes vary in concepts.¹⁸ While specific regulations are often set in the banking law, in most countries, an implicit insurance by government tops up or substitutes for formalized insurance. The schemes can also be run either by a public entity or private insurers. Many insurance schemes do not cover all deposits but rather concentrate on insuring smaller savers. Deposit insurance by cooperative federations often is designed as an “institutional guarantee”, which covers all liabilities of a failing cooperative.

A major problem of deposit insurance schemes is adverse incentives. While they are intended to address the limited capacities of depositors to assess a financial institution’s solvency, an extended coverage of potential losses not only builds confidence, but also provides a disincentive for market control of the financial institution. There is also a danger of adverse incentives for financial institutions. If premiums are not set on a risk-assessment basis, lower risk institution implicitly subsidize high-risk institutions. Financial institutions may be attracted to higher risk activities if assuming high risks does not result in proportionately greater insurance costs and if losses must only be covered partially.

Lender of last resort

If severe liquidity problems occur in a financial institution, which do not reflect a fundamental solvency problem, lenders of last resort step in. The central bank implicitly or explicitly plays this role. Distinguishing financial institutions with liquidity problems from insolvent institutions, however, is a difficult task, which in the case of agricultural lender may coincide with high political pressure to rescue the institution. Also, “too big to fail” considerations of substantial financial market reactions will have to be taken into account. Decision-makers need to balance reasons for institutional guarantees (e.g. the danger of a continuous credit crunch) with the regulatory aim of ensuring a competitive market structure, which implies that inefficient institutions cannot be sustained in the long run.

¹⁸ See Ketcha (1999) and Holway Garcia (1998) for a brief overview.

2.5 EXTERNAL SUPERVISION

The supervision of external regulation is usually entitled to central banks or specialized supervisory agencies. In some countries, specifically designated auditors and consultancy firms carry out all or part of the supervisory workload. From the start it must be clear that in every specific country context, an evaluation of the overall strengths and weaknesses of banking supervision in the context of agricultural finance needs to be performed, before reform action can be taken. It is surprising, that in some cases, the design of and ambitious regulatory reforms does not seem to specifically evaluate the capacities of supervisory institutions.¹⁹

2.5.1 Requirements for an External Supervisor

Supervisors are critical to the effectiveness of regulation. They need to fulfil some basic requirements as shown in Table 9.

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In practice, banking supervisors in developing countries do not fulfil many of these requirements. Out of 20 classified countries in sub-Saharan Africa, only three have been rated for providing a well-designed and effective system with supervisory authority amply supported at the political level (cf. Mehran *et al.*, 1998).

2.5.2 Audits as Information Base for Supervision

“It is premature to discuss bank supervision if audits are not done properly.” (Berenbach and Churchill, 1997)

As a basis for prudential external supervision, appropriate, accurate and timely information on financial status, accounting, internal procedures is needed. Generally, clear accounting rules, enforced by external auditors are likely to make on-site and off-site supervisory work more even-

¹⁹ Vogel *et al.*, (1999) also request further research e.g. in the area of supervisory procedures. The above is reconfirmed by a report by Meagher and Mwiinga (1999), who develop a comprehensive reform concept for banking legislation in Zambia without taking into account supervisory institutions and their qualifications and capacities.

ly applicable and errors and weaknesses more easily identifiable (Mehran *et al.*, 1998).

Table 9

Supervisory agencies should have...

- Capital to asset ratios (CAR)
- Clear objectives and responsibilities
- Good information basis
- Appropriate supervisory tools
- Staff capacity (qualitative and quantitative)
- Sufficient funding (cost-benefits considerations, cost-sharing)
- Operational independence and credibility
- Enforcement/sanctioning power

Typically, accounting standards are not in place or not enforced. The quality of external auditing firms varies a great deal and cost considerations may lead to an erroneous selection of firms by financial institutions. Often, external auditors cannot be held accountable for the quality of their reports. Auditors are liable only to a very limited extent. In addition, the task of auditing small rural financial institutions is often assigned to junior auditing firm staff, as these are not major business partners of the firms.

At the same time, the specific auditing requirements in rural financial institutions differ from traditional bank auditing. From a technical perspective, lending with unconventional collateral “*throws auditing off-balance*” (Jackelen, 1998). Loan portfolio asset evaluation cannot be sufficiently carried out by checking loan documentation, but instead warrants a qualitative assessment of collateral substitutes. Specifically for agricultural loans, off-balance evaluation of asset quality is required, as described above.

External audits can provide important insights into financial institutions, which for supervisors are difficult and costly to obtain. Close contact between supervisors and auditors seems imperative. In some countries, supervisors even have the right to approve or disapprove auditors for banks, in order to ensure experience, resources and skills necessary

on the side of the auditors.²⁰ Changes of auditors may also have to be indicated, and reasons given for to supervisors. Coordination between these appears desirable also in order to decrease the costs of financial institutions themselves in hosting and satisfying information needs of external auditors and external supervisors on a regular basis.

Apart from external auditors, internal audit departments play a major role in providing a secured information base for external supervisors. They are also one of the primary sources for on-site examinations by external supervisors. A qualitative assessment of the effectiveness of these mechanisms, as well as evaluation of the follow-up on problems detected by internal auditors should form part of external supervision.

The Revisoría Fiscal of Colombia provides an example of a mixture of internal and external auditor functions and a direct connection to bank supervision (see Box 5).

The actual quality of external and internal auditing is often limited. Bank examiners in developing countries often have to turn to reviewing auditing first, before a risk-based evaluation and more qualitative assessment can take place. Lack of auditing quality also seriously impedes the quality of off-site data analysis. Increased need for on-site examinations, in turn, increases the costs of supervision.

2.5.3 Supervisory Approaches and Tools

Approaches towards supervision of financial intermediation are currently in a process of change worldwide. As reflected in the recent proposal of the Basle Committee on Banking Supervision (1999) for a new capital adequacy framework, a re-orientation of banking supervision towards qualitative and risk-based assessment of methodologies, technologies and tools applied is underway. Table 10 outlines the aspects of this emerging new view of banking supervision.

²⁰ In Germany, the Federal Bank Supervisory Office uses auditing companies for spot checks in banks. A prerequisite for an auditing company to qualify for spot check audits is that it has not performed the regular audit for the same bank. For cooperative banks, specialized cooperative auditing federations carry out the auditing. They are expected to have in-depth knowledge of the specific features of the German savings and credit cooperatives.

Box 5
An Auditing Zebra: The *Revisoría Fiscal* in Colombia

The *Revisoría Fiscal* is an obligatory external control mechanism of financial institutions in Colombia. The role of the *Revisoría Fiscal* is defined by the Constitution, detailed in the Commercial Law and further related to the financial sector by Law 45 of 1990. It is established as an institution that monitors financial institutions in the interests of their owners.

The *Revisoría Fiscal* is a mixture of an internal and an external auditor. Its work is of a permanent nature and covers all functional areas of the financial institution. It is an independent institution, which informs the Superintendency of Banks on irregularities and works closely together with the internal auditing departments of the banks. It has access to daily correspondence and internal communication and carries out on-site inspections to evaluate the physical infrastructure and the application of procedures. It reviews and signs all documentation presented to the Superintendency of Banks. It also submits a special report to the Board of Administration assessing the reliability of the financial statements.

In summation, the obligatory *Revisoría Fiscal* plays a crucial role in controlling the well-functioning of internal auditing, provides information to owners and the Superintendency of Banks to identify problems at an early stage.

Source: Wisniwski (1999a)

Table 10
Approaches towards supervision

Traditional approach	↔	Modern approach
Static approach (concentration on historical and current data)	↔	Dynamic approach (prospective analysis included), risk-based supervision
Quantitative data analysis	↔	Quantitative and qualitative data analysis
Concentration on off-site supervision	↔	On-site and off-site supervision

Static approach vs. dynamic approach

A static approach towards supervision concentrates on historical and current data provided by the financial institution. A dynamic approach

to supervision additionally includes an assessment of the intermediaries' capability to manage risks currently and in the near future. It includes a prospective analysis. This approach puts special emphasis on staff qualification and experience, mechanisms to identify areas of potentially high risk, and the adequacy of systems and procedures to react to unforeseen events. A dynamic approach also evaluates the opportunity of an intermediary to access liquidity when needed.

A dynamic approach to supervision is especially relevant for agricultural lenders. Agricultural lenders have to monitor the diverse set of specific risks of agricultural lending to be able to foresee and react on up-coming repayment problems, and address management delegation problems in highly decentralized institutional structures in a timely manner. Capabilities of managing risk and specifically managing delinquency of agricultural loans are especially crucial on the credit officer level (see Klein *et al.*, 1999). Thus, an examiner also needs to be able to evaluate on-site the credit officer's capacity to actively manage the default risks involved in agricultural lending.

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Risk-based supervision

A dynamic approach to supervision that focuses on the risk management processes in the institutions, is well-known among bank supervisors as risk-based supervision. Risk-based supervision intends to separately identify the overall risks of financial intermediation. Next, it focuses on the risks most significant to the overall risk of an institution. Risk-based supervision also recognizes that the prime responsibility for risk management lies with the management of a financial institution. It concentrates on evaluating qualitatively how well management identifies, monitors and reacts to changing risk factors.

Section 1.7 identified the specific risk profile of agricultural lenders. Risk-based supervision of agricultural finance should concentrate on these known risk factors and identify the specific risk profile in every single financial institution to be supervised.

Credit risk is one of the major risk areas in agricultural finance. A traditional tool of banking supervision for credit risk assessment is the review of the quality of a sample of individual credits, its evaluation and the comparison of this evaluation to the financial institution's internal

risk assessment (cf. Basle Committee 1999a). Repayment rates and portfolio-at-risk measures based on current repayment performance provide a basis for judging the current status of the loan portfolio. However, while this information is valuable, supervisors that concentrate on a qualitative and prospective evaluation will need to go beyond these figures and evaluate the systems in place and management techniques applied. Examples of appropriate action on the part of senior management include: balance sheet action such as global or individual provisioning, and direct field action such as a closer monitoring of individual performance, repeat visits of delinquent or potentially endangered customers. Due to less frequent repayments, other early warning systems than the time, that repayment is past due need to be installed. Diversification policies, ability to assess external risks of specific agricultural products, the quality of client evaluation and other risk management techniques thus gain specific importance as part of a risk-based approach to supervision.

On-site and off-site analysis

Financial institutions' reports should theoretically, provide the information needed to identify key problem areas to be able to address problems at an early stage. This calls for timely, accurate and regular reports containing substantial information. These reports form the basis for off-site analysis of the status of a financial institution. In reality, off-site supervision of this kind is rare. Lack of standardization in the reports provided, in addition, is topped by the lack of electronic data processing (EDP). EDP can substantially ease the burden of off-site surveillance. Common deficiencies of banking supervision in developing countries concern reporting systems and inadequate or non-existent off-site supervision and/or on-site inspections. Not only do banks lack sufficient insight into the financial situation of borrowers, but supervisors also lack information on the overall financial situation of banks.

In agricultural finance for rural smallholders, as in microfinance, the basic problem of off-site analysis is that the most relevant information is difficult to trace in quantitative data sets. Credit technology, management information systems, systems and procedures, risk and cost management techniques are central to these institutions' success. Thus, the relevance of on-site inspections is substantial.

Regarding the overall status of bank supervision in developing countries (but largely also in developed countries), on-site inspections are often insufficient. Major problem areas include a focus on details of a bank's financial statements instead of a focus on the main items. There is insufficient, inadequate assessment of bank asset quality, a lack of coordination of on-site with off-site supervision and non-existence of appropriate and detailed inspection manuals. Coordination with external auditors seldom takes place. One of the challenges of rural supervision is geographic dispersion and the high requirements for qualitatively assessing the risk management of a rural financial intermediary.

Quantitative and qualitative data analysis

Traditional approaches to bank supervision concentrate on the analysis of quantitative data. This is a convenient and practical tool as it provides highly standardized information, which is easily comparable among institutions and institutional groups. However, the nature of quantitative analysis is basically static. There are numerous sets of quantitative ratios developed within the deliberation of rural financial institutions and microfinance institutions.²¹

Sensitivity analysis is a dynamic tool of supervision. Analysing alternative scenarios of the future development of an agricultural lender, especially taking into account different external shocks and their effects on the overall performance is one of the tools that can provide a dynamic view.

However, quantitative data analysis does not grasp the information needed for prospective risk-based supervision. The capability to manage external shocks can best be measured qualitatively by evaluating systems and procedures, staff qualification, access to liquidity (rating on the financial market, sources of funds) and management information systems. A qualitative assessment of the risk profile of the agricultural lender should put the quantitative data provided for example by portfolio at risk data, past repayment performance and liquidity ratios into perspective of the overall risk categories. To further clarify this point examples of quantitative and qualitative measures referring to the specific risk categories outlined in Chapter 1 are listed in Table 11.

²¹ For detailed discussion and description of relevant financial ratios see among others Yaron (1992), Christen *et al.*, (1994) and Ledgerwood (1999).

Table 11

Examples of measuring risks quantitatively and qualitatively

Risk category	Quantitative measures	Qualitative measures
Credit risk	<ul style="list-style-type: none"> • Repayment performance • Portfolio at risk • Percentage of loans with documentation and collateralization as required • Diversification of portfolio (e.g. loans for different agricultural products, regions) • Others 	<ul style="list-style-type: none"> • Systems and procedures • Policies • Management information systems • Loan tracking systems • Policies towards diversification of portfolio; active management responsive to external factors of agricultural production • Others
Liquidity and interest rate risk	<ul style="list-style-type: none"> • Liquidity ratios (e.g. cash and short term loans per current liabilities) • Others 	<ul style="list-style-type: none"> • Liquidity planning • Rating on financial markets; access to emergency liquidity • Others
Management and operational risk	<ul style="list-style-type: none"> • Ratios supplied by management information system and financial statements, e.g. efficiency indicators • Others 	<ul style="list-style-type: none"> • Vision and strategic planning • Market responsiveness, product development, client orientation • External factors: market development, competition • Staff qualification, incentive systems • Others
Governance risk	<ul style="list-style-type: none"> • Shareholder percentages of capital: national vs. international, natural vs. legal persons etc. • Others 	<ul style="list-style-type: none"> • Owner characteristics • Strength of Board of Directors • Accuracy of accounting • Others

Supervisory tools

Supervisory tools are designed to comprise a set of quantitative indicators and/or qualitative measurements to provide supervisors with a standardized data set from on-site and/or off-site examinations.

As the risk categories to be monitored by risk-based supervision for agricultural finance do not differ from general banking, supervisory tools for agricultural finance do also not differ from tools for other segments of financial markets. The contrast, again, lies in the evaluation of the risk categories and the different quantitative assessments obtained.

This section looks at two prominent supervisory tools, applied for external supervision of small financial entities involved in microfinance activities. The first is the PEARLS system, developed by the World Council of Credit Unions (WOCCU). It is currently used as a mechanism of internal regulation and supervision. The application of this tool for supervisory purposes has been proposed in a few countries, often promoted by WOCCU.

Box 6 WOCCU's PEARLS

Within various projects carried out with savings and credit cooperatives in Latin America, the World Council of Credit Unions has developed a tool for financial analysis of cooperatives. The PEARLS system comprises a variety of quantitative indicators. The maximum version has 41 separate indicators. These are grouped into six key areas: Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity and Signs of growth.

The objectives of the PEARLS monitoring system are to provide an executive management tool in identifying probable causes of institutional shortcomings. Secondly, it is intended to standardize evaluation of ratios and formulas. It also intends to provide an option for comparative rankings with objectivity. The fourth objective is to provide an effective supervisory tool for national federations in evaluating credit union performance. As opposed to the CAMEL rating system, it was primarily designed as a management tool.

Source: Richardson (2000)

While it is a valuable tool for the internal and self-regulation of savings and credit cooperatives and for monitoring improvements in overall performance, the PEARLS system has several flaws affecting its use as a supervisory tool. A basic problem of rating systems is the assignment of an overall rating to institutions, where weaknesses in some areas can be offset by strengths in other areas. This upsets risk-based evaluation, as critical issues can be hidden in subratings. Next, the PEARLS system

only contains quantitative data, without any qualitative assessment. This makes PEARLS a static approach in this terminology. Overall risk management is not evaluated.

Box 7
ACCION's CAMEL

CAMEL is an acronym for five measurements of a financial institution: Capital Adequacy, Asset Quality, Management, Earnings and Liquidity Management. North American bank regulators first created it in 1978 to evaluate financial and managerial soundness of US commercial banks. By 1992, ACCION had developed on the basis of this CAMEL an assessment tool for its affiliate microfinance institutions throughout Latin America. The major purposes of this tool were to provide a measurement mechanisms for management purposes on the part of the affiliate as well as ACCION, and to identify areas for technical assistance. ACCION's CAMEL includes quantitative and qualitative indicators, which add up to an overall rating of the institution.

Source: Saltzmann *et al.*, (1998)

The Bolivian Superintendency recently started developing an adjusted CAMEL tool for the supervision of the Private Financial Funds (PFFs) predominantly involved in urban and partially rural microfinance on the basis of ACCION's adoption. As this involves the distinct perspective of a supervisor, whose interest is assessing risk, and not in identifying areas for technical assistance, substantial restructuring efforts are anticipated.

On the part of ACCION as of 1998, the CAMEL tool already was subject to revision in relevant areas for supervision. These were a) a more prospectively oriented evaluation, b) taking into account competitive environments as well as, c) addressing issues of governance. However, to serve the purpose of a supervisory tool it should also widen its focus more specifically to the requirements of the provision of deposit facilities and analysis of asset quality that includes sectoral considerations. It should take into account that microfinance and agricultural loans may well form only a part of the total portfolio of a financial institution.

2.5.4 Staff Capacity

Adequate supervision needs sufficiently trained and experienced supervisors. Frequently low qualification, inadequate staff training and non-competitive salaries prevail in bank supervision. Bank examiners are often paid on government pay scales, which cannot compete with commercial banks. These offer more money for the same skills and amount of work. Therefore, there is a shortage of qualified personnel. Using computers to generate and analyse bank information can potentially compensate somewhat for a lack of personnel, but MIS needs specialists and appropriate infrastructure. It cannot substitute for supervisors' on-site examinations. On-site examinations are especially crucial for the supervision of agricultural finance institutions.

Box 8
The West African PARMEC law: Limits to supervisory capacity

The West African Monetary Union established a savings and credit cooperative law in 1993 to regulate the many grassroots financial institutions in the region. This *Projet d'Appui à la Réglementation des Mutuelles d'Épargne et de Crédit (PARMEC)* has been ratified by Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal and Togo. In each of the countries, the Ministry of Finance is responsible for the supervision of the institutions covered by the PARMEC law. The West African Central Bank as well as international donors has focused on providing technical assistance, training, short term technical assistance, equipment and funding for the Ministries. They have set up separate units of one to five staff members to supervise these institutions. Still, the sheer volume of work to be done to comply fully with all the supervision responsibilities formulated in the PARMEC law would quickly overwhelm the current capacity of the Ministries. Accordingly, enforcement of the regulations is weakened.

Source: Christen and Rosenberg (2000)

Even if staff qualification is improved, it is not ensured that supervisory quality will increase as well. Staff turnover and reallocation of examiners to other departments of the supervisory agency may affect supervisory quality. The Bolivian banking superintendency's department for non-bank financial institutions has repeatedly experienced rapid staff turnover and reallocation despite repeated donor efforts towards specifically training bank examiners in microfinance issues. Once commercial banks got into trouble, specialized staff was drawn to the more volumi-

nous and thus more important banking section. While allocating supervisory power to the more risky and endangered areas is a prudent decision, it left on-going and preventive supervision of the Bolivian Private Financial Funds (PFF) in a temporary void.

In the area of agricultural lending, with its specific risk profile as described above, discrete agricultural sector knowledge combined with banking experience is required for supervisors (as much as for loan officers). While they should not aim at being better agricultural bankers, they should be able to identify high-risk areas and evaluate the institution's risk management techniques. This is a complex task, which requires real knowledge of the agricultural sector and preferably practical experience in agricultural lending.

It may well be useful to employ former credit officers as supervisors. The requirement of an academic background in agricultural economics and banking may not be sufficient to ensure that supervisors can actually evaluate real-life situations in specific regions. Assessing the risks of an agricultural lender goes beyond pure agronomic analysis and involves the repercussions on the whole range of credit risks, liquidity risks, management risks and other risks outlined.²² In addition, supervision of agricultural lending also requires personnel willing to travel extensively throughout the country for on-site visits in rural areas. This is a serious challenge.

However, external supervisors are often not qualified to do appropriate on-site, qualitative and risk-oriented supervisory examinations. This is a problem which may be addressed by offering specified courses and on-site training organized by bank training institutions, perhaps with government and donor support. If retail capacity in the area of agricultural lending is short, due consideration should be given as to what extent the scarce resource of human resources of a given country should be diverted away from the actual business of agricultural lending.²³

²² This is an experience, which has been stressed for the qualification requirements on the credit officer level for the Salvadorian Financiera Calpiá and the Bolivian Caja Los Andes (cf. Buchenau, 1999).

²³ This chapter remains unsatisfactory in proposing answers to these diverse challenges. In fact, lack of adequate staff may render specialized agricultural finance regulation and supervision impossible to implement. Again, it has to be reiterated that regulation without adequate supervision is a waste of time and resources.

2.5.5 *Costs of Supervision*

Costs of supervision include examiner's staff salaries, staff training costs, administrative costs, off-site database set-up and maintenance costs as well as the costs of on-site visits. As a general rule, supervising rural financial institutions is more costly than supervising urban intermediaries. Costs are also relatively high if small financial entities are being supervised, because supervising these generally is not less resource-intensive than those involved in supervising a big commercial bank. While size matters for on-site examinations, nearly all supervisory costs are fixed. Thus, in a prudential manner, many supervisory institutions with limited funds (and limited capacities) prefer to focus on those financial institutions that form a potentially more dangerous threat to the safety and soundness of the financial system. In addition to size considerations of the institution, an extensive branch network in rural settings also increases costs. Transportation, accommodation and per diem costs of on-site inspections will further augment supervision costs.

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Thus, supervising agricultural lending means cost increases in various relevant categories. On-site supervision is more important in agricultural lending than in traditional commercial bank lending, which implies greater expenses. Also, training costs of examiners are high. For an appropriate risk assessment of agricultural loan portfolios, specific knowledge in the agricultural sector and banking is needed. Finally, supervising agricultural lending and rural intermediaries may prove costly through the diversion of supervisory attendance away from potentially riskier big banks.

Cost-benefit considerations on the side of external supervisors should consider the number of institutions in place that would fall under specific treatment. If only one or two rather small institutions actually fit this category, benefits can be estimated to be rather small. It is important not to mix this argument with considerations on the benefits of enabling financial institutions by regulatory means to carry out innovative lending to agricultural producers.

How can these challenges to rural and small entity supervision be overcome? As mechanisms for effective financial service delivery in rural

areas have been developed with an emphasis on decentralization of decision making and e.g. the introduction of mobile banking units, it follows that supervision could develop cost-reducing mechanisms. In rural contexts, an increased emphasis on ensuring adequate internal information systems to be established to manage the risks of rural financial intermediation and ensuring appropriate information flow also to supervisors, may prove more important than in urban areas. An external supervisor in the city can check compliance with quantitative requirements more frequently.

The primary funding source for external supervisors usually is the government budget, as they are primarily providing public goods. Alternatively, they are completely or partially financed by the institutions that are being supervised. As an example, Arzbach and Durán (1999) points out for most of the countries in Latin America, the savings and credit cooperatives themselves fund all or part of the supervisory costs. These fees may be distributed on a per-institution-basis or on a size-oriented basis. However size does not relate directly to the costs involved, as expenses are not higher for bigger financial institutions. Fees correspond to their capacity to pay supervision costs.

In very small countries, it is an open question whether the additional costs exceed the benefits of creating a specialized supervisory superstructure and specific regulations for the whole financial system.²⁴ This consideration is specifically valid regarding a regulatory framework that comprises differentiated types of financial institutions.

2.5.6 Operational Independence, Credibility and Enforcement

“Known cancers in banking go untreated and spread when bankers see others getting away with bad practices” (Long, 1999)

The key to the effectiveness of regulation and supervision is the opportunity of the supervisor to act upon deviation from the regulations.

²⁴ As Long (1999) has pointed out in this context, three fourths of the world's countries' financial systems comprise less than US\$10 billion in assets, which is the size of a moderately sized regional bank in a developed country.

Banking supervisors usually have a whole set of enforcement mechanisms, which include moral persuasion, fines, calls for change of senior management, or capital injection from owners together with specific regulations regarding the closure of financial institutions.

These instruments, however, can only be put into place if the supervisory entity has the mandate and sufficient independence to act upon its observations. Independence of supervisory entities, however, in many countries still is not in place and interferes with implementation of regulation.

Some of the enforcement instruments usually applied by banking supervision may prove difficult to apply for agricultural lenders. A transitional halt in lending can imply a credit crunch for the agricultural sector in the regions served. An established trust-relationship between clients and financial institution may deteriorate substantially once whole agricultural cycles are not serviced. It may prove very difficult for farmers to substitute their usual production credit from their own resources or other financial sources. On the other hand, in countries where the agricultural sector provides significant national income, political pressures of farmer organizations may render this instrument not, or not easily applicable.²⁵

One of the common complaints about bank supervisors is that they intervene too late in problem banks. This observation has triggered suggestions, that interventions should be guided by rules (Hawkins and Turner, 1999). For example, different levels of capital adequacy ratios trigger supervisory action in some countries. These rule-based intervention methods may be particularly helpful for supervisors operating in an environment of strong political pressure such as in agricultural finance.²⁶

²⁵ An example of governments discriminating between different classes of creditors in case of bankruptcy is provided by Hawkins and Turner (1999). They underline, that when the bankrupt Japanese housing finance companies “*jusen*” were liquidated, banks lost all their loans, while agricultural cooperatives lost only a tenth of their loans.

²⁶ There are, however some drawbacks of such a rule-based approach. Firstly, defining robust intervention rules may be difficult. Regulators may not know that a financial institution has crossed a threshold until long after the event. Also, strong political pressure will not stop at changing these rules for “very special cases” (see also Brownbridge and Kirkpatrick, 2000).

In bank supervision, the term “too big to fail” is used if supervisors decide to act differently if a very large financial institution has problems. For licensed rural financial institutions, this may turn into a “too small to fail” problem. If only few financial institutions are licensed that grant access to financial services to an otherwise neglected target group, political pressure may escalate to keep these important institutions running – somehow. This holds also true for recently licensed institutions, where the licensing supervisor would be blamed for not foreseeing the problems early enough in the licensing phase.

Other sanctioning mechanisms may as well prove difficult to apply for agricultural lenders. Calls for capital increases require potent owners as regards additional capital. Calls for a change in senior management may be hampered by scarcity of staff qualified and experienced in agricultural lending. A related problem may occur once parts of the portfolio need to be transferred to other intermediaries. Agricultural lending technologies are highly dependent on a track record of experience with the customer as well as highly personalized services. These services may prove complicated to transfer to other entities. Technical capacity and experience in agriculture may not be possible to find in other financial institutions.

2.5.7 Delegation of Supervisory Tasks

A proposed alternative to centralized bank supervision has been the delegation of specific supervisory tasks or specific types of financial institutions. These delegated supervisors can be specialized auditing companies, specifically designated consultancy firms as well as member-based second-tier institutions. See Table 12 for a list of potential benefits and challenges.

Some proponents of supervisory delegation have argued that delegation can help reduce the costs of supervision and address the widespread reluctance of banking supervisors to take on smaller financial institutions into their work agenda. However, it remains questionable whether a specialized supervisory agency can really carry out examinations and sanction wrongdoings in a less costly way than can specialized supervisory agencies. There is a particular danger of duplication. Centralized supervision may be able to exploit economies of scale. It may also help

increase consistency in requirements throughout the sector, if supervision is carried out by one institution. Also, the credibility lent to supervised institutions in the eyes of depositors and commercial fund providers may increase, if it is not a separate institution that issues the approval for operations of these institutions.²⁷

Table 12

Potential benefits and challenges of delegated supervision

Potential benefits	Challenges
<ul style="list-style-type: none"> • Payment of supervisors outside civil service conditions • Supervisory process may be more cost-efficient • Higher degree of technical specialization • Diversion of supervisory capacity less likely 	<ul style="list-style-type: none"> • Danger of duplication (extent of delegation) • Total costs may be higher • Delegation of enforcement? (timeliness of action) • Possible conflicts of interest (self-regulatory institutions and external auditors) • Creation of second-class supervised institutions • Governance structure of delegated supervisor needs to be well designed

External auditors are used for on-site banking supervision and for reporting irregularities or internal control weaknesses to the supervisory authority in many countries (e.g. Chile, Mexico, India, Poland, Hungary, Czech Republic and Germany). These assignments usually include reports on whether specific ratios and other requirements have been accurately completed, licensing conditions have been complied with, bank transactions are in accordance to specific laws applicable to banks, and the accounting and/or internal control systems are adequate. (cf. Hawkins and Turner, 1999; Snoek, 1990).

²⁷ Many West-European Cooperative Banks are supervised by delegated supervisory agencies. The German cooperative banks in particular are audited and supervised by their own auditing federations, which act as agents of the Federal Bank Supervisory Authority. Recently the Supervisory Authority has started sending private auditing companies out to verify the information gathered and forwarded by the federations. Discussions have arisen as regards uniform quality and the timeliness of forwarding “bad news” to the Supervisory Authority.

For external auditors, as well as other delegated supervisors the same qualifications and knowledge requirements apply as bank supervisors. Specialized agencies may face less potential of diversion to other supervisory tasks and ensure, by concentrating on one set of institutions, that supervision is carried out consistently and continuously.

A very critical issue in supervisory delegation has been highlighted by the Costa Rican experience with an auxiliary institution carrying out supervision for the Superintendency. Costs of supervision, in this case, were intended to be borne by the superintendency. Lately, this delegation had been halted due to the non-payment of the institution by the state (cf. Arzbach and Durán, 1999). In the discussion of microfinance regulation, proposals have been put forward that microfinance institutions themselves can pay part or all of the costs of their specific supervision. As a public good is provided, full cost-recovery from individual financial institutions may not be appropriate. Also, as supervisory costs usually do not differ by institutional size, bearing the costs may prove prohibitive for smaller financial entities.

Often, civil service conditions of employment in specialized supervisory agencies and central banks are not attractive enough to retain qualified supervisors, sharply limiting the scope for regular and effective on-site examinations. This restriction may be lifted by involving separate institutions that do not fall under this restriction.

As Berenbach and Churchill (1997) have pointed out, with the delegation of the supervision of specific product lines or specialized institutions, the bank supervision entity also loses the opportunity to build up supervisory capacities and an in-depth knowledge of a new line of business. The assessment of the necessity to intervene may thus remain complicated. An alternative could be the combination of centralized supervisory authorities and delegated supervision, with the assignment of very specific tasks to the delegated supervisor. These solutions face challenges of potential duplication of effort, but could help address the questions of limited capacities on the part of banking specialized supervisory agencies.

The most critical issue in delegating supervisory tasks to apex institutions is potential conflicts of interests. Member-based apex institutions

often carry out training and advisory services for their members, and involve themselves in advocacy and promotional duties. Members may chose to stop accessing the apex services and, through the general assembly or seats on the board of the apex, exert pressure to certify compliance with external regulations. Financial apexes specifically face conflicts of interests when they service their clients with concessionary funding, while concurrently carrying out supervisory tasks.

3 Internal Regulation and Supervision

“... The responsibility for risk management rests principally on voluntary regulation through internal governance, rather than on external supervision by regulatory authorities.” (Van Greuning et al., 1998)

Owners are the first line regarding regulation of a financial institution’s action. Owners that have capital at stake have a strong incentive to closely supervise the financial institution. Risk management is implemented by senior management, which acts on the basis of internal information systems and mechanisms ensuring the accuracy, substance and timeliness of these information systems.

Issues of owner control largely depend on the institutional type. NGOs, cooperatives, commercial banks and state development banks have substantially different profiles as owners. Management issues, on the other hand, are determined by the chosen organizational structure of a financial institution. The requirements towards internal control, however, which agricultural lending poses, do not differ across institutional types. Sections 3.1 and 3.2 will cover these issues before mechanisms to connect external with internal regulation to ensure strong owners and internal control are elaborated in Section 3.3.

3.1 ISSUES OF OWNER CONTROL

The type of ownership defines the mission and objective of an organization and sets out the framework for management accountability. Four types of financial institutions may be classified. First, shareholder-based institutions are a very common form of ownership. Second, member-based institutions such as savings and credit cooperatives, credit unions and village banks are owned by the same clients they serve. Third, non governmental organizations have no formal owner. There exists no equity provided by individuals or institutions, which are held responsible in the event of problems. Fourth, government-owned institutions such as post office savings banks and development banks are formally owned by state institutions.

Different owners may have different capacities to monitor a financial institution while different types of institutions' ownership generally trigger different capacities. In the case of NGOs, an ownership-driven mechanism of accountability is lacking, as an owner with a financial stake does not exist. NGOs largely rely on the motivation and reputation of their top management in ensuring mission fulfilment and financial rigour. Board members often cannot provide the adequate oversight as they may lack the necessary financial skills or may pursue social objectives at the expense of financial considerations. Donor involvement often contributes to vague responsibilities and dependence of NGOs.²⁸ As a consequence, very few regulators consider NGOs acceptable for formal financial intermediation including deposit-taking.

Cooperatives, although by concept pure self-help organizations ruled by the clientele they serve, face weaknesses in owner control as well.²⁹ The "one man one vote" rule implicitly poses disincentives for strong owner control, as criticism and monitoring rigor becomes a public good for single members. In addition, the usual practice of withdrawn shares being paid back at nominal value only additionally decreases members' incentives to pressure for the institution's profitability. Consequently, internal control in cooperatives also remains mostly weak. Membership is mainly seen as an access prerequisite for the services offered and not as private investment.

Agricultural development banks with obscure or inactive state owners may follow goals that impede the banks' financial health. However, state ownership does not automatically suggest that owner control determines goals beyond profitability to the degree financial sustainability is impacted adversely. Public development banks such as BAAC Thailand and the BRI Unit Desa system have shown under government ownership that financial institutions can prosper while providing financial services

²⁸ Steege (1998) points out for the case of Finansol Columbia, that "*the bad habit of hiding behind an NGO to avoid playing by the rules [...] kept Finansol from developing operational standards with the required rigor. At the same time, the fact that Finansol did not have to bear its own full operational costs [...] helped to camouflage Finansol's true financial condition.*"

²⁹ The basic concept of cooperatives does not allow for strong donor involvement. In many countries, however, cooperatives have been used as channelling mechanisms for donor and government funding, leading to the goal of membership to access these funds. This situation still prevails in some countries.

to rural lower-income clientele. In both cases, government intrusion has been minimal and apart from operational levels. Subsidized loan programs have been kept in separate operations as in BRI's Unit Desa system or at a manageable size (BAAC).

Shareholder-based commercial banks have private owners with their own capital at stake, which bring in substantial equity investments. They provide the possibility to leverage these equity amounts on financial markets. The capacity and willingness to provide oversight, however, is at times hampered by problems of opportunities for insider lending to shareholders and family-run businesses, that nurture other commercial businesses with access to credit. Private ownership, thus, does not necessarily supply intense owner control. For external regulators and supervisors this implies, that "fit and proper" tests should be extended to shareholders to assess their capacity to monitor the institution's well-being, provide oversight and "keeping on track" services as well as deep pockets in case of need.

In Latin America, the IDB FOMIN fund in addition to the Corporación Andina de Fomento (CAF) are involved in providing subordinated debt as equity strengthening contributions. While these provide significant equity investments which is needed to set up new intermediaries, the criteria of oversight and keeping a financial institution on track face the same obstacles as other donor-owners. Donors generally are not very strong owners. The responsible staff members of donors often change and their attention is drawn to other activities. As their own capital is not at risk, the incentive for rigorous oversight is thus reduced. While donors mostly do have deep pockets for additional funding, the timely emergency access to these resources face challenges of bureaucracy, lengthy application and appraisal procedures.

This may be different for international NGO networks, which have developed a solid reputation for financially sound specialized financial institutions, such as ACCION International or FINCA International. These may have substantial reputation capital at stake, which does not allow them to give up weakened institutions. These networks may even be regarded as particularly strong owners in specific cases.³⁰

³⁰ As examples, see Steege (1998) for an analysis of ACCION's role in the Finansol case, and Fiebig (1999b) for the role of FINCA International in the case of FINCA Uganda.

3.2 ISSUES OF INTERNAL CONTROL

Internal control refers to the whole set of institutional policies and procedures in place to monitor and manage the risks inherent in the financial intermediation process. It includes the outline and implementation of management information systems, internal auditing, fraud detection and adequate enforcement of control. The Basle Committee summarizes the key elements of internal control (see Table 13). In addition, positive control incentives such as staff incentive systems that put more emphasis on an internal framework conducive to the financial well-being and growth of an agricultural lender need to be in place.

Table 13

Elements of internal control

1. Management oversight and control culture
2. Risk recognition and assessment
3. Control activities and segregation of duties
4. Information and communication
5. Monitoring activities and correcting deficiencies

Source: Basle Committee on Banking Supervision (1998)

Management oversight and control culture

Board of Directors should decide on and monitor overall business strategies, organizational structure, policies, and major risks run by the bank. Financial intermediation, and especially intermediation involving agricultural lending does involve risk taking, which boards should recognize and evaluate to define acceptable risk levels as well as risk management policies. Boards should also control senior management and carry ultimate responsibility for the proper functioning of internal control systems.

Senior management, in turn, has the main responsibility for implementing strategies and policies regarding agricultural lending. The board should approve these strategies. It should also develop a valid control

process as well as maintain an organizational structure with clear responsibilities, authority and reporting requirements between organizational levels. In rural intermediaries, the delegation of responsibilities together with the setting of internal off-site and on-site control policies is crucial.

Reform of the internal regulation of development banks has been a particularly challenging part of development bank reform. But also in other institutional types, such as for example NGOs, the change of attitude towards enhanced internal control is often problematic throughout a growth process. While small NGO-type institutions may well survive and prosper without explicit focus on internal regulatory issues, a mid-sized NGO can be severely struck by fraud, lack of management oversight and weak Board control.

To illustrate the importance of a ‘control culture’ within the financial institution, Box 9 presents a list of key institutional changes that led to the success in reform of Bank Rakyat Indonesia’s (BRI) Unit Desa system of rural branch units.

Box 9
Substantial institutional changes that led to BRI Unit Desa’s success

1. Major reorganization of BRI management at all levels from head office to the unit banks
2. High priority accorded at the head office to the management of the unit banking system
3. Extensive reorganization and training of staff throughout the country
4. Establishment of a system of promotion and development of promotion criteria that reflect new expectations for performance
5. Fundamental revision of bookkeeping, audit, and supervision systems, which permitted the establishment of the unit banks as independent profit centre (rather than branch windows) and made accountability and a sustained anticorruption drive possible.
6. Opening of new unit banks and relocation of others to areas with high demand
7. Attention to learning about rural financial markets and emphasis on using this information to avoid potential problems with moral hazard and adverse selection
8. Crucial improvements in communications and computerization facilities
9. Overhaul of BRI’s public relations
10. Implementation of an effective unit bank staff incentive system rewarding good performance.

Source: Robinson (1994)

From this reform agenda, internal regulation issues have been core elements to the turnaround of the BRI Unit Desa system of rural branch units. Besides providing this list, Robinson stresses, even though improvements were still needed and necessary in many of these areas, the new organizational culture and systems have given BRI management an incentive to recognize and take action.

Risk recognition and assessment

Material risks need to be recognized and continually assessed as a basis for an effective internal control system. It should cover all relevant risk categories (e.g. credit, liquidity, operational and management risk). Management information systems in financial institutions involved in agricultural lending should provide the applicable data to manage the client-specific and the external risks of the agricultural sector. Recognition of risks and their assessment needs to involve branch and credit officer levels and cannot stop at headquarter/aggregate data levels. Policies for recognizing risks on-site, i.e. on the credit officer level need to be put in place.

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Control activities and segregation of duties

Systems of checks and balances between different organizational layers form basic control activities and need to be in place. In order to ensure a cross-checking of risk-relevant activities, segregation of duties e.g. in loan appraisal is essential. Control activities should be an integral part of daily business.

Internal auditors need to be operationally independent to carry out their assigned tasks in a prudent manner. While being organizationally independent, they should have the opportunity to obtain on-site and off-site information in the auditing, adequate resources need to be available in terms of staffing, but also e.g. in terms of travelling costs.

Information and communication

As the Basle Committee (1998) points out, “*An effective internal control system requires that there are adequate and comprehensive internal financial, operational and compliance data, as well as external market information about events and conditions that are relevant to decision making. Information should be reliable, timely, accessible, and provided in a consistent format.*”

Information generation and communication of information obtained is a severe problem in rural contexts. Rural infrastructure for information submission is scarce due to lack of telephone lines, electric power, roads and qualified staff. In decentralized institutional structures, management information systems and internal control mechanisms need to be designed taking this into account. Box 10 provides another example from Indonesia.

Box 10
Controlling Decentralized Institutional Structures:
The Bank Rakyat Indonesia (BRI) Unit Desa System

The BRI Unit Desa experience sheds some light on how a highly decentralized system can accomplish with internal control requirements. Firstly, every one of the more than 3 500 units acts as a separate financial entity with their own balance sheets and profit and loss account (profit centre approach). This has instilled accountability and has created responsibility among unit chiefs and staff. Evaluation of Unit Desa performance is based on their profitability rather than on loans disbursed.

As one of the crucial pillars of effective management of this diverse network, BRI Unit Desa has implemented a well-functioning management information system. The principal components of this MIS have been:

- a sound, functional and transparent bookkeeping and accounting system;
- a set of clear performance criteria and indicators, which resemble the major CAMEL criteria; and
- a simple and focused reporting system among management levels.

At the next organizational level, specific sections at BRI branches guide and supervise the 10-15 units in their region. Branch and unit operations are overseen by the regional offices, which also carry out regular internal audits of branches and units. At head office, a separate division for Unit Desa Business monitors performance of units and consolidation reporting from the regions in a national management information system. While in the 1980s, the President Director of BRI had directly overseen this division, today the Managing Director carries out this job.

Source: Maurer (1999)

Monitoring activities and correcting deficiencies

As with external supervision, an integral part of internal regulation and supervision is the timely recognition of deficiencies and immediate remedial action upon discovery. Management information systems that collect all risk relevant data are of little use as long as they are not used as part of proactive management, which should range from fraud detection to the active management of portfolio diversification.

To illustrate lessons on the importance of information generation and reaction on information obtained by senior management, Box 11 describes the example of Finansol Colombia. Finansol has been a fast growing microfinance institution that has faced severe pitfalls throughout its rapid growth process. It only survived its institutional crises due to heavy rescue measures taken by owners and donors (see Steege, 1998).

Box 11
Pitfalls of Institutional Growth – A Lesson From Finansol Colombia

Finansol Colombia, a licensed commercial finance company involved in microcredit provision, had grown to a client base of 65 000 customers and a lending portfolio of about 35 million US\$ by 1995 when it stumbled into a severe institutional crisis. As a consequence, Finansol survived only due to a major refinancing and rescue plan implemented by a group of international donors. One of the major reasons for the breakdown of Finansol performance was its extremely fast and uncontrolled growth process, which posed challenges to Finansol's internal supervisory system, which it addressed insufficiently.

The performance objectives defined for field staff induced risky lending behaviour. Also, rapid geographic extension from urban to suburban and rural markets did not consider the profitability of each of the new markets sufficiently. Feasibility studies for new branches were not sufficient. Aggressive product diversification and marketing to the similar clientele lead to reduced stability of the existing portfolio. Staff recruitment boosted, while the hiring volume exceeded the training, mentoring and supervisory capacity of experienced staff. Early success gave management confidence to rely on quantitative performance indicators only, leaving supervisors unable to track actual credit policies and practices. Changing scope of operations required development of personnel qualification, which did not take place on a broad basis. Too many new and ambitious initiatives were launched without evaluation of costs and benefits. While strong executive leadership created initial charismatic momentum, concentration of powers limited organizational strength during the growth process. Inside (management, owners) and outside (stakeholders, public) communication was rather based on a 'rosy picture' than on transparent performance data provision.

Source: Steege (1998)

While the information provided by management information systems should be directed towards and formatted according to different management levels, internal auditing should also assign discrete responsibilities of action upon discovered problems. It should also set a timeframe for action and ensure reporting of task completion.

Incentive schemes

Positive control incentives should complement the control mechanisms in the form of staff motivational and remuneration incentive systems. Incentive systems for staff are crucial for the well-being of a financial institution. Public development banks may face considerable difficulties in motivating their staff to operate efficiently. Generally, if incentive systems favour lending regardless of projected returns, or the financial institution is acting more like an employment agency than a bank, even a reformed regulatory environment may not change the behaviour of a bank. The behaviour of state-owned banks is particularly difficult to change as compensation is very rarely based on performance.³¹

3.3 CONNECTING INTERNAL REGULATION WITH EXTERNAL REGULATION

“A major issue is whether regulation should proceed through externally imposed prescriptive and detailed rules, or by the regulator creating incentives for appropriate behaviour” (Llewellyn, 1999)

Regarding “strong owners” and internal control there are the following recommendations for connecting internal with external regulation.

Owners

Generally, the structure of a private shareholding company appears to be the most appropriate institutional form for extensive outreach and financial profitability of agricultural lenders. Regulators and supervisors are recommended to apply the same criteria to owners to ensure “strong ownership” no matter what the legal status may be of the owners. These should include a) bringing in substantial equity investments as funding source, b) providing the possibility to leverage these amounts through access to other funding, c) providing intensive oversight and the service of keeping the institution on track, d) providing additional capital in case of need and emergency (deep pockets).

³¹ For an introduction into various staff incentive systems see Churchill (1999).

In countries such as Uganda and Kenya, ownership needs to be at least partially national. While interests may prevail to keep part of the ownership within the respective country, a prudent approach from the supervisor's point of view does not allow for a general distinction of national and international owners considering their efficiency in ensuring appropriate internal regulation.

As a means to connect external regulation to internal regulation, Caprio (1997) emphasizes the need to put low limits on owner liability, introduce high capital requirements and reform existing deposit insurance systems to put more capital of owners at risk. This, he assumes, will increase motivation of owners to control a financial institution: *“Aligning incentives for bank owners and managers to promote prudent risktaking would lift the excessive burden placed on bank supervisors to guarantee safe banking. If owners have more at stake in terms of their reputation, deposits, personal assets, or future expected profits, they can be expected to take greater measures to safeguard their bank.”* This can be used as a general guideline for designing regulatory requirements for owners of financial institutions.

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Internal control

Though the board of directors and senior management bear ultimate responsibility for internal control systems, supervisory agencies should assess the appropriateness of the internal control systems as a key element of their on-site inspections. External regulation can and should demand and connect to effective internal control systems. As the Basle Committee on Banking Supervision puts it: *“Supervisors should require that all banks, regardless of size, have an effective system of internal controls that is consistent with the nature, complexity, and risk inherent in their on-balance-sheet and off-balance-sheet activities and that responds to changes in the bank’s environment and conditions. [...]”* (1998)

Acknowledging the prime role of management and owners in managing the various risks faced by the financial institution results in external control mechanisms emphasizing the well-functioning of these internal mechanisms. Supervisors should especially attend to high-risk areas of internal regulation and the systems in place to control these. Potential high-risk areas include new personnel, new information systems,

areas/activities experiencing rapid growth, new technology, along with new products and activities. In agricultural lending, a well-developed management information system needs to accommodate agricultural sector developments as well as portfolio diversification on the portfolio level and on the client level. Qualitative external supervision will evaluate the internal mechanisms in place to monitor and control the risks involved in the agricultural lending business, as much as those of other lines of business.

Internal auditing

External supervisors should also focus on the quality and scope of internal auditing. As an example, Indonesia has introduced a general requirement for a separate internal audit unit in every financial institution that reports directly to the Board of Directors. Requiring an independently working internal auditing department that operates outside the influence of the management of a financial institution can efficiently support internal control.

In many countries, external regulation requires a risk evaluation and portfolio classification unit, which is independent from the loan department. Separating the operational lending and follow-up process from the classification process is intended to limit the scope for “evergreening” not reflected in the portfolio reports of a financial institution.³² The underlying concept resembles internal auditing departments, but has a much more limited scope on loan portfolio quality.

Staff qualification requirements

Requiring extensive and specialized qualification in banking is a common feature of regulatory requirements throughout the world. For top management, a “fit and proper” requirement for general managers is designed to provide strong and qualified bank leadership. These requirements are sometimes also extended to board members of banks. For example in the Indonesian rural banks, at least half of the board members are required to have more than one year of practical experience in a commercial bank. For the rural banks of the Philippines, as shown in Box 12, a more complex set of requirements is being set.

³² The term “evergreening” refers to the process of hiding potential losses by giving out new loans that refinance the repayment of the past due payments of previous loans to the same loanee.

Box 12
Stockholding, Age, Training and Residency:
Qualification Requirements in The Philippines

A director of a rural bank must be a Filipino citizen who holds at least one voting stock in a rural bank. He/she has to be at least 25 years of age and be a college graduate or have at least five years experience in business or have undergone training in banking provided by the Central Bank. The requirements for officers are similar, except that the minimum age is 21 and the majority of the key executive officers of the rural bank must be residents of the municipality where the rural bank is operating.

Source: Wehnert (1999)

One of the problems of requiring a satisfactory degree of qualification and experience in the area of banking, specifically serving the market segments an intermediary has selected to target, is the scarcity of formalized bank training in many developing countries. Authentic certificates of rural, micro or even agricultural banking seldom exist, which make an evaluation of financial institutions' staff qualification more difficult for external supervisors. Possibly, external regulation could establish an affiliation to training institutes of bankers providing certification for banking and specialized banking qualifications.

4 Self-Regulation and Self-Supervision

Self-regulation has a long history for savings and credit cooperatives all over the world. It refers to the self-bonding of a group of financial institutions to definite rules and regulations (Section 4.1). The most common form of self-regulation is the contracting of an agency by a group of financial institutions to evaluate the compliance of the group of institutions with self-set rules and regulations (Section 4.2). Generally, self-regulation is a form of self-bonding to rules to certify to owners, funding sources and clients the safety and soundness of an institution.

4.1 SETTING INDUSTRY STANDARDS

The overall aim in setting industry standards is the provision of uniform information to commercial fund providers, donors, depositors, and owners. Industry standards can also include target values of key performance indicators, which set a benchmark against which a financial industry measures its own performance.

A drawback of setting industry standards, as with other self-regulatory measures is the general absence of strong enforcement mechanisms. As opposed to pure self-regulation, other regulatory sources may provide the incentive to conform. This may be a commercial fund provider, who recognizes the standards as indicators for the financial health of financial institutions, or at least find the information given trustworthy and useful for their investment decisions. The regulatory source may as well be donors that require the fulfilment of a custom reporting format or set of information. However, the standards developed can no longer be considered self-regulatory measures, but rather are to be subsumed under regulation by market forces (see Chapter 5).

Important examples of setting industry standards are the PEARLS rating system developed by the World Council of Credit Unions (WOCCU), which comprises six different areas of self-assessment, which summarized in one overall rating (see Richardson, 2000). The tool is designed and is being used for self-assessment and signalling to fund providers. In certain instances, by publishing the results of the rating publicly, it is also used to build trust with depositors.

Another example of self-regulation through industry standards is provided by the Microbanking Bulletin published semi-annually by the Calmeadow Foundation, which assembles the supplied data from a diverse set of microfinance institutions, computes ratios and presents these data for comparison purposes to similar peer groups (*Microbanking Bulletin*, 2000). While these compilations do provide valuable management tools from a regulatory perspective, they remain weak due to a lack of qualitative assessments and prospective evaluations.

4.2 SELF-SUPERVISION

Once an agency is contracted by intermediaries in order to monitor compliance with self-set rules and regulations, the term self-supervision applies. This form of delegated internal control may complement internal auditing and connect to external auditors. It can provide a basis for management decisions as part of internal control and especially make available accurate and timely information on the status of a financial institution to owners and depositors.

Membership in such schemes is voluntary. Thus, the entity that supervises these self-set rules lacks legal backing and compliance enforcement. Enforcement is a cross-cutting weakness of self-regulatory approaches. In the end, it remains up to the financial institution whether it wants to comply with set rules or not on a case-by-case basis. The example of a cooperative agency in Honduras, as outlined in Box 13, highlights some of the key problems of self-supervision.

As supervisory powers are handed over on a contractual basis, enforcement powers usually remain rather weak. As denoted earlier, this is complemented by potential conflicts of interests for the self-supervisory agency. Derived from the experience of savings and credit cooperatives in developing countries, the overall empirical record is negative. As Christen and Rosenberg (2000) put it, “*in poor countries, self-supervision of financial intermediaries has been tried dozens of times and has consistently proven to be ineffective*”.

Box 13
Cooperative Self-Regulation in Honduras: The Case of IPCA

The *Inspectoría y Protectoría de Cooperativas de Ahorro y Crédito de Honduras* (IPCA) is a self-regulatory body which oversees 46 of the approximately 105 savings and credit cooperatives in Honduras since 1998. It is a member-based institution, which exists apart from the cooperative federation in order to offer "prudential inspections service of private character". However, large parts of the current capital stem from a terminated USAID/WOCCU Project of cooperative strengthening, and most of the members had not paid up their required equity shares to IPCA as of April 1999.

While IPCA has gained supervisory authority by delegation from the registrar, it is not in a position to directly intervene in the cooperatives following audits. Instead, the only enforcement mechanism of recommendations is moral persuasion and forwarding the information acquired to the boards of the cooperatives. In the end, enforcement relies on the decision of the owners of the cooperatives. Even though IPCA by statute is entitled to liquidate and merge cooperatives, in practice this seems unfeasible, as cooperatives would rather leave IPCA than let itself be liquidated or merged.

The fee structure for the audits is depressed in favour of the cooperatives to attract new members. IPCA's activities are mainly funded from a seed capital injection from the USAID/WOCCU project. In addition, IPCA pay the member cooperatives a 10% interest per annum on their equity shares to maintain real value. IPCA in turn receives a small fee from member cooperatives, which does not cover costs. It is intentionally kept low to attract additional members. Overall, it appears questionable whether full cost-coverage can be achieved and whether the incentives for IPCA are defined in a way to adhere to objectives.

Source: Fiebig (1999a)

4.3 FROM SELF-REGULATION AND SELF-SUPERVISION TO DELEGATED SUPERVISION

In some cases, self-regulatory mechanisms are considered to be the predecessor of delegated supervision. The Microfinance Regulatory Council of South Africa (MFRC) and AIRAC of the Dominican Republic both have started as industry associations that defined performance standards. They now evolved into delegated supervisors with financial functions that enable them to set positive and negative incentives for compliance. These incentives include better terms or services or termination of funding. (see Valenzuela and Young, 1999).

The most critical issues for self-regulation evolving into delegated supervision are the governance structure of the supervisor. For member-based institutions, possible conflicts of interest exist in acting as delegated supervisors. Especially if the institutions to be supervised are the owners or quasi-owners of the delegated supervisor, prompt and strict corrective sanctioning may not evolve. If a transformation for example of a second tier cooperative institution is intended, a change of governance structure to ensure neutrality, independence and sanctioning potential is essential. The case of IPCA Honduras presented above provides a representative example of this problem. Self-regulatory institutions will need to satisfy all the standards laid out for delegated supervision in Section 2.5.7.

5 Regulation and Supervision by Funding Sources

Funding sources have a large impact on governance and performance of financial institutions. This chapter refers to this source of regulation. It is a diverse set of regulation sources with all those powers and incentives stemming from the liability side of a financial institution except equity covered in internal regulation. Earlier in this series, costs, risks and impacts of various funding sources have been analysed in detail (cf. Gehler, 1999). Here the regulatory forces exerted by different fund providers is highlighted.

Generally, funding sources can be divided into those provided at commercial terms and those provided at concessionary terms. Concessions can be made for diverse characteristics of the funds, e.g. interest, but also for terms, repayment structures and collateralization. The chapter will first concentrate on funding sources that in most cases provide funds at concessionary terms (governments, donors and financial apexes), before turning to commercial fund providers and to the subgroup of depositors. But before analysing the explicit characteristics of these, common requirements for funding of the first three regulation sources will be examined. Finally, there will be a look at opportunities for connecting funding sources' regulatory effects with external regulation.

5.1 INDUSTRY STANDARDS REQUIRED BY FUNDING AND RATING AGENCIES

Usually, donors, apexes, and commercial fund providers, but also depositors require a minimum standard of performance from financial institutions with which they entrust their money. Standardized information provided to the public forms the basis for this investment decision, complemented with specific assessments and evaluation efforts carried out by donors, apexes and commercial fund providers, mostly on-site. The standardized information format can be decided upon and required by external regulation. It can be enforced by owners, result from a self-regulatory mechanism, but it can also be directly requested and required by donors, apexes and commercial sources of funds.

Initiatives to develop standard performance indicators and industry standards as regards benchmarks abound within the microfinance discussion. Examples are the minimum reporting formats established in 1996 by the Donor's Working Group followed by the detailed assessment tool for microfinance institutions developed and published by CGAP.³³ Use of these standards, however, is still rather slight.

Rating agencies may provide an assurance that the developed standards are applied, and can possibly put a quality seal on the figures and qualitative information provided. The contracting of rating agencies by owners is a comprehensive issue of self-regulation and regulation by market forces. Owners of financial institutions can use these ratings in order to assess performance of the institution and expressly of the management in place. It can also be a tool for management staff, complementary to internal control and management information systems. In most of the cases, however, it is a tool of fund providers to assess the creditworthiness of a financial institution.

Box 14 offers an example of a rating agency of the Private Sector Initiatives Corp., which puts a seal of approval under the data provided.

5.2 GOVERNMENTS AND DONORS

Governments

Many agricultural development banks almost exclusively rely on concessionary public funds. Even when government representatives are not on the board of directors, this usually implies a high degree of intervention opportunities in the financial institution's management.

The degree of distortion can vary. Sometimes large-scale government funds may provide little distorting incentives to an intermediary. As an example, some financial institutions might be chosen to act as a clearing centre for governments to pay salaries and pensions to civil servants. Institutions with a widespread network of branches in rural areas may be especially interesting partners for governments. Such transfer pay-

³³ See Donor's Working Group (1995), CGAP (1999).

Box 14
MicroRate : A Rating Agency for Microfinance Institutions

MicroRate is a credit rating agency that specializes in microfinance, which is based in Washington DC and, since 1997 has evaluated 24 MFIs in Latin America. As accelerated growth of successful Latin American MFIs is expected to create bottlenecks in funding, access to domestic and international capital markets has been identified as being a crucial issue for their future development. MicroRate aims at providing up-to-date and reliable information to these potential fund providers as a basis for funding decisions.

The MicroRate evaluations take place at least once a year, with semi-annual data updates. They provide a detailed analysis of operational performance, including an evaluation of lending operations, portfolio quality, organizational issues (such as management information systems and internal controls), financial position (adjusted for possible subsidies) as well as the market environment. On a summary sheet, major strengths, risk factor, summary data on the loan portfolio and overall performance, operational efficiency, asset quality and sources of funding are provided.

Currently, the ratings are predominantly used by the MFIs themselves as a means of self-assessment and quality control. In addition, donors have started using them as a basis for funding decisions. As commercial funding sources are still scarce, MicroRate is currently financed primarily from donor sources.

Source: Von Stauffenberg (1999)

ment functions however do not deliver funds for on-lending purposes, as they provide only illusory liquidity as long as part of the transferred amount is kept with the intermediary (Wisniwski, 1999b).³⁴

Donors

While extensive efforts have been made to develop uniform reporting standards, sets of indicators and ratios including benchmarks, donors still use a wide diversity of reporting formats and requirements. Satisfying dissimilar formats for reporting to different donors can become a significant cost and expertise issue for financial institutions.

At the same time, earmarking of funds for the provision of types of services (e.g. group loans) to a very precisely defined target group (e.g. potato growers in a specific region) may prove infeasible for the client-orientation of the financial institution and for its mid-term sustainability. Klein *et al.*, (1999) have identified portfolio diversification for agri-

³⁴ Monthly reports to external supervisors timed at month-end sometimes overestimate the liquidity position of an intermediary.

cultural products and variance of income sources as one of the major lending strategies to cope with critical agricultural risks. Efforts to apply this risk management strategy may be obstructed by restrictive targeting.

The Philippine Microfinance Standards initiative (Box 15) shows how donors supported the development of industry standards.

Many donors and governments promote a graduation of microfinance institutions into commercial financial markets. One of the proposed instruments for achieving this goal has been apex institutions. Other options include venture capital funds, stand-by letters of credit from prime international financial institutions and other guarantee mechanisms. Donors implementing these strategies are acknowledging the vigorous regulation forces that exposure to commercial financing develops in financial institutions.

Many donors may use external auditing firms to check the fulfilment of their requirements on a regular basis. Currently however, many donors view the necessity to include audits into their project agreements as a side issue rather than as a powerful tool of exerting regulatory control on their partners (cf. CGAP 1999). The establishment of uniform accounting and auditing standards and active reference of donors to these in a given country may lead to more clarity for all regulatory sources involved and may help attract more commercial funding.

Apex financial institutions are an attractive option for placing donor as well as government funds. These are expected to select and finance successful and robust financial institutions.

5.3 WHOLESALE FINANCIAL INSTITUTIONS

“... The accomplishment of efficient and sustainable microfinance retailing capacity is usually promoted when private investors, commercial lenders, and/or depositors become holder of the MFO’s [microfinance organization, M.F.] liabilities. [...] This positive effect may be dampened by access to funds from an apex organization in terms softer than those of commercial funds [...].” (Gonzalez-Vega, 1998)

Box 15
The Philippine Microfinance Standards for NGO's

The Philippine Microfinance Standards initiative is a USAID funded project which encompasses microfinance institutions, donors and other local supporters in a Microfinance Coalition. It has developed performance standards for microfinance NGOs in the Philippines, which were launched in 1998. The Coalition does not have any mandate to enforce the use of the standards. A number of leading NGOs in the Microfinance Coalition have adopted the standards due to Board decisions for self-assessment as well as to provide information to donors.

Financial apexes such as the People's Credit and Finance Corporation and CARE Philippines use the standards as an evaluation tool for loan fund applicant NGOs. The Asian Development Bank also advocates the use of the performance standards in their member countries for long term financing applications. Apart from these first applications, the Coalition expects usage of the standards to become more prevalent among financial institutions together with fund providers once donor funds for microfinance become more rare than they are currently in the Philippines.

Source: Garcia (1999)

Apex institutions provide one or more of a range of services to financial institutions, from the wholesaling of loanable funds; disbursement of grants and subsidies on behalf of donors and government; operation of loan guarantee facilities; supply of guarantees for financial institutions raising funds in capital markets; institution-building support in the form of technical assistance and/or training of the staff of financial institutions; provision of services and inputs for financial institutions; generation of public goods (e.g. lobbying, forum for information exchange) to a role in the prudential regulation and supervision of financial institutions (Gonzalez-Vega, 1998). Because of the variety of services offered by apexes, it is difficult to clearly identify their regulatory impact on financial institutions.

Apexes that combine different functions and types of services offered are likely to also provide mixed and contradicting incentives to the institutions. Conflicts of interests are likely to occur between promotional roles, such as advocacy, technical assistance and grant provision and financial roles, such as the provision of guarantees and funding sources. Funding decisions based on a perspective of promoting agricultural lending may incur intensive and costly investment monitoring, which puts more emphasis on the provision of credit to a selected clientele than

on profitability. Especially once donor funds are involved as funding sources for the financial apex, disbursement pressures may additionally provide an incentive to lower the standards for access to financing. Apex institutions, which provide subsidized funding to agricultural lenders, are likely to have crowding out effects for deposit mobilization and the accessing of other commercial funds by agricultural lenders.

When analysing the backgrounds of expressed desire of financial institutions to become part of the external regulatory framework in a specific country, it is important to bear in mind, that hidden agendas may exist. In some countries, the prime motivation for non-conventional financial institutions such as NGOs or savings and credit cooperatives to become regulated and supervised entities, may be access to financial apexes and government credit lines. For Central American countries, this has been recently emphasized as the prime motivation for becoming a licensed institution (FOLADE, 1999). The desire stems from restrictions of financial apexes to work with non-regulated financial entities. It remains questionable whether this interest can be sufficient to prompt the costly endeavour of external regulation and supervision.

Box 16 provides an example from Bolivia, where the overall framework of the financial sector has contributed to a widescale movement of NGOs to become regulated entities.

5.4 COMMERCIAL FUND PROVIDERS

Commercial fund providers use the most powerful enforcement mechanism, which may have a domino effect on other commercial fund providers once one of the providers pulls out. This is the enforcement mechanism of withdrawing or cutting off access to new funds. However, the degree of utilization of this mechanism differs between socially motivated commercial funding (e.g. social investment funds) and purely profit-oriented commercial funding. Measured according to the effectiveness of regulatory force there are strong fund providers (commercial sources, depositors, good apexes) and weak/possibly distorting ones (donors, governments, bad apexes).

Box 16

Wholesale Financial Institutions and the Rush to Become Regulated in Bolivia

Since the beginning of 1999, the role of the wholesale financial institution institutions FONDESIF (Fondo de Desarrollo del Sistema Financiero) and NAFIBO (Nacional Financiera Boliviana) has been defined by a decree. These two institutions are now the only second tier institutions that channel funds from government and donors to the financial sector. NAFIBO is confined to work with regulated institutions only, and FONDESIF is allowed to finance the portfolio of non-regulated institutions one time before the hypothetical transformation into a regulated institution. The prime institutions to turn to for funding today are NAFIBO and FONDESIF. This provides a potent incentive for providers of microcredit to convert into the form of a Private Financial Fund.

As Navajas and Schreiner (1998) put it, “the irony is that while supervision enables an organization to take deposits [...], the link between supervision and open access to cheap funds from an apex may relieve an MFO [microfinance organization, M.F.] from the need to push itself to make the effort to vigorously attract deposits in the market.” At the same time, while the regulations imposed by the Superintendency allow for deposit-taking, many of the institutions do not plan or at least do not place strong emphasis on attracting depositors as major future funding source.

Sources: Fiebig (1999b), Navajas and Schreiner (1998)

External regulation may be called for to ease the process of obtaining information necessary for investment decisions. However, the prime consideration for external regulation is the protection of small deposits. Commercial fund providers usually are expected to evaluate their own investment opportunities. Many commercial fund providers and apex finance institutions require a formal status of the financial institution to be financed. This is a means to ensure to some extent, that an external regulator and some sort of supervision are in place that ensures safety of the investment.

Quasi-private commercial fund providers are those, who are searching for viable investment options while maintaining a social mission to their investments. Examples in the world of microfinance in Latin America are ACCION's Bridge Fund (guarantees) and Gateway Fund (equity investments). Both funds require a very detailed information, most of which is gained through a personal on-site visit. While guarantee funds will specifically focus on an institution's relations to local commercial banks, an equity fund will put importance on projected performance

and perspectives to investor participation in strategic decision-making.³⁵

Generally, depositors' inability to intensely monitor the performance of the financial institution they entrust their savings with is the most important trigger for external regulation. However, capacity to supervise differs across depositors, as larger, possibly institutional depositors may well be in a position to be well informed. Generally, public disclosure of audited, certified financial information is an important tool to enable depositors to make savings decisions on the basis of secured information. Accurate external audits together with disclosure requirements constitute a necessary condition for strong depositor control.

Likewise, rating agencies may be used to provide depositors with more detailed information. One recent example of this concept is the Guatemalan plans to introduce a specialized rating agency for selected savings and credit cooperatives. See Box 17.

5.5 RELATIONS BETWEEN MARKET AND EXTERNAL REGULATION AND SUPERVISION

As with internal regulation, external regulators can use the incentive effects of certain funding sources to assure that proper control of the business conduct of agricultural lenders is in place. Information disclosure plays a vital role in connecting regulation by funding sources with external regulation. Public information disclosure can help market actors support their decisions to provide funds to financial institutions on solid information. Regular publication of key performance data, balance sheets and financial statements form a good basis. While many countries provide updated performance information of financial institutions, a number of nations still do not even review balance sheets of commercial banks required to be published. Transparency requirements can enhance commercial market forces' roles in the intermediary and thereby also lighten the workload of external supervisors. Rating agen-

³⁵ Saltzmann *et al.*, (1998) stress, that while ACCION's CAMEL instrument does provide useful information for investment decisions of ACCION's fund managers, it lacks the specific in-depth assessments needed in the context of equity investments.

cies may form an additional tool to provide this transparency, though experiences remain limited in a developing country context.

Also, in the ongoing external supervision, emphasis should be put on evaluating the extent and the form, in which funding sources affect a financial institution's business conduct. External supervision should monitor and analyse the different funding sources of an agricultural lender for liquidity implications, interest rate sensitivity, impact on the financial institution's governance, its profitability as well as consequences of possible concentration on only a few funding sources. Potential access to funding sources in cases of liquidity crunches is a key aspect of liquidity risk analysis and needs to take into account the institutions' rating on the relevant financial markets.

Box 17
The Guatemalan Rating System Project

The federation of savings and credit cooperatives (FENACOAC) in Guatemala today comprises 39 out of 130 existing cooperatives. These are the institutions that have opted for a WOCCU/USAID project in 1987, and today comply with most of the PEARLS system indicators. Out of these, 13 cooperatives have been selected to participate in a regulatory experiment. These will be regularly assessed by an independent rating agency. An adoption of the PEARLS system is expected to provide the off-site information, and regular on-site examination with a specific focus on the loan portfolio will complement this. Contractual agreements between the rating agency and the cooperatives will include a range of sanctioning mechanisms.

The key information that will be provided to the depositors of the savings and credit cooperatives will either be a seal/no seal, or a more differentiated rating. This is hoped to provide a soundness signal to depositors, which so far demand an additional "insecurity" premium of 2 percent on deposit rates as compared to banks' rates.

Source: CGAP Investment Proposal

6 Findings: A Regulatory and Supervisory Perspective on Agricultural Finance

This study has shown, that the question of whether the provision of financial services to rural farm households requires specific regulatory and supervisory structure to prosper is not easy to resolve. A comprehensive analytical framework has been introduced that embraces all possible forms of regulation and supervision. The focus is on the role of external, state-rule based regulation and supervision, the effects of internal and self-regulation as well as regulation by funding sources. When considering adjustments necessary from either approach it is necessary to take into account the others.

Which one of the regulatory sources defined is the most important one for facilitation of financial services to farmers? The primary source of influence on financial institutions' action are owners and management. Only if owners and managers are willing and capable of venturing into agricultural finance will it take place continuously. This recommendation assumes only market-oriented financial institutions will be in the position to provide financial services from credit, savings, insurance and payment systems to the rural farmers. Government can provide incentives to support agricultural finance, but should not be involved in the actual provision of loans, as has been the case via development banks in a variety of countries in the past.³⁶

Clearly the role of government through prudential regulation and supervision is to provide a fair and competitive marketplace framework. Nothing more and nothing less is required. This means that specifications and adjustments of regulatory and supervisory requirements should not go further than ensuring that different client groups in different sectors are only treated differently once they have a different risk and cost profile for financial service provision.

Regulators should ensure a competitive level playing field in rural areas. Specific regulations, which impede agricultural lending to rural smallholders, should be modified to reduce undue discrimination. This study stressed several regulations, which often are the source of actual discrimination against agricultural lending. This refers to loan collateral

³⁶ Efficient and effective development banks remain the exception from the rule, such as for example (after substantial reform efforts) BAAC Thailand or BRI Unit Desa, Indonesia.

requirements, which cannot be met by farmers, strict provisioning requirements for “non-collateralized loans” and very strict and rule-based systems for the provisioning of possibly longer-term agricultural loans. Branching regulations and reporting requirements also need to be adjusted so that they do not overburden rural financial institutions with costs. Every additional regulatory rule implies costs for financial institutions. Rural finance is already a costly endeavour.

External regulation, however, should also not be more lenient with agricultural finance than with other sectors. All too often, when inadequacy of regulatory regimes is claimed, a relaxation to allow for financial flows to move to the agricultural sector is sought. Instead, it is proposed to require a higher capital coverage for agricultural loan portfolios than other loan types. The capital adequacy ratio for these parts of the portfolio should be set substantially above the Basle Committee’s recommended 8%. Liquidity management requirements also need to take into account seasonal and covariant risks in rural financial intermediation. Guidelines should also be stricter.

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Agricultural finance is a risky and expensive business. However, the problem does not lie with the unchangeable risks and costs which can be avoided by not providing access to rural smallholders, but with the accurate *management* of the risks and costs. External supervision should accordingly zero in on the appropriateness of risk management systems within rural financial institutions. This implies a strong emphasis on qualitative, and not only quantitative measures. It also implies a focus on forward-looking, rather difficult to standardize assessment tools. It also implies a stronger role of on-site supervision for agricultural finance providers. Recent discussants have summarized the overall adjustment requirements for bank supervision in general banking as a risk-based approach to supervision. Examples of the adjustments of supervisory tools necessary have been presented in this text. So far implementation of such approaches has occurred in only a few countries worldwide.

A risk-based approach to supervision again implies high supervisory costs on the part of the supervisory institution. Not only are large portions of on-going supervisory costs fixed, but moreover the geographic isolation of rural branches contributes to higher costs for appropriate supervision. Requirements referring to control of strong internal control systems may help lower these costs.

Apart from costs, supervisory capacity is a major issue in many developing countries. It is clear, that a sophisticated supervisory system for agricultural finance will not work within a politically dependent, technically inadequate bank supervision system. In many countries, there is substantial scope for donor and government support to help tackle this problem.

Delegation of supervisory tasks is sometimes proposed as an alternative to heal supervisory capacity and cost problems. However, it is often questionable whether these arrangements provide better technical adequacy of supervision, and whether the delegation process introduces additional control costs on the part of the delegating institution.

Self-regulation can complement external regulation and supervision. As self-regulation per definition refers to self-imposed rules, conflicts of interest on the part of the self-supervisory institution are likely to prevail. Especially once deposit-taking from non-members/owners of financial institutions is involved, self-regulation cannot suffice.

Regulation and supervision by funding providers is a difficult issue in agricultural finance. Concessionary fund providers, such as governments and donors tend to have good intentions with funding agricultural loan portfolios or the expansion of savings services to remote rural areas. Long-term, they may provide disincentives for the building of sustainable financial institutions. It is advised to use subsidy resources to increase the management capacity of rural financial institutions rather than to fund agricultural loans.

Commercial fund providers, such as savers often fear institutions that invest substantial parts of their depositors' money in the agricultural sector. Agricultural lending is perceived as a high risk, high cost endeavour. Transparency, which is created by ensuring adequate internal and external auditing and additional information disclosure requirements, will support the establishment of trust between the saver and rural financial institution.

The circle closes with the adjustments or specific requirements needed for internal regulation and supervision. The study has emphasized that appropriate risk and cost recognition forms the basis for prudent risk and cost management in agricultural finance. Technical capacity and

decision-making based on economic and agronomic evaluations of agricultural loans needs to be bolstered. Owners of financial institutions need to balance possible social objectives with profit objectives. They also need to be in a position to be adequately informed about what risks, costs and liquidity challenges are involved in rural finance.

External regulation and supervision can support the well-functioning of these internal control mechanisms by requiring information disclosure, evaluating owners and managers qualitatively and prescribing appropriate internal control measures to be taken. Ensuring that only “healthy” rural financial institutions enter the market in the first place remains a major challenge for external regulation.³⁷

Table 14 provides a generic overview of the roles and the interplay of different regulatory and supervisory levels in a complex reform agenda.

Opportunity costs will have to be reviewed when determining what institutions merit primary attention within the design of a reform process. Donor and government coordination in this policy field becomes, as in many other fields, a fundamental prerequisite for a successful reform program.

³⁷ It is important to reiterate that this recommendation refers to deposit taking financial institutions, which mobilize savings from non-member/owners and supercede a certain minimum size only.

Table 14

Framework for the interplay of the different regulatory and supervisory levels

Key Players	Responsibility in Risk Management	Importance on the Policy Level	Importance on the Operational level
External Regulation and Supervision			
Legal and Regulatory Authorities	Set optimised framework	Critical	None
Bank Supervisors	Monitor	Indirect (monitoring)	Indirect
Internal Regulation and Supervision			
Shareholders	Appoint key players	Indirect	Indirect
Board of Directors	Set policy	Critical	Indirect
Executive Management	Implement policy	Critical (implementation)	Critical
Internal Auditor	Test compliance	Indirect (compliance)	Critical
External Auditors	Evaluate and express opinion	Indirect (evaluation)	Indirect
Self-regulation and supervision			
Self-supervisory institution	Set policy framework Monitor compliance	Indirect	Indirect

External regulation and supervision

External regulation acts by legislative power. Usually involves specialized public institutions, such as central banks, superintendencies and courts, as external supervisors to ensure that the norms set are followed by the financial institutions.

Internal regulation and supervision

Internal regulation is a set of rules established by the owners of a financial institution. Internal supervision is carried out by the owners themselves, delegated to specialized boards, internal auditors and other entities within the organizational set-up of a financial institution.

Prudential regulation and supervision

The process of structuring of financial institutions' actions according to a set of rules and norms that ensures the protection of depositors' money, a safe and sound financial system and a competitive financial market structure.

Regulation

A specific set of rules that structures actions of market participants according to certain principles. Regulation requires the existence of an enforcement mechanism.

Regulation by funding sources

The diverse funding sources impose certain requirements on financial institutions. Owners, as one of the sources of funds impose rules that are referred to as internal regulation. The rules, to which a financial institution voluntarily subscribes in order to gain access to funding, are referred to as regulation by funding sources. Sources either monitor compliance themselves or delegate part or all of the supervisory work to other supervisory institutions.

Regulator/Regulatory institution

A regulatory institution sets regulatory rules for financial institutions. Typical regulators are governments, ministries, central banks, bank superintendencies; but are also owners, boards of directors, commercial and subsidized fund providers, as well as self-regulatory bodies.

Self-regulation and -supervision

Self-regulation refers to rules set voluntarily by financial institutions themselves. The decision to commit the institution to the fulfilment of these rules is taken either by the owners or by top-management. Self-regulation can also be called delegated internal regulation, as the primary source of regulation remains with the owners. Self-supervision is carried out by institutions outside the organizational set-up of a financial institution in order to ensure the fulfilment of the self-set rules.

Supervision

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The process of collecting data, analysing the data and acting upon the analytical outcomes of the data in order to ensure the application of regulation.

Supervisor/Supervisory institution

A supervisory institution is entitled by the regulator to carry out the process of supervision of the set rules.

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