**1.2 FINANCIAL INSTITUTIONS IN KENYA (RECAP)**

Financial institutions are those organizations that are involved in providing various types of financial services to their customers. A financial institution can also be defined as that type of an institution, which performs the collection of funds from private investors and public investors and utilizes those funds in financial assets.

The financial institutions are controlled and supervised by the rules and regulations delineated by government authorities.

Financial institutions comprise of:

* Commercial Banks (Inclusive of Islamic banks) and Mortgage finance Institutions.
* Stock Brokerage Firms and Investment Banks.
* Micro Finance Institutions.
* Building Societies.
* Credit Unions.
* Insurance Companies.
* Stock exchanges.
* Mutual Funds.
* Pension funds.
* Hedge Funds.

**1.2.1 The size, structure and composition of financial institutions in Kenya**

**Commercial Banks and Mortgage finance Institutions.**

How many commercial banks do we have in Kenya today? How many mortgage finance institutions? What is the structure of ownership of these institutions? The organizational structures? These are the issues. Please update yourself on these.

In summary, as of 2009, the consolidated statement of financial position of commercial banks and mortgage finance institutions in Kenya was as follows:

(Refer to attachment to these notes for the balance sheet)

Organizational structures in banking

A financial institution has to make available services through one or more service facilities, physical locations or electronics networks. This can be achieved by adopting either of the following models:

1. Unit banking organizational structure

Here services are offered from one office. However, a small number of services like deposit taking may be offered from limited service facilities like ATMs, drive in windows, and point of sale (PoS) terminals. Most banks and indeed financial institutions begin as unit institutions due to limited capital and personnel. This model is however, risky if the surrounding economy weakens and people move away to other areas.

1. Branch banking organizational structure

This is where a financial institution, in our case a bank, offers services through multiple locations, in addition to ATMs, PoS, and drive in windows. Note that in some countries like the USA, branch banking has been restricted. Restrictions have been based on arguments that branch banking drives out local competitors, leading to higher service fees, and drains capital from small communities to large cities where most branch banks have headquarters. It has been noted that this model leads to greater operating efficiency, and increases availability and convenience of service. It also stimulates economic growth by availing capital in the form of loans to many people, since such banks are heavily capitalized.

1. Bank and multibank holding organizations

Bank holding organizations refer to corporations that hold stock in one or more banks/ financial institutions. Multibank holding organizations hold stock in at least two banks/ financial institutions.

The advantages and disadvantages of branch banking apply to these as well. Note that this banking model has been used to circumvent restrictions on branch banking.

1. Bank subsidiaries model

In this model, a bank has subsidiary firms’ e.g. insurance firm, Securities Company, and other non-bank subsidiaries.

1. Networking

Networking refers to banks communicating through electronic systems to collect and move funds. The most familiar applications are the ATMs. Equally popular are the point of sale terminals like the ones found in supermarkets where payments can be made by debit cards.

1. Agent banking

As mentioned earlier, the finance act that went into force in 2010 allowed for agent banking. Agent means an entity that has been contracted by an institution and approved by the Central Bank to provide the services of the institution on behalf of the institution in the manner specified in the Guideline. Agent banking is aimed at:

i) Increasing financial services outreach and to promote financial inclusion to the un-banked and under-banked population without risking the safety and soundness of the banking system; and,

ii) Encouraging institutions to use agents in the provision of banking services so as to reduce the cost of financial services and to foster financial inclusion, reach and depth.

You have probably encountered EQUITY AGENTS in some of the places you visit.

**Stock Brokerage Firms and Investment Banks.**

Investment banks are different from brokers and broker-dealers, even though they are often thought of as one and the same. Brokers charge commissions for helping the purchase and sale of securities. A broker-dealer executes similar functions, but it also trades for its own account; for instance, when you buy a stock, you can buy it through an exchange or the dealer’ s own account (and you’ll pay the current market price no matter what the dealer paid for it). An investment bank actually is a broker-dealer that provides corporation with financial services, such as assistance with initial public offerings (IPOs), Merger and Acquisitions (M&As) advice, and strategic planning. Investment banks basically do the following:

Underwriting.

Underwriting is the process by which investment bankers raise investment capital from investors on behalf of corporations and governments that are issuing securities (both equity and debt).

Investment banks help businesses sail through mergers and acquisitions and also provide financial services like market making and trading activities of the following financial products: Equities, foreign exchange, derivatives, fixed income and commodities.

Please refer to BCOM 330 notes for more details on functions of the Investment banks. The attachments to these notes contain a list of licensed stockbrokers and investment banks (Source, CMA).

# CASE: Five investment banks become stockbrokers after demotion

**Published on 04/05/2011: The Standard Newspaper LTD**

By James Anyanzwa

The Capital Markets Authority (CMA) has officially downgraded the investment banking licenses of five investment banks to stockbroker level.

The market regulator has also put Equatorial Investment Bank on conditional licence, and revoked the trading permit of Africa Alliance Kenya Securities, and Africa Alliance Kenya Management. Trading licences for two investment advisers (Equilibrium Capital and Fin consult) and an authorized Depository institution—Dubai Bank Kenya— have also been cancelled. In a gazette Notice No 4937, the Authority reduced Africa Investment Bank, Drummond Investment Bank, Kestrel capital (EA), Apex Africa Investment Bank, and Sterling Investment Bank to stockbrokers.

"The licensees are in the process of effecting a change of name to reflect their license status as stockbrokers. Accordingly, this change of name shall be posted on the Authority’s website," said Stella Kilonzo, CMAs chief executive.

Although the reason for the demotion was not clearly spelt out, speculations point to the inability of the affected firms to meet the new capital requirements. The CMA revised minimum capital limit for market players after a string of four stockbrokers collapsed due to financial difficulties.

Operating license

Under new laws, investment banks are required to raise their minimum capital to Sh250 million, from Sh30 million, while stockbrokers are required to increase their capital to Sh50 million, up from Sh5 million, by the end of March in order to acquire an operating licence.

Ms Kilonzo, however, said CMA was satisfied with the high level of compliance in terms of share capital requirements for stockbrokers and investment banks. In a statement on Wednesday, Kilonzo said CMA is on-course to roll out internal control and risk management guidelines, and risk-based capital adequacy requirements this year, as part of the Risk-Based Supervision model adopted by the Authority last year.

"The approach puts emphasis on identification of emerging risks and assessing the adequacy of each intermediary’s risk management systems on a continuous basis," she said. Players who revert to offering stockbrokerage services will miss out on the lucrative business of being transaction advisers in major transactions at the bourse; such as initial public offerings (IPO), rights issue, mergers, and acquisitions, which diversify their sources of income and increase the firms’ value.

Investment banks are also allowed to trade with their own money, and earn margins on transactions, although stockbrokers are also allowed to acquire dealership licenses at an extra cost.

Advisory services

Stockbrokers generate revenue from commissions charged on transactions and advisory services.

"In exercise of its mandate as outlined in the Capital Markets Act, the Capital Markets Authority has finalised the licensing process of market intermediaries for 2011," said Kilonzo.

**Micro finance institutions**

The Microfinance Act, 2006 and the Microfinance Regulations issued there under sets out the legal, regulatory and supervisory framework for the microfinance industry in Kenya. The Microfinance Act became operational with effect from 2nd May 2008.   
  
The principal object of the Microfinance Act is to regulate the establishment, business and operations of microfinance institutions in Kenya through licensing and supervision. The Act enables Deposit Taking Microfinance Institutions licensed by the Central Bank of Kenya to mobilize savings from the general public, thus promoting competition, efficiency and access.  
  
It is, therefore, expected that the microfinance industry will play a pivotal role in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans.  There are 4 licensed deposit taking MFIs - Faulu Kenya Deposit Taking Microfinance Limited, and Kenya Women Finance Trust Deposit Taking Microfinance Limited, SMEP Deposit Taking Microfinance Limited, and Uwezo DTM Limited . Regulations for Non Deposit Taking Microfinance Institutions are yet to be put in place

**Building Societies**

A building society is a financial institution, [owned by its members](http://en.wikipedia.org/wiki/Mutual_organization), that offers [banking](http://en.wikipedia.org/wiki/Banking_institution) and other [financial services](http://en.wikipedia.org/wiki/Financial_services), especially [mortgage lending](http://en.wikipedia.org/wiki/Mortgage_loan). Building Societies are licensed under the Building Societies Act. There are no functioning building societies in Kenya. Please refer to the CBK website for their regulations.

**Credit Unions (SACCO’s)**

These are co-op associations whose members normally have a common bond, such as employees of the same firm. Member’s savings are loaned out only to other members. They offer the cheapest source of funds for individual borrowers. Co-ops are regulated by the co-op act.

**Insurance Companies**

Life insurance companies

Life insurance companies generally try to invest so as to hedge their liabilities, which are defined by the policies they write. Thus there are as many objectives as there are distinct types of policies. Until a decade or so ago there were only two types of life insurance policies available for individuals: whole-life and term.

A whole-life insurance policy combines a death benefit with a kind of savings plan that provides for a gradual buildup of cash value that the policyholder can withdraw at a later point in life, usually at age 65. Term insurance, on the other hand, provides death benefits only, with no buildup of cash value. The interest rate that is embedded in the schedule of cash value accumulation promised under a whole-life policy is a fixed rate, and life insurance companies try to hedge this liability by investing in long-term bonds. Often the insured individual has the right to borrow at a pre-specified fixed interest rate against the cash value of the policy.

Non–Life Insurance Companies

Non–life insurance companies such as property and casualty insurers have investable funds primarily because they pay claims after they collect policy premiums. Typically, they are conservative in their attitude toward risk. As with life insurers, non–life insurance companies can be either stock companies or mutual companies.

**Stock exchanges**

This is to be covered in the assignment: major financial centers in Eastern and Southern Africa. In that exercise, students are to highlight the functions of stock exchanges, before discussing the major stock exchanges in the region.

**Mutual Funds and other investment companies.**

Investment companies

Investment companies are financial intermediaries that collect funds from individual investors and invest those funds in a potentially wide range of securities or other assets. Pooling of assets is the key idea behind investment companies. Each investor has a claim to the portfolio established by the investment company in proportion to the amount invested. These companies thus provide a mechanism for small investors to “team up” to obtain the benefits of large-scale investing.

Investment companies perform several important functions for their investors:

1. Record keeping and administration. Investment companies issue periodic status reports, keeping track of capital gains distributions, dividends, investments, and redemptions, and they may reinvest dividend and interest income for shareholders.

2. Diversification and divisibility. By pooling their money, investment companies enable investors to hold fractional shares of many different securities. They can act as large investors even if any individual shareholder cannot.

3. Professional management. Many, but not all, investment companies have full-time staffs of security analysts and portfolio managers who attempt to achieve superior investment results for their investors.

4. Lower transaction costs. Because they trade large blocks of securities, investment companies can achieve substantial savings on brokerage fees and commissions.

Types of investment companies

Unit Investment Trusts

Unit investment trusts are pools of money invested in a portfolio that is fixed for the life of the fund. To form a unit investment trust, a sponsor, typically a brokerage firm buys a portfolio of securities which are deposited into a trust. It then sells to the public shares, or “units,” in the trust, called redeemable trust certificates. All income and payments of principal from the portfolio are paid out by the fund’s trustees (a bank or trust company) to the shareholders. Most unit trusts hold fixed-income securities and expire at their maturity, which may be as short as a few months if the trust invests in short-term securities like money market instruments, or as long as many years if the trust holds long-term assets like fixed-income securities. There is little **active management** of a unit investment trust because once established, the portfolio composition is fixed; hence these trusts are referred to as unmanaged. Trusts tend to invest in relatively uniform types of assets; for example, one trust may invest in municipal bonds, another in corporate bonds. The uniformity of the portfolio is consistent with the lack of active management. The trusts provide investors a vehicle to purchase a pool of one particular type of asset, which can be included in an overall portfolio as desired. The lack of active management of the portfolio implies that management fees can be lower than those of managed funds.

Sponsors of unit investment trusts earn their profit by selling shares in the trust at a premium to the cost of acquiring the underlying assets. For example, a trust that has purchased Ksh. 5 million of assets may sell 5,000 shares to the public at a price of Ksh. 1,030 per share, which (assuming the trust has no liabilities) represents a 3% premium over the net asset value of the securities held by the trust. The 3% premium is the trustee’s fee for establishing the trust. Investors who wish to liquidate their holdings of a unit investment trust may sell the shares back to the trustee for net asset value. The trustees can either sell enough securities from the asset portfolio to obtain the cash necessary to pay the investor, or they may instead sell the shares to a new investor (again at a slight premium to net asset value).

Managed Investment Companies

There are two types of managed companies: closed-end and open-end. In both cases, the fund’s board of directors, which is elected by shareholders, hires a management company to manage the portfolio for an annual fee that typically ranges from .2% to 1.5% of assets. In many cases the management company is the firm that organized the fund. In other cases, a mutual fund will hire an outside portfolio manager.

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Most management companies have contracts to manage several funds. Open-end funds stand ready to redeem or issue shares at their net asset value (although both purchases and redemptions may involve sales charges). When investors in open-end funds wish to “cash out” their shares, they sell them back to the fund at NAV. In contrast, closed-end funds do not redeem or issue shares. Investors in closed-end funds who wish to cash out must sell their shares to other investors. Shares of closed-end funds are traded on organized exchanges and can be purchased through brokers just like other common stock; their prices therefore can differ from NAV.

Mutual funds

Mutual funds are the common name for open-end investment companies. This is the dominant investment company today, accounting for the majority of investment company assets. What are the typical products offered by the mutual funds (Bcom 330)?

Costs of investing in mutual funds

Fee Structure

An individual investor choosing a mutual fund should consider not only the fund’s stated investment policy and past performance, but also its management fees and other expenses.

* Front-End Load

A front-end load is a commission or sales charge paid when you purchase the shares. These charges are used primarily to pay the brokers who sell the funds. There exist low load funds with a front end load of around 3%. An ordinary fund will charge around 6%.

* Back-End Load

A back-end load is a redemption, or “exit,” fee incurred when you sell your shares.

* Operating Expenses

Operating expenses are the costs incurred by the mutual fund in operating the portfolio, including administrative expenses and advisory fees paid to the investment manager. These expenses are usually expressed as a percentage of total assets under management. Shareholders do not receive an explicit bill for these operating expenses; however, the expenses periodically are deducted from the assets of the fund. Shareholders pay for these expenses through the reduced value of the portfolio.

Other Investment Organizations

There are intermediaries not formally organized or regulated as investment companies that nevertheless serve functions similar to investment companies. Two of the more important are commingled funds and real estate investment trusts.

Commingled Funds

Commingled funds are partnerships of investors that pool their funds. The management firm that organizes the partnership, for example, a bank or insurance company, manages the funds for a fee. Typical partners in a commingled fund might be trust or retirement accounts which have portfolios that are much larger than those of most individual investors but are still too small to warrant managing on a separate basis.

Real Estate Investment Trusts (REITs)

A REIT is similar to a closed-end fund. REITs invest in real estate or loans secured by real estate. Besides issuing shares, they raise capital by borrowing from banks and issuing bonds or mortgages. Most of them are highly leveraged, with a typical debt ratio of 70%.

There are two principal kinds of REITs. Equity trusts invest in real estate directly, whereas mortgage trusts invest primarily in mortgage and construction loans. REITs generally are established by banks, insurance companies, or mortgage companies, which then serve as investment managers to earn a fee.

Refer to attached pullout from the CMA on unit trusts offered by these collective investment schemes (Mutual funds and investment companies)

**Pension funds**

### A pension fund is any plan, fund, or scheme which provides retirement income. Pension funds are important shareholders of listed and private companies. They are especially important to the stock market where large [institutional investors](http://en.wikipedia.org/wiki/Institutional_investor) dominate. Open vs. closed pension funds Open pension funds support at least one pension plan with no restriction on membership while closed pension funds support only pension plans that are limited to certain employees.

A public pension fund is one that is regulated under public sector law while a private pension fund is regulated under private sector law. In certain countries the distinction between public or government pension funds and private pension funds may be difficult to assess. In others, the distinction is made sharply in law, with very specific requirements for administration and investment. In Kenya, pension funds are regulated by the RBA, governed by the RBA act, retirement benefits regulations and the investment regulations and policies issued.

Retirement Benefit Scheme can be classified in various forms as presented below:

Defined Contribution and Defined Benefit

A defined contribution (DC) scheme is a scheme in which member' and employer' contributions are fixed either as a percentage of pensionable earnings or as a shilling amount, and a member's retirement benefits has a value equal to those contributions, net of expenses including premiums paid for insurance of death or disability risks, accumulated in an individual account with investment return and any surpluses or deficits as determined by the trustees of the scheme.

DC Schemes are arrangements where the retirement benefit is not known or defined in advance. Rather the level of retirement income receivable on pay-out date is related to the:

* Level of contributions made over the accumulation period;
* The charges deducted by the product provider;
* The investment returns of the fund during the accumulation phase;
* The annuity rates at retirement.

A defined benefit (DB) Scheme is an arrangement where the benefit, which is ordinarily determined by the scheme rules, is defined in advance. Benefits are often related to the final salary and/or years of service of the employee. The main risk for beneficiaries is the solvency of the employer so as to be in a position to meet the promised benefits.

Hybrid Schemes seek to combine features of DB and DC schemes in some way and can take a variety of forms. For purposes of categorization, hybrid schemes are DB schemes because of the promises they make to members.

Provident Fund and Pension Fund

Provident fund means a scheme for the payment of lump sums and other similar benefits to employees when they leave employment or to the dependants of employees on the death of those employees.  
  
In the case of a pension fund at the point of retiring a proportion of the retirement fund is commuted as lump sum with the remainder paid out as periodical payments.  The commuted amount will be equal to no more than one quarter of the retirement benefits in a scheme where members do not make any contributions and not more than one third of the retirement benefits in a scheme where members make contributions.

**Hedge Funds**

There are no functioning hedge funds in Kenya.

Hedge funds are aggressively managed portfolio of investments that uses advanced investment strategies such as leveraged, long, short and derivative positions in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market benchmark).   
  
Legally, hedge funds are most often set up as private investment partnerships that are open to a limited number of investors and require a very large initial minimum investment. Investments in hedge funds are illiquid as they often require investors keep their money in the fund for at least one year. For the most part, hedge funds (unlike mutual funds) are unregulated because they cater to sophisticated investors. You can think of hedge funds as mutual funds for the super rich. They are similar to mutual funds in that investments are pooled and professionally managed, but differ in that the fund has far more flexibility in its investment strategies. It is important to note that hedging is actually the practice of attempting to reduce risk, but the goal of most hedge funds is to maximize return on investment. The name is mostly historical, as the first hedge funds tried to hedge against the downside risk of a bear market by shorting the market (mutual funds generally can't enter into short positions as one of their primary goals). Nowadays, hedge funds use dozens of different strategies, so it isn't accurate to say that hedge funds just "hedge risk". In fact, because hedge fund managers make speculative investments, these funds can carry more risk than the overall market.

* 1. **SPECIFIC MANAGEMENT PROBLEMS FACING FINANCIAL INSTITUTIONS IN KENYA.**

In the recent past in Kenya, there has been news about troubled financial institutions, and changes in regulations. Some of the prominent cases in the recent past are, among others:

* The collapse of Nyaga Stockbrokers LTD, and Francis Thuo and Partners LTD.
* INVESCO assurance LTD placed under statutory management.
* The case of charterhouse bank.
* The increase in core capital requirements for financial institutions by the ministry of finance in the budget (2008/09 budget).
* The introduction of the RTGS and the impending introduction of check truncation from June, 2011.
* The introduction of the proceeds of crime and the anti money laundering act of 2010.
* The introduction of the finance act in January 2010.

Globally, the 2008 financial crisis had its roots financial sector, and led to the collapse of Lehman brothers (USA), and the near collapse of AIG, the insurance giant. The effects of the crisis were especially severe in Iceland (Geography lesson! This is a country in Scandinavia. Scandinavia is a region in Europe). You can access all this information in the net. Consequently, the world leaders, during the G7 summit met at Davos Switzerland in late 2010, it was agreed that the risk management frameworks of financial institutions needed to be tightened. The result was the Basel III accord to be discussed later in the course. What is clear, however is that once the financial sector sneezes, the entire economy catches a cold. Governments are keenly aware of this and enact regulations whose observance can be a key management challenge.

The key management problems facing financial institutions are as follows:

1. The regulatory environment

In light of the global financial crisis, the regulatory environment has changed significantly. There are indications that regulations will get tighter in coming days. In Kenya, some loosely regulated financial intermediaries such as Sacco’s are now under a regulator. Mobile cash transfer services are being regulated by the CBK. The regulatory environment is also undergoing changes in light of the global financial crisis. Furthermore, the CBK, CMA, IRA, and RBA entered into an MOU in 2009 to share information and to coordinate supervision, thus reducing opportunities for regulatory arbitrage. In July 2010, the proceeds of crime and anti money laundering act came into effect. The Finance act had been in force from January 2010.

1. Globalization

Globalization of business has affected all businesses, but financial institutions are even more affected due to their role in facilitating international trade. In addition, most financial institutions are looking for global investment opportunities in the face of increasing competitive pressure back home. Thus mutual funds are buying into offshore companies; commercial banks are expanding regionally (For example Eco-bank, equity, KCB). The challenge lies in the management of such offshore investments that are being made. In addition, globalization means more competition as more financial institutions enter the market via the reciprocity agreements between governments, and customs unions that open up the market to foreign firms, e.g. the East Africa Common market protocol that came into effect in 2010, and COMESA.

1. Competition

The Kenyan experience in competition has especially been interesting. Financial institutions have come under intense competition from the unlikeliest of sources: mobile telephony firms. Most financial institutions have had to adjust their strategies to cope with such competition. Most firms opted to cooperate with mobile telephony firms and offer mobile banking.

Commercial banks have also come under pressure from Sacco’s. These credit unions have a steadily growing financial muscle. Managers have to constantly be on the lookout for such competition and react accordingly. This is not easy. With globalization more pan African and international banks are expected to start operations in Kenya, with Ecobank already operating in the country. Competition exists in the unlikeliest of places: stock exchanges- there is stiff competition between NYSE and NASDAQ and AMEX in the USA. There have been calls for the establishment of an alternative stock exchange in Kenya to foster competition.

1. Innovations in information communication technology

ICT is a business enabler. This is without question. Small financial institutions have at their disposal massive computing resources to analyze data, and conduct data mining. There is a downside to this however- exposure to a massive number of computer-generated reports poses a danger of information overload for the recipient, especially when the underlying analysis and its implications are not clearly understood. Financial institutions are not immune to this danger. Typically, financial institutions devote their computer resources for information access rather than analysis. Often, neither employees are properly trained nor the useful information is made available to them in a form amenable for more efficient or profitable customer service. Further, banks fail to utilize internally available information for monitoring effectiveness of their employees or services on a timely basis. As a result, banks overlook a valuable tool for reducing risk. The management challenge is to ensure that information systems add value to the organization so as to justify their costs.

In addition, in light of developments in ICT most financial institutions have had to replace their existing **legacy systems** with new systems that support, for example mobile and internet banking. Management of such a transition is a challenge in itself.

1. Increased volatility in interest and foreign exchange rates

Interest and forex are the major sources of revenue for financial institutions. Volatility in the forex and interest rates poses a real challenge to managers since they threaten the major revenue center of the institutions. Management of this exposure is very important for a financial institution.

**2.1 FINANCIAL INTERMEDIARIES’ REGULATORS IN KENYA (RECAP).**

Students are expected to do research on this area. Refer to earlier courses (e.g. BCOM 330: FINANCIAL INSTITUTIONS AND MARKETS), and visit the websites of the various regulators, in addition to other publications that touch on this topic. This topic is examinable.

**2.2 SPECIFIC REGULATIONS IN PLACE IN KENYA.**

a. Safety and soundness regulations

This is a layer of regulation imposed on financial institutions to protect depositors and borrowers against the risk of failure of financial institutions. Specific regulations include:

1. In Kenya, banks are prohibited from making loans of greater than 25% of owners’ equity capital (Core capital) to any one company or borrower (refer to the prudential guidelines). In effect, this regulation forces banks to diversify their loan assets by spreading them among many borrowers.
2. There is prescribed minimum capital required from the owners of financial institutions towards the funding operations of financial institutions. Note that the higher the proportion of equity contributed by the owners, the higher the degree of protection against insolvency.
3. Financial institutions regulators require provision for guaranty funds to meet insolvency losses in case of the collapse of a financial institution. In Kenya we have the deposits protection fund for bank deposits as an example.

Note that regulation has a cost to those being regulated, for example the opportunity cost of additional capital required, and the cost of producing information required by regulators. Regulation also has benefits, in the form of lower risk of insolvency, for example. The difference between the private benefits of being regulated and the costs is the net regulatory burden.

b. Monetary policy regulation

Financial institutions, especially commercial banks, play a special role in transmitting monetary policy from the CBK to the rest of the economy. The CBK controls the quantity of notes and coins in circulation (Outside money). Banks hold the bulk of cash in the form of bank deposits (Inside money). To meet its monetary policy targets the CBK imposes controls in the form of minimum level of required cash reserves to be held against deposits. Note that if such controls exceed the liquidity needs of a financial institution, they add to the net regulatory burden.

c. Credit allocation regulation

These are regulations that are set to ensure that financial institutions cater to socially important sectors such as housing and agriculture. They include setting a minimum percentage that a bank must lend to the sector in question. It may also involve setting the maximum interest rates to a particular sector.

d. Investor protection regulation

These are regulations meant to protect investors who invest in the securities markets using investment banks, or indirectly using mutual funds and pension funds. There are regulations regarding the proportion of cash that pension funds, for example can invest in stocks and real estate. The CMA runs the investor protection fund that was used to reimburse some of the investors caught up in the Nyaga Stockbrokers collapse. Research more on this investor protection fund.

e. Entry and chartering regulations

There are restrictions on entry into the industry in the form of high direct costs, e.g. capital contribution, or indirectly by restricting people who can start financial institutions. Regulations also cover the scope of permitted activities under a given charter, e.g. restricting commercial banks from venturing into investment banking.

The Basel Accords

**Geography first:** Basel is a city in Switzerland, Central Europe.

The Basel Accords refer to the banking supervision Accords (recommendations on banking laws and regulations agreed upon internationally) issued by the [Basel Committee on Banking Supervision](http://en.wikipedia.org/wiki/Basel_Committee_on_Banking_Supervision) (BCBS).

The Basel Accord I

In 1988, the Bank of International Settlements (BIS) which hosts the BCBS introduced the Basel Accord I which was designed to ensure minimum capital requirements for banks. It provided for the implementation of a credit risk management framework with a minimum capital standard of 8% (CAR) by the end of 1992. The min cap standard is based on the Capital Adequacy ratio (CAR).

The Basel accord II

As the implementation of the Basel Accord I preceded, it was recognized that numerous shortcomings existed in the framework and in June 2004, following extensive consultation with industry, the Basel II Accord was published. This version superseded the 1988 Accord and aimed at ensuring that capital allocation is far more risk sensitive, establishing a framework for convergence of regulatory and economic capital. Additionally, it separates and quantifies risk into credit, market and operational risk components, establishing a viable structure and measurement system for each. The Basel II Framework describes a more comprehensive measure and minimum standard for capital adequacy that national supervisory authorities are now working to implement through domestic rule-making and adoption procedures. It seeks to improve on the existing rules by aligning regulatory capital requirements more closely to the underlying risks that banks face. In addition, the Basel II Framework is intended to promote a more forward-looking approach to capital supervision, one that encourages banks to identify the risks they may face, today and in the future, and to develop or improve their ability to manage those risks. As a result, it is intended to be more flexible and better able to evolve with advances in markets and risk management practices.

The events that began in 2007 with the sub-prime crisis have now forced regulators and financial service organizations globally to again re-examine and reassess risk management frameworks and processes.

The Basel Accord III

The Basel Committee on Banking Supervision (the “Basel Committee”) released a near final version of its new bank capital and liquidity standards, referred to as “Basel III”, in December 2010 (The DAVOS Summit). Subsequent guidance was issued in January 2011 regarding minimum requirements for regulatory capital instruments. Basel III is a series of amendments to the existing Basel II framework.

While the basic building blocks of the existing framework would remain largely in place, there are several important new elements,8 relating in particular to minimum capital ratios, rules which define eligibility of regulatory capital, leverage and liquidity requirements, as summarized below.

Key Elements of the Basel III Framework

Capital Ratios

• Core solvency ratio retained at 8% of risk weighted assets (“RWAs”).

• Minimum “common equity” component will be 4.5% when fully phased in by 2015, increased from the current 2% minimum.

• Overall Tier 1 element of the capital base (including common equity) will be 6% when fully phased in by 2015, increased from the current 4% minimum.

• In addition, there will be a “capital conservation buffer” made up of common equity and amounting to 2.5% of RWAs when fully phased in by 2019; an institution with capital falling within the buffer range (i.e., with common equity of between 4.5% and 7%) will be subject to restrictions on dividend payouts, share buybacks and bonuses. In effect, most banks will be required, or otherwise seek, to maintain a ratio of 7% of RWAs in common equity (4.5% minimum plus a 2.5% capital conservation buffer).

• A further “countercyclical capital buffer” may be imposed. Where required, it would be made up of common equity of up to an additional 2.5% of RWAs. This buffer is expected to be imposed at a national level only during times of excessive credit growth, and will be allowed to be released during times of credit contraction.

Liquidity Ratios

• Short term liquidity – Liquidity Coverage Ratio (“LCR”) – banks will be required from 2015 to maintain a liquid assets buffer calibrated by reference to net cash outflow over a 30 day stressed period.

• Longer Term liquidity – Net Stable Funding Ratio (“NSFR”) – banks will be required to have stable funding in place to address funding needs over a stressed one year period. Implementation is scheduled for 2018.

Other Elements of the Basel III Framework

• Systemically important financial institutions (“SIFIs”) are likely to be subject to additional capital requirement and liquidity surcharges, to be determined in 2011.

• Provisions on Pillar 2 (supervisory evaluation) and Pillar 3 (disclosure, market discipline) will be set out in further detail in 2011, building on the existing enhancements to the Basel II framework.

• More stringent standards for the treatment of securitizations and CDOs were issued in the July 2009 release.

• The treatment of trading positions will be subject to a more comprehensive review in 2011. Banks applying “Value-at-risk” (“VaR”) models to trading positions are required to calculate a stressed-VaR charge based on a historical period of recent stressed market conditions. Further, credit conversion factors have been adjusted under Basel III to reflect the 2007-2008 experience that some off-balance sheet items are more likely than previously thought to be brought on-balance sheet.

**Discussion questions:**

1. In Kenya today, do we have guaranty funds that protect:

* Insurance claimholders in case of collapse of an insurance company.
* Investors in the case of the collapse of an investment bank/ mutual fund, or against criminal activities (Illegal sale of investor shares) that led to the collapse of Nyaga Stockbrokers LTD.
* Depositors in case of bank insolvency.

If yes, discuss the guaranty funds. If no, mention the risks that investors face and Make recommendations.

1. Why should more regulation be imposed on financial institutions than other types of corporations?

**LIQUIDITY MANAGEMENT IN FINANCIAL INSTITUTIONS**

**Scenario:** You walk into your bank to withdraw some cash for use. You are told that the bank is short of cash and that you should try your luck the next day. What would come into your mind?

-The bank is about to collapse.

-The managers are incompetent.

- Tomorrow, if I am lucky, I will withdraw all my cash and close the account immediately.

**Lesson:** failure in management of liquidity severely dents public confidence in the institution and may result in bank runs.

The art of managing financial institution lies in the resolution of conflicts between liquidity and profitability. Financial institutions, especially banks attract depositors cash by not only promising some return on the cash (Interest), but also by committing itself to payment on demand (Withdrawals of cash with little or no notice). Financial institutions must ensure andequate liquidity to meet any claims upon it in cash on demand.

A financial institution is considered liquid if it has ready access to immediately spendable funds at a reasonable cost at precisely the time those funds are needed. Lack of adequate liquidity is among the first indicators that a financial institution is in serious trouble.

**Demand for and supply of liquidity in a financial institution**

The table below summarizes the sources and uses of funds in a financial institution:

|  |  |
| --- | --- |
| **Supply of funds comes from:** | **Demand for cash arises from:** |
| Incoming customer deposits (C) | Customer withdrawals (W) |
| Revenue on sale of non-deposit services like Bankers and travelers checks(N) | Loan requests (R) |
| Customer loan repayments (L) | Repayments on banks non-deposit borrowings, e,g overnight loans (O) |
| Sale of assets e.g. foreign currency (A) | Operating expenses and taxes (T) |
| Borrowing from money market and other institutions (B) | Payments of dividends (D) |

The various sources of liquidity demand and supply determine an institutions **net liquidity position (NLP)** at any moment in time.

NLP= (C+N+L+A+B)-(W+R+O+T+D)

When NLP<0, then management must prepare for a *liquidity deficit* (Probably borrow).

When NLP>0, then the firm must prepare for a *liquidity surplus* (Maybe invest the excess).

Liquidity has a critical time dimension. A customer may indicate to a bank that he/she will not roll over CDs that are due to mature tomorrow, but will instead prefer cash. This creates an immediate (near term) need for cash that may be met by borrowing from another bank, for example.

Long term liquidity demands arise from seasonal, cyclical and trend factors, e.g. during schools opening, major holidays, end of the month, planting season in rural areas, e.t.c. there is need for management to anticipate such demand for cash and plan accordingly.

Liquidity pressures may arise outside of a bank. A firm that has liquidity pressures will request for a loan from a bank. In general, when it comes to liquidity management,

1. Rarely will demand and supply of liquidity be equal at any point in time. The management must at all times deal with either a liquidity deficit or a liquidity surplus.
2. There is a trade-off between a banks liquidity and profitability. Other factors held constant, the more liquid a financial institution, the less profitable it is.
3. Timing is key in liquidity management. Careful planning is needed on when and where needed funds can be raised.

**Why do financial institutions face liquidity problems?**

Mismatch in maturity of loans and deposits

Financial institutions, especially banks borrow large amounts of **short term** deposits and reserves from individuals, then turn around and make **long term** credit (loans). This mismatch in maturities is a cause of liquidity problems.

Sensitivity to changes in interest rates

When interest rates rise, some depositors will withdraw their cash in search of higher returns elsewhere. Customers will also postpone loan requests, or prefer to borrow in credit lines that attract lower interest.

**Theories of liquidity management**

Commercial loan theory

According to this theory, a financial institution should provide short term self liquidating loans to business firms to enable them meet their working capital requirements. Self liquidating loans refer to loans which finance the movements of goods through the successive stages of production, transportation, storage, distribution and finally consumption. Banks were urged to refrain from long term lending- to finance plant, equipment, parmanent working capital, real estate, consumer durables and speculation. The logical basis for this theory is that deposits are demand or near demand liabilities and should therefore be committed to obligations that are self liquidating. Since this theory holds that financial institutions should always lend against self liquidating papers, it came to be known as the real bills doctrine.

Criticisms of the commercial loan theory

* + - If financial insitutions decides to grant new loans only after the repayment of the old loan, production and trade for the dissapointed borrowers will suffer, leading to reduced production and trade. This will result in a fall in the purchasing power of the community, in turn leading to fall in prices. This would make it difficult for existing debtors to pay their debts in time.
    - The liquidity structure of self liquidating loans is conditioned by the economic situation in the country. In periods of economic deppression, goods do not move speedily or move at very low prices. In such circumstances, there is no guarantee that the debtor will be able to pay up the loan upon maturity.
    - The theory failed to consider that a bank can ensure liquidity of its assets only when they are readily convertible into cash wihtout any loss in value and not because the loans are made against real trade bills. The bank could achieve this by including treasury bills, bills of exchange and other highly marketable securities in its portfolio. The problem of liquidity in financial institutions is not one of maturity of loans but essentially one of shifting the assets elsewhere for cash without realising losses. It is this limitation that led to the shiftabilty theory.

The shiftability theory (Asset liquidity management or asset conversion)

According to this theory, financial insitutions need not rely upon maturities if it has maintained a substantial amount of such assets that can be shifted into others to meet expected cash demand. Liquidity is thus tantamount to shiftability.

According to shiftabilty theorists, an asset must be transferable to others without an appreciable capital loss for the purpose of meeting temporary liquidity crisis caused by a sudden demand on the part of customers. This would however not be possible in times of general liquidity crisis engulfing the entire industry. In such circumstances, a bank should possess such assets as can be shifted to the central bank, the lender of last resort, as the source of cash.

This theory failed to distinguish clearly the liquidity of an individual insitution and that of the industry as a whole. Again there is an opportunity cost in storing liquidity in assets. Moreover, the assets in question may be sold in a market experiencing declining prices resulting in substantial capital losses. Liquid assets generally have a very low rate of return, and selling them weakens the balance sheet of a financial institution. Lastly selling such assets involves some cost in the form of commissions.

In this approach, for example, a manager may rely on liquid assets that can be readily converted into cash. This approach is mainly used in smaller financial institutions since it is less risky than the reliance on borrowings.

The anticipated income theory

Commercial banks are increasingly taking part in term lending- i.e. granting of loans whose repayment period is greater than one year but less than five years. Banks use stocks, machinery and potential earnings as collateral while granting these loans. If a financial institution is satisfied that a borrower has the potential to earn a reasonably high income in the foreseeable future, it will grant a loan even though it is not self liquidating in nature, or when assets taken as collateral are not readily shiftable.

According to this theory, loan repayment schedules have to be adapted to the anticipated incomes or cash receipts of a borrower. Thus, all loans, short term or long term become liquid if the borrower have the capacity to repay the sum.

Liabilities management theory (Borrowed liquidity management strategies)

According to this theory, it it unnnecesary to observe standards in regard to self liquidating loans and liquidity reserves, for reserve money can be borrowed in the money market whenever a financial institution experiences reserve defficiency.

The advantages of this approach are:

1. A financial institution can borrow only when it needs funds, thus eliminating the opportunity cost of storing liquidity in low yield assets.
2. The institution can leave the volume and composition of its asset portfolio unchanged.
3. The institution can use the control lever, which is offering higher interest when funds are needed in large amounts, and lowering them when assets needed are minimal.

To meet liquidity deficiency, a financial institution may resort to:

* + - Isssuance of time certificates of deposit (CDs).
    - Use of Repos and reverses.
    - Borrowing from commercial banks.
    - Borrowing from the central bank.
    - Raising capital funds by issuing shares or by means of retained earnings.

**Guidelines for liquidity managers**

Over time, liquidity managers have developed rules of the thumb that guide their activities.

1. A liquidity manager must keep track of activities of all funds using and funds raising departments within a bank. When for example the loans department grants a credit line to a customer, the liquidity manager must anticipate outflow of cash.
2. The liquidity manager should know in advance when the banks biggest credit or deposit customers intend to withdraw or deposit cash.
3. The liquidity needs and decisions must be analyzed on a continuing basis to avoid both excess and deficit positions.
4. The liquidity manager in conjunction with the BoD must ensure that the priorities and objectives for liquidity management are clear. The priorities are as outlined below.

**Priorities in the employment of funds**

In prioritizing funds for financial institutions, the following order is recomended.

* Liquidity

Since public confidence is essential for the survival of a financial institution, it has to lay an overiding emphasis on liquidity. With that end in view, it must provide itself with andequate cash. There are also legal requirements – every commercial bank, for example is required by law to keep with the central bank some cash reserves against its deposits. The cash reserve held by the bank for legal and operational purposes is designated in banking circles as primary reserve. Excess reserves act as an insurance against costs associated with deposit outflows.

* Secondary reserves

Since cash is a barren asset, it forms only a small proportion of banks total assets. Secondary reserves- liquid but earning assets occupy the second priority. These assets can be converted to cash with little or no delay or loss of principal.

* Customers needs for loans and advances

The third priority is to consider its customer needs for funds- and it will extend credit to customers whose operations and needs are intimately understood and known by the institution- hence the need for guarantors and collateral.

* Purchase of investment securities in the open market

If the first three priorities have not exhausted income, the financial institution may purchase earning assets in the open market.

**Estimating liquidity needs: the case of commercial banks**

There are several methods for estimating liquidity. Note that as a manager, you must always fine tune these estimates as new information is availed.

* + - 1. The sources and uses of funds approach

This approach rests on two simple facts:

* + - * 1. Banks liquidity rises as deposits increase and loans decrease.
        2. Banks liquidity declines as deposits decrease and loans increase.

A liquidity gap is present whenever sources and uses of funds do not match. This gap may either be positive, or negative. The following steps are followed in this approach.

* Loans and deposits must be forecast for a given liquidity planning period.
* The estimated change in loans and deposits must be calculated for the same planning period.
* An estimate of the firm’s net liquidity funds is derived by comparing the estimated change in loans with the estimated change in deposits.

Estimation of loans and deposits can be done using statistical models, which may be like:

L= f (Ge, E, Ms, R, I)

D= f (Gp, S, Ms, Y, I)

L refers to estimated loans for the period.

D refers to estimated deposits for the period.

Ge is projected growth of the economy.

E is the projected bank’s earnings.

Ms is current growth in money supply.

R is the difference between the peak loan rate and the commercial paper rate.

I is the expected inflation rate.

Gp is growth in personal income.

S is the expected growth in retail sales.

Y is the yield on money market deposits.

A simpler approach is to divide the forecast in future deposits and loan growth into three key components:

1. Trend component

This can be estimated by constructing a trend line for loans and deposits.

1. Seasonal component

This is a measure of how deposits and loans are expected to behave in any given week or month due to seasonal factors.

1. Cyclical component

This represents the positive or negative deviations from the total expected deposits and loans. This is done by comparing the actual loans and deposits with the sum of the trend and seasonal components.

Example

Assume you are a manager in a bank. By analyzing past data, you have deduced the following:

* Trend growth rate of deposits over the past 10 years is 10% p.a.
* Trend growth rate of loans over the past 10 years is 8% p.a.
* You have also deduced weakly seasonal and cyclical components.

The balances in the first week of January for deposits and loans are Ksh. 1210 million and Ksh. 799 million.

The table below shows the weekly deposits/ loans forecast for the first six weeks of the year.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Trend estimate | Seasonal element | Cyclical element | Estimated total deposits |
| Deposits forecast for: |  |  |  |  |
| January, week 1 | 1210 | -4 | -6 | 1200 |
| January, week 2 | 1212 | -54 | -58 | 1100 |
| January, week 3 | 1214 | -121 | -93 | 1000 |
| January, week 4 | 1216 | -165 | -101 | 950 |
| February, week 1 | 1218 | 70 | -38 | 1250 |
| February, week 2 | 1220 | 32 | -52 | 1200 |
|  |  |  |  |  |
|  | Trend estimate | Seasonal element | Cyclical element | Estimated total deposits |
| Loans forecast for: |  |  |  |  |
| January, week 1 | 799 | 6 | -5 | 800 |
| January, week 2 | 800 | 59 | -9 | 850 |
| January, week 3 | 801 | 174 | -25 | 950 |
| January, week 4 | 802 | 166 | 32 | 1000 |
| February, week 1 | 803 | 27 | -80 | 750 |
| February, week 2 | 804 | 98 | -2 | 900 |

Trend estimate is one week’s portion of the 10% annual growth.

Seasonal component: Compare average/ trend deposit and loan figure for each week of the year to the deposit/loan level during the final week of each of the past 10 years.

Cyclical element compares the sum of trend and seasonal elements with the actual deposits/ loans the previous year.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Estimate deposits | Estimated loans | Deposit change | Loans change | Liquidity deficit/ surplus |
| Liquidity forecast for: |  |  |  |  |  |
| January, week 1 | 1200 |  |  |  |  |
| January, week 2 | 1100 | 850 | -100 | 50 | -150 |
| January, week 3 | 1000 | 950 | -100 | 100 | -200 |
| January, week 4 | 950 | 1000 | -50 | 50 | -100 |
| February, week 1 | 1250 | 750 | 300 | -250 | 550 |
| February, week 2 | 1200 | 900 | -50 | 150 | -200 |

* + - 1. The structure of funds approach

Here the bank deposits and other funds sources are divided into categories based on their estimated probability of being withdrawn. The funds are typically divided into three categories;

* + - * 1. “Hot money” liabilities

Deposits and other borrowed funds that are very interest sensitive or that the management is sure will be drawn in the current period.

* + - * 1. Vulnerable funds

These are customer deposits of which a substantial portion (probably 25%, 30 %…) will probably be removed from the bank sometime during the current time period.

* + - * 1. Stable funds

These are often called core deposits or core liabilities. They are the funds that the bank considers most unlikely to be removed from the bank. Of course a small percentage of these will still be withdrawn.

The manager then sets aside liquid funds according to some operating rule. For example;

Liquidity liability reserve = 0.95\*Hot money deposits + 0.30\*vulnerable deposits +0.15\* stable deposits.

The criterion is developed by the management based on prior experience. Adjustments to this liquidity reserve will always be adjusted as more funds flow into or out of the bank.

* + - 1. Liquidity indicator approach

Many banks estimate their liquidity needs based on experience and industry averages. This means that they make use of benchmark ratios as liquidity indicators. Examples are:

* + - * 1. Cash position indicator

Cash and deposits due from depository institutions divided by total assets-the bigger the ratio, the better the bank will be able to meet immediate cash needs.

* + - * 1. Liquid securities

Government securities divided by total assets. The greater the proportion of government securities, the more liquid the bank is.

* + - * 1. Capacity ratio

Net loans and leases divided by total assets- this is actually a negative liquidity indicator since loans and leases are among the most illiquid of assets.

Please research on more of these liquidity ratios.

**SUMMARY**

* + - 1. The practical ways of obtaining liquidity for any financial institution are:
         * Selling all cash type assets such as T-Bills.
         * Borrowing cash in the money market, from other financial institutions, and as a last resort, from the central bank.
         * Use the excess cash over and above the amount held to meet regulatory reserve requirements.
      2. Liquidity risk insulation elements designed to protect depositors from liquidity risks are:
         * Discount window.
         * Deposit insurance.
      3. Factors that determine the financing requirements by a financial institution include:
         * The financing gap.
         * Amount of liquid assets held by the financial institution.
      4. Liquidity planning (Estimating liquidity needs) is paramount in the running of a financial institution.

**MANAGEMENT OF ASSETS AND LIABILITIES**

**CAPITAL ANDEQUACY**

Functions of capital

* + - 1. To absorb unanticipated losses with enough margin to inspire confidence and enable the financial institution to continue as a going concern.
      2. To protect depositors in the case of insolvency and liquidation.
      3. To protect the insurance funds (in the form of deposits protection fund) and taxpayers who may intervene to protect claimants.
      4. To protect the industry from increased insurance premiums due to increased riskiness of insolvency caused by a perception that the financial institutions are undercapitalized.
      5. To fund new assets and business expansion.

**What is adequate capital fund?**

Depositors may favor the maximum amount of capital fund so that the financial institution may be able to absorb all the losses that may occur- thus leaving depositors fully protected. On the other hand stockholders may like the bank to operate with minimum capital since excess capital prevents them from earning any reasonable return on investment. There is thus a conflict.

However, in assessing adequate capital, it is important to note that public confidence (which is essential in banks) is a function of safety of deposits. Thus in assessing adequacy of capital, emphasis should not be placed on management or corporate liabilities, but rather on the history and future prospects of the institution, its customers and the community it serves. Determination of adequate capital is imprecise and requires exercise of judgment in light of the above factors. Over time however, several tools have been developed to aid in assessment of capital adequacy.

Suppose we have 2 banks: one with high capital and another with low capital as illustrated below.

TABLE A: High capital bank

|  |  |
| --- | --- |
| ASSETS | LIABILITIES |
| Reserves Ksh. 10 million  Loans Ksh. 90 million | Deposits Ksh. 90 million  Bank Capital Ksh. 10 million |

TABLE B: Low capital bank

|  |  |
| --- | --- |
| ASSETS | LIABILITIES |
| Reserves Ksh. 10 million  Loans Ksh. 90 million | Deposits Ksh. 96 million  Bank Capital Ksh. 4 million |

Now supposing both banks write off Ksh. 5 million in bad debts. The balance sheet for both banks will be as follows

TABLE C: High capital bank

|  |  |
| --- | --- |
| ASSETS | LIABILITIES |
| Reserves Ksh. 10 million  Loans Ksh. 85 million | Deposits Ksh. 90 million  Bank Capital Ksh. 5 million |

TABLE D: Low capital bank

|  |  |
| --- | --- |
| ASSETS | LIABILITIES |
| Reserves Ksh. 10 million  Loans Ksh. 85 million | Deposits Ksh. 96 million  Bank Capital ( Ksh. 1 million) |

If capital is negative, then the bank is bankrupt.

* Banks desire to hold less capital to satisfy the owners.
* But less capital is bad for the bank in case of large withdrawals. It can go bankrupt. Therefore, the regulators stepped in and set capital requirement regulations.

**Book value vs. Market value of capital**

The book value of capital- the excess of the book value of assets over the book value of liabilities is the one that is used by regulators to measure capital. The book value is based on historical costs and may differ from the economic capital, where assets and liabilities are measured at market values. The difference between the market value of capital and the book value is measured using the market to book ratio. This deviation of the market value of a firm from its book value may be attributed to:

* Interest rate volatility: the greater the interest rate volatility, the greater the discrepancy.
* Examination/ enforcement

The more frequent the examination/ enforcement by regulators, the lower the discrepancy.

Normally, the book value of capital comprises of:

* The par value of share capital.
* The share premium/ discount.
* Retained earnings.
* Loan loss reserve: this is a special reserve from retained earnings set aside to meet or actual losses on the loan portfolio. It represents an estimate of the losses expected in a loan portfolio.

Note that the book value of capital, despite of its continued use in assessing capital adequacy, has a limitation in that it only partially recognizes credit risk, and totally fails to consider interest risk.

Market value captures the true economic difference between the value of an institutions asset and its liabilities. For capital to serve as a cushion between the value of a firms assets and the value of its outstanding liabilities, it must have significant economic value. Here market values for assets and liabilities are used.

**Standards for measuring capital adequacy**

**Ratio of paid up capital to reserves**

This is an important index for assessing the financial strength of financial institutions. It is also a pointer to the management policy regarding retention of earnings. Paid up capital comprises of share capital, share premium and retained earnings. Reserves consist of both primary and secondary reserves held by banks. Reserves are expected to follow a rising trend since they are created out of current earnings.

This measure is simple, but it cannot measure capital adequacy. This ratio fails to measure whether capital is sufficient to absorb losses- failing to shed light on the magnitude of losses to be protected.

**Capital deposit ratio**

A high capital deposit ratio is indicative that depositors will incur low risks. The rule of the thumb is that financial institutions have a capital fund at a minimum of 10% of deposit liabilities. Though the ratio is simple, it does not measure the amount or quality of assets in which deposits are invested.

**Capital asset ratio**

This is the ratio of core capital funds to total assets. A ratio of 5% is considered sufficient.

|  |  |
| --- | --- |
| L>5% | Well capitalized |
| L>4% | Adequately capitalized |
| L<4% | Under capitalized |
| L<3% | Significantly under capitalized |
| L<2% | Critically under capitalized |

**Risk adjusted assets ratio**

This ratio is based on the Basel Accords and is an internationally agreed ratio for gauging capital adequacy. The risk adjusted capital requirements consider the individual differences in the riskiness of an institutions operations including activities that may not be show cased in traditional financial statements (off balance sheet events). In addition the approach recognizes that not all balance sheet items are equally risky. The measures incorporate the belief that the required ratio of capital should be based on a risk adjusted total reflecting these factors.

The following terminology is important in understanding the ratio.

* **Capital:** A bank’s capital is divided into Tier 1 and Tier 2 capital. Tier 1 is the primary or core capital. Tier 2 is the supplementary capital. Total capital is the sum of tier 1 and tier 2 capital.
* **Tier 1 Capital**:

Is as defined in Section 2(1) of the Kenya of the Banking Act and includes permanent shareholders equity (issued and fully paid-up ordinary shares and perpetual non-cumulative preference shares) plus disclosed reserves (additional share premium plus retained earnings plus 50% of profits after tax plus minority interest in consolidated subsidiaries) less intangible assets (goodwill and equity funded through revaluation reserves). In arriving at the applicable figure, any proposed or interim dividends have to be taken into account. Tier one capital (Core capital) is the capital in the bank's balance sheet that can absorb losses without a bank being required to cease trading.

In Kenya, commercial banks are required to have a core capital of Ksh. 1 Billion by December 2012. The core capital for insurance companies is as follows:

* General Insurance companies- Ksh. 300 Million from June 2010.
* Composite Insurance companies- Ksh. 450 Million from June 2010.
* Life insurance companies- Ksh. 150 Million from June 2010.
* **Tier 2 Capital**:

Is as defined in Section 2(1) of the Kenya Banking Act and includes 25% of asset revaluation reserves which have received prior Central Bank’s approval, subordinated debt, hybrid (debt equity) capital instruments or any other capital instrument approved by Central Bank. Supplementary capital must not exceed core capital. Tier two capital (Supplementary capital) can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

* **Risk adjusted assets**:

Two components comprise risk adjusted assets:

1. Risk adjusted on balance sheet items.
2. Risk adjusted off-balance sheet items.

To be adequately capitalized, an institution must hold a risk adjusted assets ratio of at least 8%.

**Example:**

A bank that has the following assets:

On- balance sheet items:

Ksh. 000

Cash…………………………………………………………..10,000

Treasury bills (GoK)…………………………..……………..28,000

Treasury bonds (GoK)…………………………………….243,500

Municipal bonds (Nairobi city council)…………….……150,000

Corporate bonds (local banks)……………..……………..50,000

Residential mortgages……………………………………400,000

Consumer loans…………………………..……………….200,000

Commercial loans………………………………………….520,000

Off balance sheet items (contingent liabilities)

Cancellable loan commitments……………………………30,000

Standby letters of credit……………………..…………….100,000

Forward agreements……………………………………….200,000

Capital

Tier 1…………………………………………… …………..60,000

Tier 2………………………………………………………..15,000

All figures in thousands of Ksh.

By filling the CBK/ PR3, determine the CAR using the Basel II accord and the CBK prudential guidelines.

**LOANS AND ADVANCES/ LENDING POLICIES AND PROCEDURES**

Financial institutions are expected to supply the communities in which they function with adequate supply of credit for all legitimate business and consumer financial needs and to price that credit reasonably in line with competitively determined interest rates. Because loans support a great deal of businesses, how well banks perform in its lending function is a great determinant of the economic health of the economy. On the lower side, risks in banks tend to be concentrated in the loan portfolio- and most troubles that financial institutions face emanate from its lending function.

**TYPES OF LOANS MADE BY BANKS**

1. Real estate loans- these are secured by real property- land, buildings and other structures. They include short term loans for construction, or long term loans for purchase of apartments, homes, and commercial property.
2. Financial institutions loans- include loans to other banks, insurance companies and other financial institutions.
3. Agricultural loans- extended to farmers and ranch operators to support crop farming and livestock rearing.
4. Commercial and industrial loans- granted to businesses to cover such expenses as purchasing inventory, paying taxes and meeting payrolls.
5. Loans to individuals- this covers loans to purchase vehicles, appliances and other retail goods to repair/ modernize homes, cover medical expenses and other personal expenses.
6. Miscellaneous loans- includes all loans not covered above, e,g. securities loans.
7. Lease financing receivables’- where a bank buys vehicles or equipment and leases them to customers.

**FACTORS DETERMINING THE GROWTH AND MIX OF BANK LOANS**

1. **Characteristics of market area it serves**

Like other organizations, a bank will focus on the needs of its customers. A bank located in a suburban setting with a lot of home ownership by families will typically have mostly residential real estate loans. How about a bank operating in an industrial setting? A Rural setting? This puts banks at a risk of having too much loans of a particular type. How can banks diversify their loans in this case? First, they can purchase whole loans or pieces of loans from other banks- called *participations* or use credit derivatives to manage the risk in holding predominantly one type of loan.

1. **Bank size**

Large banks are wholesale lenders- issuing large denomination loans to corporations and other business firms. Smaller banks will concentrate in personal loans and home mortgage loans. They are retail lenders.

1. **Experience and expertise of management**

Some banks with expertise in micro lending tend to have a significant portion of their loans here, regardless of their size and market characteristics.

1. **Loan policy**

The loan policy of a bank will determine the growth and mix of loan portfolio.

1. **Expected yield**

The expected yield of a particular type of loan will determine the mix of loans. The highest proportion will be in the type that offers the highest return.

**REGULATION OF LENDING**

The loan portfolio of any financial institution is heavily determined by regulation. The risk and safety of loan portfolios are the largest determinants of loan quality. Thus the state may prohibit or regulate some loans. Examples of such prohibitions/ restrictions include:

1. Loans collaterized by the banks own stock (Prohibited- USA)
2. Restriction on percentage of real estate loans to total capital.
3. A loan to a single customer not exceeds 25% of the capital.

(Please do some more research on loans regulations)

The quality of a bank’s loan portfolio and the soundness of its lending policies are rated using a numerical rating. The possible ratings are as follows:

1=strong performance

2=satisfactory performance

3=fair performance

4=marginal performance

5=unsatisfactory performance

It is not only loans that are rated. Other ratings may cover capital adequacy, management quality, earnings record, liquidity position, and sensitivity to market risk exposure. All of these dimensions are combined into one overall rating called the CAMELS rating. CAMELS stand for **C**apital adequacy, **A**sset Quality, **M**anagement Quality, **E**arnings record, **L**iquidity position, **S**ensitivity to market risk.

Specific guidelines on loans and advances management (including the restrictions and prohibitions in lending, and classification of loans performance in terms of collectability) in Kenya are contained in the CBK PRUDENTIAL GUIDELINES. EVERY STUDENT **MUST** GET A COPY AND READ ON THE SPECIFIC REGULATIONS. Make arrangements to get a copy of the prudential guidelines from the lecturer.

**ESTABLISHING A WRITTEN LOAN POLICY**

Every institution must set up a written policy on lending. In particular, there ought to be a board credit committee which oversees the following:

(a) Review and oversee the overall lending policy of the banking institution;

(b) Deliberate and consider loan applications beyond the discretionary limits of the Credit Risk Management Committee;

(c) Review lendings by the Credit Risk Management Committee;

Classification of loans

Loans are generally classified depending on their performance, that is, the ability to pay by the borrowers. In Kenya, loans are classified as:

* Normal
* Watch
* Sub-standard
* Doubtful
* Loss

Normal

These are well-documented facilities granted to financially sound customers where no weaknesses exist. All such loans must be performing in accordance with the contractual terms and are expected to continue doing so. Loans in this category are normally fully protected by the current sound net worth and paying capacity of the borrower.

Watch

Loans in this category may be currently protected and may not be past due but exhibit potential weaknesses which may, if not corrected, weaken the asset or inadequately protect the institution’s position at some future date. Examples of such weaknesses include, but are not limited to: inability to properly supervise the debt due to an inadequate loan agreement; deteriorating condition or control of collateral; deteriorating economic conditions or adverse trends in the borrower’s financial position which may, if not checked, jeopardize repayment capacity, risk potential is greater than when the loan was originally granted. This category should not be used as a compromise between Normal and Substandard.

Substandard

Loans in this category are not adequately protected by the current sound net worth and paying capacity of the borrower. In essence, the primary sources of repayment are not sufficient to service the debt and the institution must look to secondary sources such as collateral, sale of fixed assets, refinancing, or additional capital injections for repayment. As per the CBK guidelines any loan, which is past due for more than 90 days but less than 180 days shall be classified as Substandard, at a minimum.

Doubtful

Loans in this category have all the weaknesses inherent in a substandard loan plus the added characteristic that the loan is not well secured. These weaknesses make collection in full, on the basis of currently existing facts, conditions, and value, highly questionable and improbable. The possibility of loss is high, but because of important and reasonably specific pending mitigating factors, the actual amount of loss cannot be fully determined. If pending events do not occur within 360 days and repayment must again be deferred pending further developments, a loss classification is warranted upon realization of securities held. A loan that is past due for more than 360 days may however retain a “doubtful” classification if it is backed by realizable security.

Loss

Loans, which are considered uncollectible or of such little value that their continuance recognition as bankable assets is not warranted shall be classified Loss. Losses shall be taken in the period in which they are identified. Loans paid in installments with the characteristics in the table below shall be classified as loss: -

Mode of payment Installments in Arrears

Monthly 12 or more

Quarterly 4 or more

Semi-annually 2 (not paid within 5 months)

Annually 1(not paid within 11 months)

Bank underwriting

The important elements of policies concerning default risk in the loan portfolio are

* The thoroughness with which the financial position of a borrower is analyzed.
* The standards set for accepting or rejecting loan applicants.

The assessment of an applicant’s loan default risk depends on the size of the firm and the risk aversion of the owners. The credit standards affect the volume of lending and the variability in earnings.

It is paramount, therefore that loan applicants are thoroughly vetted as it has direct implications on default risk.

(IN ADDITION TO THESE NOTES, EACH STUDENT MUST ALSO READ THE PRUDENTIAL GUIDELINES ON “ASSETS PROVISIONING” PP 62)

**DEPOSITS**

Banks mobilize funds by attracting deposits. Commercial Bank deposit products offer you an array of privileges and services. Designed with your banking needs and comfort in mind, these convenient accounts prove that, at Commercial Banks, banking is about a shared long-term relationship between bank and you.

Current Account

The Current Account allows you the facility of unlimited withdrawals up to the extent of the balance in your account, with a provision for overdraft.

Savings Account

The Savings Account allows you the facility of unlimited withdrawals (up to the extent of the balance in your account).

Term Deposit/ Fixed deposit

The Term Deposit offers you the dual benefit of attractive returns with high liquidity. A time deposit (also known as a term deposit, particularly in Canada, Australia and New Zealand) is a money deposit at a banking institution that cannot be withdrawn for a certain "term" or period of time. When the term is over it can be withdrawn or it can be held for another term. Generally speaking, the longer the term the better the yield on the money. A certificate of deposit is a time-deposit product. A deposit of funds in a savings institution under an agreement stipulating that

(a) The funds must be kept on deposit for a stated period of time,

(b) The institution may require a minimum period of notification before a withdrawal is made.

Foreign Currency

You have the option of opening Current, Savings and Term Deposit accounts in different foreign currencies – Like US Dollar, Pound Sterling, Japanese Yen, and Euros. This entitles you to avail all the convenience of local currency accounts including:

1. Unlimited cash withdrawals up to the balance in your account

2. Deposits facility

3. Interest accrued on an annual basis

4. Automatic rollover of deposits

Demand account

The cheque is the traditional mode of payment for a demand account. A demand account or demand deposit (North America: checking account, UK and Commonwealth: current account) is a deposit account held at a bank or other financial institution, For the purpose of securely and quickly providing frequent access to funds on demand, through a variety of different channels.

To attract more depositors, financial institutions may use a combination of favorable terms over deposits, and the use of aggressive sales and marketing techniques. It is worth noting that financial institutions, especially banks are required to keep a certain proportion of their deposits as reserves with the central bank, which in effect ties cash and limits lending capacity.

Corrective actions are authorized by Section 34 of The Banking Act (Kenya), with the approval of the Minister, states when an institution fails to meet any financial obligation, when it falls due, including an obligation to pay any depositor. It is thus imperative that liquidity management be in mind when dealing with deposits.

Deposit protection

The CBK runs the deposit protection fund, insurance for depositors in case of problems at the bank. Each financial institution under the CBK that takes deposits is required to contribute to the fund.

Pursuant to the provisions of Section 38(5) of the Banking Act, where it appears to the Board of the Deposit Protection Fund that the affairs of an institution are being conducted in a manner detrimental to its own interest or to the interests of its depositors, the Board may:

a) Increase the contributions (to the DPFB) of that institution; or

b) Terminate the protection of its deposits.

**INTEREST RISK MANAGEMENT**

Interest risk management is of major interest in the management of financial institution. Before we embark on this topic, it is paramount that the student appreciates the term structure of interest rates, or the yield curve.

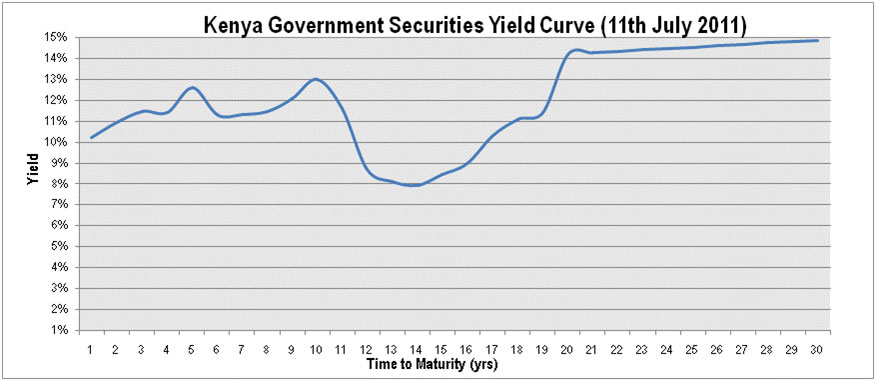
**The Yield Curve (Term structure of Interest rates/ Duration)**

A yield curve is a relationship between the interest rate and the time to maturity of the debt instrument denominated in a given currency. For the issuer, an interest rate is the cost of borrowing while for the investor; the rate represents a measure of return from investment.

The Kenya Government securities yield curve is derived from the relation between interest rates of Treasury bills/bonds and the time to maturities of bonds of different tenors. The interest rates for Treasury bills are the prevailing weighted average rates for both 91-day and 182-day and 364-day papers while interest rates for Treasury bonds are the average prevailing secondary market yields for bonds based on years to maturity. In a developing market, the estimation of the yield curve entails use of only a few known yields for certain maturities while yields for other maturities are estimated by interpolation.

For the investor, a yield curve is useful for understanding conditions in the financial markets with an aim to seeking trading opportunities, measuring expected returns on bonds and acting as an indicator for interest rates and inflation expectations. For issuers, the yield curve acts as a benchmark for pricing other financial instruments in the market as well as predicting the yield/prices of future government issuances (CBK, 2011)

The Yield curve for Kenya is illustrated below.



**(CBK, 2011:** <http://www.centralbank.go.ke/securities/YieldCurve.aspx>, accessed on August 3, 2011)

**Interest Risk Management**

Interest rate risk is defined to be potential variability in net interest income (NII) or market value of equity (MVE) due to changes in interest rates.

This is the third main type of risk faced by banks. If there's a reservation that investors frequently harbor about investing in banks, it's that earnings can be squeezed by interest rates, which are completely outside banks' control.

The impact of rates on banks is often oversimplified to "Higher rates, good; Lower rates, bad." But there are more nuances to interest rate management than this. For instance, at any point, banks can be either asset sensitive or liability sensitive. Asset sensitivity means that the interest rate on assets (like loans) will change more quickly than the interest rate on liabilities. In this situation, rising rates will be profitable—at least for a while. But when banks are liability sensitive and rates start to rise, the interest rate on liabilities will change faster than the interest rate on assets, pinching margins.

However, banks aren't nearly as interest rate sensitive as they used to be. Banks try to closely match the life of their assets to their liabilities. And big banks have additional risk management tools at their disposal that small banks don't.

To understand why banks aren't entirely at the mercy of prevailing interest rates, consider how banks report their revenue and income. Unlike traditional firms, there is no explicit "revenue" or "sales" line. Instead, there are four major components to examine: (1) interest income, (2) interest expense, (3) noninterest (or fee) income, and (4) provisions for loan losses. Here's an example of how the top of a bank income statement will look

For now, let's ignore the noninterest income component because this is generally steadier than interest income and interest expense. When we do this, we see that banks have a natural hedge built into their business. Consider the following as a base case for a bank operating in a strong economy

Suppose now that the CBK cuts rates. Because the CBK understands the benefit of maintaining a strong banking system, subtle cues are generally communicated before any cuts. In the meantime, banks reposition their balance sheets so that they're liability sensitive, thus allowing net inter­est income to widen. However, if a cut happens, it's for a good reason. A re­cession might be causing unemployment to rise and bankruptcies to increase. That, in turn, leads to higher provisions for loan losses for banks. Here's "what might happen in a weak economy

Have interest rates impacted the bank? Yes and no. Sure, net interest income widened, but this number is meaningless in isolation. After all, the weak economy caused provisioning to double, thereby wiping out the wider interest spread. In the real "world, this relationship doesn't come out to the perfect round numbers laid out here, but it can be close.

However, big banks also have additional tools at their disposal. For starters, the breadth of their business lines makes it easier for them to reposition their balance sheet to focus on one sector versus another, depending on the operating environment. Perhaps most importantly, big banks have the ability to access the capital markets to pass the buck by letting investors purchase the loans (much like a bond) and assume the interest rate risk. Then banks—which still service the loans and collect a fee doing so—can focus on their strengths: credit and liquidity risk management.

As you're thinking about interest rate risk, remember that the impact it has on a bank's balance sheet is complex, dynamic, and varies from institution to institution.

**THE DURATION GAP MODEL**

First we will to look at a model that focuses on the bank’s earnings stream. Here we will look at the effects of interest rate changes on interest income and interest expense. To do this, we need to look at rate sensitive assets (RSA) and rate sensitive liabilities (RSL) using these, we will compute a measure, the GAP, of interest rate exposure.

**Method:**

–Group assets and liabilities into time "buckets” according to when they mature or are expected to re-price.

–Calculate GAP for each time bucket.

–Funding GAPt = Ksh. Value RSAt – Ksh. Value or RSLt, where t = time bucket; e.g., 0-3 months.

Rate-Sensitive Assets

–Short-Term Securities Issued by the Government and Private Borrowers

–Short-Term Loans Made by the Bank to Borrowing Customers

–Variable-Rate Loans Made by the Bank to Borrowing Customers

Rate-Sensitive Liabilities

–Borrowings from Money Markets

–Short-Term Savings Accounts

–Money-Market Deposits

–Variable-Rate Deposits

**Traditional static GAP analysis**

1. Management develops an interest rate forecast

2. Management selects a series of “time buckets” (intervals) for determining when assets and liabilities are rate-sensitive

3. Group assets and liabilities into time "buckets" according to when they mature or re-price

– The effects of any off-balance sheet positions (swaps, futures, etc.) are added to the balance sheet position

– Calculate GAP for each time bucket

– Funding GAPt = Ksh. Value RSAt – Ksh. Value or RSLt

Management forecasts NII (Net Interest Income) given the interest rate environment.

**Factors affecting NII**

* Changes in the level of interest rates

∆ NII = (GAP) \* (∆ i expected)

* Changes in the slope of the yield curve
* Changes in the volume of assets and liabilities
* Change in the composition of assets and liabilities.

**Rate, Volume, and Mix Analysis**

•Many banks publish a summary of how net interest income has changed over time.

•They separate changes over time to shifts in assets and liability composition and volume from changes associated with movements in interest rates.

•The purpose is to assess what factors influence shifts in net interest income over time.

**An Asset-Sensitive Bank Has:**

–Positive Dollar Gap…indicates a bank has more rate sensitive assets than liabilities, and that net interest income will generally rise (fall) when interest rates rise (fall).

**A Liability-Sensitive Bank Has:**

–Negative Dollar Gap…indicates a bank has more rate sensitive liabilities than rate sensitive assets, and that net interest income will generally fall (rise) when interest rates rise (fall).

**Optimal value for a bank’s GAP?**

•There is no general optimal value for a bank's GAP in all environments.

•The best GAP for a bank can be determined only by evaluating a bank's overall risk and return profile and objectives.

•Generally, the farther a bank's GAP is from zero, the greater is the bank's risk.

•Many banks establish GAP policy targets to control interest rate risk by specifying that GAP as a fraction of earning assets should be plus or minus 15% or the ratio of RSAs to RSLs should fall between 0.9 and 1.1.

**Important Decisions in the GAP Model**

1. Management must choose the time period over which NIM is to be managed.

2. Management must choose a target NIM.

3. To increase NIM management must either:

a. Develop correct interest rate forecast; or

b. Reallocate assets and liabilities to increase spread.

4. Management must choose dollar volume of interest-sensitive assets and liabilities.

**Steps that banks can take to reduce interest rate risk**

•Calculate periodic GAPs over short time intervals.

•Match fund re-priceable assets with similar re-priceable liabilities so that periodic GAPs approach zero.

•Match fund long-term assets with noninterest-bearing liabilities.

•Use off-balance sheet transactions, such as interest rate swaps and financial futures, to hedge.

**Various ways to adjust the effective rate sensitivity of a bank’s assets and liabilities on- balance sheet.**

|  |  |
| --- | --- |
| Objectives | Approaches |
| Reduce asset sensitivity | Buy longer term maturities  Lengthen the maturities of loans  Move from floating rate loans to term loans |
| Increase asset sensitivity | Buy short term securities  Shorten loan maturities  Make more loans on a floating rate basis |
| Reduce liability sensitivity | Pay premiums to attract longer term deposit instruments  Issue long term subordinated debt |
| Increase liability sensitivity | Pay premiums to attract short term deposit instruments  Borrow more via non-core purchased liabilities. |
|  |  |