4 Bank models & prudential requirements

4.1 Learning outcomes

After studying this text the learner should / should be able to:

- Elucidate the models of banking.
- Expound on the rationale, objectives and principles of regulation.
- Discuss the particulars of banking prudential requirements.

4.2 Introduction

The previous section covered risk in banking. The prudential requirements (capital, liquid assets, cash reserves, large exposures, etc.) for banks are founded on risk. There are different models or styles of banking, and each has a particular risk profile. Where there is no *de jure* differentiation between banks with different risk profiles, the prudential requirements are the same. Where *de jure* differentiation exists, the prudential requirements differ.

This section first covers the prudential requirements, but this section is preceded by a discussion on the rationale, objectives and principles of regulation. This in turn is preceded by the banking models. Thus, this section is arranged as follows:

- Bank models.
- Rationale, objectives and principles of regulation.
- Prudential requirements.

4.3 Bank models

4.3.1 Introduction

The purpose of this section is to shed some light on the banking specialisations that exist. It should be kept in mind that few banks specialise in only one area. The banking specialisations are as follows:

- Commercial banks.
- Mutual banks / building societies.
- Merchant and investment banks.
- Trading banks.
- Private banks.
- Islamic banks.
- Development banks.
- Micro-credit banks.
- Co-operative banks.
- Dedicated banks.
- Discount houses.

4.3.2 Commercial banks

Commercial banks are the "norm" banks. The name originates in the group of banks that were members of the clearing house system, i.e. the banks which brought into being the payments system, and organised interbank payments amongst them (via the central bank, which is part of the payments system). They were also the only banks that offered current / cheque account banking. This group endures to this day, although cheque payments are being replaced by EFTs (such as internet banking). It must be added that banks which are not members of the clearing system are also able to offer EFTs.

Commercial banks are also called high street banks. They are the banks that provide all services the public associates with banking, such as ATM withdrawals / deposits, cheque / current and accounts, other deposit accounts, overdraft facilities, mortgage advances, leasing, instalment credit advances, and so on. Examples are HSBC, Barclays, Royal Bank of Scotland, UBS. The products of these banks are confusing to the public. In essence, these banks:

- Take deposits and loans (interbank) = liabilities.
- Make loans (MD and NMD) (and hold shares to a small degree) and hold central bank money (N&C and reserves).
- In the case of MD, they make markets, and hold MD portfolios for this purpose and for opportunistic profits.
- Make markets in, and hold for this purpose and for opportunistic profits, foreign exchange.
- Make markets in, and hold for this purpose and for opportunistic profits, derivative contracts.
- Organise, and make possible, payments (cheques, ETFs).

These are the "norm" banks, in the sense that the banking statute, the main thrust of which is the prudential requirements (capital, liquid assets, reserves, concentration of loans, etc.), are directed at them. As we will see, there are other banks that specialise in certain areas of mainstream banking; the prudential requirements apply equally to them. Then there are specialised banks, and they have dissimilar prudential requirements.

4.3.3 Mutual banks / building societies

Mutual banks / building societies are distinguished from the "norm" banks in that the holders of particular long-term deposits, which are called *shares*, are their ultimate owners. As opposed to ordinary shares that may be listed, mutual banks/ building societies issue the following types of "shares", all of which are interest bearing:

- Indefinite period shares.
- Fixed period shares (usually longer than 5 years).
- Permanent interest-bearing shares.

As mutual banks generally are transmutes of building societies, they, like building societies, tend do little business other than mortgage loans. Apart from mortgage business, and the issuing (selling) of the "shares" referred to above, the mutual banks / building societies also offer savings, medium-term and long-term deposit facilities.

4.3.4 Merchant and investment banks

Merchant banking is the old name for the investment banking genre. The old name is still in use, but only because of entrenched branding. Investment banking is essentially the provision of certain banking and other services (especially services that involve the wholesale financial markets) aimed at the corporate and government sectors. The following services usually are associated with investment banking in the US:

- Advising (on financing needs, funding mechanism, team of institutions, etc.).
- Administration (in connection with issuing securities such as legal documents).
- Underwriting (agreement to take up un-issued securities at a specified price).
- Distribution (placement of securities with investors).

In other countries investment banking is associated with the abovementioned, plus other services that include:

- Securities broking and dealing.
- Commodities broking and dealing.
- Foreign exchange broking and dealing.
- Derivatives broking and dealing.
- Portfolio management.

Some of these functions are conducted through subsidiaries or are fellow subsidiaries of the bank under the umbrella of a bank holding company. As noted, the main clients of investment banks are the corporate sector and the government sector.

Investments banks are usually subject to the same requirements as the "norm" banks, but in some countries the capital requirement entry level is lower.

4.3.5 Trading banks

There are certain banks that prefer to operate in only a limited part of the business of investment banking, i.e. trading in the financial markets. They tend to operate solely in the following areas:

- Securities broking and trading.
- Commodities broking and trading.
- Derivatives broking and trading.

4.3.6 Private banks

Private banking is a term used for the banks that focus on providing services to high net worth individuals (which private banks refer to as private clients). Examples in the UK are Hoare & Co (the only surviving private banker still owned by the same family), Coutts Bank and Martins Bank (which started business in the 17th century as goldsmith-bankers). Each client of a private bank is assigned a private banker.

The following services are usually associated with private banking:

- A cheque account with generous overdraft facilities.
- Other generous loan facilities such as a mortgage advance at a prime rate.
- Foreign exchange services.
- Onshore portfolio management services.
- Offshore portfolio management services.
- Stock broking.

Most of the business done with a private bank is by telephone conversation (which is recorded to protect both parties), and by electronic banking. Cheque books and forex are generally hand-delivered to the client.

Private banks are normal banks in respect of prudential requirements.

4.3.7 Islamic banks

Islamic banking is predicated on Islamic law (Shariah) principles derived from Scripture and Traditions. Any venture forbidden in the Sacred Law applies to bank transactions. In essence, Islamic law prohibits usury, i.e. the collection and payment of interest (commonly called Lariba – no interest).

Islamic law also prohibits investing in businesses that are considered unlawful or Haraam (businesses that sell alcohol or pork, engage in gambling, or media businesses that engage in pornography or scandal). There are a number of specialised Islamic banks in many countries that service this banking need. Islamic banks, or Islamic banking divisions of ordinary banks, are required to establish a Shariah Board, comprised mainly of Islamic clergy and scholars, to advise them on Shariah principles.

An example: if LCC 10 000 is borrowed from an Islamic bank, the borrower need only pay LCC 10 000 to the bank, plus a service fee, which will be the costs the bank incurred to acquire and lend the cash. No unrelated amount may be imposed on the borrower. Some banks in Muslim countries use the euphemism "service charges" for the interest charged on their loans to circumvent laws prohibiting usury.

Islamic Law permits the trade in assets, and some Islamic banks focus on this area of business. For example, if an individual wants to buy a motor vehicle from a dealer, s/he will inform a bank that provides such a service. The bank will purchase the vehicle from the dealer and sell it to the purchaser who repays for the loan in set monthly instalments until the debt is settled. The instalment includes a predetermined mark-up, which includes a service fee.

Those in agreement with lending on the basis of an explicit mark-up being set state that the mark-up reimburses the bank to an extent commensurate with the risk it undertakes. However, there are many Muslims who contend that this type of lending is contrary to the principles of Islamic law.

Like any bank, an Islamic bank can accept deposits. This money is then invested in permitted ventures such as the purchase of property from which rental income can be derived. The depositor benefits (loses) proportionately from a positive (negative) rate of return on the principal invested; thus it is known as shared risk-and-reward banking. Any amount spent by the bank on the protection and administration of deposits can be retrieved from the depositor through the imposition of service fees.

Islamic banks are normal banks in respect of prudential requirements.

4.3.8 Development banks

Most developing countries have development banks. They are owned by government and are usually brought into being by separate statute. The statute spells out the activities of the bank, the ministry responsible for its oversight, etc. The capital of development banks is voted by Parliament, and when new funds are required the bond market is accessed.

Most development banks are focused on specific areas such as agriculture, local authorities and industry.

4.3.9 Micro-credit banks

Micro-credit banking is the lending by specialist banks of small amounts of funds to small entrepreneurs for the purpose of the purchase of tools (for the production of goods), raw materials (to be beneficiated or used for the production of other goods) or goods for resale. The world's best example of successful micro-credit banking is Grameen Bank of Bangladesh. Grameen Bank[37] describes its *underlying premise* as follows:

“The underlying premise of Grameen is that, in order to emerge from poverty and remove themselves from the clutches of usurers and middlemen, landless peasants need access to credit, without which they cannot be expected to launch their own enterprises, however small these may be. In defiance of the traditional rural banking postulate whereby “no collateral (in this case, land) means no credit”, the Grameen Bank experiment set out to prove – successfully – that lending to the poor is not an impossible proposition; on the contrary, it gives landless peasants the opportunity to purchase their own tools, equipment, or other necessary means of production and embark on income-generating ventures which will allow them escape from the vicious cycle of “low income, low savings, low investment, low income”. In other words, the banker’s confidence rests upon the will and capacity of the borrowers to succeed in their undertakings.”

Grameen Bank describes its *mode of operation* as follows:

“A bank branch is set up with a branch manager and a number of centre managers and covers an area of about 15 to 22 villages. The manager and the workers start by visiting villages to familiarise themselves with the local milieu in which they will be operating and identify the prospective clientele, as well as explain the purpose, the functions, and the mode of operation of the bank to the local population. Groups of five prospective borrowers are formed; in the first stage, only two of them are eligible for, and receive, a loan. The group is observed for a month to see if the members are conforming to the rules of the bank. Only if the first two borrowers begin to repay the principal plus interest over a period of six weeks, do the other members of the group become eligible themselves for a loan. Because of these restrictions, there is substantial group pressure to keep individual records clear. In this sense, the collective responsibility of the group serves as the collateral on the loan.”

As regards loan size, purpose of the loans, the rate of interest charged, and the repayment rate, and the source of funds, Grameen Bank reports:

“Loans are small, but sufficient to finance the micro-enterprises undertaken by borrowers: rice-husking, machine repairing, purchase of rickshaws, buying of milk cows, goats, cloth, pottery etc. The interest rate on all loans is 16 percent. The repayment rate on loans is currently – 95 per cent – due to group pressure and self-interest, as well as the motivation of borrowers.”

As these banks are usually agencies of government departments, their capital is provided by the relevant department. In cases where the bank is formed under its own statute the capital is voted by Parliament, and when new funds are required the bond market is accessed. In some cases these banks take deposits.

4.3.10 Co-operative banks

In some developing countries there exists a bank-type institution, the village financial service co-operative. It goes by another name, rural bank, in other countries. As the name suggests, these banks are geographic-specific, and small-scale, financial services intermediaries. They are usually member-owned and -controlled co-operatives that provide basic financial services (mainly savings, loans and funds transmission) to members in rural areas not serviced by the mainstream banks.

Another type of co-operative bank is the savings and credit co-operative (SACCO). SACCOs are also known as *credit unions* in some countries. In a nutshell they are owned and governed by members who have the same common bond: working for the same employer, belonging to the same church, social fraternity or living/working in the same community. They are not-for-profit organisations, but maintain high prudential standards set down by the World Council of Credit Unions (WOCCU).

In some countries the co-operative type banks are formalised under a statute, such as the Co-operative Banks Act in South Africa. In South Africa there are two types of formalised co-operative banks: *savings co-operative banks* and *savings and loans co-operative banks.*

The prudential requirements for these banks are the same as for mainstream banks, but the entry level capital requirement is substantially lower.

4.3.11 Dedicated banks

Dedicated banking is a new banking genre (not yet tested in the world but considered in regulation circles) and includes two types of banking intermediaries:

- Core banks
- Narrow banks.

Core banks are those that will specialise in a particular field of banking such as cell phone banking. Narrow banks are those that will take deposits from the public and the funds will be invested in certain restricted, and marketable, securities such as government bonds and treasury bills. As such regulation will be minimal.

In a particular country, a Dedicated Banks Bill has been introduced (not yet promulgated) which provides for the creation of the legislative environment for two dedicated banks to be called:

- Savings banks.
- Savings and loans banks.

The Bill states that a *savings bank* may:

- …accept deposits from the general public;
- make payments on behalf of a client thereof, provided the client has a credit balance in an account with the bank that is sufficient to cover such payments;
- provide trust or custody services to clients;
- open a savings account on behalf of a depositor into which the depositor may deposit money and from which the depositor may withdraw or transfer money.

The Bill also states that the savings bank may only invest money deposited with it in liquid assets (treasury bills and short-term government bonds in the main).

As regards the savings and loans banks, the Bill states that they may conduct the business of a savings bank, and may make loans to individuals and businesses under certain conditions (including concentration and terms of loans).

4.3.12 Discount houses

Discount houses had their genesis in the UK in the 18th century as bill brokers (in trade bills, which later became bankers' acceptances, and treasury bills). They later took on call deposits from banks to fund holdings of these assets and made markets in them.

They emerged in developing countries (first in South Africa in 1961, next Rhodesia / Zimbabwe, Malawi, Zambia, etc.) with unsophisticated financial systems where the banks were enjoying wide margins, which constrained economic development. This situation is usually of concern to governments and to central banks for a number of reasons:

- It reflects a uncompetitive banking environment (in fact banks favour inefficient markets because of the opportunities for profit).
- There is no (or limited) secondary market in securities.
- Both these inhibit the implementation of monetary policy (discount rate cannot be effectively applied and open market operations are difficult to implement).
- Funding by government is not easy and this is reflected in rates that are higher than otherwise would be the case.
- Capital for the productive sector is expensive.
- Foreign investment is not forthcoming.

Thus, discount houses were actively encouraged in the 20th century to assist in the development of developing countries' financial systems. The essence of a discount house is as follows.

- A discount house is registered as a *banking institution* (banks and discount houses are regarded as *banking institutions*).
- The Registrar of Banks and the central bank, which requires of them to submit a statement of assets and liabilities on a daily basis, regulate the discount houses.
- Their liabilities are limited to call money from the banks, and certain government departments, and their assets are pledged as collateral for the money (this differs in countries).
- The assets of the discount houses are categorised in terms of term to maturity and limits placed on these categories and sub-categories. For example, there would be no limit on liquid assets, and a 10% limit on securities of longer than 3 years. Within the 90% category there may also be a limit on the holding of bankers' acceptances.
- The discount houses earn a margin between the rate paid for call money from banks and the rates earned on securities held in portfolio.
- The discount houses actively trade their portfolios and act as market makers in these securities, i.e. quote firm buying rates for securities offered and securities in portfolio which are in demand. In this way they make trading profits.
- The discount houses are instrumental in assisting the creation of instruments other than treasury bills (examples are: bankers' acceptances, commercial paper, repurchase agreements and NCDs.

Discount houses usually have unique prudential requirements:

- No cash reserve requirement (motivation being that *they do not create credit*; they merely hold and trade in credit instruments already issued).
- A reasonable level of borrowings in relation to its capital and reserves. In South Africa it was: (call money + borrowings) / (capital and reserves) < or = to 50.
- Limits on non-liquid assets, for example, 80% short term liquid asset paper and 20% long term paper (government bonds and other non-liquid assets). This requirement essentially is a liquid asset requirement.

An interesting aspect of discount houses is that they, in the process of creating markets and building the financial system, bring about their own demise over time. Because they shrink bank margins, they shrink their own, and are obliged, in order to survive, to intrude on normal banking business. This does not enthral the banks, making them complain bitterly to the authorities, and eventually the authorities encourage the discount houses to transmute into banks. This happened or is happening in most of the countries that had / has these unique institutions.

4.4 Rationale, objectives & principles of regulation[38]

4.4.1 Introduction

There are four elements to regulation:

- Institution of rules of conduct (or rules for operation).
- Monitoring (observance of whether the rules instituted are obeyed).
- Supervision (observance of the behaviour of participants).
- Enforcement (ensuring that the rules are adhered to).

Regulation has a profound effect on the operation of the financial markets and its development, and it has to be adjusted frequently as developments in the financial sector take place (i.e. it must be efficient). However, to remain in step with innovation in the financial system is no mean task, because the business of the financial sector is innovation, and this applies particularly in banking which is at the very centre of the financial markets. New instruments are created frequently. For this and other reasons the regulatory authorities have to get the regulated "on board", i.e. involved in the regulation process, on the basis that the regulation of this sector is in the interests of the participants. Another important dimension of regulation is that it must be cost-effective. These and other issues pertaining to regulation are covered in this section under the following headings:

- Rationale for regulation.
- Objectives of regulation.
- Principles of regulation.

4.4.2 Rationale for regulation

4.4.2.1 Introduction

The financial sector plays a pivotal role in the economy in that in its absence or partial failure the economic machine will be severely damaged. Imagine if the payments system failed or the banks are closed for extended periods (such as occurred in Argentina in 2001/2 – where segments of the economy were reduced to barter trade). The financial sector is also a major employer and is a major attractor of foreign exchange if soundly managed. This sector also carries the responsibility of allocating capital to the most productive uses.

The main rationale for government intervention is "market malfunction" which means that the financial system will produce a sub-optimal outcome in the absence of regulation. Thus, government intervention has welfare benefits. The consumer and the participants want regulation and are even prepared to pay for it.

The "rationale" for regulation amounts to "why regulation is necessary" There are a number of reasons:

- Systemic malfunction.
- Market imperfections.
- The moral hazard problem.
- Economies of scale.
- Consumer confidence and consumer demand for regulation.
- Supplier demand for regulation.

4.4.2.2 Systemic malfunction

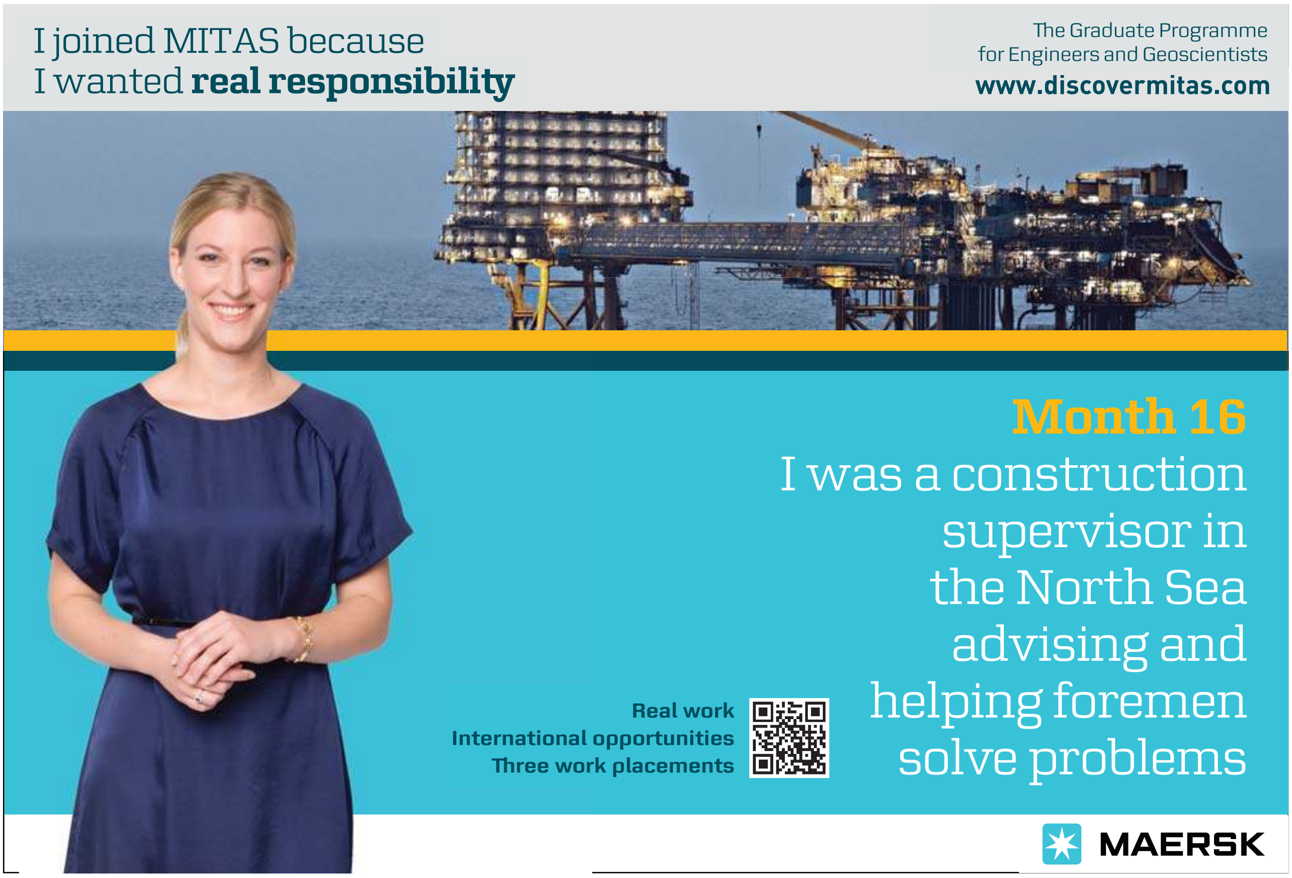
As we have mentioned, the financial *system* plays a vital role in the economy, and failure or malfunction of the system can disrupt economic activity severely. Banks are the only financial intermediaries that intermediate between all sectors of the economy (household, corporate, government and foreign) and all the other financial intermediaries. In addition, the banking system provides the payments and clearing systems for all transactions that take place in the economy. The failure of a major bank not only causes losses for depositors and shareholders, but also disrupts payments and the settlement of previously effected transactions immediately and possibly for some time.

Within the financial sector there are major differences between intermediaries in terms of systemic issues. The banks are the prime focus in this regard because of the reasons: the payments system, the size of banks in relation to other financial intermediaries (the largest repository of financial wealth in the economy), the possibility of bank runs, and the fact that there are few large banks. The failure of one unit trust, for example, will not disrupt the functioning of the economy.

4.4.2.3 Market imperfections

If the market were perfect in terms of competition, there would be no cause for intervention by the authorities. Perfect competition does not exist, and the consequence is that there are market imperfections. There are many examples of market imperfections that stand in the way of consumer protection:

- Problems of asymmetric information. This means that some persons have information that is denied to other persons or some persons supply information that is ambiguous or incorrect to other persons.
- Inadequate information on the part of the consumer of financial products and services.
- Consumers are not equally equipped to gauge the quality of bank products.
- Consumers are not able to assess the safety and soundness of financial intermediaries and agents in the financial system.
- Principal-agent problems. The directors and managers act as *agents* for the investors and shareholders of a financial intermediary (i.e. the *principals*). However, the agents may pursue their own interests at the expense of the principals. The best example is that the managers and directors may have a performance bonus scheme that encourages them to take risks in the financial markets.



4.4.2.4 The moral hazard problem

The moral hazard problem in banking is associated with government preference for the introduction of safety net arrangements such as lender of last resort facilities and deposit insurance. The most potentially hazardous is the latter. Deposit insurance creates a condition that the event insured against (losing the deposit) is more likely to occur.

4.4.2.5 Economies of scale

Users of financial products (e.g. deposits) ideally should monitor the behaviour and soundness of financial intermediaries and markets. However, this is a laborious and costly task in terms of time involved. Essentially, the regulatory authorities undertake this task on behalf of the users. Rating agencies also play a role in this regard, but the cost of the reports of the rating agency is expensive for the proverbial man in the street.

4.4.2.6 Consumer confidence and consumer demand for regulation

The role of regulation is also to set minimum standards for products in order that consumers gain confidence in the system. The mere existence of inferior products may tarnish the good products. Consumer demand for regulation is rational for the following reasons:

- Lower transactions costs.
- Consumers have a lack of information and even if they had information they lack the ability to use the information.
- Consumers require a degree of assurance in their transactions with financial intermediaries.
- They may have had a bad experience with a bank in the past.
- The value of a long-term contract (e.g. a 3-year deposit) may be affected by the behaviour of the intermediary during the period of the deposit.

4.4.2.7 Supplier demand for regulation

It is in the interests of the suppliers of financial products to demand regulation. The motivation is that ill-behaved intermediaries may affect the business of well-behaved intermediaries. In some countries the ratio of notes in circulation to total money stock is significantly higher than in other countries, despite the existence of well-managed intermediaries. Clearly this means that the consumer keeps his/her wealth in bank notes under the proverbial mattress as opposed to bank deposits (and foregoes a return).

4.4.3 Objectives of regulation

4.4.3.1 Introduction

The ultimate objectives of regulation need to be narrowly defined:

- Promotion of financial stability.
- Promotion of fair and healthy competition.
- Promotion of consumer protection.

The first two objectives may be rolled together under the heading "high degree of economic efficiency"

4.4.3.2 Promotion of financial stability

"Financial stability" is usually seen as having two elements, i.e. *price stability* and *stable conditions in the financial system*. A central bank defines these two elements as follows[39]:

> *"Price stability is achieved when changes in the general price level do not materially affect the economic decision-making processes. Although relative price movements will still have an impact on production, consumption, saving and investment, the rate of inflation or deflation would be so low that it would no longer be an important factor in economic decision making."*

> *"Stable conditions in the financial sector are achieved when there is a high degree of confidence that the financial institutions and financial markets are able to meet contractual obligations without interruption or recourse to outside assistance. Such stable conditions do not preclude the failure of individual financial institutions. A financial institution can fail and be allowed to fail even under stable financial conditions. It is only when the whole, or an important part, of the financial sector is at risk, that the situation can be described as financially unstable."*

These two elements of financial stability are interrelated. It will be evident that financial regulation pertains to the second element, i.e. stability of the financial sector (or "promotion of financial stability", as the heading of this section states). This objective may be split into two categories:

- Systemic stability.
- Institutional safety and soundness.

Systemic stability means that the financial *system* is not compromised in any way, i.e. that the financial system is not subjected to shocks caused by the participants themselves through reckless trading, poor market infrastructure and inefficient clearing and settlement systems, lack of market liquidity, inefficient payments system and ineffective security delivery system (the latter is also called "delivery versus payment").

Institutional safety and soundness is closely related to the aforementioned and means that the authorities have to ensure that the intermediaries that make up the financial system are profitable, have sufficient capital to cover risk exposures, are competitive internationally, and are driven by "fit and proper" management and directors. Promotion of i*nstitutional safety and soundness* also means that the regulator should not impose regulatory hurdles that would impair their safety.

4.4.3.3 Promotion of fair and healthy competition

A major objective of the regulator is the promotion of fair and healthy competition in the financial system. This ensures competitiveness internationally, and fair pricing for the consumers of financial products. Healthy competition and fair pricing also aids in the efficient allocation of financial capital.

Another important dimension here is the effectiveness of monetary policy. Monetary policy can only be effective in an environment of intense competition amongst financial intermediaries, and this applies particularly to the banks.

4.4.3.4 Promotion of consumer protection

A crucial objective of the regulator is to protect the consumer against the failure of intermediaries and against fraud. Fraud may take many forms, such as manipulation of share prices, concealment of crucial information from the investor / depositor, the sale of inappropriate policies (just to "earn" the commission), insider trading, and the misuse or plain stealing of the investor's funds. With the exception of the latter, these methods of fraud are possible because of the problem of "asymmetric information".

The job of the regulatory authorities in this regard is to promote integrity, transparency and disclosure of information of participants' firms and products. For this reason much emphasis is placed on the integrity of directors and managers of suppliers of financial products, as well as the agents for these products. Proper education of the suppliers and consumers is part of the job of the regulator.

4.4.4 Principles of regulation

4.4.4.1 Introduction

The principles of regulation are the principles that need to be applied when formulating regulatory policies, specific regulatory requirements and the structure of the regulatory institutions. They are derived from the objectives and may be categorised as follows:

- Efficiency-related principles.
- Stability-related principles.
- Conflict-conciliatory principles (to address conflicts between objectives).
- Regulatory-structure principles.
- General principles.

4.4.4.2 Efficiency-related principles

The principles that reside under this heading advance the achievement of a high level of *efficiency* in financial services, and there are two:

- Promotion of a high level of competition amongst financial system participants. Examples:
  - the removal of restrictive practices that impair trading in financial assets,
  - low barriers of entry to the financial markets,
  - freedom of choice regarding financial services.

- Creating competitive neutrality between existing and potential supplies of financial services ("level playing field").

4.4.4.3 Stability-related principles

Stability-related principles are those that contribute to the promotion of stability in the financial system and the safety of financial intermediaries and institutions. They are:

- Incentives for the prudent assessment and management of risk. This requires the imposition of minimum prudential standards to be observed by participants, of which the capital requirement is the most important. Appropriate information systems are required. Cross-market risk management is also essential.
- Use of regulatory requirements that are based on market values. The viability of an institution can only be gauged with the use of market values of balance sheet items as opposed to historic values.
- A willingness of the regulators to take timely action to redress existing and future developments that threaten the stability of financial institutions and markets. By this is meant that the regulators should take appropriate action whenever actual or potential market deficiencies are detected.

4.4.4.4 Conflict-conciliatory principles

Conflict-conciliatory principles are designed to address potential conflicts between regulatory principles. These principles involve:

- Following an integrated approach, aiming at the simultaneous achievement of the objectives of regulation.
- Pursuing a target-instrument procedure, whereby the regulatory instruments are selected and applied in such a way that they facilitate the implementation of the integrated approach.

The target-instrument procedure means that the instruments of regulation used to achieve particular targets simultaneously neutralise the negative effects of other instruments.

4.4.4.5 Regulatory-structure principles

An unsolved debate in regulation circles is whether there should be a single regulator or a number of specialist regulators. This is a debate that is particularly relevant as the financial system becomes more and more complex. The principles are:

- Following a *functional* as well as an *institutional* approach to regulation.
- Co-ordination of regulation by different agencies in order to assure consistency in regulation.
- A preference for a small number of regulatory agencies.

4.4.4.6 General principles

General principles are those that have a bearing on the general conduct of the regulatory process, and they are:

- Each regulatory arrangement must be related to one or more of the objectives identified.
- Regulatory arrangements must be cost-effective. A judgement has to be made on how far the objectives are pursued and what cost is reasonable to bear.
- Cost of regulation must be distributed equitably. There are two models in this respect: the taxpayer via government that funds the regulator, or the user, i.e. the institution being regulated, funds the regulator.
- Regulatory arrangements must be flexible. This is because of the innovative nature of the environment regulated – the financial system.
- Regulatory arrangements should be practitioner-based, i.e. the regulated and the regulator must have a good relationship and the regulated must be involved in the process of regulation.

4.5 Prudential requirements

4.5.1 Introduction

Of all financial industry legislation, banking legislation is the most multifaceted and wide-ranging. This is a reflection of the central role played by banks in the financial system, and the inventiveness of bankers, given their need to stay ahead of competitors. Consequently, the regulators have difficulty in staying ahead of developments, i.e. they tend to be a hop and a skip behind their private sector banking counterparts.

In the past it was fashionable to say that banking legislation is primarily aimed at the protection of the depositor, and specifically the small proverbial *man in the street* who does not have the skills to protect himself / herself from the odd unscrupulous banker. Nowadays, this is seen as a narrow focus. Banking legislation worldwide is focused increasingly on the integrity of the financial system, i.e. *financial stability*, discussed earlier.

The US subprime banking crisis, which had international repercussions, showed how interconnected the financial systems of the world are, and therefore the importance of *international financial stability*.

This crisis is not the first one; it follows many others, such as the Japanese bank crisis, the Asian crisis, and so on. These led to a number of international financial-stability proposals. One example is the G20 initiative, the Financial Stability Forum (FSF), through which these countries adopted 12 key standards for sound financial systems. These standards are issued by various standard-setting bodies (such as the IMF, the World Bank, the OECD, the Basel Committee), and cover the following areas/issues:

- Monetary and financial policy transparency.
- Fiscal policy transparency.
- Data dissemination.
- Insolvency.
- Corporate governance.
- Accounting and auditing.
- Payments and settlement.
- Market integrity.
- Banking supervision.
- Securities regulation.
- Insurance supervision.
- Public debt management.

In conclusion, it is useful to quote from the keynote speech of President and CEO of the Federal Reserve Bank of New York[40]:

> *"In a world of instantaneous communication, interconnected markets, and more complex instruments and risks, effective supervision is more important than ever to maintaining financial stability, both locally and globally. To remain effective and relevant, supervisors must understand how and to what extent the 'wired' economy and other technologies are changing banking and finance…we must take care that our efforts to ensure the safe and sound operation of the financial markets do not stifle the innovation and creative energy that is changing banking and finance – indeed the world – for the better."*

The key word in this text is *risk*. Ultimately, bank management, and bank regulation and supervision are about the *management and regulation of risk*. The broad strokes of bank regulation and supervision for the G-20 (and generally accepted by the world) are set out in the Basel Accords. We discuss the Accords briefly, before moving on to the prudential requirements.

4.5.2 Basel accords

The term Basel Accords (German spelling, also referred to as the Basle Accords, British spelling) refers to the banking regulation / supervision Accords of the Basel Committee on Banking Supervision (BCBS). The BCBS is situated at the Bank of International Settlements (BIS) in Basel, Switzerland. The G-20 economies, as well as some other major banking locales such as Turkey and Singapore, are represented on the BCBS.

Essentially, the Accords are recommendations on banking laws and regulations, and there are three: Basel I, Basel II and Basel III (in progress).The BCBS, as an informal forum of countries, creates broad supervisory standards / guidelines / statements of best practice in banking, in the expectation that member and other countries' supervisory authorities will implement them. It therefore encourages countries to adopt common approaches to and standards of supervision.

Basel I was published by the BCBS (then populated by the G-10 countries' banking supervision representatives) in 1988 and enforced in 1992. It published a set of minimum capital requirements for banks, primarily focused on credit risk. The assets of banks were placed in five categories according to credit risk, carrying risk weights of 0% (government securities) in steps up to 100% (unsecured corporate debt). Banks with international presence were required to hold capital equal to 8% of the risk-weighted assets.

Basel I is now generally regarded as outmoded. As financial conglomerates and product innovation spread, risk management had to change Therefore, a more comprehensive set of guidelines, known as Basel II, was developed by BCBS; these have been implemented by the G-20 and most other countries. Basel III, a response to the financial crisis, following the "Great Recession" of 2007–09, is being phased in over a long period (see below). Basel III builds on Basel II.

4.5.3 Basel II

4.5.3.1 Introduction

Basel II sets up risk and capital requirements, the intention being that a bank holds capital (and reserves, from here on just called capital) commensurate with the risk inherent in its loans (MD and NMD), shares and derivatives. This means the greater the risk the more capital is required to ensure its solvency; if this approach is adopted widely it contributes to financial stability, locally and internationally.

The Basel II Accord was endorsed in 2004, and rests on three pillars:

- Minimum capital requirement (addresses risk) (Pillar 1).
- Supervisory review (regulatory response to Pillar 1) (Pillar 2).
- Market discipline (promotes greater stability in the financial system) (Pillar 3).

4.5.3.2 Pillar 1: minimum capital requirement

Pillar 1 addresses the maintenance of capital required for three major risk-types a bank faces:

- Credit risk.
- Market risk.
- Operational risk.

The other risks were not considered quantifiable at that stage. There are three approaches to determining *credit risk* (IRB = internal ratings based):

- Standardised approach.
- Foundation IRB approach.
- Advanced IRB approach.

The standardised approach reflects the Basel I requirement, discussed earlier, but adds a new 150% rating: for borrowers with poor credit ratings. The minimum capital requirement (percentage of risk weighted assets to be held as capital) is the same as Basel I: 8%. Banks which adopt the standardised ratings approach are obliged to rely on the ratings produced by external rating agencies. For this reason many banks have adopted / are adopting the IRB approach.

The preferred approach for *market risk* is VaR, discussed earlier.

There are three approaches for *operational risk*:

- Basic indicator approach.
- Standardised approach.
- Internal measurement approach.

4.5.3.3 Pillar 2: supervisory review (regulatory response to Pillar 1)

As indicated, Pillar 2 is the regulatory response to Pillar 1, and it presents regulators much improved "tools" over those available under Basel I. It also provides a framework for managing the other bank risks: systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk and legal risk.

4.5.3.4 Pillar 3: market discipline (promotes greater stability in the financial system)

Pillar 3 promotes the sharing of bank information, which facilitates assessment of the bank by other bodies such as analysts, investors, customers, other banks and rating agencies. This amounts to peer review / market discipline, and it supplements regulation in that it leads to sound corporate governance.

Pillar 3 encourages banks to make available to the general public the details of their management procedures regarding risk, and therefore capital adequacy. The public disclosures that banks are obliged to make under Basel II enable market participants (mentioned above) to develop a good understanding of the risk profile of the bank and commensurate capital compliance. Thus, they will be able reward / punish banks (in terms of share and bond prices, i.e. the price of existing and new capital) according to risk management procedures and capital adequacy.

4.5.4 Basel III

As mentioned above, Basel III builds on Basel II. As expressed by the BIS[41]: "Basel III is part of the Committee's continuous effort to enhance the banking regulatory framework… [It is] a comprehensive set of reform measures…to strengthen the regulation, supervision and risk management of the banking sector. These measures aim to:

- improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source
- improve risk management and governance
- strengthen banks' transparency and disclosures.

The reforms target:

- bank-level, or microprudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress
- macroprudential, system wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time.

These two approaches to supervision are complementary as greater resilience at the individual bank level reduces the risk of system wide shocks."

Basel Committee on Banking Supervision reforms - Basel III

Strengthens microprudential regulation and supervision, and adds a macroprudential overlay that includes capital buffers.

	Capital					Liquidity
	Pillar 1			Pillar 2	Pillar 3	
	Capital	Risk coverage	Containing leverage	Risk management and supervision	Market discipline	Global liquidity standard and supervisory monitoring
All Banks	**Quality and level of capital** Greater focus on common equity. The minimum will be raised to 4.5% of risk-weighted assets, after deductions. **Capital loss absorption at the point of non-viability** Contractual terms of capital instruments will include a clause that allows – at the discretion of the relevant authority – write-off or conversion to common shares if the bank is judged to be non-viable. This principle increases the contribution of the private sector to resolving future banking crises and thereby reduces moral hazard. **Capital conservation buffer** Comprising common equity of 2.5% of risk-weighted assets, bringing the total common equity standard to 7%. Constraint on a bank's discretionary distributions will be imposed when banks fall into the buffer range. **Countercyclical buffer** Imposed within a range of 0-2.5% comprising common equity, when authorities judge credit growth is resulting in an unacceptable build up of systematic risk.	**Securitisations** Strengthens the capital treatment for certain complex securitisations. Requires banks to conduct more rigorous credit analyses of externally rated securitisation exposures. **Trading book** Significantly higher capital for trading and derivatives activities, as well as complex securitisations held in the trading book. Introduction of a stressed value-at-risk framework to help mitigate procyclicality. A capital charge for incremental risk that estimates the default and migration risks of unsecuritised credit products and takes liquidity into account. **Counterparty credit risk** Substantial strengthening of the counterparty credit risk framework. Includes: more stringent requirements for measuring exposure; capital incentives for banks to use central counterparties for derivatives; and higher capital for inter-financial sector exposures. **Bank exposures to central counterparties (CCPs)** The Committee has proposed that trade exposures to a qualifying CCP will receive a 2% risk weight and default fund exposures to a qualifying CCP will be capitalised according to a risk-based method that consistently and simply estimates risk arising from such default fund.	**Leverage ratio** A non-risk-based leverage ratio that includes off-balance sheet exposures will serve as a backstop to the risk-based capital requirement. Also helps contain system wide build up of leverage.	**Supplemental Pillar 2 requirements.** Address firm-wide governance and risk management; capturing the risk of off-balance sheet exposures and securitisation activities; managing risk concentrations; providing incentives for banks to better manage risk and returns over the long term; sound compensation practices; valuation practices; stress testing; accounting standards for financial instruments; corporate governance; and supervisory colleges.	**Revised Pillar 3 disclosures requirements** The requirements introduced relate to securitisation exposures and sponsorship of off-balance sheet vehicles. Enhanced disclosures on the detail of the components of regulatory capital and their reconciliation to the reported accounts will be required, including a comprehensive explanation of how a bank calculates its regulatory capital ratios.	**Liquidity coverage ratio** The liquidity coverage ratio (LCR) will require banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario that is specified by supervisors. **Net stable funding ratio** The net stable funding ratio (NSFR) is a longer-term structural ratio designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding. **Principles for Sound Liquidity Risk Management and Supervision** The Committee's 2008 guidance *Principles for Sound Liquidity Risk Management and Supervision* takes account of lessons learned during the crisis and is based on a fundamental review of sound practices for managing liquidity risk in banking organisations. **Supervisory monitoring** The liquidity framework includes a common set of monitoring metrics to assist supervisors in identifying and analysing liquidity risk trends at both the bank and system-wide level.
SIFIs	In addition to meeting the Basel III requirements, global systemically important financial institutions (SIFIs) must have higher loss absorbency capacity to reflect the greater risks that they pose to the financial system. The Committee has developed a methodology that includes both quantitative indicators and qualitative elements to identify global systemically important banks (SIBs). The additional loss absorbency requirements are to be met with a progressive Common Equity Tier 1 (CET1) capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance. For banks facing the highest SIB surcharge, an additional loss absorbency of 1% could be applied as a disincentive to increase materially their global systemic importance in the future. A consultative document was published in cooperation with the Financial Stability Board, which is coordinating the overall set of measures to reduce the moral hazard posed by global SIFIs.					

Table 1: Summary of Basel III requirements
Source: BIS.

A summary of the Basel III requirements is presented in Table 1, and the phase-in arrangements in Table 2.

Basel Committee on Banking Supervision
BANK FOR INTERNATIONAL SETTLEMENTS

Basel III phase-in arrangements
(All dates are as of 1 January)

	Phases	2013	2014	2015	2016	2017	2018	2019
Capital	Leverage Ratio	Parallel run 1 Jan 2013 – 1 Jan 2017 Disclosure starts 1 Jan 2015					Migration to Pillar 1	
Capital	Minimum Common Equity Capital Ratio	3.5%	4.0%	4.5%				4.5%
Capital	Capital Conservation Buffer				0.625%	1.25%	1.875%	2.5%
Capital	Minimum common equity plus capital conservation buffer	3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%
Capital	Phase-in of deductions from CET1*		20%	40%	60%	80%	100%	100%
Capital	Minimum Tier 1 Capital	4.5%	5.5%	6.0%				6.0%
Capital	Minimum Total Capital		8.0%					8.0%
Capital	Minimum Total Capital plus conservation buffer		8.0%		8.625%	9.25%	9.875%	10.5%
Capital	Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital		Phased out over 10 year horizon beginning 2013					
Liquidity	Liquidity coverage ratio – minimum requirement			60%	70%	80%	90%	100%
Liquidity	Net stable funding ratio						Introduce minimum standard	

* Including amounts exceeding the limit for deferred tax assets (DTAs), mortgage servicing rights (MSRs) and financials.
– – transition periods

Table 2: Basel III phase-in arrangements
Source: BIS.

4.5.5 The banking statute: general

While the Basel Accord presents the broad outline of prudential requirements, it is individual countries that adopt and implement them, and they do so via the local banking statute and regulations under the statute. While the local banking statute provides a broad brush to local regulation, the regulations under the statute provide the details.

The banking statute of most countries is elaborate. In Box 1 we present the outline (chapter and section headings) of one such statute[42] in order to indicate its multifaceted nature. The statute is enacted "To provide for the regulation and supervision of the business of public companies taking deposits from the public; and to provide for matters connected therewith."

BOX 1: CHAPTER AND SECTION HEADINGS OF A BANKING STATUTE

CHAPTER I: INTERPRETATION AND APPLICATION OF ACT

1. Definitions
2. Exclusions from application of Act

CHAPTER II: ADMINISTRATION OF ACT

3. Office for Banks
4. Registrar and Deputy Registrar of Banks
5. Delegation of powers and assignment of functions by Registrar
6. Powers of inspection of, and guidelines by, Registrar
7. Furnishing of information by banks
8. Power of Registrar to extend certain periods
9. Appeal against decisions of Registrar
10. Annual report by Registrar

CHAPTER III: AUTHORIZATION TO ESTABLISH, AND REGISTRATION AND CANCELLATION OF REGISTRATION OF, BANKS

11. Registration a prerequisite for conducting business of bank
12. Application for authorization to establish bank
13. Granting or refusal of application for authorization
14. Revocation of authorization
15. Formation of certain companies prohibited except with approval of Registrar
16. Application for registration as bank
17. Granting or refusal of application for registration
18. Conditions of registration

18A. Branches of foreign institutions

18B. Cancellation or suspension of authorization by Registrar and notice by Registrar of intention to cancel or suspend authorization

19. Repealed
20. Repealed
21. Untrue information in connection with applications
22. Use of name of bank
23. Cancellation or suspension of registration by Registrar
24. Notice by Registrar of intention to cancel or suspend registration
25. Cancellation or suspension of registration by court
26. Restriction by Registrar of activities of bank
27. Cancellation of registration at request of bank
28. Cancellation of registration upon winding-up
29. Withdrawal of suspension or restriction
30. Publication of information relating to banks and representative offices of foreign institutions
31. Date on which registration lapses
32. Repayment of deposits upon lapse of registration
33. Reregistration in terms of this Act

33A. Reregistration after commencement of Banks Amendment Act, 1994

34. Representative offices of foreign institutions
35. Annual licence

CHAPTER IV: SHAREHOLDING IN, AND REGISTRATION OF CONTROLLING COMPANIES IN RESPECT OF, BANKS

36. Repealed
37. Permission for acquisition of shares in bank or controlling company
38. Registration of shares in name of nominees
39. Furnishing of information by shareholders
40. Absence of wrongful intent
41. Effects of registration of shares contrary to Act
42. Restriction of right to control bank
43. Application for registration as controlling company
44. Granting or refusal of application for registration as controlling company
45. Cancellation by Registrar of registration of controlling company
46. Cancellation by court of registration of controlling company
47. Cancellation of registration at request of controlling company
48. Lapse of registration of controlling company upon cancellation of registration of bank
49. Date on which registration of controlling company lapses
50. Investments by controlling companies

CHAPTER V: FUNCTIONING OF BANKS AND CONTROLLING COMPANIES WITH REFERENCE TO COMPANIES ACT

51. Application of Companies Act to banks and controlling companies
52. Subsidiaries, branch offices, other interests and representative offices of banks and controlling companies
53. Disclosure by banks and controlling companies of interest in subsidiaries, trusts and other undertakings
54. Compromises, amalgamations, arrangements and affected transactions
55. Reconstruction within group of companies
56. Alteration of memorandum of association or articles of association, and change of name
57. Alteration of memorandum of association or articles of association in accordance with direction of Registrar
58. Information regarding directors and officers
59. Returns regarding shareholders
60. Directors of bank or controlling company
61. Appointment of auditor
62. Appointment of auditor by Registrar
63. Functions of auditor in relation to Registrar
64. Audit committee
65. Forwarding of certain notices, reports, returns and financial statements to Registrar
66. Disclosure of issued share capital
67. Disclosure of names of certain shareholders
68. Special provisions relating to winding-up or judicial management of bank
69. Appointment of curator to bank

69A. Investigation of affairs of bank under curatorship

CHAPTER VI: PRUDENTIAL REQUIREMENTS

70. Minimum share capital and unimpaired reserve funds

70A. Minimum share capital and reserve funds in respect of banking group

71. Repealed
72. Minimum liquid assets
73. Large exposures
74. Failure or inability to comply with prudential requirements
75. Returns

CHAPTER VII: PROVISIONS RELATING TO ASPECTS OF THE CONDUCT OF THE BUSINESS OF A BANK

76.	Restriction on investments in immovable property and shares, and on loans and advances to certain subsidiaries
77.	Restriction on investments with, and loans and advances to, certain associates
78.	Undesirable practices
79.	Shares, debentures, negotiable certificates of deposit and share warrants
80.	Limitation on certain activities of banks

CHAPTER VIII: CONTROL OF CERTAIN ACTIVITIES OF UNREGISTERED PERSONS

81.	Order prohibiting anticipated or actual contraventions of certain provisions of Act
82.	Registrar's power to exact information from unregistered persons
83.	Repayment of money unlawfully obtained
84.	Management and control of repayment of money unlawfully obtained

CHAPTER IX: GENERAL PROVISIONS	
85.	Certification of returns and other documents
86.	Inspection, copies and keeping of documents
87.	Minors and married women as depositors
88.	Limitation of liability
89.	Furnishing of information by Registrar
90.	Regulations
91.	Offences and penalties
92.	Review of Act
93.	Interpretation of certain references in existing laws and in other documents
94.	Amendment of section 3 of Act 61 of 1973, as amended by section 106 of Act 82 of 1986
95.	Repeal of laws, and savings
96.	Short title

4.5.6 The banking statute: prudential requirements

4.5.6.1 Introduction

It goes without saying that the entire statute is devoted to the regulation and supervision of banks. However, only certain sections funnel in on risk management and ultimately on the solvency of banks. Of these, the most significant are the prudential requirements, which are:

- Share capital and unimpaired reserve fund.
- Liquid assets.
- Large exposures.
- Reserve requirement.
- Returns.

4.5.6.2 Share capital and unimpaired reserve fund

The statute / regulations under the statute define what qualifies as primary (ordinary shares, etc) and secondary share capital and unimpaired reserve funds, and prescribe the minimum amount of share capital and unimpaired reserves to be held, which is related to the risk/s[43] the bank is exposed to.

4.5.6.3 Liquid assets

The statute lists the assets which rank as liquid assets (LA). In most countries they are:

- Treasury bills.
- Short-term government bonds (< 3-years to maturity).
- Central bank money: bank notes and coins, reserves with the central bank.
- Bills of the central bank.

The regulations under the statute prescribe a minimum amount of liquid assets to be held, which is a ratio of deposits / liabilities, for example 5%. The ratio resides in the regulations because it can be changed.

4.5.6.4 Large exposures

The statute of most countries state that: a bank shall not make investments with or grant loans or advances or other credit to any person, to an aggregate amount exceeding an amount representing a prescribed percentage of such bank's capital and reserves. The regulations under the statute then prescribe the ratio, for example 10%.

4.5.6.5 Reserve requirement

In most countries the banks are obliged to comply with *a (cash) reserve requirement.* Banks are required to maintain a certain minimum amount (e.g. 5% of deposits) in reserves, defined as bank deposits with the central bank. This requirement is related to liquidity risk (and some scholars see it as a monetary policy tool).

4.5.6.6 Returns

Returns at first glance may not seem like a prudential requirement. However, it is a *crucial* prudential requirement, because the collection of the right information by the supervisor is vital to the supervision function, and ultimately to the regulatory function. The returns that the banks are obliged to complete and submit to the Registrar of Banks are formidable, and require sophisticated IT systems.

4.5.7 The banking statute: other requirements associated with risk management

Other requirements of the banking statute associated with risk management include:

- Licensing of bank. The barriers to entry are high.
- The power of inspection of the Registrar of Banks. The statute determines that the Registrar has extensive powers of inspection, and may do so at any time.
- Furnishing of information by banks. Apart from the requirement to submit myriad detailed returns to the Registrar, this office has the power to request / demand any other information from banks.
- Only specific persons may be officers and directors of the banks. The statute is stringent in respect of the requirements (fit and proper and experience) of the persons who are directors and executive officers of banks. Also, the composition of the board of directors must be relevant to the nature of the bank's business.
- Fiduciary duties of non-executive directors. Directors are required to act in the best interests and for the benefit of the bank, its depositors and its shareholders.
- Restriction of voting of executive directors. In most countries, the statute ensures that the executive directors may not enjoy the majority of the vote at board meetings.
- Special functions of the auditor and the audit committee. In many countries a bank is obliged to appoint two auditors, and the auditors are required to furnish the Registrar with any information they may have regarding irregularities and any matter that may endanger the continued existence of the bank.

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